# Gustin Solar

Gustin Township

## Exhibit A

Landowner Agreements
(Deeds & Recorded Memorandums)

May 15, 2026

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Gustin Solar
Participating Owners' List

| Parcel Number | Property Owner | Zoning | Parcel Acreage |
|---|---|---|---|
| 050-013-200-010-01 | David J. Phinney | A-R | 20.07 |
| 050-013-200-020-01 | David J. Phinney | A-R | 20.05 |
| 050-014-300-001-00 | Samuel J. Tanari and Mark F. Tanari | A-R | 119.98 |
| 050-014-300-010-00 | Kathleen L. Robleski and Kenneth F. Sadek | A-R | 39.52 |
| 050-022-100-020-01 | Bruce and Amy Buurma | A-R | 75.94 |
| 050-022-300-025-00 | Kimberly Makela | A-R | 27.75 |
| 050-022-300-030-00 | Kimberly Makela | A-R | 12.19 |
| 050-023-200-005-00 | Ryan Dellaer and Charina Dellar | A-R | 79.31 |
| 050-023-200-010-01 | Kelvin D. & Sandra K. Travis | A-R | 29.7 |
| 050-023-300-010-00 | John G. Parsons | A-R | 79.17 |
| 050-023-400-010-00 | Samuel J. Tanari and Mark F. Tanari | A-R | 79.15 |
| 050-024-100-005-00 | Evan M. Fowler | A-R | 37.96 |
| 050-024-100-010-00 | Kimberly Harber | A-R | 80.64 |
| 050-024-200-005-04 | Tim Gozdor | A-R | 20.23 |
| 050-024-200-009-00 | John and Deborah Graham | A-R | 20.23 |
| 050-024-200-010-02 | Bruce and Amy Buurma | A-R | 76.68 |
| 050-024-200-010-03 | Jon Whitefield | A-R | 4.01 |
| 050-024-300-015-00 | Alfred and Marlene Graziana | A-R | 75.45 |
| 050-024-400-005-00 | Samuel J. Tanari and Mark F. Tanari | A-R | 158.96 |
| 050-025-200-015-00 | Roger A. and Rosemary Love | A-R | 192.01 |
| 050-025-300-005-00 | Roger A. and Rosemary Love | A-R | 19.93 |
| 050-025-300-010-00 | Rondald N. Procunier | A-R | 58.28 |
| 050-025-300-020-00 | Rondald N. and Dessmus A. Procunier | A-R | 1.14 |
| 050-025-400-005-35 | Hugh J. MacMaster | A-R | 75.1 |
| 050-026-200-004-30 | Richard C. Rohrborn | A-R | 29.97 |
| 050-026-400-005-00 | Carlin K. and Shelly Sonberg | A-R | 39.45 |
| 050-026-400-010-01 | Mark A. and Elizabeth A. Younk | A-R | 19.71 |
| 050-026-400-010-02 | Jacob and Andrea Golbeck | A-R | 18.94 |
| 050-027-100-005-00 | Richard C. Rohrborn | A-R | 79.59 |
| 050-027-200-020-00 | James H. Freeland | A-R | 114.07 |
| 050-027-300-008-00 | Bernard E. and Della R. Truman | A-R | 32.86 |
| 050-035-100-006-00 | Alan G and Patricia L. Gill | A-R | 80.21 |
| 050-035-100-010-01 | Alan and Patrcia Gill | A-R | 35.23 |
| 050-035-100-015-00 | Charles C. Kupczak | A-R | 40.05 |
| 050-035-200-005-00 | Ronald N. Procunier | A-R | 80.11 |
| 050-036-100-005-00 | Brian T. And Karen M. MacMaster | A-R | 119.7 |
| 050-036-100-020-00 | Ricky C. and Denise M. Procunier | A-R | 34.78 |
| 050-036-200-040-00 | TANARIES OF ALCONA LLC | A-R | 108.99 |

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Received Alcona County Michigan
11/21/2022 8:32 AM

DocId:8020335
Tx:4015609

202200004150
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
12/05/2022 10:42 AM
RECORDING FEE 30.00
PAGES: 8

Received Alcona County Michigan
12/5/2022 8:34 AM

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000218
Agreement #MI00000065200

NOTICE IS HEREBY GIVEN that ROGER A. LOVE and ROSEMARY LOVE, husband and wife, LAURAL L. COPELAND, a woman, BENTLY A. LOVE, a man, CALEB COPELAND, a man and PHILIP COPELAND, a man, as joint tenants with full rights of survivorship (together with its successors, assigns and heirs, "**Owner**"), whose address is 1141 S. F-41, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 11-1-22.

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee, acting through their duly authorized representatives, have executed this Agreement with the intent that it be effective as of the Effective Date, and certify that they have read, understand and agree to the terms and conditions of this Agreement.

"Owner":

Roger A. Love

Roger A. Love

Rosemary Love

Rosemary Love

The foregoing instrument was acknowledged before me in Alcona County, Michigan, on Nov. 1, 2022 by Roger A. Love and Rosemary Love, husband and wife, as joint tenants with full rights of survivorship.

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

David O. Webb

Notary Public

David O. Webb

Print Name

Jackson County, Michigan

Acting in Alcona County

My Commission expires: 12-3-27

Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Judy Sutherland

Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Bently A. Love

The foregoing instrument was acknowledged before me in Tuscola County, Michigan, on 10-19-22 by Bently A. Love, as joint tenant with full rights of survivorship.

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Tuscola

Notary Public
David O. Webb
Print Name
Jackson County, Michigan
Acting in Tuscola County
My Commission expires: 12-3-2027

Prepared By:
Cheryl Gillman, P24-720, 8/16/2022

After recording, return to:
Carrie Main, P24-20

1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim R. Claucherty

1945 W. Parnall Rd
Jackson, MI 49201

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Laural L. Copeland

Laural L. Copeland

The foregoing instrument was acknowledged before me in Lowndes County, ~~Michigan~~ Georgia on 10/14/2022 by Laural L. Copeland, as joint tenant with full rights of survivorship.

Natalie Howell

Notary Public

Natalie Howell

Print Name

Lowndes County, Georgia

Acting in Lowndes County

My Commission expires: 02/04/2023

NATALIE HOWELL
NOTARY PUBLIC
LOWNDES COUNTY, GEORGIA
MY COMMISSION EXPIRES
FEBRUARY 04, 2023

Prepared By:
Cheryl Gillman, P24-720, 8/16/2022

After recording, return to:
Carrie Main, P24-20

RFM 4
RFM 5/2021
8/3/2022

MI65200

Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager Tim R. Claucherty

Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Caleb Copeland

Caleb Copeland

The foregoing instrument was acknowledged before me in Lowndes County, ~~Michigan~~ Georgia,

on 10/14/2022 by Caleb Copeland, as joint tenant with full rights of survivorship.

Natalie Howell

Notary Public

Natalie Howell

Print Name

Lowndes County, Georgia

Acting in Lowndes County

My Commission expires: 02/04/2023

NATALIE HOWELL
NOTARY PUBLIC
LOWNDES COUNTY, GEORGIA
MY COMMISSION EXPIRES FEBRUARY 04, 2023

Prepared By:
Cheryl Gillman, P24-720, 8/16/2022
Consumers Energy Company

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company

RFM 4
RFM 5/2021
8/3/2022

MI65200

1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty

1945 W. Parnall Rd
Jackson, MI 49201

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":
Philip R Copeland
Philip Copeland

The foregoing instrument was acknowledged before me in Lowndes County, ~~Michigan~~ Georgia on 10/14/2022 by Philip Copeland, as joint tenant with full rights of survivorship.

NATALIE HOWELL NOTARY PUBLIC LOWNDES COUNTY, GEORGIA MY COMMISSION EXPIRES FEBRUARY 04, 2023

Natalie Howell
Notary Public
Natalie Howell
Print Name
Lowndes County, Georgia
Acting in Lowndes County
My Commission expires: 02/04/2023

"Grantee":
CONSUMERS ENERGY COMPANY
By: TIM R. CLAUCHERTY
Its: REAL ESTATE P.M.

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on November 16, 20 22, by TIM R. CLAUCHERTY, real estate P.M of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of Jackson

Carrie J Main
Notary Public
Print Name
County,
Acting in County
My Commission expires:

Prepared By:
Cheryl Gillman, P24-720, 8/16/2022

After recording, return to:
Carrie Main, P24-20

UNOFFICIAL COPY

202200003394
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
RECEIVED ON
09/28/2022 08:33 AM
RECORDED ON
09/28/2022 09:22 AM
RECORDING FEE 30.00
PAGES: 4
ELECTRONICALLY RECORDED

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000214
Agreement #MI00000065184

NOTICE IS HEREBY GIVEN that WILLIAM MAKELA, aka William G. Makela and KIMBERLY A. MAKELA, aka Kimberly Ann Makela, husband and wife (together with its successors, assigns and heirs, "**Owner**"), whose address is 1628 E. Mill Street, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 8-23-22

[Signatures on Following Page]

RFM 4
RFM 5/2021
8/3/2022

MI65184

UNOFFICIAL COPY

IN WITNESS WHEREOF, Owner and Grantee, acting through their duly authorized representatives, have executed this Agreement with the intent that it be effective as of the Effective Date, and certify that they have read, understand and agree to the terms and conditions of this Agreement.

"Owner":

Kimberly A. Makela, aka Kimberly Ann Makela

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on 8/23/2022 by Kimberly A. Makela, aka Kimberly Ann Makela, A single person.

Notary Public

David Webb

Jackson County, Michigan

Acting in Alcona County

My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

"Grantee":
CONSUMERS ENERGY COMPANY

By: TIM R. CLAUCHERTY

Its: REAL ESTATE PM

The foregoing instrument was acknowledged before me in JACKSON County, Michigan, on 9-13-, 2022, by TIM R. CLAUCHERTY, Real estate PM of Consumers Energy Company, a Michigan corporation, for the corporation.

Notary Public

Print Name

_____ County, _____

Acting in _____ County

My Commission expires: _____

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of Jackson

**Prepared by:**
**Cheryl Gillman, P24-720, 8/16/2022**
**Consumers Energy Company**
**1945 W Parnall Road**
**Jackson, MI 49201**
**Project Manager: Judy Sutherland**

**After recording, return to:**
**Carrie Main, P24-720**
**Consumers Energy Company**
**1945 W Parnall Road**
**Jackson, MI 49201**

RFM 4
RFM 5/2021
8/3/2022

MI65184

Received Alcona County Michigan
11/28/2022 8:34 AM

DocId:8020221
Tx:4015517

202200004068
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
11/28/2022 10:03 AM
RECORDING FEE 30.00
PAGES: 4

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000215
Agreement #MI00000065188

NOTICE IS HEREBY GIVEN that JAMES H. FREELAND, Trustee of the JAMES H. FREELAND TRUST dated September 30, 1992 (together with its successors, assigns and heirs, "**Owner**"), whose address is 1121 S. Cruzen Road, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 9-9-2022

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee, acting through their duly authorized representatives, have executed this Agreement with the intent that it be effective as of the Effective Date, and certify that they have read, understand and agree to the terms and conditions of this Agreement.

"Owner": JAMES H. FREELAND TRUST dated September 30, 1992

James H. Freeland, Trustee

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on 9-9-2022 by James H. Freeland, Trustee of the James H. Freeland Trust

dated September 30, 1992, for the trust.

Notary Public

David O. Webb

Jackson County, Michigan

Acting in Alcona County

My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

"Grantee":
CONSUMERS ENERGY COMPANY

By: TIM R. CLAUCHERTY

Its: REAL ESTATE PM

The foregoing instrument was acknowledged before me in JACKSON County, Michigan, on November 10, 2022, by TIM R. CLAUCHERTY, real estate P.M. of Consumers Energy Company, a Michigan corporation, for the corporation.

Notary Public

Print Name

County,

Acting in JACKSON County

My Commission expires:

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The Southwest 1/4 of the Southwest 1/4 of Section 22, Town 26 North, Range 8 East.

Parcel ID: 050-022-300-040-00

AND

The Northwest 1/4 of the Southwest 1/4 and the West 1/2 of the Northwest 1/4 of Section 27, Town 26 North, Range 8 East; Except: commencing at the West 1/4 corner, North 01° East, 327.17 feet to the Point of Beginning, thence North 88° East 330.00 feet, thence North 01° West 660.00 feet, thence South 88° West 330.00 feet, thence South 01°East 660.00 feet to the Point of Beginning.

Parcel ID: 050-027-200-020-00

Prepared by:
Cheryl A. Gillman
1945 W. Parnall Rd
Jackson, MI 49201

202200003400
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
RECEIVED ON
09/28/2022 11:28 AM
RECORDED ON
09/28/2022 11:33 AM
RECORDING FEE 30.00
PAGES: 5
ELECTRONICALLY RECORDED

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000216
Agreement #MI00000065194

NOTICE IS HEREBY GIVEN that RICHARD C. ROHRBORN, aka RICHARD CHARLES ROHRBORN, a man (together with its successors, assigns and heirs, "**Owner**"), whose address is 11310 Bellwood Drive, Plymouth, Michigan 48170, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 8-23-22.

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Richard C. Rohrborn, aka Richard Charles Rohrborn

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on 8/23/2022 by Richard C. Rohrborn, aka Richard Charles Rohrborn a man.

Notary Public

David Webb

Jackson County, Michigan

Acting in Alcona County

My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

"Grantee":
CONSUMERS ENERGY COMPANY

By: Lindsey Ewig
Lindsey Ewig

Its: Real Estate Supervisor

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on August 23 ~~30~~, 20 22, by Lindsey Ewig, real estate Supervisor of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of JACKSON

Notary Public

Print Name

_____ County, _____

Acting in _____ County

My Commission expires: _____

Prepared By:
Cheryl Gillman, P24-720, 8/16/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim R. Claucherty

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

RFM 4
RFM 5/2021
8/3/2022

MI65194

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

Part of the Northwest 1/4 of the Northwest 1/4 of Section 26, Town 26 North, Range 8 East, described as: Commencing at the Northwest corner of Section 26; thence East 990.00 feet; thence South 1320.00 feet; thence West 990.00 feet; thence North 1320.00 feet to the Point of Beginning. Subject to any part thereof that may be used for road right of way purposes.

Parcel ID: 050-026-200-004-30

AND

The North 1/2 of the Northeast 1/4 of Section 27, Town 26 North, Range 8 East.

Parcel ID: 050-027-100-005-00

202200003478
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
RECEIVED ON
10/05/2022 08:31 AM
RECORDED ON
10/05/2022 09:13 AM
RECORDING FEE 30.00
PAGES: 4
ELECTRONICALLY RECORDED

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000217
Agreement #MI00000065196

NOTICE IS HEREBY GIVEN that JOHN G. PARSONS, a man (together with its successors, assigns and heirs, "Owner"), whose address is 2099 E. Fowler Road, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "Grantee"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 8-23-22.

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

John G. Parsons

John G. Parsons

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on 8/23/2022 by John G. Parsons, a man.

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

David O. Webb

Notary Public

Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2027

"Grantee":
CONSUMERS ENERGY COMPANY

By: Alice Johnson
**Alice Johnson**

Its: REAL ESTATE SUPERVISOR

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on 8-23, 2022, by Alice Johnson, real estate Supervisor of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of Jackson

Carrie J Main

Notary Public

Print Name

_____ County, _____

Acting in _____ County

My Commission expires: _____

Prepared By:
Cheryl Gillman, P24-720, 8/16/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim R. Claucherty

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

RFM 4
RFM 5/2021
8/3/2022

MI65196

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The West 1/2 of the Southwest 1/4 of Section 23, Town 26 North, Range 8 East.

Parcel ID: 050-023-300-010-00

202500000636
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
RECEIVED ON
03/19/2025 01:43 PM
RECORDED ON
03/19/2025 01:48 PM
RECORDING FEE 30.00
PAGES: 9
ELECTRONICALLY RECORDED

**MEMORANDUM OF COLLECTION EASEMENT AGREEMENT**
Gustin Solar

SAP# 40516246
Agreement# MI00000065200

NOTICE IS HEREBY GIVEN that **ROGER A. LOVE and ROSEMARY LOVE, husband and wife and LAURAL L. COPELAND, a married woman, BENTLY A. LOVE, a married man, CALEB COPELAND, a single man and PHILLIP COPELAND, a single man as joint tenants with full rights of survivorship** (together with its successors, assigns and heirs, "**Owner**"), whose address is 1141 South F-41, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Among these easements and rights, Owner has granted Grantee the following:

1. Grant of Easement. Owner has granted, conveyed, and warranted to Grantee an exclusive easement to use, convert, maintain and capture the flux of solar energy on, over, across, under and through the Property, including, but not limited to, the air space thereon, for the purposes set forth below (the "Easement").

1.1. Purposes of the Easement. The Easement is solely and exclusively for solar energy purposes (as such term is broadly defined, including ancillary rights related thereto and necessary for the development and operation of Solar Facilities [as defined below]), and not for any other purpose, and Grantee shall have the exclusive right to develop and use the Property for solar energy purposes and to derive all profits therefrom, including but not limited to the following activities (collectively, "**Site Activities**"):

1.1.1. Converting solar energy into electrical energy, and collecting and transmitting the electrical energy so converted;

1.1.2. Determining the feasibility of solar energy conversion and other power generation on the Property or on adjacent lands, including studies of solar energy emitted upon, over and across the Property and other meteorological data, environmental studies and extracting soil samples;

1.1.3. Constructing, laying down, installing, using, replacing, relocating, reconstructing and removing from time to time, and monitoring, maintaining, repairing and operating the following: (i) solar energy collection and electrical generating equipment of any kind (including, without limitation, any such equipment utilizing photovoltaic and/or solar thermal technology (collectively, "**Solar Generating Equipment**"); (ii) underground electrical distribution, collection, transmission and communications lines or cables, electric combiners, inverters, transformers and substations, energy storage facilities, and telecommunications equipment; (iii) roads and crane pads; (iv) meteorological measurement equipment; (v) control buildings, operations and maintenance

facilities and buildings; and (vi) installing, operating, maintaining, repairing and replacing any other improvements, whether accomplished by Grantee or a third party authorized by Grantee, that Grantee reasonably determines are necessary, useful or appropriate to accomplish any of the foregoing (all of the above, including the Solar Generating Equipment, collectively "**Solar Facilities**").

1.2. Other Uses. Owner agrees to provide Grantee with current information concerning the status and location of all other land uses occurring on the Property (including, without limitation, agricultural use, industrial use and oil and gas exploration and production activities). Any new leases or renewals and or extensions of existing leases, options to lease, seismic operations, or any other agreement made by Owner with a third party regarding the Property (including any of the foregoing related to water, oil, gas or other minerals) shall be consented to by Grantee in writing and contain language that states that such third party shall not disturb, interfere with, preclude, or destroy Grantee's rights hereunder and its interest is subordinate to the right, title and interest of Grantee.

2. Term. The term of the Easement shall commence on the Effective Date and continue for the following described periods (collectively, the "**Term**"):

2.1. Development Term. This Easement, and the easements set forth herein, shall be for an initial term (the "**Development Term**") commencing on the Effective Date and continuing until the earlier to occur of: (a) five (5) years after the Effective Date or (b) the date on which the Operations Term commences. Grantee shall use the Development Term to satisfy the "all appropriate inquiry" requirements as outlined in MCL324.20126(3)(h).

2.2. Operations Term. Grantee will have the right and option (the "**Agreement Extension Option**") to extend the term of this Easement, and the easements set forth herein, for an additional thirty (30) year term (the "**Operations Term**"), by giving Owner written notice of such extension at any time prior to the expiration of the five (5) year period described above, whereupon the Operations Term shall commence (and the Development Term shall end) on the date specified in such notice, which date shall in any event not be later than the expiration of such five (5) year period (the "**Operations Term Commencement Date**"). For purposes of this Easement, if the Operations Term Commencement Date does not fall on January 1st, the first year of the Operations Term shall be the remainder of the calendar year in which Grantee exercises the Agreement Extension Option (with Fees and all other annual payments being prorated during such partial year to include prorated credit for Development Term Fee for the remainder of such partial year) and the first full calendar year thereafter (with Fees and all other annual payments being made for such first full calendar year of the Operations Term and every year thereafter as provided in Exhibit B). If Grantee so requests, the Parties shall promptly execute and record a supplemental memorandum of this Easement setting forth the expiration date of the Operations Term. Grantee shall not be permitted to commence construction of any Solar Facilities on the Property unless and until Grantee has exercised the Agreement Extension Option.

2.3. Extended Term. Provided that Grantee has not fully surrendered or terminated this Easement, then on or before the expiration of the Operations Term, Grantee may, at its option, extend the term of this Easement, and the easements set forth herein, for an additional ten (10) year period (the "**Extended Term**"). Grantee may exercise its option to extend this Easement for the Extended Term by giving Owner written notice thereof on or before the date that is ninety (90) days prior to the expiration of the Operations Term or with written approval of Owner if less than 90 days prior to the expiration of the Operations Term.

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated **02/20/2025.**

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Collection Easement Agreement.

"Owner":

Roger A Love

Roger A. Love

Rosemary Love

Rosemary Love

The foregoing instrument was acknowledged before me in Alcona County, Michigan, on February 20th, 2025

by Roger A. Love and Rosemary Love, husband and wife.

David O. Webb

David O. Webb - Notary Public

Jackson County, Michigan

Acting in Alcona County

My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

RFM
RFM 9/16/2022

MI65200

IN WITNESS WHEREOF, Owner and Grantee, acting through their duly authorized representatives, have executed this Agreement with the intent that it be effective as of the Effective Date, and certify that they have read, understand and agree to the terms and conditions of this Agreement.

"Owner":

Laural L. Copeland

Laural L. Copeland

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on 3-1-25 by Laural L. Copeland, a married woman.

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

David O. Webb

David O. Webb - Notary Public

Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2027

RFM
RFM 9/16/2022

MI65200

IN WITNESS WHEREOF, Owner and Grantee, acting through their duly authorized representatives, have executed this Agreement with the intent that it be effective as of the Effective Date, and certify that they have read, understand and agree to the terms and conditions of this Agreement.

"Owner":

Bently A. Love

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on 3-1-25 by Bently A. Love, a married man.

David O. Webb - Notary Public

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2027

RFM
RFM 9/16/2022

MI65200

IN WITNESS WHEREOF, Owner and Grantee, acting through their duly authorized representatives, have executed this Agreement with the intent that it be effective as of the Effective Date, and certify that they have read, understand and agree to the terms and conditions of this Agreement.

"Owner":

Caleb Copeland
**aka Caleb A Copeland**

The foregoing instrument was acknowledged before me in Brooks County, Georgia,
***aka Caleb A Copeland**
on March 9, 2025 by Caleb Copeland, a single man.

NATALIE WALL HOWELL NOTARY PUBLIC BROOKS COUNTY, GEORGIA MY COMMISSION EXPIRES JANUARY 17, 2027

Natalie Howell
Notary Public

Natalie Howell
Print Name

Brooks County, Georgia
Acting in Brooks County

My Commission expires: Jan. 17, 2027

RFM
RFM 9/16/2022

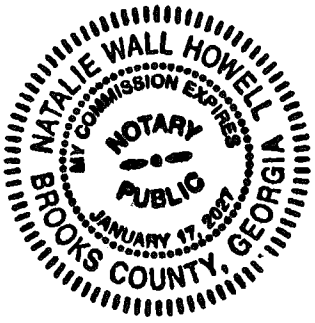
MI65200

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Collection Easement Agreement.

"Owner":

Phillip Copeland
**aka Phillip R Copeland**

The foregoing instrument was acknowledged before me in Brooks County, Georgia,
***aka Phillip R Copeland**
on March 9, 2025 by Phillip Copeland, a single man.




Natalie Howell
Notary Public

Natalie Howell
Print Name

Brooks County, Georgia
Acting in Brooks County

My Commission expires: Jan. 17, 2027

RFM
RFM 9/16/2022

MI65200

"Grantee":
**CONSUMERS ENERGY COMPANY**

By: Kaycee Valkuchak

Its: Kaycee Valkuchak
Project Manager

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on March 18, 2025, by, Kaycee Valkuchak, Project Manager of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main
**Carrie J Main** Notary Public

Print Name
**Hillsdale** County, Michigan

Acting in **Jackson** County

My Commission expires: **1-6-2029**

Prepared By:
Joshua W. Berg, 04/22/2024 Rev 11/6/2024
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Jason Vasaris (LT)

After recording, return to:
Carrie Main, P24-720
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

RFM
RFM 9/16/2022

MI65200

Jackson, MI 49201
Project Manager: Jason Vasaris (LT)

Jackson, MI 49201

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The Northwest Quarter (NW-1/4) of Section 25, T26N, R8E lying West of Old D & M right of way Except commencing at the intersection of said rail road right of way and North section line West 132.00 feet, South 122.00 feet, East 119.00 feet more or less to West right of Way of said rail road, North to point of beginning and East Half (E-1/2) of the Southwest Quarter (SW-1/4) lying West of old D & M right of way, Except F-41 right of way.

Parcel ID: 050-025-200-015-00

RFM
RFM 9/16/2022

MI65200

202200003365
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
RECEIVED ON
09/26/2022 08:40 AM
RECORDED ON
09/26/2022 09:29 AM
RECORDING FEE 30.00
PAGES: 4
ELECTRONICALLY RECORDED

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000219
Agreement #MI00000065204

NOTICE IS HEREBY GIVEN that J. PARSONS LAND COMPANY, LLC, a Michigan limited liability company (together with its successors, assigns and heirs, "**Owner**"), whose address is 2099 E. Fowler Road, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 8-23-22

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner": J. Parsons Land Company, LLC, a Michigan limited liability company

Signature

By: John G PARSONS
Print Name

Its: OWNER 100%
Print Title

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on 8/23/2022 by John G. Parsons **Owner**
Print Name Print Title

of J. Parsons Land Company, LLC, a Michigan limited liability company, on behalf of the company.

David O. Webb
Notary Public

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

David Webb

Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2027

"Grantee":
CONSUMERS ENERGY COMPANY

By: TIM R. CLAUCHERTY

Its: REAL ESTATE PM

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on 9-13-, 20 22, by TIM R. CLAUCHERTY, Real Estate PM of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main
Notary Public

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of Jackson

Print Name

_____ County, _____

Acting in _____ County

My Commission expires: _____

Prepared By:
Cheryl Gillman, P24-720, 8/16/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim R. Claucherty

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

RFM 4
RFM 5/2021
8/3/2022

MI65204

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The Southeast 1/4 of the Northeast 1/4 of Section 35, Town 26 North, Range 8 East.

Parcel ID: 050-035-100-015-00

Received Alcona County Michigan
2/21/2023 8:24 AM

DocId:6021211
Tx:4016322

202300000415
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
02/21/2023 09:29 AM
RECORDING FEE 30.00
PAGES: 4

MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246 - Gustin Solar
Master Tract #SOL000000000220
Agreement #MI00000065209

NOTICE IS HEREBY GIVEN that BRUCE BUURMA AND AMY BUURMA, husband and wife (together with its successors, assigns and heirs, "Owner"), whose address is 2141 S. Wice Road, Mikado, Michigan 48745, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "Grantee"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Townships of Gustin and Harrisville, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 1-6-23.

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

JASMIN STENCEL, Notary Public
State of Michigan, County of St. Clair
My commission expires May 15, 2027
Acting in the County of St. Clair

"Owner":

Bruce Buurma

Amy Buurma

The foregoing instrument was acknowledged before me in St. Clair County, Michigan, on 1/6/2023 by Bruce Buurma and Amy Buurma, husband and wife.

Jasmin R. Stencel
Notary Public
Print Name
St. Clair County, Michigan
Acting in St. Clair County
My Commission expires: 5/15/2027

"Grantee":
**CONSUMERS ENERGY COMPANY**

By:
Tim R. Claucherty
Its: Real Estate PM

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on February 6, 23, by Tim R. Claucherty, Real estate PM of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J. Main
Notary Public
Print Name
Hillsdale County, Mi
Acting in Jackson County
My Commission expires: 1-6-2029

Prepared By: Cheryl Gillman, P24-720, 8/16/2022
Revised: 11/01/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

RFM 4
RFM 5/2021
8/3/2022

MI65209

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

Commencing at the West 1/4 corner of Section 24, Town 26 North, Range 8 East; thence North 3° East, 527.012 feet; thence South 86° East, 600.00 feet; thence North 3° East 291.00 feet; thence North 86° West, 600.00 feet; thence North 3° East, 491.94 feet; thence South 86° East, 491.94 feet; thence South 86° East, 2689.96 feet; thence South 3° West, 1308.02 feet; thence North 86° West, 2681.12 feet to the Point of Beginning.

Parcel ID: 050-024-200-010-02

202500003174
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
RECEIVED ON
09/18/2025 08:31 AM
RECORDED ON
09/18/2025 08:40 AM
RECORDING FEE 30.00
PAGES: 4
ELECTRONICALLY RECORDED

# FIRST AMENDMENT TO MEMORANDUM OF SOLAR EASEMENT AGREEMENT

Gustin Solar

SAP# 40516246
Agreement# MI00000065209

By a certain Memorandum of Solar Easement Agreement dated January 6th, 2023 and recorded February 21st, 2023 as Document No. 202300000415, Alcona County Records, record notice was previously given that **BRUCE T. BUURMA and AMY L. BUURMA, husband and wife** (together with its successors, assigns and heirs, "**Owner**"), whose address is 2141 South Wice Road, Mikado, Michigan 48745, granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering land in the Township of Gustin, County of Alcona, State of Michigan described as:

SEE EXHIBIT A ATTACHED HERETO AND MADE A PART HEREOF

as set forth in a certain Solar Easement Agreement (the "Agreement) dated January 6th, 2023, between Owner and Grantee.

NOTICE IS HEREBY GIVEN that Owner and Grantee have now agreed on certain revisions to Exhibit A-1 of the Agreement, and for ease of reference, that they have amended the Agreement (to include all of their agreed-upon revisions as well as all unchanged provisions) between Owner and Grantee.

IN WITNESS WHEREOF, the Owner and Grantee have executed this First Amendment to Memorandum of Solar Easement Agreement this 19th day of August, 2025.

EXEMPT FROM TRANSFER TAX PER MCL 207.526(f) AND MCL 207.505(f)

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed and have affixed their respective signatures as of the day and year first above written.

"Owner":

Bruce T. Buurma

Amy L. Buurma

Acknowledgement

The foregoing instrument was acknowledged before me in Iosco County, Michigan, on 8/19/2025 by BRUCE T. BUURMA and AMY L. BUURMA, husband and wife.

Notary Public

Marian Nevala

Print Name

Iosco County, Michigan

Acting in Iosco County

My Commission expires: 12/18/2031

RFM 3/1/2024

MI65209

"Grantee":
**CONSUMERS ENERGY COMPANY**

By: Kaycee Valkuchak
Signature

Kaycee Valkuchak
Print Name

Its: Project Manager
Print Title

Acknowledgement

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on September 11, 2025, by Kaycee Valkuchak, Project Manager of Consumers Energy Company, a Michigan corporation, for the corporation.

CARRIE J. MAIN
Notary Public, State of Michigan
County of Hillsdale
Acting in Jackson County
My Commission Expires Jan. 6, 2029

Carrie J Main
Notary Public

Print Name

County, Michigan

Acting in County

My Commission expires:

Prepared By:
Liana Berg, 06/30/2025
Consumers Energy Company
One Energy Plaza
Jackson, MI 49201
Project Manager: Kaycee Valkuchak

After recording, return to:
Carrie Main, EP7-464
Consumers Energy Company
One Energy Plaza
Jackson, MI 49201

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

Commencing at the West 1/4 corner of Section 24, Town 26 North, Range 8 East; thence North 3° East, 527.012 feet; thence South 86° East, 600.00 feet; thence North 3° East 291.00 feet; thence North 86° West, 600.00 feet; thence North 3° East, 491.94 feet; thence South 86° East, 491.94 feet; thence South 86° East, 2689.96 feet; thence South 3° West, 1308.02 feet; thence North 86° West, 2681.12 feet to the Point of Beginning.

Parcel ID: 050-024-200-010-02

Received Alcona County Michigan
11/7/2022 8:32 AM

DocId:8019740
Tx:4015294

202200003861
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
11/07/2022 11:11 AM
RECORDING FEE 30.00
PAGES: 5

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000227
Agreement #MI00000065234

NOTICE IS HEREBY GIVEN that ALAN G. GILL and PATRICIA L. GILL, husband and wife, as tenants by the entireties (together with its successors, assigns and heirs, "**Owner**"), whose address is 1516 S F-41, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 9-8-22.

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Alan G. Gill

Patricia L. Gill

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on 9-8-22 by Alan G. Gill and Patricia L. Gill, husband and wife, as tenants by the entireties.

Notary Public

David O. Webb

Franklin County, Michigan

Acting in Alcona County

My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

"Grantee":
CONSUMERS ENERGY COMPANY

By: TIM R. CLAUCHERTY

Its: REAL ESTATE P.M.

The foregoing instrument was acknowledged before me in JACKSON County, Michigan, on October 26, 20 22, by TIM R. CLAUCHERTY, real estate PM of Consumers Energy Company, a Michigan corporation, for the corporation.

Notary Public

Carrie J. Main

Print Name

Hillsdale County, Mi.

Acting in Jackson County

My Commission expires: 1-6-2029

Prepared By:
Cheryl Gillman, P24-720, 8/17/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The North 1/2 of the Northeast 1/4 of Section 35, Town 26 North, Range 8 East.

Parcel ID: 050-035-100-006-00

AND

The Southwest 1/4 of the Northeast 1/4 of Section 35, Town 26 North, Range 8 East, described as: Commencing at the North 1/4 corner thence South1874.65 feet to the Point of Beginning; Thence North 89 degrees East, 660.00 feet; thence South 89 degrees West, 660.00 feet; thence North 330.00 feet to the Point of Beginning.

Parcel ID: 050-035-100-010-01

Received Alcona County Michigan
11/28/2022 8:34 AM

DocId:8020222
Tx:4015517

202200004069
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
11/28/2022 10:03 AM
RECORDING FEE 30.00
PAGES: 6

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000230
Agreement #MI00000065244

NOTICE IS HEREBY GIVEN that RONALD N. PROCUNIER, a man and DESSMUS A. PROCUNIER, a man, as joint tenants with full rights of survivorship (together with its successors, assigns and heirs, "**Owner**"), whose address is 1347 S. F-41, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 8-23-22

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":
Ronald N Procunier
Ronald N. Procunier

The foregoing instrument was acknowledged before me in Alcona County, Michigan, on 8-23-22 by Ronald N. Procunier, a man, as joint tenant with full rights of survivorship.

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

David O. Webb
Notary Public
David Webb
Print Name
Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12-3-27

"Grantee":
CONSUMERS ENERGY COMPANY
By:
Tim R. Claucherty
Its: Real Estate PM

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on 9-13-, 2022, by Tim R. Claucherty, real estate pm of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of

Carrie J Main
Notary Public
Print Name
County,
Acting in Jackson County
My Commission expires:

Prepared By:
Cheryl Gillman, P24-720, 8/17/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Judy Sutherland

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner": Dessmus A Procunier
Dessmus A. Procunier

The foregoing instrument was acknowledged before me in Alcona County, Michigan, on 8-23-22 by Dessmus A. Procunier, a man, as joint tenant with full rights of survivorship.

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

David O. Webb
Notary Public
David O Webb
Print Name
Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12-3-27

"Grantee":
CONSUMERS ENERGY COMPANY

By: Tim R. Claucherty
Its: Real Estate PM

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on 9-13, 2022, by Tim R. Claucherty of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of

Carrie J Main
Notary Public
Print Name
County,
Acting in Jackson County
My Commission expires:

Prepared By:
Cheryl Gillman, P24-720, 8/17/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim R. Claucherty

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The South 1/2 of the Northwest 1/4 of the Southwest 1/4 and the Southwest 1/4 of the Southwest 1/4 of Section 25, Town 26 North, Range 8 East, except commencing at the Southwest corner, North 1249.00 feet to the Point of Beginning, North 250.00 feet, East 250.00 feet, South 250.00 feet, West 250.00 feet to the Point of Beginning, except the F-41 Right of Way.

Parcel ID: 050-025-300-010-00

AND

The North 1/2 of the Northwest 1/4 of Section 35, Town 26 North, Range 8 East.

Parcel ID: 050-035-200-005-00

Received Alcona County Michigan
1/3/2023 8:31 AM

DocId:8020642
Tx:4015857

202300000008
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
01/03/2023 10:15 AM
RECORDING FEE 30.00
PAGES: 4

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000232
Agreement #MI00000065250
Gustin Solar

NOTICE IS HEREBY GIVEN that HUGH J. MACMASTER AND BARBARA A. MACMASTER, husband and wife (together with its successors, assigns and heirs, "**Owner**"), whose address is 329 Liberty Street Ephrata PA 17522.

has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 11-21-22

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Hugh J. MacMaster

Barbara A. MacMaster

The foregoing instrument was acknowledged before me in Lancaster County, Pennsylvania on November 21, 2022 by Hugh A. MacMaster and Barbara A. MacMaster, husband and wife.

Rachel Erin Figgins Notary Public

Rachel Erin Figgins
Print Name

Lancaster County, Pennsylvania

Acting in Lancaster County

My Commission expires: July 2, 2024

Commonwealth of Pennsylvania - Notary Seal
Rachel Erin Figgins, Notary Public
Lancaster County
My commission expires July 2, 2024
Commission number 1270440
Member, Pennsylvania Association of Notaries

"Grantee":
CONSUMERS ENERGY COMPANY

By: TIM R. CLAUCHERTY

Its: REAL ESTATE PM

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on 10/19, 20 22, by Tim R. Claucherty, Real Estate PM of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main
Notary Public

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of Jackson

Print Name

County,

Acting in County

My Commission expires:

Prepared By:
Cheryl Gillman, P24-720, 9/28/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

A parcel of land in the Southeast 1/4 of Section 25, Town 26 North, Range 8 East, described as: Commencing at the Southeast corner, thence North 88° West 272.94 feet, thence North 03° East 872.72 feet, thence South 88° East 227.21 feet, thence South 871.94 feet to the Point of Beginning.

Parcel ID: 050-025-400-005-35

Received Alcona County Michigan
1/3/2023 8:31 AM

DocId:8020640
Tx:4015857

202300000006
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
01/03/2023 10:15 AM
RECORDING FEE 30.00
PAGES: 4

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000256
Agreement #MI00000065321
Gustin Solar

NOTICE IS HEREBY GIVEN that BRIAN T. MACMASTER and KAREN M. MACMASTER, husband and wife (together with its successors, assigns and heirs, "Owner"), whose address is 6700 Woodbury Road, Laingsburg, Michigan 48848, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "Grantee"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 11-17-22

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Brian T. MacMaster

Karen M. MacMaster

The foregoing instrument was acknowledged before me in Shiawassee County, Michigan,

On 11-17-22 by Brian T. MacMaster and Karen M. MacMaster, husband and wife.

Notary Public

David O. Webb
Jackson County, Michigan
Acting in Shiawassee County
My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Shiawassee

"Grantee":
CONSUMERS ENERGY COMPANY

By:
TIM R. CLAUCHERTY

Its: REAL ESTATE PM

The foregoing instrument was acknowledged before me in JACKSON County, Michigan, on 12/19, 20 22, by TIM R. CLAUCHERTY, real estate pm of Consumers Energy Company, a Michigan corporation, for the corporation.

Notary Public

Print Name

County,

Acting in County

My Commission expires:

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of Jackson

Prepared By:
Tabitha Metcalf, P24-720, 8/19/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

RFM 4
RFM 5/2021
8/3/2022

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The East 1/2 of the Northeast 1/4 and the Northeast 1/4 of the Southeast 1/4 of Section 36, Town 26 North, Range 8 East.

Parcel ID: 050-036-100-005-00

202200003401
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
RECEIVED ON
09/28/2022 11:31 AM
RECORDED ON
09/28/2022 11:41 AM
RECORDING FEE 30.00
PAGES: 4
ELECTRONICALLY RECORDED

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000259
Agreement #MI00000065330

NOTICE IS HEREBY GIVEN that RANDALL SAUTTER, a man (together with its successors, assigns and heirs, "Owner"), whose address is 3666 E. Walker Road, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "Grantee"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 8/26/22.

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Randall Sautter

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on August 26/2022 by Randall Sautter, a man.

Notary Public

David O. Webb

Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

"Grantee":
CONSUMERS ENERGY COMPANY

By: Lindsey Ewig
**Lindsey Ewig**

Its: Real Estate Supervisor

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on August 26, 2022, by Lindsey Ewig, real estate Supervisor of Consumers Energy Company, a Michigan corporation, for the corporation.

Notary Public

Print Name

_____ County, _____

Acting in _____ County

My Commission expires: _____

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting In the County of Jackson

Prepared By:
Tabitha Metcalf, P24-720, 8/19/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

RFM 4
RFM 5/2021
8/3/2022

MI65330

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The West 1/2 of the Southwest 1/4 of Section 24, Town 26 North, Range 8 East, except commencing at the Southeast corner; thence North 330.00 feet; thence West 660.00 feet; thence South 330.00 feet; thence East 660.00 feet to the Point of Beginning, except the F-41 Right of Way.

Parcel ID: 050-024-300-015-00

Received Alcona County Michigan
5/22/2023 8:39 AM

DocId:8022723
Tx:4017620

202300001588
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
05/22/2023 09:48 AM
RECORDING FEE 30.00
PAGES: 6

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

Gustin Solar

SAP# 40516246
Master Tract# SOL000000000265
Agreement# MI00000065341

NOTICE IS HEREBY GIVEN that MARK A. YOUNK and ELIZABETH A. YOUNK, husband and wife (together with its successors, assigns and heirs, "**Owner**"), whose address is 1835 E. Dewar Road, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Among these easements and rights, Owner has granted Grantee the following:

1. Grant of Easement. Owner has granted, conveyed, and warranted to Grantee an exclusive easement to use, convert, maintain and capture the flux of solar energy on, over, across, under and through the Property, including, but not limited to, the air space thereon, for the purposes set forth below (the "Easement").

1.1. Purposes of the Easement. The Easement is solely and exclusively for solar energy purposes (as such term is broadly defined, including ancillary rights related thereto and necessary for the development and operation of Solar Facilities [as defined below]), and not for any other purpose, and Grantee shall have the exclusive right to develop and use the Property for solar energy purposes and to derive all profits therefrom, including but not limited to the following activities (collectively, "**Site Activities**"):

1.1.1. Converting solar energy into electrical energy, and collecting and transmitting the electrical energy so converted;

1.1.2. Determining the feasibility of solar energy conversion and other power generation on the Property or on adjacent lands, including studies of solar energy emitted upon, over and across the Property and other meteorological data, environmental studies and extracting soil samples;

1.1.3. Constructing, laying down, installing, using, replacing, relocating, reconstructing and removing from time to time, and monitoring, maintaining, repairing and operating the following: (i) solar energy collection and electrical generating equipment of any kind (including, without limitation, any such equipment utilizing photovoltaic and/or solar thermal technology (collectively, "**Solar Generating Equipment**"); (ii) overhead and underground electrical distribution, collection, transmission and communications lines or cables, electric

combiners, inverters, transformers and substations, energy storage facilities, and telecommunications equipment; (iii) roads and crane pads; (iv) meteorological measurement equipment; (v) control buildings, operations and maintenance facilities and buildings; and (vi) installing, operating, maintaining, repairing and replacing any other improvements, whether accomplished by Grantee or a third party authorized by Grantee, that Grantee reasonably determines are necessary, useful or appropriate to accomplish any of the foregoing (all of the above, including the Solar Generating Equipment, collectively "**Solar Facilities**").

1.2. Other Uses. Owner agrees to provide Grantee with current information concerning the status and location of all other land uses occurring on the Property (including, without limitation, agricultural use, industrial use and oil and gas exploration and production activities). Any new leases or renewals and or extensions of existing leases, options to lease, seismic operations, or any other agreement made by Owner with a third party regarding the Property (including any of the foregoing related to water, oil, gas or other minerals) shall be consented to by Grantee in writing and contain language that states that such third party shall not disturb, interfere with, preclude, or destroy Grantee's rights hereunder and its interest is subordinate to the right, title and interest of Grantee.

2. Term. The term of the Easement shall commence on the Effective Date and continue for the following described periods (collectively, the "**Term**"):

2.1. Development Term. This Easement, and the easements set forth herein, shall be for an initial term (the "**Development Term**") commencing on the Effective Date and continuing until the earlier to occur of: (a) five (5) years after the Effective Date or (b) the date on which the Operations Term commences. Grantee shall use the Development Term to satisfy the "all appropriate inquiry" requirements as outlined in MCL324.20126(3)(h).

2.2. Operations Term. Grantee will have the right and option (the "**Agreement Extension Option**") to extend the term of this Easement, and the easements set forth herein, for an additional thirty (30) year term (the "**Operations Term**"), by giving Owner written notice of such extension at any time prior to the expiration of the five (5) year period described above, whereupon the Operations Term shall commence (and the Development Term shall end) on the date specified in such notice, which date shall in any event not be later than the expiration of such five (5) year period (the "**Operations Term Commencement Date**"). For purposes of this Easement, if the Operations Term Commencement Date does not fall on January 1st, the first year of the Operations Term shall be the remainder of the calendar year in which Grantee exercises the Agreement Extension Option (with Fees and all other annual payments being prorated during such partial year to include prorated credit for Development Term Fee for the remainder of such partial year) and the first full calendar year thereafter (with Fees and all other annual payments being made for such first full calendar year of the Operations Term and every year thereafter as provided in Exhibit B). If Grantee so requests, the Parties shall promptly execute and record a supplemental memorandum of this Easement setting forth the expiration date of the Operations Term. Grantee shall not be permitted to commence construction of any Solar Facilities on the Property unless and until Grantee has exercised the Agreement Extension Option.

2.3. Extended Term. Provided that Grantee has not fully surrendered or terminated this Easement, then on or before the expiration of the Operations Term, Grantee may, at its option, extend the term of this Easement, and the easements set forth herein, for an additional ten (10) year period (the "**Extended Term**"). Grantee may exercise its option to extend this Easement for the Extended Term by giving Owner written notice thereof on or before the date that is ninety (90) days prior to the expiration of the Operations Term or with written approval of Owner if less than 90 days prior to the expiration of the Operations Term.

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 5-1-23

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Mark A. Younk

Elizabeth A. Younk

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on May 1st 2023 by Mark A. Younk and Elizabeth A. Younk, husband and wife.

David O. Webb - Notary Public

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/02/2027

"Grantee":
**CONSUMERS ENERGY COMPANY**

By:

Its: TIM R CLAUCHERTY REAL ESTATE AM

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on 5-10-, 2023, by TIM R. CLAUCHERTY real estate pm of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of Jackson

Notary Public

Print Name

County,

Acting in County

My Commission expires:

Prepared By: Tabitha Metcalf, P24-720, 8/19/2022
Revised By: Cheryl A. Gillman, P24-720, 4/18/2023
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The North 1/2 of the Southeast 1/4 of the Southeast 1/4 of Section 26, Town 26 North, Range 8 East.

Parcel ID: 050-026-400-010-01

202200003433
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
RECEIVED ON
10/03/2022 09:35 AM
RECORDED ON
10/03/2022 09:42 AM
RECORDING FEE 30.00
PAGES: 4
ELECTRONICALLY RECORDED

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000267
Agreement #MI00000065415

NOTICE IS HEREBY GIVEN that RICKY C. PROCUNIER AND DENISE M. PROCUNIER, husband and wife (together with its successors, assigns and heirs, "Owner"), whose address is 1638 S. Bush Lane, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "Grantee"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 8/26/2022.

[Signatures on Following Page]

RFM 4
RFM 5/2021
8/3/2022

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Ricky C. Procunier

Denise M Procunier

**Denise M. Procunier**

Procunier

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on 8/26/2022 by Ricky C. Procunier and Denise M. Procunier, husband and wife.

David O. Webb

Notary Public

David O. Webb

Jackson County, Michigan

Acting in Alcona County

My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

"Grantee":
CONSUMERS ENERGY COMPANY

By: Lindsey Ewig

**Lindsey Ewig**

Its: Real Estate Supervisor

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on August 26, 2022, by Lindsey Ewig, real estate Supervisor of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main

Notary Public

Print Name

_____ County, _____

Acting in _____ County

My Commission expires: _____

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of Jackson

Prepared By:
Cheryl Gillman, P24-720, 8/23/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

RFM 4
RFM 5/2021
8/3/2022

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The Southwest 1/4 of the Northeast 1/4, Section 36, Town 26 North, Range 8 East.

Parcel ID:050-036-100-020-00

RFM 4
RFM 5/2021
8/3/2022

Received Alcona County Michigan
11/7/2022 8:32 AM

DocId:8019934
Tx:4015294

202200003855
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
11/07/2022 11:11 AM
RECORDING FEE 30.00
PAGES: 4

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP #40668579
Master Tract # SOL000000000295
Agreement # MI0000065623

NOTICE IS HEREBY GIVEN that DANIEL R. HARBER and KIMBERLY A. HARBER (together with its successors, assigns and heirs, "Owner"), whose address is 2760 Old Shore Road, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "Grantee"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 9-8-22

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Daniel R. Harber

Kimberly A. Harber

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on 9-8-22 (Date) by Daniel R. Harber and Kimberly A. Harber.

Notary Public

David O. Webb

Jackson County, Michigan

Acting in Alcona County

My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

"Grantee":
CONSUMERS ENERGY COMPANY

By: TIM R. CLAUCHERTY

Its: REAL ESTATE P.M.

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on October 26, 20 22, by TIM R. CLAUCHERTY, real estate pm of Consumers Energy Company, a Michigan corporation, for the corporation.

Notary Public

Carrie J Main

Print Name

Hillsdale County, Mi

Acting in Jackson County

My Commission expires: 1-6-2029

Prepared By:
Scott Hoeft, P24-720, 8/28/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-720
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The West 1/2 of the Northeast 1/4 of Section 24, Town 26 North, Range 8 East.

Parcel ID: 050-24-100-010-00

Received Alcona County Michigan
11/7/2022 8:32 AM

DocId:8019939
Tx:4015294

202200003860
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
11/07/2022 11:11 AM
RECORDING FEE 30.00
PAGES: 4

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract #SOL000000000307
Agreement #MI00000066248

NOTICE IS HEREBY GIVEN that CARLIN K. SONBERG and SHELLY S. SONBERG, Trustees of the CARLIN K. SONBERG and SHELLY S. SONBERG REVOCABLE LIVING TRUST AGREEMENT, dated June 30, 2005 (together with its successors, assigns and heirs, "Owner"), whose address is 1352 South F-41, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "Grantee"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 9-16-2022

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner": CARLIN K. SONBERG and SHELLY S. SONBERG REVOCABLE LIVING TRUST AGREEMENT, dated June 30, 2005

Carlin K Sonberg

Carlin K. Sonberg, Trustee

Shelly S Sonberg

Shelly S. Sonberg, Trustee

The foregoing instrument was acknowledged before me in Alcona County, Michigan, on 9-16-2022 (Date) by Carlin K. Sonberg and Shelly S. Sonberg, Trustees of the Carlin K. Sonberg and Shelly S. Sonberg Revocable Living Trust Agreement, dated June 30, 2005, for the trust.

David O. Webb

Notary Public

Jackson County, Michigan

Acting in Alcona County

My Commission expires: 12-3-2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

"Grantee":
CONSUMERS ENERGY COMPANY

By:

Tim R. Claucherty

Its: Real Estate P.M.

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on October 26, 2022, by Tim R. Claucherty, real estate PM of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main

Carrie J. Main

Notary Public

Hillsdale County, Michigan

Acting in Jackson County

My Commission expires: 1-6-2029

Prepared By:
Scott Hoeft, P24-720, 9/15/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-720
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

Received Alcona County Michigan
11/28/2022 8:34 AM

DocId:8020219
Tx:4015517

202200004066
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
11/28/2022 10:03 AM
RECORDING FEE 30.00
PAGES: 4

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246
Master Tract # SOL000000000365
Agreement #MI00000067452

NOTICE IS HEREBY GIVEN that BERNARD E. TRUMAN AND DELLA R. TRUMAN, husband and wife, (together with its successors, assigns and heirs, "**Owner**"), whose address is 1465 S. Cruzen Road, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 11-1-22.

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Bernard E. Truman

Della R. Truman

The foregoing instrument was acknowledged before me in Alcona County, Michigan, on Nov. 1, 2022 by Bernard E. Truman and Della R. Truman, husband and wife.

Notary Public

David O. Webb

Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

"Grantee":
CONSUMERS ENERGY COMPANY

By:

Its: TIM R. CLAUCHERTY REAL ESTATE PM

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on November 16, 2022, by TIM R. CLAUCHERTY, real estate PM of Consumers Energy Company, a Michigan corporation, for the corporation.

Notary Public

Print Name

County,

Acting in Jackson County

My Commission expires:

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of

Prepared By:
Cheryl A. Gillman, P24-720, 10/31/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The Southwest 1/4 of the Southwest 1/4, Section 27, Town 26 North, Range 8 East, EXCEPT the East 225.00 feet.

Parcel ID: 050-027-300-008-00

Received Alcona County Michigan
12/5/2022 8:34 AM

DocId:8020337
Tx:4015611

202200004151
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
12/05/2022 10:49 AM
RECORDING FEE 30.00
PAGES: 4

MEMORANDUM OF SOLAR EASEMENT AGREEMENT
Gustin Solar

SAP# 40516246
Master Tract # SOL000000000384
Agreement # MI00000067627

NOTICE IS HEREBY GIVEN that EVAN M. FOWLER (together with its successors, assigns and heirs, "Owner"), whose address is 3666 E. McNeil Road, Lincoln, Michigan 48742 has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "Grantee"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 11-11-22

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner": Evan M. Fowler

Evan M. Fowler

The foregoing instrument was acknowledged before me in Alcona County, Michigan, on November 11, 2022 by Evan M. Fowler.

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

David O. Webb
Notary Public

David O. Webb

Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2022

"Grantee":

CONSUMERS ENERGY COMPANY

By: Tim R. Claucherty

Its: Real Estate PM

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on November 22, 2022, by Tim R. Claucherty, Real Estate P.M. of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of

Carrie J Main
Notary Public

Print Name

County,

Acting in Jackson County

My Commission expires:

Prepared By:
Cheryl A. Gillman, P24-720, 11/09/2022
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-720
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The Northeast 1/4 of the Northeast 1/4, Section 24, Town 26 North, Range 8 East, EXCEPT: Commencing at the Northeast corner; thence South 89° West, 1052.48 feet along the centerline of Dewar Road to the Point of Beginning; thence South 417.42 feet; thence South 89°West, 268.52 feet; thence North 417.42 feet; thence North 89 ° East, 268.52 feet along to centerline of Dewar Road to the Point of Beginning.

Parcel ID: 050-024-100-005-00

Received Alcona County Michigan
5/22/2023 8:39 AM

DocId:8022722
Tx:4017620

202300001587
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
05/22/2023 09:48 AM
RECORDING FEE 30.00
PAGES: 6

**MEMORANDUM OF SOLAR EASEMENT AGREEMENT**

**Gustin Solar**

SAP# 40516246
Master Tract #SOL000000000643
Agreement #MI00000069386

NOTICE IS HEREBY GIVEN that JACOB GOLBECK AND ANDREA GOLBECK, husband and wife, (together with its successors, assigns and heirs, "**Owner**"), whose address is 1464 S. F-41, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Among these easements and rights, Owner has granted Grantee the following:

1. Grant of Easement. Owner has granted, conveyed, and warranted to Grantee an exclusive easement to use, convert, maintain and capture the flux of solar energy on, over, across, under and through the Property, including, but not limited to, the air space thereon, for the purposes set forth below (the "Easement").

1.1. Purposes of the Easement. The Easement is solely and exclusively for solar energy purposes (as such term is broadly defined, including ancillary rights related thereto and necessary for the development and operation of Solar Facilities [as defined below]), and not for any other purpose, and Grantee shall have the exclusive right to develop and use the Property for solar energy purposes and to derive all profits therefrom, including but not limited to the following activities (collectively, "**Site Activities**"):

1.1.1. Converting solar energy into electrical energy, and collecting and transmitting the electrical energy so converted;

1.1.2. Determining the feasibility of solar energy conversion and other power generation on the Property or on adjacent lands, including studies of solar energy emitted upon, over and across the Property and other meteorological data, environmental studies and extracting soil samples;

1.1.3. Constructing, laying down, installing, using, replacing, relocating, reconstructing and removing from time to time, and monitoring, maintaining, repairing and operating the following: (i) solar energy collection and electrical generating equipment of any kind (including, without limitation, any such equipment utilizing photovoltaic and/or solar thermal technology (collectively, "**Solar Generating Equipment**"); (ii) overhead and underground electrical distribution, collection, transmission and communications lines or cables, electric combiners, inverters, transformers and substations, energy storage facilities, and telecommunications equipment; (iii) roads and crane pads; (iv) meteorological measurement equipment; (v) control buildings,

operations and maintenance facilities and buildings; and (vi) installing, operating, maintaining, repairing and replacing any other improvements, whether accomplished by Grantee or a third party authorized by Grantee, that Grantee reasonably determines are necessary, useful or appropriate to accomplish any of the foregoing (all of the above, including the Solar Generating Equipment, collectively "**Solar Facilities**").

1.2. Other Uses. Owner agrees to provide Grantee with current information concerning the status and location of all other land uses occurring on the Property (including, without limitation, agricultural use, industrial use and oil and gas exploration and production activities). Any new leases or renewals and or extensions of existing leases, options to lease, seismic operations, or any other agreement made by Owner with a third party regarding the Property (including any of the foregoing related to water, oil, gas or other minerals) shall be consented to by Grantee in writing and contain language that states that such third party shall not disturb, interfere with, preclude, or destroy Grantee's rights hereunder and its interest is subordinate to the right, title and interest of Grantee.

2. Term. The term of the Easement shall commence on the Effective Date and continue for the following described periods (collectively, the "**Term**"):

2.1. Development Term. This Easement, and the easements set forth herein, shall be for an initial term (the "**Development Term**") commencing on the Effective Date and continuing until the earlier to occur of: (a) five (5) years after the Effective Date or (b) the date on which the Operations Term commences. Grantee shall use the Development Term to satisfy the "all appropriate inquiry" requirements as outlined in MCL324.20126(3)(h).

2.2. Operations Term. Grantee will have the right and option (the "**Agreement Extension Option**") to extend the term of this Easement, and the easements set forth herein, for an additional thirty (30) year term (the "**Operations Term**"), by giving Owner written notice of such extension at any time prior to the expiration of the five (5) year period described above, whereupon the Operations Term shall commence (and the Development Term shall end) on the date specified in such notice, which date shall in any event not be later than the expiration of such five (5) year period (the "**Operations Term Commencement Date**"). For purposes of this Easement, if the Operations Term Commencement Date does not fall on January 1st, the first year of the Operations Term shall be the remainder of the calendar year in which Grantee exercises the Agreement Extension Option (with Fees and all other annual payments being prorated during such partial year to include prorated credit for Development Term Fee for the remainder of such partial year) and the first full calendar year thereafter (with Fees and all other annual payments being made for such first full calendar year of the Operations Term and every year thereafter as provided in Exhibit B). If Grantee so requests, the Parties shall promptly execute and record a supplemental memorandum of this Easement setting forth the expiration date of the Operations Term. Grantee shall not be permitted to commence construction of any Solar Facilities on the Property unless and until Grantee has exercised the Agreement Extension Option.

2.3. Extended Term. Provided that Grantee has not fully surrendered or terminated this Easement, then on or before the expiration of the Operations Term, Grantee may, at its option, extend the term of this Easement, and the easements set forth herein, for an additional ten (10) year period (the "**Extended Term**"). Grantee may exercise its option to extend this Easement for the Extended Term by giving Owner written notice thereof on or before the date that is ninety (90) days prior to the expiration of the Operations Term or with written approval of Owner if less than 90 days prior to the expiration of the Operations Term.

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated 5-1-23.

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Jacob Golbeck

Andrea Golbeck

The foregoing instrument was acknowledged before me in Alcona County, Michigan,

on May 1, 2023 by Jacob Golbeck and Andrea Golbeck, husband and wife.

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

David O. Webb - Notary Public

Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2027

"Grantee":
**CONSUMERS ENERGY COMPANY**

By:

Its: TIM R. CLAUCHERTY REAL ESTATE PM

The foregoing instrument was acknowledged before me in JACKSON County, Michigan, on 5-10-, 20 23, by TIM R. CLAUCHERTY Real Estate PM of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of Jackson

Notary Public

Print Name

County,

Acting in County

My Commission expires:

Prepared By: Cheryl Gillman, P24-720, 1/26/2023
Revised: 4/18/2023
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The South 1/2 of the Southeast 1/4 of the Southeast 14, Section 26, Town 26 North, Range 8 East.

Parcel ID: 050-026-400-010-02

Received Alcona County Michigan
5/30/2023 8:37 AM

DocId:8022811
Tx:4017688

202300001662
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
05/30/2023 09:22 AM
RECORDING FEE 30.00
PAGES: 5

# MEMORANDUM OF SOLAR EASEMENT AGREEMENT

SAP# 40516246 - Gustin Solar
Master Tract # SOL000000000846
Agreement #MI00000070983

NOTICE IS HEREBY GIVEN that TIM GOZDOR (together with its successors, assigns and heirs, "**Owner**"), whose address is 12279 Mentz Drive, Bruce Township, Michigan 48065, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Township of Gustin, County of Alcona, State of Michigan:

Among these easements and rights, Owner has granted Grantee the following:

1. Grant of Easement. Owner has granted, conveyed, and warranted to Grantee an exclusive easement to use, convert, maintain and capture the flux of solar energy on, over, across, under and through the Property, including, but not limited to, the air space thereon, for the purposes set forth below (the "Easement").

1.1. Purposes of the Easement. The Easement is solely and exclusively for solar energy purposes (as such term is broadly defined, including ancillary rights related thereto and necessary for the development and operation of Solar Facilities [as defined below]), and not for any other purpose, and Grantee shall have the exclusive right to develop and use the Property for solar energy purposes and to derive all profits therefrom, including but not limited to the following activities (collectively, "**Site Activities**"):

1.1.1. Converting solar energy into electrical energy, and collecting and transmitting the electrical energy so converted;

1.1.2. Determining the feasibility of solar energy conversion and other power generation on the Property or on adjacent lands, including studies of solar energy emitted upon, over and across the Property and other meteorological data, environmental studies and extracting soil samples;

1.1.3. Constructing, laying down, installing, using, replacing, relocating, reconstructing and removing from time to time, and monitoring, maintaining, repairing and operating the following: (i) solar energy collection and electrical generating equipment of any kind (including, without limitation, any such equipment utilizing photovoltaic and/or solar thermal technology (collectively, "**Solar Generating Equipment**"); (ii) overhead and underground electrical distribution, collection, transmission and communications lines or cables, electric combiners, inverters, transformers and substations, energy storage facilities, and telecommunications equipment; (iii) roads and crane pads; (iv) meteorological measurement equipment; (v) control buildings, operations and maintenance facilities and buildings; and (vi) installing, operating, maintaining, repairing and

replacing any other improvements, whether accomplished by Grantee or a third party authorized by Grantee, that Grantee reasonably determines are necessary, useful or appropriate to accomplish any of the foregoing (all of the above, including the Solar Generating Equipment, collectively "**Solar Facilities**").

1.2. Other Uses. Owner agrees to provide Grantee with current information concerning the status and location of all other land uses occurring on the Property (including, without limitation, agricultural use, industrial use and oil and gas exploration and production activities). Any new leases or renewals and or extensions of existing leases, options to lease, seismic operations, or any other agreement made by Owner with a third party regarding the Property (including any of the foregoing related to water, oil, gas or other minerals) shall be consented to by Grantee in writing and contain language that states that such third party shall not disturb, interfere with, preclude, or destroy Grantee's rights hereunder and its interest is subordinate to the right, title and interest of Grantee.

2. Term. The term of the Easement shall commence on the Effective Date and continue for the following described periods (collectively, the "**Term**"):

2.1. Development Term. This Easement, and the easements set forth herein, shall be for an initial term (the "**Development Term**") commencing on the Effective Date and continuing until the earlier to occur of: (a) five (5) years after the Effective Date or (b) the date on which the Operations Term commences. Grantee shall use the Development Term to satisfy the "all appropriate inquiry" requirements as outlined in MCL324.20126(3)(h).

2.2. Operations Term. Grantee will have the right and option (the "**Agreement Extension Option**") to extend the term of this Easement, and the easements set forth herein, for an additional thirty (30) year term (the "**Operations Term**"), by giving Owner written notice of such extension at any time prior to the expiration of the five (5) year period described above, whereupon the Operations Term shall commence (and the Development Term shall end) on the date specified in such notice, which date shall in any event not be later than the expiration of such five (5) year period (the "**Operations Term Commencement Date**"). For purposes of this Easement, if the Operations Term Commencement Date does not fall on January 1st, the first year of the Operations Term shall be the remainder of the calendar year in which Grantee exercises the Agreement Extension Option (with Fees and all other annual payments being prorated during such partial year to include prorated credit for Development Term Fee for the remainder of such partial year) and the first full calendar year thereafter (with Fees and all other annual payments being made for such first full calendar year of the Operations Term and every year thereafter as provided in Exhibit B). If Grantee so requests, the Parties shall promptly execute and record a supplemental memorandum of this Easement setting forth the expiration date of the Operations Term. Grantee shall not be permitted to commence construction of any Solar Facilities on the Property unless and until Grantee has exercised the Agreement Extension Option.

2.3. Extended Term. Provided that Grantee has not fully surrendered or terminated this Easement, then on or before the expiration of the Operations Term, Grantee may, at its option, extend the term of this Easement, and the easements set forth herein, for an additional ten (10) year period (the "**Extended Term**"). Grantee may exercise its option to extend this Easement for the Extended Term by giving Owner written notice thereof on or before the date that is ninety (90) days prior to the expiration of the Operations Term or with written approval of Owner if less than 90 days prior to the expiration of the Operations Term.

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated May 10, 2023

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Solar Easement Agreement.

"Owner":

Tim Gozdor

The foregoing instrument was acknowledged before me in Macomb County, Michigan,

on May 10, 2023 by Tim Gozdor.

David O. Webb - Notary Public

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Macomb

Jackson County, Michigan
Acting in Macomb County
My Commission expires: 12/03/2027

"Grantee":
**CONSUMERS ENERGY COMPANY**

By: TIM R. CLAUCHERTY
Its: REAL ESTATE PM

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on 5-22-, 2023, by TIM R. CLAUCHERTY, Tim R. Claucherty, real estate pm of Consumers Energy Company, a Michigan corporation, for the corporation.

Carrie J Main

Notary Public

Carrie J Main
NOTARY PUBLIC - STATE OF MICHIGAN
County of Hillsdale
My Commission Expires January 6, 2029
Acting in the County of Jackson

Print Name

_____ County, _____

Acting in _____ County

My Commission expires: _____

Prepared By: Cheryl A. Gillman, P24-720, 4/21/2023
Revised: 5/5/2023
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Tim Claucherty (JS)

After recording, return to:
Carrie Main, P24-20
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The West 1/2 of the Northeast 1/4 of the Northwest 1/4 of Section 24, Town 26 North, Range 8 East.

Parcel ID: 050-024-200-005-04

Received Alcona County Michigan
4/4/2023 1:44 PM

Doc Id:8022120
Tx:4017153

202300001163
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORBES
04/04/2023 02:06 PM
RECORDING FEE 30.00
PAGES: 7

STATE OF MICHIGAN
ALCONA COUNTY, MI
04/04/2023
202300001163
REAL ESTATE TRANSFER TAX
33.00 CO
225.00 ST
TX # 4017153

# MEMORANDUM OF EASEMENT AGREEMENT

THIS MEMORANDUM OF EASEMENT AGREEMENT (this "**Memorandum**"), is made, dated and effective as of February 25, 2023 (the "**Effective Date**"), by **Bruce Buurma and Amy Buurma**, husband and wife of 2141 Wice Rd, Mikado, Michigan, 48748 ("**Owner**"), and **Sapling Solar, LLC**, a Delaware limited liability company, with offices at 226 N. Morgan Street, Suite 200, Chicago, Illinois 60607 ("**Grantee**"), with regards to the following:

1. Solar Agreement. Owner and Grantee did enter into that certain Easement Agreement of even date herewith (the "**Agreement**"), which affects the real property located in the Townships of Gustin and Harrisville, County of Alcona, State of Michigan, as more particularly described in Exhibit A attached hereto (the "**Property**"). Capitalized terms used and not defined herein have the meaning given the same in the Agreement.

2. Grant of Rights. The Agreement grants Grantee: (a) the exclusive right to study, develop and use the Property for converting solar energy into electrical energy and collecting and transmitting the electrical energy so converted; (b) the exclusive right to access, relocate and maintain the "**Project**," as that term is defined in the Agreement, which are located on the Property; (c) an exclusive right to capture, use and convert the unobstructed solar resources over and across the Property; (d) a non-exclusive right for any audio, visual, view, light, shadow, noise, vibration, air turbulence, wake, electromagnetic or other effect of any kind attributable to the development of the Property for solar energy purposes and operation of the Project; (e) the right to subjacent and lateral support for the Project; (f) the right of ingress to and egress from the Project on, under, over and across the Property by means of (A) roads and lanes thereon if existing or (B) such routes, roads and lanes as Grantee may construct from time to time as provided in the Agreement; (g) the exclusive right to erect, construct, reconstruct, replace, relocate, remove, operate, maintain and use, on, under, over and across the Property, in connection with Project overhead and underground electric transmission and communication system lines and facilities; and (h) the right to undertake any other activities, as permitted in the Agreement, necessary to accomplish the purposes of the Agreement.

3. Term; Extensions. The Agreement shall be for an initial Development Term of up to seven (7) years from the Effective Date. If exercised pursuant to the terms and conditions of the Agreement, the term of the Agreement may be extended for a Construction Term of up to two (2) years following

the Development Term. If exercised pursuant to the terms and conditions of the Agreement, the term of the Agreement may be extended for a Production Term of twenty (20) years following the Construction Term. The Agreement also provides for a right to extend the Production Term for up to four (4) separate Extension Terms of five (5) years each, totaling twenty (20) additional years, as determined by Grantee, and if the extension terms and conditions of the Agreement are met, such renewals to be exercised by Grantee at least one hundred eighty (180) days prior to the then-current expiration date of the Production Term or Extension Term, as the case may be. The Restoration Term shall begin on the expiration or earlier termination of (a) the Construction Term, if it occurs and if construction has commenced, or (b) the Production Term, if Grantee does exercise an option to extend the term of the Easement through the Production Term, or (b) the Production Term, if Grantee does exercise an option to extend the term of the Easement through the Production Term, and shall expire on the earlier (y) twelve (12) months from such date, or (z) when Grantee completes the Restoration Obligations. All rights granted pursuant to the Agreement are for a term coterminous with the Agreement.

4. Rights of Mortgagees. Pursuant to the Agreement, any Lender of Grantee or Grantee's assignees has certain rights regarding notice and right to cure any default of Grantee under the Agreement, as well as other rights as set forth in the Agreement.

5. Assignment. Grantee's rights and obligations under the Agreement are assignable without Owner's prior written consent so long as written notice of such assignment is provided to Owner after such assignment is effective. Upon any assignment of all of Grantee's right, title and interest under the Agreement, the assigning Grantee shall automatically (without the need for any writing) be released from all of its obligations and liability under the Agreement, except for liabilities that accrued prior to the date of such transfer.

6. Non-Interference and Setbacks. To the extent permitted by law Owner has waived any and all setbacks and setback requirements, whether imposed by applicable law or by any person or entity, including any setback requirements described in the zoning ordinance of the County or municipality (as applicable) or in any governmental entitlement or permit heretofore or hereafter issued to Grantee, such sublessee or such Affiliate. Owner has agreed not to engage in any activity that might interfere with Grantee's efforts to develop, construct or operate the Project or cause a decrease in the output or efficiency of the Project without the prior written consent of Grantee.

7. Subordination. The Agreement provides that from and after its effective date, any right, title or interest created by Owner in favor of or granted to any third party shall be subject to (i) the Agreement and all of Grantee's rights, title and interests created thereby, (ii) any lien of any lender of Grantee's then in existence on the easement estate created by the Agreement, and (iii) Grantee's right to create a lien in favor of any lender of Grantee's.

8. Agreement Controls. This Memorandum does not supersede, modify, amend or otherwise change the terms, conditions or covenants of the Agreement, and Owner and Grantee executed and are recording this Memorandum solely for the purpose of providing constructive notice of the Agreement and Grantee's rights thereunder. The terms, conditions and covenants of the Agreement are incorporated in this Memorandum by reference as though fully set forth herein.

9. No Ownership. Owner shall have no ownership, lien, security or other interest in any of the Project installed on the Property, or except for as otherwise provided in the Agreement, any profits derived therefrom, and Grantee may remove any or all of the Project at any time.

10. Cooperation. Owner shall fully support and cooperate with Grantee in the conduct of construction and Operations, including in Grantee's efforts to obtain from any governmental authority or any other Person any environmental impact review, permit, entitlement, approval, authorization or other rights necessary or convenient in connection with construction and Operations. Without limiting the generality of the foregoing, in connection with any application by Grantee for a governmental permit, approval, authorization, entitlement or other consent, Owner agrees (and shall use reasonable efforts to cause any such other Person to agree) not to oppose, in any way, whether directly or indirectly, any such application or approval at any administrative, judicial or legislative level. Further, in the event of legal proceedings related to Grantee's use of the Property after the Effective Date, except those arising out of the interpretation and/or enforcement of the Agreement, Owner shall, in all respects, fully cooperate with Grantee in any such proceeding. Owner agrees that Grantee may provide this Memorandum of Easement Agreement in lieu of any affidavit of Owner or other form of Owner's consent (whether oral or written) that may be requested or required in connection with Grantee's efforts to obtain any environmental impact review, permit, entitlement, approval, authorization, agreement or other rights necessary or convenient in Grantee's discretion for the Project.

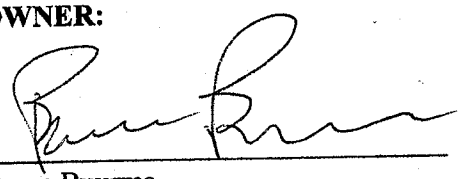
11. Counterparts. This Memorandum may be executed in counterparts, each of which shall be deemed an original and all of which when taken together shall constitute one and the same document.

12. Consideration. The consideration for owner's grant of the Easement Agreement is $30,000.00, receipt of which is acknowledged by Owner.

[signatures appear on following page]

IN WITNESS WHEREOF, the parties have executed this Memorandum to be effective as of the date first written above.

**OWNER:**



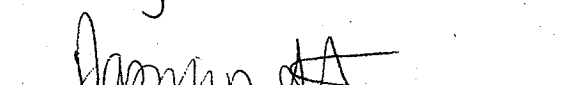
Bruce Buurma

STATE OF Michigan §
§
COUNTY OF St. Clair §

This instrument was acknowledged before me by Bruce Buurma, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal this 10th day of January 2023

JASMIN STENCEL, Notary Public
State of Michigan, County of St. Clair
My commission expires May 15, 2027
Acting in the County of St. Clair



Jasmin Stencel, Notary Public
St. Clair County, Michigan
Acting in the County of St. Clair
My Commission Expires: 5/15/2027
(Notary Seal)

IN WITNESS WHEREOF, the parties have executed this Memorandum to be effective as of the date first written above.

**OWNER:**

Amy Buurma

STATE OF Michigan §
§
COUNTY OF St. Clair §

This instrument was acknowledged before me by Amy Buurma, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that she executed the same for the purposes and consideration therein expressed.

Given under my hand and seal this 6th day of January 2023.

JASMIN STENCEL, Notary Public
State of Michigan, County of St. Clair
My commission expires May 15, 2027
Acting in the County of St. Clair

Jasmin R. Stencel, Notary Public
St. Clair County, Michigan
Acting in the County of St. Clair
My Commission Expires: 5/15/2027
(Notary Seal)

**GRANTEE:**

Sapling Solar, LLC

a Delaware limited liability company

By: _____

Name: Paul Harris

Title: Vice President

COMMONWEALTH OF MASSACHUSETTS §
§
COUNTY OF MIDDLESEX §

This instrument was acknowledged before me by PAUL HARRIS, VICE PRESIDENT of Sapling Solar, LLC, a Delaware limited liability company, on behalf of said company, and known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal this 25th day of FEBRUARY, 2023.

_____
Danielle Changala, Notary Public
Middlesex County, Massachusetts
Acting in the County of Middlesex
My Commission Expires: 1-22-27
(Notary Seal)

**Prepared by and after recording return to:**
**Sergio Trevino**
**Attn: Easement & Title Department**
**Sapling Solar, LLC**
**c/o Ranger Power**
**226 N. Morgan Street, Suite 200**
**Chicago, Illinois 60607**
**Reference:**

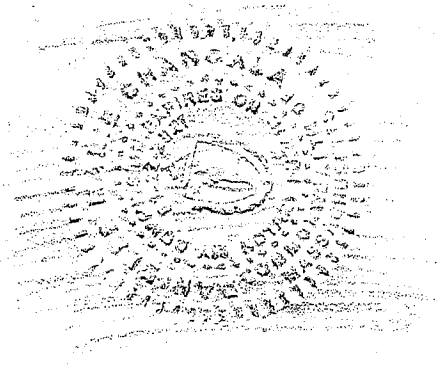


**EXHIBIT "A" to**
MEMORANDUM OF EASEMENT AGREEMENT

**Description of Property**

215.32 acres of land, more or less, in Alcona County, identified as follows:

Parcel Number: 050-022-100-020-01
Acreage: 78
Legal Description:

The SW-1/4 of the NE-1/4 of Section 22, T26N, R8E and the SE-1/4 of the NE-1/4 of Section 22, T26N, R8E except a parcel of land in the Southeast corner thereof that is 10 rods wide, North and South, and 32 rods long, East and West, and which extends Westerly from the center of the established highway on the East boundary thereof.

AND

Parcel Number: 060-018-400-015-01
Acreage: 137.32
Legal Description:

**The Southeast 1/4 of Section 18, Township 26 North, Range 9 East, EXCEPT commencing at the Southeast corner; thence North 369.6 feet to the point of beginning; thence West 316.8 feet; thence North 198 feet; thence East 316.8 feet; thence South 198 feet to the point of beginning; EXCEPT commencing at the Southeast corner; thence North 89°41'54" West along an existing fence line 993.25 feet; thence North 00°45'05" East 988.05 feet; thence South 89°14'55" East 993.22 feet; thence South 00°45'05" West along the East line of said section and the centerline of Coville Road 412.65 feet; thence North 89°14'55" West 316.80 feet; thence South 00°45'05" West 198.00 feet; thence South 89°14'55" East 316.80 feet; thence South 00°45'05" West along the East line of said section and centerline of Coville Road 369.60 feet to the point of beginning.**

202500003324
FILED FOR RECORD IN
ALCONA COUNTY MICHIGAN
MELISSA A. CORDES
RECEIVED ON
10/01/2025 02:00 PM
RECORDED ON
10/01/2025 02:28 PM
RECORDING FEE 30.00
PAGES: 7
ELECTRONICALLY RECORDED

# MEMORANDUM OF COLLECTION EASEMENT AGREEMENT

Gustin Solar

SAP# 40516246
Agreement# MI00000086815

NOTICE IS HEREBY GIVEN that KELVIN D. TRAVIS AND SANDRA K. TRAVIS, husband and wife, and MARK F. TRAVIS, MICHAEL K. TRAVIS AND JESSICA L. KASSUBA, as joint tenants with full rights of survivorship (together with its successors, assigns and heirs, "**Owner**"), whose address is 747 McConnell Road, Harrisville, Michigan 48740, has granted and conveyed to CONSUMERS ENERGY COMPANY, a Michigan corporation (together with its transferees, successors and assigns, "**Grantee**"), whose address is One Energy Plaza, Jackson, Michigan 49201, certain easements and rights covering the following land described in Exhibit A residing in the Gustin, County of Alcona, State of Michigan:

Among these easements and rights, Owner has granted Grantee the following:

1. Grant of Easement. Owner has granted, conveyed, and warranted to Grantee an exclusive easement to use, convert, maintain and capture the flux of solar energy on, over, across, under and through the Property, including, but not limited to, the air space thereon, for the purposes set forth below (the "Easement").

1.1. Purposes of the Easement. The Easement is solely and exclusively for solar energy purposes (as such term is broadly defined, including ancillary rights related thereto and necessary for the development and operation of Solar Facilities [as defined below]), and not for any other purpose, and Grantee shall have the exclusive right to develop and use the Property for solar energy purposes and to derive all profits therefrom, including but not limited to the following activities (collectively, "**Site Activities**"):

1.1.1. Converting solar energy into electrical energy, and collecting and transmitting the electrical energy so converted;

1.1.2. Determining the feasibility of solar energy conversion and other power generation on the Property or on adjacent lands, including studies of solar energy emitted upon, over and across the Property and other meteorological data, environmental studies and extracting soil samples;

1.1.3. Constructing, laying down, installing, using, replacing, relocating, reconstructing and removing from time to time, and monitoring, maintaining, repairing and operating the following: (i) solar energy collection and electrical generating equipment of any kind (including, without limitation, any such equipment utilizing photovoltaic and/or solar thermal technology (collectively, "**Solar Generating Equipment**"); (ii) overhead and underground electrical distribution, collection, transmission and communications lines or cables, electric combiners, inverters, transformers and substations, energy storage facilities, and telecommunications equipment; (iii) roads and crane pads; (iv) meteorological measurement equipment; (v) control buildings, operations and maintenance facilities and buildings; and (vi) installing, operating, maintaining, repairing and replacing any other improvements, whether accomplished by Grantee or a third party authorized by Grantee, that Grantee reasonably determines are necessary, useful or appropriate to accomplish any of the foregoing (all of the above, including the Solar Generating Equipment, collectively "**Solar Facilities**").

1.2. Other Uses. Owner agrees to provide Grantee with current information concerning the status and location of all other land uses occurring on the Property (including, without limitation, agricultural use, industrial use and oil and gas exploration and production activities). Any new leases or renewals and or extensions of existing leases, options to lease, seismic operations, or any other agreement made by Owner with a third party regarding the Property (including any of the foregoing related to water, oil, gas or other minerals) shall be consented to by Grantee in writing and contain language that states that such third party shall not disturb, interfere with, preclude, or destroy Grantee's rights hereunder and its interest is subordinate to the right, title and interest of Grantee.

2. Term. The term of the Easement shall commence on the Effective Date and continue for the following described periods (collectively, the "**Term**"):

2.1. Development Term. This Easement, and the easements set forth herein, shall be for an initial term (the "**Development Term**") commencing on the Effective Date and continuing until the earlier to occur of: (a) five (5) years after the Effective Date or (b) the date on which the Operations Term commences. Grantee shall use the Development Term to satisfy the "all appropriate inquiry" requirements as outlined in MCL324.20126(3)(h).

2.2. Operations Term. Grantee will have the right and option (the "**Agreement Extension Option**") to extend the term of this Easement, and the easements set forth herein, for an additional thirty (30) year term (the "**Operations Term**"), by giving Owner written notice of such extension at any time prior to the expiration of the five (5) year period described above, whereupon the Operations Term shall commence (and the Development Term shall end) on the date specified in such notice, which date shall in any event not be later than the expiration of such five (5) year period (the "**Operations Term Commencement Date**"). For purposes of this Easement, if the Operations Term Commencement Date does not fall on January 1st, the first year of the Operations Term shall be the remainder of the calendar year in which Grantee exercises the Agreement Extension Option (with Fees and all other annual payments being prorated during such partial year to include prorated credit for Development Term Fee for the remainder of such partial year) and the first full calendar year thereafter (with Fees and all other annual payments being made for such first full calendar year of the Operations Term and every year thereafter as provided in Exhibit B). If Grantee so requests, the Parties shall promptly execute and record a supplemental memorandum of this Easement setting forth the expiration date of the Operations Term. Grantee shall not be permitted to commence construction of any Solar Facilities on the Property unless and until Grantee has exercised the Agreement Extension Option.

2.3. Extended Term. Provided that Grantee has not fully surrendered or terminated this Easement, then on or before the expiration of the Operations Term, Grantee may, at its option, extend the term of this Easement, and the easements set forth herein, for an additional ten (10) year period (the "**Extended Term**"). Grantee may exercise its option to extend this Easement for the Extended Term by giving Owner written notice thereof on or before the date that is ninety (90) days prior to the expiration of the Operations Term or with written approval of Owner if less than 90 days prior to the expiration of the Operations Term.

Exempted from transfer tax per MCL 207.526(f) and MCL 207.505(f)

As set forth in that certain Solar Easement Agreement between Owner and Grantee dated Sept. 22, 2025

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum as of the above-mentioned date of the Collection Easement Agreement.

"Owner"

Kelvin D. Travis

Kelvin D. Travis

Sandra K. Travis

Sandra K. Travis

The foregoing instrument was acknowledged before me in Alcona County, Michigan, on Sept. 22, 2025 by Kelvin D. Travis and Sandra K. Travis, husband and wife, as joint tenants with full rights of survivorship.

David O. Webb

David O. Webb - Notary Public
Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

RFM
RFM 9/16/2022

MI86815

"Owner"

Mark Travis

The foregoing instrument was acknowledged before me in Alcona County, Michigan, on Sept 22, 2025 by Mark Travis, as a joint tenant with full rights of survivorship.

David O. Webb - Notary Public
Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

RFM
RFM 9/16/2022

MI86815

"Owner":

Michael K. Travis

Michael K. Travis

The foregoing instrument was acknowledged before me in Alcona County, Michigan, on Sept. 22, 2025 by Michael K. Travis, as a joint tenant with full rights of survivorship.

David O. Webb - Notary Public
Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2027

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

RFM
RFM 9/16/2022

MI86815

"Owner":

Jessica L. Kassuba

The foregoing instrument was acknowledged before me in Alcona County, Michigan, on Sept. 22, 2025 by Jessica L. Kassuba, as a joint tenant with full rights of survivorship.

DAVID O WEBB
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF JACKSON
My Commission Expires December 3, 2027
Acting in the County of Alcona

David O. Webb - Notary Public
Jackson County, Michigan
Acting in Alcona County
My Commission expires: 12/03/2027

"Grantee":
**CONSUMERS ENERGY COMPANY**
By: Kaycee Valkuchak
Its: Kaycee Valkuchak - Project Manager

The foregoing instrument was acknowledged before me in Jackson County, Michigan, on September 29, 2025, by, Kaycee Valkuchak, Project Manager of Consumers Energy Company, a Michigan corporation, for the corporation.

CARRIE J. MAIN
Notary Public, State of Michigan
County of Hillsdale
Acting in Jackson County
My Commission Expires Jan. 6, 2029

Notary Public

Print Name

County, Michigan

Acting in County

My Commission expires:

Prepared By:
Sarah Allbee, 07/23/2025
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201
Project Manager: Kaycee Valkuchak
Revised By: Sarah Allbee, 09/17/25

After recording, return to:
Carrie Main, P24-720
Consumers Energy Company
1945 W. Parnall Rd
Jackson, MI 49201

RFM
RFM 9/16/2022

MI86815

EXHIBIT A

Description of the Property

Land situated in the Township of Gustin, County of Alcona, State of Michigan

The East 1/2 of the North 1/2 of the Southwest 1/4 of the Northwest 1/4 and the South 1/2 of the Southwest 1/4 of the Northwest 1/4 of Section 23, Town 26 North, Range 8 East.

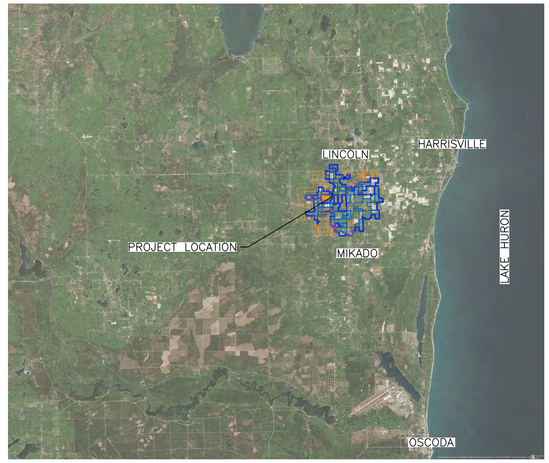
Parcel ID: 050-023-200-010-01

SHEET SIZE: ANSI-D 22x34

# CONSUMERS ENERGY

## GUSTIN SOLAR ENERGY CENTER

PROJECT NO. 192088
ALCONA COUNTY
GUSTIN TOWNSHIP
ISSUED FOR PERMITTING
05/13/26




VICINITY MAP
NOT TO SCALE

SITE INFORMATION:
LAT: 44°38'58.97"N
LONG: 83°26'36.08"W

OWNER:
CONSUMERS ENERGY
(800) 477-5050
1 ENERGY PLAZA
JACKSON, MI 49201

DESIGN ENGINEER:
GRANT ALBANSODER
GLALBANSODER@BURNSMCD.COM
(720) 573-7646
BURNS & MCDONNELL MICHIGAN, INC.
2111 WOODWARD AVE., SUITE 901.
DETROIT, MI 48201

| PROJECT INFORMATION – ALCONA COUNTY – GUSTIN TOWNSHIP | | |
|---|---|---|
| ITEM | QUANTITY | UNIT |
| TOTAL PROPERTY AREA[1] | 3,985.6 | AC |
| PROPERTY AREA USED FOR SOLAR FACILITIES[2] | 2,684.2 | AC |
| AREA WITHIN LIMITS OF DISTURBANCE | 1,371.0 | AC |
| AREA WITHIN PROJECT FENCELINES[2] | 1,266.9 | AC |
| AREA DEVELOPED[3] | 138.4 | AC |
| TREE CLEARING | 35.1 | AC |

1. INCLUDES THE OVERALL CONSUMERS ENERGY PROPERTY BOUNDARY IN GUSTIN TOWNSHIP.
2. SEE TABLE ON DRAWING 220-002 FOR ACREAGE PER PARCEL.
3. DEVELOPMENT IS DEFINED AS EARTH-DISTURBING ACTIVITY, SUCH AS EARTHWORK AND INSTALLATION OF ROADS & STAGING AREAS.

DESCRIPTION OF PROPOSED DEVELOPMENT:
THE PROJECT IS PLANNED TO BE A 241-MEGAWATT AC / 299-MEGAWATT DC PHOTOVOLTAIC POWER GENERATION FACILITY. THE DEVELOPMENT WILL INCLUDE, BUT IS NOT LIMITED TO, SINGLE-AXIS TRACKING SYSTEMS SUPPORTED BY STEEL PILES, CENTRAL INVERTERS INTEGRATED WITH PAD-MOUNT DISTRIBUTION TRANSFORMERS, GRAVEL ACCESS ROADS, UNDERGROUND COLLECTOR CABLES, AND JUNCTION BOXES.

### SHEET LIST TABLE


| SHEET NUMBER | SHEET TITLE |
|---|---|
| GENERAL | |
| CV-200-001 | COVER & INDEX |
| CV-200-002 | LEGEND & ABBREVIATIONS |
| CV-210-001 | CIVIL NOTES 01 |
| CV-210-002 | CIVIL NOTES 02 |
| CV-200-003 | CIVIL NOTES 03 |
| EXISTING CONDITIONS & CLEARING | |
| CV-220-001 | KEY PLAN |
| CV-220-002 | PARCEL IDENTIFICATION & ZONING PLAN |
| CV-221-001 | ENLARGED PLAN 01 |
| CV-221-002 | ENLARGED PLAN 02 |
| CV-221-003 | ENLARGED PLAN 03 |
| CV-221-004 | ENLARGED PLAN 04 |
| CV-221-005 | ENLARGED PLAN 05 |
| CV-221-006 | ENLARGED PLAN 06 |
| CV-221-007 | ENLARGED PLAN 07 |
| CV-221-008 | ENLARGED PLAN 08 |
| CV-221-009 | ENLARGED PLAN 09 |
| SITE IMPROVEMENTS & GRADING | |
| CV-240-001 | KEY PLAN |
| CV-240-002 | PROJECT DELINEATION MAP |
| CV-241-001 | ENLARGED PLAN 01 |
| CV-241-002 | ENLARGED PLAN 02 |
| CV-241-003 | ENLARGED PLAN 03 |
| CV-241-004 | ENLARGED PLAN 04 |
| CV-241-005 | ENLARGED PLAN 05 |
| CV-241-006 | ENLARGED PLAN 06 |
| CV-241-007 | ENLARGED PLAN 07 |
| CV-241-008 | ENLARGED PLAN 08 |
| CV-241-009 | ENLARGED PLAN 09 |
| CV-241-010 | ENLARGED PLAN 10 |
| CV-241-011 | ENLARGED PLAN 11 |
| CV-241-012 | ENLARGED PLAN 12 |
| CV-241-013 | ENLARGED PLAN 13 |
| CV-241-014 | ENLARGED PLAN 14 |
| CV-241-015 | ENLARGED PLAN 15 |
| CV-241-016 | ENLARGED PLAN 16 |
| CV-241-017 | ENLARGED PLAN 17 |
| CV-242-001 | LANDSCAPE PLAN |
| CV-245-001 | PERIMETER FENCE DETAILS |
| CV-245-002 | VEGETATIVE BUFFER DETAIL 01 |
| CV-245-003 | VEGETATIVE BUFFER DETAIL 02 |
| CV-245-004 | SAFETY SIGNS |
| EROSION & SEDIMENT CONTROL | |
| CV-250-001 | KEY PLAN |
| CV-251-001 | ENLARGED PLAN 01 |
| CV-251-002 | ENLARGED PLAN 02 |
| CV-251-003 | ENLARGED PLAN 03 |
| CV-251-004 | ENLARGED PLAN 04 |
| CV-251-005 | ENLARGED PLAN 05 |
| CV-251-006 | ENLARGED PLAN 06 |
| CV-251-007 | ENLARGED PLAN 07 |
| CV-251-008 | ENLARGED PLAN 08 |
| CV-251-009 | ENLARGED PLAN 09 |
| CV-251-010 | ENLARGED PLAN 10 |
| CV-251-011 | ENLARGED PLAN 11 |
| CV-251-012 | ENLARGED PLAN 12 |
| CV-251-013 | ENLARGED PLAN 13 |
| CV-251-014 | ENLARGED PLAN 14 |
| CV-251-015 | ENLARGED PLAN 15 |
| CV-251-016 | ENLARGED PLAN 16 |
| CV-251-017 | ENLARGED PLAN 17 |
| EP-350 | CAB DETAILS |
| EP-351 | ISA ELEVATION VIEW |


STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

GENERAL
COVER & INDEX

SCALE: NOT TO SCALE
JOB: 192088
DRAWING NO. 1823-CV-200
SHEET 001
REV. A
UNIT: N/A

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-200-001.DWG 5/12/2026 8:36 PM GLALBANSODER

SHEET SIZE: ANSI-D 22x34

ABBREVIATIONS:

| | |
|---|---|
| ABC | AGGREGATE BASE COURSE |
| AC | ALTERNATING CURRENT COLLECTION LINE |
| ACO | AT CONTRACTOR'S OPTION |
| AHJ | AUTHORITY HAVING JURISDICTION |
| AVE | AVENUE |
| BMP | BEST MANAGEMENT PRACTICES |
| CL | CENTER LINE |
| CONC | CONCRETE |
| COR | CORNER |
| CY | CUBIC YARD |
| DEC | DECIDUOUS |
| DIA | DIAMETER |
| DR | DRIVE |
| DTL | DETAIL |
| DWG | DRAWING |
| E | EAST / EASTING |
| ECL | EROSION CONTROL LOG |
| EGLE | DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY |
| EL / ELEV | ELEVATION |
| EOP | END OF PIPE |
| EOR | ENGINEER OF RECORD |
| EP | END POINT |
| EPA | ENVIRONMENTAL PROTECTION AGENCY |
| ESMT | EASEMENT |
| EVS | EVERGREENS |
| EXIST / EXIST. | EXISTING |
| FES | FLARED END SECTION |
| FO | FIBER OPTIC LINE (UNDERGROUND) |
| FT | FOOT/FEET |
| G | GAS LINE (UNDERGROUND) |
| GA | GAUGE |
| HDPE | HIGH-DENSITY POLYETHYLENE |
| HR | HOUR |
| HP | HIGH POINT |
| ID | INSIDE DIAMETER |
| INV | INVERTER |
| LOD | LIMITS OF DISTURBANCE |
| LOS | LIMITS OF SEEDING |
| MAX | MAXIMUM |
| MDOT | MICHIGAN DEPARTMENT OF TRANSPORTATION |
| MIN | MINIMUM |
| N | NORTH / NORTHING |
| NE | NORTH EAST |
| NW | NORTH WEST |
| OD | OUTSIDE DIAMETER |
| OHE | OVERHEAD ELECTRIC LINE |
| PC | POINT OF CURVATURE |
| PCC | PORTLAND CEMENT CONCRETE PAVEMENT |
| PI | POINT OF INTERSECTION |
| POB | POINT OF BEGINNING |
| PT | POINT OF TANGENCY |
| PVMT | PAVEMENT |
| R | RADIUS |
| RAD | RADIAN |
| RD | ROAD |
| RCP | REINFORCED CONCRETE PIPE |
| R/W | RIGHT OF WAY |
| SBST | SUBSTATION |
| SE | SOUTHEAST |
| SHB | SHRUBS |
| STA | STATION |
| STD | STANDARD |
| STR | STRUCTURE |
| SW | SOUTHWEST |
| SWPPP | STORMWATER POLLUTION PREVENTION PLAN |
| T | TELEPHONE LINE (UNDERGROUND) |
| TYP / TYP. | TYPICAL |
| UNO | UNLESS NOTED OTHERWISE |
| UTIL | UTILITY |
| YR | YEAR |

LEGEND:

EXISTING CONDITIONS & CLEARING:

- CEMETERY
- CLEARING – TREES/SHRUBS
- 300 EXISTING CONTOUR (MAJOR)
- 322 EXISTING CONTOUR (MINOR)
- CULVERT
- DEMOLITION – LINEAR FEATURE
- DEMOLITION – STRUCTURE
- DITCH – CENTER
- EASEMENTS
- EASEMENTS – UTILITIES
- E ELECTRICAL – OVERHEAD SERVICE LINES
- E ELECTRIC – OVERHEAD DISTRIBUTION LINES
- MV COLLECTION ONLY PARCELS
- FEMA – FLOOD ZONE (A)
- FENCE – GUARDRAIL
- FO FIBER OPTIC – UNDERGROUND
- HISTOLS
- LIGHT POLE
- LIMITS OF EARTHWORK
- MISCELLANEOUS – MAILBOX
- MISCELLANEOUS – SIGN
- MUCK
- POND EDGE
- E POWER – EQUIPMENT
- POWER – STRUCTURE
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- EXISTING BUILDING
- X X EXISTING FENCE
- EXISTING TREELINE
- EXISTING ROADS
- R/W ROAD – RIGHT OF WAY
- STREAM – JURISDICTIONAL
- SWAMP
- T TELEPHONE EQUIPMENT
- TELEPHONE EQUIPMENT – GUY WIRE
- TOWNSHIP BOUNDARY
- E UNDERGROUND – ELECTRIC
- G UNDERGROUND – GAS LINE
- T UNDERGROUND – TELEPHONE
- W UNDERGROUND – WATER
- WATERBODY – JURISDICTIONAL
- WATERBODY – NON-JURISDICTIONAL
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL

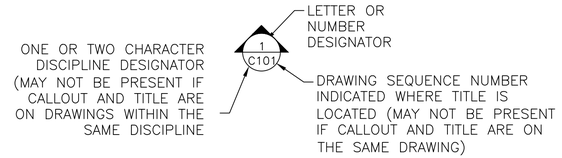
LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 PROPOSED CONTOUR (MAJOR)
- 322 PROPOSED CONTOUR (MINOR)
- CULVERT
- FENCE
- 24-FT DOUBLE SWING GATE
- INVERTER
- AC MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- LOD LIMITS OF DISTURBANCE
- LOD LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- AREAS OF LOW GROW SEED MIX PRE-SEEDING (BY OWNER)
- AREAS OF ADDITIONAL LOW GROW SEED MIX SEEDING PER PROJECT SPECIFICATIONS
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD
- 45 DBA SOUND CONTOUR

EROSION & SEDIMENT CONTROL:

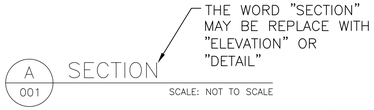
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




SECTION AND DETAIL SYMBOL IDENTIFIERS

SECTION CALLOUT EXAMPLE

DETAIL CALLOUT EXAMPLE




SECTION AND DETAIL TITLE EXAMPLE

SECTION AND DETAIL IDENTIFICATION SYSTEM

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|
| A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

REFERENCE DRAWINGS

SIGNATURE

NAME: G. ALBANSODER

MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

GENERAL
LEGEND & ABBREVIATIONS

UNIT: N/A

SCALE: NOT TO SCALE | JOB: 192088 | DRAWING NO.: 1823-CV-200 | SHEET: 002 | REV.: A

SHEET SIZE: ANSI-D 22X34

050-011-300-040-00 - MELVIN VONFINTEL, A MARRIED MAN, AS TO PARCEL 1:

LEGAL DESCRIPTION:

Parcel 1:

The following described premises situated in the Township of Gustin, County of Alcona, State of Michigan, Parcel 1- Commencing at the West 1/4 corner of Section 11, T26N, R8E, Gustin Township, Alcona County, Michigan; thence South 02 deg. 02'47" East along the West line of said section and the centerline of McConnell Road, 658.73 feet to the Point of Beginning; thence North 89 deg. 34'42" East 2644.44 feet; thence South 01 deg. 21'01" East along the North and South 1/4 line of said section, 1157.56 feet; thence South 89 deg. 41'50" West 1315.26 feet; thence North 01 deg. 41'52" West along the West 1/8 line of said section 495.00 feet; thence South 89 deg. 38'15" West along the South 1/8 line of said section, 1318.25 feet; thence North 02 deg. 02'47" West along the West line of said section and the centerline of McConnell Road 658.37 feet to the Point of Beginning. Said parcel being a part of the Southwest Quarter of said Section 11 and containing 54.98 acres of land, more or less. Being subject to the rights of the public over the Westerly 33 feet thereof.

Parcel No.: 050-011-300-040-00

050-011-300-100-00 & 050-011-300-050-01: MELVIN B. VONFINTEL AND PALMA J. VONFINTEL AKA PALMA VONFINTEL, HUSBAND AND WIFE, AS TO PARCEL 2, 3:

LEGAL DESCRIPTION:

Parcel 2:

The following-described premises:

Situated in Gustin Township, Alcona County, State of Michigan

Parcel D of Certificate of Survey by John F. Oliver, dated 01/02/2006, described as:

Part of the SE 1/4 of the SW 1/4 of Section 11, T26N, R8E, described as: Commencing at the Southwest corner of Section 11, T26N, R8E; thence N89°45'26"E along the South line of said section and the centerline of M-72 Highway 1796.57 feet to the Point of Beginning; thence N01°21'01"W 825.42 feet; thence N89°41'50"E 824.00 feet; thence S01° 21'01"E along the N-S 1/4 line of said section 826.28 feet to the South 1/4 corner of said Section 11; thence S89° 45'26"W along the South line of said section and the centerline of M-72 Highway 824.03 feet to the Point of Beginning.

Parcel ID No.: 050-011-300-100-00

Parcel 3:

Commencing at the SW Corner of Section 11, T26N, R8E, Gustin Township, Alcona County, Michigan; thence N 02° 02'47"W along the West line of said section and the centerline of McConnell Road, 658.73 ft to the Point of Beginning; thence continuing N 02°02'47"W along said West line and said centerline, 658.73 ft; thence N 89° 38'15"E along the South 1/8 line of said section, 1318.25 ft; thence s 01°41 '52"E along the West 1/8 line of said section, 660.00 ft; thence S 89°41 '50"W 1314.28 ft to the Point of Beginning. Said parcel being the N-1/2 of the SW 1/4 of the SW 1/4 of said Section 11 and containing 19.92 acres of land, more or less. Being subject to the rights of the public over the Westerly 33 feet thereof.

Parcel ID No.: 050-011-300-050-01

050-013-200-010-01 & 050-013-200-020-01: DAVID PHINNEY, A MARRIED MAN:

LEGAL DESCRIPTION:

Parcel 1:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan:
The North 1/2 of the Southwest 1/4 of the Northwest 1/4 of Section 13, Township 26 North, Range 8 East.

Parcel ID No.: 050-013-200-010-01

Parcel 2:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan:
The South 1/2 of the Southwest 1/4 of the Northwest 1/4 of Section 13, Township 26 North, Range 8 East.

Parcel ID No.: 050-013-200-020-01

050-014-100-020-00: DENNIS M. DAVENPORT AND SHELLY M. DAVENPORT, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises: Situated in the Township of Gustin, Alcona County, Michigan.

The East 1/2 of the Southeast 1/4 of the Northwest 1/4 AND the Southwest 1/4 of the Northeast 1/4 of Section 14, Township 26 North, Range 8 East.

Parcel ID No.: 050-014-100-020-00

050-014-100-040-00: DAVID PHINNEY, A MARRIED MAN:

LEGAL DESCRIPTION:

Parcel 3:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan:
Parcel C: Commencing at the East 1/4 Corner of Section 14, Township 26 North, Range 8 East, thence North 5°11' East along section line 325.8 feet to Point of Beginning; thence North 85°40' West 660.0 feet; thence North 5°11' East 330.0 feet; thence South 85°40' East 660.0 feet; thence South 5°11' West along section line 330.0 feet to Point of Beginning, being part of the Southeast Quarter of the Northeast Quarter of Section 14, Township 26 North, Range 8 East, according to survey thereof recorded in Liber 145, Page 882 of Alcona County Records.
AND
Parcel D: Beginning at the East 1/4 Corner of Section 14, Township 26 North, Range 8 East, thence North 85°31'30" West 660.0 feet; thence North 5°11' East 324.1 feet; thence South 85°40' East 660.0 feet; thence South 5°11' West along section line 325.8 feet to Point of Beginning, being part of the Southeast Quarter of the Northeast Quarter of Section 14, Township 26 North, Range 8 East, according to survey thereof recorded in Liber 145, Page 882 of Alcona County Records.
AND
Parcel E: Commencing at the East 1/4 Corner of Section 14, Township 26 North, Range 8 East, thence North 85°31'30" West along the East/West quarter line 660.0 feet to Point of Beginning; thence continuing North 85°31'30" West along the East/West quarter line 657.20 feet; thence North 5°20' East 1297.65 feet; thence South 85°40' East along 1/8 line 654.05 feet; thence South 5°11' West 1314.10 feet to Point of Beginning, being part of the Southeast Quarter of the Northeast Quarter of Section 14, Township

Parcel ID No.: 050-014-100-040-00

050-014-200-005-00: BRIAN D. GERARD:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona, State of Michigan:

The W 1/2 of the NW 1/4 AND the W 1/2 of the NE 1/4 of the NW 1/4 AND the W 1/2 of the SE 1/4 of the NW 1/4 located in Section 14, T26N, R8E.

Parcel ID No.: 050-014-200-005-00

***NOTE: PARCEL SPLIT ON 11/12/2025 PER MCA JOB NUMBER 1054-25-13489A. RESULTANT PARCELS DO NO REFLECT LEGAL DESCRIPTION SHOWN HEREON. SURVEYOR DOES NOT HAVE NEWLY CREATED PARCEL ID NUMBERS AT THIS TIME OF SURVEY.

050-014-300-001-00: SAMUEL J. TANARI AND MARK F. TANARI, CO-TRUSTEES OF THE ARLENE TANARI 2021 IRREVOCABLE TRUST F/B/O MARK F. TANARI DATED OCTOBER 14, 2021 F/K/A FMS TOPS, LLC, A MICHIGAN LIMITED LIABILITY COMPANY, BY DEED RECORDED IN LIBER 470, PAGE 752:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona, and State of Michigan, to- wit:

The NE 1/4 of the SW 1/4 and the W 1/2 of the NW 1/4 of the SE 1/4 and the SW 1/4 of the SE 1/4 and part of the SE 1/4 of the SE 1/4 of Section 14, T26N, R8E.

Also described as:

Commencing at the Southeast corner of Section 14, T26N, R8E; thence N. 89 deg. 36'22"W along the South line of said Section and the centerline of Dewar Road 2648.04 feet to the S 1/4 corner of said Section 14; thence N. 01 deg. 08'19"E along the North-South 1/4 line of said Section 1310.09 feet; thence N. 89 deg. 43'55"W along the South 1/8 line of said Section 1320.55 feet; thence N. 01 deg. 17'31"E along the West 1/8 line of said Section 1307.21 feet; thence S. 89 deg. 51'35"E along the East-West 1/4 line of said Section 1317.10 feet to the Center of said Section 14; thence continuing S. 89 deg. 51'35"E along said East-West 1/4 line and a portion of Clark Road (as certified) 658.46 feet; thence S. 01 deg. 03'36"W 1311.53 feet; thence S. 89 deg. 43'55"E along the South 1/8 line of said Section 680.24 feet; thence S. 00 deg. 58'55"W along the East 1/8 line of said Section 631.57 feet; thence S. 89 deg. 43'55'E 1322.18 feet; thence S. 00 deg. 49'33"W along the East line of said Section and the centerline of F-41 Highway 684.27 feet 10 the point of beginning. Description taken from Survey dated March 30, 2010 by Alcona Area Land Survey.

Parcel ID No.: 050-014-300-001-00

050-014-300-010-00: KATHLEEN L. ROBLESKI AND KENNETH F. SADEK AND NANCY E. KULLMAN AND THOMAS C. SADEK AND LYNDA M. KOSCO AND KRISTIN E. MORTON AND KEVIN M. KOSCO, AS TENANTS IN COMMON, AS THEIR RESPECTIVE INTERESTS MAY APPEAR, BY DEEDS RECORDED IN LIBER 194, PAGE 293 AND INSTRUMENT NO. 202300002884:

LEGAL DESCRIPTION:

Land situated in the Township of Gustin, County of Alcona, State of Michigan, more particularly described as:

The N.W. 1/4 of the S.W. 1/4, Section 14, Township 26 North, Range 8 East.

(For informational purposes only)
Commonly Known As: VL S McConnell Rd.

Parcel ID No.: 050-014-300-010-00

050-014-300-020-00: ASHLEY TAIT, A SINGLE WOMAN:

LEGAL DESCRIPTION:

The Following described premises situated in the Township of Gustin, Alcona County and State of Michigan, to-wit:

The Southeast one quarter of the Southwest one quarter of Section 14, Town 26 North, Range 8 East EXCEPT beginning at the Southwest corner of said Southeast one quarter of the Southwest one quarter; thence North 466.7 feet along the West line of said Southeast one quarter of the Southwest one quarter; thence East parallel to the South line of said Section 14, 466.7 feet; thence South 466.7 feet to the South line of said Section 14; thence West 466.7 feet along the South line of Section 14 to the Point of beginning.

Parcel ID No.: 050-014-300-020-00

050-015-100-005-00: THE CHARLES E. AND BARBARA J. MCCLOREY FAMILY REVOCABLE LIVING TRUST:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona, and State of Michigan, towit:

The Northeast Quarter (NE1/4) of the Northeast Quarter (NE1/4) of Section 15, Town 26 North Range 8 East, Gustin Township, Alcona County, Michigan.

Parcel ID No.: 050-015-100-005-00

050-015-100-060-00: NICHOLAS L. CORDES AND HELEN-ANN E. CORDES, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as:

The Southeast Quarter (SE-1/4) of the Northeast Quarter (NE-1/4) of Section 15, T26N, R8E, Alcona County, Michigan.

Parcel ID No.: 050-015-100-060-00

050-022-100-015-02: MARK A. YOUNK AND ELIZABETH A. YOUNK, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises to wit:

Situated in the Township of Gustin, Alcona County, Michigan.

The West 1/2 of the Northwest 1/4 of the Northeast 1/4 of Section 22, Township 26 North, Range 8 East.

LESS AND EXCEPT:

The following-described premises situated in the Township of Gustin, County of Alcona, State of Michigan, and
described as follows, VIZ:

Commencing at the North 1/4 Corner of Section 22, T26N, R8E, Gustin Township, Alcona County, Michigan; thence N88°43'35"E along the North line of said section and the centerline of Dewar Road, 491.71 ft to the Point of Beginning; thence continuing N88°43'35"E along said North line and said centerline, 152.00 ft; thence S00°24'32"E 316.33 ft; thence S86°23'57"W 106.19 ft; thence N04°45'50"W 127.40 ft; thence N06°15'30"W 58.29 ft; thence S86°23'37"W 22.50 ft; thence N03°43'12"W 136.42 ft to the Point of Beginning. Said parcel being a part of the NW- 1/4 of the NE-1/4 of said Section 22 and containing 0.94 acres of land, more or less. HAVING and GRANTING rights for Ingress and Egress over Parcel "A" and HAVING right for Ingress and Egress over Parcel "D", as conveyed in Liber 542, Page 624, in Public Records of Alcona County, Michigan.

Parcel ID No.: 050-022-100-015-02

050-022-100-020-01: BRUCE BUURMA AND AMY BUURMA, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona, State of Michigan; to-wit:

The SW 1/4 of the NE 1/4 of Section 22, T26N, R8E and the SE 1/4 of the NE 1/4 of Section 22, T26N, R8E except a parcel of land in the Southeast corner thereof that is 10 rods wide, North and South, and 32 rods long, East and West, and which extends Westerly from the center of the established highway on the East boundary thereof.

Parcel ID No.: 050-022-100-020-01

050-022-200-005-02: ROBERT C. GODDARD A/K/A ROBERT C. GODDARD, JR. AND KATHERINE M. GODDARD:

LEGAL DESCRIPTION:

Parcel 3:

The following described premises situated in the Township of Gustin County of Alcona and State of Michigan, to-wit:

The East Half (E 1/2) of the Northwest Quarter (NW 1/4) of Section 22, T26N, R8E, LESS AND EXCEPTING Commencing at the Northwest Corner thereof; thence South 700 feet to the P.O.B.; thence continuing South 400 feet; thence East 275 feet; thence North 400 feet; thence West 275 feet to the P.O.B., all land being parallel to the Section Line, AND The North 7/10 of the Northwest Quarter (NE 1/4) of the Southwest Quarter (SW 1/4), less and excepting a parcel described as beginning at a point 747.78 feet Southerly from the center of Section 22 on the Quarter line; thence Southerly on the Quarter line 132 feet; thence West 132 feet; thence Northerly 132 feet; thence East 132 feet to starting point; and a parcel described as commencing at a point 132 feet West of the Southeast Corner of the North 7/10th of the Northeast Quarter (NE 1/4) of the Southwest Quarter (SW 1/4) Section 22, T26N, R8E; thence North 132 feet; thence West 165 feet; thence South 132 feet; thence East 165 feet to the Point of Beginning, all being in Section 22, T26N, R8E.

LESS AND EXCEPT

The following described premises situated in the Township of Gustin, County of Alcona, and State of Michigan:

Commencing at the North 1/4 corner of Section 22, T26N, R8E, thence North 89°47'40" West along the North line of said Section 22, 935.85 feet; thence South 01°16'12" West 700.12 feet to the Point of Beginning, thence South 00°24'00" East 608.72 feet; thence North 87°06'36" West, 373.22 feet; thence North 00°16'22" East along the West 1/16th line of said Section, 191.20 feet; thence South 89°47'40" East 275.00 feet; thence North 00°16'22" East, 400.00 feet; thence South 89°47'40" East, 90.69 feet to the Point of Beginning, being part of the NE 1/4 of the NW 1/4 of said Section, as conveyed in Liber 422, Page 255 in Public Records of Alcona County, Michigan.

LESS AND EXCEPT

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan,
described as:

Commencing at the N 1/4 corner of Section 22, T26N, R8E; thence N. 89 deg. 47'40" W along the North line of said Section 22, 935.85 feet to the point of beginning; thence S 01 deg. 16'12" W 700.12 feet; thence N. 89 deg. 47'40" W 365.69 feet; thence N. 00 deg. 16'22" E along the West 1/16 line of said Section 700.00 feet; thence S. 89 deg. 47'40" E along said North line 377.87 feet to the point of beginning. Description taken from Survey recorded in Liber 432, Pages 1038-39, Alcona County Records, as conveyed in Liber 515, Page 1459 in Public Records of Alcona County, Michigan.

Parcel ID No.: 050-022-200-005-02

050-022-300-020-00: WADE P. HARTMAN AND SANDRA L. HARTMAN, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

Parcel 1:

The following described premises located in the Township of Gustin, County of Alcona and State of Michigan:

The South 3/10ths of the Northeast 1/4 of the Southwest 1/4 of Section 22, Town 26 North, Range 8 East; and the Southeast 1/4 of the Southwest 1/4 of Section 22, Town 26 North, R8E

Parcel ID No.: 050-022-300-020-00

050-022-300-025-00: KIMBERLY A. MAKELA, SURVIVOR OF HERSELF AND HER DECEASED HUSBAND WILLIAM MAKELA:

LEGAL DESCRIPTION:

The Land referred to herein below is situated in the Township of Gustin, County of Alcona, State of Michigan, and is described as follows:

North 7/10ths of the Northwest Quarter (NW-1/4) of the Southwest Quarter (SW-1/4) of Section 22, Township 26 North, Range 8 East, Alcona County Records.

Parcel ID No.: 050-022-300-025-00

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

GENERAL
CIVIL NOTES 01

UNIT:N/A

| SCALE: NOT TO SCALE | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| JOB: 192088 | 1823-CV-210 | 001 | A |

SHEET SIZE: ANSI-D 22x34

050-022-300-030-00: KIMBERLY A. MAKELA, SURVIVOR OF HERSELF AND WILLIAM GUSTAVE MAKELA, WHOSE DEATH CERTIFICATE IS RECORDED IN INSTRUMENT #202500003173, ALCONA COUNTY RECORDS:

LEGAL DESCRIPTION:

Land situated in Gustin Township, Alcona County, Michigan to-wit:

The South 3/10 of the Northwest Quarter (NW-1/4) of the Southwest Quarter (SW-1/4) of Section 22, Township 26 North, Range 8 East, Lying South of existing road.

Parcel ID No.: 050-022-300-030-00

050-022-300-040-00: THE JAMES H. FREELAND TRUST, JAMES H. FREELAND, TRUSTEE:

LEGAL DESCRIPTION:

The following described premise situated in Gustin Township, County of Alcona, State of Michigan, to-wit:

The Southwest Quarter (SW1/4) of the Southwest Quarter (SW1/4) of Section 22, Township 26 North, Range 8 East.

Parcel ID No.: 050-022-300-040-00

050-022-400-005-01: LLOYD C. BISCHER, TRUSTEE OF THE LLOYD BISCHER REVOCABLE LIVING TRUST, DATED APRIL 13, 2021:

LEGAL DESCRIPTION:

Land situated in Gustin Township, Alcona County, Michigan to-wit:

The East 660 feet of the South Half (S-1/2) of the Southeast Quarter (SE-1/2) of Section 22, Township 26 North, Range 8 East.

AND

The South Half (S-1/2) of the East Half (E-1/2) of the East Half (E-1/2) of the Southwest Quarter (SW-1/4) of the Southeast Quarter (SE-1/4) AND the Southwest Quarter (SW-1/4) of the Southeast Quarter (SE-1/4) of the Southeast Quarter (SE-1/4) of Section 22, Township 26 North, Range 8 East.

AND

The Northwest Quarter (NW-1/4) of the Southeast Quarter (SE-1/4) of the Southeast Quarter (SE-1/4) of Section 22, Township 26 North, Range 8 East.

Parcel ID No.: 050-022-400-005-01

050-023-100-005-15: GERALD J. LINTON AND MARY E. LINTON, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan:

North Half (N-1/2) of the Northeast Quarter (NE-1/4) of Section 23, Township 26 North, Range 8 East, EXCEPT the West Half (W-1/2) of the Northwest Quarter (NW-1/4) of the Northeast Quarter (NE-1/4) of said Section 23, T26N, R8E.

Parcel ID No.: 050-023-100-005-15

050-023-100-010-00: MARK JOSEPH FULSHER, A MINOR:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, to-wit: The South Half (S 1/2) of the Northeast Quarter (NE 1/4) of Section 23, Township 26 North, Range 8 East.

Parcel ID No.: 050-023-100-010-00

050-023-200-005-00: RYAN DELLAR AND CHARINA DELLAR, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The East half of the Northwest quarter, Section 23, township 26 North, Range 8 East.

Parcel ID No.: 050-023-200-005-00

050-023-200-010-01: KELVIN D. TRAVIS AND SANDY K. TRAVIS, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the City/Township/Village of Gustin, County of Alcona and State of Michigan, to-wit:

THE SOUTH 1/2 OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 26 NORTH, RANGE 8 EAST, GUSTIN TOWNSHIP, ALCON A COUNTY, MICHIGAN; AND

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan:

East Half (E-1/2) of the North Half (N-1/2) of the Southwest Quarter (SW-1/4) of the Northwest Quarter (NW-1/4) of Section 23, Township 26 North, Range 8 East.

Parcel ID No.: 050-023-200-010-01

050-023-300-010-00: JOHN G. PARSONS, A SINGLE MAN:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona, State of Michigan; to-wit:

The W-1/2 of the SW-1/4 of Section 23, T26N, R8E.

Parcel ID No.: 050-023-300-010-00

050-023-400-010-00: SAMUEL J. TANARI AND MARK F. TANARI, CO-TRUSTEES OF THE ARLENE TANARI 2021 IRREVOCABLE TRUST F/B/O MARK F. TANARI DATED OCTOBER 14, 2021 F/K/A TANARIES OF ALCONA, L.L.C., A MICHIGAN LIMITED LIABILITY COMPANY, BY DEED RECORDED IN LIBER 374, PAGE 216:

LEGAL DESCRIPTION:

Land situated in the Township of Gustin, County of Alcona, State of Michigan, more particularly described as:

Parcel 1:

The West Half (W-1/2) of the Southeast Quarter (SE-1/4) of Section 23, T26N, RSE.

(For informational purposes only)
Commonly Known As: 2317 E Fowler Rd.

Parcel ID No.: 050-023-400-010-00

050-024-100-005-00: EVAN M. FOWLER:

LEGAL DESCRIPTION:

Situated in the Township of Gustin, County of Alcona, and State of Michigan:

The Northeast 1/4 of the Northeast 1/4 of Section 24, Township 26 North, Range 8 East.

LESS:Parcel 1: Part of the Northeast 1/4 of the Northeast 1/4 of Section 24, Township 26 North, Range 8 East, described as: Commencing at the Northeast corner of Section 24; thence South 89°30'00" West along the North line of said Section and the centerline of Dewar Road 1052.48 feet to the Point of Beginning; thence South 00°30'00" East 417.42 feet; thence South 89°30'00" West 208.71 feet; thence North 00°30'00" West 417.42 feet; thence North 89°30'00" East along the North line of said Section and the centerline of Dewar Road 208.71 feet to the Point of Beginning.

AND

LESS:Parcel 2: Part of the Northeast 1/4 of the Northeast 1/4 of Section 24, Township 26 North, Range 8 East, described as: Commencing at the Northeast corner of Section 24; thence South 89°30'00" West along the North line of said Section and the centerline of Dewar Road 1261.19 feet to the Point of Beginning; thence South 00°30'00" East 417.42 feet; thence South 89°30'00" West 59.81 feet; thence North 00°30'00" West 417.42 feet; thence North 89°30'00" East along the North line of said Section and the centerline of Dewar Road 59.81 feet to the Point of Beginning.

Parcel ID No.: 050-024-100-005-00

050-024-100-010-00: KIMBERLY HARBER, TRUSTEE OF THE KIMBERLY HARBER LIVING TRUST, DATED JANUARY 3,2001:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as:

W1/2 of the NE1/4 of Section 24, T26N, R8E.

Parcel ID No.: 050-024-100-010-00

050-024-100-015-01: CHARLES P. TAIT:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan:

T26N R8E Sec. 24 N 1/2 of SE 1/4 of NE ¼

Parcel ID No.: 050-024-100-015-01

050-024-200-005-04: TIM GOZDOR:

LEGAL DESCRIPTION:

The following described premise located in the Township of Gustin, County of Alcona and State of Michigan:

The W-1/2 of the NE-1/4 of the NW-1/4 of Section 24, T26N, R8E.

Parcel ID No.: 050-024-200-005-04

050-024-200-005-05: CHARLES P. TAIT AND RENEE L. TAIT, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as:

The Northeast Quarter (NE-1/4) of the Northwest (NW-1/4) of the Northwest Quarter (NW-1/4) of Section 24, T26N, R8E.

Parcel ID No.: 050-024-200-005-05

050-024-200-009-00: JOHN GRAHAM AND DEBORAH GRAHAM, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following legally described premises: Situated in the Township of Gustin, County of Alcona, Michigan.

The South 1/2 of the Northwest 1/4 of the Northwest 1/4 of Section 24, Township 26 North, Range 8 East.

Parcel ID No.:050-024-200-009-00

050-024-200-010-02: BRUCE BUURMA AND AMY BUURMA, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises located in the Township of Gustin, County of Alcona and State of Michigan:

The South Half (S-1/2) of the Northwest Quarter (NW-1/4) of Section 24, T26N, R8E, except the North 330 feet thereof.

AND

The North 330 feet of the South Half (S-1/2) of the Northwest Quarter (NW-1/4) of Section 24, T26N, R8E.

LESS AND EXCEPT:

The following described premises located in the Township of Gustin, County of Alcona and State of Michigan,
described as:

Commencing at the W-1/4 corner of Section 24, T26N, R8E; thence N. 03 deg. 03'09"E along the West Section line and County Road F-41 a distance of 527.12 feet to the point of beginning, thence continue Northerly along said line a distance of 291.00 feet; thence S. 86 deg. 23'59"E a distance of 600.00 feet; thence S. 03 deg. 03'09"W a distance of 291.00 feet; thence N: 86 deg. 23'59"W a distance of 600.00 feet to the point of beginning. Being part of the S-1/2 of the NW-1/4 of said Section 24 and being subject to rights of the public over the Westerly 50 feet thereof for County Road F-41. Description taken from Survey dated April 10, 2019 by NorthEast Land Surveys, as conveyed as Instrument No. 202400001555 in Public Records of Alcona County, Michigan.

Parcel ID No.: 050-024-200-010-02

050-024-200-010-03: JON WHITEFIELD:

LEGAL DESCRIPTION:

Land situated in Gustin Township, Alcona County, Michigan to-wit:

Parcel "1-A":

Commencing at the West 1/4 corner of Section 24, T26N, R8E; thence N03°03'09"E, along West Section line and County Road F-41, a distance of 527.12 feet to the Point of Beginning; thence continue Northerly along said line, a distance of 291.00 feet; thence S86°23'59"E, a distance of 600.00 feet; thence South 03°03'09"W, a distance of 291.00 feet; thenceN86°23'59"W, a distance of 600.00 feet to the Point of Beginning. The above described parcel being a part of the South 1/2 of the Northwest 1/4 of said Section 24. Being subject to the rights of the public over the Westerly 50 feet thereof for County Road F-41. Also being subject to easements and restrictions of record, if any. Description taken from Survey by NorthEast Land Surveys, dated April 10, 2019, recorded in Instrument #202000001718, Alcona County Records.

Parcel ID No.: 050-024-200-010-03

050-024-300-015-00: ALFRED GRAZIANA AND MARLENE GRAZIANA, SUBJECT TO THE EQUITABLE INTEREST TO PURCHASE TITLE TO THE LAND CREATED BY THAT LAND CONTRACT DATED MARCH 22, 1984, BETWEEN ALFRED J. GRAZIANA AND MARLENE GRAZIANA, HIS WIFE, SELLER, AND RANDALL SAUTTER, A SINGLE MAN, AND LEO L. SAUTTER, A MARRIED MAN, AS JOINT TENANTS WITH RIGHTS OF SURVIVORSHIP, BUYER, RECORDED MARCH 22, 1984 IN LIBER 194, PAGE 930 IN PUBLIC RECORDS OF ALCONA COUNTY, MICHIGAN.:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, to-wit:

The West Half (W1/2) of the Southwest Quarter (SW1/4) of Section 24, T26N, R8E, Less and Excepting a parcel described as Commencing at the Southeast Corner of said Section, thence North 330 feet, thence West 660 feet, thence South 330 feet, thence East 660 feet to the Point of Beginning.

Parcel ID No.: 050-024-300-015-00

050-024-400-005-00: SAMUEL J. TANARI AND MARK F. TANARI, CO-TRUSTEES OF THE ARLENE TANARI 2021 IRREVOCABLE TRUST F/B/O MARK F. TANARI DATED OCTOBER 14, 2021 F/K/A TANARIES OF ALCONA, L.L.C., A MICHIGAN LIMITED LIABILITY COMPANY, BY DEED RECORDED IN LIBER 445, PAGE 1399:

LEGAL DESCRIPTION:

Land situated in the Township of Gustin, County of Alcona, State of Michigan, more particularly described as:

Parcel 2:

Part of the Southeast quarter of Section 24, Town 26 North, Range 8 East, described as: Beginning at the Southeast corner of said Section 24, thence North 86 degrees 07 minutes 36 seconds West along the South Section line, 2581.11 feet, thence North 03 degrees 26 minutes 41 seconds East parallel to the North-South quarter line, 264.00 feet, thence North 86 degrees 07 minutes 36 seconds West, parallel to said South line, 82.50 feet, thence North 03 degrees 26 minutes 41 seconds East along said North-South quarter line, 2368.11 feet, thence South 86 degrees 23 minutes 29 seconds East along the East-West quarter line, 2673.47 feet, thence South 03 degrees 39 minutes 34 seconds West along the East Section line, 2644.41 feet to the point of beginning.

(For informational purposes only)
Commonly Known As: S. Barlow Rd.

Parcel ID No.: 050-024-400-005-00

050-025-100-055-00 & 050-025-100-060-00: GEORGE L. LOYER, MERRY LOU LOYER AND JASON W. LOYER, AS JOINT TENANTS WITH FULL RIGHTS OF SURVIVORSHIP:

LEGAL DESCRIPTION:

Parcel 1:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as follows:

W 1/2 of the N 1/2 of the S 1/2 of the NE 1/4 of Section 25, T26N, R8E

Parcel ID No.: 050-025-100-055-00

Parcel 2:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as follows:

S 1/2 of the S 1/2 of the NE 1/4 of Section 25, T26N, R8E

Parcel ID No.: 050-025-100-060-00

050-025-200-015-00: ROGER A. LOVE AND ROSEMARY LOVE, HIS WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, to-wit:

That part of the NW 1/4 and the East 1/2 of the SW 1/4 of Sec. 25, T26N, R8E lying West of Detroit and Mackinaw Railroad right of way, excepting, a parcel in the NE corner of the NW 1/4 described as commencing at the section line between section 24 & 25, T26N, R8E on west side of Detroit and Mackinaw Railroad right of way, thence west 132 feet, thence South 122 feet, thence east 119 feet more or less to Detroit and Mackinaw right of way, thence northerly on West side of Detroit and Mackinaw Railroad right of way 122 feet more or less to Point of Beginning.

Parcel ID No.: 050-025-200-015-00

050-025-300-005-00: ROGER A. LOVE AND ROSEMARY LOVE, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona, and State of Michigan, to wit:

The North Half (N-1/2) of the Northwest Quarter (NW-1/4) of the Southwest Quarter (SW-1/4) of Section 25, Township 26 North, Range 8 East.

Parcel ID No.: 050-025-300-005-00

050-025-300-010-00: RONALD N. PROCUNIER, A SINGLE MAN, AND DESSMUS A. PROCUNIER, A SINGLE MAN, AS JOINT TENANTS WITH FULL RIGHTS OF SURVIVORSHIP:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as follows:

The Southwest Quarter (SW-1/4) of the Southwest Quarter (SW-1/4) of Section 25, T26N, R8E,

AND

The South Half (S-1/2) of the Northwest Quarter (NW-1/4) of the Southwest Quarter (SW-1/4) of Section 25, T26N, R8E.

Land located in the Township of Gustin, County of Alcona, State of Michigan described as:

That part of the South Three-Fourths (S-3/4ths) of the West Half (W-1/2) of the Southwest Quarter (SW 1/4) of Section 25, T26N, R8E, described as: Commencing at the Southwest Corner of the Southwest Quarter (SW-1/4) of Section 25, Thence North along the centerline of F-41, a County Road. 1249 feet to the Point of Beginning, thence continuing North along the centerline of F-41, 250 feet, thence East 250 feet, thence South 250 feet, thence West 250 feet to the Point of Beginning.

Parcel ID No.: 050-025-300-010-00

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE

NAME
G. ALBANSODER

MICHIGAN P.E. No.
6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

GENERAL
CIVIL NOTES 02

UNIT:N/A

| SCALE: NOT TO SCALE | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| JOB: 192088 | 1823-CV-210 | 002 | A |

050-025-400-005-35: HUGH J. MACMASTER A/K/A HUGH MACMASTER AND BARBARA A. MACMASTER A/K/A BARBARA MACMASTER, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Harrisville, County of Alcona, State of Michigan, to-wit:

That part of the East Half (E-1/2) of the Southeast Quarter (SE-1/4) of Section 25, T26N, R8E described as, beginning at the Southeast corner of said description or at the intersection of Barlow and Procunier Roads: thence Westerly 20 rods; thence Northerly parallel with Barlow Road 80 rods; thence Easterly 20 rods parallel with Procunier Road to Barlow Road; thence Southerly 80 rods to the Point of Beginning. Containing 10 acres more or less; AND

The following described premises situated in the Township of Gustin, County of Alcona, State of Michigan, to-wit:

The E-1/2 of the SE-1/4 of Section 25, T26N, R8E, less a parcel beginning at the SE corner of said description or at the intersection of Barlow and Procunier Roads; thence Westerly 20 rods; thence Northerly parallel with Barlow Road 80 rods; thence Easterly 20 rods parallel with Procunier Road to Barlow Road; thence Southerly 80 rods to point of beginning containing 10 acres more or less.

LESS AND EXCEPT:

The following described premises situated in the Township of Gustin, County of Alcona, State of Michigan,

Beginning at the SE corner of Section 25, T26N, R8E, Gustin Township, Alcona County, Michigan; thence N 88 deg. 59'05" West along the South line of said section and the centerline of Procunier Road, 272.94 feet; thence N 03 deg. 30'58" East 872.74 feet; thence S. 88 deg. 59'05" East 227.21 feet; thence S 00 deg. 30' 45" West along the East line of said section and the centerline of Barlow Road, 871.94 feet to the Point of Beginning. Said parcel being a part of the SE-1/4 of the SE-1/4 of said Section 25, and containing 5.00 acres of land, more or less. Being subject to the rights of the public over the Easterly and Southerly 33 feet thereof, as conveyed in Liber 537, Page 1331 in Public Records of Alcona County, Michigan.

Parcel ID No.: 050-025-400-005-35

050-026-100-020-00: SCOTT MARK KROON:

LEGAL DESCRIPTION:

The following described lands and premises situated in the Township of Gustin, County of Alcona and State of Michigan as:

Town 26 North, Range 8 East, Section 26, Commencing at the North Quarter Corner; thence North 89 degrees East 660.08 feet; thence South 1 degree East 1310.58 feet; thence South 89 degrees West 659.05 feet; thence North 1 degree West 1314.24 feet to the Point of Beginning; South 302/36 Parcel "A".

Parcel ID No.: 050-026-100-020-00

050-026-200-004-04: LEROY PERRIN, GRANTOR TRUSTEE AND ROSE MARIE A. PERRIN, GRANTOR TRUSTEE OF THE LEROY PERRIN FAMILY TRUST, U/A/D JANUARY 9, 1989, AS TO A LIFE ESTATE, AND LEROY PERRIN AND ROSEMARIE A. PERRIN AS TRUSTEE(S) OF THE LEROY PERRIN AND ROSEMARIE A. PERRIN TRUST AS TO THE REMAINDER.:

LEGAL DESCRIPTION:

The following described premises in the Township of Gustin County of Alcona, State of Michigan, to wit: T26N R8E SEC 26 NW1/4 EXC N 1320 FT OF W 990 FT EXC COM W1/4 COR, N 926.31 FT, E 940.5 FT, S 926.31 FT, W 940.5 FT ALG E-W1/4 LN TO POB EXC COM N1/4 COR, S89DEGW 700.84 FT TO ALG CL FOWLER RD TO POB, S89DEGW 548.24 FT, S5DEGW 170.92 FT S30DEGE 108.5 FT N87DEGE 118.77 FT, S4DEGE 194.31 FT N89 DEGW 379.36 FT, N 452.88 FT TO POB SV; AND

The following described real estate, situated in an unincorporated area in the County of Alcona, State of Michigan:

Legal Description: Commencing at the N 1/4 of Sec 26, T26N, R8E, thence S 89 DEG 30' 00"W along the N line of said Sec and the centerline of Fowler Rd., 700.84 ft. to the P.O.B.; thence S 00 DEG 30' 00"E 452.88 ft; thence S 89 DEG 30' 00"W 379.36 ft; thence N 04 DEG 19' 00'W 194.31 ft; thence S 87 DEG 10' 54"W 118.77 ft; thence N 30 DEG 42' 40"W 108.50 ft; thence N 05 DEG 19' 02"E 170.92 ft; thence N 89 DEG 30' 00"E along the N line of said Sec and the centerline of Fowler Rd. 548.24 ft to the P.O.B. Said parcel being a part of the NE 1/4 of the NW 1/4 of said Sec 26 and containing 5.00 acres of land, more or less. Being subject to the rights of the public over the Northerly 33 ft. thereof.

LESS AND EXCEPT:

The following-described premises:

Situated in Gustin Township, Alcona County, State of Michigan

Part of the NE1/4 of the NW1/4 of Section 26, T26N, R8E, described as: Commencing at the North 1/4 corner of Section 26, T26N, R8E; thence S 89°30'00"W along the North line of said section and centerline of Fowler Rd, 700.84 feet to the Point of Beginning; thence S 00°30'00"E 452.88 feet; thence S 89°30'00"W 379.36 feet; thence N 04° 19'00"W 194.31 feet; thence S 87°10'54"W 118.77 feet; thence N 30°42'40"W 108.50 feet; thence N 05°19'02"E 170.92 feet; thence N 89°30'00"E along the North line of said section and the centerline of Fowler Rd, 548.24 feet to the Point of Beginning, as conveyed in Liber 553, Page 1151 in Public Records of Alcona County, Michigan.

The Southwest 1/4 of the Northwest 1/4 of Section 35, Township 26 North, Range 8 East, LESS AND EXCEPTING a parcel described as commencing at the Northwest corner thereof, thence South 400 feet along the centerline of McConnell Road to the Point of Beginning; thence East 295 feet; thence South 625 feet; thence West 295 feet; thence North 625 feet to the Point of Beginning, AND ALSO LESS AND EXCEPTING a parcel commencing at the Northwest corner; thence South 1,025 feet to the Point of Beginning; thence East 735 feet; thence South 295 feet; thence West 735 feet; thence North 295 feet to the Point of Beginning.

Parcel ID No.: 050-026-200-004-04

050-026-200-004-30: RICHARD C. ROHRBORN, TRUSTEE OF THE RICHARD C. ROHRBORN REVOCABLE LIVING TRUST DATED SEPTEMBER 23, 2022:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as follows:

N 1320 feet of the W 990 feet of the NW1/4 of Section 26, T26N, R8E.

Parcel ID No.: 050-026-200-004-30

050-026-300-005-00 & 050-026-300-060-00: ROBERT C. GODDARD A/K/A ROBERT C. GODDARD, JR. AND KATHERINE M. GODDARD:

LEGAL DESCRIPTION:

Parcel 1:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as:

The East one-half (E 1/2) of the Southwest Quarter (SW 1/4) and the West one-half (W 1/2) of the Southeast Quarter (SE 1/4) of Section 26, T26N, R8E.

Parcel ID No.: 050-026-300-005-00

Parcel 2:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as:

South 30 Acres of the Southwest 1/4 of the SW 1/4 of Section 26, T26N, R8E.

Parcel ID No.: 050-026-300-060-00

050-026-300-010-05: CHARLES P. TAIT, A MARRIED MAN:

LEGAL DESCRIPTION:

Parcel 1:

The following described premises situated in the Township of Gustin, County of Alcona, State of Michigan, to-wit:

The North Half (N 1/2) of the Northwest Quarter (NW 1/4) of the Southwest Quarter (SW 1/4) of Section 26, T26N, R8E.

Parcel ID No.: 050-026-300-010-05

050-026-400-005-00: CARLIN K. SONBERG AND SHELLY S. SONBERG REVOCABLE LIVING TRUST AGREEMENT DATED JUNE 30, 2005:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as follows:

The Northeast Quarter (NE-1/4) of the Southeast Quarter (SE-1/4) of Section 26, T26N, R8E

Parcel ID No.: 050-026-400-005-00

050-026-400-010-01: MARK A. YOUNK AND ELIZABETH A. YOUNK, HUSBAND AND WIFE:

Parcel ID No.: 050-026-400-005-00

050-026-400-010-01: MARK A. YOUNK AND ELIZABETH A. YOUNK, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

Land situated in Gustin Township, Alcona County, Michigan to-wit:

The North Half (N-1/2) of the Southeast Quarter (SE-1/4) of the Southeast Quarter (SE-1/4) of Section 26, Township 26 North, Range 8 East.

Parcel ID No. 050-026-400-010-01

050-026-400-010-02: JACOB GOLBECK AND ANDREA GOLBECK, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the Township Gustin, County of Alcona and State of Michigan:

The South 1/2 of the Southeast 1/4 of the Southeast 1/4, Section 26, Township 26 North, Range 8 East, EXCEPT a strip of land 50 feet in width lying West of and adjacent to the centerline of M-23 (F-41) as now surveyed over the Southeast 1/4 of the Southeast 1/4 of Section 26, Township 26 North, Range 8 East.

Parcel ID No.: 050-026-400-010-02

050-027-100-005-00: RICHARD C. ROHRBORN, TRUSTEE OF THE RICHARD C. ROHRBORN REVOCABLE LIVING TRUST DATED SEPTEMBER 23, 2022:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as follows:

The N-1/2 of the NE-1/4 of Section 27, T26N, R8E.

Parcel ID No.: 050-027-100-005-00

050-027-200-005-00: OWNER NOT PROVIDED:

LEGAL DESCRIPTION:

Parcel 2:

The following described premises located in the Township of Gustin, County of Alcona and State of Michigan: The Northeast 1/4 of the Northwest 1/4 of Section 27, Town 26 North, Range 8 East.

Parcel ID No.: 050-027-200-005-0

050-027-200-010-20: JAMES H. FREELAND, TRUSTEE OF THE JAMES H. FREELAND TRUST:

LEGAL DESCRIPTION:

A portion of the following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as:

Commencing at the West-1/4 corner of Section 27, T26N, R8E; thence N. 01 deg. 10'22"W along the West line of said Section and centerline of Cruzen Road a distance of 327.17 feet; thence N. 88 deg. 55'30"E a distance of 330.00 feet; thence N. 01 deg. 10'22"W a distance of 660.00 feet; thence S. 88 deg. 55'30"W a distance of 330.00 feet; thence N. 01 deg. 10'22"W along said West section line and centerline a distance of 330.00 feet; thence N. 88 deg. 53'34"E along North line of the SW-1/4 of the NW-1/4 of said Section a distance of 1312.00 feet; thence S. 01 deg. 12'39"E along East line of said SW-1/4 of NW-1/4 a distance of 1317.90 feet; thence S. 01 deg. 18'10"E along East line of the NW-1/4 of the SW-1/4 of said Section a distance of 1319.05 feet; thence S. 89 deg. 00'25"W along South line of said NW-1/4 of SW-1/4 a distance of 1311.65 feet; thence N. 01 deg. 21'25"W along said West Section line and centerline a distance of 1317.18 feet to the point of beginning. Description taken from Survey dated May 23, 2012 by North East Land Surveys; AND

The following described premises situated in Gustin Township, County of Alcona, State of Michigan, to wit:

The Northwest Quarter (NW1/4) of the Northwest Quarter (NW1/4) of Section 27 Township 26 North, Range 8 East.
Said parcel being situated in Gustin township, Alcona County, Michigan.

Parcel ID No.: 050-027-200-010-20

050-027-200-015-20: JAMES H. FREELAND, TRUSTEE OF THE JAMES H. FREELAND TRUST:

LEGAL DESCRIPTION:

A portion of the following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as:

Commencing at the West-1/4 corner of Section 27, T26N, R8E; thence N. 01 deg. 10'22"W along the West line of said Section and centerline of Cruzen Road a distance of 327.17 feet; thence N. 88 deg. 55'30"E a distance of 330.00 feet; thence N. 01 deg. 10'22"W a distance of 660.00 feet; thence S. 88 deg. 55'30"W a distance of 330.00 feet; thence N. 01 deg. 10'22"W along said West section line and centerline a distance of 330.00 feet; thence N. 88 deg. 53'34"E along North line of the SW-1/4 of the NW-1/4 of said Section a distance of 1312.00 feet; thence S. 01 deg. 12'39"E along East line of said SW-1/4 of NW-1/4 a distance of 1317.90 feet; thence S. 01 deg. 18'10"E along East line of the NW-1/4 of the SW-1/4 of said Section a distance of 1319.05 feet; thence S. 89 deg. 00'25"W along South line of said NW-1/4 of SW-1/4 a distance of 1311.65 feet; thence N. 01 deg. 21'25"W along said West Section line and centerline a distance of 1317.18 feet to the point of beginning. Description taken from Survey dated May 23, 2012 by North East Land Surveys.

Parcel ID No.: 050-027-200-015-20

050-027-300-008-00: BERNARD E. TRUMAN AND DELLA R. TRUMAN, TRUSTEES, OR THEIR SUCCESSORS IN TRUST UNDER THE TRUMAN LIVING TRUST DATED AUGUST 5, 1997, AND ANY AMENDMENTS THERETO, AS TENANTS IN COMMON, NOT AS TENANTS BY THE ENTIRETIES:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona, State of Michigan:

Southwest Quarter (SW1/4) of the Southwest Quarter (SW1/4) except the East 225 feet thereof of Section 27, Township 26 North, Range 8 East, Alcona County, Michigan.

Parcel ID No.: 050-027-300-008-00

050-028-400-005-00: HAROLD L. BEAN, A MARRIED MAN, JOSHUA LEE BEAN, A MARRIED MAN, AND KENNY LEE JACOBSEN, A MARRIED MAN, AS JOINT TENANTS WITH FULL RIGHTS OF SURVIVORSHIP:

LEGAL DESCRIPTION:

The following described premises: Situated in the Township of Gustin, County of Alcona, State of Michigan:

The North 1/2 of the Southeast 1/4 of Section 28, Township 26 North, Range 8 East.

Parcel ID No.: 050-028-400-005-00

050-035-100-006-00: ALAN G. GILL AND PATRICIA L. GILL, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan:

The North Half (N 1/2) of the Northeast Quarter (NE 1/4) of Section 35, Township 26 North, Range 8 East.

Parcel ID No.: 050-035-100-006-00

050-035-100-010-01: ALAN GILL AND PATRICIA GILL, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as:

The SW-1/4 of the NE-1/4 of Section 35, T26N, R8E EXCEPT commencing at the N-1/4 corner of said Section 35; thence S. 00 deg. 12'40"E along the N-S 1/4 line of said Section and the centerline of Woodman Road 1874.65 feet to the point of beginning; thence N. 89 deg. 47'20"E 660.00 feet; thence S. 00 deg. 12'40"E 330.00 feet; thence S. 89 deg. 47'20"W 660.00 feet; thence N. 00 deg. 12'40"W along the N-S 1/4 line and the centerline of Woodman Road 330.00 feet to the point of beginning.

Parcel ID No.: 050-035-100-010-01

050-035-100-015-00: CHARLES C. KUPCZAK, A SINGLE MAN, SUBJECT TO THE EQUITABLE INTEREST TO PURCHASE TITLE TO THE LAND CREATED BY THAT LAND CONTRACT DATED APRIL 17, 2020, BETWEEN CHARLES C. KUPCZAK, SELLER, AND J. PARSONS LAND COMPANY, LLC BY JOHN PARSONS, BUYER, RECORDED APRIL 20, 2020 AS INSTRUMENT NO. 202000001269 IN PUBLIC RECORDS OF ALCONA COUNTY, MICHIGAN.:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan:

The SE-1/4 of the NE-1/4 of Section 35, T26N, R8E.

Parcel ID No.: 050-035-100-015-00

050-035-200-005-00: RONALD N. PROCUNIER, A SINGLE MAN AND DESSMUS A. PROCUNIER, A SINGLE MAN, AS JOINT TENANTS WITH FULL RIGHTS OF SURVIVORSHIP:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, described as follows:

The N 1/2 of the NW 1/4 of Section 35, T26N, R8E.

Parcel ID No.: 050-035-200-005-00

050-035-400-005-01 & 050-035-400-030-00: GARY G. STAHL REVOCABLE LIVING TRUST DATED DECEMBER 10, 2009:

LEGAL DESCRIPTION:

Parcel 1:

The following described premises situated in the Township of Gustin, County of Alcona, State of Michigan: The North 3/4 of the East Half (E 1/2) of the Southeast Quarter (SE 1/4) of Section 35, T26N, R8E; EXCEPT East 330 feet of the South 660 feet; and the Northwest Quarter (NW 1/4) of the Southeast Quarter (SE 1/4).

Parcel ID No.: 050-035-400-005-01

Parcel 2:

The following described premises situated in the Township of Gustin, County of Alcona, State of Michigan:
The Southwest Quarter (SW 1/4) of the Southeast Quarter (SE 1/4) and the South Half (S 1/2) of the Southeast Quarter (SE 1/4) of the Southeast Quarter (SE 1/4)

EXCEPT the South 220 feet of the East 693 feet and the East 330 feet of the North Half (N 1/2) of the Southeast Quarter (SE 1/4) of the Southeast Quarter (SE 1/4) being in Section 35, T26N, R8E.

EXCEPT: Commencing at the SE1/4 corner of Section 35, T26N, RANGE 8E, thence N 220 Feet to the Point of Beginning, thence North 243 Feet, thence West 330 feet, thence South 243 Feet, thence East 330 feet to the point of beginning.

Parcel ID No.: 050-035-400-030-00

050-036-100-005-00: BRIAN T. MACMASTER AND KAREN M. MACMASTER, HIS WIFE:

LEGAL DESCRIPTION:

The following described premises situated in the Township of Gustin, County of Alcona, State of Michigan, to-wit:

The E-1/2 of the NE-1/4 of Section 36, T26N, R8E, also the NE-1/4 of the SE-1/4 of Section 36, T26N, R8E.

Parcel ID No.: 050-036-100-005-00

050-036-100-020-00: RICKY C. PROCUNIER AND DENISE M. PROCUNIER, HUSBAND AND WIFE:

LEGAL DESCRIPTION:

That certain piece or parcel of land situated and being in the Township of Gustin, County of Alcona and State of Michigan, and described as follows, to-wit:

The SW1/4 of the NE1/4 of Section 36, T26N, R8E.

LESS AND EXCEPT:

The following described premises situated in the Township of Gustin, County of Alcona and State of Michigan, to-wit:

T26N R8E Section 36, N 467 Ft of W 467 Ft of SW¼ of NE¼, as conveyed as Instrument No. 202500001946 in Public Records of Alcona County, Michigan.

Parcel ID No.: 050-036-100-020-00

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
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| REV | DATE | DESCRIPTION | ADB DR | ACG BY | JTD CK | GLA APP | BMC CO |
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| A | 05/13/26 | ISSUED FOR PERMITTING | | | | | |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

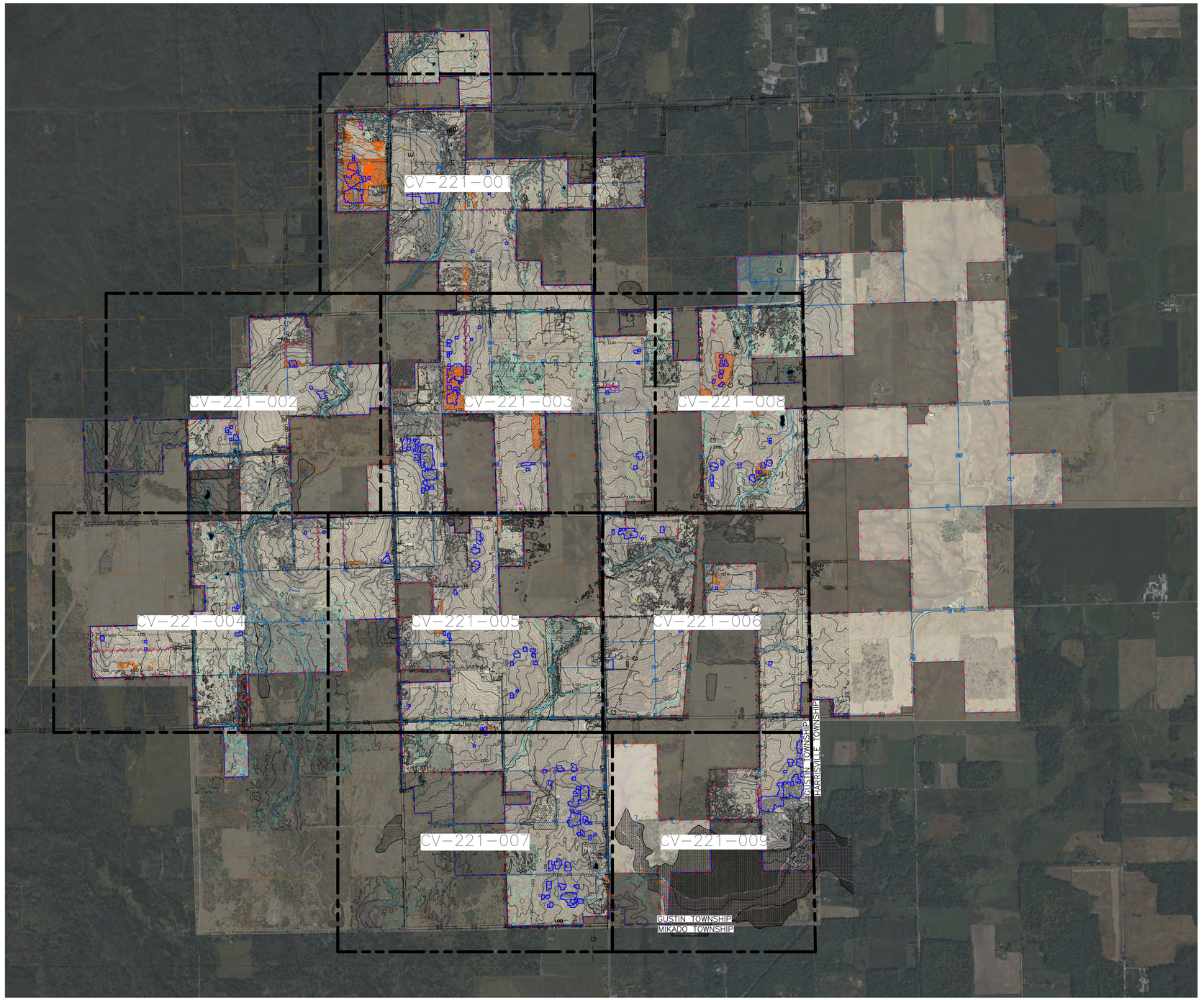
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

GENERAL
CIVIL NOTES 03

UNIT: N/A
SCALE: NOT TO SCALE
JOB: 192088
DRAWING NO.: 1823-CV-210
SHEET: 003
REV.: A

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-210-003.DWG 5/11/2026 10:39 AM MBBARRAZA




GENERAL NOTES:

1. FEMA DOES NOT PARTICIPATE WITHIN THE PROJECT AREA. HOWEVER, THE PROJECT SITE IS LOCATED ON THE FOLLOWING FIRM PANELS: 0260D, 09/28/2012; 0270D, 09/28/2012; 0290D, 09/28/2012; 0407D, 09/28/2012; 0410, 09/28/2012.
2. ALL BODIES OF WATER WITHIN THE PROJECT EASEMENT ARE NOT COUNTY DRAINS. RESEARCH WAS COMPLETED BY METRO CONSULTING ASSOCIATES AND CONFIRMED BY THE ALCONA COUNTY DRAIN COMMISSIONER ON 04/23/2024.
3. THERE ARE NO KNOWN EXISTING DUMPSTERS LOCATED ON THE PROPERTY.
4. THESE PLANS DEPICT INFORMATION TAKEN DIRECTLY FROM THE ALTA/NSPS LAND TITLE SURVEY CONDUCTED BY METRO CONSULTING ASSOCIATES, DATED 02/04/2026 AND LAST REVISED 04/21/2026 (REVISION B), WITH THE EXCEPTION OF THE WETLAND INFORMATION. REFER TO THE ALTA/NSPS SURVEY DOCUMENTS FOR COMPLETE INFORMATION.
5. HORIZONTAL DATUM: NAD83 MICHIGAN STATE PLANE COORDINATE SYSTEM; CENTRAL ZONE, GEOID 12B, INTERNATIONAL FEET.
6. VERTICAL DATUM: NAVD88 (GEOID 18)
   6.1 GROUND ELEVATIONS WERE ESTABLISHED BY ROWE PROFESSIONAL SERVICES COMPANY.

LEGEND:

EXISTING CONDITIONS & CLEARING:

- CLEARING – SHRUB/VEGETATION
- 300 CONTOUR (MAJOR)
- 322 CONTOUR (MINOR)
- DEMOLITION – FENCE
- DEMOLITION – STRUCTURE
- EASEMENTS
- E ELECTRIC – OVERHEAD DISTRIBUTION LINES
- FO FIBER OPTIC – UNDERGROUND
- LIGHT POLE
- LIMITS OF EARTHWORK
- MISCELLANEOUS – SIGN
- POND EDGE
- PROJECT BOUNDARY – CONSUMERS ENERGY
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- EXISTING TREELINE
- R/W ROAD – RIGHT OF WAY
- STREAM – JURISDICTIONAL
- E UNDERGROUND – ELECTRIC
- G UNDERGROUND – GAS LINE
- T UNDERGROUND – TELEPHONE
- W UNDERGROUND – WATER
- WATERBODY – JURISDICTIONAL
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL

1400' 700' 0 1400' 2800'
1" = 1400'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

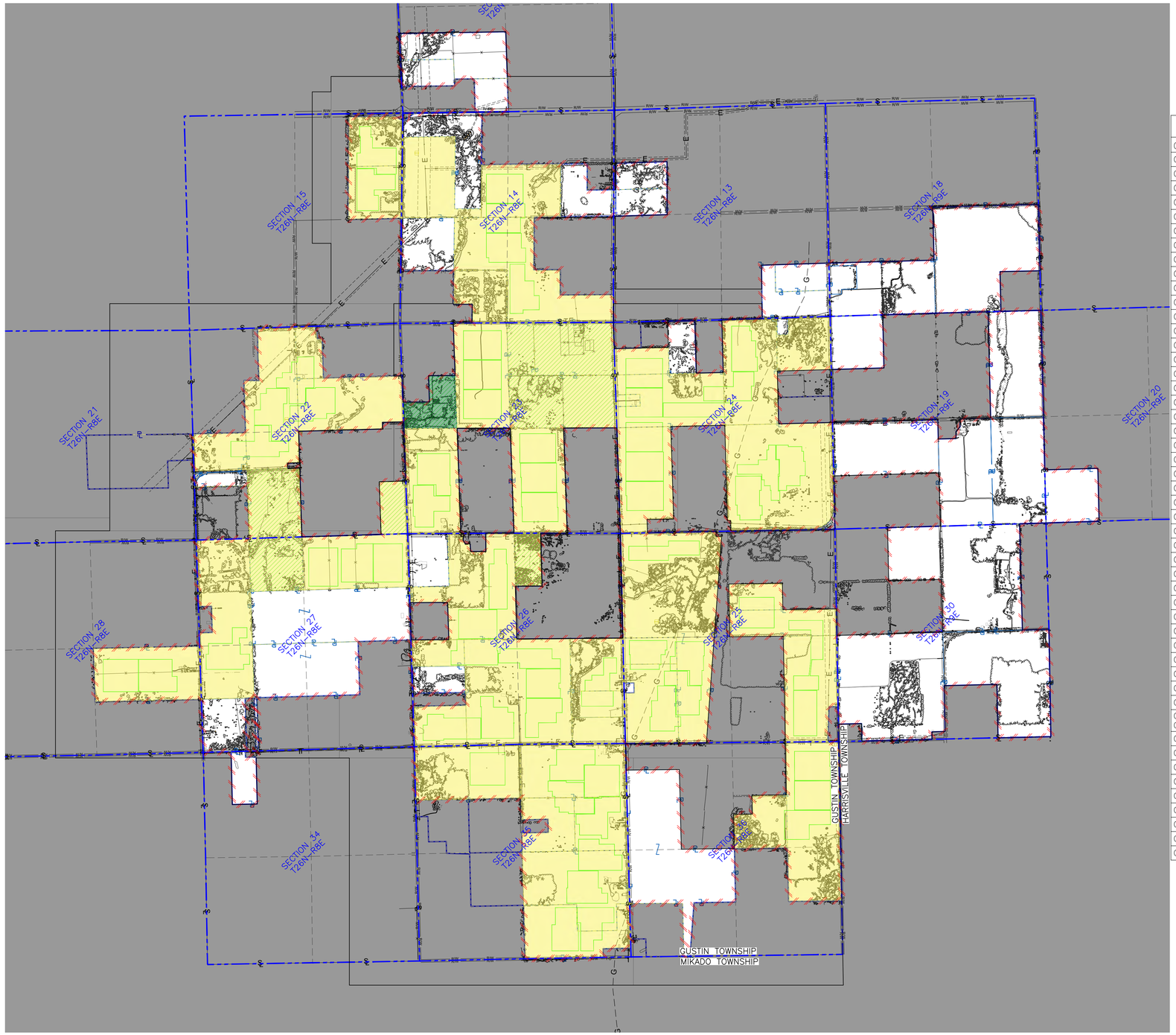
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EXISTING CONDITIONS & CLEARING
KEY PLAN

UNIT:N/A

| SCALE: 1" = 1400' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| JOB: 192088 | 1823-CV-220 | 001 | A |




LEGEND:

EXISTING CONDITIONS & ZONING:

- PROPERTY BOUNDARY – CONSUMERS ENERGY
- PROPERTY LINE – PARTICIPATING
- SOLAR ARRAY OUTLINE
- NON–PARTICIPATING PARCEL
- ZONE "A–R" AGRICULTURAL–RESIDENTIAL
- ZONE "F–R" FOREST RECREATION
- COLLECTION LINE ONLY LAND USE

| PARCEL # | FINAL LANDOWNER | ZONING | USE TYPE FOR DWGS | PARCEL ACREAGE | FENCED ACREAGE |
|---|---|---|---|---|---|
| 050–014–100–020–00 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 59.35 | 26.09 |
| 050–014–200–005–00 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 63.99 | 2.00 |
| 050–014–300–001–00 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 119.98 | 46.78 |
| 050–014–300–020–00 | TAIT, ASHLEY | A–R | SOLAR FACILITIES | 32.40 | 0.00 |
| 050–015–100–005–00 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 37.57 | 16.70 |
| 050–015–100–060–00 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 39.80 | 28.36 |
| 050–022–100–015–02 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 18.38 | 6.65 |
| 050–022–100–020–01 | BUURMA, BRUCE | A–R | SOLAR FACILITIES | 75.94 | 21.44 |
| 050–022–200–005–02 | GODDARD, ROBERT | A–R | SOLAR FACILITIES | 93.72 | 51.85 |
| 050–022–300–020–00 | HARTMAN | A–R | COLLECTION LINE ONLY | 51.41 | 0.00 |
| 050–022–300–025–00 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 27.76 | 10.51 |
| 050–022–400–005–01 | BISCHER, LLOYD | A–R | COLLECTION LINE ONLY | 19.81 | 0.00 |
| 050–023–100–010–00 | FULSHER | A–R | COLLECTION LINE ONLY | 79.42 | 0.00 |
| 050–023–200–005–00 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 79.31 | 63.37 |
| 050–023–200–010–01 | TRAVIS | F–R | COLLECTION LINE ONLY | 29.70 | 0.00 |
| 050–023–300–010–00 | PARSON | A–R | SOLAR FACILITIES | 79.17 | 39.38 |
| 050–023–400–010–00 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 79.15 | 56.23 |
| 050–024–100–005–00 | FOWLER, EVAN | A–R | SOLAR FACILITIES | 37.96 | 0.00 |
| 050–024–100–010–00 | HARBER | A–R | SOLAR FACILITIES | 80.64 | 37.65 |
| 050–024–200–009–00 | GRAHAM, JOHN | A–R | SOLAR FACILITIES | 20.23 | 11.36 |
| 050–024–200–010–02 | BUURMA, BRUCE | A–R | SOLAR FACILITIES | 76.68 | 54.10 |
| 050–024–200–010–03 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 4.01 | 3.18 |
| 050–024–300–015–00 | SAUTTER, RANDALL | A–R | SOLAR FACILITIES | 75.45 | 55.29 |
| 050–024–400–005–00 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 158.96 | 54.80 |
| 050–025–100–055–00 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 20.03 | 7.89 |
| 050–025–100–060–00 | CONSUMERS ENERGY | A–R | SOLAR FACILITIES | 40.10 | 23.36 |
| 050–025–200–015–00 | LOVE | A–R | SOLAR FACILITIES | 192.01 | 52.87 |
| 050–025–300–005–00 | LOVE | A–R | SOLAR FACILITIES | 19.93 | 15.70 |
| 050–025–300–010–00 | PROCUNIER | A–R | SOLAR FACILITIES | 58.28 | 30.62 |
| 050–025–400–005–35 | MACMASTER, HUGH | A–R | SOLAR FACILITIES | 75.10 | 32.24 |
| 050–026–100–020–00 | KOON | A–R | COLLECTION LINE ONLY | 19.86 | 0.00 |
| 050–026–200–004–04 | PERRIN LEROY | A–R | SOLAR FACILITIES | 104.35 | 39.31 |
| 050–026–300–005–00 | GODDARD, ROBERT | A–R | SOLAR FACILITIES | 157.77 | 94.48 |
| 050–026–300–010–05 | TAIT, CHARLES | A–R | SOLAR FACILITIES | 19.91 | 5.20 |
| 050–026–300–060–00 | GODDARD, ROBERT | A–R | SOLAR FACILITIES | 30.01 | 15.64 |
| 050–026–400–005–00 | SONBERG, CARLIN | A–R | SOLAR FACILITIES | 39.45 | 11.87 |
| 050–026–400–010–01 | YOUNK, MARK | A–R | SOLAR FACILITIES | 19.71 | 8.44 |
| 050–026–400–010–02 | GOLBECK | A–R | SOLAR FACILITIES | 18.94 | 0.00 |
| 050–027–100–005–00 | ROHBORN, RICHARD | A–R | SOLAR FACILITIES | 79.59 | 56.66 |
| 050–027–200–005–00 | HARTMAN | A–R | COLLECTION LINE ONLY | 39.69 | 0.00 |
| 050–027–200–010–20<br>050–027–200–015–20 | FREELAND | A–R | SOLAR FACILITIES | 114.07 | 22.36 |
| 050–028–400–005–00 | BEAN | A–R | SOLAR FACILITIES | 79.93 | 38.83 |
| 050–035–100–006–00 | GILL | A–R | SOLAR FACILITIES | 80.21 | 44.51 |
| 050–035–100–010–01 | GILL | A–R | SOLAR FACILITIES | 35.23 | 5.51 |
| 050–035–100–015–00 | J PARSON LAND COMPANY | A–R | SOLAR FACILITIES | 40.05 | 31.61 |
| 050–035–200–005–00 | PROCUNIER, RONALD | A–R | SOLAR FACILITIES | 80.11 | 20.50 |
| 050–035–400–005–01 | STAHL, GARY | A–R | SOLAR FACILITIES | 94.98 | 45.67 |
| 050–035–400–030–00 | STAHL, GARY | A–R | SOLAR FACILITIES | 61.53 | 25.10 |
| 050–036–100–005–00 | MACMASTER, BRIAN | A–R | SOLAR FACILITIES | 119.70 | 51.07 |
| 050–036–100–020–00 | PROCUNIER, RICKY | A–R | SOLAR FACILITIES | 34.78 | 1.71 |

NOTES:
1. SEE DRAWINGS 210–001, 210–002, AND 210–003 FOR LEGAL DESCRIPTIONS FOR PARCELS.
2. THE USE TYPE OF "SOLAR FACILITIES" INCLUDES THE ABOVE AND BELOW GROUND INFRASTRUCTURE ASSOCIATED WITH A SOLAR FACILITY.

1400' 700' 0 1400' 2800'
1" = 1400'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
License No. 6201313263
LICENSED PROFESSIONAL ENGINEER
05/13/2026

FOR PERMITTING PURPOSES ONLY

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|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

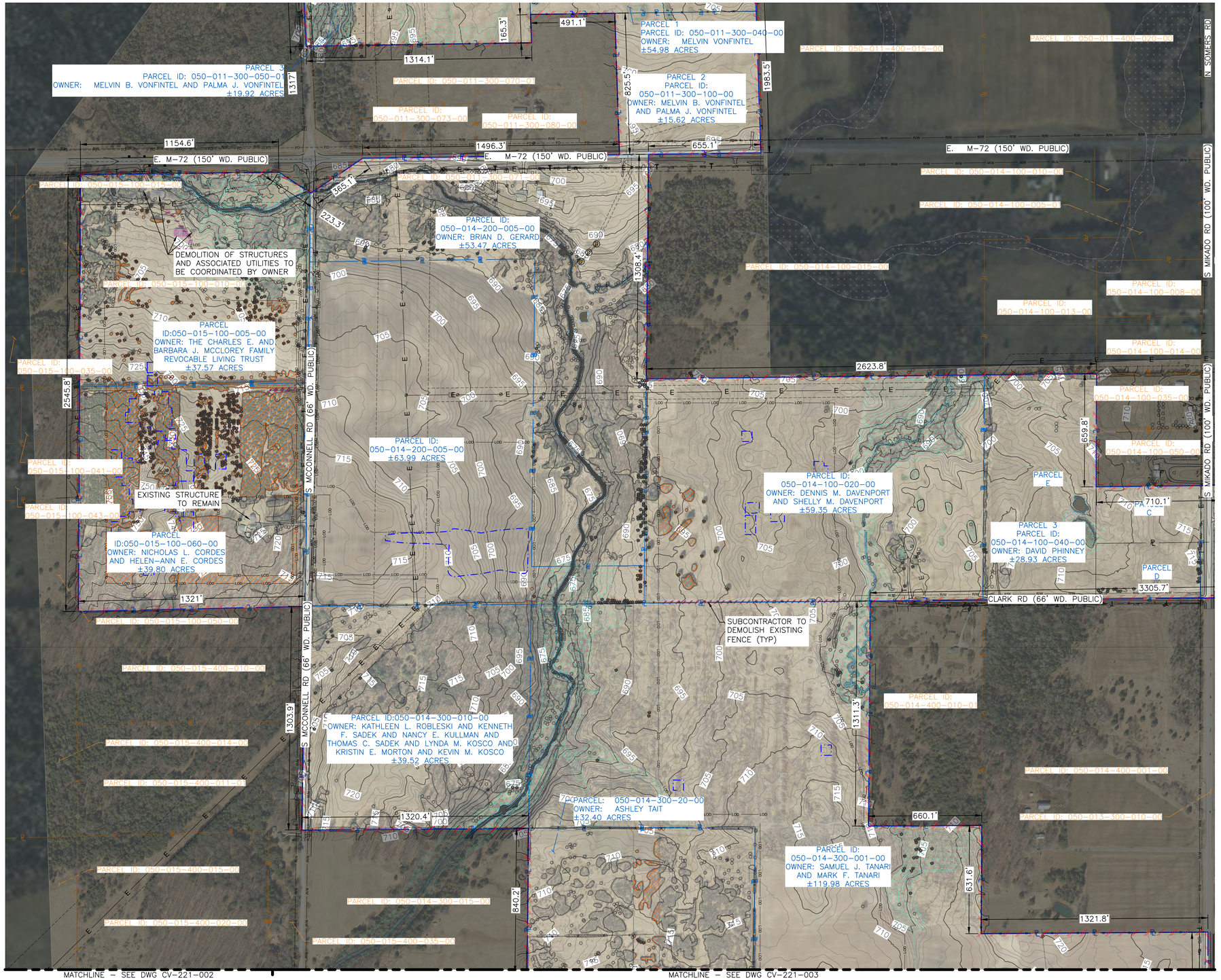
SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EXISTING CONDITIONS & CLEARING
PARCEL IDENTIFICATION & ZONING PLAN

UNIT:N/A
SCALE: 1" = 1400'
JOB: 192088
DRAWING NO.: 1823–CV–220
SHEET: 002
REV.: A




GENERAL NOTES:

1. FEMA DOES NOT PARTICIPATE WITHIN THE PROJECT AREA. HOWEVER, THE PROJECT SITE IS LOCATED ON THE FOLLOWING FIRM PANELS: 0270D, 09/28/2012; 0275D, 09/28/2012; 0407D, 09/28/2012; 0410D, 09/28/2012; 0425D, 09/28/2012.
2. ALL BODIES OF WATER WITHIN THE PROJECT EASEMENT ARE NOT COUNTY DRAINS. RESEARCH WAS COMPLETED BY METRO CONSULTING ASSOCIATES AND CONFIRMED BY THE ALCONA COUNTY DRAIN COMMISSIONER ON 04/23/2024.
3. THERE ARE NO KNOWN EXISTING DUMPSTER LOCATED ON THE PROPERTY.

LEGEND:

EXISTING CONDITIONS & CLEARING:

- CLEARING - TREES/SHRUBS
- 300 EXISTING CONTOUR (MAJOR)
- 322 EXISTING CONTOUR (MINOR)
- DEMOLITION - LINEAR FEATURE
- DEMOLITION - STRUCTURE
- EASEMENTS
- HISTOLS
- E ELECTRIC - OVERHEAD DISTRIBUTION LINES
- FO FIBER OPTIC - UNDERGROUND
- LIGHT POLE
- LIMITS OF EARTHWORK
- MISCELLANEOUS - SIGN
- POND EDGE
- PROJECT BOUNDARY - CONSUMERS ENERGY
- PROPERTY LINE - NON-PARTICIPATING
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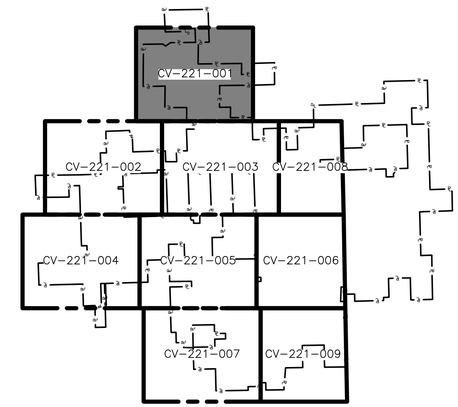
- EXISTING TREELINE
- R/W ROAD - RIGHT OF WAY
- STREAM - JURISDICTIONAL
- E UNDERGROUND - ELECTRIC
- UNDERGROUND - GAS LINE
- T UNDERGROUND - TELEPHONE
- WATERBODY - JURISDICTIONAL
- WETLANDS - JURISDICTIONAL
- WETLANDS - NON-JURISDICTIONAL




KEYMAP
NTS

N

300' 150' 0 300' 600'
1" = 300'

GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
STATE OF MICHIGAN
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EXISTING CONDITIONS & CLEARING
ENLARGED PLAN 01

UNIT:N/A

| SCALE: 1" = 300' | DRAWING NO. 1823-CV-221 | SHEET 001 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |

SHEET SIZE: ANSI-D 22x34

MATCHLINE – SEE DWG CV-221-001

S PERKINS RD (66' WD. PUBLIC)

E DEWAR RD (66' WD. PUBLIC)

CORNPATCH TRAIL

1427.4'

323.2'

1308.6'

981.8'

1955.3'

373.2'

SUBCONTRACTOR TO DEMOLISH EXISTING FENCE (TYP)

1291.6'

527.9'

165'

2087'

1312.7'

EXISTING STRUCTURE TO REMAIN

S CRUZEN RD

1317.2'

EXISTING STRUCTURE TO REMAIN

EXISTING PRIVATE CEMETERY TO REMAIN

782.4'

297'

297'

MILL ST

W MILLMASTER RD

MILL ST (66' WD. PUBLIC)

1311.9'

1314.5'

1705.4'

1307.8'

MATCHLINE – SEE DWG CV-221-003

MATCHLINE – SEE DWG CV-221-004

MATCHLINE – SEE DWG CV-221-005

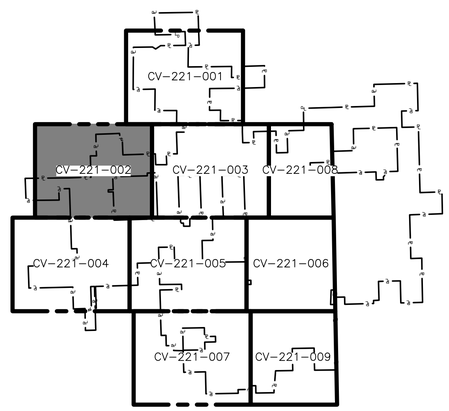
GENERAL NOTES:

1. FEMA DOES NOT PARTICIPATE WITHIN THE PROJECT AREA. HOWEVER, THE PROJECT SITE IS LOCATED ON THE FOLLOWING FIRM PANELS: 0270D, 09/28/2012; 0275D, 09/28/2012; 0407D, 09/28/2012; 0410D, 09/28/2012; 0425D, 09/28/2012.
2. ALL BODIES OF WATER WITHIN THE PROJECT EASEMENT ARE NOT COUNTY DRAINS. RESEARCH WAS COMPLETED BY METRO CONSULTING ASSOCIATES AND CONFIRMED BY THE ALCONA COUNTY DRAIN COMMISSIONER ON 04/23/2024.
3. THERE ARE NO KNOWN EXISTING DUMPSTER LOCATED ON THE PROPERTY.

LEGEND:

EXISTING CONDITIONS & CLEARING:

- CLEARING – TREES/SHRUBS
- 300 EXISTING CONTOUR (MAJOR)
- 322 EXISTING CONTOUR (MINOR)
- DEMOLITION – LINEAR FEATURE
- DEMOLITION – STRUCTURE
- EASEMENTS
- HISTOLS
- E ELECTRIC – OVERHEAD DISTRIBUTION LINES
- FO FIBER OPTIC – UNDERGROUND
- LIGHT POLE
- LIMITS OF EARTHWORK
- MISCELLANEOUS – SIGN
- POND EDGE
- PROJECT BOUNDARY – CONSUMERS ENERGY
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- EXISTING TREELINE
- R/W ROAD – RIGHT OF WAY
- STREAM – JURISDICTIONAL
- E UNDERGROUND – ELECTRIC
- UNDERGROUND – GAS LINE
- T UNDERGROUND – TELEPHONE
- WATERBODY – JURISDICTIONAL
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL




KEYMAP
NTS

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE

NAME: G. ALBANSODER

MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EXISTING CONDITIONS & CLEARING
ENLARGED PLAN 02

UNIT:N/A

| SCALE: 1" = 300' | DRAWING NO. 1823-CV-221 | SHEET 002 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-221-002.DWG 5/13/2026 5:43 PM GLALBANSODER

SHEET SIZE: ANSI-D 22x34

MATCHLINE – SEE DWG CV-221-001

PARCEL ID: 050-014-300-015-00
PARCEL ID: 050-015-400-020-00
PARCEL ID: 050-015-400-030-00
PARCEL ID: 050-022-100-005-00
PARCEL ID: 050-023-200-007-00
PARCEL ID: 050-023-200-008-00
PARCEL ID: 050-023-200-009-00
PARCEL ID: 050-022-100-20-01
OWNERE: BRUCE BUURMA AND AMY BUURMA
±75.94 ACRES
PARCEL ID: 050-014-300-20-00
OWNER: ASHLEY TAIT
±32.40 ACRES
PARCEL ID: 050-014-300-025-00
PARCEL ID: 050-014-300-001-00
OWNER: SAMUEL J. TANARI AND MARK F. TANARI
±119.98 ACRES
PARCEL ID: 050-023-200-005-00
OWNER: RYAN DELLAR AND CHARINA DELLAR
±79.31 ACRES
PARCEL ID: 050-023-300-010-00
JOHN G. PARSONS
±79.17 ACRES
PARCEL ID: 050-023-300-060-00
PARCEL ID: 050-023-300-080-00
PARCEL ID: 050-023-400-010-00
OWNER: SAMUEL J. TANARI AND MARK F. TANARI
±79.15 ACRES
PARCEL ID: 050-023-400-007-00
PARCEL ID: 050-023-400-005-00
PARCEL ID: 050-023-400-015-00
PARCEL ID: 050-013-300-010-00
PARCEL ID: 050-013-300-020-01
PARCEL ID: 050-024-200-006-00
PARCEL ID: 050-24-200-005-05
OWNER: CHARLES P. TAIT AND RENEE L. TAIT
±10.13 ACRES
PARCEL ID: 050-24-200-005-04
OWNER: TIM GOZDOR
±20.23 ACRES
PARCEL ID: 050-24-200-009-00
JOHN GRAHAM AND DEBORAH GRAHAM
±20.23 ACRES
PARCEL ID:050-024-200-010-03
OWNER: JON WHITEFIELD
±4.01 ACRES
PARCEL ID: 050-24-200-010-02
OWNER: BRUCE BUURMA AND AMY BUURMA
±76.68 ACRES
PARCEL ID: 050-24-300-015-00
OWNER: ALFRED GRAZIANA AND MARLENE GRAZIANA
±75.45 ACRES
PARCEL ID: 050-024-300-005-00
PARCEL ID: 050-024-300-025-00

E DEWAR RD (66' WD. PUBLIC)
S MCCONNELL RD (66' WD. PUBLIC)
MIKADO RD (100' WD. PUBLIC)

DEMOLITION OF STRUCTURES AND ASSOCIATED UTILITIES TO BE COORDINATED BY OWNER
DEMOLITION OF STRUCTURES AND UTILITIES TO BE COORDINATED BY OWNER

MATCHLINE – SEE DWG CV-221-002
MATCHLINE – SEE DWG CV-221-005
MATCHLINE – SEE DWG CV-221-006
MATCHLINE – SEE DWG CV-221-008

GENERAL NOTES:

1. FEMA DOES NOT PARTICIPATE WITHIN THE PROJECT AREA. HOWEVER, THE PROJECT SITE IS LOCATED ON THE FOLLOWING FIRM PANELS: 0270D, 09/28/2012; 0275D, 09/28/2012; 0407D, 09/28/2012; 0410D, 09/28/2012; 0425D, 09/28/2012.
2. ALL BODIES OF WATER WITHIN THE PROJECT EASEMENT ARE NOT COUNTY DRAINS. RESEARCH WAS COMPLETED BY METRO CONSULTING ASSOCIATES AND CONFIRMED BY THE ALCONA COUNTY DRAIN COMMISSIONER ON 04/23/2024.
3. THERE ARE NO KNOWN EXISTING DUMPSTER LOCATED ON THE PROPERTY.

LEGEND:

EXISTING CONDITIONS & CLEARING:

- CLEARING – TREES/SHRUBS
- 300 EXISTING CONTOUR (MAJOR)
- 322 EXISTING CONTOUR (MINOR)
- DEMOLITION – LINEAR FEATURE
- DEMOLITION – STRUCTURE
- EASEMENTS
- HISTOLS
- E ELECTRIC – OVERHEAD DISTRIBUTION LINES
- FO FIBER OPTIC – UNDERGROUND
- LIGHT POLE
- LIMITS OF EARTHWORK
- MISCELLANEOUS – SIGN
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- WATERBODY – JURISDICTIONAL
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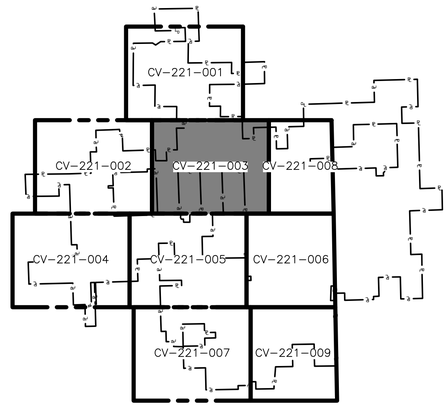



KEYMAP
NTS

300' 150' 0 300' 600'
1" = 300'

GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
STATE OF MICHIGAN
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|
| A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

REFERENCE DRAWINGS

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EXISTING CONDITIONS & CLEARING
ENLARGED PLAN 03

UNIT: N/A

| SCALE: | 1" = 300' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-221 | 003 | A |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-221-003.DWG 5/13/2026 6:07 PM GLALBANSODER

SHEET SIZE: ANSI-D 22x34

MATCHLINE – SEE DWG CV-221-002

FOWLER RD (66' WD. PUBLIC)

FOWLER RD (66' WD. PUBLIC)

PARCEL ID: 050-021-400-050-00

PARCEL ID: 050-021-400-010-00

PARCEL ID: 050-028-100-010-10

PARCEL ID: 050-028-100-010-05

PARCEL ID: 050-028-100-005-00

PARCEL ID: 050-028-100-015-01

PARCEL ID: 050-028-200-005-00

PARCEL ID: 050-028-100-020-00

PARCEL ID: 050-028-100-080-00

PARCEL ID: 050-028-200-010-00

PARCEL ID: 050-022-300-040-00
THE JAMES H. FREELAND TRUST
±39.62 ACRES

PARCEL ID: 050-022-400-010-01

PARCEL ID: 050-027-100-005-00
OWNER: RICHARD C. ROHRBORN
±79.59 ACRES

PARCEL ID: 050-027-200-010-20 &
PARCEL ID: 050-027-200-015-20
OWNER: JAMES H. FREELAND
±114.07 ACRES

PARCEL ID: 050-027-200-025-00

PARCEL ID: 050-027-100-010-00

PARCEL ID: 050-027-300-005-00

PARCEL ID: 050-027-300-010-00

PARCEL ID: 050-027-400-050-00

PARCEL ID: 050-027-300-016-00

PARCEL ID: 050-027-300-040-01

PARCEL ID: 050-034-100-010-01

PARCEL ID: 050-034-200-005-00

PARCEL ID: 050-034-200-015-01

PARCEL ID: 050-028-400-065-02

PARCEL ID: 050-028-400-065-01

PARCEL ID: 050-028-400-075-00

PARCEL ID: 050-028-400-010-00

PARCEL ID: 050-028-300-045-00

PARCEL ID: 050-028-300-055-00

PARCEL ID: 050-028-300-035-00

PARCEL ID: 050-028-400-005-00
OWNER: HAROLD L. BEAN
±79.93 ACRES

PARCEL ID: 050-028-400-005-00
OWNER: BERNARD E. TRUMAN
AND DELLA R. TRUMAN
±32.86 ACRES

S CRUZEN RD

S CRUZEN RD

E PROCUNIER RD (66' WD. PUBLIC)

E PROCUNIER RD (66' WD. PUBLIC)

E PROCUNIER RD (66' WD. PUBLIC)

1311'

1647.1'

330'

659.9'

330'

327.3'

2635'

1324'

2637.7'

1317'

225'

1318.6'

1319.1'

2556.2'

148.5'

66'

693.3'

1968.5'

EXISTING STRUCTURES TO REMAIN

SUBCONTRACTOR TO DEMOLISH EXISTING FENCE (TYP)

MATCHLINE – SEE DWG CV-221-005

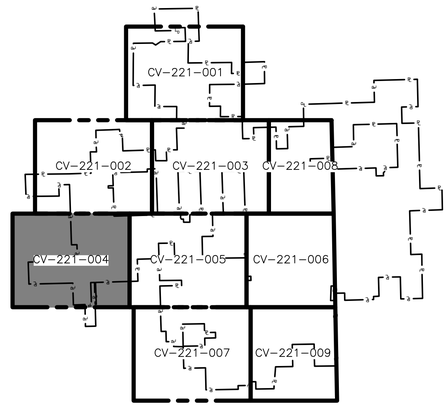
GENERAL NOTES:

1. FEMA DOES NOT PARTICIPATE WITHIN THE PROJECT AREA. HOWEVER, THE PROJECT SITE IS LOCATED ON THE FOLLOWING FIRM PANELS: 0270D, 09/28/2012; 0275D, 09/28/2012; 0407D, 09/28/2012; 0410D, 09/28/2012; 0425D, 09/28/2012.
2. ALL BODIES OF WATER WITHIN THE PROJECT EASEMENT ARE NOT COUNTY DRAINS. RESEARCH WAS COMPLETED BY METRO CONSULTING ASSOCIATES AND CONFIRMED BY THE ALCONA COUNTY DRAIN COMMISSIONER ON 04/23/2024.
3. THERE ARE NO KNOWN EXISTING DUMPSTER LOCATED ON THE PROPERTY.

LEGEND:

EXISTING CONDITIONS & CLEARING:

- CLEARING – TREES/SHRUBS
- 300 EXISTING CONTOUR (MAJOR)
- 322 EXISTING CONTOUR (MINOR)
- DEMOLITION – LINEAR FEATURE
- DEMOLITION – STRUCTURE
- EASEMENTS
- HISTOLS
- E ELECTRIC – OVERHEAD DISTRIBUTION LINES
- FO FIBER OPTIC – UNDERGROUND
- LIGHT POLE
- LIMITS OF EARTHWORK
- MISCELLANEOUS – SIGN
- POND EDGE
- PROJECT BOUNDARY – CONSUMERS ENERGY
- PROPERTY LINE – NON–PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- EXISTING TREELINE
- R/W ROAD – RIGHT OF WAY
- STREAM – JURISDICTIONAL
- E UNDERGROUND – ELECTRIC
- UNDERGROUND – GAS LINE
- T UNDERGROUND – TELEPHONE
- WATERBODY – JURISDICTIONAL
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON–JURISDICTIONAL




KEYMAP
NTS

N

300' 150' 0 300' 600'
1" = 300'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

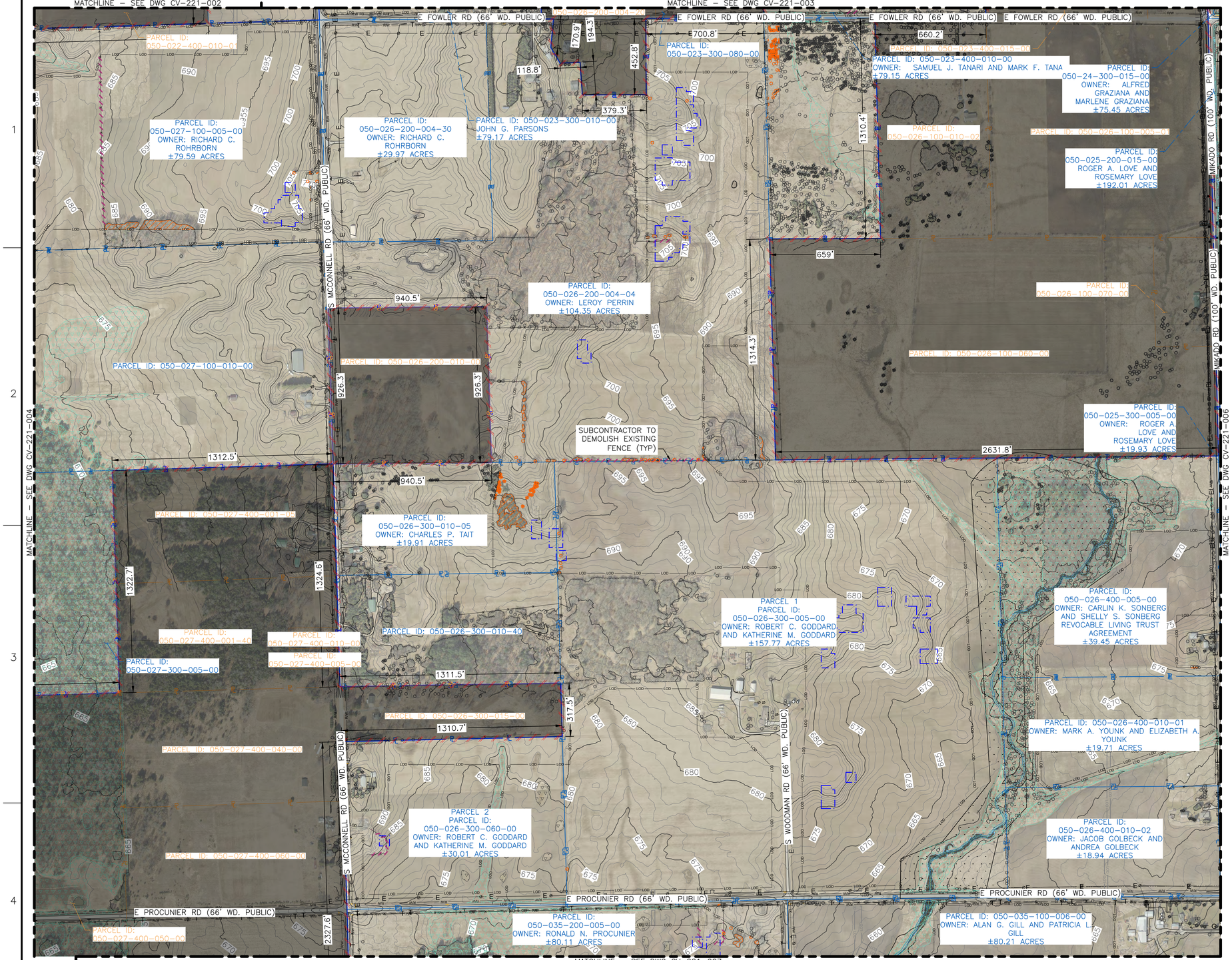
Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EXISTING CONDITIONS & CLEARING
ENLARGED PLAN 04

UNIT:N/A

| SCALE: 1" = 300' | DRAWING NO. 1823-CV-221 | SHEET 004 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-221-004.DWG 5/13/2026 6:07 PM GLALBANSODER



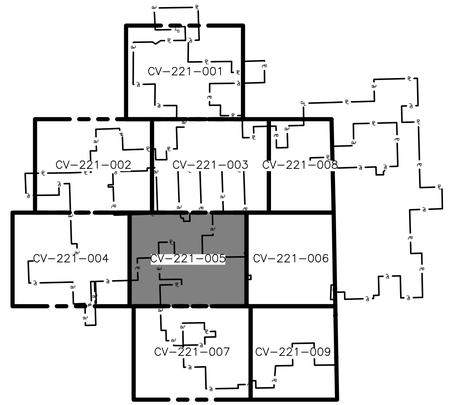

GENERAL NOTES:

1. FEMA DOES NOT PARTICIPATE WITHIN THE PROJECT AREA. HOWEVER, THE PROJECT SITE IS LOCATED ON THE FOLLOWING FIRM PANELS: 0270D, 09/28/2012; 0275D, 09/28/2012; 0407D, 09/28/2012; 0410D, 09/28/2012; 0425D, 09/28/2012.
2. ALL BODIES OF WATER WITHIN THE PROJECT EASEMENT ARE NOT COUNTY DRAINS. RESEARCH WAS COMPLETED BY METRO CONSULTING ASSOCIATES AND CONFIRMED BY THE ALCONA COUNTY DRAIN COMMISSIONER ON 04/23/2024.
3. THERE ARE NO KNOWN EXISTING DUMPSTER LOCATED ON THE PROPERTY.

LEGEND:

EXISTING CONDITIONS & CLEARING:

- CLEARING – TREES/SHRUBS
- 300 EXISTING CONTOUR (MAJOR)
- 322 EXISTING CONTOUR (MINOR)
- DEMOLITION – LINEAR FEATURE
- DEMOLITION – STRUCTURE
- EASEMENTS
- HISTOLS
- E ELECTRIC – OVERHEAD DISTRIBUTION LINES
- FO FIBER OPTIC – UNDERGROUND
- LIGHT POLE
- LIMITS OF EARTHWORK
- MISCELLANEOUS – SIGN
- POND EDGE
- PROJECT BOUNDARY – CONSUMERS ENERGY
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- EXISTING TREELINE
- R/W ROAD – RIGHT OF WAY
- STREAM – JURISDICTIONAL
- E UNDERGROUND – ELECTRIC
- G UNDERGROUND – GAS LINE
- T UNDERGROUND – TELEPHONE
- WATERBODY – JURISDICTIONAL
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL




KEYMAP
NTS

05/13/2026

FOR PERMITTING PURPOSES ONLY

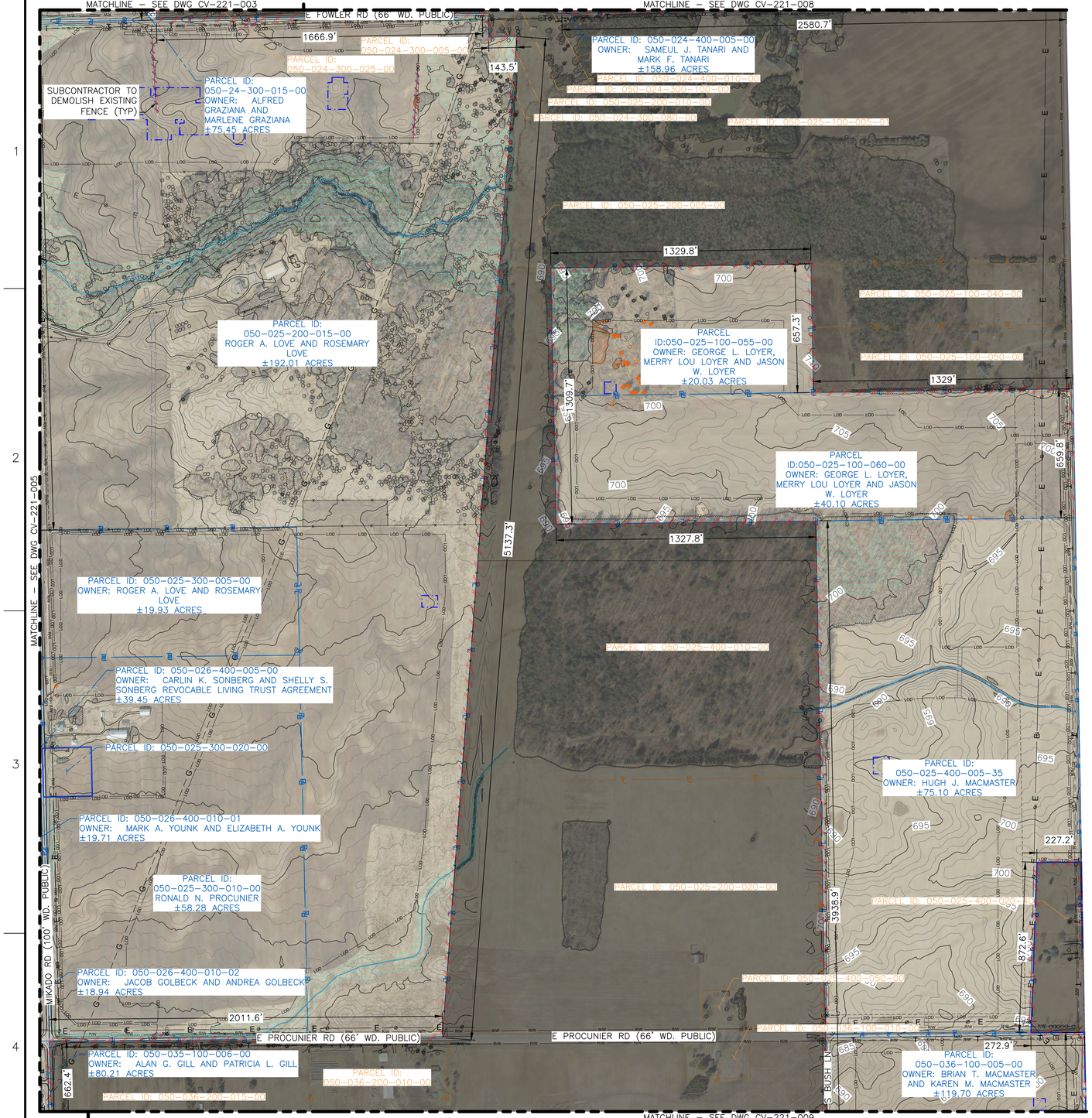
| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EXISTING CONDITIONS & CLEARING
ENLARGED PLAN 05

SCALE: 1" = 300' | UNIT: N/A
JOB: 192088 | DRAWING NO.: 1823-CV-221 | SHEET: 005 | REV.: A



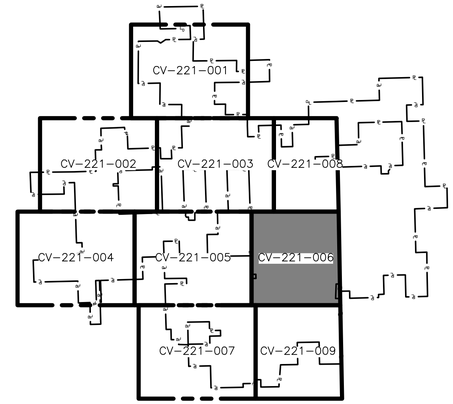

GENERAL NOTES:

1. FEMA DOES NOT PARTICIPATE WITHIN THE PROJECT AREA. HOWEVER, THE PROJECT SITE IS LOCATED ON THE FOLLOWING FIRM PANELS: 0270D, 09/28/2012; 0275D, 09/28/2012; 0407D, 09/28/2012; 0410D, 09/28/2012; 0425D, 09/28/2012.
2. ALL BODIES OF WATER WITHIN THE PROJECT EASEMENT ARE NOT COUNTY DRAINS. RESEARCH WAS COMPLETED BY METRO CONSULTING ASSOCIATES AND CONFIRMED BY THE ALCONA COUNTY DRAIN COMMISSIONER ON 04/23/2024.
3. THERE ARE NO KNOWN EXISTING DUMPSTER LOCATED ON THE PROPERTY.

LEGEND:

EXISTING CONDITIONS & CLEARING:

- CLEARING – TREES/SHRUBS
- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- DEMOLITION – LINEAR FEATURE
- DEMOLITION – STRUCTURE
- EASEMENTS
- HISTOLS
- E — ELECTRIC – OVERHEAD DISTRIBUTION LINES
- FO — FIBER OPTIC – UNDERGROUND
- LIGHT POLE
- LIMITS OF EARTHWORK
- MISCELLANEOUS – SIGN
- POND EDGE
- PROJECT BOUNDARY – CONSUMERS ENERGY
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- EXISTING TREELINE
- R/W — ROAD – RIGHT OF WAY
- STREAM – JURISDICTIONAL
- E — UNDERGROUND – ELECTRIC
- G — UNDERGROUND – GAS LINE
- T — UNDERGROUND – TELEPHONE
- WATERBODY – JURISDICTIONAL
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL




KEYMAP
NTS

300' 150' 0 300' 600'
1" = 300'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

CV-221-007

REFERENCE DRAWINGS

| REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|
| A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

Consumers Energy

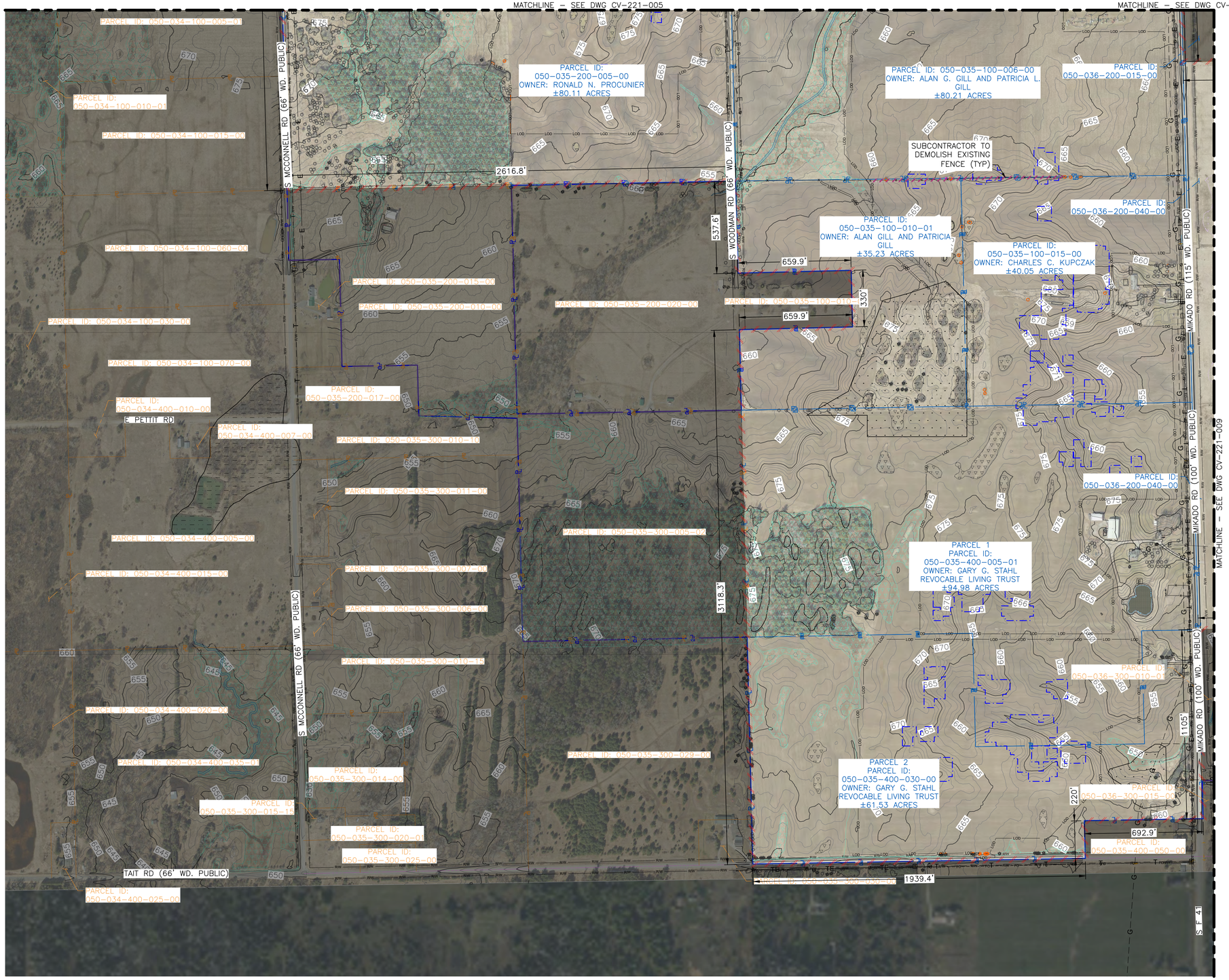
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EXISTING CONDITIONS & CLEARING
ENLARGED PLAN 06

UNIT:N/A

| SCALE: | 1" = 300' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-221 | 006 | A |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-221-006.DWG 5/13/2026 6:07 PM GLALBANSODER



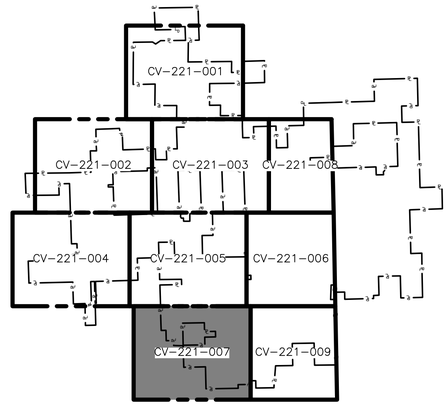

GENERAL NOTES:

1. FEMA DOES NOT PARTICIPATE WITHIN THE PROJECT AREA. HOWEVER, THE PROJECT SITE IS LOCATED ON THE FOLLOWING FIRM PANELS: 0270D, 09/28/2012; 0275D, 09/28/2012; 0407D, 09/28/2012; 0410D, 09/28/2012; 0425D, 09/28/2012.
2. ALL BODIES OF WATER WITHIN THE PROJECT EASEMENT ARE NOT COUNTY DRAINS. RESEARCH WAS COMPLETED BY METRO CONSULTING ASSOCIATES AND CONFIRMED BY THE ALCONA COUNTY DRAIN COMMISSIONER ON 04/23/2024.
3. THERE ARE NO KNOWN EXISTING DUMPSTER LOCATED ON THE PROPERTY.

LEGEND:

EXISTING CONDITIONS & CLEARING:

- CLEARING – TREES/SHRUBS
- 300 EXISTING CONTOUR (MAJOR)
- 322 EXISTING CONTOUR (MINOR)
- DEMOLITION – LINEAR FEATURE
- DEMOLITION – STRUCTURE
- EASEMENTS
- HISTOLS
- E ELECTRIC – OVERHEAD DISTRIBUTION LINES
- FO FIBER OPTIC – UNDERGROUND
- LIGHT POLE
- LIMITS OF EARTHWORK
- MISCELLANEOUS – SIGN
- POND EDGE
- PROJECT BOUNDARY – CONSUMERS ENERGY
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- EXISTING TREELINE
- R/W ROAD – RIGHT OF WAY
- STREAM – JURISDICTIONAL
- E UNDERGROUND – ELECTRIC
- G UNDERGROUND – GAS LINE
- T UNDERGROUND – TELEPHONE
- WATERBODY – JURISDICTIONAL
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL




KEYMAP
NTS

05/13/2026

300' 150' 0 300' 600'
1" = 300'

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EXISTING CONDITIONS & CLEARING
ENLARGED PLAN 07

UNIT:N/A

| SCALE: 1" = 300' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| JOB: 192088 | 1823-CV-221 | 007 | A |

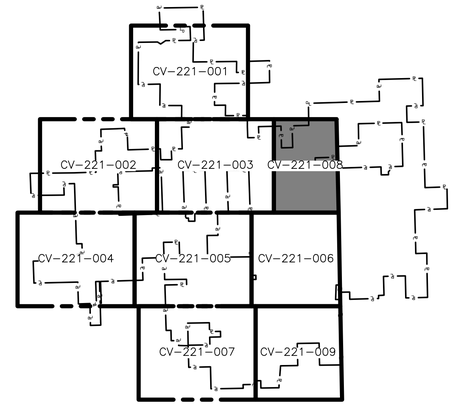
GENERAL NOTES:

1. FEMA DOES NOT PARTICIPATE WITHIN THE PROJECT AREA. HOWEVER, THE PROJECT SITE IS LOCATED ON THE FOLLOWING FIRM PANELS: 0270D, 09/28/2012; 0275D, 09/28/2012; 0407D, 09/28/2012; 0410D, 09/28/2012; 0425D, 09/28/2012.
2. ALL BODIES OF WATER WITHIN THE PROJECT EASEMENT ARE NOT COUNTY DRAINS. RESEARCH WAS COMPLETED BY METRO CONSULTING ASSOCIATES AND CONFIRMED BY THE ALCONA COUNTY DRAIN COMMISSIONER ON 04/23/2024.
3. THERE ARE NO KNOWN EXISTING DUMPSTER LOCATED ON THE PROPERTY.

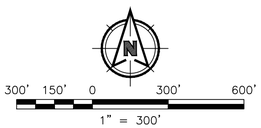
LEGEND:

EXISTING CONDITIONS & CLEARING:

- CLEARING – TREES/SHRUBS
- 300 EXISTING CONTOUR (MAJOR)
- 322 EXISTING CONTOUR (MINOR)
- DEMOLITION – LINEAR FEATURE
- DEMOLITION – STRUCTURE
- EASEMENTS
- HISTOLS
- E ELECTRIC – OVERHEAD DISTRIBUTION LINES
- FO FIBER OPTIC – UNDERGROUND
- LIGHT POLE
- LIMITS OF EARTHWORK
- MISCELLANEOUS – SIGN
- POND EDGE
- PROJECT BOUNDARY – CONSUMERS ENERGY
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- EXISTING TREELINE
- R/W ROAD – RIGHT OF WAY
- STREAM – JURISDICTIONAL
- E UNDERGROUND – ELECTRIC
- G UNDERGROUND – GAS LINE
- T UNDERGROUND – TELEPHONE
- WATERBODY – JURISDICTIONAL
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL




KEYMAP
NTS



05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EXISTING CONDITIONS & CLEARING
ENLARGED PLAN 08

UNIT: N/A
SCALE: 1" = 300'
JOB: 192088
DRAWING NO.: 1823-CV-221
SHEET: 008
REV.: A

A

B

C

D

1

2

3

4

GENERAL NOTES:

1. FEMA DOES NOT PARTICIPATE WITHIN THE PROJECT AREA. HOWEVER, THE PROJECT SITE IS LOCATED ON THE FOLLOWING FIRM PANELS: 0270D, 09/28/2012; 0275D, 09/28/2012; 0407D, 09/28/2012; 0410D, 09/28/2012; 0425D, 09/28/2012.
2. ALL BODIES OF WATER WITHIN THE PROJECT EASEMENT ARE NOT COUNTY DRAINS. RESEARCH WAS COMPLETED BY METRO CONSULTING ASSOCIATES AND CONFIRMED BY THE ALCONA COUNTY DRAIN COMMISSIONER ON 04/23/2024.
3. THERE ARE NO KNOWN EXISTING DUMPSTER LOCATED ON THE PROPERTY.

LEGEND:

EXISTING CONDITIONS & CLEARING:

- CLEARING – TREES/SHRUBS
- 300 EXISTING CONTOUR (MAJOR)
- 322 EXISTING CONTOUR (MINOR)
- DEMOLITION – LINEAR FEATURE
- DEMOLITION – STRUCTURE
- EASEMENTS
- HISTOLS
- E ELECTRIC – OVERHEAD DISTRIBUTION LINES
- FO FIBER OPTIC – UNDERGROUND
- LIGHT POLE
- LIMITS OF EARTHWORK
- MISCELLANEOUS – SIGN
- POND EDGE
- PROJECT BOUNDARY – CONSUMERS ENERGY
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- EXISTING TREELINE
- R/W ROAD – RIGHT OF WAY
- STREAM – JURISDICTIONAL
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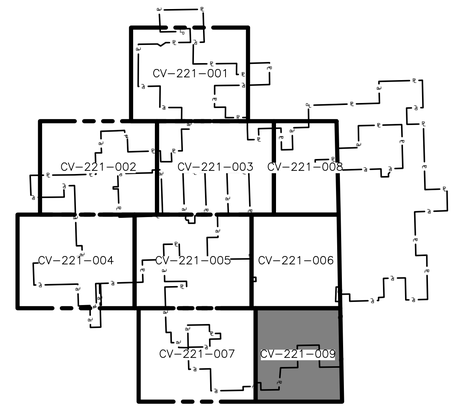
- UNDERGROUND – TELEPHONE
- WATERBODY – JURISDICTIONAL
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL




KEYMAP
NTS

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
License No. 6201313263
LICENSED PROFESSIONAL ENGINEER
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

| REV | DATE | DESCRIPTION | DR | BY | CK | APP | CO |
|---|---|---|---|---|---|---|---|

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

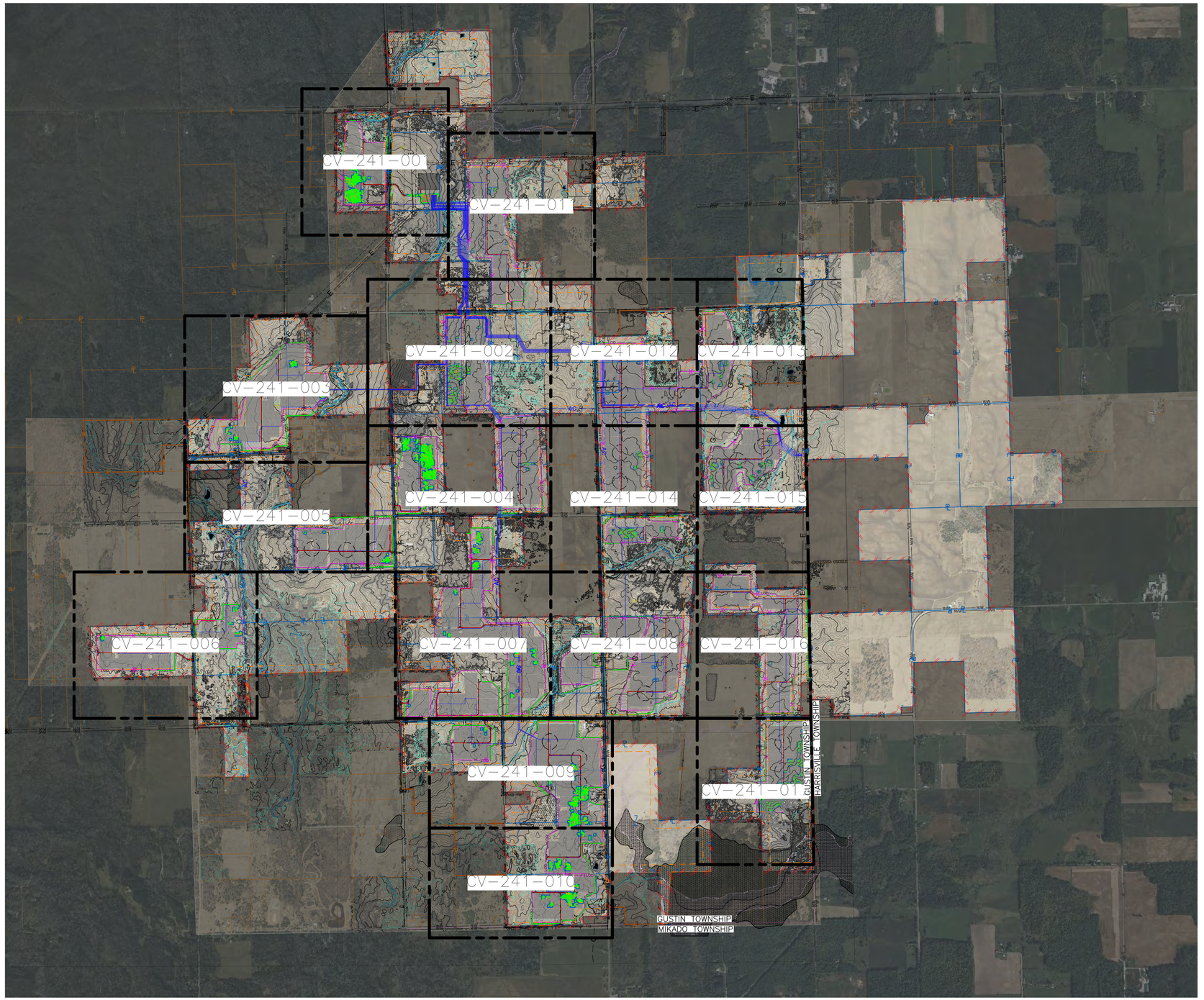
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EXISTING CONDITIONS & CLEARING
ENLARGED PLAN 09

UNIT:N/A

| SCALE: 1" = 200' | DRAWING NO. 1823-CV-221 | SHEET 009 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |




NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
3. PRE-DEVELOPMENT DRAINAGE PATTERNS ARE TO BE MAINTAINED TO THE GREATEST EXTENT PRACTICABLE.
4. SOLAR EQUIPMENT SETBACK INCLUDES REQUIRED DEFINING SETBACKS FROM THE GUSTIN TOWNSHIP SOLAR ORDINANCE AND SPECIAL LAND USE PERMIT REQUIREMENTS.
   - 4.1. GUSTIN TWP ORDINANCE SECTION 4.5 (A-R) AGRICULTURAL-RESIDENTIAL DISTRICT: MINIMUM FRONT YARD SETBACK = 60-FT.
   - 4.2. GUSTIN TWP ORDINANCE SECTION 7.31 C.3: THE COMMERCIAL SOLAR ENERGY SYSTEM SHALL BE SET BACK TWO HUNDRED (200) FEET FROM ALL PROPERTY LINES OF NON-PARTICIPATING LOTS.
5. NO DRAINAGE, SANITARY SEWER, STORM SEWERS, OR OTHER UTILITY MAINS ARE IDENTIFIED ON SITE.
6. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.
7. ALL INTERNAL TURNING RADII ALONG AGGREGATE ACCESS ROADS SHALL BE A MINIMUM OF 35-FT.
8. LOCATIONS OF UNDERGROUND COLLECTION LINES ARE APPROXIMATE IN NATURE AND SUBJECT TO CHANGE

LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK – SEE NOTE 4
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 — PROPOSED CONTOUR (MAJOR)
- 322 — PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- AC — MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LOD — LIMITS OF DISTURBANCE
- LOD — LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD

N

1400' 700' 0 1400' 2800'

1" = 1400'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
License No. 6201313263
LICENSED PROFESSIONAL ENGINEER

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

| REV | DATE | DESCRIPTION | ADB DR | ACG BY | JTD CK | GLA APP | BMC CO |
|---|---|---|---|---|---|---|---|
| A | 05/13/26 | ISSUED FOR PERMITTING | | | | | |

SIGNATURE

NAME: G. ALBANSODER

MICHIGAN P.E. No.: 6201313263

Consumers Energy

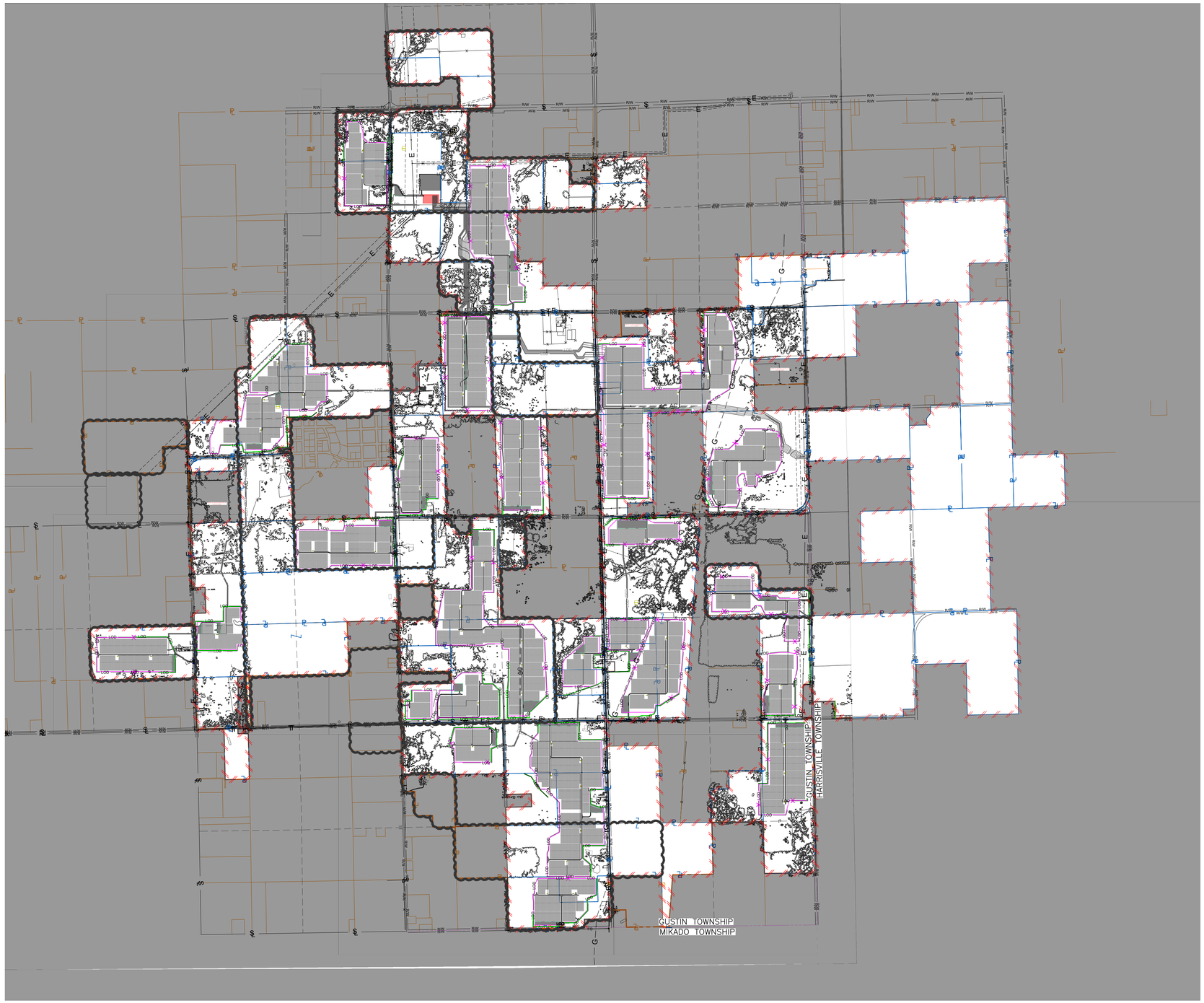
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING KEY PLAN

UNIT: N/A

| SCALE: 1" = 1400' | DRAWING NO. 1823-CV-240 | SHEET 001 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |

SHEET SIZE: ANSI-D 22x34




LEGEND:

PROJECT DELINEATION:

SAPLING SOLAR PARCEL

1400' 700' 0 1400' 2800'

1" = 1400'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

| REV | DATE | DESCRIPTION | DR | BY | CK | APP | CO |
|---|---|---|---|---|---|---|---|

SIGNATURE

NAME: G. ALBANSODER

MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

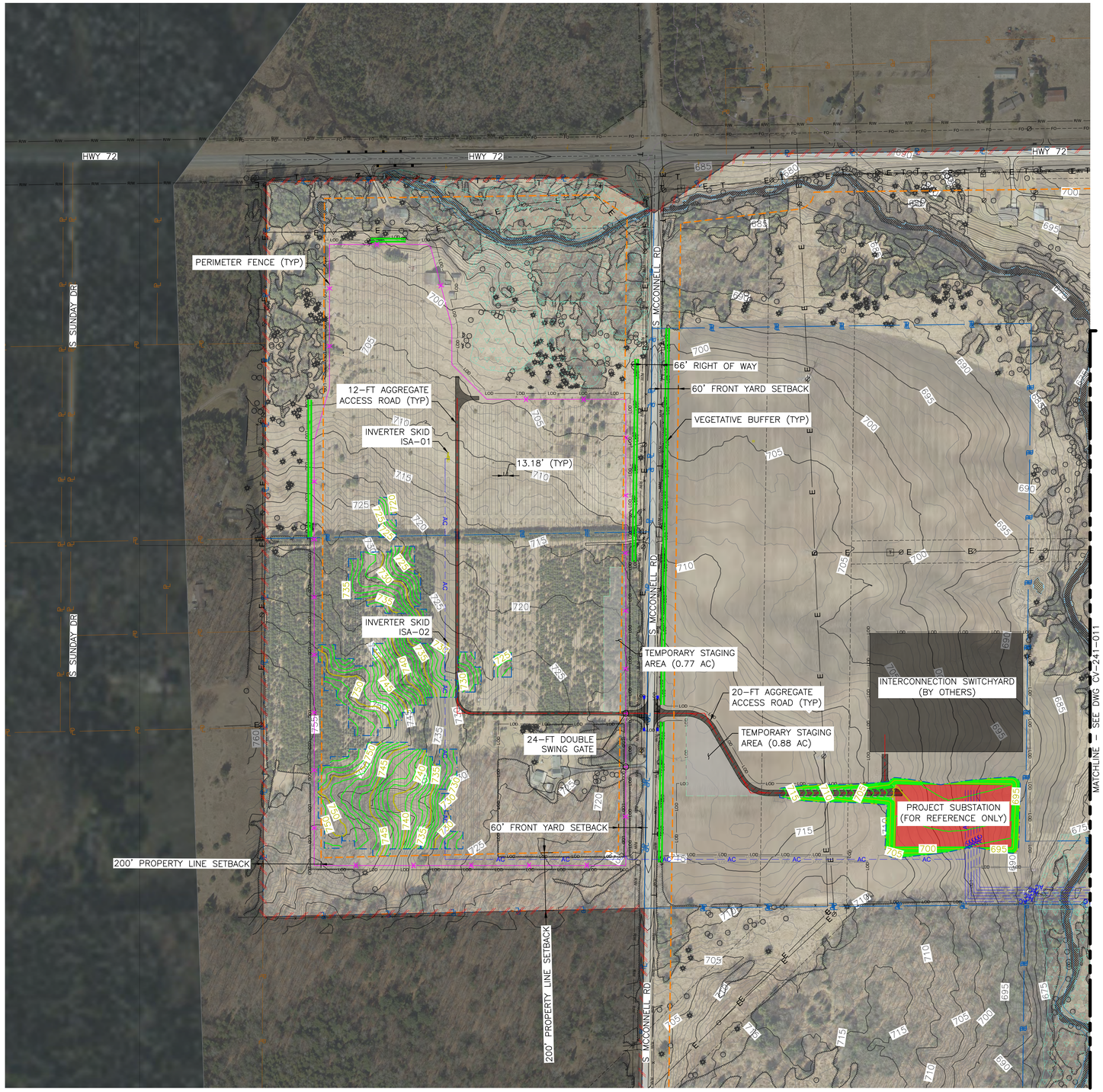
SITE IMPROVEMENTS & GRADING
PROJECT DELINEATION MAP

UNIT: N/A

| SCALE: | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| 1" = 1400' | 1823-CV-240 | 002 | A |

JOB: 192088

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-240-002.DWG 5/5/2026 1:52 PM ACGEORGE



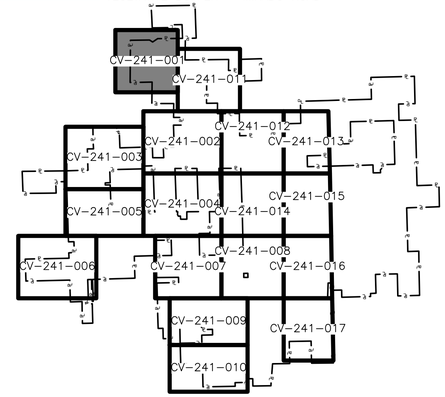

GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
3. PRE-DEVELOPMENT DRAINAGE PATTERNS ARE TO BE MAINTAINED TO THE GREATEST EXTENT PRACTICABLE.
4. SOLAR EQUIPMENT SETBACK INCLUDES REQUIRED DEFINING SETBACKS FROM THE GUSTIN TOWNSHIP SOLAR ORDINANCE AND SPECIAL EXCEPTION USE APPROVAL PERMIT REQUIREMENTS.
5. ALL SITE ENTRANCE LOCATIONS SHALL PROVIDE EMERGENCY ACCESS.
6. NO DRAINAGE, SANITARY SEWER, STORM SEWERS, OR OTHER UTILITY MAINS ARE IDENTIFIED ON SITE. LOCATIONS OF KNOWN EXISTING DRAIN TILE HAS BEEN IDENTIFIED ON THE EXISTING CONDITIONS & CLEARING PLANS.
7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

LEGEND:

SITE IMPROVEMENTS & GRADING:

- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- PROPOSED CONTOUR (MAJOR)
- PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LIMITS OF DISTURBANCE
- LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

200' 100' 0 200' 400'
1" = 200'

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 01

UNIT: N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-241 | 001 | A |

SHEET SIZE: ANSI-D 22x34

MATCHLINE – SEE DWG CV-241-011

MATCHLINE – SEE DWG CV-241-012

MATCHLINE – SEE DWG CV-241-003

MATCHLINE – SEE DWG CV-241-004

200' PROPERTY LINE SETBACK

INVERTER SKID ISA-36

24-FT DOUBLE SWING GATE

60' FRONT YARD SETBACK

66' RIGHT OF WAY

E DEWAR RD

S MCCONNELL RD

VEGETATIVE BUFFER (TYP)

13.18' (TYP)

INVERTER SKID ISA-37

TEMPORARY STAGING AREA (2.00 AC)

12-FT AGGREGATE ACCESS ROAD (TYP)

INVERTER SKID ISA-38

PERIMETER FENCE (TYP)

INVERTER SKID ISA-39

200' PROPERTY LINE SETBACK

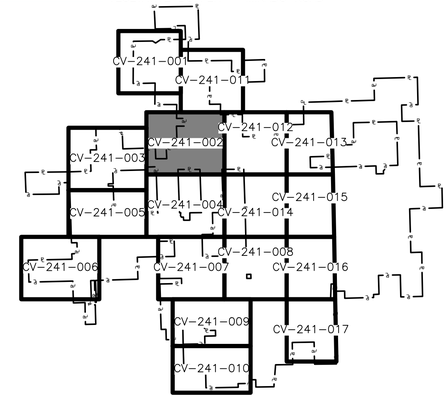
GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
3. PRE-DEVELOPMENT DRAINAGE PATTERNS ARE TO BE MAINTAINED TO THE GREATEST EXTENT PRACTICABLE.
4. SOLAR EQUIPMENT SETBACK INCLUDES REQUIRED DEFINING SETBACKS FROM THE GUSTIN TOWNSHIP SOLAR ORDINANCE AND SPECIAL EXCEPTION USE APPROVAL PERMIT REQUIREMENTS.
5. ALL SITE ENTRANCE LOCATIONS SHALL PROVIDE EMERGENCY ACCESS.
6. NO DRAINAGE, SANITARY SEWER, STORM SEWERS, OR OTHER UTILITY MAINS ARE IDENTIFIED ON SITE. LOCATIONS OF KNOWN EXISTING DRAIN TILE HAS BEEN IDENTIFIED ON THE EXISTING CONDITIONS & CLEARING PLANS.
7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 — PROPOSED CONTOUR (MAJOR)
- 322 — PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- AC — MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LOD — LIMITS OF DISTURBANCE
- LOD — LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

200' 100' 0 200' 400'
1" = 200'

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

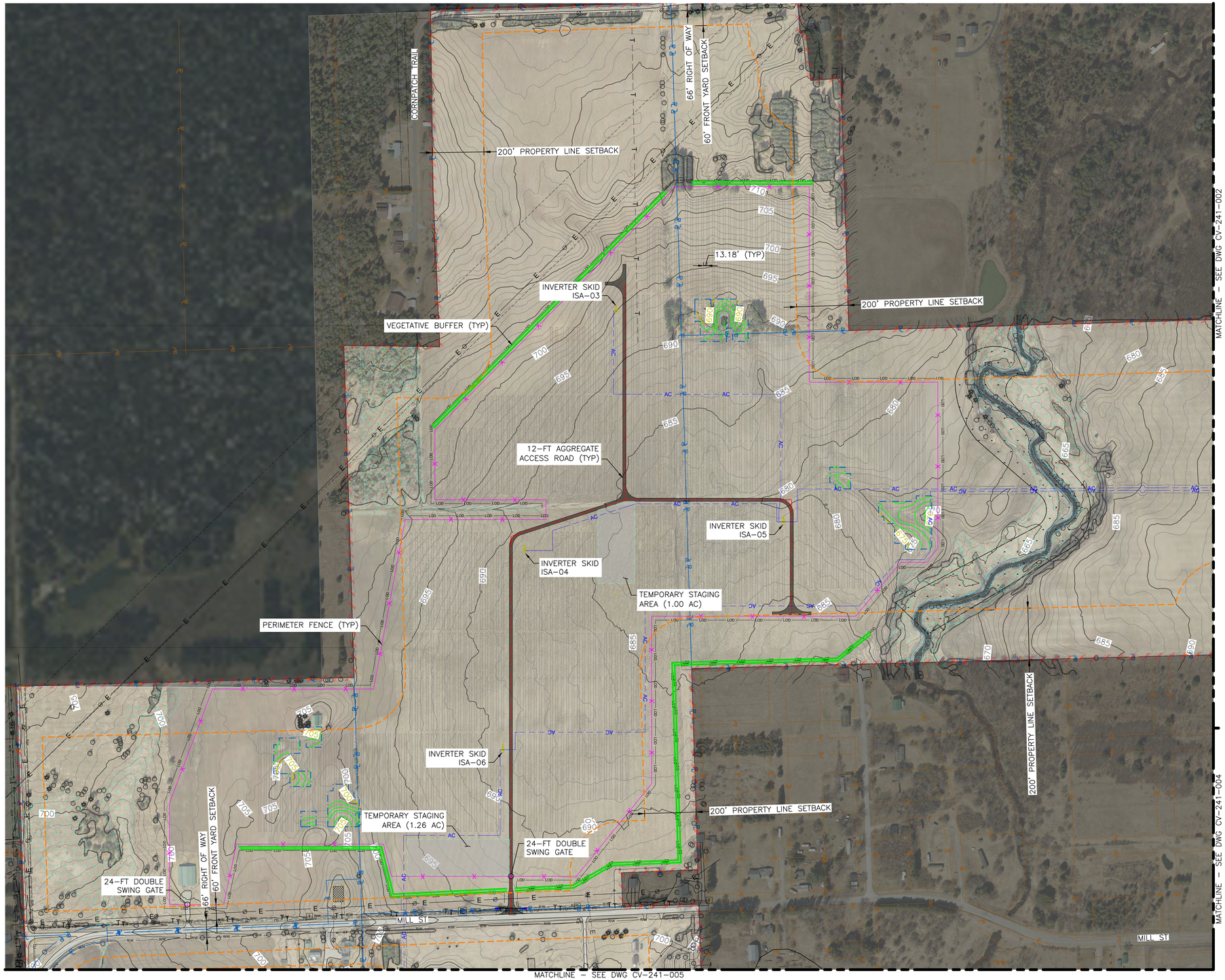
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 02

UNIT: N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-241 | 002 | A |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-241-002.DWG 5/13/2026 9:20 AM GLALBANSODER




GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
3. PRE-DEVELOPMENT DRAINAGE PATTERNS ARE TO BE MAINTAINED TO THE GREATEST EXTENT PRACTICABLE.
4. SOLAR EQUIPMENT SETBACK INCLUDES REQUIRED DEFINING SETBACKS FROM THE GUSTIN TOWNSHIP SOLAR ORDINANCE AND SPECIAL EXCEPTION USE APPROVAL PERMIT REQUIREMENTS.
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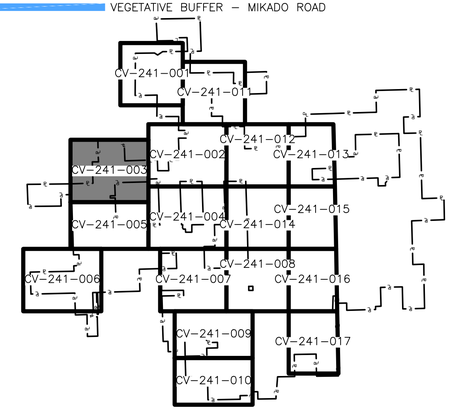
7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 — PROPOSED CONTOUR (MAJOR)
- 322 — PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- AC — MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LOD — LIMITS OF DISTURBANCE
- LOD — LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
License No. 6201313263
LICENSED PROFESSIONAL ENGINEER
05/13/2026

200' 100' 0 200' 400'
1" = 200'

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 03

UNIT:N/A

| SCALE: 1" = 200' | DRAWING NO. 1823-CV-241 | SHEET 003 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |

GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
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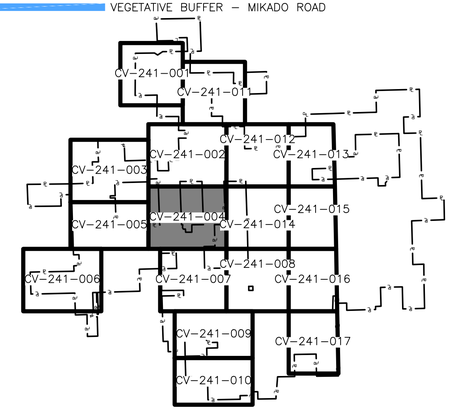
7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

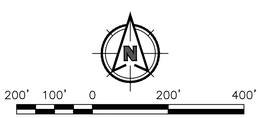
LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 — PROPOSED CONTOUR (MAJOR)
- 322 — PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- AC — MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LOD — LIMITS OF DISTURBANCE
- LOD — LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS



05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

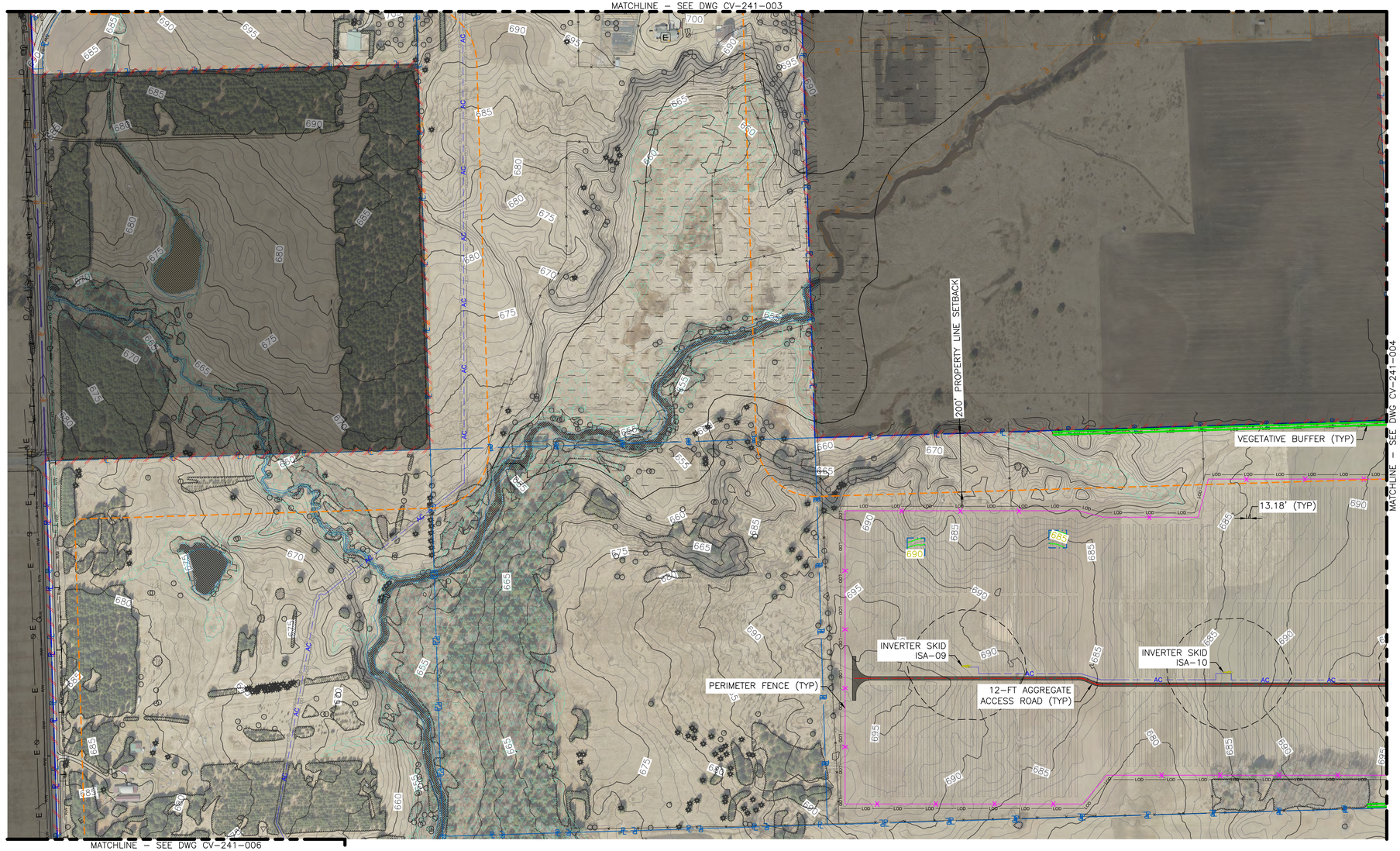
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 04

UNIT: N/A

| SCALE: 1" = 200' | DRAWING NO. 1823-CV-241 | SHEET 004 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |

SHEET SIZE: ANSI-D 22x34




GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
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7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 — PROPOSED CONTOUR (MAJOR)
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- CULVERT
- PROPOSED FENCE
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- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
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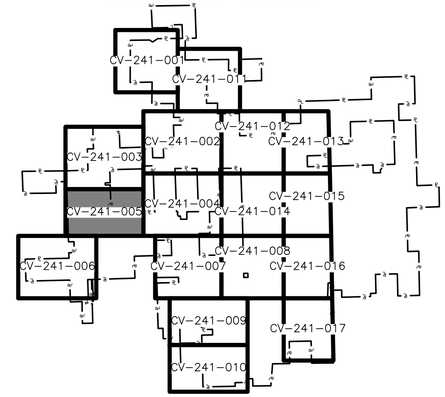
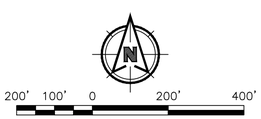
- LOD — LIMITS OF DISTURBANCE
- LOD — LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS



05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

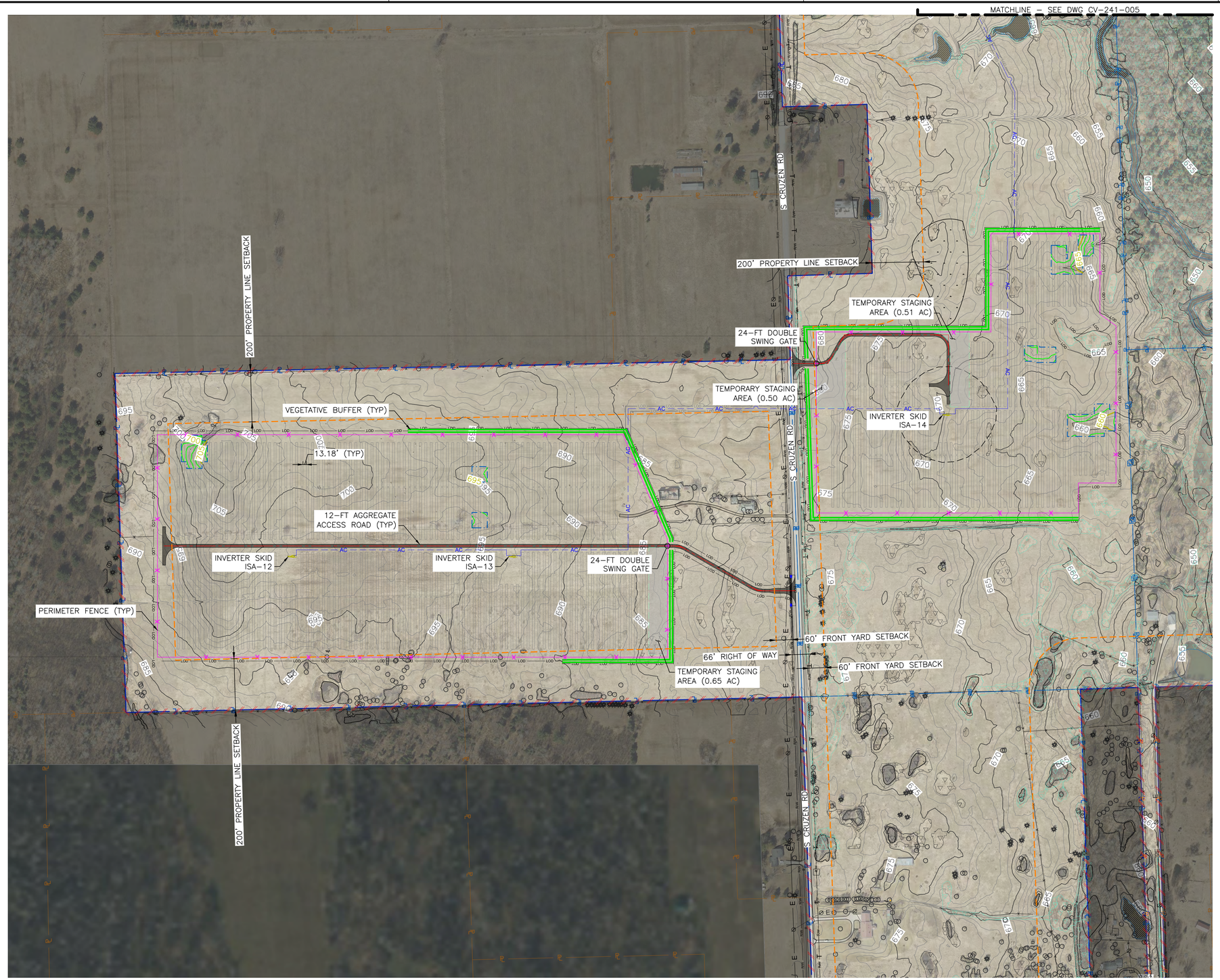
Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 05

UNIT:N/A

| SCALE: 1" = 200' | DRAWING NO. 1823-CV-241 | SHEET 005 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-241-005.DWG 5/12/2026 9:32 AM MBBARRAZA




GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
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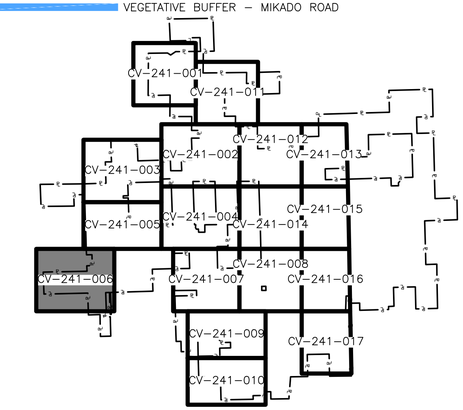
LEGEND:

SITE IMPROVEMENTS & GRADING:

- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- PROPOSED CONTOUR (MAJOR)
- PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LIMITS OF DISTURBANCE
- LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS

05/13/2026

FOR PERMITTING PURPOSES ONLY

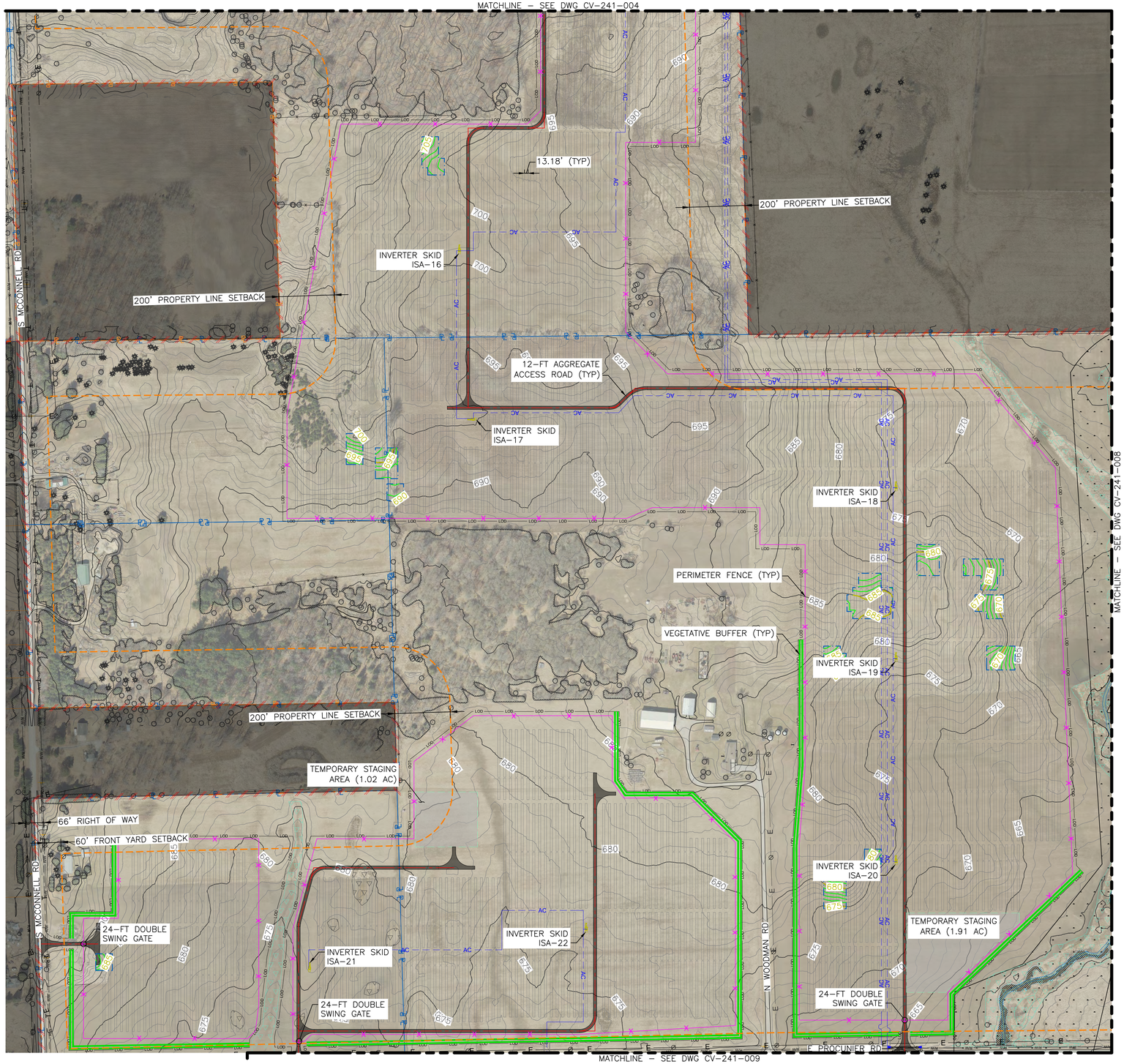
| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 06

UNIT: N/A
SCALE: 1" = 200'
JOB: 192088
DRAWING NO.: 1823-CV-241
SHEET: 006
REV.: A



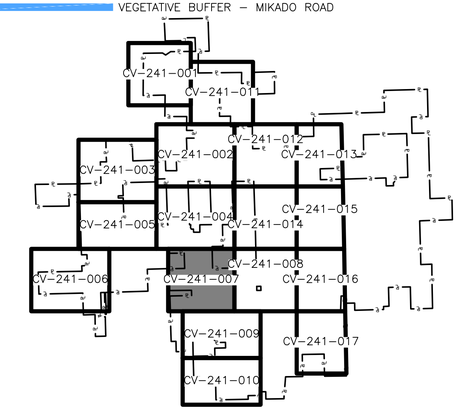

GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
3. PRE-DEVELOPMENT DRAINAGE PATTERNS ARE TO BE MAINTAINED TO THE GREATEST EXTENT PRACTICABLE.
4. SOLAR EQUIPMENT SETBACK INCLUDES REQUIRED DEFINING SETBACKS FROM THE GUSTIN TOWNSHIP SOLAR ORDINANCE AND SPECIAL EXCEPTION USE APPROVAL PERMIT REQUIREMENTS.
5. ALL SITE ENTRANCE LOCATIONS SHALL PROVIDE EMERGENCY ACCESS.
6. NO DRAINAGE, SANITARY SEWER, STORM SEWERS, OR OTHER UTILITY MAINS ARE IDENTIFIED ON SITE. LOCATIONS OF KNOWN EXISTING DRAIN TILE HAS BEEN IDENTIFIED ON THE EXISTING CONDITIONS & CLEARING PLANS.
7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

LEGEND:

SITE IMPROVEMENTS & GRADING:

- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- PROPOSED CONTOUR (MAJOR)
- PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LIMITS OF DISTURBANCE
- LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS

200' 100' 0 200' 400'
1" = 200'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

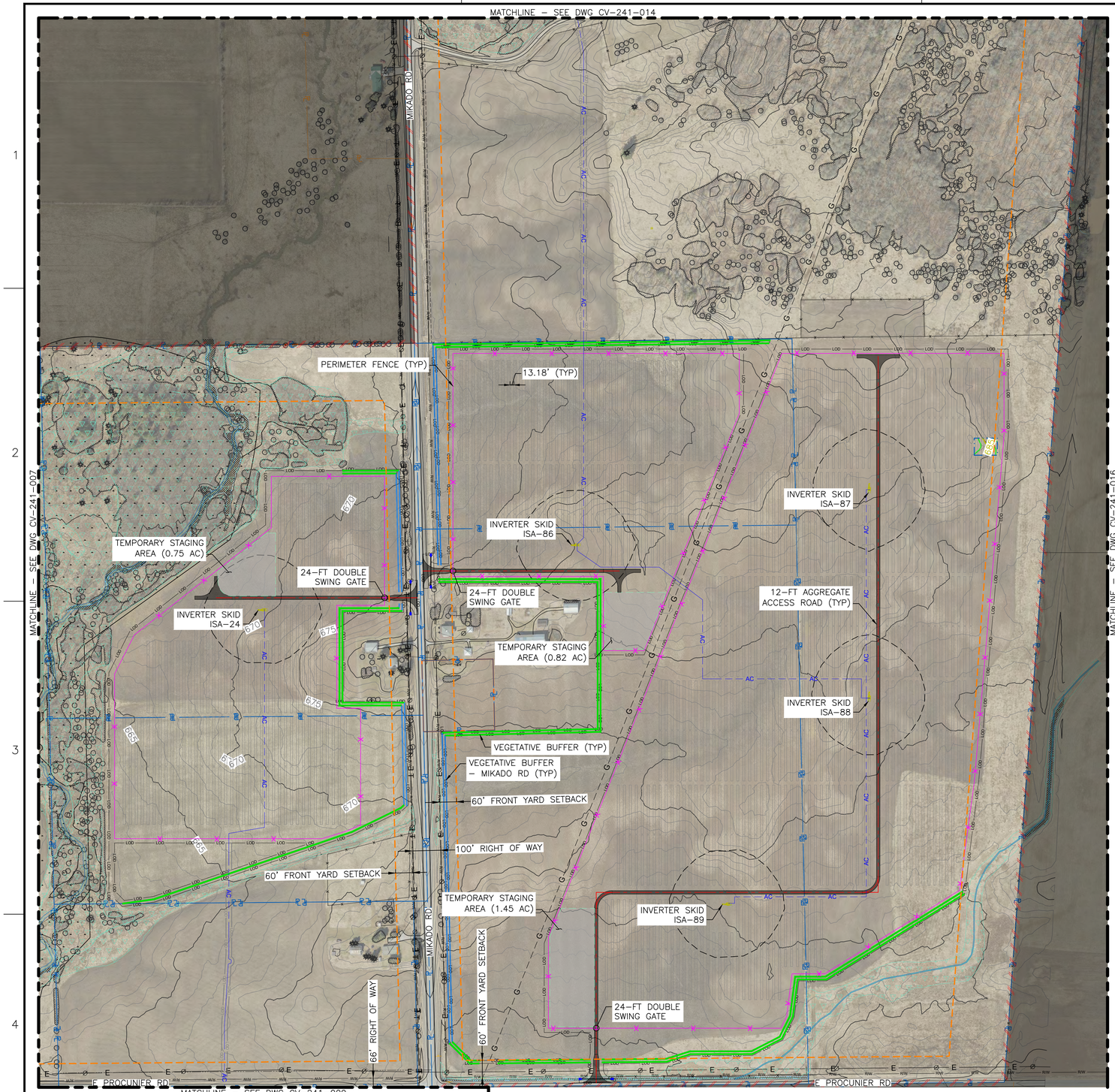
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 07

UNIT:N/A

| SCALE: 1" = 200' | DRAWING NO. 1823-CV-241 | SHEET 007 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |




GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT–GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
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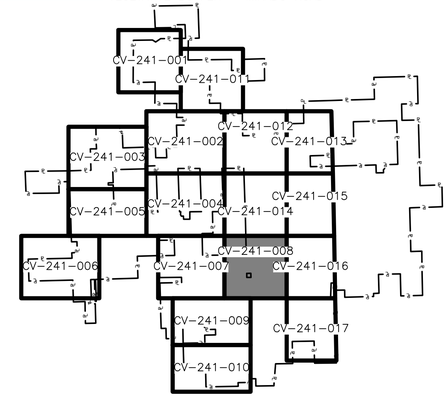
6. NO DRAINAGE, SANITARY SEWER, STORM SEWERS, OR OTHER UTILITY MAINS ARE IDENTIFIED ON SITE. LOCATIONS OF KNOWN EXISTING DRAIN TILE HAS BEEN IDENTIFIED ON THE EXISTING CONDITIONS & CLEARING PLANS.
7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

LEGEND:

SITE IMPROVEMENTS & GRADING:

- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON–PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON–JURISDICTIONAL
- LIMITS OF EARTHWORK
- PROPOSED CONTOUR (MAJOR)
- PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12–FT ACCESS ROAD
- 20–FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LIMITS OF DISTURBANCE
- LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

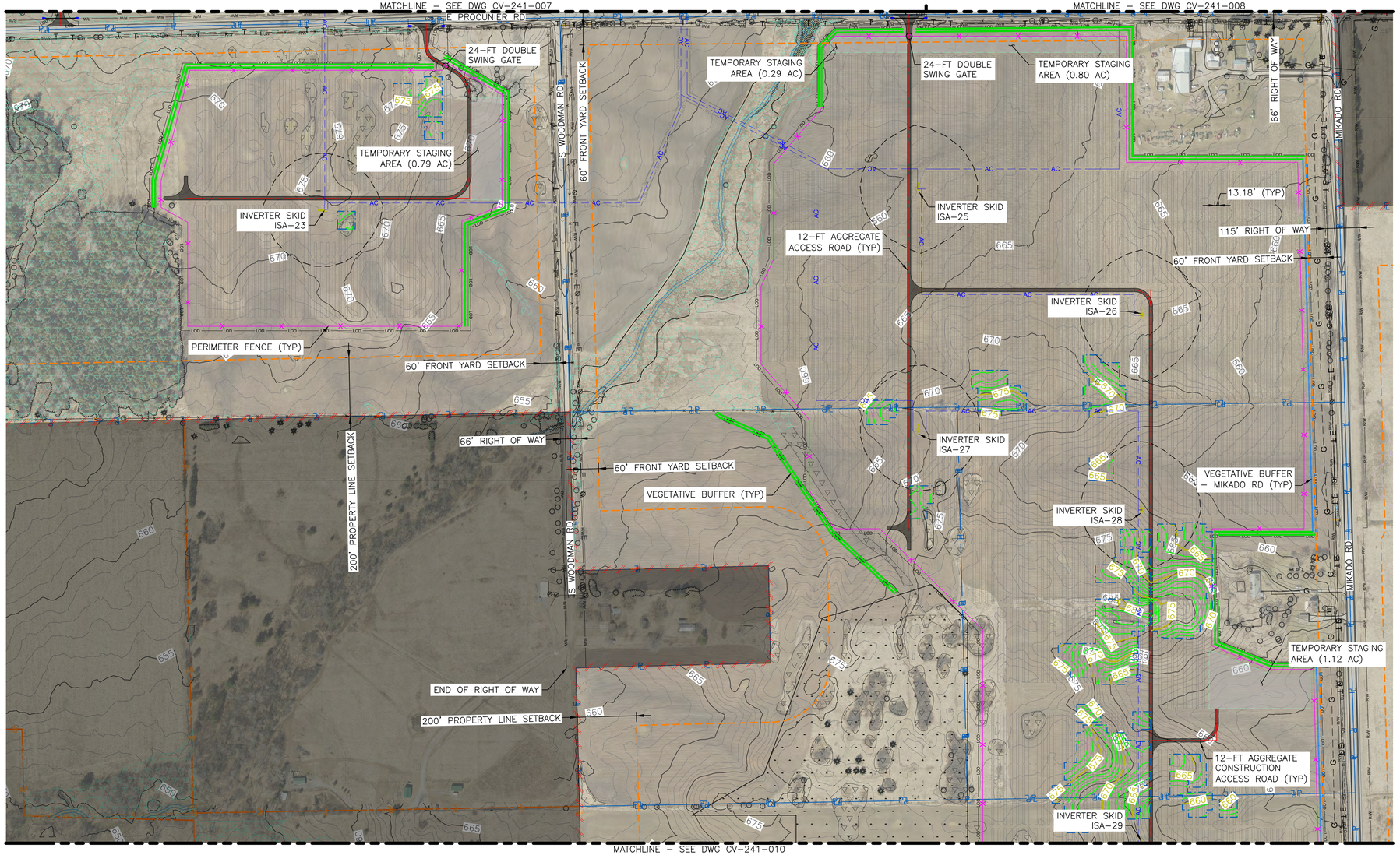
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 08

UNIT:N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823–CV–241 | 008 | A |




GENERAL NOTES:

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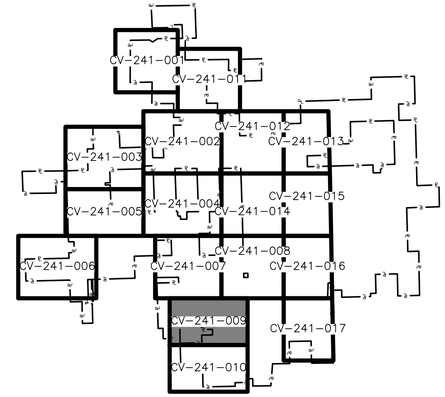
7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON–PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON–JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 — PROPOSED CONTOUR (MAJOR)
- 322 — PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- AC — MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12–FT ACCESS ROAD
- 20–FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LOD — LIMITS OF DISTURBANCE
- LOD — LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

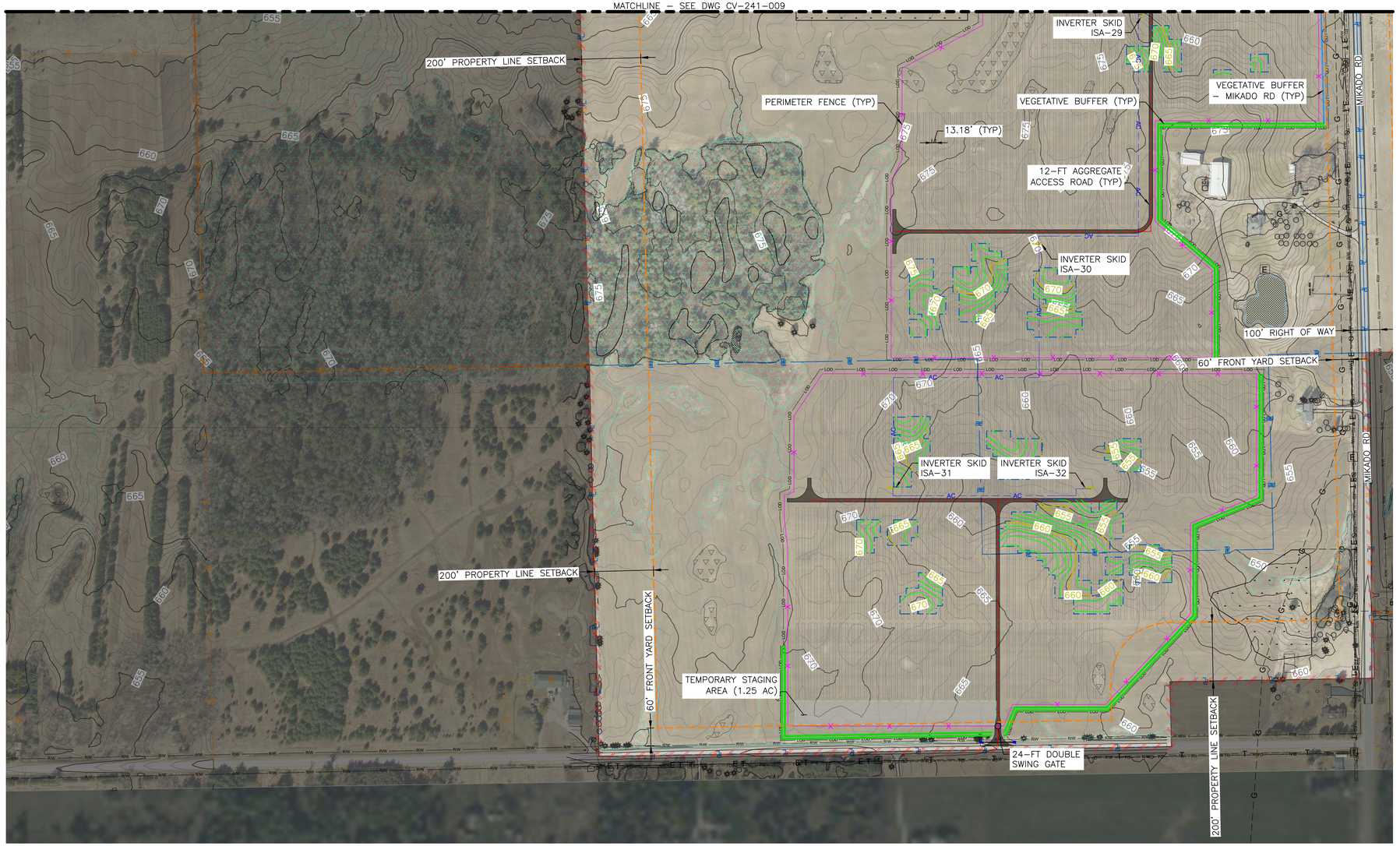
SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 09

UNIT:N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-241 | 009 | A |




GENERAL NOTES:

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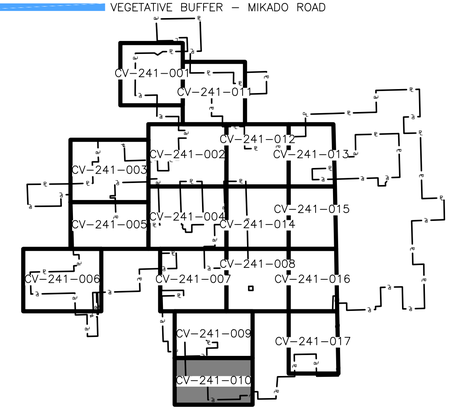
LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 — PROPOSED CONTOUR (MAJOR)
- 322 — PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- AC — MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LOD — LIMITS OF DISTURBANCE
- LOD — LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

200' 100' 0 200' 400'
1" = 200'

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

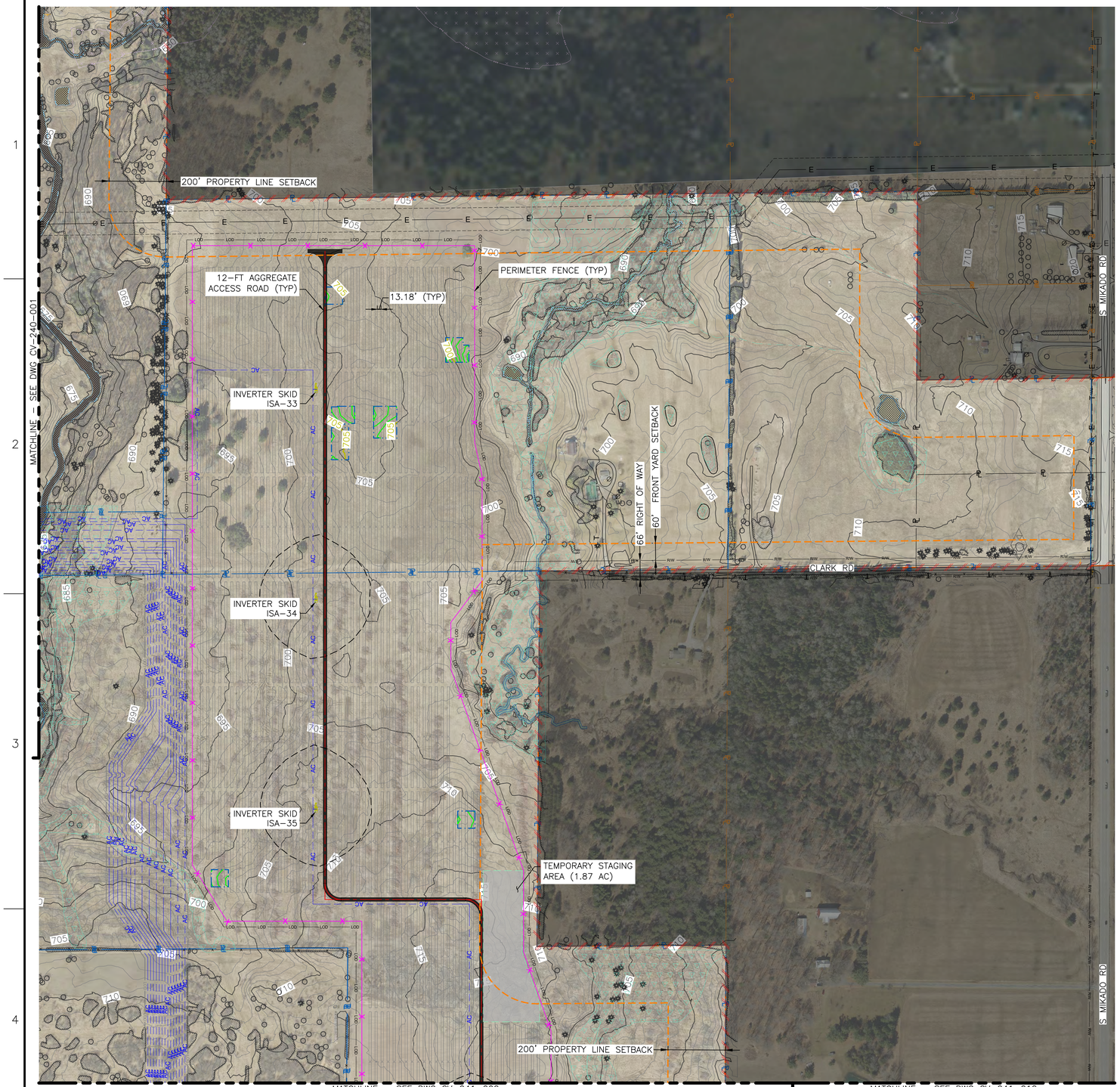
SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 10

UNIT:N/A

| SCALE: 1" = 200' | DRAWING NO. 1823-CV-241 | SHEET 010 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |




GENERAL NOTES:

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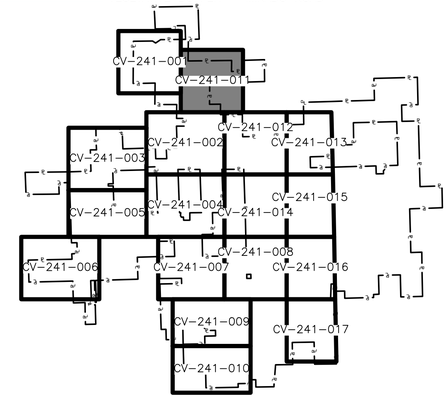
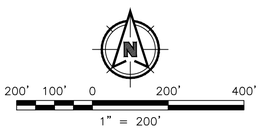
LEGEND:

SITE IMPROVEMENTS & GRADING:

- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY - CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE - NON-PARTICIPATING
- PROPERTY LINE - PARTICIPATING
- WETLANDS - JURISDICTIONAL
- WETLANDS - NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- PROPOSED CONTOUR (MAJOR)
- PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LIMITS OF DISTURBANCE
- LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER - MIKADO ROAD




KEYMAP
NTS




STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|
| A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

REFERENCE DRAWINGS

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

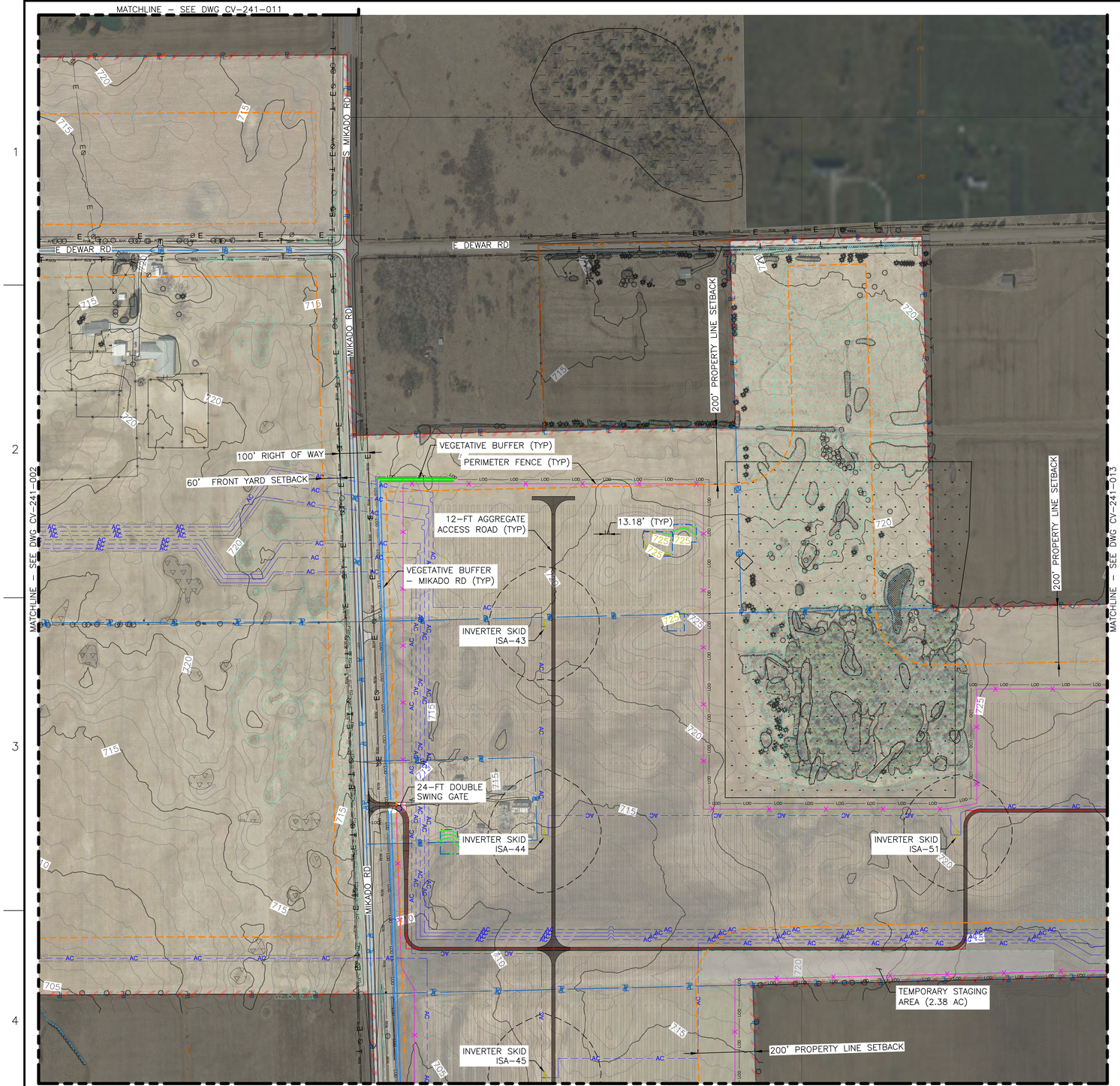
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 11

UNIT:N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-241 | 011 | A |

SHEET SIZE: ANSI-D 22x34




GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
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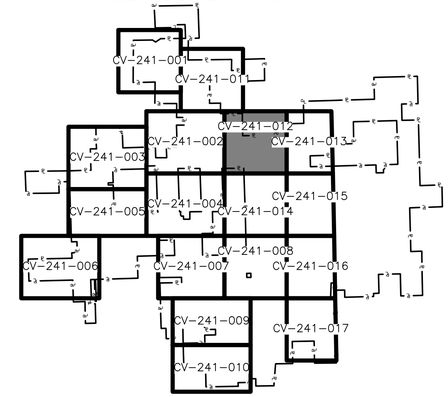
7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

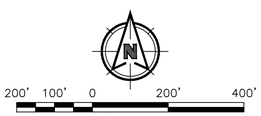
LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 — PROPOSED CONTOUR (MAJOR)
- 322 — PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- AC — MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LOD — LIMITS OF DISTURBANCE
- LOD — LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS




STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

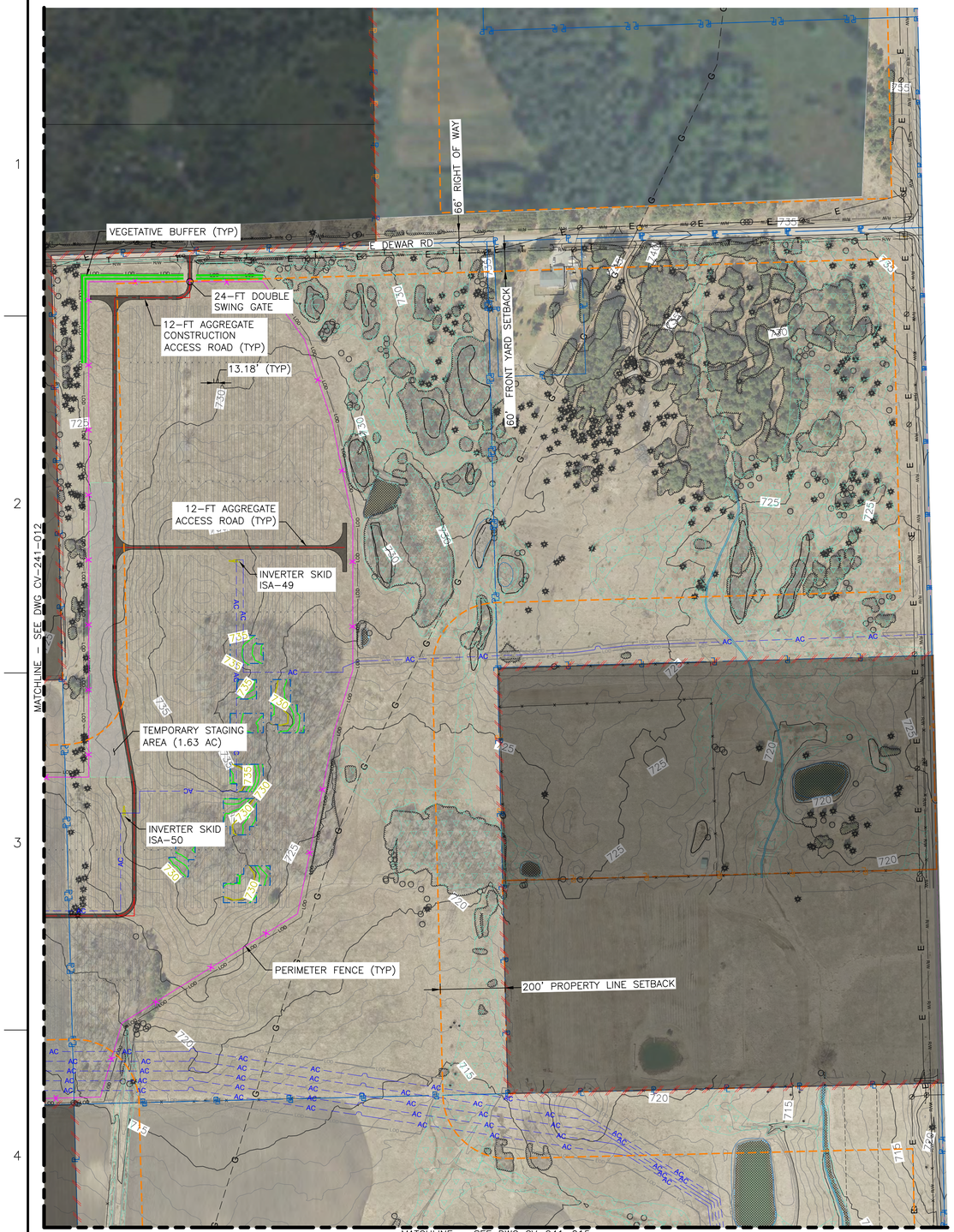
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 12

UNIT: N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-241 | 012 | A |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-241-012.DWG 5/12/2026 10:17 AM MBBARRAZA



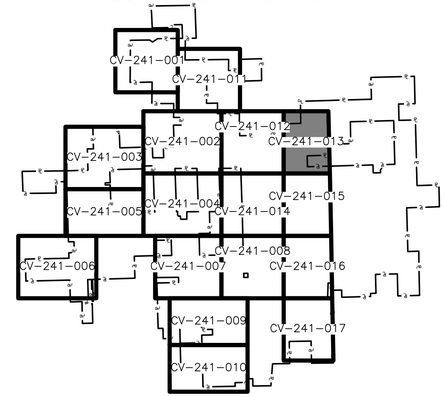

GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
3. PRE-DEVELOPMENT DRAINAGE PATTERNS ARE TO BE MAINTAINED TO THE GREATEST EXTENT PRACTICABLE.
4. SOLAR EQUIPMENT SETBACK INCLUDES REQUIRED DEFINING SETBACKS FROM THE GUSTIN TOWNSHIP SOLAR ORDINANCE AND SPECIAL EXCEPTION USE APPROVAL PERMIT REQUIREMENTS.
5. ALL SITE ENTRANCE LOCATIONS SHALL PROVIDE EMERGENCY ACCESS.
6. NO DRAINAGE, SANITARY SEWER, STORM SEWERS, OR OTHER UTILITY MAINS ARE IDENTIFIED ON SITE. LOCATIONS OF KNOWN EXISTING DRAIN TILE HAS BEEN IDENTIFIED ON THE EXISTING CONDITIONS & CLEARING PLANS.
7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

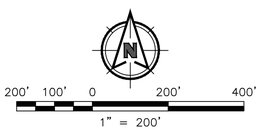
LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 EXISTING CONTOUR (MAJOR)
- 322 EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY - CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE - NON-PARTICIPATING
- PROPERTY LINE - PARTICIPATING
- WETLANDS - JURISDICTIONAL
- WETLANDS - NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 PROPOSED CONTOUR (MAJOR)
- 322 PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- AC MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LOD LIMITS OF DISTURBANCE
- LOD LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER - MIKADO ROAD




KEYMAP
NTS




STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

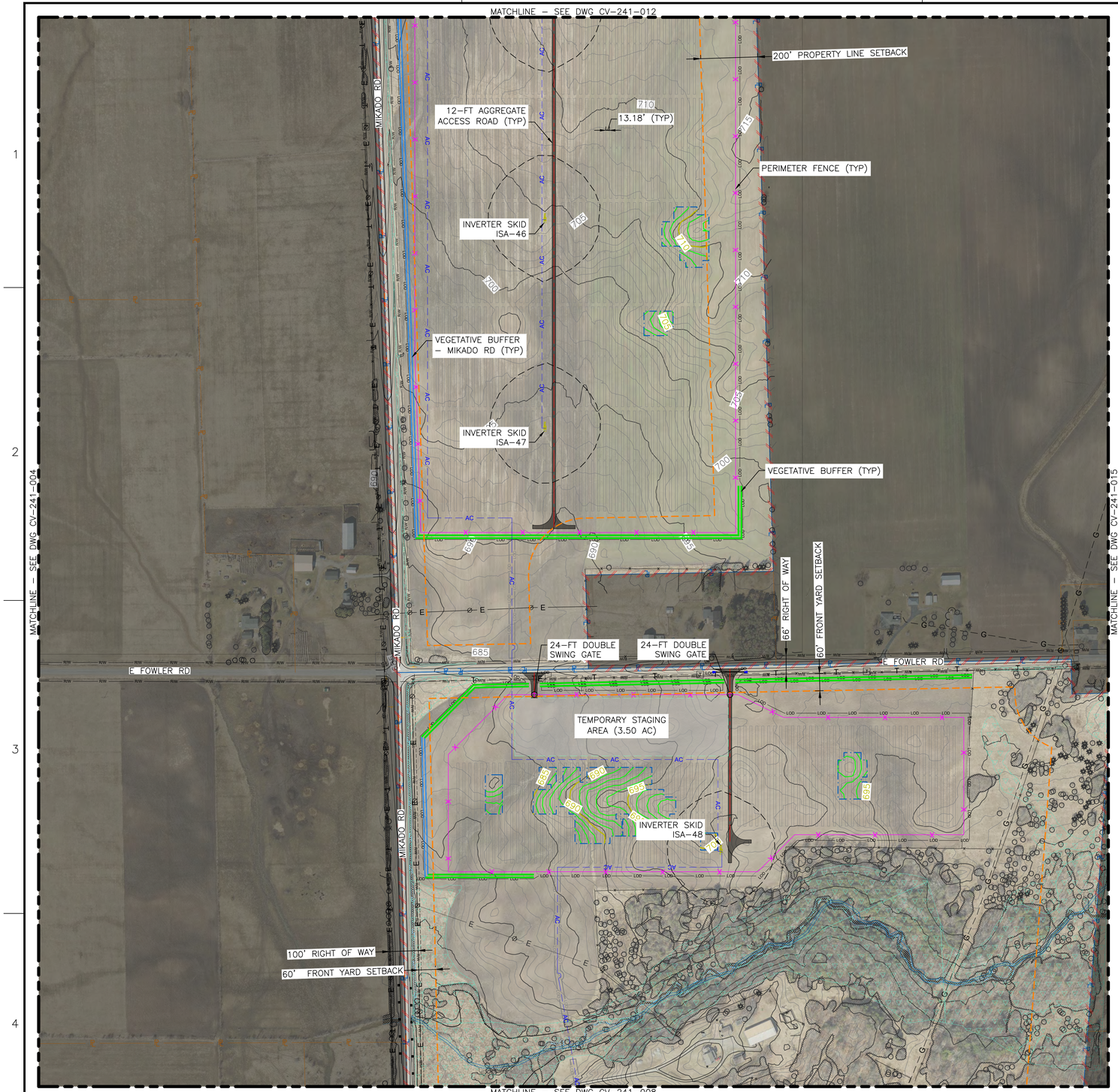
SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 13

UNIT: N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-241 | 013 | A |



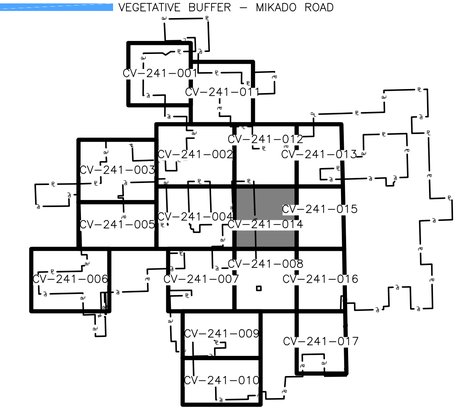

GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
3. PRE-DEVELOPMENT DRAINAGE PATTERNS ARE TO BE MAINTAINED TO THE GREATEST EXTENT PRACTICABLE.
4. SOLAR EQUIPMENT SETBACK INCLUDES REQUIRED DEFINING SETBACKS FROM THE GUSTIN TOWNSHIP SOLAR ORDINANCE AND SPECIAL EXCEPTION USE APPROVAL PERMIT REQUIREMENTS.
5. ALL SITE ENTRANCE LOCATIONS SHALL PROVIDE EMERGENCY ACCESS.
6. NO DRAINAGE, SANITARY SEWER, STORM SEWERS, OR OTHER UTILITY MAINS ARE IDENTIFIED ON SITE. LOCATIONS OF KNOWN EXISTING DRAIN TILE HAS BEEN IDENTIFIED ON THE EXISTING CONDITIONS & CLEARING PLANS.
7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 — PROPOSED CONTOUR (MAJOR)
- 322 — PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- AC — MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LOD — LIMITS OF DISTURBANCE
- LOD — LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS

GRANT LOUIS ALBANSODER
STATE OF MICHIGAN
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

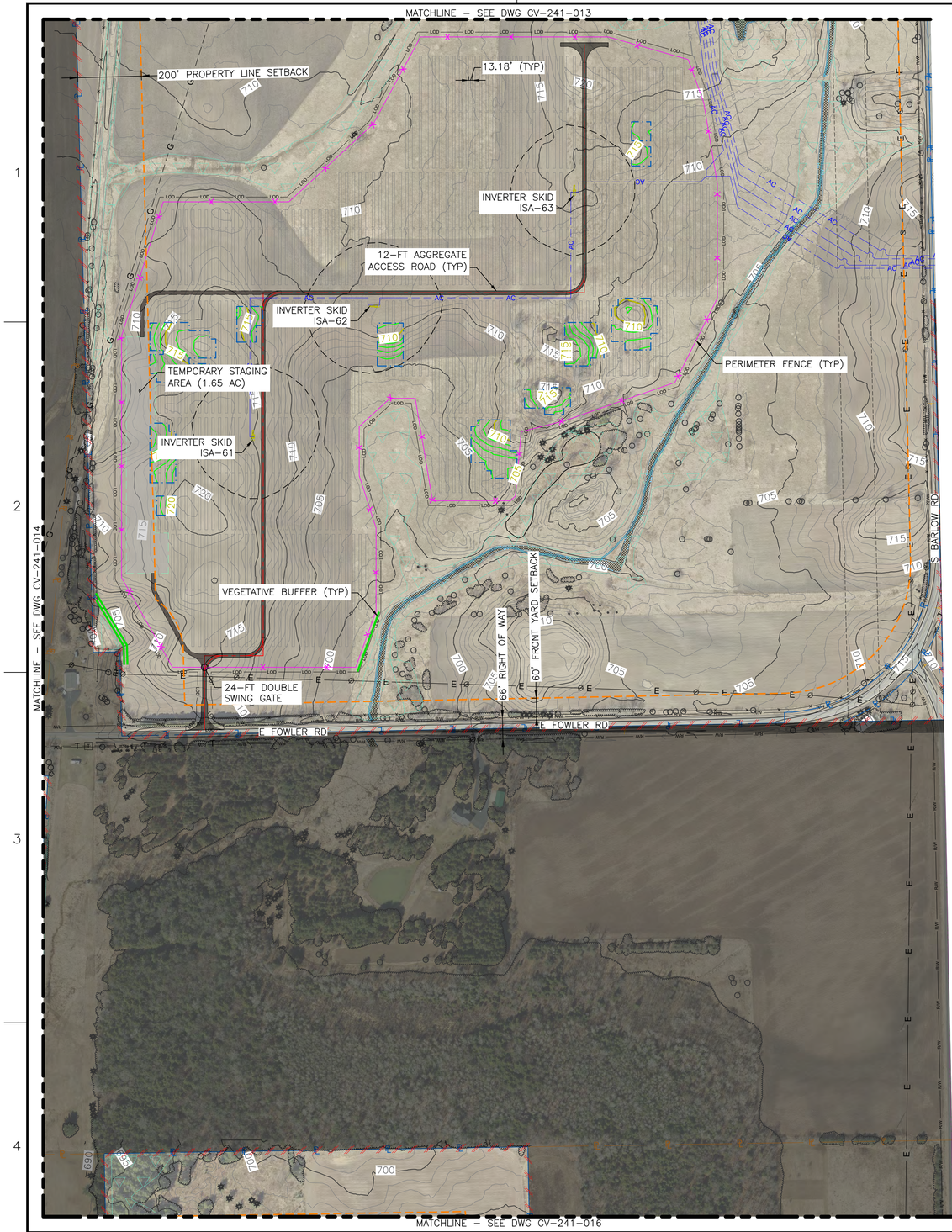
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 14

UNIT:N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-241 | 014 | A |




GENERAL NOTES:

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2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
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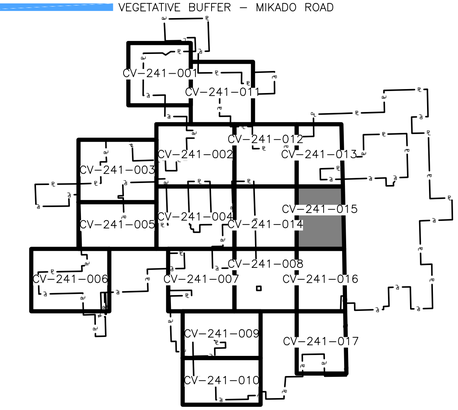
LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 — PROPOSED CONTOUR (MAJOR)
- 322 — PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- AC — MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LOD — LIMITS OF DISTURBANCE
- LOD — LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

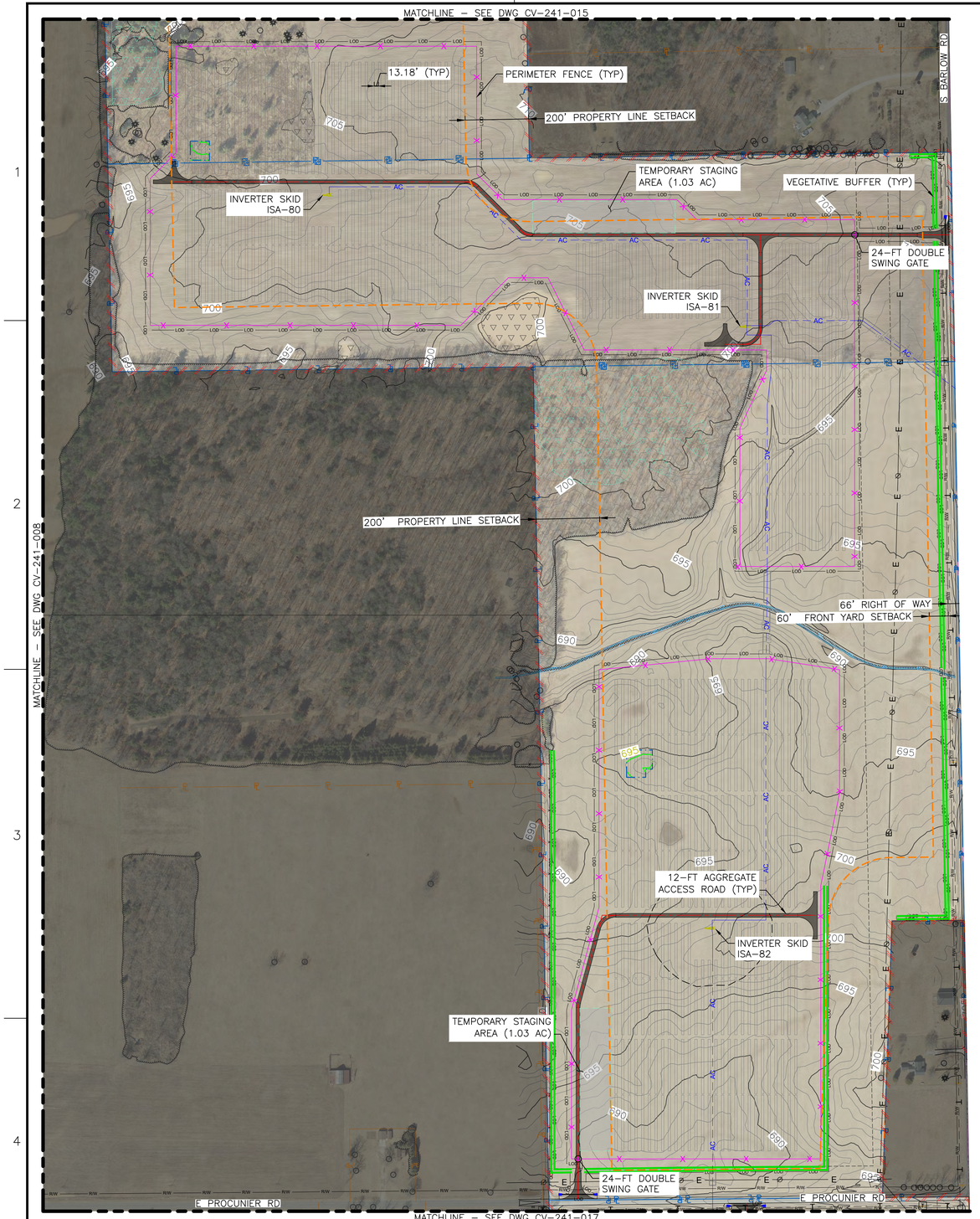
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 15

UNIT:IN/A

| SCALE: 1" = 200' | DRAWING NO. 1823-CV-241 | SHEET 015 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |




GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
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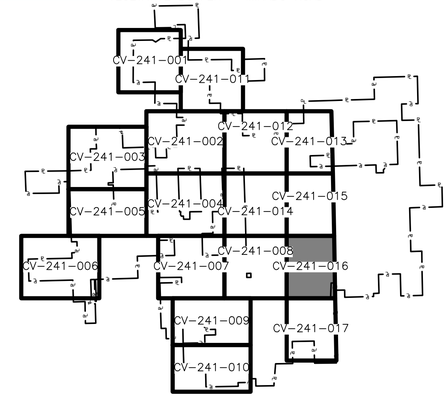
LEGEND:

SITE IMPROVEMENTS & GRADING:

- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- PROPOSED CONTOUR (MAJOR)
- PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LIMITS OF DISTURBANCE
- LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS

200' 100' 0 200' 400'
1" = 200'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

| REV | DATE | DESCRIPTION | DR | BY | CK | APP | CO |
|---|---|---|---|---|---|---|---|

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

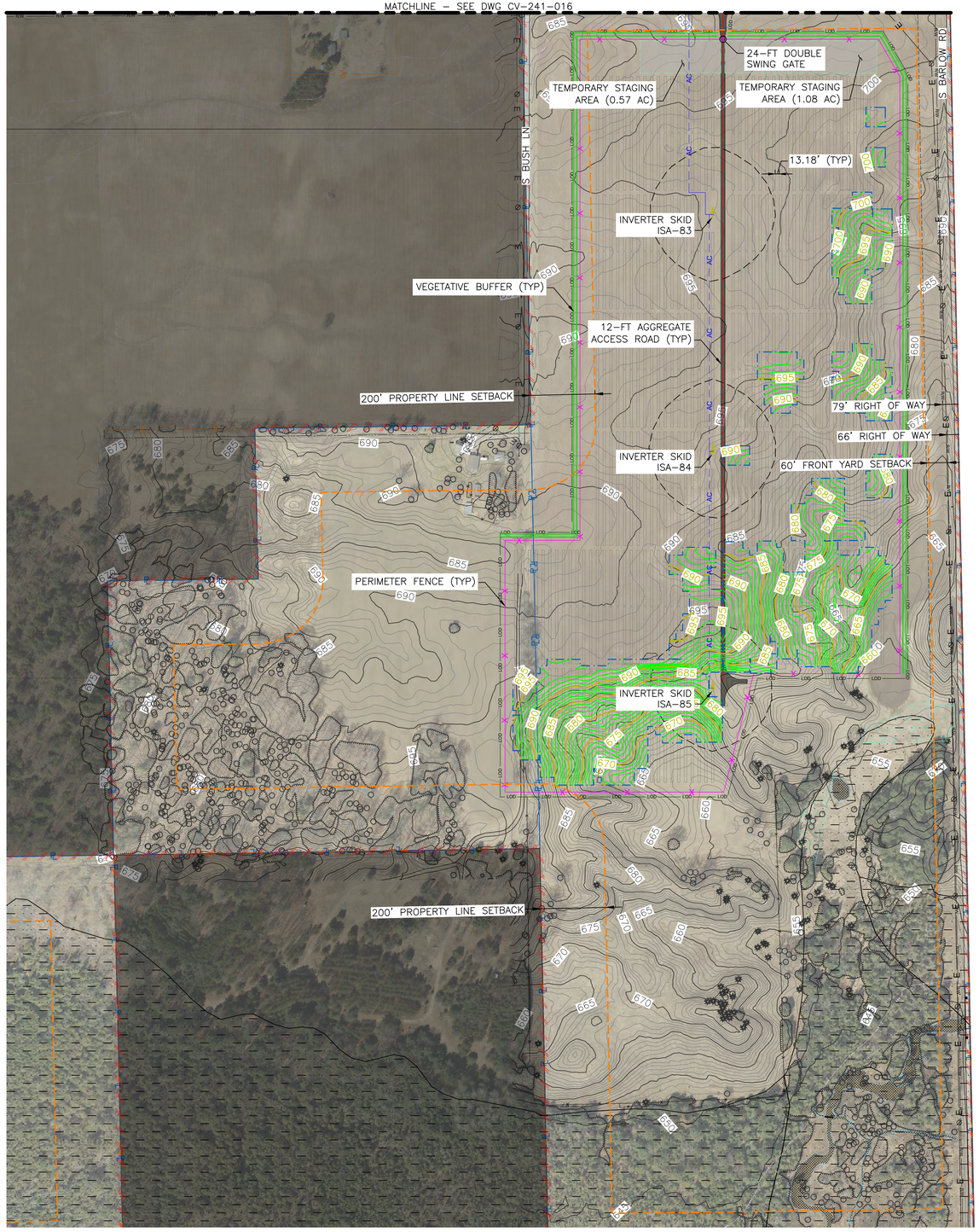
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 16

UNIT:N/A

| SCALE: 1" = 200' | DRAWING NO. 1823-CV-241 | SHEET 016 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |




GENERAL NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
3. PRE-DEVELOPMENT DRAINAGE PATTERNS ARE TO BE MAINTAINED TO THE GREATEST EXTENT PRACTICABLE.
4. SOLAR EQUIPMENT SETBACK INCLUDES REQUIRED DEFINING SETBACKS FROM THE GUSTIN TOWNSHIP SOLAR ORDINANCE AND SPECIAL EXCEPTION USE APPROVAL PERMIT REQUIREMENTS.
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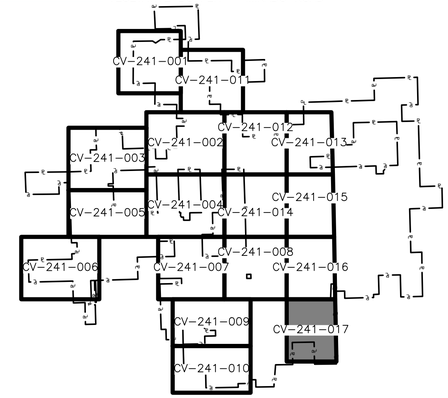
7. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

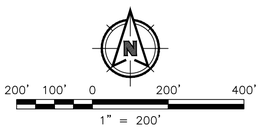
LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — EXISTING CONTOUR (MAJOR)
- 322 — EXISTING CONTOUR (MINOR)
- PROJECT BOUNDARY – CONSUMERS ENERGY
- SOLAR EQUIPMENT SETBACK
- PROPERTY LINE – NON-PARTICIPATING
- PROPERTY LINE – PARTICIPATING
- WETLANDS – JURISDICTIONAL
- WETLANDS – NON-JURISDICTIONAL
- LIMITS OF EARTHWORK
- 300 — PROPOSED CONTOUR (MAJOR)
- 322 — PROPOSED CONTOUR (MINOR)
- CULVERT
- PROPOSED FENCE
- AC — MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- TEMPORARY STAGING AREA
- CONSTRUCTION ACCESS ROAD
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 45 DBA SOUND CONTOUR
- LOD — LIMITS OF DISTURBANCE
- LOD — LIMITS OF DISTURBANCE FOR ELECTRICAL INSTALLATION (FOR REFERENCE ONLY)
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER – MIKADO ROAD




KEYMAP
NTS



05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

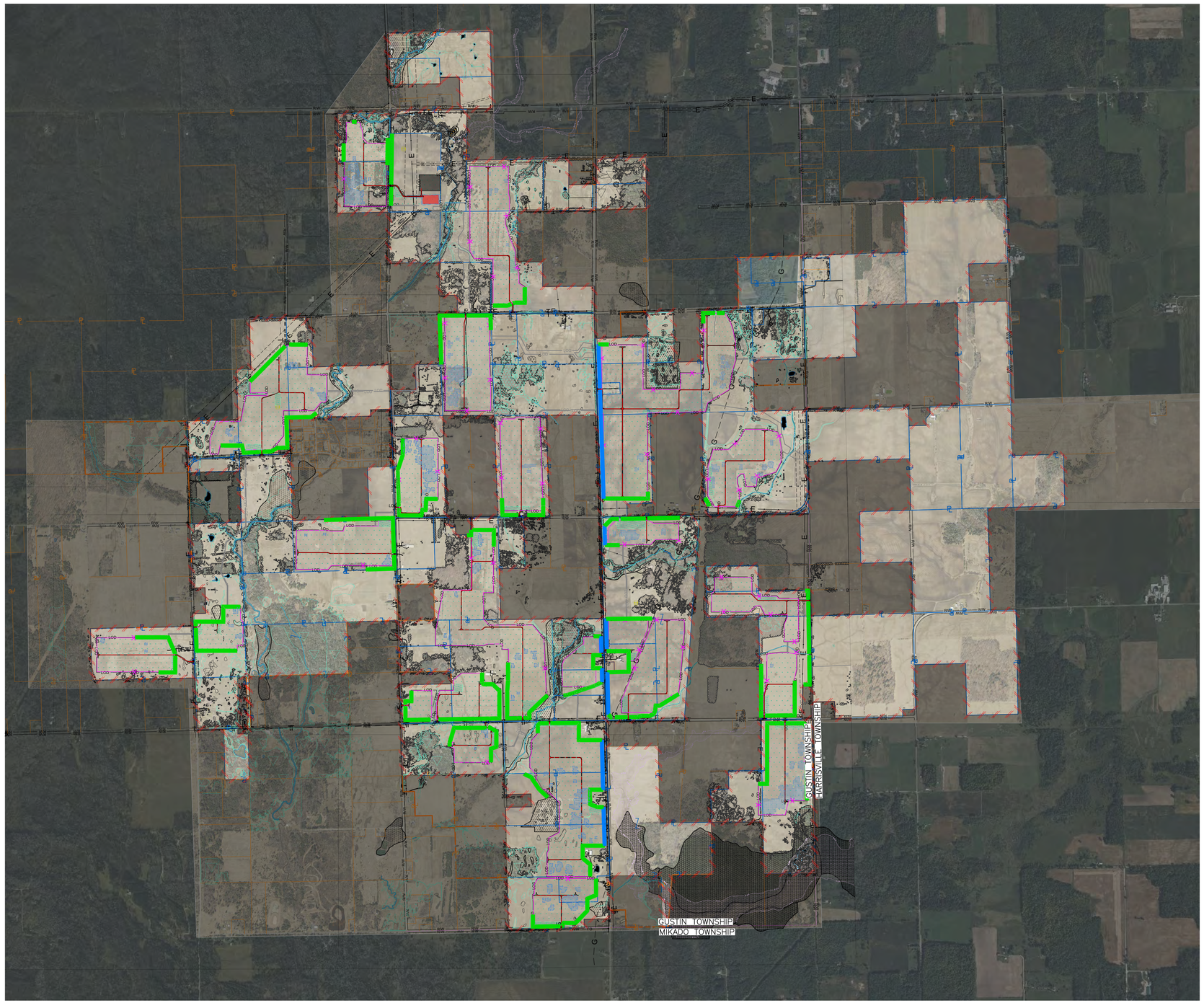
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
ENLARGED PLAN 17

UNIT:N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-241 | 017 | A |




NOTES:

1. THE PROJECT SITE IS TO BE PRE-SEEDED WITH THE LOW-GROW AND POLLINATOR SEED MIXES BY THE LANDOWNER DURING THE SPRING 2026 PLANTING SEASON; LOW-GROW MIX IS ONLY DEPICTED WITHIN THE LIMITS OF DISTURBANCE FOR CLARITY.
2. ADDITIONAL SEEDING DEPICTED ON THE EROSION & SEDIMENT CONTROL DRAWINGS IS FOR PERMANENT STABILIZATION OF KNOWN EARTH-DISTURBING ACTIVITIES ASSOCIATED WITH CIVIL CONSTRUCTION.
   2.1. SEEDING TO REPAIR/STABILIZE ADDITIONAL DISTURBANCES AS A RESULT OF CONSTRUCTION WILL BE COORDINATED IN THE FIELD.
3. TEMPORARY STAGING AREAS AND CONSTRUCTION ACCESS ROADS ARE TO BE RECLAIMED AND SEEDED WITH LOW-GROW SEED MIX BY SUBCONTRACTOR, UNLESS OTHERWISE COORDINATED WITH CONTRACTOR.

LEGEND:

EXISTING CONDITIONS & CLEARING:

- AREAS OF LOW GROW SEED MIX PRE-SEEDING (BY OWNER) – SEE NOTE 1
- AREAS OF ADDITIONAL LOW GROW SEED MIX SEEDING PER PROJECT SPECIFICATIONS – SEE NOTE 2
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- RECLAIMED STAGING AREA – SEE NOTE 3
- RECLAIMED CONSTRUCTION ROAD – SEE NOTE 3
- VEGETATIVE BUFFER
- VEGETATIVE BUFFER MIKADO ROAD

1400' 700' 0 1400' 2800'
1" = 1400'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
License No. 6201313263
LICENSED PROFESSIONAL ENGINEER
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

| REV | DATE | DESCRIPTION | DR | BY | CK | APP | CO |
|---|---|---|---|---|---|---|---|

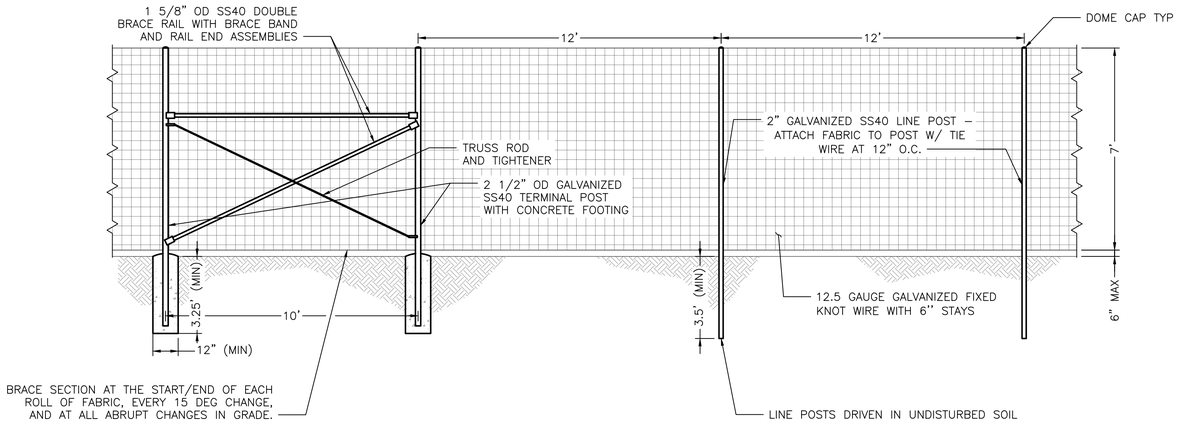
SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
LANDSCAPE PLAN

UNIT: N/A

| SCALE: 1" = 1400' | DRAWING NO. 1823-CV-242 | SHEET 001 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |

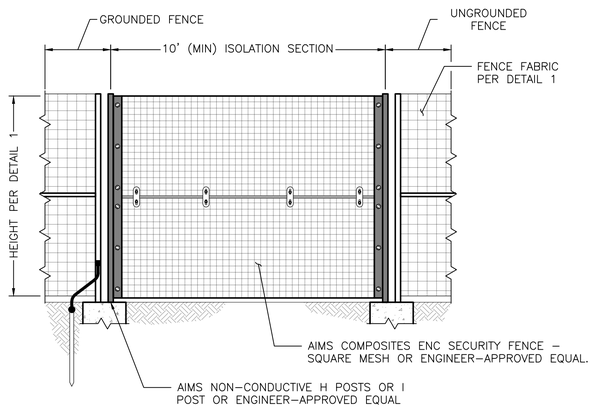



NOTES:

1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION THAT COMPLY WITH THE SPECIFICATIONS.
   1.1. SUBCONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL. FINAL FENCE INSTALLATION SHALL MATCH APPROVED SHOP DRAWINGS.
   1.2. FENCE EMBEDMENT DEPTH IS SPECIFIED IN ACCORDANCE WITH ASTM F567.
2. GROUNDING/BONDING OF THE FENCE AND GATES IS INCLUDED IN THE SCOPE FOR THE ELECTRICAL CONTRACT.
3. STEEL FENCE POSTS SHALL HAVE DOME CAPS INSTALLED ON TOPS.
4. CONCRETE FOR POST FOOTINGS SHALL HAVE A 28–DAY COMPRESSIVE STRENGTH OF 2,500 PSI. TOP OF CONCRETE FOOTINGS SHALL BE AT GRADE AND CROWNED TO SHED WATER AWAY FROM THE POST.

## 1 – TYPICAL PERIMETER FENCE – GAME FENCE

NOT TO SCALE

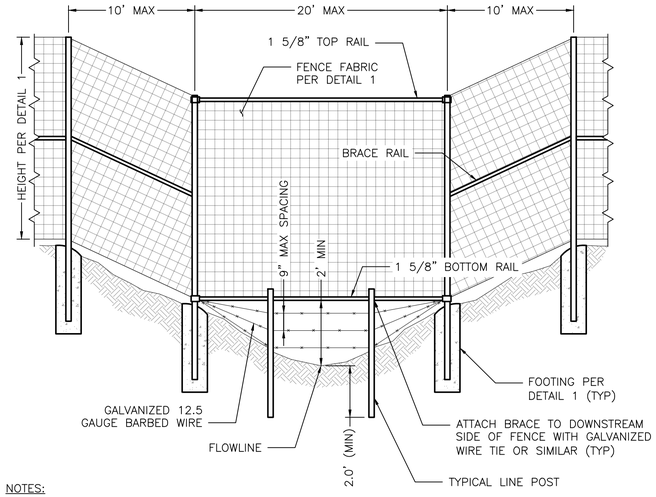



NOTES:

1. NO METALLIC TIES SHALL EXIST BETWEEN GROUNDED AND UNGROUNDED SECTION OF FENCE. THE FENCE SHALL NOT BE CONNECTED IN ANY MANNER WITHIN THE FOUNDATION.
2. POSTS EMBEDDED IN CONCRETE FOUNDATIONS SHALL BE WIDENED AS REQUIRED TO INCLUDE ISOLATION SECTION.

## 3 – TYPICAL FENCE ISOLATION PANEL

NOT TO SCALE

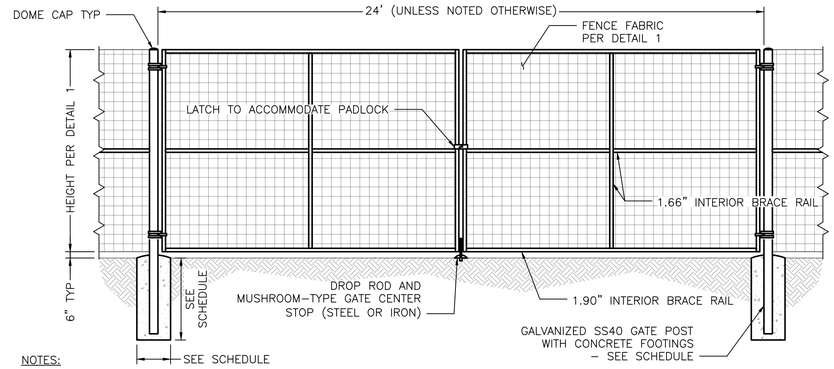



NOTES:

1. FOR DITCHES SHALLOWER THAN 24", INSTALL A ROCK CHECK DAM BENEATH FENCE SUCH THAT TOP OF CHECK DAM IS 6" BELOW THE BOTTOM OF THE FENCE. TOP OF CHECK DAM SHALL BE EXTENDED A MINIMUM OF 2' PAST BOTH SIDES OF FENCE. BOTTOM RAIL CAN BE OMITTED IN THESE INSTANCES.
2. SUBCONTRACTOR MAY SUBMIT ALTERNATIVE STYLES OF FENCE–CHANNEL CROSSINGS TO ENGINEER FOR APPROVAL.

## 4 – TYPICAL FENCE – CHANNEL CROSSING

NOT TO SCALE




NOTES:

1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION THAT COMPLY WITH THE SPECIFICATIONS.
   1.1. SUBCONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL. FINAL FENCE INSTALLATION SHALL MATCH APPROVED SHOP DRAWINGS.
2. GROUNDING/BONDING OF THE FENCE AND GATES IS INCLUDED IN THE SCOPE FOR THE ELECTRICAL CONTRACT.

| GATE POST SCHEDULE – 7' FENCE (ASTM F900) | | | |
|---|---|---|---|
| GATE LEAF WIDTH | OUTSIDE DIA. OF PIPE (IN) | FOOTING DIA. (IN) | FOOTING DEPTH (IN) |
| OVER 6 TO 12 FT | 4.000 | 12 | 36 |
| OVER 12 TO 18 FT | 6.625 | 20 | 42 |
| OVER 18 TO 24 FT | 8.625 | 26 | 48 |

## 2 – TYPICAL DOUBLE SWING GATE

NOT TO SCALE

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE

NAME: G. ALBANSODER

MICHIGAN P.E. No.: 6201313263

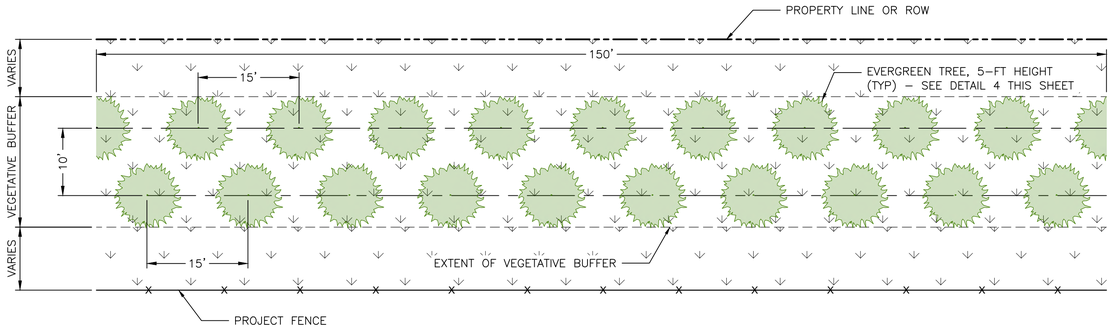
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

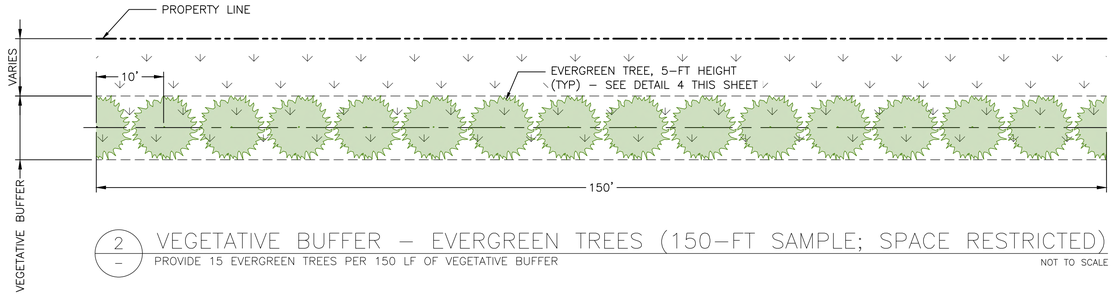
SITE IMPROVEMENTS & GRADING
PERIMETER FENCE DETAILS

UNIT: N/A

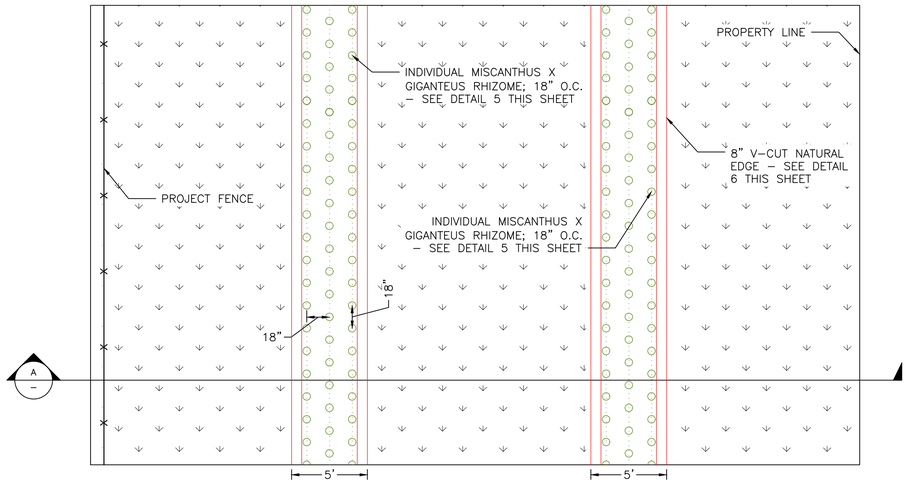
| SCALE: SCALE VARIES | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| JOB: 192088 | 1823–CV–245 | 001 | A |



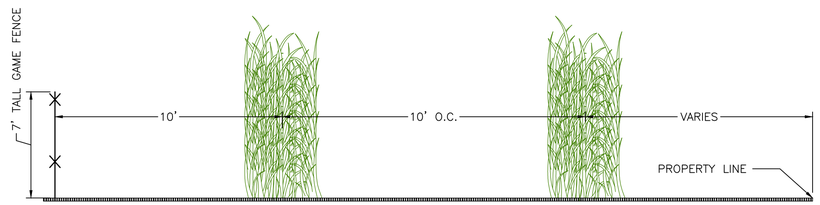

1 VEGETATIVE BUFFER – EVERGREEN TREES (150-FT SAMPLE)
PROVIDE 20 EVERGREEN TREES PER 150 LF OF VEGETATIVE BUFFER
NOT TO SCALE



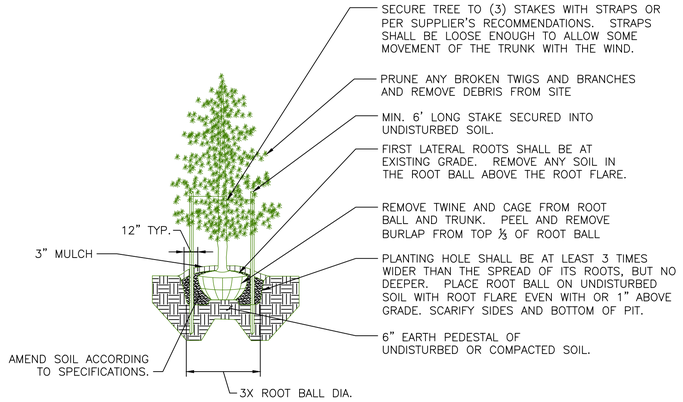

2 VEGETATIVE BUFFER – EVERGREEN TREES (150-FT SAMPLE; SPACE RESTRICTED)
PROVIDE 15 EVERGREEN TREES PER 150 LF OF VEGETATIVE BUFFER
NOT TO SCALE




3 VEGETATIVE BUFFER – MISCANTHUS x GIGANTEUS (MxG) (150-FT SAMPLE)
PROVIDE 600 MxG RHIZOMES PER 150 LF OF VEGETATIVE BUFFER (300 EA PER ROW)
NOT TO SCALE




A ELEVATION VIEW
1" = 5'



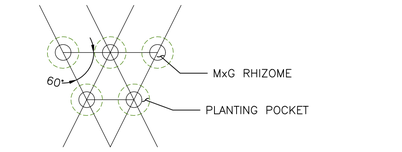

4 EVERGREEN PLANTING DETAIL
NOT TO SCALE

EVERGREEN PLANTING NOTES:

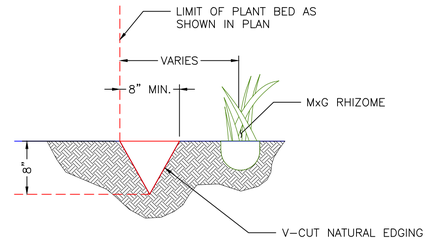
1. ALL PLANT MATERIALS SHALL BE INSTALLED BETWEEN MARCH 15 AND NOVEMBER 15.
2. EVERGREEN TREES SHOULD BE AS FOLLOWS, OR APPROVED EQUIVALENT BASED ON AVAILABILITY:
   2.1. ABIES BALSAMEA / BALSAM FIR
   2.2. ABIES CONCOLOR / WHITE FIR
   2.3. PICEA GLAUCA / WHITE SPRUCE
   2.4. PINUS RESINOSA / RED PINE
   2.5. PINUS STROBUS / WHITE PINE
3. LOCATE UTILITIES PRIOR TO COMMENCING LANDSCAPE OPERATIONS.
4. SUBCONTRACTOR SHALL STAKE ALL PLANTING AREAS IN THE FIELD PRIOR TO PLANTING FOR APPROVAL OF THE CONTRACTOR.
5. AGED SHREDDED HARDWOOD MULCH SHALL BE USED AS A THREE INCH (3") TOP DRESSING IN ALL PLANTING AREAS.
6. SCREENING SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE FACILITY, INCLUDING REPLACING DEAD VEGETATION WITHIN SIX (6) MONTHS OR AT THE EARLIEST FEASIBLE TIME OF THE YEAR DEPENDANT ON THE WEATHER.

MxG PLANTING NOTES:

1. EACH HEDGE ROW OF MxG SHALL BE ESTABLISHED WITH THREE LINES OF INDIVIDUAL RHIZOMES PLANTED 18" APART, AS WELL AS 18" STAGGERED.
2. LOCATE UTILITIES PRIOR TO COMMENCING LANDSCAPE OPERATIONS.
3. SUBCONTRACTOR SHALL LOCATE AND STAKE ALL PLANTING AREAS IN THE FIELD PRIOR TO EXCAVATING PLANTBED OR PLANTING FOR APPROVAL OF THE CONTRACTOR.
4. ALL PLANT MATERIAL SHALL BE SPECIMEN QUALITY AND SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 THE 'AMERICAN STANDARD FOR NURSERY STOCK'.
5. PREPARE PLANTING BEDS FOR AN 8" TILLED CONDITION.
6. AGED SHREDDED HARDWOOD MULCH SHALL BE USED AS A THREE INCH (3") TOP DRESSING IN ALL PLANTING AREAS WHERE DIFFICULTY IN ESTABLISHMENT OF MxG IS OBSERVED.
7. SCREENING SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE FACILITY, INCLUDING REPLACING DEAD VEGETATION WITHIN SIX (6) MONTHS OR AT THE EARLIEST FEASIBLE TIME OF THE YEAR DEPENDANT ON THE WEATHER.




5 MxG PLANTING DETAIL
NOT TO SCALE




6 V-CUT NATURAL EDGE
NOT TO SCALE

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

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|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

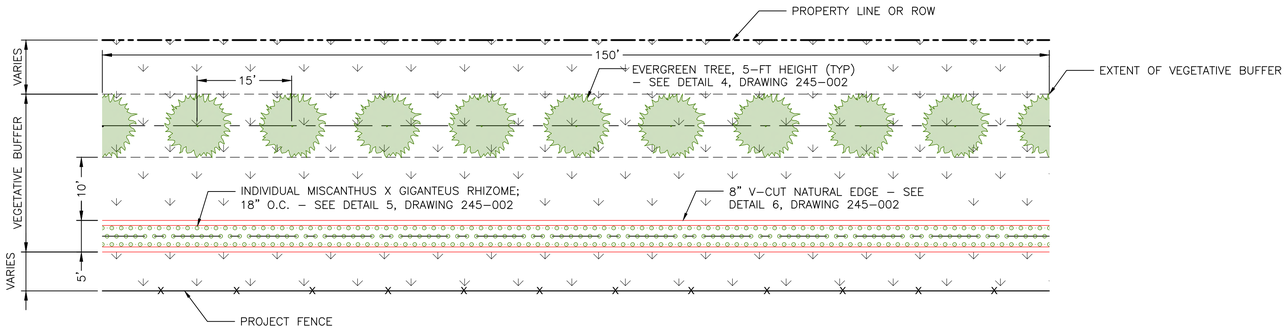
SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
VEGETATIVE BUFFER DETAIL 01

UNIT:N/A

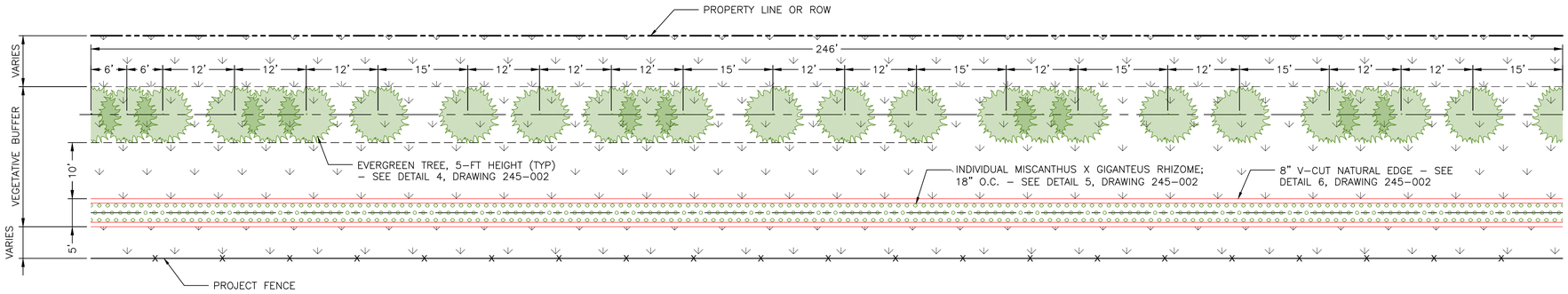
| SCALE: SCALE VARIES | DRAWING NO. 1823-CV-245 | SHEET 002 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |




1 – VEGETATIVE BUFFER – EVERGREEN TREES & MxG (150-FT SAMPLE)

PROVIDE 10 EVERGREEN TREES AND 300 MxG RHIZOMES PER 150 LF OF VEGETATIVE BUFFER

NOT TO SCALE




2 – VEGETATIVE BUFFER – EVERGREEN TREES (246-FT SAMPLE)

PROVIDE 24 EVERGREEN TREES AND 492 MxG RHIZOMES PER 246 LF OF VEGETATIVE BUFFER

NOT TO SCALE

EVERGREEN PLANTING NOTES:

1. PLANTING LOCATIONS TO SPELL "GUSTIN" IN MORSE CODE (--. ..- ... - .. -.)

GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
STATE OF MICHIGAN
License No. 6201313263

05/13/2026

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|---|---|---|---|---|---|---|---|---|
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| REV | DATE | DESCRIPTION | DR | BY | CK | APP | CO |
|---|---|---|---|---|---|---|---|
| A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE

NAME

G. ALBANSODER

MICHIGAN P.E. No.

6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
VEGETATIVE BUFFER DETAIL 02

UNIT: N/A

| SCALE: SCALE VARIES | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| JOB: 192088 | 1823-CV-245 | 003 | A |

¼" MOUNTING HOLES EACH CORNER

DANGER, HIGH VOLTAGE WITHIN, KEEP OUT

SAFETYSIGN.COM #E3278–B6D OR EQUIVALENT
TO BE PLACED AT GATES AND ALONG PERIMETER FENCE EVERY 200–FT.
12" X 18"

¼" MOUNTING HOLES EACH CORNER

NO TRESPASSING SIGN

ITEM # 10056025 TO BE OBTAINED FROM CONSUMERS ENERGY STOREROOM – COORDINATE WITH OWNER
TO BE PLACED AT GATES AND ALONG PERIMETER FENCE EVERY 600–FT
12" X 18"

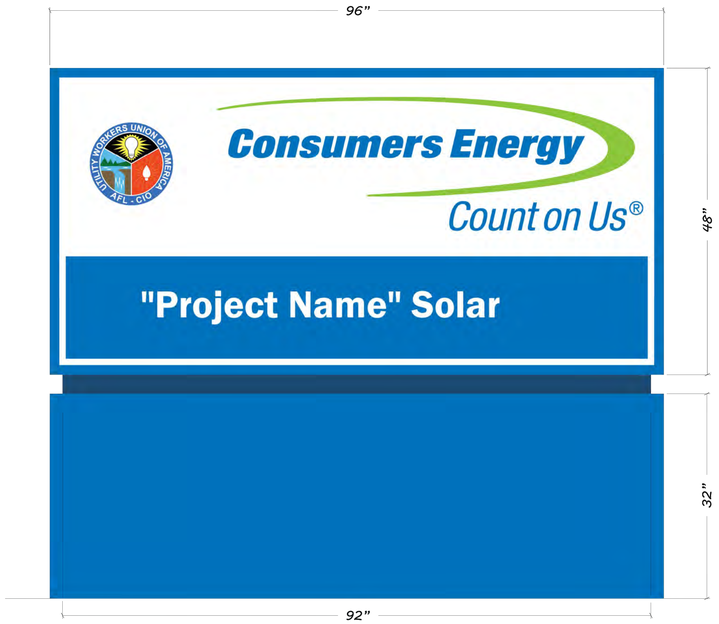
SIGN NOTES:

1. SIGNS SHALL BE ENGINEERING GRADE REFLECTIVE ALUMINUM: 0.040" THICKNESS MIN.
2. CENTER OF SIGN SHALL BE 5 FEET ABOVE GRADE.
3. ALL SIGNS SHALL BE UV STABILIZED. ALL TEXT HEADERS SHALL BE 3/8" HEIGHT (MIN). BODY TEXT SHALL BE 3/16" HEIGHT (MIN). REFERENCE ANSI Z535.4, PRODUCT SAFETY SIGNS AND LABELS, FOR MINIMUM REQUIREMENTS RELATED TO DURABILITY AND LOCATION.
4. SUBCONTRACTOR SHALL PROCURE AND INSTALL ALL SIGNS FOR CIVIL CONTRACT. SIGN ORDER FORM SHALL BE SUBMITTED TO CONTRACTOR FOR APPROVAL PRIOR TO PURCHASE.
5. SUBCONTRACTOR SHALL INSTALL SIGNS ON FENCE FABRIC, LOCATED AS NOTED, USING ALUMINUM RING TIES (HOG RINGS) OR EQUIVALENT.

¼" MOUNTING HOLES EACH CORNER

COPPER WIRE IN THIS FACILITY HAS BEEN REPLACED WITH
COPPER CLAD STEEL WHICH HAS NO SCRAP VALUE

SAFETYSIGN.COM CUSTOM BLANK HEADER SIGN
TO BE PLACED AT ENTRANCE GATES
12" X 18"




PROJECT INFORMATION SIGN

TO BE PROCURED BY OWNER
TO BE LOCATED AS INDICATED ON PLAN

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
License No. 6201313263
LICENSED PROFESSIONAL ENGINEER
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
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| REV | DATE | DESCRIPTION | DR | BY | CK | APP | CO |
|---|---|---|---|---|---|---|---|
| A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

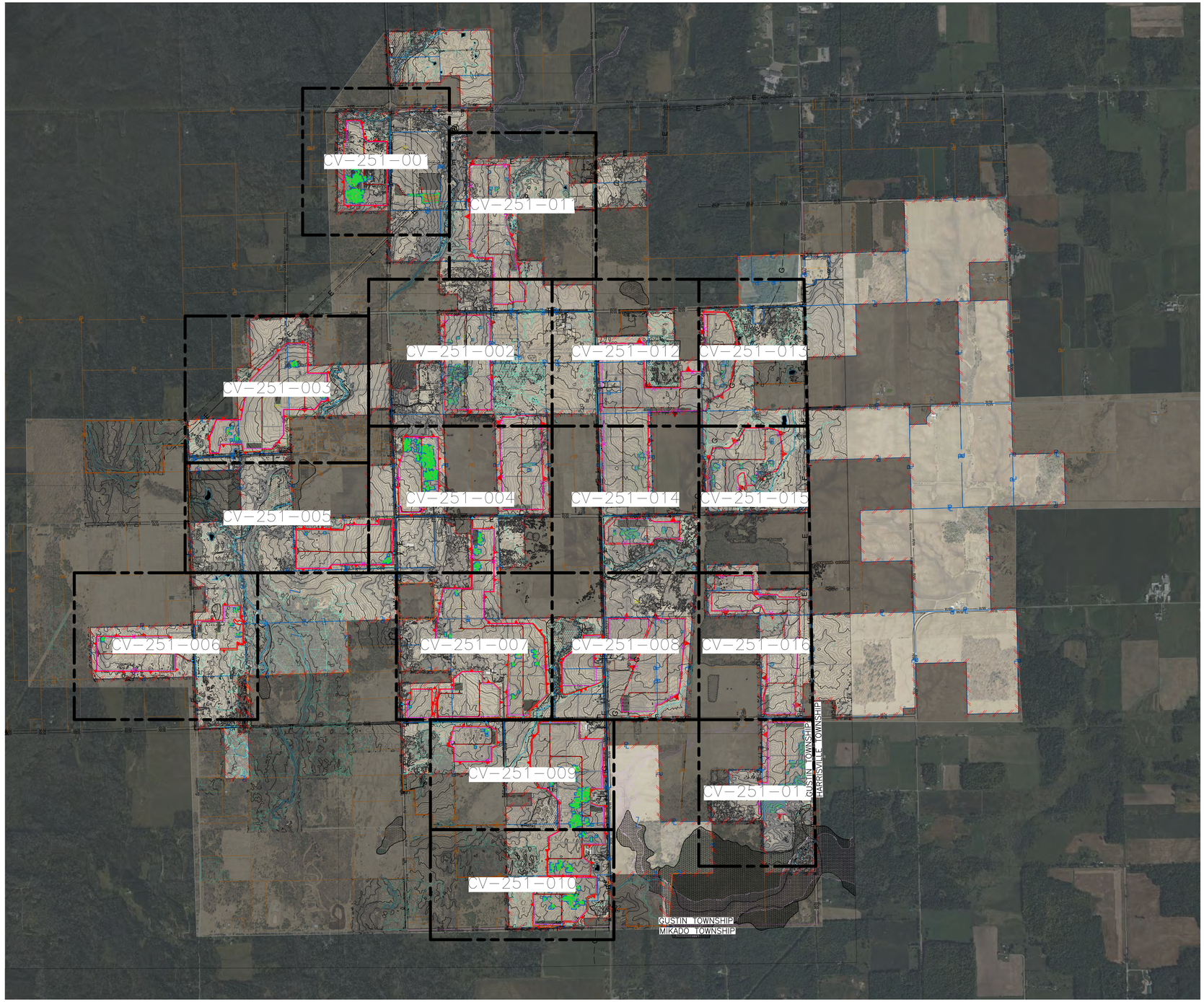
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
SAFETY SIGNS

UNIT:N/A

| SCALE: SCALE VARIES | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| JOB: 192088 | 1823–CV–245 | 004 | A |




GENERAL NOTES:

1. THE PROJECT SITE IS TO BE PRE-SEEDED WITH THE LOW-GROW SEED MIX BY THE LANDOWNER DURING THE SPRING 2026 PLANTING SEASON. ADDITIONAL SEEDING DEPICTED ON THESE DRAWINGS IS FOR PERMANENT STABILIZATION OF KNOWN EARTH-DISTURBING ACTIVITIES ASSOCIATED WITH CIVIL CONSTRUCTION.
   1.1. SEEDING TO REPAIR/STABILIZE ADDITIONAL DISTURBANCES AS A RESULT OF CONSTRUCTION WILL BE COORDINATED IN THE FIELD.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE

1400' 700' 0 1400' 2800'
1" = 1400'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

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|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

| REV | DATE | DESCRIPTION | DR | BY | CK | APP | CO |
|---|---|---|---|---|---|---|---|
| A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

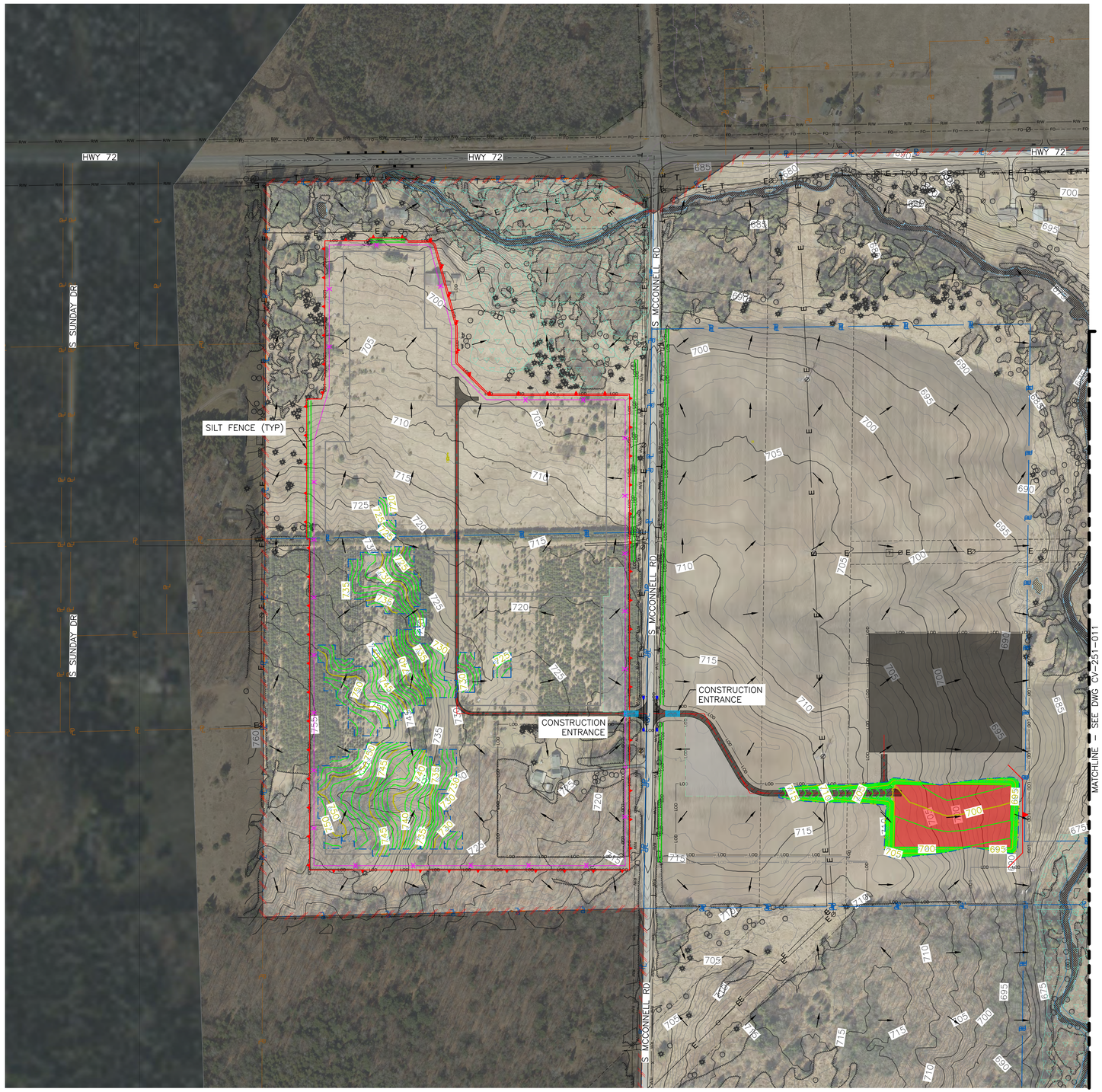
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL KEY PLAN

UNIT:N/A

| SCALE: | 1" = 1400' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-250 | 001 | A |



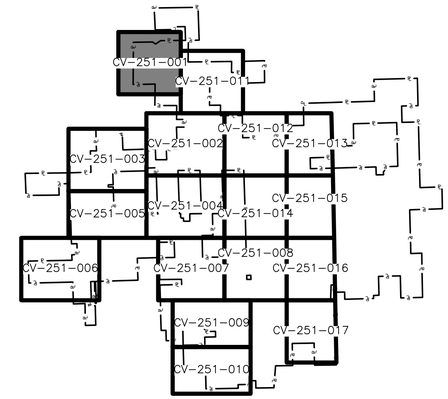

GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

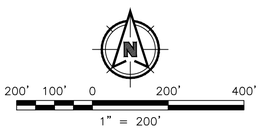
LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS



05/13/2026

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|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 01

UNIT: N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-251 | 001 | A |

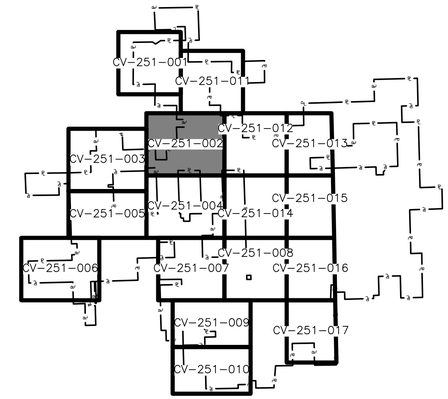
GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

05/13/2026

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| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 02

UNIT:N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-251 | 002 | A |

GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

200' 100' 0 200' 400'
1" = 200'

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

| SIGNATURE | |
|---|---|
| NAME | G. ALBANSODER |
| MICHIGAN P.E. No. | 6201313263 |

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 03

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-251 | 003 | A |

UNIT: N/A

MATCHLINE – SEE DWG CV-251-002

MATCHLINE – SEE DWG CV-251-003

MATCHLINE – SEE DWG CV-251-005

MATCHLINE – SEE DWG CV-251-014

MATCHLINE – SEE DWG CV-251-007

S MCCONNELL RD

E FOWLER RD

SILT FENCE (TYP)

CONSTRUCTION ENTRANCE

CONSTRUCTION ENTRANCE

CONSTRUCTION ENTRANCE

CONSTRUCTION ENTRANCE

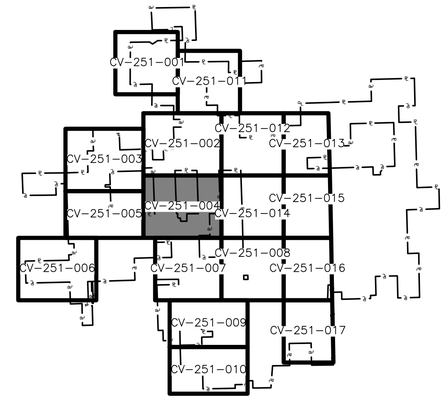
GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

200' 100' 0 200' 400'
1" = 200'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

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|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

Consumers Energy

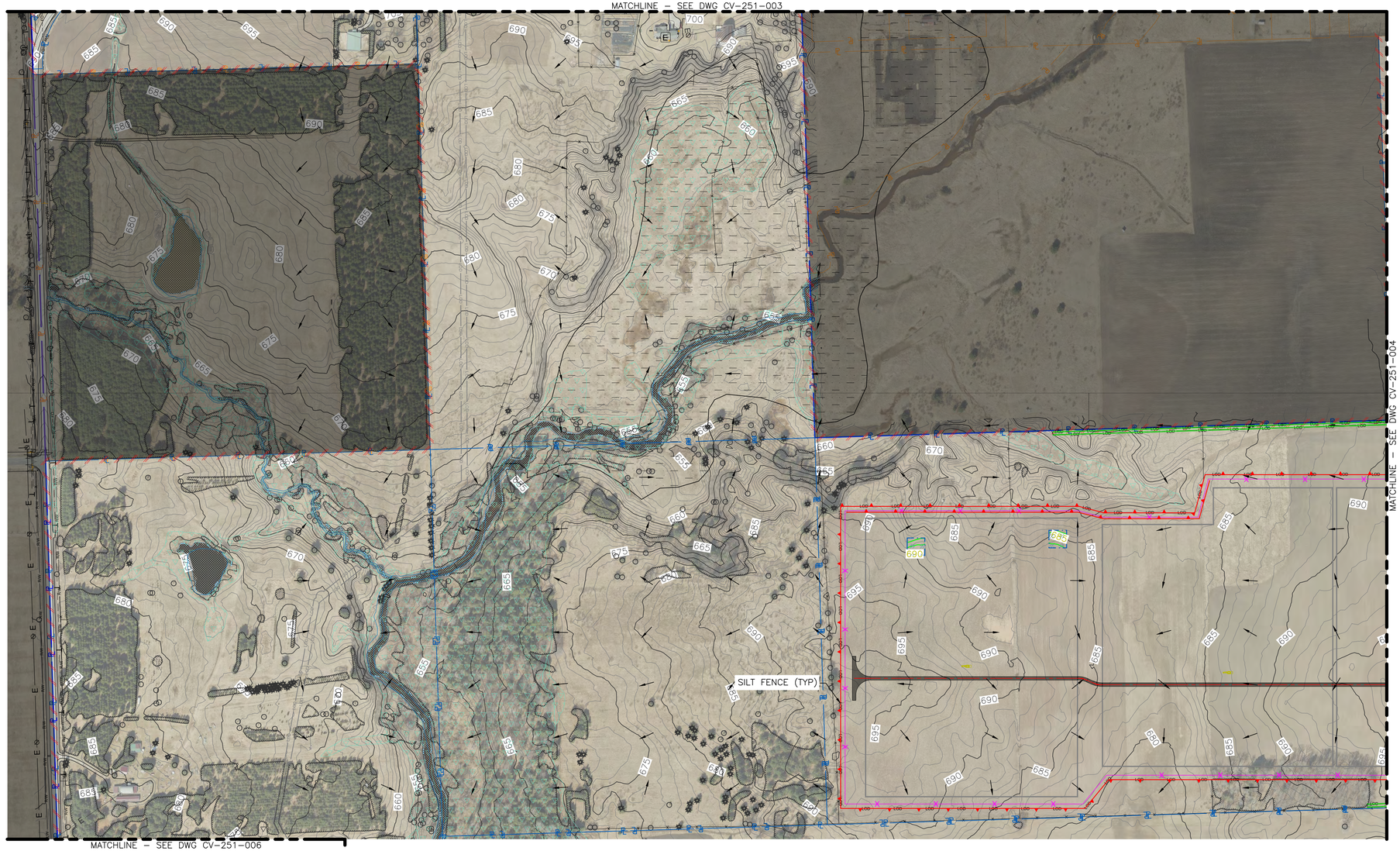
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 04

UNIT: N/A

| SCALE: 1" = 200' | DRAWING NO. 1823-CV-251 | SHEET 004 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |

MATCHLINE – SEE DWG CV-251-003




MATCHLINE – SEE DWG CV-251-004

MATCHLINE – SEE DWG CV-251-006

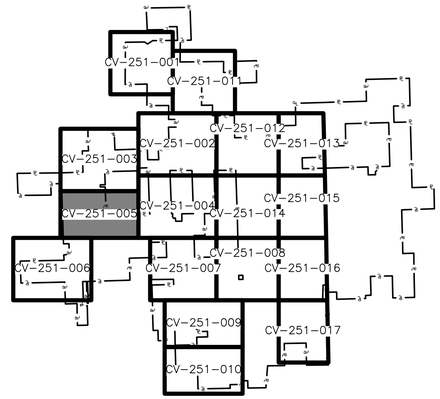
GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

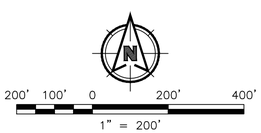
LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS



05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

| REV | DATE | DESCRIPTION | DR | BY | CK | APP | CO |
|---|---|---|---|---|---|---|---|

SIGNATURE

NAME: G. ALBANSODER

MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 05

UNIT: N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-251 | 005 | A |

MATCHLINE – SEE DWG CV-251-005

CONSTRUCTION ENTRANCE

SILT FENCE (TYP)

S CRUZEN RD

CONSTRUCTION ENTRANCE

S CRUZEN RD

S CRUZEN RD

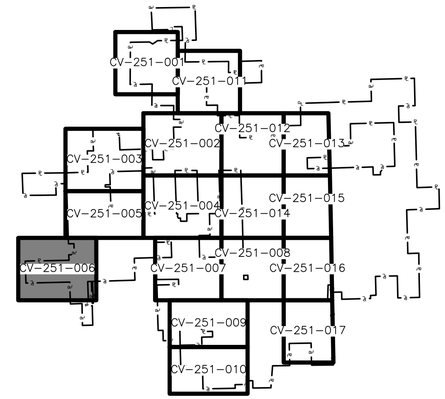
GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

200' 100' 0 200' 400'
1" = 200'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

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|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

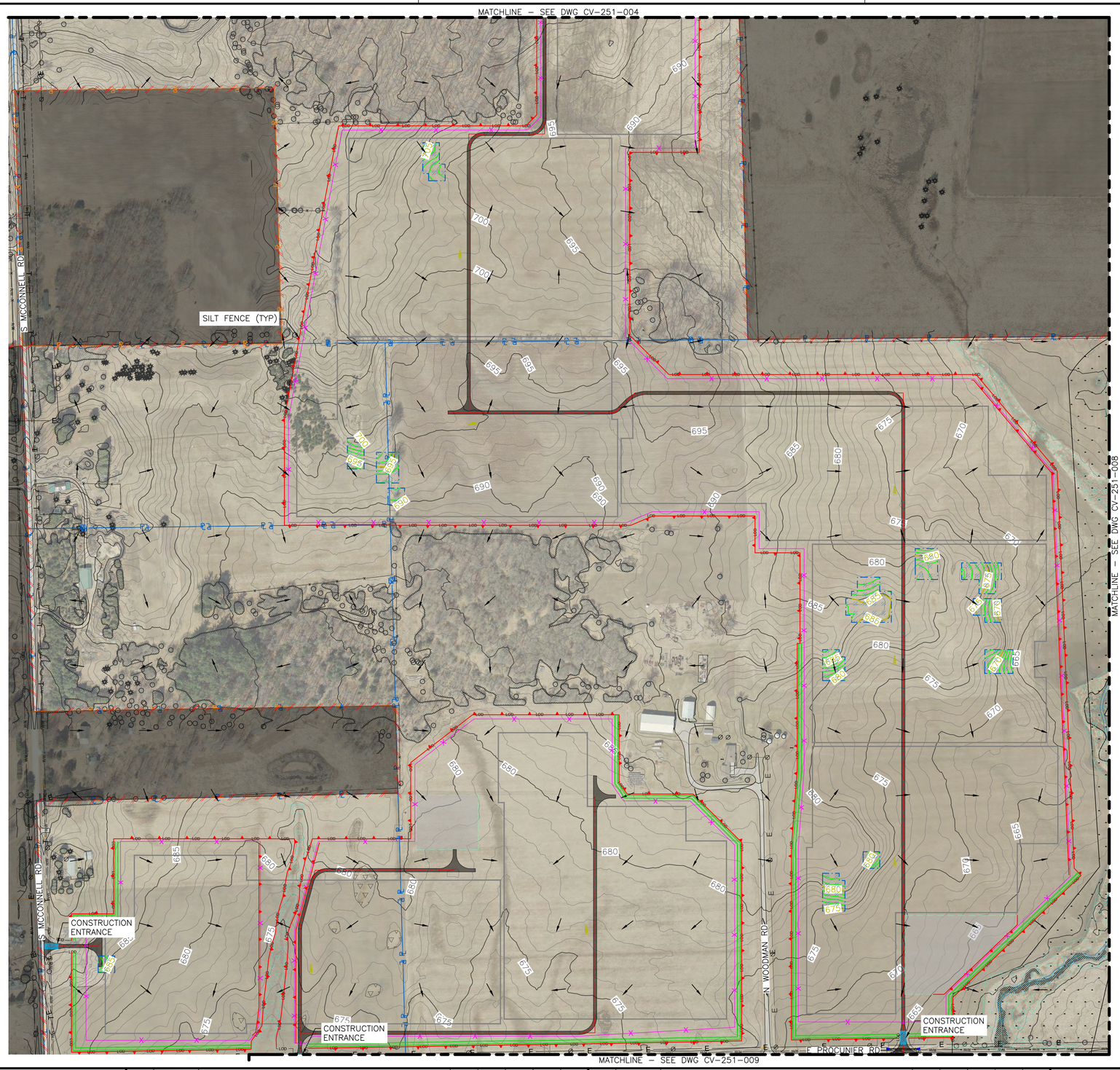
Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 06

UNIT: N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-251 | 006 | A |

SHEET SIZE: ANSI-D 22x34



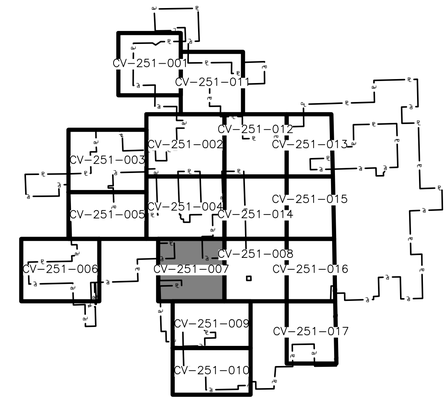

GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

200' 100' 0 200' 400'
1" = 200'

GRANT LOUIS ALBANSODER
STATE OF MICHIGAN
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

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| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

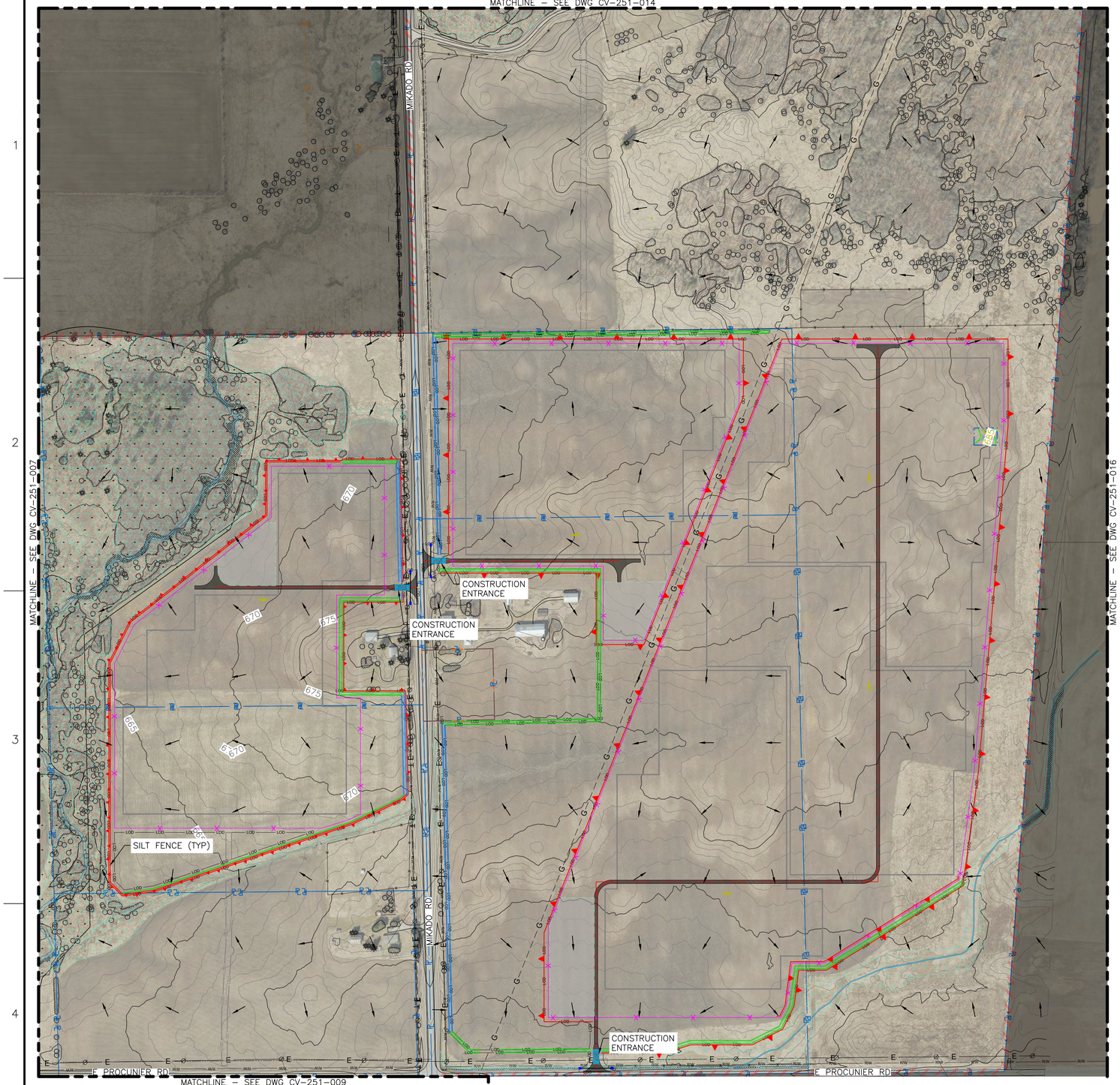
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 07

UNIT:N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-251 | 007 | A |



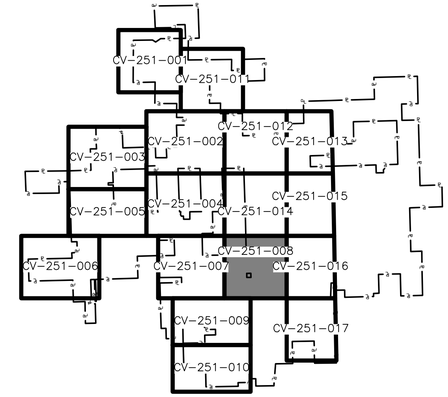

GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

N

200' 100' 0 200' 400'
1" = 200'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
License No. 6201313263
LICENSED PROFESSIONAL ENGINEER
05/13/2026

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|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

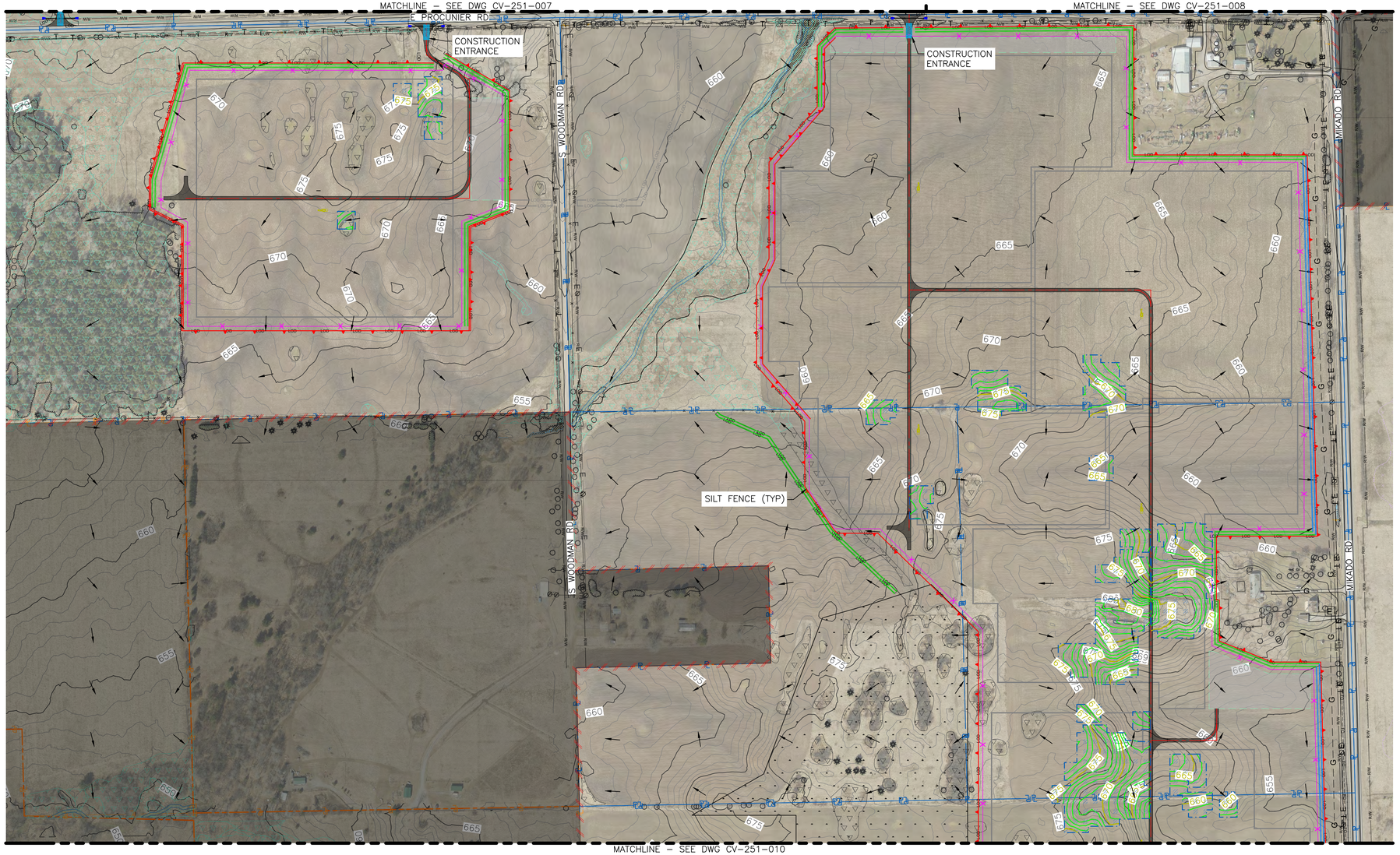
EROSION & SEDIMENT CONTROL
ENLARGED PLAN 08

UNIT: N/A

| SCALE: | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| 1" = 200' | 1823-CV-251 | 008 | A |
| JOB: 192088 | | | |

MATCHLINE – SEE DWG CV-251-007

MATCHLINE – SEE DWG CV-251-008




MATCHLINE – SEE DWG CV-251-010

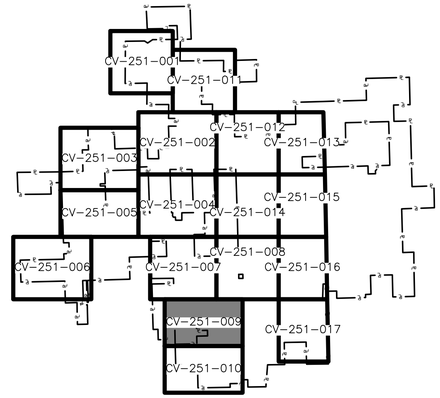
GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

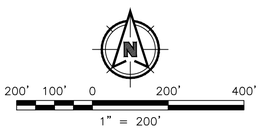
LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS



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| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
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| REV | DATE | DESCRIPTION | DR | BY | CK | APP | CO |
|---|---|---|---|---|---|---|---|
| A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE

NAME
G. ALBANSODER

MICHIGAN P.E. No.
6201313263

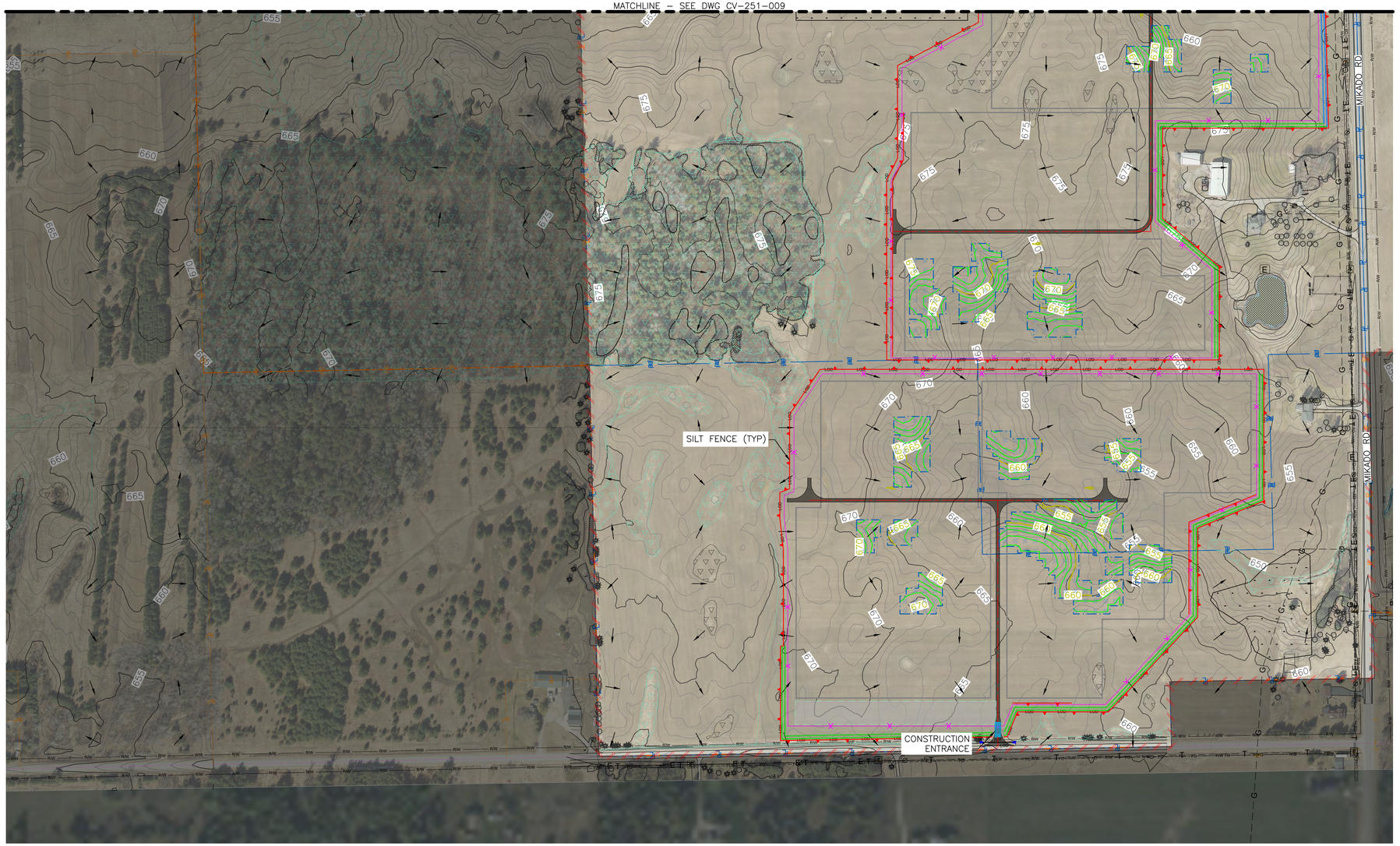
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 09

UNIT: N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-251 | 009 | A |



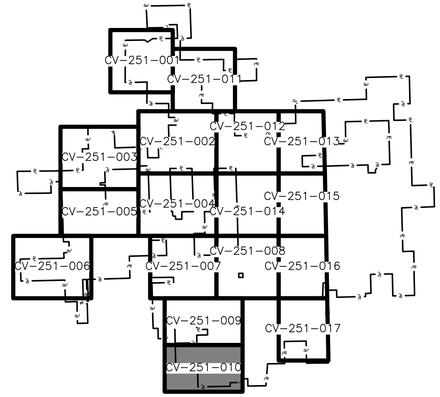

GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

200' 100' 0 200' 400'
1" = 200'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

Consumers Energy

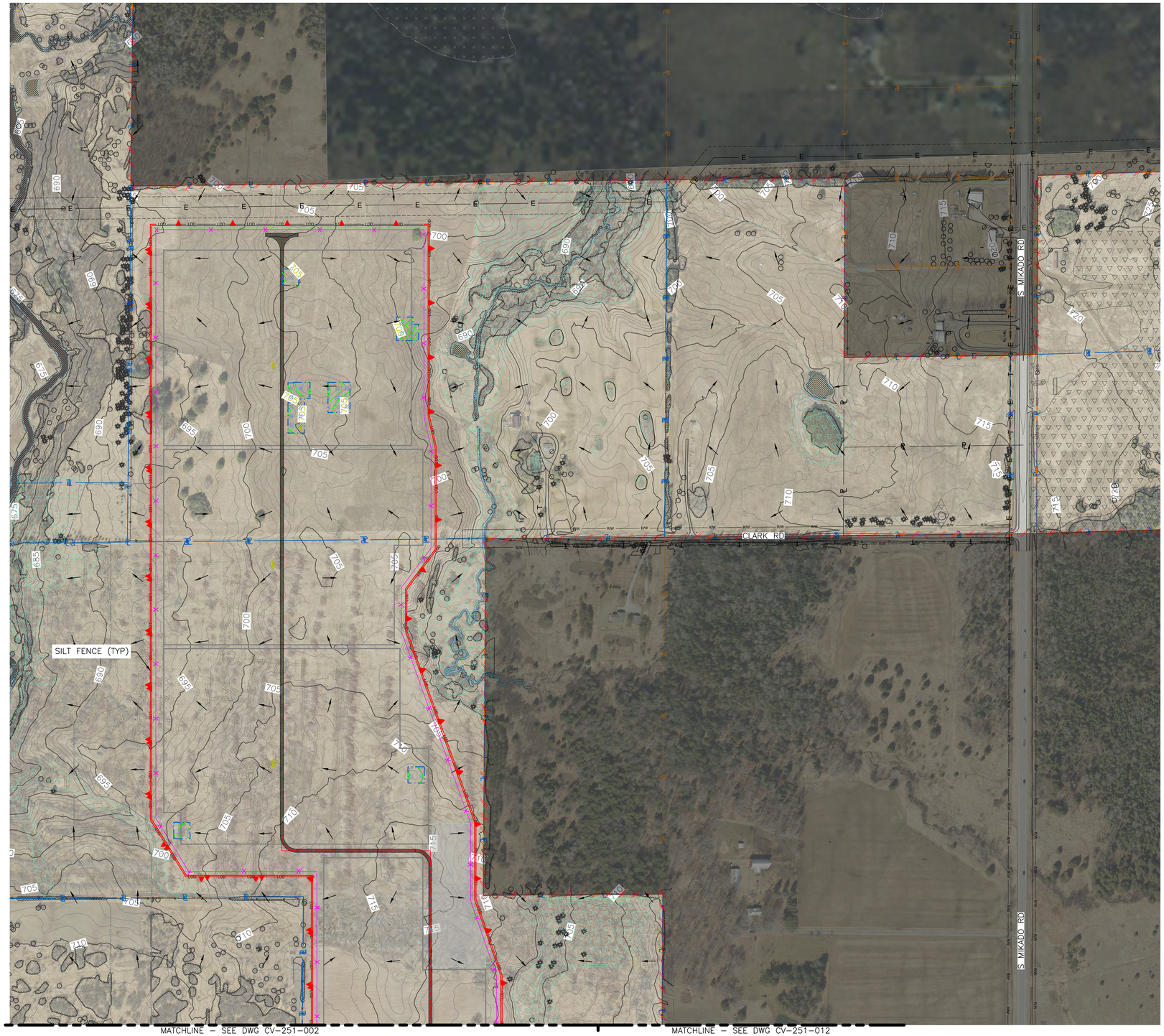
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 10

SCALE: 1" = 200'
JOB: 192088
DRAWING NO. 1823-CV-251
UNIT: N/A
SHEET 010
REV. A

SHEET SIZE: ANSI-D 22x34

MATCHLINE – SEE DWG CV-251-001



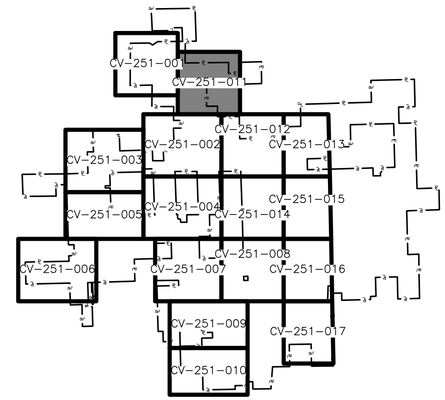

GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE

NAME: G. ALBANSODER

MICHIGAN P.E. No.: 6201313263

Consumers Energy

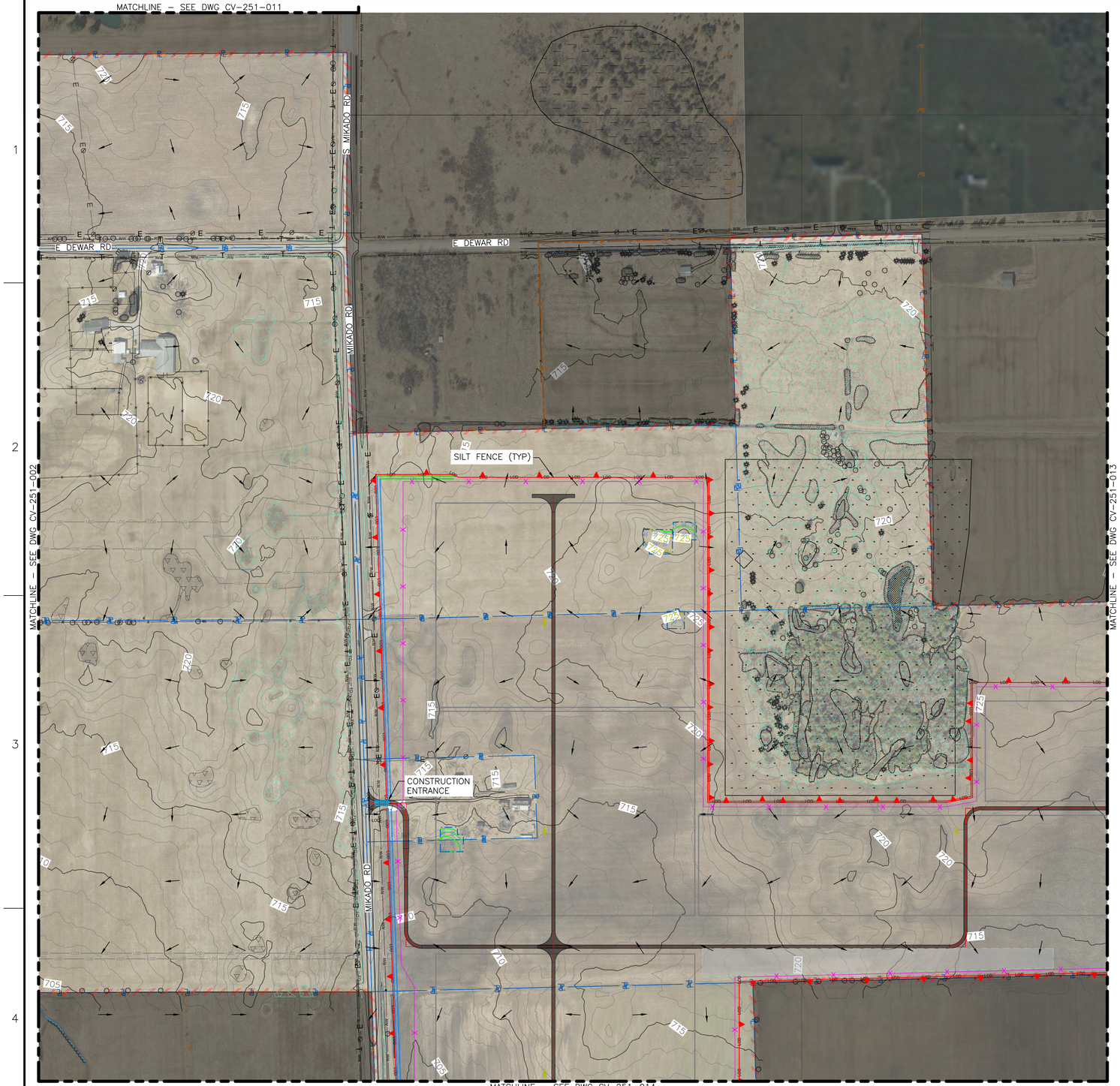
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 11

UNIT:N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-251 | 011 | A |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-251-011.DWG 5/13/2026 3:11 PM GLALBANSODER



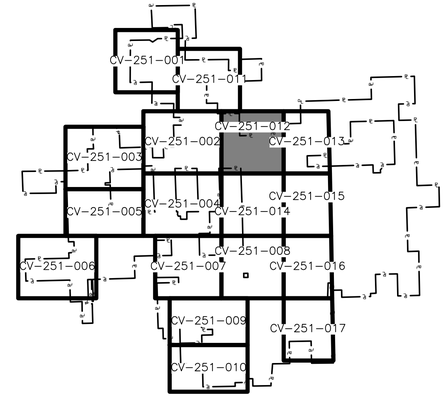

GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

N

200' 100' 0 200' 400'
1" = 200'

STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

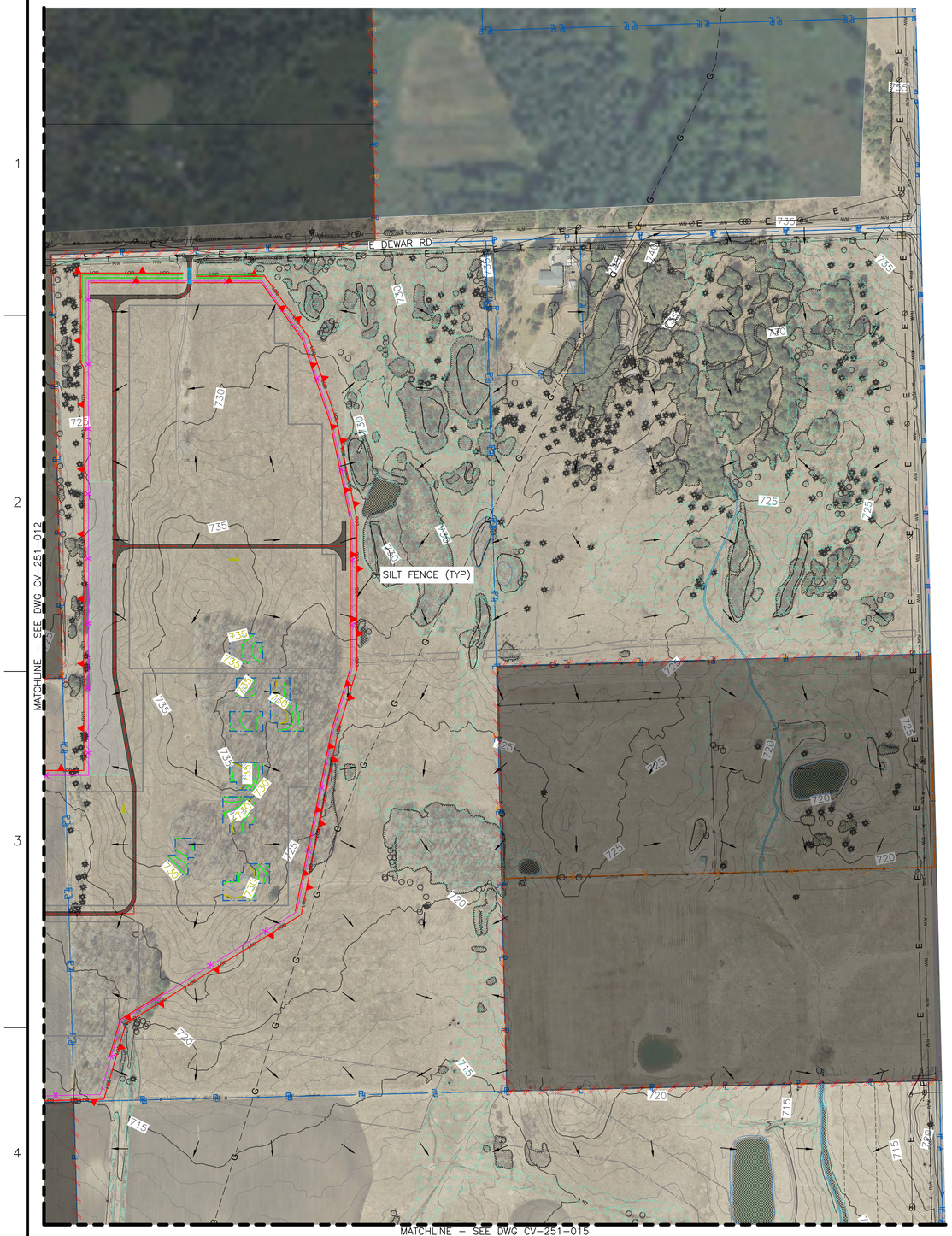
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 12

SCALE: 1" = 200'
JOB: 192088
DRAWING NO.: 1823-CV-251
SHEET: 012
REV.: A
UNIT: N/A

SHEET SIZE: ANSI-D 22x34



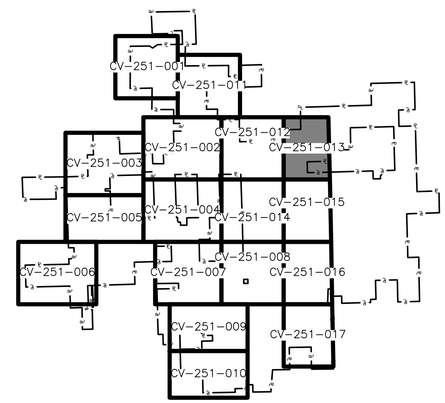

GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

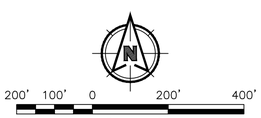
LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS



05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE

NAME: G. ALBANSODER

MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 13

UNIT:N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-251 | 013 | A |

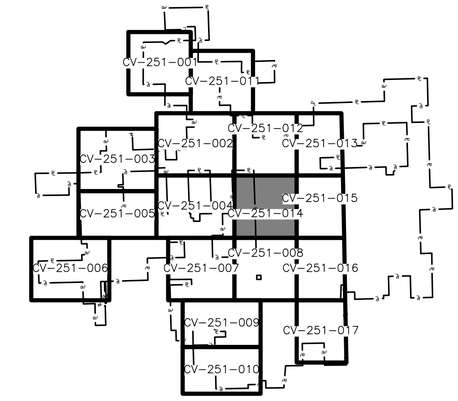
GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

200' 100' 0 200' 400'
1" = 200'

GRANT LOUIS ALBANSODER
STATE OF MICHIGAN
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

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| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

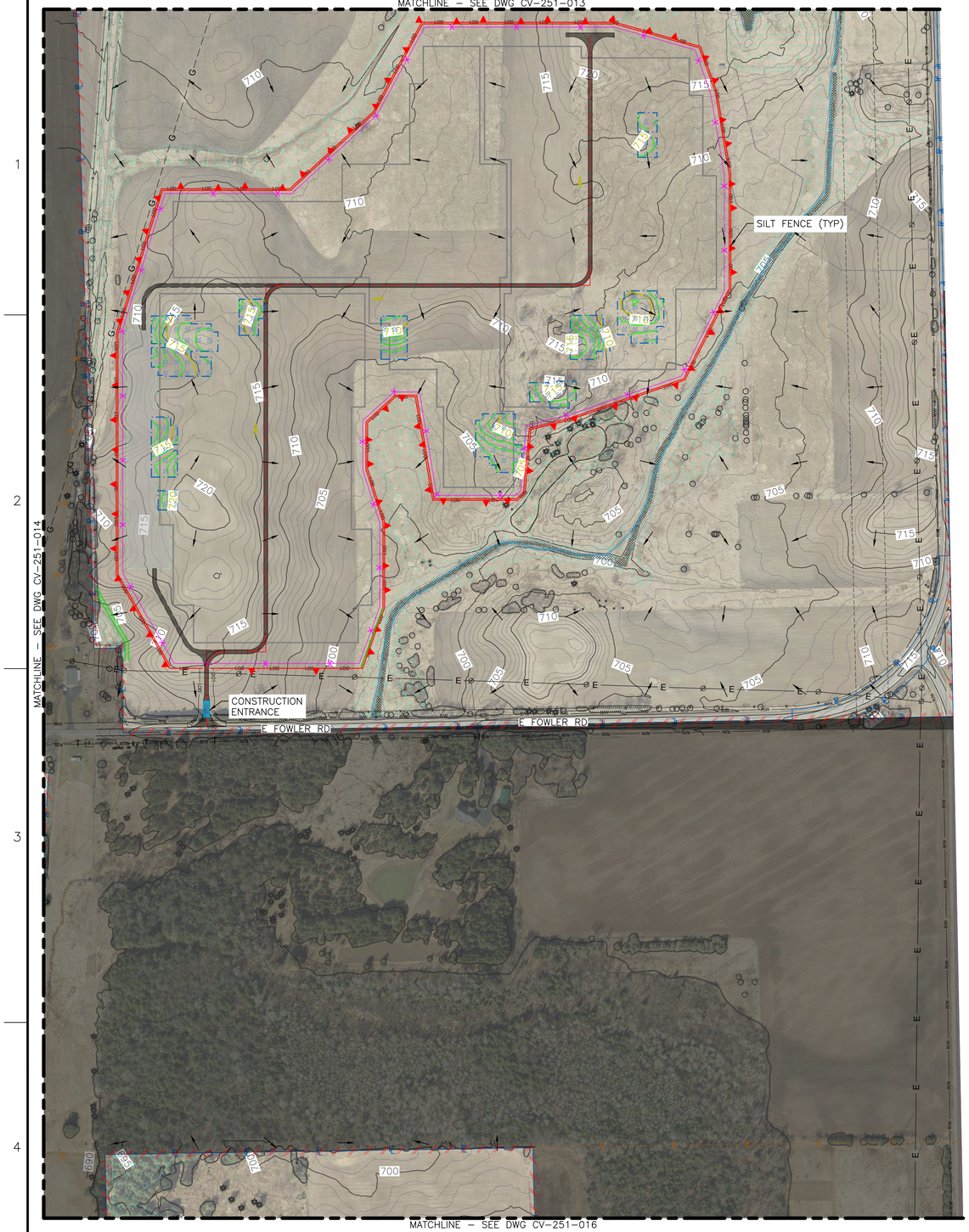
Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 14

UNIT:N/A

| SCALE: | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| 1" = 200' | 1823-CV-251 | 014 | A |
| JOB: 192088 | | | |



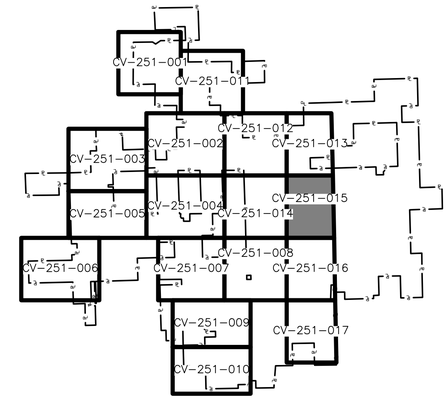

GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

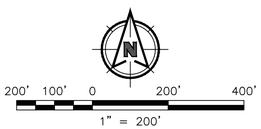
LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS




STATE OF MICHIGAN
GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

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| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE
NAME: G. ALBANSODER
MICHIGAN P.E. No.: 6201313263

Consumers Energy

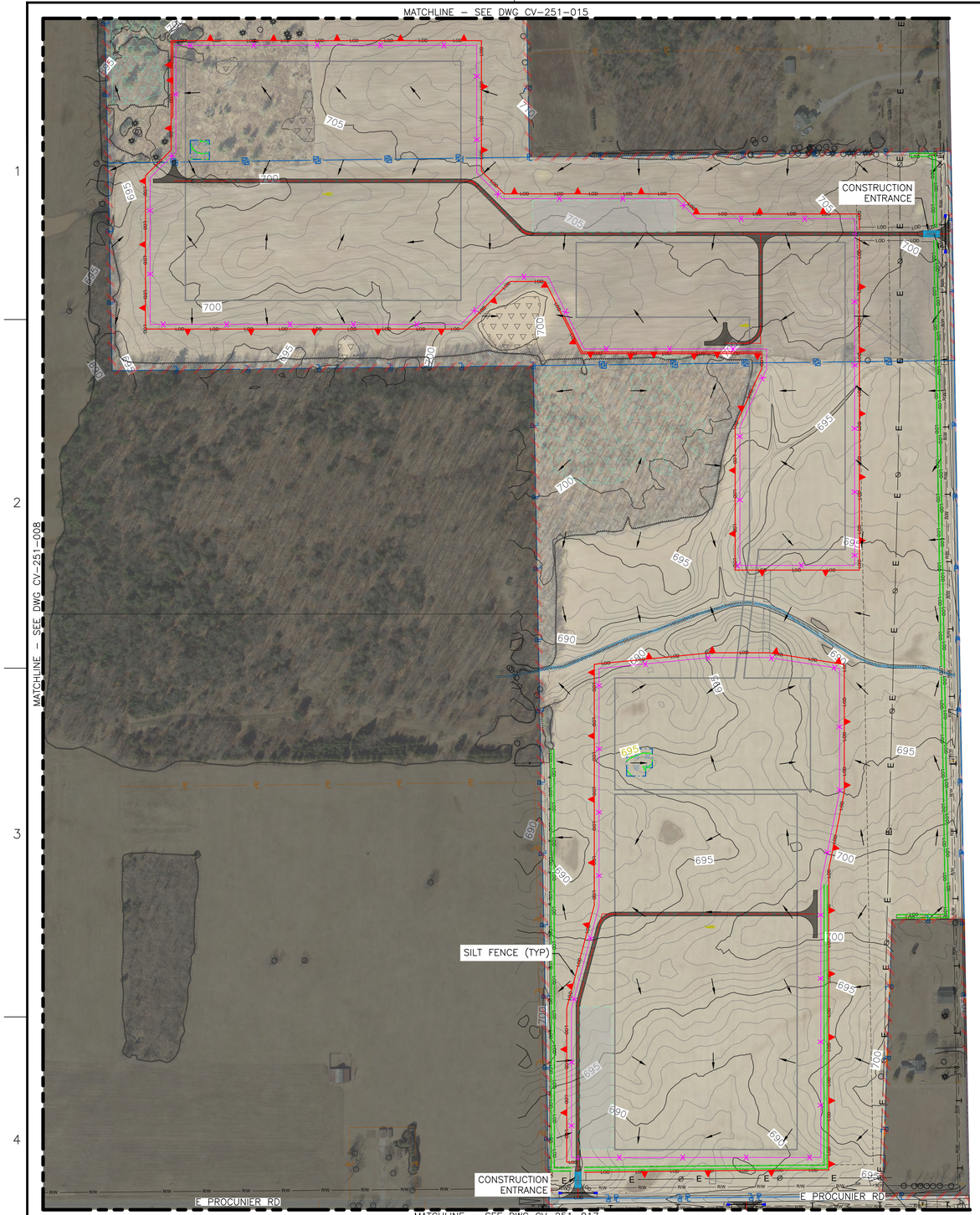
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 15

UNIT:N/A

| SCALE: | 1" = 200' | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 1823-CV-251 | 015 | A |

SHEET SIZE: ANSI-D 22x34



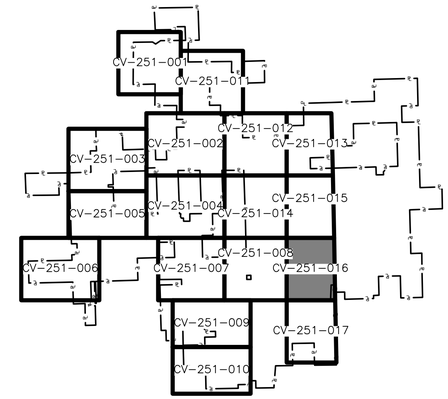

GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

GRANT LOUIS ALBANSODER
STATE OF MICHIGAN
LICENSED PROFESSIONAL ENGINEER
License No. 6201313263
05/13/2026

200' 100' 0 200' 400'
1" = 200'

FOR PERMITTING PURPOSES ONLY

| REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|
| A | 05/13/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

REFERENCE DRAWINGS

SIGNATURE

NAME: G. ALBANSODER

MICHIGAN P.E. No.: 6201313263

Consumers Energy

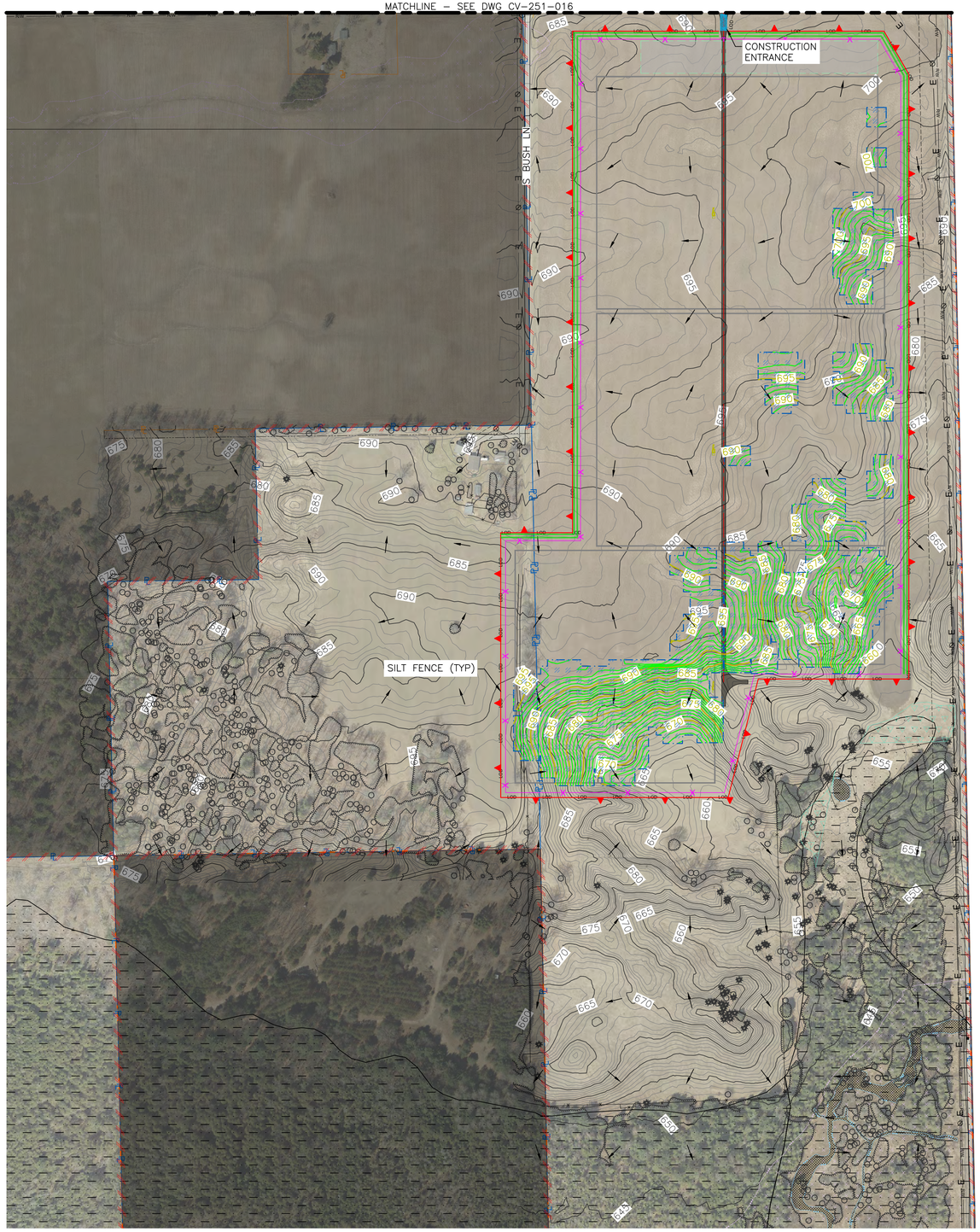
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 16

UNIT: N/A

| SCALE: | 1" = 200' | DRAWING NO. | 1823-CV-251 | SHEET | 016 | REV. | A |
|---|---|---|---|---|---|---|---|
| JOB: | 192088 | | | | | | |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-251-016.DWG 5/11/2026 11:48 PM GLALBANSODER



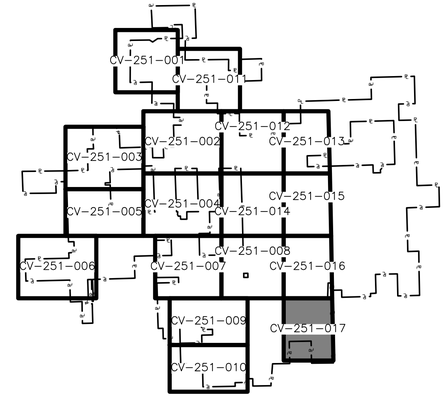

GENERAL NOTES:

1. SILT FENCE SHALL BE HIGH-VISIBILITY ORANGE, TO ACT AS WILDLIFE EXCLUSIONARY FENCE.

LEGEND:

EROSION & SEDIMENT CONTROL:

- DISTURBED AREAS TO BE SEEDED PER SPECIFICATIONS
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOLAR ARRAY OUTLINE
- FLOW ARROW




KEYMAP
NTS

200' 100' 0 200' 400'
1" = 200'

GRANT LOUIS ALBANSODER
LICENSED PROFESSIONAL ENGINEER
STATE OF MICHIGAN
License No. 6201313263
05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| REV | DATE | DESCRIPTION | ADB DR | ACG BY | JTD CK | GLA APP | BMC CO |
|---|---|---|---|---|---|---|---|
| A | 05/13/26 | ISSUED FOR PERMITTING | | | | | |

SIGNATURE
NAME
G. ALBANSODER
MICHIGAN P.E. No.
6201313263

Consumers Energy

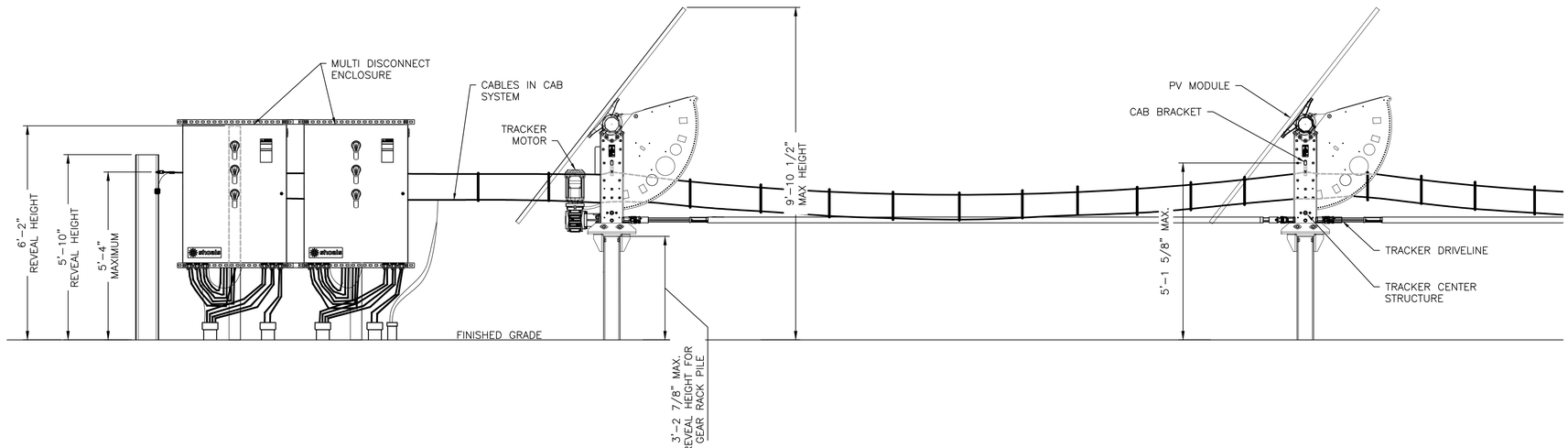
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

EROSION & SEDIMENT CONTROL
ENLARGED PLAN 17

UNIT:N/A

| SCALE: | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| 1" = 200' | 1823-CV-251 | 017 | A |
| JOB: 192088 | | | |

SHEET SIZE: ANSI-D 22x34




A E-W CAB SYSTEM ELEVATION VIEW
VIEW FACING NORTH
SCALE: NOT TO SCALE

STATE OF MICHIGAN
JASON WONG
No. 6201314188
LICENSED PROFESSIONAL ENGINEER

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|

| REV | DATE | DESCRIPTION | DR | BY | CK | APP | CO |
|---|---|---|---|---|---|---|---|
| A | 2026-05-22 | ISSUED FOR PERMITTING – GUSTIN SOLAR ENERGY CENTER I & II – PS-00016 | TMB | JLW | MBD | JLW | BMC |

SIGNATURE
NAME
JASON WONG
MICHIGAN P.E. No.
6201314188

Consumers Energy
GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

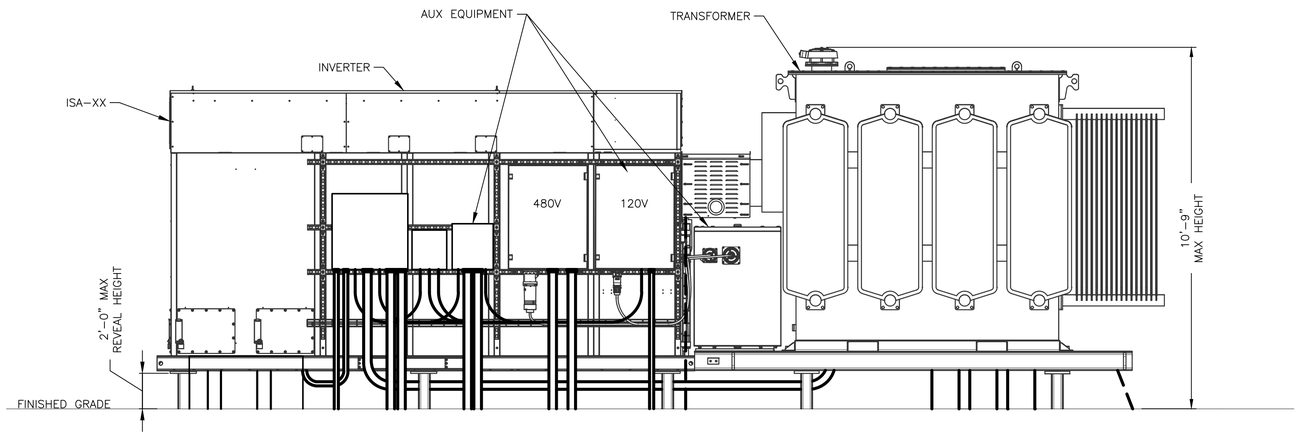
COLLECTOR SYSTEM
CAB DETAILS

UNIT:N/A

| SCALE: | NONE | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 8-EP-350 | | A |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\ELEC\DWGS\PERMITTING DWGS\EP-350.DWG 5/13/2026 3:49 PM TBOYLES

SHEET SIZE: ANSI-D 22x34




1 INVERTER SKID ASSEMBLY (ISA) ELEVATION

SCALE: 1" = 2'

STATE OF MICHIGAN
JASON
WONG
No.
6201314188
LICENSED PROFESSIONAL ENGINEER

05/13/2026

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 2026-05-22 | ISSUED FOR PERMITTING – GUSTIN SOLAR ENERGY CENTER I & II – PS-00016 | TMB | JLW | MBD | JLW | BMC |

SIGNATURE

NAME
JASON WONG

MICHIGAN P.E. No.
6201314188

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

COLLECTOR SYSTEM
ISA ELEVATION VIEW

UNIT:N/A

| SCALE: | NONE | DRAWING NO. | SHEET | REV. |
|---|---|---|---|---|
| JOB: | 192088 | 8-EP-351 | | A |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\ELEC\DWGS\PERMITTING DWGS\EP-351.DWG 4/13/2026 9:15 AM TBOYLES

# Gustin Solar

Gustin Township

**Exhibit C**

Glare Study

May 13, 2026

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1898 & CO.®
PART OF BURNS McDONNELL

# SOLAR GLARE STUDY

## CONSUMERS ENERGY COMPANY

GUSTIN SOLAR ENERGY CENTER
192088

May 13, 2026

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# LIST OF ABBREVIATIONS

| Abbreviation | Term/Phrase/Name |
|---|---|
| 1898 & Co. | 1898 & Co., a division of Burns & McDonnell Michigan, Inc. |
| FAA | Federal Aviation Administration |
| MWac | Megawatt alternating current |
| Owner | Consumers Energy Company |
| Project | Gustin Solar Energy Center |
| Project Site | Location of Project in Gustin and Harrisville Township, Alcona County, Michigan |
| PV | Photovoltaic |
| Study | Solar Glare Analysis |

# 1.0 Introduction

## 1.1 Study Overview

1898 & Co., a division of Burns & McDonnell Michigan, Inc. (“1898 & Co.”) is pleased to provide a glare study to Burns & McDonnell Michigan, Inc. for the Gustin Solar Energy Center (the “Project”), proposed by Consumers Energy Company (“Owner”). The objective of the Study is to estimate the potential for Project solar arrays to direct concentrated glare toward or onto nearby properties or roadways located in Gustin Township.

## 1.2 Project Overview

Gustin Solar Energy Center is proposed on land located in Gustin and Harrisville Township, Alcona County, Michigan, approximately 4.5 miles west of the city of Harrisville. Gustin Solar Energy Center will add 25 megawatts alternating current (“MWac”) of generating capacity in addition to the 215 MWac approved as Sapling Solar.

## 1.3 Glare Overview

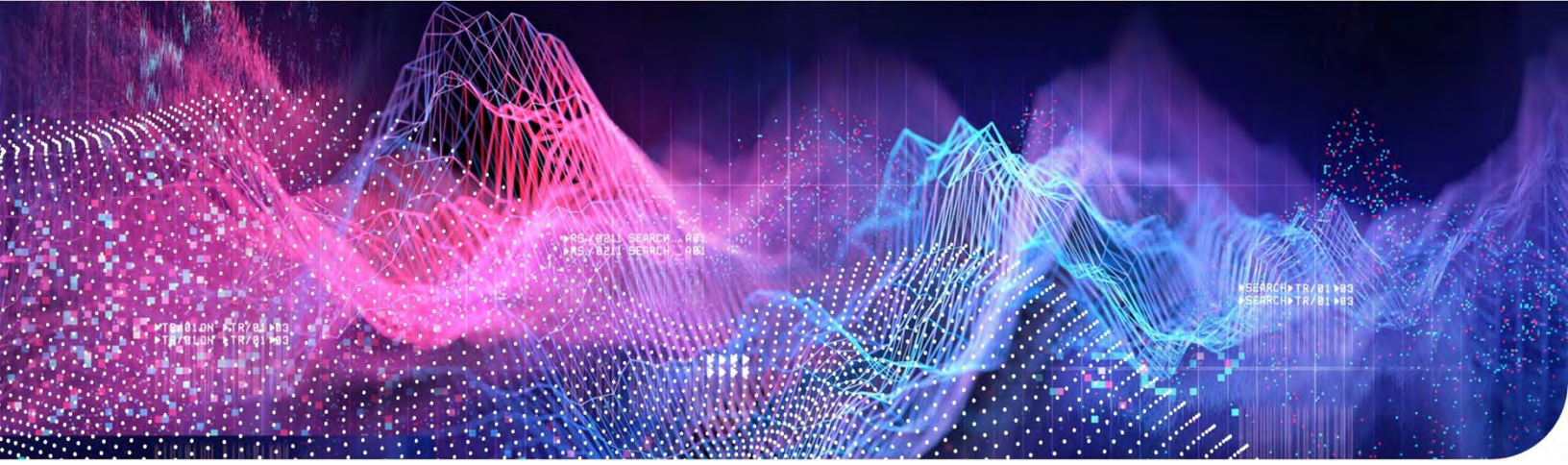
Glare is defined as a continuous source of bright light reflecting or refracting off a surface. Glare from a solar project occurs when the sun reflects or refracts off the solar panels, and only occurs under very specific conditions that are dependent on sun position, tracker position, time of day, and other similar factors.

Glare is considered consequential if the yellow glare may cause ocular impacts to the observer and the glare does not occur within an hour of sunrise or sunset and from a similar direction as the sun. Since the intensity of the sun is significantly greater than the intensity of the glare from the Project, the impact of glare on the observer is negligible compared to the sun when the glare occurs within an hour of sunrise or sunset and from a similar direction as the sun.

## 1.4 Applicable Regulation

Glare associated with solar arrays is not currently regulated by any applicable county or state. However, Section 7.31.A.2 of the Gustin Township Zoning Ordinance provide as follows:

> Section 7.31.A.2: *Solar Energy Systems shall be located or placed so that concentrated solar glare shall not be directed toward or onto nearby properties or roadways at any time of the day.*



# 2.0 Modeling Parameters and Inputs

## 2.1 Modeling Overview

Glare was modeled for the Project Site using ForgeSolar, a commercially licensed Solar Glare Hazard Analysis Tool, which was initially developed by Sandia National Laboratory in conjunction with the Federal Aviation Administration (FAA).

This software models the sun's paths with respect to the orientation of the solar panels during every minute over a full year. Any glare caused by the arrays is analyzed by receptor and array block for the entire year. ForgeSolar assigns a color value of "green", "yellow", or "red" to the glare intensity based on the potential to cause afterimage or permanent damage. The potential glare is measured by the intensity at the observer's retina and the size of glare in the observer's field of vision.

| Green Glare | Yellow Glare | Red Glare |
|---|---|---|
| Low potential of causing afterimage. | Potential of causing afterimage. | Potential of causing retinal burns only exists for concentrated solar-thermal projects. |

From 1898 & Co.'s experience on similar large solar energy systems, an appropriate threshold for glare is visible or marginally visible "yellow" glare that does not occur within an hour of sunrise or sunset and from a similar direction as the sun. Since the intensity of the sun is significantly larger than the intensity of the glare from the Project, the impact of glare on the observer is negligible compared to the sun when the glare occurs within an hour of sunrise or sunset and from a similar direction as the sun. This threshold is due to the conservative nature of ForgeSolar modeling assumptions, the low potential of afterimage from "green" glare for a typical observer, and the allowable thresholds used by the FAA.

The following sections summarize the inputs utilized in the ForgeSolar model for this Study.

## 2.2 Solar Arrays

The Project was modeled as 34 separate arrays within the ForgeSolar model. For each array, the model assessed glare for the entire area encompassed by the polygon, including all the gaps between rows, inverters, and access roads. The parameters for the arrays and photovoltaic ("PV") panels are summarized in Table 2-1.

Table 2-1: Parameters for PV Arrays and Modules

| Array Type | Maximum Tracking Angle (degrees) | Array Azimuth (degrees) | Module Surface Material | Average Height Above Ground (ft) | Ground Coverage Ratio (%) |
|---|---|---|---|---|---|
| Single-axis tracking | +/- 52 | 180 | Smooth glass with anti-reflective coating (revised) | 5.5 | 37.2 |

Glare intensity is partially dependent on the distance between a receptor and the array where glare is occurring and partially dependent on the size of the glare. The Owner-provided layout of the arrays are graphically represented in Appendix A.

## 2.3 Receptors

The following receptors in Gustin Township were modeled within Forge Solar:

- 132 residences and buildings were modeled six feet above the ground as "observation points".
- 18 roads were modeled four feet and eight feet above the ground as "path receptors" in ForgeSolar. The glare on a path receptor is limited to a 50-degree view angle in the direction of travel in accordance with FAA research on glare impacts for pilots.

The location of the receptors and roadways were determined using aerial imagery. The location of each receptor is presented graphically in Appendix A, and the coordinates of the residences and buildings are presented in Appendix B.

## 2.4 Terrain and Existing Vegetation

The ForgeSolar model utilizes topography data to place the arrays and receptors at the proper elevation. The model does not consider any natural features between the arrays and a receptor that may block the glare from being seen at a receptor.

Publicly-available terrain data was downloaded from the National Elevation Dataset, a product of the United States Geological Survey. The 10-meter resolution digital elevation model was exported as 5-meter intervals for use in the ForgeSolar model. Elevations were assigned by 1898 & Co. to each vertex of the arrays and each receptor using this data.

After the ForgeSolar model is run, the line of sight of any instances of "yellow" glare were further evaluated using aerial imagery to determine if the glare would be visible, marginally visible, or not visible to the observer. The line-of-sight designation for each instance of "yellow" glare is presented in Appendix B.

## 2.5 Obstacles

Obstacles located between a receptor and a solar array, such as trees or buildings, may significantly reduce or eliminate the duration and/or intensity of the glare.

Within the Project area, there are several existing and substantial forested areas with having a width greater than 100 feet. Ten forested areas were identified using aerial imagery and were modeled as twenty-foot obstacles in the ForgeSolar model. Other obstacles and trees were considered as part of the line-of-sight analysis for the receptors that received "yellow" glare.

## 2.6 Resting Angle

The sun's path with respect to each solar array is calculated by the ForgeSolar model to determine the glare during every minute over a full year. Since the model assumes a flat horizon with no elevation change or obstacles, at low sun angles the model generates erroneous results if the resting angle is set to zero degrees. Thus, a resting angle of five (5) degrees is utilized for the maximum angle the trackers will rotate backward to during back-tracking. For the analysis, the resting angle does not reach the night-time stow position (zero-degree angle) until the sun is on or below the horizon.

## 2.7 Environment

Glare only occurs when the sun is shining. The model assumes the sun is always shining, with no consideration given for cloud cover, rainy days, fog, or other similar occurrences that may diminish the potential occurrence or severity of glare. This approach provides a conservative estimate of the amount of time when glare could occur.

# 3.0 Results

Using the inputs and parameters defined in Section 2.0, the ForgeSolar model calculated the potential for glare for the identified receptors in Gustin Township. Table 3-1 summarizes the results. The tables included in Appendix B detail potential glare duration and intensity by receptor, including estimated daily minutes. The maps included in Appendix A identify the receptors impacted by potential glare.

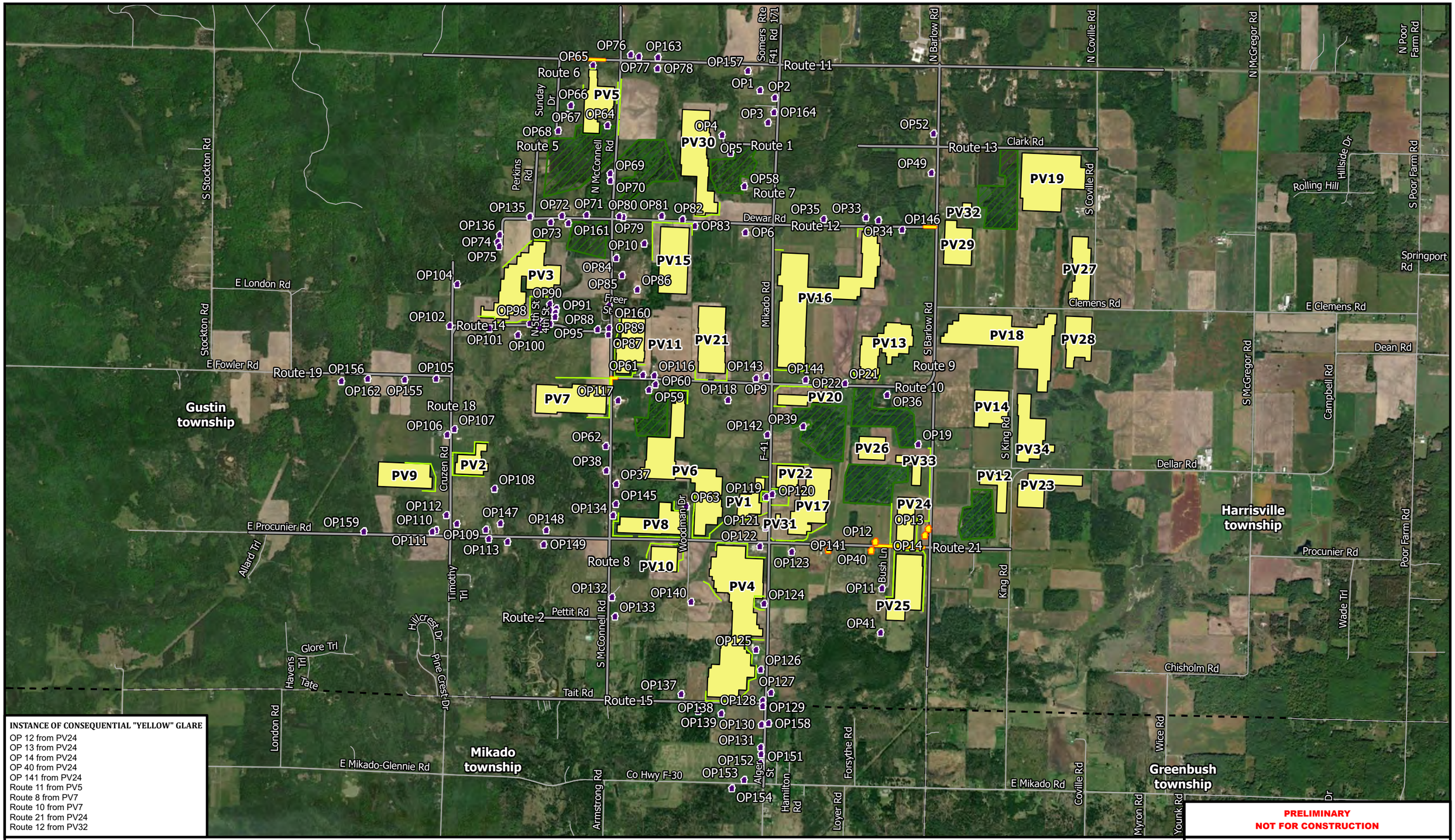
Table 3-1: Summary of Results

| Type of Receptor | No. of Receptors | No. of Instances of "Yellow Glare" | |
|---|---|---|---|
| | | Inconsequential | Consequential |
| Residences | 132 | 3 | 5 |
| Roads | 18 | 6 | 5 |

The following summarizes key observations from the results of the Study:

- Fourteen of the 150 identified receptors are estimated to receive 19 instances of potential "yellow" glare. (A single receptor can have multiple instances of glare from different arrays.) Instances of "yellow" glare are considered inconsequential if the glare is not visible at the receptor or the glare occurs from the same direction as the sun during sunrise or sunset.
  - Of the 19 instances of potential "yellow" glare, three instances of glare are not visible at the receptor and is not considered consequential.
  - Of the 16 instances of potential "yellow" glare visible or marginally visible at the receptor, six instances of glare occur within an hour of sunrise or sunset and from a similar direction as the sun for the observer. Since the sun is significantly more intense than estimated glare from the Project, the impacts of the glare during these times are negligible compared to the impact of the sun.
  - For the remaining ten instances of potential "yellow" glare visible at five residences and along five roads, planned visual screening may reduce or eliminate the impact of the glare. Alternatively, operational controls can be used to adjust the angle of the PV panels that are the source of the glare and thereby eliminating it.
- The Study was performed using a conservative modeling approach with Project Site-specific conditions. Further, the Project Site was modeled with sunny conditions, complete coverage of PV panels in the modeled arrays, a flat horizon, and a terrain between the Project Site and the receptors. Due to the conservative approach of the Study, the actual duration and intensity of glare experienced at each receptor is expected to be less than those reported in the Study.

# APPENDIX A - GLARE INTENSITY MAP




**INSTANCE OF CONSEQUENTIAL "YELLOW" GLARE**

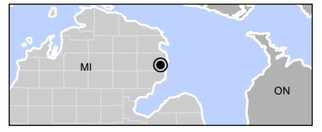
OP 12 from PV24
OP 13 from PV24
OP 14 from PV24
OP 40 from PV24
OP 141 from PV24
Route 11 from PV5
Route 8 from PV7
Route 10 from PV7
Route 21 from PV24
Route 12 from PV32

**LEGEND**

Township
PV
Obstacle
Observation Point
Glare
No Glare
Route
Glare
No Glare
Planned Vegetation Screening

**REFERENCE**

0 0.4 0.8
MILES
0 0.4 0.8
KILOMETERS
N




**PRELIMINARY**
**NOT FOR CONSTRUCTION**

**Gustin Solar Energy Center**
**Solar Glare Study**

| | |
|---|---|
| **LOCATION:** | Gustin Township, Alcona County, Michigan |
| **CLIENT:** | Consumers Energy |
| **PROJ. NO.:** | 192088 |
| **CREATED:** | 05/13/2026 |

BURNS McDONNELL
www.burnsmcd.com

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# APPENDIX B - GLARE RESULTS BY RECEPTOR

Table B-1: Glare Results by Receptor - Residences

| Receptor Name | Latitude | Longitude | Daily Yellow Glare Duration (minutes) | Time of Day (EST) | Time of Year | Visibility | Sunrise/Sunset[1] | Consequential |
|---|---|---|---|---|---|---|---|---|
| OP-01 | 44.653 | -83.426 | 0 | - | - | - | - | - |
| OP-02 | 44.653 | -83.424 | 0 | - | - | - | - | - |
| OP-03 | 44.651 | -83.424 | 0 | - | - | - | - | - |
| OP-04 | 44.649 | -83.430 | 0 | - | - | - | - | - |
| OP-05 | 44.648 | -83.429 | 0 | - | - | - | - | - |
| OP-06 | 44.641 | -83.427 | 0 | - | - | - | - | - |
| OP-09 | 44.627 | -83.425 | 0 | - | - | - | - | - |
| OP-10 | 44.639 | -83.440 | 0 | - | - | - | - | - |
| OP-11 | 44.609 | -83.408 | 0 | - | - | - | - | - |
| OP-12 | 44.613 | -83.409 | PV24: 20 minutes | 5:30AM - 6:30AM | April - August | Visible | No | Yes |
| OP-13 | 44.614 | -83.403 | PV24: 20 minutes | 6:45M - 7:45PM | April - August | Visible | No | Yes |
| OP-14 | 44.614 | -83.403 | PV24: 25 minutes | 6:45M - 7:45PM | April - September | Visible | No | Yes |
| OP-19 | 44.622 | -83.404 | 0 | - | - | - | - | - |
| OP-21 | 44.627 | -83.414 | 0 | - | - | - | - | - |
| OP-22 | 44.627 | -83.416 | 0 | - | - | - | - | - |
| OP-33 | 44.642 | -83.412 | 0 | - | - | - | - | - |
| OP-34 | 44.642 | -83.410 | 0 | - | - | - | - | - |
| OP-35 | 44.642 | -83.417 | 0 | - | - | - | - | - |
| OP-36 | 44.626 | -83.408 | 0 | - | - | - | - | - |
| OP-37 | 44.618 | -83.442 | 0 | - | - | - | - | - |
| OP-38 | 44.619 | -83.444 | 0 | - | - | - | - | - |
| OP-39 | 44.623 | -83.419 | 0 | - | - | - | - | - |
| OP-40 | 44.612 | -83.410 | PV24: 20 minutes | 5:30AM - 6:30AM | April - August | Visible | No | Yes |

[1] Sunrise/Sunset column summarizes if the glare occurs within an hour of sunrise or sunset and from a similar direction as the sun. Since the intensity of the sun is significantly larger than the intensity of the glare from the Project, the impact of glare on the observer is negligible compared to the sun during the instance of glare.

| Receptor Name | Latitude | Longitude | Daily Yellow Glare Duration (minutes) | Time of Day (EST) | Time of Year | Visibility | Sunrise/Sunset[1] | Consequential |
|---|---|---|---|---|---|---|---|---|
| OP-41 | 44.605 | -83.408 | 0 | - | - | - | - | - |
| OP-49 | 44.647 | -83.404 | 0 | - | - | - | - | - |
| OP-52 | 44.650 | -83.403 | 0 | - | - | - | - | - |
| OP-58 | 44.645 | -83.427 | 0 | - | - | - | - | - |
| OP-59 | 44.626 | -83.438 | 0 | - | - | - | - | - |
| OP-60 | 44.627 | -83.438 | 0 | - | - | - | - | - |
| OP-61 | 44.627 | -83.439 | PV7: 15 minutes | 4:00PM - 5:30PM | January, November - December | Marginally Visible | Yes | No |
| OP-62 | 44.621 | -83.444 | 0 | - | - | - | - | - |
| OP-63 | 44.616 | -83.433 | 0 | - | - | - | - | - |
| OP-64 | 44.650 | -83.445 | 0 | - | - | - | - | - |
| OP-65 | 44.655 | -83.447 | 0 | - | - | - | - | - |
| OP-66 | 44.652 | -83.449 | PV5: 10 minutes | 8:00AM - 9:00AM | January, December | Not Visible | Yes | No |
| OP-67 | 44.651 | -83.450 | 0 | - | - | - | - | - |
| OP-68 | 44.649 | -83.451 | 0 | - | - | - | - | - |
| OP-69 | 44.646 | -83.444 | 0 | - | - | - | - | - |
| OP-70 | 44.645 | -83.444 | 0 | - | - | - | - | - |
| OP-71 | 44.642 | -83.447 | 0 | - | - | - | - | - |
| OP-72 | 44.642 | -83.450 | 0 | - | - | - | - | - |
| OP-73 | 44.641 | -83.451 | 0 | - | - | - | - | - |
| OP-74 | 44.639 | -83.458 | 0 | - | - | - | - | - |
| OP-75 | 44.639 | -83.458 | 0 | - | - | - | - | - |
| OP-76 | 44.656 | -83.442 | 0 | - | - | - | - | - |
| OP-77 | 44.656 | -83.441 | 0 | - | - | - | - | - |
| OP-78 | 44.655 | -83.439 | 0 | - | - | - | - | - |
| OP-79 | 44.642 | -83.442 | 0 | - | - | - | - | - |
| OP-80 | 44.642 | -83.443 | 0 | - | - | - | - | - |
| OP-81 | 44.642 | -83.438 | 0 | - | - | - | - | - |

| Receptor Name | Latitude | Longitude | Daily Yellow Glare Duration (minutes) | Time of Day (EST) | Time of Year | Visibility | Sunrise/Sunset[1] | Consequential |
|---|---|---|---|---|---|---|---|---|
| OP-82 | 44.642 | -83.435 | 0 | - | - | - | - | - |
| OP-83 | 44.641 | -83.433 | 0 | - | - | - | - | - |
| OP-84 | 44.638 | -83.443 | 0 | - | - | - | - | - |
| OP-85 | 44.636 | -83.442 | 0 | - | - | - | - | - |
| OP-86 | 44.635 | -83.440 | 0 | - | - | - | - | - |
| OP-87 | 44.631 | -83.444 | 0 | - | - | - | - | - |
| OP-88 | 44.631 | -83.445 | 0 | - | - | - | - | - |
| OP-89 | 44.632 | -83.444 | 0 | - | - | - | - | - |
| OP-90 | 44.634 | -83.451 | 0 | - | - | - | - | - |
| OP-91 | 44.633 | -83.450 | 0 | - | - | - | - | - |
| OP-92 | 44.633 | -83.451 | 0 | - | - | - | - | - |
| OP-93 | 44.633 | -83.451 | 0 | - | - | - | - | - |
| OP-94 | 44.632 | -83.451 | 0 | - | - | - | - | - |
| OP-95 | 44.632 | -83.451 | 0 | - | - | - | - | - |
| OP-96 | 44.632 | -83.453 | 0 | - | - | - | - | - |
| OP-97 | 44.632 | -83.452 | 0 | - | - | - | - | - |
| OP-98 | 44.632 | -83.453 | 0 | - | - | - | - | - |
| OP-99 | 44.632 | -83.454 | 0 | - | - | - | - | - |
| OP-100 | 44.631 | -83.455 | 0 | - | - | - | - | - |
| OP-101 | 44.631 | -83.459 | 0 | - | - | - | - | - |
| OP-102 | 44.631 | -83.464 | 0 | - | - | - | - | - |
| OP-103 | 44.631 | -83.452 | 0 | - | - | - | - | - |
| OP-104 | 44.635 | -83.463 | 0 | - | - | - | - | - |
| OP-105 | 44.627 | -83.465 | 0 | - | - | - | - | - |
| OP-106 | 44.622 | -83.464 | 0 | - | - | - | - | - |
| OP-107 | 44.622 | -83.463 | 0 | - | - | - | - | - |
| OP-108 | 44.617 | -83.458 | 0 | - | - | - | - | - |

| Receptor Name | Latitude | Longitude | Daily Yellow Glare Duration (minutes) | Time of Day (EST) | Time of Year | Visibility | Sunrise/Sunset[1] | Consequential |
|---|---|---|---|---|---|---|---|---|
| OP-109 | 44.614 | -83.462 | 0 | - | - | - | - | - |
| OP-110 | 44.613 | -83.465 | 0 | - | - | - | - | - |
| OP-111 | 44.613 | -83.465 | 0 | - | - | - | - | - |
| OP-112 | 44.614 | -83.464 | 0 | - | - | - | - | - |
| OP-113 | 44.612 | -83.458 | 0 | - | - | - | - | - |
| OP-114 | 44.613 | -83.459 | 0 | - | - | - | - | - |
| OP-115 | 44.612 | -83.456 | 0 | - | - | - | - | - |
| OP-116 | 44.627 | -83.438 | 0 | - | - | - | - | - |
| OP-117 | 44.625 | -83.442 | PV7: 35 minutes | 3:45PM - 6:00PM | January - February, October - December | Visible | Yes | No |
| OP-118 | 44.625 | -83.428 | 0 | - | - | - | - | - |
| OP-119 | 44.617 | -83.423 | 0 | - | - | - | - | - |
| OP-120 | 44.617 | -83.422 | 0 | - | - | - | - | - |
| OP-121 | 44.614 | -83.423 | 0 | - | - | - | - | - |
| OP-122 | 44.612 | -83.424 | 0 | - | - | - | - | - |
| OP-123 | 44.612 | -83.420 | 0 | - | - | - | - | - |
| OP-124 | 44.607 | -83.423 | 0 | - | - | - | - | - |
| OP-125 | 44.603 | -83.424 | 0 | - | - | - | - | - |
| OP-126 | 44.601 | -83.423 | 0 | - | - | - | - | - |
| OP-127 | 44.599 | -83.422 | 0 | - | - | - | - | - |
| OP-128 | 44.598 | -83.423 | 0 | - | - | - | - | - |
| OP-129 | 44.598 | -83.423 | 0 | - | - | - | - | - |
| OP-130 | 44.596 | -83.423 | 0 | - | - | - | - | - |
| OP-131 | 44.594 | -83.423 | 0 | - | - | - | - | - |
| OP-132 | 44.607 | -83.442 | 0 | - | - | - | - | - |
| OP-133 | 44.606 | -83.442 | 0 | - | - | - | - | - |
| OP-134 | 44.615 | -83.443 | 0 | - | - | - | - | - |
| OP-135 | 44.641 | -83.454 | 0 | - | - | - | - | - |

| Receptor Name | Latitude | Longitude | Daily Yellow Glare Duration (minutes) | Time of Day (EST) | Time of Year | Visibility | Sunrise/Sunset[1] | Consequential |
|---|---|---|---|---|---|---|---|---|
| OP-136 | 44.640 | -83.458 | 0 | - | - | - | - | - |
| OP-137 | 44.599 | -83.433 | 0 | - | - | - | - | - |
| OP-138 | 44.597 | -83.431 | 0 | - | - | - | - | - |
| OP-139 | 44.597 | -83.428 | 0 | - | - | - | - | - |
| OP-140 | 44.607 | -83.432 | 0 | - | - | - | - | - |
| OP-141 | 44.612 | -83.415 | PV24: 5 minutes | 5:30AM - 6:15AM | May - July | Visible | No | Yes |
| OP-142 | 44.622 | -83.423 | 0 | - | - | - | - | - |
| OP-143 | 44.628 | -83.424 | 0 | - | - | - | - | - |
| OP-144 | 44.627 | -83.419 | 0 | - | - | - | - | - |
| OP-145 | 44.616 | -83.442 | 0 | - | - | - | - | - |
| OP-146 | 44.641 | -83.407 | 0 | - | - | - | - | - |
| OP-147 | 44.614 | -83.457 | 0 | - | - | - | - | - |
| OP-148 | 44.613 | -83.451 | 0 | - | - | - | - | - |
| OP-149 | 44.612 | -83.451 | 0 | - | - | - | - | - |
| OP-151 | 44.594 | -83.423 | 0 | - | - | - | - | - |
| OP-152 | 44.593 | -83.423 | 0 | - | - | - | - | - |
| OP-153 | 44.591 | -83.425 | 0 | - | - | - | - | - |
| OP-154 | 44.590 | -83.426 | 0 | - | - | - | - | - |
| OP-155 | 44.626 | -83.469 | 0 | - | - | - | - | - |
| OP-156 | 44.626 | -83.474 | 0 | - | - | - | - | - |
| OP-157 | 44.655 | -83.427 | 0 | - | - | - | - | - |
| OP-158 | 44.596 | -83.422 | 0 | - | - | - | - | - |
| OP-159 | 44.613 | -83.474 | 0 | - | - | - | - | - |
| OP-160 | 44.634 | -83.444 | 0 | - | - | - | - | - |
| OP-161 | 44.641 | -83.449 | 0 | - | - | - | - | - |
| OP-162 | 44.626 | -83.477 | 0 | - | - | - | - | - |
| OP-163 | 44.656 | -83.439 | 0 | - | - | - | - | - |

| Receptor Name | Latitude | Longitude | Daily Yellow Glare Duration (minutes) | Time of Day (EST) | Time of Year | Visibility | Sunrise/Sunset[1] | Consequential |
|---|---|---|---|---|---|---|---|---|
| OP-164 | 44.652 | -83.424 | 0 | - | - | - | - | - |

Table B-2: Glare Results by Receptor - Roads

| Receptor Name | Associated Road | Daily Yellow Glare Duration (minutes) | Time of Day (EST) | Time of Year | Visibility | Sunrise/Sunset[2] | Consequential |
|---|---|---|---|---|---|---|---|
| Route 1 | Clark Road | 0 | - | - | - | - | - |
| Route 2 | Pettit Road | 0 | - | - | - | - | - |
| Route 3 | E Mill Street | 0 | - | - | - | - | - |
| Route 4 | 4th Street | 0 | - | - | - | - | - |
| Route 5 | Perkins Road | 0 | - | - | - | - | - |
| Route 6 | Sunday Drive | PV5: 5 minutes | 8:30AM - 9:00AM | January, December | Not Visible | Yes | No |
| Route 7 | Mikado Road | 0 | - | - | - | - | - |
| Route 8 | S McConnell Road | PV5: <5 minutes | 4:15PM - 5:45PM | December | Marginally Visible | Yes | No |
| | | PV7: 40 minutes | 3:45PM - 5:00PM | January, November - December | Visible | No | Yes |
| Route 9 | S Barlow Road | 0 | - | - | - | - | - |
| Route 10 | E Fowler Road | PV7: 40 minutes | 3:30PM - 6:00PM | January - February, October - December | Visible | No | Yes |
| | | PV11: 40 minutes | 4:45AM - 5:15AM, 7:30PM - 8:30PM | April - August | Visible | Yes | No |
| | | PV21: 5 minutes | 5:00AM - 5:30AM | June - July | Visible | Yes | No |
| Route 11 | Highway 72 | PV5: 30 minutes | 7:30AM - 9:30AM, 3:45PM - 6:00PM | January - February, October - December | Marginally Visible | No | Yes |
| Route 12 | Dewar Road | PV29: 20 minutes | 5:15PM - 6:30PM | April - August | Marginally Visible | Yes | No |
| | | PV32: 15 minutes | 5:30AM - 6:30AM | May - August | Marginally Visible | No | Yes |
| Route 13 | Clark Road | 0 | - | - | - | - | - |

[2] Sunrise/Sunset column summarizes if the glare occurs within an hour of sunrise or sunset and from a similar direction as the sun. Since the intensity of the sun is significantly larger than the intensity of the glare from the Project, the impact of glare on the observer is negligible compared to the sun during the instance of glare.

| Receptor Name | Associated Road | Daily Yellow Glare Duration (minutes) | Time of Day (EST) | Time of Year | Visibility | Sunrise/Sunset[2] | Consequential |
|---|---|---|---|---|---|---|---|
| Route 14 | Mill Road | 0 | - | - | - | - | - |
| Route 15 | Tait Road | 0 | - | - | - | - | - |
| Route 18 | Cruzen Road | PV7: <5 minutes | 8:30AM – 8:45AM | December | Not Visible | Yes | No |
| Route 19 | E Fowler Road | 0 | - | - | - | - | - |
| Route 21 | E Procunier Road | PV24: 25 minutes | 5:30AM – 6:45AM, 6:30PM – 7:45PM | April – August | Visible | No | Yes |

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# Gustin Solar

Gustin Township

## Exhibit D

Solar PV Station O&M Manual

May 15, 2026

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| Document Information | |
|---|---|
| Doc ID | Solar PV Station O&M Management Plan |
| Collection | Solar |
| Collection Short Code | Template |
| Chapter | [Chapter] |
| Sub-Chapter | [Subchapter] |
| Document Number | New Policy |
| Document Title | Solar PV Station O&M Management Plan Draft |
| Document Type | Policy |
| Use Type | Required |
| Keywords | |
| Revision Date | 8/21/2025 |

## Revision Summary

8/21/2025 Updated complaint reporting and resolution plan.

## Purpose

This document summarizes Consumers Energy's utility scale solar PV station operating and maintenance policy and standards. It is not intended to be used as procedures or work instructions.

## Scope

The scope of this operations and maintenance management plan will include Environmental, Health, Safety & Security, Technical Asset Management, Operation and Maintenance of utility scale solar PV stations. Some topics such as Emergency Response, Vegetation Management and Decomissioning are included specific documents so named. Also of note, the intended scope of this document is post-commercial operations date (COD).

**Consumers Energy operates and maintains all utility scale PV generating stations of which it owns.** The operation and maintenance of these assets will be conducted by union Solar/Battery Technicians who are trained in an 18 month earn-while-you-learn Department of Labor (DOL)-certified program that provides individuals with specialized skills that are essential to ensure high availability and capacity factor of the assets they support. UWUA Power for America Training Trust Fund (P4A) and the Utility Workers Union of America (UWUA), AFL-CIO administers the Michigan based program.

## Vision & Policy

**Vision:** Consumers Energy Generation Operations is recognized as a world leading clean energy supplier. Our innovative and empowered team achieves industry defining outcomes that power Michigan safely, reliably, and affordably.

**Policy:** Safety is foremost at Consumers Energy, starting with public safety as detailed in the PV Emergency Response Plan. On going operations and maintenance of the site will be conducted safely by Consumers Energy and its agents with all such activities being conducted with the utmost care of the environment. Physical and cyber security shall also be paramount in ensuring public safety as well as the safe and reliable operation of each asset and components there-of.

## Technology

**The key components of a utility scale solar site are:**

**Solar Modules**: Solar cells contain a material that conducts electricity only when energy is provided—by sunlight, in this case. This material is called a semiconductor; the "semi" means its electrical conductivity is less than that of a metal but more than an insulator's. When the semiconductor is exposed to sunlight, it absorbs the light, transferring the energy to negatively charged particles called electrons. The electrons flow through the semiconductor as electrical current, because other layers of the PV cell are designed to extract the current from the semiconductor. Then the current flows through metal contacts—the grid-like lines on a solar cell. To boost energy yield bifacial solar modules, which are double-sided to capture light on both sides of a silicon solar module—they capture light reflected off the ground or roof where the panels are installed. (Source: energy.gov)

***Notably, solar modules do not contain, nor do they release liquids or gases.***

**Trackers:** These devices change their orientation throughout the day to follow the sun's path to maximize energy capture. Single-axis solar trackers rotate on one axis moving back and forth in a single direction. Motors and gear trains direct solar trackers by means of a controller that responds to the sun's direction and/or adjusts on a chronological basis to counteract the Earth's rotation by turning in the opposite direction.

***Notably, solar trackers are also used to stow or position solar modules into a safe store position in order to mitigate any potential equipment damage in the event of severe weather such as high wind, hail and/or heavy snow.***

**Wiring and Connectors:** Specialized, environmental resist conductors and connector are used to connect solar panels in series to form a string. This arrangement allows the electricity generated by each panel to flow through the entire string, resulting in a cumulative voltage output.

Strings are then connected in enclosed electrical combiner boxes to form an array. By connecting multiple strings of solar panels in parallel, meaning that the positive terminals of all the strings are connected, as are the negative terminals. This provides for an increased current output, thereby enhancing the overall power production of the solar panel system.

**Inverters:** The inverter converts the direct current (DC) to an alternating current (AC), which flows into the electric grid and, eventually, connects to the circuit that is your home's electrical system. As long as sunlight continues to reach the module and the circuit is connected, electricity will continue to be generated.

**Generation Step Up Transformer:** Generator step-up transformers (GSU) are the critical link between the utility scale solar station and the transmission network connecting AC networks of different voltage to each other. GSUs must be built to withstand severe electrical stress from fault currents and transients. generator. Its configuration and overall build are meant to withstand extreme thermal loading without succumbing to early wear and tear. A generator step-up transformer works by converting the generator's low voltage and high current output into a higher voltage and lower current. This is done by windings of wire around a common iron core.

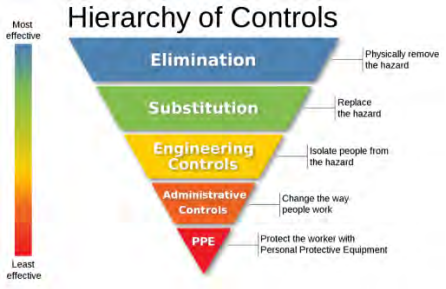
***Notably, GSUs are typically filled with an insulating fluid that is also circulated through cooling tubes/fins to dissipate heat. Mineral and synthetic oils are most often used. Spill containment is required for environmental protection/best practices and the fluid is periodically sampled to ensure its purity and efficacy. Polychlorinated Biphenyl (PCBs) oils are no longer used in the United States as of the 1979 Toxic Substance Controls Act.***

**Substation:** In additional to the GSU, substations may contain equipment that helps keep our electricity transmission and distribution systems running as smoothly as possible, without repeated failure or downtime. This includes protection equipment, which detects and clears faults in the network. Generally PV generating stations and substations are unattended, relying on SCADA (supervisory control and data acquisition) for remote supervision and control. Sensors, computers, networked data communications and graphical user interfaces are typically housed in a climate-controlled building called the control house which is connected via specialized fiber optic lines and communications to a remote control room that is staffed 24/7.

**Each of the aforementioned key components will have been supplied by a Consumers Energy Approved Supplier based upon Consumers Energy technical specifications, as well as relevant codes, statues, etc.**

## Environmental, Health, Safety & Security (EHSS)

The generation, transmission and distribution of electricity included inherit hazards and risks that must be mitigated by robust hazard identification and controls including:




EHSS hazards and risks are first eliminated and/or mitigated through facility design. Written policies, standards and work-instructions further mitigate EHSS hazards and risks and are required for every potentially hazardous situation at every Consumers Energy site. Each is informed by all relevant governmental and industry standards, codes, etc. as a minimum. Personal protective equipment is required commensurate with each situation and task, thereby providing a further barrier of protection.

**EHSS communications and reporting each follow internal and external stakeholder standards and are to be conducted well within required timeframes. Security encompasses both physical security and cyber security as to ensure that wanderers and/or trespassers are kept safely outside of physical and/or cyber boundaries.**

## Technical Asset Management

Technical Asset Management (TAM) includes those activities that are used to inform, optimize, monitor and control energy production, minimize down time, reduce costs and accentuate the EHSS performance of the site. Such activities include remote monitoring and diagnostics of site equipment, sensors and instrumentation augmented by the use of unmanned aerial vehicles (drones) and third-party satellite imagery.

Change control, document and records management and warranty adherence/administration are also key elements of TAM. In particular, technical drawings and records must be up to date and readily accessible for both routine and emergency situations.

## Operations

At Consumers Energy, the Merchant Operations Center (MOC) is responsible for dispatching Consumers Energy owned and contracted units as to support the reliable operation of the Bulk Electric System (BES). The MOC provides continuous monitoring and supervision of the solar PV station and performance. Routine operation is performed remotely using communication and software systems in a control room environment that is staffed 24/7. Should a fault or anomaly occur, the MOC follows specific protocol to notify/engage other teams.

## Maintenance

**Preventative and Predictive Maintenance:** Is the core element of the maintenance activities at solar PV power stations. Periodic visual and physical inspections, as well as verification activities each performed at scheduled intervals are required. Original Equipment Manufacturer (OEM) manuals and specifications are used to inform the preventative and predictive maintenance plan.

**Corrective Maintenance:** Refers to activities performed to restore a solar PV station, equipment or component to a fully functioning state after a failure detection by remote monitoring or during an on-site inspection. Oftentimes corrective maintenance only affects a small portion of the solar PV station which can be isolated from the remainder of the site using lockout-tagout (LOTO) and electrical clearance/de-energization/grounding/etc. procedures. Replacing a couple low performing solar modules in a string would be such an example.

**Major Maintenance:** Pertains to the replacement or substantial refurbishment of a major piece of equipment. Replacing a complete inverter skid or doing a site-wide electrical shut-down to test/repair substation breakers and/or other components are two examples. Major maintenance typically involves the create of a specific outage plan and supporting procedures/work instructions.

**Spare Parts Management**: Must ensure that spare parts are available and in operating condition in a timely manner as to minimize the downtime of the solar PV station.

## Indicative Schedule of Maintenance

**Site**

| Item/Activity | Frequency | Comments |
|---|---|---|
| Monitor Cameras | Daily | Central security command center escalates any concerns to management, law enforcement and/or emergency responders. |
| Inspect Perimeter Fencing | Quarterly | Patrol perimeter to inspect fencing for damage. |
| Inspect Drain Tile Outlets | Quarterly | Patrol site to visually inspect drain tile outlets. |
| Storm Water Facilities | Quarterly or more frequently as specified in SWPPP. | Patrol site to visually inspect storm water facilities. See site specific Storm Water Pollution Prevention Plan (SWPPP) |
| Vegetation Management | Various | See stand-alone vegetation management plan specific to the site. |
| Respond to Community / Neighbor Concerns | Within two business days | Site manager or designee |

**Solar Modules**

| Item/Activity | Frequency | Comments |
|---|---|---|

| | | |
|---|---|---|
| ***Module Cleaning*** | Infrequent | Standard practice in the Midwest not to wash panels except in extreme soiling situations when rain is insufficient. |
| ***Module Snow Removal*** | Infrequent | Standard practice is to use tilt and natural heating of the panels to clear snow/ice. |
| ***Visual Inspection*** | Ad Hoc | Large solar PV stations may contain over ½ million individual panels. Visual inspection will be conducted as needed in response to specific concerns. |
| ***Unmanned Aerial Inspection / Satellite Imagery*** | Annual, Ad Hoc | LIDAR, Infrared and other advanced imagery techniques will be utilized to identify anomalies. |

**Trackers**

| Item/Activity | Frequency | Comments |
|---|---|---|
| ***Visual Inspection*** | Bi-Annually | 1. Inspect all fasteners on the outer rows of the site for any signs of loosening such as misaligned torque marks or loose nuts.<br>2. Inspect the Damper assemblies for misalignment or damage.<br>3. Inspect the Center Structures and Drivelines for to verify they are still correctly aligned.<br>4. Inspect the bolts on drive components to ensure torque markings are aligned; re-tighten if necessary on all outer rows.<br>5. Test stow functionality; trip any applicable sensor (if installed).<br>6. Inspect for corrosion on tracker components while performing. |
| ***Visual Inspection*** | Annually | 1. Inspect Driveline assemblies and Bearing Housings for misalignment. Column settling can affect the alignment of tracker components.<br>2. Inspect the Bearings for excessive wear from Column settling. Check for misaligned torque markings on the Columns. Repair, replace, or re-torque if necessary.<br>3. Inspect the conduits and penetrations in the Motor Controller enclosures and verify the seal remains intact. |

| | | |
|---|---|---|
| ***Visual Inspection*** | Every Two Years | 1. Inspect all hardware on one complete row per Motor Block. If loose hardware is found on the row, expand inspection to all rows in the Motor Block.<br>2. Inspect the module clamps on exterior rows for torque drop below the threshold using a torque wrench. |

**Disconnect, Transition Boxes, Wiring and Connectors**

| Item/Activity | Frequency | Comments |
|---|---|---|
| ***Unmanned Aerial Inspection / Satellite Imagery*** | Annual, Ad Hoc | LIDAR, Infrared and other advanced imagery techniques will be utilized to identify anomalies. |
| ***Switches, Disconnects, Breakers, Relays*** | Annual, Ad Hoc | Timing, methods and specifics TBD. |

**Inverters**

| Item/Activity | Frequency | Comments |
|---|---|---|
| ***Cooling System Inspection*** | Every 3 Months | Check for cooling liquid leakages. Check the correct input pressure of the expansion tank. Check and clean protective grilles. (Check for the absence of insects, fluff, dust, etc.) Check, clean and replace air filters. Check the fans operation. |
| | Every 5 Years | Change cooling liquid (water / glycol) and hoses. |
| ***Switches, Disconnects, Breakers, Relays*** | Annual, Ad Hoc | Timing, methods and specifics TBD. |

**Control House/Substation/Generation Step-Up Transformer/Switchyard**

| Item/Activity | Frequency | Comments |
|---|---|---|
| ***Inspection & Testing*** | Various | Refer to detailed component requirements and schedule in CE procedure 14-01 Substation Inspections, etc. |

## Operations and Maintenance Procedures and Work Instructions

**CESWS:** The Consumers Energy Standard Work System is an electronic library of sorts that houses site and/or equipment specific procedures and work instructions for those activities required for the ongoing operation and maintenance of the PV site.

**ProjectWise®:** Is an electronic library system of record for engineering drawings, OEM manuals, etc.

## Operations and Maintenance Records

**SCADA:** Supervisory Control and Data Acquisition refers to the onsite hardware and software used to measure and report real time operating data to other CE systems.

**PI:** Operating and performance data can be monitored at a glance and are recorded using a logging and timestamping tool called PI Historian.

**SAP®:** Maintenance and inspection programs are prepared, executed, and recorded using SAP® enterprise resource planning technology.

**Data Lake:** The aforementioned data from SAP® and PI Historian may be captured in a large database that can subsequently be referenced for monitoring and diagnostics as well as reporting.

## Training

Each person will be provided a comprehensive orientation before commencing any work at site. The material at a minimum will cover topics such as a general overview of the project, hazard analysis, emergency response, wildlife conservation training and vegetation management (as outlined in this document).

## Stakeholder Concern Intake, Tracking and Resolution

Prior to Commercial Operation, a specific, stand-alone Liberty Solar Farms Complaint Resolution Procedure including specific email and phone intake contact points will be provided.

## Vegetation Management

As part of detailed engineering and design, a specific, stand-alone vegetation management plan is prepared for each individual utility scale solar station and provided to interested parties. Specifications including ground cover species and maintenance there off, noxious/invasive weed control and fire prevention are detailed within the vegetation management plan.

## Emergency Response

As part of detailed engineering and design, a specific, stand-alone Emergency Response Plan (ERP) is prepared for each individual utility scale solar station and provided to interested parties. Prevention, training, and response preparedness are key elements of the ERP.

## Decommissioning

As part of detailed engineering and design, a specific, stand-alone decommissioning study/plan is prepared for each individual utility scale solar station and provided to interested parties. Typically, financial assurance is provided to governmental stakeholders in the form a surety bond in the amount of the estimated decommissioning costs determined in the study/plan.

## References

The following documents were utilized to help inform this policy. Consult these documents for further applicable information.

- **Operations and Maintenance Best Practices 5.0** – Available at www.solarpowereurope.org
- **Best Practices for Operation and Maintenance of Photovoltaic and Energy Storage Systems; 3rd Edition** – Available at www.NREL.gov/solar
- **Various OEM Operating Manuals, etc.**

# Gustin Solar

Gustin Township

## Exhibit E

Solar PV Station Emergency Response Plan

May 15, 2026

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| Document Information | |
|---|---|
| Doc ID | Solar PV Station Emergency Response Plan |
| Collection | Solar |
| Collection Short Code | Template |
| Chapter | [Chapter] |
| Sub-Chapter | [Subchapter] |
| Document Number | Preliminary Policy |
| Document Title | Solar PV Station Emergency Response Plan Draft |
| Document Type | Policy |
| Use Type | Required |
| Keywords | |
| Revision Date | 8/21/2025 |

## Purpose

This document summarizes Consumers Energy's utility scale solar PV station emergency response policy and standards. It is not intended to be used as specific procedures or work instructions.

## Scope

The scope of this emergency response plan will include Environmental, Health, Safety & Security of utility scale solar PV stations. The intended scope of this document is post-commercial operations date (COD).

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## Environmental, Health, Safety & Security (EHSS)

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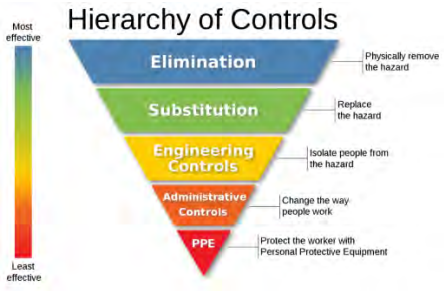



EHSS hazards and risks are first eliminated and/or mitigated through facility design. Written policies, standards and work-instructions further mitigate EHSS hazards and risks and are required for every potentially hazardous situation at every Consumers Energy site. Each is informed by all relevant governmental and industry standards, codes, etc. as a minimum. Personal protective equipment is required commensurate with each situation and task, thereby providing a further barrier of protection.

**EHSS communications and reporting each follow internal and external stakeholder standards and are to be conducted well within required timeframes. Security encompasses both physical security and cyber security as to ensure that wanderers and/or trespassers are kept safely outside of physical and/or cyber boundaries.**

## Public Safety

Access to the Solar PV site is limited to trained staff and maintenance personnel only. Solar panel arrays and the Substation are surrounded by fence per requirements of the National Electric Safety Code (NESC). Additionally, fencing around the Substation includes an additional foot of barbed wire along the top of the fence. Access to the Solar PV site occurs through gates in the fence that are secured with a padlock, and only Operator personnel have access.

## Emergency Responder Training and Orientation

Appropriate training of first responders is key to their understanding of the hazards that are present within the Solar PV site area and to mitigate potential risks to their life during a response. As such, first responders that could be dispatched to the site in the event of an emergency will be trained prior to commencement of operation and on a periodic basis thereafter. The Supervisor will work with Fire and other local Departments, as well as county and state safety officials, as appropriate, to provide biennial site-specific orientation to emergency response leadership and their assigned staff.

## Emergency Response Overview

Table 1, shown below, provides an overview of Company's Emergency Management documentation and the relationship to this document.

| | | |
|---|---|---|
| **Emergency Management Program Documents** | Emergency Management Policy | A corporate policy providing the authority to maintain Company-wide emergency *response* plans and emergency management core capabilities. |
| | Emergency Management *Strategy* | A plan outlining the Company's adopted standards, capability goals, and strategic direction for emergency management activities, including the development and integration of all plans, policies, and procedures necessary to build, sustain, and improve the Company's capability to prepare for, respond to, and recover from threats resulting from *All-Hazards*. |
| | | |
| **Company-Wide Response Plans** | Crisis Management Plan (Officer in Charge/Crisis Management Team) | A plan that outlines the responsibilities of an "Officer in Charge" and Crisis Management Team during formal ICS activations. |
| | All-Hazards Emergency Operations Plan (EOP) | A plan providing standardized terminology, response process, and response organizations to prepare for and respond to any *incident* involving Consumers Energy's facilities or the communities served. The EOP also establishes guidelines to determine the appropriate level of response and clarifies the information sharing process to define |

| | | |
|---|---|---|
| | | incident status, incident objectives, and resource requirements. |
| | Crisis Communications Plan | A plan providing a scalable, company-wide process for assuring an appropriate communications response is enacted during any incident that invokes a media response, activates the EOP, threatens the Company's reputation, or requires immediate communication to internal or external stakeholders. The CCP provides a response organization, key responsibilities, and a process for providing consistent communications. |
| | Master Business Continuity Plan | A plan for mitigating the impact to the Company during a continuity event that impacts Company operations. The Master *Business Continuity* Plan ensures viable strategies have been established to continue or quickly recover critical business processes. This plan utilizes the Company's response process and response organization outlined in the All-Hazards *Emergency Operations Plan (EOP).* |

| | | |
|---|---|---|
| **Organization-Specific Plan** | Generation Operations Emergency Response Procedure | A procedure providing the steps to be taken during and after any incident involving one or more Consumers Energy Electric Generation facilities. Aligns with company-wide response plans. |
| ***Site-Specific Annexes*** | Example: Blackman Solar PV Station Emergency Response Procedure | Ensures that site personnel are prepared to respond to any incident in a safe, efficient, and effective manner that aligns with Consumers Energy's company-wide response plans and the Generation ERP. |
| | | |
| **Work Instructions** | Operational Procedures | Procedures are tactical—they are the step-by-step instructions for a carrying out the actions required for policy compliance. They typically describe and define how policies will be implemented and by whom. They also spell out who is responsible for review and approval of the procedure.<br><br>It is required that personnel follow procedure documents when completing the covered instructions.<br><br>They are not optional, and personnel should not rely on memory alone to complete the steps covered. |

| | | |
|---|---|---|
| | *Job Aids* | Job aids are more detailed step-by-step instructions that focus on a specific task in a procedure. They are, by definition, reference documents that support some part of a key business process. |

***Table 1: CE Emergency Management Planning Framework: Generation Operations Example***

## Technology

**The key components of a utility scale solar site are:**

**Solar Modules**: Solar cells contain a material that conducts electricity only when energy is provided—by sunlight, in this case. This material is called a semiconductor; the "semi" means its electrical conductivity is less than that of a metal but more than an insulator's. When the semiconductor is exposed to sunlight, it absorbs the light, transferring the energy to negatively charged particles called electrons. The electrons flow through the semiconductor as electrical current, because other layers of the PV cell are designed to extract the current from the semiconductor. Then the current flows through metal contacts—the grid-like lines on a solar cell. To boost energy yield bifacial solar modules, which are double-sided to capture light on both sides of a silicon solar module—they capture light reflected off the ground or roof where the panels are installed. (Source: energy.gov)

***Notably, solar modules do not contain, nor do they release liquids or gases.***

**Trackers:** These devices change their orientation throughout the day to follow the sun's path to maximize energy capture. Single-axis solar trackers rotate on one axis moving back and forth in a single direction. Motors and gear trains direct solar trackers by means of a controller that responds to the sun's direction and/or adjusts on a chronological basis to counteract the Earth's rotation by turning in the opposite direction.

***Notably, solar trackers are also used to stow or position solar modules into a safe store position in order to mitigate any potential equipment damage in the event of severe weather such as high wind, hail and/or heavy snow.***

**Wiring and Connectors:** Specialized, environmental resist conductors and connector are used to connect solar panels in series to form a string. This arrangement allows the electricity generated by each panel to flow through the entire string, resulting in a cumulative voltage output.

Strings are then connected in enclosed electrical combiner boxes to form an array. By connecting multiple strings of solar panels in parallel, meaning that the positive terminals of all the strings are connected, as are the negative terminals. This provides for an increased current output, thereby enhancing the overall power production of the solar panel system.

**Inverters:** The inverter converts the direct current (DC) to an alternating current (AC), which flows into the electric grid and, eventually, connects to the circuit that is your home's electrical system. As long as sunlight continues to reach the module and the circuit is connected, electricity will continue to be generated.

**Generation Step Up Transformer:** Generator step-up transformers (GSU) are the critical link between the utility scale solar station and the transmission network connecting AC networks of different voltage to each other. GSUs must be built to withstand severe electrical stress from fault currents and transients. generator. Its configuration and overall build are meant to withstand extreme thermal loading without succumbing to early wear and tear. A generator step-up transformer works by converting the generator's low voltage and high current output into a higher voltage and lower current. This is done by windings of wire around a common iron core.

***Notably, GSUs are typically filled with an insulating fluid that is also circulated through cooling tubes/fins to dissipate heat. Mineral and synthetic oils are most often used. Spill containment is required for environmental protection/best practices and the fluid is periodically sampled to ensure its purity and efficacy. Polychlorinated Biphenyl (PCBs) oils are no longer used in the United States as of the 1979 Toxic Substance Controls Act.***

**Substation:** In additional to the GSU, substations may contain equipment that helps keep our electricity transmission and distribution systems running as smoothly as possible, without repeated failure or downtime. This includes protection equipment, which detects and clears faults in the network. Generally PV generating stations and substations are unattended, relying on SCADA (supervisory control and data acquisition) for remote supervision and control. Sensors, computers, networked data communications and graphical user interfaces are typically housed in a climate-controlled building called the control house which is connected via specialized fiber optic lines and communications to a remotely located control room that is staffed 24/7.

**Each of the aforementioned key components will have been supplied by a Consumers Energy Approved Supplier based upon Consumers Energy technical specifications, as well as relevant codes, statues, etc.**

## Abbreviations and Definitions

1. **AED** – **A**utomated **E**xternal **D**efibrillator
2. **CE** – **C**onsumers **E**nergy
3. **CESCC –** Consumers Energy Security Command Center
4. **EMS** – **E**mergency **M**edical **S**ervices
5. **Emergency Officials** – Responding agencies (EMS, FD, Police, etc.)
6. **ERP** – Emergency Response Plan
7. **Everbridge**- A scalable mass notification system that delivers emergency messaging to individuals and groups.
8. **FD** – Fire Department
9. **ICS** – Incident Command System
10. **MOC** – Merchant Operations Center
11. **PPE** – Personal Protective Equipment
12. **SDS** – Safety Data Sheet
13. **SLUP** – Special Land Use Permit
14. **SPCC** – Spill Prevention Control and Countermeasures plan
15. **Supervisor** – CE authorized representative that has management responsibility of the Solar PV Station site.

## General Guidelines for Reporting an Incident

1. **Public/Consumers Employee calls 911**
    a. 911 receives the call and gathers as much information as possible regarding the incident and the location.
    b. 911 will notify Consumers Energy's Security Command Center (CESCC) (800-760-3295) of the reported incident.

c. CESCC will initiate Everbridge notifications for the applicable affected site.

2. **Merchant Operations Center (MOC)** receives a fault via supervisory control and data acquisition (SCADA) indicating possible on-site incident:
   a. MOC will contact the on-call Renewable Specialist or Solar/Battery Tech to verify there is an actual indication of an incident through SCADA.
   b. If verified there is a probable indication of an incident, Renewable Specialist or Solar/Battery Tech will contact the MOC and the on-call Supervisor.
   c. MOC will call CESCC and report the incident and request 911 be called.
   d. CESCC will call 911 and initiate Everbridge notifications for the applicable affected site.

## Evacuation Plan

As needed site personnel will take appropriate steps, such as, establish minimum clearance area (line of sight), etc., to protect individuals and the surrounding environment until first responders arrive to implement containment measures and set the evacuation area(s).

## Injury Incident

**WARNING**

Assess the scene for safety issues before helping the injured person.

1. Depending on the type of injury, call **911** (if applicable) and **Security Command Center (800-760-3295)** to initiate the Everbridge notifications.
2. **Triage**
   **a.** Assess the scene for safety issues before helping the injured person to prevent additional injuries and to ensure no other personnel are put at risk in the process.
   **b.** Tend to the injured person per First Aid/CPR Training as soon as it is safe to do so. (i.e., assess the person's overall condition, stop the bleeding, need for eyewash, exposure to gas or chemicals, use AED if needed, etc.).

**NOTE**
For **non-emergent** medical attention, the site personnel shall contact the supervisor, and arrange for transport to nearest hospital or clinic. The supervisor may accompany the injured party to the hospital or clinic.

3. **Chemical Exposure**

   **a.** Review applicable Safety Data Sheet (SDS) documents for instructions on treatment, precautions, etc. Access the SDS Database here: https://chemmanagement.ehs.com/9/783660e3-72de-4d7d- 8ae2-17c77e80232b

   **b.** The Renewables Right to Know (RTK) Program Coordinator is listed in each of the site-specific plans. The RTK Program Coordinator is also a resource for emergencies involving exposure to gas/chemicals.

   - See also *535 Right to Know Program* for additional information.

4. **Electric Shock**

**WARNING**
Electric shock from live circuit/system may exist. Do not touch the injured person before all power to the applicable circuit/system has been shut off.

Assume batteries are charged and are potential shock hazards.

**NOTE**
Refer to the *Corporate Safety Manual*, **210-3 Electrical Safety/Electrical Emergency Response,** for more information.

**If there is suspicion that an injury has occurred from electric shock, the following general emergency procedure must be carried out by CE Personnel:**

a. Call 911 for emergency medical assistance immediately. Any electric shock, no matter the size, requires medical attention.

   - Call Security Command Center (800-760-3295) to initiate the Everbridge notifications.

- Switch off all power per applicable specific Operating Manual.
- Always assume batteries are charged.

b. Verify all power has been switched off.
   - Lock power in the Off position to prevent other personnel from accidentally switching on the power.
   - After the victim is removed from the power source, administer first aid/CPR as applicable.

Refer to the *Corporate Safety Manual*, **210-3 Electrical Safety/Electrical Emergency Response,** for more information.

5. **Arc Flash**

**Arc flash hazards exist at all Solar sites. In the event of an arc flash causing injury:**

a. Stop working and move away from electrical source.
b. Call 911.
c. Do not touch the injured person until power has been shut off. If power can't be shut off, use non-conductive materials to safely separate the injured person from the source.
d. If the injured person is on fire, smother the flames.
e. Perform CPR if needed.
f. Run cool water over the injured person's burns if possible.
g. Do not apply ice, cream, or ointment to the burns.
h. Avoid touching anything that has been exposed to the arc flash until it has cooled down.

## Fire Response

***In the event of a fire, the individual discovering the emergency shall:***

1. Assess the situation to determine potential safety concerns to life and the environment, with life safety as the priority.

2. Notify the appropriate local authorities by dialing 911 and direct them to the entry point identified on Figures 1 and 2.

3. Local authorities should contact the Operator to determine the appropriate response. Upon arrival to the Project, responders shall:
   **a.** Evacuate and secure the area and keep people a minimum of 300 feet away, provided there are no immediate threats to people or non-solar property.
   **b.** Let the facility burn. Burning electrical equipment is already damaged and must be replaced.
   **c.** Protect adjacent exposures, such as homes and forested areas, as needed, to limit the potential of the fire spreading.
   **d.** If fire must be suppressed within the array fence line, the Operator will direct local authorities on how to proceed.

***The following are the most important considerations when responding to a fire or other emergency at the Solar PV site:***

- Solar and substation components are always hot and should always be considered electrically energized. DC voltage is always present, even at night.
- Identify and validate the hazard in order to minimize injury.
- Electrical components produce gas during combustion. All responders should use a self-contained breathing apparatus (SCBA).
- Before committing apparatus to the access roads within any of the fenced panel array enclosures, understand that turn arounds will often be well over 1,000 feet away.
- Under the direction of the Operator, isolate or shutdown the electrical power at the site of the fire, if possible.
- Do not assume the system is de-energized and do not attempt to de-energize any equipment.
- Do not open any inverter doors until at least 48 hours have passed since the initiation of the event or conditions are verified safe and entry is approved by the Operator.
- Leave the scene in a safe condition after mitigating hazards.

## Hazardous Waste Spill/Release

**1. Spill**

a. If applicable, follow the site Spill Prevention Control and Countermeasures Plan (SPCC).
b. If applicable call **911** and **Security Command Center (800-760-3295)** to initiate the Everbridge notifications.
c. Always wear proper PPE when working with any chemical or hazardous spill.
d. Keep people and animals away from the spill site.
e. Consult with/engage Environmental Coordinator to determine if an Environment Risk Assessment is required.

2. **Spill Containment**

a. Take immediate preventive action that can be performed, without exposing yourself or others to danger, to control the situation and prevent environmental consequences/contamination.

b. If clay absorbent material is not readily available, use any available absorbent material or sand to
absorb the spill until clay absorbent material is delivered to the location.

## Acts of Terrorism, Sabotage, and Bomb Threats

***In the case of an act of terrorism, bomb threat, vandalism, or sabotage, make the following notifications:***

a. Call **911** and **Security Command Center (800-760-3295)** to initiate the Everbridge notifications and request the local/county emergency manager be contacted.

b. Upon arrival, first responders will assume control of response actions including determining if evacuation of the public is required.

c. Refer to Site Specific Annexes herein for evacuation guidance to support law enforcement.

## Contacts

The name(s) of those responsible for the site and their contact information shall be posted prominently at various locations around the perimeter of the site such that a lay person can readily find such information.

## References

The following documents were utilized to help inform this policy. Consult these documents for further applicable information.

**Industry**

- Operations and Maintenance Best Practices 5.0 – Available at www.solarpowereurope.org
- Best Practices for Operation and Maintenance of Photovoltaic and Energy Storage Systems; 3rd Edition – Available at www.NREL.gov/solar

**Internal**

- *G-A-125 Generation Operations Emergency Response Procedure*. April 2015. Jackson, MI.
- *CE All Hazards Emergency Operations Plan* CE Standard Work (sharepoint.com)

**State**

- *Michigan Emergency Management Act, Michigan State Police / Emergency Management and Homeland Security Division*, Publication 102, 2013

**Federal**

- Comprehensive Preparedness Guide (CPG) 101, Producing Emergency Plans, Federal Emergency Management Agency (FEMA) 2010
- National Incident Management System (NIMS), Department of Homeland Security (DHS), 2008
- Incident Command System, Component 4
- National Infrastructure Protection Plan (NIPP), DHS, 2004
- National Response Framework (NRF), DHS, 2007

## Annexes

### Gustin Solar PV Station

**Community Hospitals**

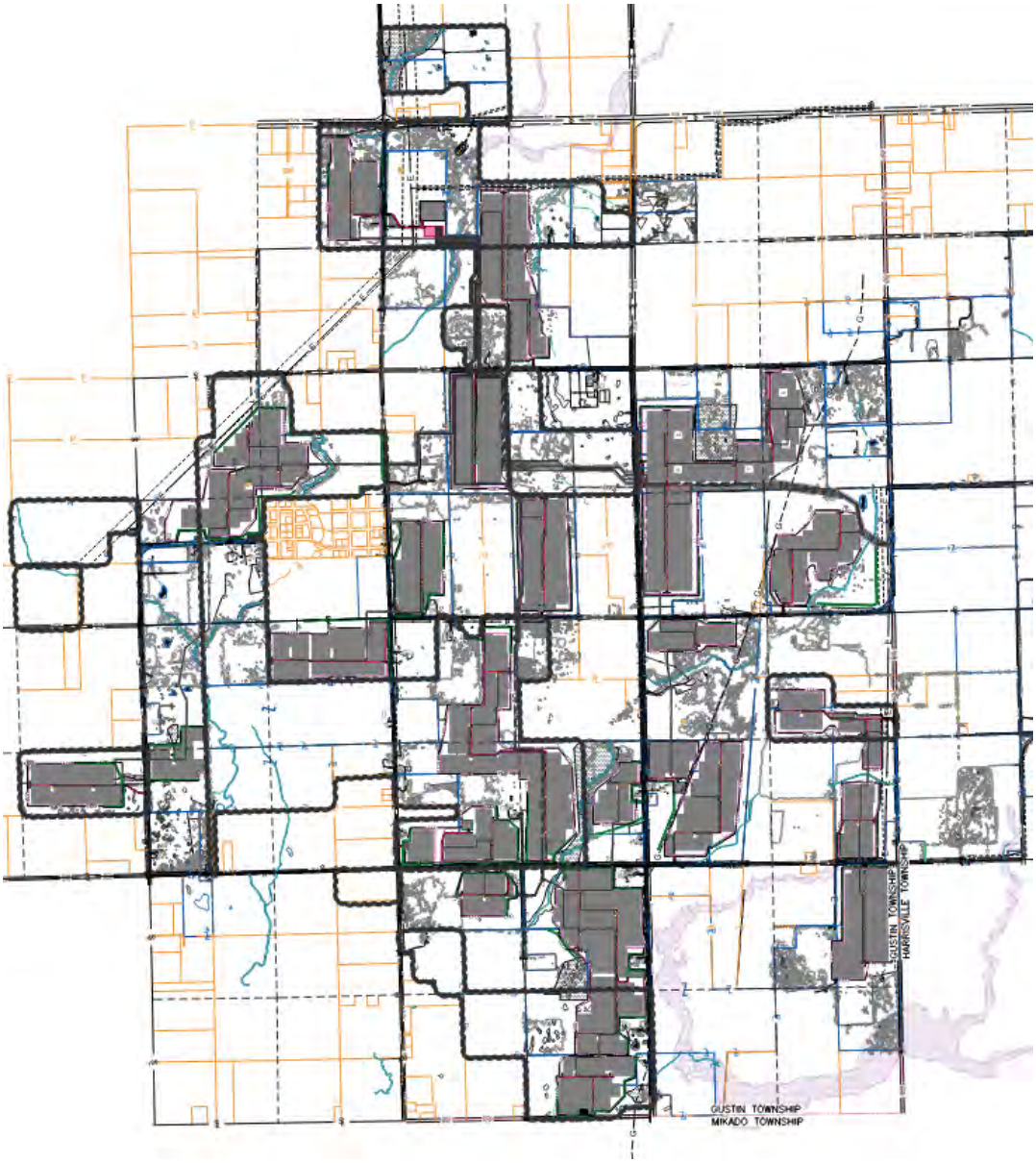
MyMichigan Medical Center Tawas

200 Hemlock Rd, Tawas City, MI 48763

| CE Contacts | |
|---|---|
| **Role** | **Telephone** |
| Site Field Leader | **TBD** |
| Operations Consumers Energy | **800-477-5050** |
| Distribution Control Center | **800-453-4543** |
| Security Command Center | **800-760-3295** |

| Local/Regional Contacts | | |
|---|---|---|
| **Name** | **Agency** | **Phone/Cell** |
| Fire | Fire Department | **911** |
| Police | Police Department | **911** |
| HAZMAT | Hazardous Materials Team | **911** |
| County Office | Alcona County Emergency Services | **(989) 736-8185** |
| Michigan State Police | Michigan State Police, Operations Desk | **517-241-8000** |
| Emergency Dispatch | County Dispatch Authority | **911** |
| EGLE | Michigan Department of Environment, Great Lakes, and Energy | **1-800-662-9278** |
| NRC | National Response Center | **800-424-8802** |
| EPA | Environmental Protection Agency (Region 5) | **312-886-3000** |
| | Environmental Protection Agency (National Emergency Response Center) | **800 424-8802** |

**Gustin Solar Site Layout**



# Gustin Solar

Gustin Township

**Exhibit F**
Sound Study

May 15, 2026

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BURNS McDONNELL

CONSUMERS ENERGY

# SOUND STUDY

## GUSTIN SOLAR ENERGY CENTER

PROJECT NO. 192088

MAY 13, 2026

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# List of Abbreviations

| Abbreviation | Term/Phrase/Name |
|---|---|
| ANSI | American National Standards Institute |
| Burns & McDonnell | Burns & McDonnell Michigan, Inc. |
| CadnaA | Computer Aided Noise Abatement |
| Consumers | Consumers Energy |
| dB | decibels |
| dBA | A-weighted decibels |
| Hz | Hertz |
| IEEE | Institute of Electrical and Electronics Engineers |
| ISO | International Organization for Standardization |
| $L_{eq}$ | equivalent sound level |
| $L_X$ | X-percentile exceedance sound level |
| MCL | Michigan Compiled Laws |
| PL | property-line receivers |
| Project | Gustin Solar Energy Center |
| PV | photo-voltaic |
| PWL | sound power level |
| SPL | sound pressure level |

# Executive Summary

The Gustin Solar Energy Center (Project) is a 25-megawatt alternating current solar energy facility proposed in Gustin Township, Alcona County, Michigan. Gustin Solar Energy Center will add 25-megawatts of generating capacity in addition to the 215 megawatts approved as part of Sapling Solar. The Project consists of multiple solar array blocks containing photo-voltaic (PV) modules attached to a single-axis tracking system mount on steel piles, inverters, access roads, and electrical collection lines. The Project will interconnect to a new substation in Gustin Township.

Burns & McDonnell Michigan, Inc. (Burns & McDonnell) conducted a sound study for the Project. The Gustin Township Zoning Ordinance imposes a noise limit of 45 dBA along all perimeter property lines. The portion of the Project approved as Sapling Solar (outlined on Figure 3-1) are governed by variance approved by the Gustin Township Zoning Board of Appeals on December 12, 2024. The variance raises the noise limit to 50 dBA at the outer wall of the nearest building located on an adjacent non-participating property.

The sound study is based on the Project layout included in Appendix A. Burns & McDonnell used a predictive model to estimate the Project sound levels based on major sound-emitting equipment operating at maximum sound levels at the same time. The Project, as modeled, is predicted to comply with the applicable sound level limits.

# 1.0 Acoustic Terminology

The term “sound level” is often used to describe two different sound characteristics: sound power and sound pressure. Every source that produces sound has a sound power level (PWL). The PWL is the acoustic energy emitted by a sound source and is an absolute number that is not affected by the surrounding environment. The acoustic energy produced by a source propagates through media as pressure fluctuations. These pressure fluctuations, also called sound pressure levels (SPL), are what human ears hear and microphones measure.

Sound is physically characterized by amplitude and frequency. The amplitude of sound is measured in decibels (dB) as the logarithmic ratio of a sound pressure to a reference sound pressure (20 micropascals). The reference sound pressure corresponds to the typical threshold of human hearing. To the average listener, a 3-dB change in a continuous broadband sound is generally considered “just barely perceptible”; a 5-dB change is generally considered “clearly noticeable”; and a 10-dB change is generally considered a doubling (or halving, if the sound is decreasing) of the apparent loudness.

Sound waves can occur at many different wavelengths, also known as the frequency. Frequency is measured in hertz (Hz) and is the number of wave cycles per second that occur. The typical human ear can hear frequencies ranging from approximately 20 to 20,000 Hz. Normally, the human ear is most sensitive to sounds in the middle frequencies (1,000 to 8,000 Hz) and is less sensitive to sounds in the lower and higher frequencies. As such, the A-weighting scale was developed to simulate the frequency response of the human ear to sounds at typical environmental levels. The A-weighting scale emphasizes sounds in the middle frequencies and de-emphasizes sounds in the low and high frequencies. Any sound level to which the A-weighting scale has been applied is expressed in A-weighted decibels, or dBA. For reference, the A-weighted sound pressure level and subjective loudness associated with some common sound sources are listed in Table 1-1.

Sound in the environment is constantly fluctuating when a car drives by, a dog barks, or a plane passes overhead. Therefore, sound metrics have been developed to quantify fluctuating environmental sound levels. These metrics include the exceedance sound level. The exceedance sound level is the sound level exceeded during “x” percent of the sampling period and is also referred to as a statistical sound level. Common exceedance sound level values are the 10-, 50-,90-percentile exceedance sound levels, denoted by $L_{10}$, $L_{50}$, and $L_{90}$. The equivalent-continuous sound level ($L_{eq}$) is the logarithmic average of the varying sound over a given time period and is the most common metric used to describe sound.

**Table 1-1: Typical Sound Pressure Levels Associated with Common Sound Sources**

| Sound Pressure Level (dBA) | Subjective Evaluation | Environment |
|---|---|---|
| 140 | Deafening | Jet aircraft at 75 feet |
| 130 | Threshold of pain | Jet aircraft during takeoff at a distance of 300 feet |
| 120 | Threshold of feeling | Elevated train |
| 110 | Very loud | Jet flyover at 1,000 feet |
| 100 | | Motorcycle at 25 feet |
| 90 | Moderately loud | Propeller plane flyover at 1,000 feet |
| 80 | | Diesel truck (40 mph) at 50 feet |
| 70 | Loud | B-757 cabin during flight |
| 60 | Moderate | Air-conditioner condenser at 15 feet |
| 50 | Quiet | Private Office |
| 40 | | Farm field with light breeze, birdcalls |
| 30 | Very quiet | Quiet residential neighborhood |
| 20 | | Rustling leaves |
| 10 | Just audible | -- |
| 0 | Threshold of hearing | -- |

Sources:
(1) Adapted from Architectural Acoustics, M. David Egan, 1988
(2) Architectural Graphic Standards, Ramsey and Sleeper, 1994

# 2.0 Applicable Regulations

Burns & McDonnell reviewed the following regulatory sources to determine the criteria applicable to the Project. The applicable regulations are summarized in the sections below.

## 2.1 State of Michigan

The State of Michigan applies the following regulations for noise generated by a solar energy facility:

> (*iv*) The solar energy facility does not generate a maximum sound in excess of 55 average hourly decibels as modeled at the nearest outer wall of the nearest dwelling located on an adjacent nonparticipating property. Decibel modeling shall use the A-weighted scale as designed by the American National Standards Institute.
>
> (*vi*) The solar energy facility will comply with any more stringent requirements adopted by the commission. Before adopting such requirements, the commission must determine that the requirements are necessary for compliance with state or federal environmental regulations.

## 2.2 Alcona County

No applicable numeric sound level limits were identified in any county ordinances.

## 2.3 Gustin Township

Sec. 7.31 C6 of The Gustin Township Zoning Ordinance provides the following regulations applicable to noise generated by solar energy facilities:

> *"The sound pressure level of a solar energy facility and all ancillary solar equipment shall not exceed forty-five (45) dBA ($L_{eq}$ (1 hour)) at the property line of an adjacent non-participating lot. The site plan shall include modeled sound isolines extending from the sound source to the property lines to demonstrate compliance with this standard."*

On December 12, 2024, the Gustin Township Zoning Board of Appeals approved a variance of the noise regulation that raises the limit to 50 dBA on at the outer wall of the nearest building on an adjacent non-participating property.

## 2.4 Applicable Regulations

The Project is governed by section of the Gustin Township Zoning Ordinance identified above that limits noise to 45 dBA at the Project's perimeter property lines. The portion of the Project that includes portions of the previously approved Sapling Solar may be governed by the noise limit variance described above. For reference, Figure 3-1 shows the land to which the variance applies.

# 3.0 Predictive Modeling

## 3.1 Sound Modeling Methodology and Input Parameters

Sound modeling was performed using the industry-accepted sound modeling software Computer Aided Noise Abatement (CadnaA), version 2026. The software is a scaled, three-dimensional program which accounts for air absorption, terrain, ground absorption, reflections and shielding for each piece of sound-emitting equipment and predicts sound pressure levels. The model calculates sound propagation based on International Organization for Standardization (ISO) 9613-2:2024; General Method of Calculation. ISO 9613-2 assesses the sound level propagation based on the octave band center-frequency range from 31.5 to 8,000 Hz.

The ISO standard considers sound propagation properties and user input directivities for noise sources. The software also assumes moderate downwind sound propagation in all directions from all noise sources, as well as a moderate temperature inversion for propagation calculations. In other words, the model assumes that each piece of equipment always propagates its worst-case sound levels in all directions. Empirical studies accepted within the industry have demonstrated that modeling may over-predict sound levels in certain directions, and as a result, modeling results generally are considered a conservative measure of a project's actual sound level.

The modeled temperature and relative humidity were left at the program's default values. Reflections and shielding were considered for sound waves encountering physical structures. Terrain elevations were included in the model to account for surface effects. Ground absorption values can range from 0.0 (fully reflective surface) to 1.0 (fully absorptive surface). The ground absorption was conservatively set to 0.5 for the Project area. The sound modeling parameters used are summarized in Table 3-1.

**Table 3-1: Sound Modeling Parameters**

| Model Input | Parameter Value |
|---|---|
| Ground Absorption | 0.5 |
| Number of Reflections | 2 |
| Receptor Height | 5 feet above grade |
| Terrain | USGS topographic land data |
| Temperature | 50 °F |
| Humidity | 70% |

## 3.2 Project Equipment

Project operational sound levels were modeled assuming each piece of equipment is operating at full load. Onsite inverters are expected to be the primary sound sources associated with the Project. Sound emissions from the PV modules and tracking system are expected to be negligible and were not included in the predictive model. The inverters selected for the Project are Siemens Gamesa Proteus PV 4500 Inverters. The Gamesa Electric Proteus PV Station was measured to be less than 60 dBA at 10 meters. The modeling sound pressure and sound power levels inputs are shown in Table 3-2. Project inverters and transformers were modeled based on general arrangement drawings as provided in Appendix A. Vendor-provided equipment specifications are provided in Appendix B.

**Table 3-2: Project Equipment Model Input**

| Equipment Name | Number of Sources | Sound Power Level (dBA) | Sound Pressure Level (dBA) |
|---|---|---|---|
| Gamesa Electric Proteus PV Station | 89 | 94 dBA | 60 dBA at 10 meters |
| 156 MVA Substation Transformer | 1 | 106 dBA | 83 dBA per IEEE |
| 270 MVA Substation Transformer | 1 | 109 dBA | 86 dBA per IEEE |

*IEEE – Institute of Electrical and Electronics Engineers C57.12.90 Test Standard

## 3.3 Modeling Results

Measurement points (“receivers”) were identified at building in the vicinity of the Project to predict the maximum Project sound level impacts. A graphical representation of the Project sound levels, and the locations of the buildings identified through use of ariel imagery are provided in Figure 3-1. The modeling shows that the Project will comply with all applicable noise limits.

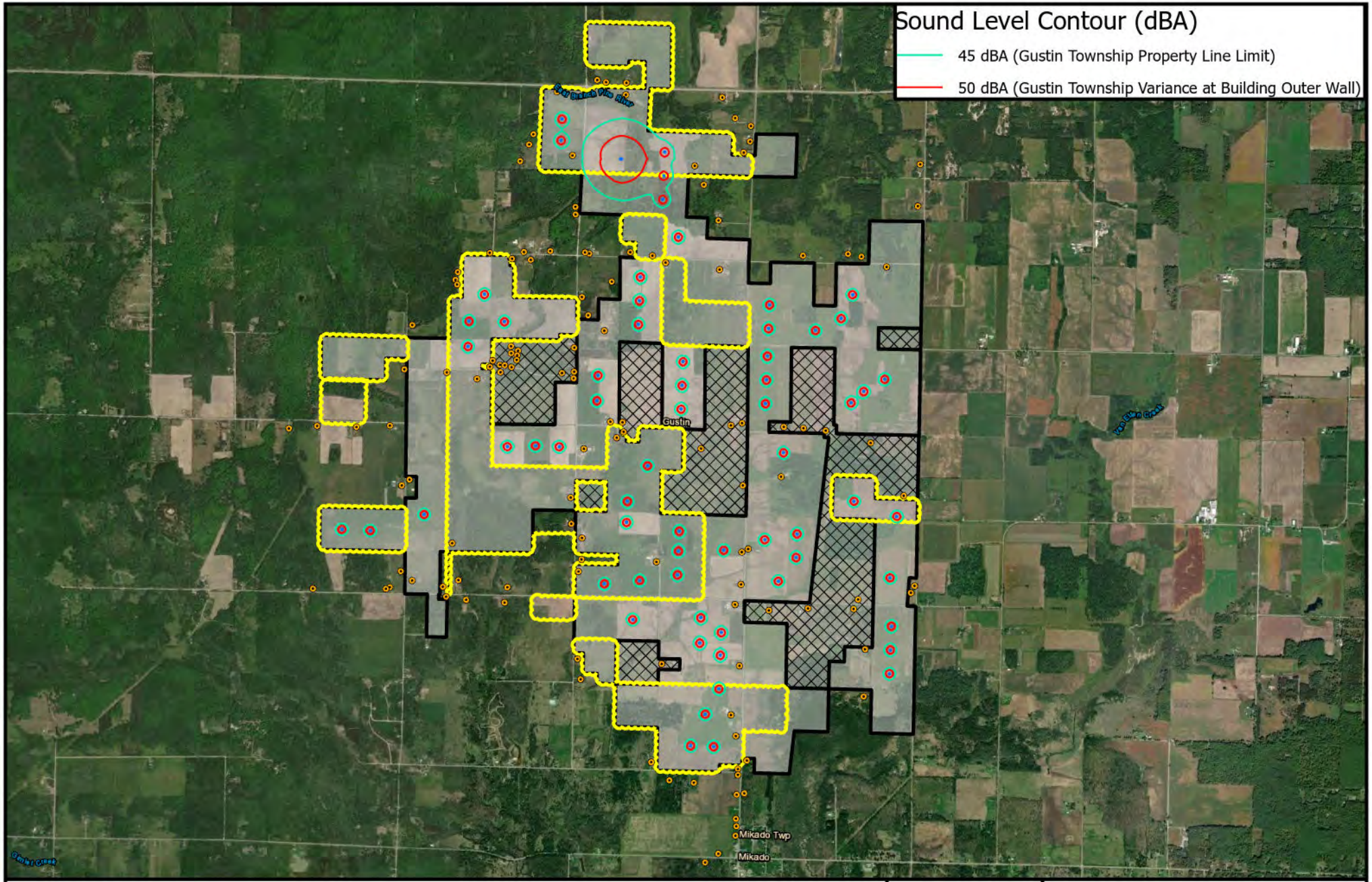



Figure 3-1
Consumers Energy
Gustin Solar Energy Center
Gustin Township
Sound Contour Map

Source: ESRI, Burns & McDonnell

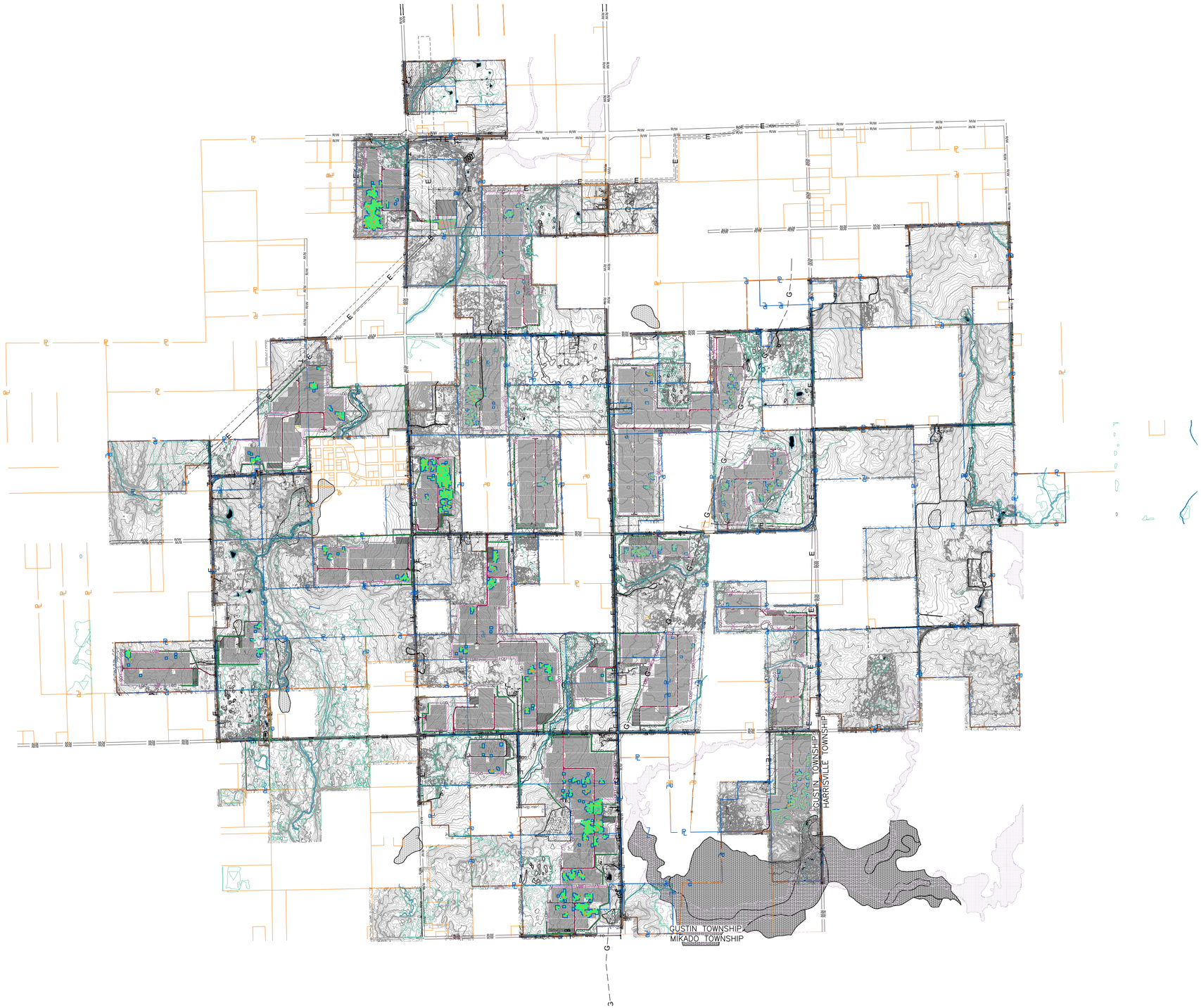
Issued: 5/7/2026

# 4.0 Conclusions

Burns & McDonnell conducted a sound study for the Project proposed in Gustin Township, Alcona County, Michigan. The sound study consisted of a review of potential regulatory sources and predictive modeling to determine Project sound level impacts at regulatory measurement points.

Portions of the Project previously approved as Sapling Solar will be subject to a noise limit variance approved by the Gustin Township Zoning Board of Appeals, while the additional solar arrays that are the subject of this approval will be subject to the commercial solar energy facility-specific noise limit specified in Gustin Township Zoning Ordinance. Burns & McDonnell used a predictive noise model to estimate the Project sound levels based on all major sound-emitting equipment operating at maximum normal operating sound levels at the same time. The Project, as modeled, is expected to comply with the noise limits outlined in this report.

# APPENDIX A – GENERAL ARRANGEMENT DRAWING



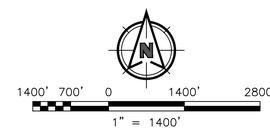

NOTES:

1. DRAWING SCALE FOR ENLARGED SITE PLANS IS PRESENTED AT 1" = 200' FOR LEGIBILITY OF REVIEW.
2. ALL TEMPORARY STAGING AREAS ARE TO BE CONSTRUCTED AT-GRADE (UNLESS NOTED OTHERWISE) AND WILL MAINTAIN THE EXISTING TOPOGRAPHY OF THE SITE. FINAL CONTOURS ARE TO MATCH EXISTING CONTOURS.
3. PRE-DEVELOPMENT DRAINAGE PATTERNS ARE TO BE MAINTAINED TO THE GREATEST EXTENT PRACTICABLE.
4. SOLAR EQUIPMENT SETBACK INCLUDES REQUIRED DEFINING SETBACKS FROM THE GUSTIN TOWNSHIP SOLAR ORDINANCE AND SPECIAL LAND USE PERMIT REQUIREMENTS.
   - 4.1. GUSTIN TWP ORDINANCE SECTION 4.5 (A-T) AGRICULTURAL-RESIDENTIAL DISTRICT: MINIMUM FRONT YARD SETBACK = 60-FT.
   - 4.2. GUSTIN TWP ORDINANCE SECTION 7.31 C.3: THE COMMERCIAL SOLAR ENERGY SYSTEM SHALL BE SET BACK TWO HUNDRED (200) FEET FROM ALL PROPERTY LINES OF NON-PARTICIPATING LOTS.
5. NO DRAINAGE, SANITARY SEWER, STORM SEWERS, OR OTHER UTILITY MAINS ARE IDENTIFIED ON SITE.
6. THIS SITE WILL INCLUDE PROJECT SIGNAGE PROVIDING BASIC INFORMATION TO THE PUBLIC.

LEGEND:

SITE IMPROVEMENTS & GRADING:

- 300 — CONTOUR (MAJOR)
- 322 — CONTOUR (MINOR)
- CULVERT
- FENCE
- FENCE – ISOLATION PANELS
- INVERTER
- MV# — MV# — MEDIUM VOLTAGE CABLE (FOR REFERENCE ONLY)
- PROPOSED SOLAR ARRAY (FOR REFERENCE ONLY)
- STOCKPILE
- TEMPORARY STAGING AREA
- 12-FT ACCESS ROAD
- 20-FT ACCESS ROAD
- 24-FT DOUBLE SWING GATE
- POST-CONSTRUCTION BUILDING
- POST-CONSTRUCTION FENCE
- POST-CONSTRUCTION TREELINE




FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/15/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE

NAME: G. ALBANSODER

MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING KEY PLAN

UNIT: N/A

| SCALE: 1" = 1400' | DRAWING NO. 1823-CV-240 | SHEET 001 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |

# APPENDIX B – VENDOR-PROVIDED EQUIPMENT SPECIFICATIONS

# Noise Level Declaration

Manufacturer: GAMESA ELECTRIC

Address: c/ Mar Mediterráneo 14-16, CP28830 San Fernando de Henares, Madrid

Declares that the product:

## GAMESA ELECTRIC PROTEUS PV STATION

Gamesa Electric power stations assembled on metallic skid, emits maximum sound pressure levels (dB(A)) according to the following table:

| | | | | |
|---|---|---|---|---|
| 10m distance | | **< 60** | | 10m distance |
| | 1m distance | **< 80** | 1m distance | |
| **< 60** | **< 80** | | **< 80** | **< 60** |
| | 1m distance | **< 80** | 1m distance | |
| 10m distance | | **< 60** | | 10m distance |

Those values are with the power station running at full power and at 50°C ambient temperature.

Yours sincerely,

Date: December 2022

Jorge García Gómez
Gamesa Electric Industrial Program Manager

## 5.0 Project Specific Ratings

### 5.1 Common to all voltage classes

| Parameter | Value | Unit |
|---|---|---|
| Site Location | Gustin ( Gustin )] | Alcona |
| Minimum Ambient Temperature | -40 | °C |
| Maximum Ambient Temperature | 40 | °C |
| Average 24-hour Ambient Temperature | 30 | °C |
| Quantity | 1 | - |
| Phase | 3 | - |
| Frequency | 60 | Hz |

### 5.2 138 kV Voltage Class

| Parameter | Value | Unit |
|---|---|---|
| HV Rated Voltage | 140 | kV |
| Minimum HV Winding Line/Neutral BIL | 550 / 110 | kV |
| HV Connection | Grounded Wye | |
| XV Rated Voltage | 34.5 | kV |
| Minimum XV Winding Line/Neutral BIL | 200 / 110 | kV |
| XV Connection | Grounded Wye | |
| YV Rated Voltage | 13.8 | kV |
| YV Connection | Tertiary Buried Delta | - |
| On Load (OLTC) Tap Range | HV: ±16 x 0.625% = ±10% | - |
| LTC Manufacturer | MR Reinhausen | - |
| Rated Capacity | 94/125/156 | MVA |
| Cooling Class | ONAN/ONAF/ONAF | |
| Positive Sequence Impedance (ONAN MVA base) | 9 | % |
| Sound Pressure Level | Per IEEE, 80/82/83 | dBA |
| HV Phase BCTs | 1200-5A | C-800 Multi |
| | 1200-5A | 0.3B1.8 Metering Class |
| HV Neutral BCTs | 600-5A (tapped at 500-5A) | C-800 Multi |
| XV Phase BCTs | Three (3) 3000-5A | C-800 Multi |

## 5.0 Project Specific Ratings

### 5.1 Common to all voltage classes

| Parameter | Value | Unit |
|---|---|---|
| Site Location | Gustin ( Sapling) | Alcona County, MI |
| Minimum Ambient Temperature | -40 | °C |
| Maximum Ambient Temperature | 40 | °C |
| Average 24-hour Ambient Temperature | 30 | °C |
| Quantity | 1 | - |
| Phase | 3 | - |
| Frequency | 60 | Hz |

### 5.2 138 kV Voltage Class

| Parameter | Value | Unit |
|---|---|---|
| HV Rated Voltage | 140 | kV |
| Minimum HV Winding Line/Neutral BIL | 550 / 110 | kV |
| HV Connection | Grounded Wye | |
| XV Rated Voltage | 34.5 | kV |
| Minimum XV Winding Line/Neutral BIL | 200 / 110 | kV |
| XV Connection | Grounded Wye | |
| YV Rated Voltage | 13.8 | kV |
| YV Connection | Tertiary Buried Delta | - |
| On Load (OLTC) Tap Range | HV: ±16 x 0.625% = ±10% | - |
| LTC Manufacturer | MR Reinhausen | - |
| Rated Capacity | 162/216/270 | MVA |
| Cooling Class | ONAN/ONAF/ONAF | |
| Positive Sequence Impedance (ONAN MVA base) | 9 | % |
| Sound Pressure Level | Per IEEE, 79/82/86 | dBA |
| HV Phase BCTs | 2000-5A | C-800 Multi |
| | 2000-5A | 0.3B1.8 Metering Class |
| HV Neutral BCTs | 1200-5A C800 Multi, tapped at 1000-5A | C-800 Multi |
| XV Phase BCTs | Three (3) 5000-5A | C-800 Multi |

BURNS McDONNELL

# Gustin Solar

Gustin Township

**Exhibit G**

Decommissioning Plan

May 15, 2026

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# DECOMMISSIONING PLAN WITH COST ESTIMATE

## Gustin Solar – Gustin Township

## Alcona County, MI

**BLACK & VEATCH PROJECT NO. 423554**

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**PREPARED FOR**

Consumers Energy

12 MAY 2026

BLACK & VEATCH

## Table of Contents

**1.0 Project Description ..... 1**
**2.0 Purpose of the Decommissioning Plan and Cost Estimate ..... 1**
**3.0 Local Ordinances and Restoration Requirements ..... 1**
**4.0 Decommissioning Approach ..... 2**
4.1 Overall Approach ..... 2
4.2 Demolition Approach ..... 2
**5.0 Decommissioning Scope ..... 2**
5.1 Civil Scope of Work ..... 2
5.2 Electrical Scope of Work ..... 2
5.3 Components Included in the Cost Estimate ..... 3
5.3.1 Key Quantities ..... 3
5.3.2 Assumptions and General Clarifications ..... 3
**6.0 Decommissioning Cost Estimate ..... 4**
6.1 Decommissioning Cost Values ..... 4

**Appendix A - Decommissioning Cost Estimate**

**Appendix B – Reference Drawing**

# 1.0 Project Description

Gustin Solar is a proposed 241 MW (AC) solar project utilizing photovoltaic (PV) modules located in the Gustin and Harrisville Townships, Alcona County, Michigan. Gustin Solar is situated east of South Hubbard Lake Road, south of M-72, and west of S Barlow Road. The substation and transmission interconnection will be located off South McConnell Road in Gustin Township. This decommissioning plan and cost estimate is specific to the solar PV modules and electrical substation in the Gustin Township.

# 2.0 Purpose of the Decommissioning Plan and Cost Estimate

This report provides the Decommissioning Plan and corresponding decommissioning cost estimate prepared as required per Gustin Township Ordinance, 2023-1 Section 7.31 Solar Energy Systems. The cost estimate was produced utilizing the provided Site Layout Drawings with an expected accuracy range of -30% and +50% (AACE Class Level 5).

# 3.0 Local Ordinances and Restoration Requirements

Gustin Township Zoning Ordinance includes requirements specific to the decommissioning of solar energy systems (SES). The decommissioning requirements per the zoning ordinance as applicable to inclusion in the decommissioning plan and decommissioning cost estimate as described in Section 7.31 Solar Energy Systems are as follows:

- Article C. Commercial Solar Energy System,
  9. A condition of every approval of a Commercial Solar Energy System shall be adequate provision for the removal of the system whenever it ceases to be used for one (1) year or more. In the event that a system has been abandoned (meaning not having been in operation for a period of one (1) year), the property owner and developer/applicant shall notify the Township and shall remove the system within one (1) year from the date of abandonment. Removal includes the proper receipt of a demolition permit from the Building Official and proper restoration of the site to the satisfaction of the Zoning Administrator. The site shall then be filled and covered with topsoil and restored to a state compatible with the surrounding vegetation.
  10. To ensure proper removal of a Commercial Solar Energy System upon discontinued use or abandonment, applications shall include a description of the financial security guaranteeing removal of the system which must be posted with the Township within fifteen (15) days after approval or before a construction permit is issued for the facility. The financial security shall be: 1) a cash bond; or 2) an irrevocable bank letter of credit or a performance bond, in a form approved by the Township. The amount of such guarantee shall be no less than the estimated cost of removal and may include a provision for inflationary cost adjustments. The estimate shall be prepared by the engineer for the developer and shall be approved by the Township. The applicant shall be responsible for the payment of any costs or attorney fees incurred by the Township in securing removal.

# 4.0 Decommissioning Approach

## 4.1 Overall Approach

The site will be restored to a pre-construction condition, with exceptions as noted herein.

At the end of the project's useful life no equipment, including solar PV modules, is considered for resale or reuse.

## 4.2 Demolition Approach

The demolition approach for the solar PV modules, tracking, pilings, fences, and foundations will be by mechanical means. Machines (e.g., a backhoe) will remove the PV modules, support frames, and piles. The PV modules will be palletized for offsite recycling. It is assumed that PV modules will be placed on pallet for shipment to a licensed recycling facility. Concrete will be removed for offsite disposal.

# 5.0 Decommissioning Scope

## 5.1 Civil Scope of Work

All project access gravel roads will be removed. The estimate includes costs to remove the aggregate access roads to their design depth. The gravel layer of roads will be removed and replaced with borrow fill to support vegetation. The replaced roads will be graded to the surrounding areas. The fences will be removed from the site.

The estimate includes only minor grading since the site will be finish graded to provide contours consistent with the drainage design at the time of original plant construction. The estimate excludes grading and mass excavation to return the site back to its original contours prior to construction of the project. The site will be re-seeded with select grass seed mix in areas disturbed by construction equipment, which is assumed to be within the fenced areas.

The estimate includes removal of inverter foundations and solar PV module support pile foundations. All support piles will be extracted by mechanical means. All other structures foundation, fence posts, and miscellaneous pipe will be removed within 36 inches of ground surface.

All demolition debris will be transported off site to the recyclers and/or landfill.

## 5.2 Electrical Scope of Work

The solar PV module components and inverter skids and PCS transformers will be removed by mechanical means for recycling or offsite disposal.

The collection system in the solar field will be completely removed. All buried cable and associated conduit are assumed to be removed by pulling them from the ground via mechanical means without the need to excavate and expose the cable and conduit.

## 5.3 Components Included in the Cost Estimate

The following components and structures are included in the demolition cost estimate:

- PV Modules
- Support Piles
- PV Racks
- DC Collection System
- AC Collection System
- Communication Cables
- Equipment: Inverters, PCS Transformers, and Met Stations
- Substation
- Fence
- Roads

### 5.3.1 Key Quantities

Key quantities for the equipment located at Gustin Solar include:

- 435,889 PV modules
- 85,518 Support Piles
- 5,652 Racks
- 6 Met Stations
- 64 Inverter Skid Assemblies
- 64 PCS Transformers
- 4,536,676 linear feet (LF) of above grade cable
- 2,549,260 LF below grade cable
- 172,926 LF Fence
- 80,740 LF of gravel roads
- 1,261 acres of fenced site

### 5.3.2 Assumptions and General Clarifications

The cost estimate was developed based on the following:

- Total material estimates were based on comparisons to similar facilities, crew rate cost, and productivity factor, as applicable.
- Economic assumptions are based on regional cost estimates expressed in 2026 dollars.
- The cost estimate is based on a turnkey contracting approach. That is, the demolition contractor will perform all the work.
- Union rates for Michigan were considered for this demolition estimate.
- No equipment was considered for resale or reuse.
- PV modules will be placed on pallets at 25 PV modules per pallet.
- PV modules will be removed and transported off site to a recycling facility for disposal. A PV module recycling facility is assumed to be within 100 miles of the site.
- All concrete foundation pads will be removed. Concrete will be crushed for offsite disposal at a local landfill.
- Drainage features installed for the project will remain in place.
- Approximately 66% of the 1,261 fenced acreage is assumed to be disturbed during demolition activities and will be seeded using select seed mix.
- The existing gravel roads are assumed to be 12 feet wide with 10 inches of gravel.
- Substation is assumed to be located on a six (6) acre lot.

- One combined Stormwater Pollution Prevention Plan (SWPPP) will be developed for all separate fenced areas.
- It is assumed that the decommissioning tasks will take 4 to 5 months to complete.
- Excluded components:
  - Switchyard
  - Removal of vegetation buffers/solar plant screening areas installed during construction.
  - New trees to replace any trees removed during construction.
- No escalation is included.

# 6.0 Decommissioning Cost Estimate

The purpose of the decommissioning cost estimate is to determine the costs in current 2026 dollars required to demolish solar project components and surface restoration.

Black & Veatch developed the demolition cost estimate based on information and drawings provided by Consumers Energy Company (CEC) and Black & Veatch's proprietary estimating tool. When site specific data was not available, typical data from Black & Veatch's in-house databases was used. Additionally, a set of assumptions were developed based on previous experience. The information, analysis, and opinions used to develop the cost estimate and set of assumptions are based on publicly available sources, market research, along with financial and operational information used to develop the Black & Veatch's in-house database.

The estimate is based on several assumptions and does not include any local contractor bids. The estimate accuracy is tied strongly to the key quantities listed in Section 5.3.

## 6.1 Decommissioning Cost Values

The direct costs provided in Table 6-1 are based on methodology, assumptions, and values defined in this study and information provided by CEC and supplemented with Black & Veatch estimate data. These cost estimates used conservative approaches and strategies based on available information. Economic assumptions are based on regional cost estimates expressed in 2026 dollars.

**Table 6-1 Decommissioning Cost Summary in Gustin Township**

| ITEM DESCRIPTION | COST |
|---|---|
| **Direct Decommissioning Cost** | |
| Gustin Solar Plant and Substation | $29,360,000 |
| **Total Direct Costs** | **$29,360,000** |

## Appendix A – Decommissioning Cost Estimate

| DECOMMISSIONING COST ESTIMATE FOR GUSTIN SOLAR - GUSTIN TOWNSHIP | |
|---|---|
| **Description for Direct Decommissioning Costs** | **Total** |
| | |
| **Inverter Demo** | **$ 147,000** |
| | |
| **Site Restoration** | **$ 4,241,000** |
| | |
| **Fence Removal** | **$ 1,297,000** |
| | |
| **Module Removal** | **$ 13,865,000** |
| | |
| **Pile & Tracker Removal** | **$ 5,217,000** |
| | |
| **Equipment and Cable** | **$ 3,427,000** |
| | |
| **Substation - Gustin Township** | **$ 918,000** |
| | |
| **Construction Management** | **$ 248,000** |
| | |
| **Direct Decommissioning Cost** | **$ 29,360,000** |

| Description for Scrap Metal | Total |
|---|---|
| Tracker frame (Aluminum) | $59,000 |
| Pilings (Galvanized Steel) | $305,000 |
| Transformers, Inverters, substation | $5,000 |
| Insulated Copper Wire | $361,000 |
| Insulated Aluminum Wire | $175,000 |
| Fence posts (Galvanized Steel) | $6,000 |
| **Potential Scrap Credit** | **$ (911,000)** |

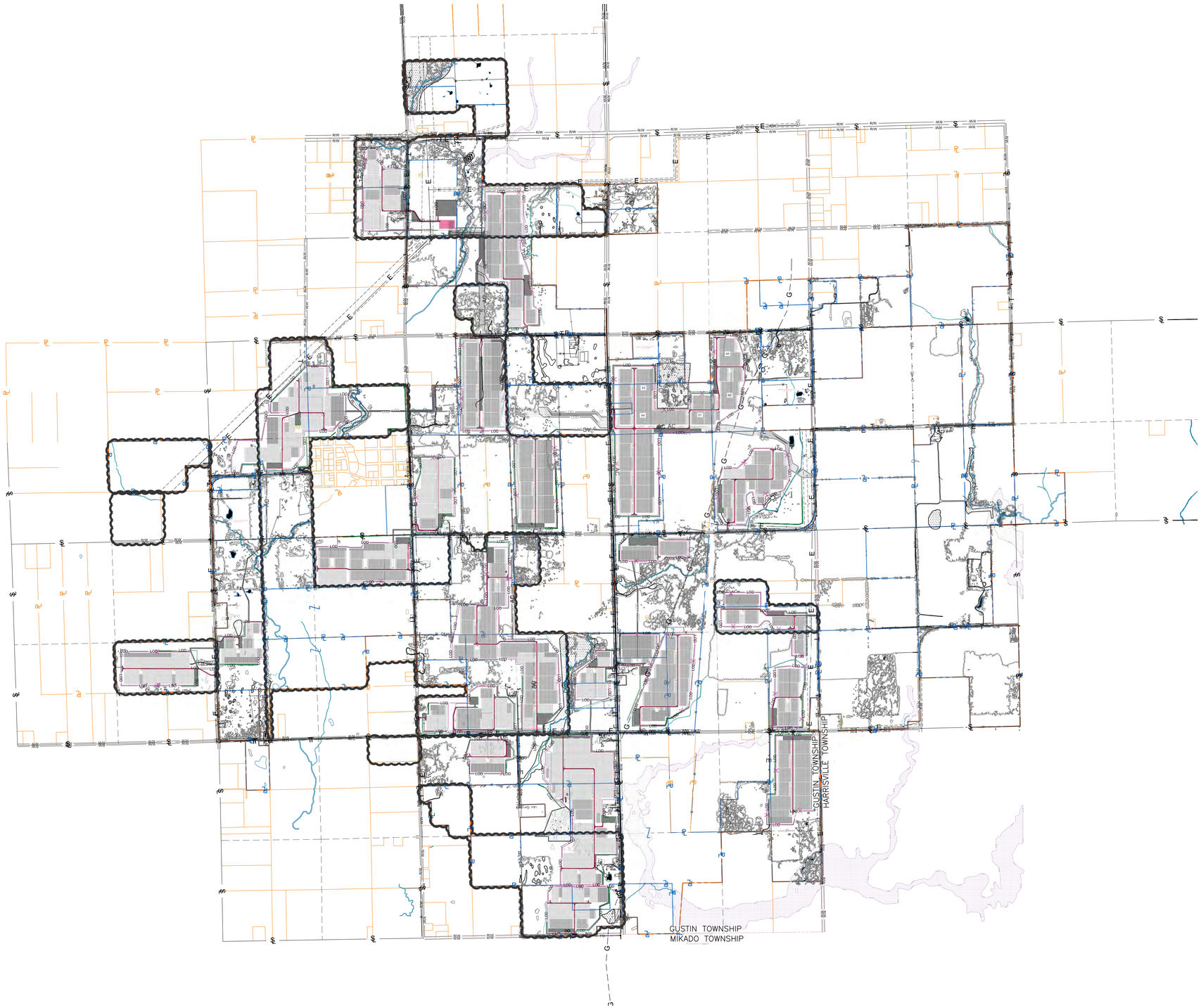
# Appendix B – Reference Drawing

SHEET SIZE: ANSI-D 22x34

LEGEND:

PROJECT DELINEATION:

SAPLING SOLAR PARCEL




1400' 700' 0 1400' 2800'

1" = 1400'

FOR PERMITTING PURPOSES ONLY

| REFERENCE DRAWINGS | REV | DATE | DESCRIPTION | DR | BY | CHK | APP | CO |
|---|---|---|---|---|---|---|---|---|
| | A | 05/15/26 | ISSUED FOR PERMITTING | ADB | ACG | JTD | GLA | BMC |

SIGNATURE

NAME: G. ALBANSODER

MICHIGAN P.E. No.: 6201313263

Consumers Energy

GUSTIN SOLAR ENERGY CENTER
ALCONA COUNTY, MI

SITE IMPROVEMENTS & GRADING
PROJECT DELINEATION MAP

UNIT:N/A

| SCALE: 1" = 1400' | DRAWING NO. 1823-CV-240-000 | SHEET 002 | REV. A |
|---|---|---|---|
| JOB: 192088 | | | |

C:\BMCD_LIB\DC\ACCDOCS\BMCD ENR\CE-GUSTINSOLAR\PROJECT FILES\2_DSGN\CIVIL\DWGS\PERMITTING\G1\1823-CV-240-002.DWG 5/5/2026 11:00 AM ACGEORGE

# Gustin Solar

Gustin Township

## Exhibit H

Stormwater Calculations

May 15, 2026

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Path: C:\Users\tmmcilroy\DC\ACCDocs\BMcD ENR\CE-GustinSolar\Project Files\2_Dsgn\Civil\Dsgn\Drainage\ArcGis\ARCGIS_4.8.26\RESULTS\precon_arcgis model\Precon_Arcgis model.aprx tmmcilroy 5/11/2026

# CONSUMERS ENERGY
# GUSTIN SOLAR

Consumers Energy
Count on Us®

## LEGEND

- GUSTIN WATERSHEDS
- USGS Topo 5' Contours
- ARRAY OUTLINE GUSTIN 1
- ARRAY OUTLINE GUSTIN 2

Spatial Reference:
NAD 1983 StatePlane Michigan Central FIPS 2112 Feet Intl

BURNS McDONNELL℠

Service Layer Credits: World Imagery (WGS84): Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World_Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
Hybrid Reference Layer (WGS84): Kalamazoo County GIS, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS

**NOTES**
1. TOPOGRAPHY OBTAINED FROM UNITED STATES GEOLOGICAL SURVEY (USGS) 3DEP.

N

0 5001,000 2,000 3,000 4,000
Feet

## FIGURE WS-100
## WATERSHED DELINEATION

PRELIMINARY - NOT FOR CONSTRUCTION
REV A

DATED: 5/11/2026 BY: T. MCILROY

## EXISTING AND PROPOSED WATERSHED DATA

**GENERAL INFORMATION**

Name: T. Mcilroy
Reviewer: G. Albansoder
Project Number: 192088
Project Name: Gustin Solar
Location of Project: Gustin Township, Michigan
Rainfall Type: Type II [2]
10 Year, 24 Hour Precipitation 2.99 inches [2]
25 Year, 24 Hour Precipitation 3.55 inches [2]
100 Year, 24 Hour Precipitation 4.46 inches [2]

**OBJECTIVE**

Analyze site runoff using SCS Curve Number Method for existing and proposed site conditions.

**REFERENCES**


1 Natural Resources Conservation Service (June 1986). TR-55: Urban Hydrology for Small Watersheds
https://www.hydrocad.net/pdf/TR-55%20Manual.pdf
2 National Oceanic and Atmospheric Administration. (2018). NOAA Atlas 14
https://hdsc.nws.noaa.gov/hdsc/pfds/
3 USDA Natural Resources Conservation Service. (July 2019). Web Soil Survey.
https://hdsc.nws.noaa.gov/hdsc/pfds/
4 National Land Cover Database (2021) U.S. Geological Survey
https://www.usgs.gov/centers/eros/science/national-land-cover-database


**VALUES**

| Table A: Runoff Curve Numbers [1] | | Hydraulic Soil Group (HSG) [3] | | | |
|---|---|---|---|---|---|
| **Source** | **Cover Type** | **A** | **B** | **C** | **D** |
| Existing Conditions [4] | Developed Open Space | 52 | 68 | 78 | 84 |
| Existing Conditions [4] | Developed Low Intensity | 81 | 88 | 90 | 93 |
| Existing Conditions [4] | Developed Medium Intensity | 84 | 89 | 93 | 94 |
| Existing Conditions [4] | Developed High Intensity | 88 | 92 | 93 | 94 |
| Existing Conditions [4] | Deciduous Forest | 36 | 60 | 73 | 79 |
| Existing Conditions [4] | Grassland/Herbaceous | 47 | 63 | 75 | 85 |
| Existing Conditions [4] | Pasture/Hay | 39 | 61 | 74 | 80 |
| Existing Conditions [4] | Cultivated Crops | 62 | 71 | 78 | 81 |
| Existing Conditions [4] | Woody Wetlands | 86 | 86 | 86 | 86 |
| Existing Conditions [4] | Emergent Herbaceous Wetlands | 80 | 80 | 80 | 80 |
| Existing Conditions [4] | Shrub/Scrub | 48 | 67 | 77 | 80 |
| Existing Conditions [4] | Mixed Forest | 36 | 60 | 73 | 79 |
| Existing Conditions [4] | Evergreen Forest | 36 | 60 | 73 | 79 |
| Proposed Conditions | Meadow | 30 | 58 | 71 | 78 |
| Proposed Conditions | Impervious | 98 | 98 | 98 | 98 |

Note: Locations assigned to a dual soil group (ex. A/D) use HSG D values.

| Table B: Time of Concentration [1] | | | |
|---|---|---|---|
| **Flow Type** | **Surface Description** | **Roughness Coefficient** | |
| Sheet Flow (first 100 feet) | Smooth Surfaces | Manning's n | 0.011 |
| Sheet Flow (first 100 feet) | Fallow | Manning's n | 0.050 |
| Sheet Flow (first 100 feet) | Cultivated: Residue >20% | Manning's n | 0.170 |
| Sheet Flow (first 100 feet) | Cultivated Residue <=20% | Manning's n | 0.060 |
| Sheet Flow (first 100 feet) | Grass (Short) | Manning's n | 0.150 |
| Sheet Flow (first 100 feet) | Range | Manning's n | 0.130 |
| Sheet Flow (first 100 feet) | Woods (Light Underbrush) | Manning's n | 0.400 |
| Shallow Concentrated Flow | Paved | Velocity Factor (ft/s) | 20.3 |
| Shallow Concentrated Flow | Unpaved | Velocity Factor (ft/s) | 16.1 |
| Shallow Concentrated Flow | Grassed Waterway | Velocity Factor (ft/s) | 15.0 |
| Shallow Concentrated Flow | Cultivated Straight Rows | Velocity Factor (ft/s) | 9.0 |
| Shallow Concentrated Flow | Short Grass Pasture | Velocity Factor (ft/s) | 7.0 |
| Shallow Concentrated Flow | Woodland | Velocity Factor (ft/s) | 5.0 |

# HydroCAD 24-Hour Model Result Comparison

| Watershed | Surface Area (ac) | Existing Weighted CN | Proposed Weighted CN | Change in CN | Event-10yr Storm Rainfall (inches) = 2.99 | | | Event-25yr Storm Rainfall (inches) = 3.55 | | | Event-100yr Storm Rainfall (inches) = 4.46 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Existing Runoff (cfs) | Proposed Runoff (cfs) | Change in Peak Flow (cfs) | Existing Runoff (cfs) | Proposed Runoff (cfs) | Change in Peak Flow (cfs) | Existing Runoff (cfs) | Proposed Runoff (cfs) | Change in Peak Flow (cfs) |
| 1 | 13.74 | 71.35 | 69.10 | -2.25 | 8.61 | 6.77 | -1.84 | 13.25 | 10.86 | -2.39 | 21.69 | 18.43 | -3.26 |
| 2 | 28.88 | 66.10 | 63.50 | -2.59 | 9.85 | 7.52 | -2.33 | 16.98 | 13.74 | -3.24 | 30.78 | 26.25 | -4.53 |
| 3 | 10.45 | 61.38 | 59.75 | -1.62 | 2.84 | 2.42 | -0.42 | 5.89 | 5.28 | -0.61 | 12.11 | 11.30 | -0.81 |
| 5 | 56.55 | 70.87 | 68.29 | -2.58 | 14.86 | 12.54 | -2.32 | 23.77 | 20.51 | -3.26 | 40.61 | 35.71 | -4.90 |
| 6 | 44.41 | 75.05 | 70.23 | -4.82 | 12.54 | 9.54 | -3.00 | 18.48 | 14.94 | -3.54 | 29.13 | 25.01 | -4.12 |
| 7 | 11.38 | 79.54 | 78.03 | -1.50 | 11.57 | 7.04 | -4.53 | 15.99 | 9.88 | -6.11 | 23.62 | 14.82 | -8.80 |
| 8 | 159.78 | 79.14 | 77.02 | -2.12 | 100.99 | 77.45 | -23.54 | 140.17 | 109.82 | -30.35 | 207.93 | 166.73 | -41.20 |
| 9 | 11.13 | 71.48 | 61.21 | -10.28 | 9.67 | 2.15 | -7.52 | 14.71 | 4.43 | -10.28 | 23.8 | 9.27 | -14.53 |
| 10 | 10.43 | 69.51 | 59.85 | -9.66 | 6.60 | 1.60 | -5.00 | 10.49 | 3.45 | -7.04 | 17.65 | 7.49 | -10.16 |
| 11 | 16.15 | 71.03 | 58.48 | -12.55 | 13.23 | 1.75 | -11.48 | 20.18 | 4.26 | -15.92 | 32.74 | 10.11 | -22.63 |
| 12 | 23.93 | 65.93 | 63.24 | -2.69 | 5.65 | 3.69 | -1.96 | 9.99 | 6.87 | -3.12 | 18.65 | 13.40 | -5.25 |
| 13 | 19.69 | 64.21 | 60.72 | -3.49 | 3.51 | 2.75 | -0.76 | 6.56 | 5.56 | -1.00 | 12.92 | 11.60 | -1.32 |
| 14 | 69.77 | 74.32 | 73.47 | -0.85 | 21.73 | 19.13 | -2.60 | 32.04 | 28.60 | -3.44 | 50.51 | 45.73 | -4.78 |
| 15 | 15.44 | 79.04 | 76.50 | -2.53 | 16.05 | 9.67 | -6.38 | 22.40 | 13.73 | -8.67 | 33.4 | 20.82 | -12.58 |
| 16 | 47.90 | 79.44 | 78.09 | -1.34 | 37.52 | 32.39 | -5.13 | 52.01 | 45.48 | -6.53 | 77.05 | 68.20 | -8.85 |
| 17 | 13.31 | 81.06 | 78.15 | -2.91 | 16.01 | 9.56 | -6.45 | 21.67 | 13.41 | -8.26 | 31.33 | 20.10 | -11.23 |
| 18 | 5.36 | 77.05 | 71.11 | -5.95 | 8.77 | 5.09 | -3.68 | 12.22 | 7.72 | -4.50 | 18.2 | 12.45 | -5.75 |
| 19 | 28.61 | 81.07 | 78.72 | -2.35 | 28.53 | 19.81 | -8.72 | 38.72 | 27.47 | -11.25 | 56.09 | 40.73 | -15.36 |
| 20 | 13.31 | 81.73 | 79.43 | -2.30 | 15.72 | 12.58 | -3.14 | 21.11 | 17.41 | -3.70 | 30.24 | 25.78 | -4.46 |
| 21 | 16.48 | 83.15 | 79.37 | -3.79 | 20.79 | 12.37 | -8.42 | 27.65 | 17.15 | -10.50 | 39.23 | 25.42 | -13.81 |
| 22 | 38.85 | 79.47 | 76.52 | -2.95 | 23.02 | 19.48 | -3.54 | 31.97 | 27.66 | -4.31 | 47.44 | 42.01 | -5.43 |
| 23 | 7.80 | 84.18 | 84.18 | 0.00 | 4.76 | 4.19 | -0.57 | 6.30 | 5.55 | -0.75 | 8.89 | 7.85 | -1.04 |
| 24 | 27.43 | 80.80 | 77.82 | -2.98 | 26.77 | 12.22 | -14.55 | 36.34 | 17.18 | -19.16 | 52.67 | 25.82 | -26.85 |
| 25 | 15.08 | 76.35 | 70.88 | -5.47 | 13.06 | 6.84 | -6.22 | 18.68 | 10.59 | -8.09 | 28.59 | 17.44 | -11.15 |
| 26 | 24.14 | 81.79 | 80.61 | -1.17 | 15.48 | 14.50 | -0.98 | 20.83 | 19.73 | -1.10 | 29.95 | 28.65 | -1.30 |
| 27 | 22.17 | 78.46 | 75.08 | -3.38 | 16.95 | 15.11 | -1.84 | 23.75 | 21.95 | -1.80 | 35.61 | 34.07 | -1.54 |
| 28 | 91.59 | 79.25 | 77.73 | -1.52 | 104.45 | 98.66 | -5.79 | 144.12 | 137.59 | -6.53 | 212.48 | 205.05 | -7.43 |
| 29 | 25.89 | 76.86 | 72.21 | -4.65 | 26.84 | 14.58 | -12.26 | 37.95 | 22.18 | -15.77 | 57.19 | 35.88 | -21.31 |
| 30 | 14.22 | 73.45 | 64.93 | -8.52 | 15.35 | 5.69 | -9.66 | 22.58 | 10.09 | -12.49 | 35.46 | 18.55 | -16.91 |
| 31 | 5.24 | 72.74 | 66.17 | -6.56 | 6.42 | 2.65 | -3.77 | 9.39 | 4.55 | -4.84 | 14.65 | 8.12 | -6.53 |
| 32 | 10.11 | 77.71 | 72.55 | -5.15 | 11.85 | 7.81 | -4.04 | 16.50 | 11.62 | -4.88 | 24.55 | 18.42 | -6.13 |
| 33 | 15.18 | 75.02 | 67.93 | -7.09 | 12.38 | 6.61 | -5.77 | 17.96 | 10.86 | -7.10 | 27.79 | 18.81 | -8.98 |
| 34 | 58.03 | 74.41 | 68.07 | -6.34 | 37.77 | 20.11 | -17.66 | 55.65 | 33.05 | -22.60 | 87.47 | 57.54 | -29.93 |
| 35 | 63.20 | 75.00 | 70.29 | -4.71 | 49.44 | 31.25 | -18.19 | 71.65 | 49.19 | -22.46 | 110.93 | 82.20 | -28.73 |
| 36 | 28.63 | 73.54 | 65.24 | -8.31 | 11.04 | 4.75 | -6.29 | 16.32 | 8.30 | -8.02 | 25.83 | 15.38 | -10.45 |
| 37 | 10.40 | 69.48 | 62.64 | -6.84 | 8.34 | 3.31 | -5.03 | 13.11 | 6.29 | -6.82 | 21.86 | 12.21 | -9.65 |
| 38 | 14.43 | 77.04 | 76.36 | -0.68 | 19.55 | 18.45 | -1.10 | 27.40 | 26.14 | -1.26 | 41.03 | 39.59 | -1.44 |
| 39 | 30.74 | 68.03 | 65.18 | -2.85 | 18.67 | 12.08 | -6.59 | 30.83 | 21.41 | -9.42 | 53.54 | 39.41 | -14.13 |
| 40 | 31.13 | 79.90 | 78.30 | -1.60 | 36.60 | 28.02 | -8.58 | 50.50 | 39.22 | -11.28 | 74.42 | 58.63 | -15.79 |
| 41 | 34.98 | 80.75 | 79.06 | -1.69 | 42.68 | 29.46 | -13.22 | 57.78 | 40.81 | -16.97 | 83.5 | 60.42 | -23.08 |
| 42 | 48.46 | 72.35 | 64.19 | -8.16 | 40.53 | 13.43 | -27.10 | 60.92 | 24.55 | -36.37 | 97.94 | 46.88 | -51.06 |
| 43 | 33.04 | 80.47 | 78.92 | -1.55 | 34.29 | 29.01 | -5.28 | 46.95 | 40.25 | -6.70 | 68.64 | 59.58 | -9.06 |
| 44 | 80.87 | 74.20 | 72.88 | -1.32 | 24.91 | 19.47 | -5.44 | 37.30 | 29.14 | -8.16 | 59.82 | 46.86 | -12.96 |
| 45 | 28.79 | 77.64 | 70.70 | -6.93 | 32.26 | 15.27 | -16.99 | 44.97 | 23.60 | -21.37 | 66.98 | 38.77 | -28.21 |
| 46 | 27.90 | 80.95 | 78.99 | -1.96 | 30.73 | 21.45 | -9.28 | 41.66 | 29.75 | -11.91 | 60.29 | 44.09 | -16.20 |
| 47 | 45.90 | 81.79 | 79.89 | -1.90 | 47.58 | 35.58 | -12.00 | 63.97 | 48.83 | -15.14 | 91.77 | 71.60 | -20.17 |
| 48 | 43.07 | 83.00 | 81.46 | -1.55 | 28.60 | 24.49 | -4.11 | 38.18 | 33.31 | -4.87 | 54.37 | 48.41 | -5.96 |
| 49 | 30.90 | 81.92 | 80.15 | -1.77 | 31.71 | 19.40 | -12.31 | 42.62 | 26.66 | -15.96 | 61.18 | 39.14 | -22.04 |
| 50 | 54.38 | 81.63 | 79.98 | -1.64 | 36.07 | 25.40 | -10.67 | 48.61 | 34.95 | -13.66 | 69.94 | 51.45 | -18.49 |
| 51 | 22.97 | 81.00 | 79.01 | -1.99 | 20.83 | 14.94 | -5.89 | 28.33 | 20.71 | -7.62 | 41.09 | 30.72 | -10.37 |
| 52 | 46.99 | 80.01 | 78.52 | -1.49 | 57.86 | 54.80 | -3.06 | 79.05 | 75.62 | -3.43 | 115.3 | 111.46 | -3.84 |
| 53 | 17.87 | 77.48 | 74.04 | -3.44 | 6.77 | 5.04 | -1.73 | 9.61 | 7.42 | -2.19 | 14.59 | 11.68 | -2.91 |
| 54 | 27.06 | 76.72 | 74.89 | -1.83 | 30.34 | 28.04 | -2.30 | 43.14 | 40.52 | -2.62 | 65.57 | 62.35 | -3.22 |
| 55 | 14.59 | 77.95 | 75.68 | -2.28 | 18.20 | 14.43 | -3.77 | 25.31 | 20.58 | -4.73 | 37.62 | 31.36 | -6.26 |
| 56 | 15.05 | 78.59 | 74.58 | -4.01 | 10.72 | 6.50 | -4.22 | 14.86 | 9.47 | -5.39 | 22.03 | 14.78 | -7.25 |
| 57 | 28.14 | 82.70 | 81.50 | -1.20 | 39.02 | 36.46 | -2.56 | 51.85 | 48.89 | -2.96 | 73.45 | 69.94 | -3.51 |
| 58 | 14.56 | 84.31 | 82.86 | -1.45 | 23.35 | 16.84 | -6.51 | 30.72 | 22.42 | -8.30 | 43.05 | 31.83 | -11.22 |
| 59 | 24.81 | 81.03 | 78.39 | -2.64 | 33.71 | 17.32 | -16.39 | 45.56 | 24.28 | -21.28 | 65.72 | 36.39 | -29.33 |
| 60 | 21.14 | 74.64 | 66.29 | -8.35 | 22.49 | 7.38 | -15.11 | 32.37 | 12.71 | -19.66 | 49.77 | 23.08 | -26.69 |
| 61 | 11.15 | 78.43 | 74.50 | -3.93 | 16.56 | 10.70 | -5.86 | 22.94 | 15.62 | -7.32 | 33.94 | 24.41 | -9.53 |
| 62 | 30.55 | 80.86 | 79.39 | -1.47 | 37.05 | 33.55 | -3.50 | 50.17 | 46.32 | -3.85 | 72.5 | 68.33 | -4.17 |
| 63 | 63.31 | 81.41 | 79.66 | -1.75 | 80.61 | 71.90 | -8.71 | 109.06 | 98.34 | -10.72 | 157.49 | 143.64 | -13.85 |
| 64 | 34.39 | 81.35 | 79.01 | -2.34 | 42.83 | 28.59 | -14.24 | 57.97 | 39.62 | -18.35 | 83.73 | 58.67 | -25.06 |
| 65 | 38.61 | 81.94 | 79.89 | -2.05 | 53.56 | 36.17 | -17.39 | 71.78 | 49.65 | -22.13 | 102.6 | 72.70 | -29.90 |
| 66 | 29.76 | 81.00 | 78.90 | -2.10 | 29.30 | 20.33 | -8.97 | 39.79 | 28.20 | -11.59 | 57.65 | 41.81 | -15.84 |
| 67 | 64.88 | 81.96 | 80.57 | -1.39 | 85.26 | 29.59 | -55.67 | 114.32 | 40.33 | -73.99 | 163.51 | 58.71 | -104.80 |

# Gustin Solar

Gustin Township

**Exhibit H-2**

Stormwater Calculations

Pre-Construction

May 15, 2026

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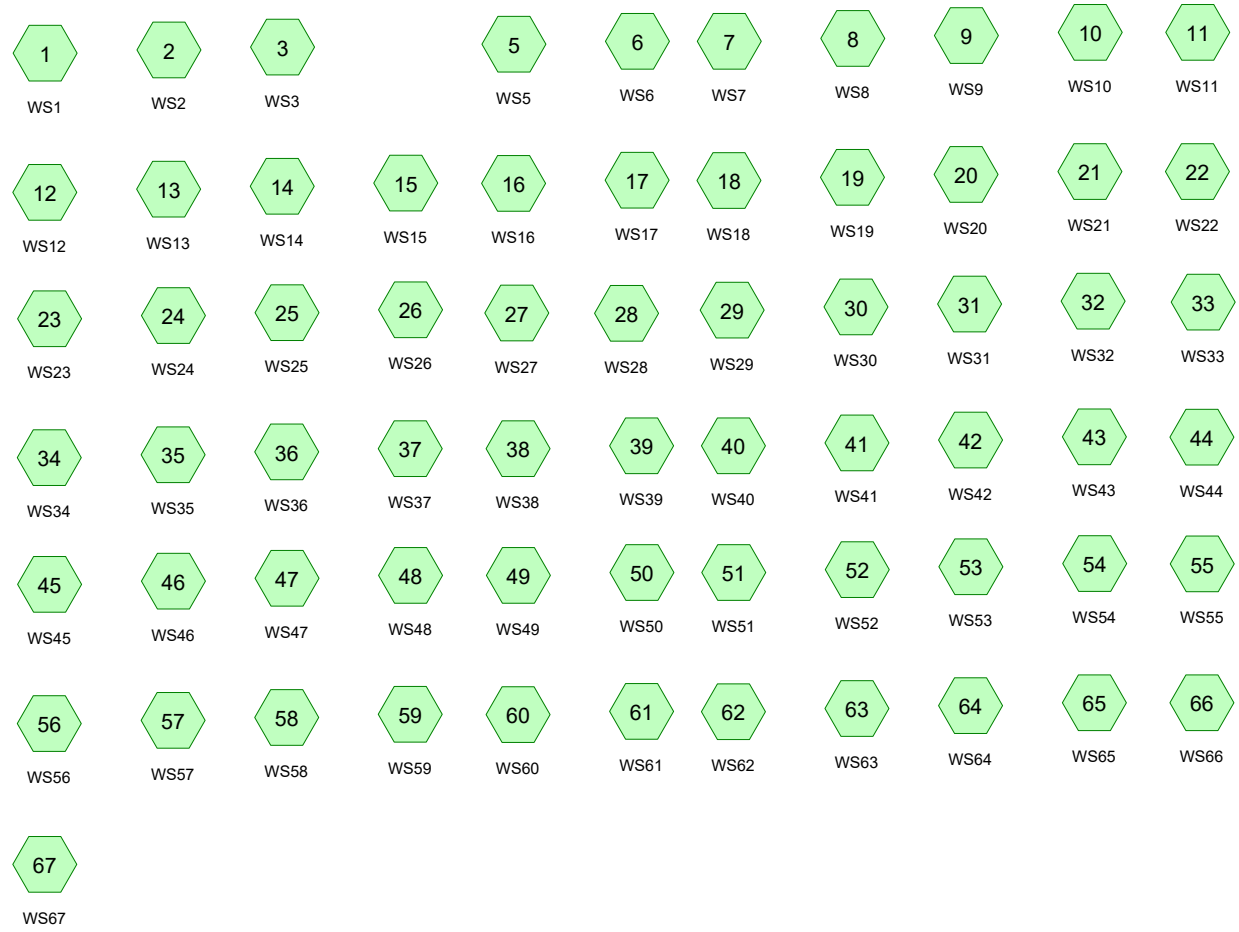



Subcat Reach Pond Link

**Routing Diagram for 187901_GustinSolar_PreCon-HydroCAD**
Prepared by Burns & McDonnell, Printed 5/13/2026
HydroCAD® 10.20-8a s/n 08510 © 2025 HydroCAD Software Solutions LLC

## Rainfall Events Listing (selected events)

| Event# | Event Name | Storm Type | Curve | Mode | Duration (hours) | B/B | Depth (inches) | AMC |
|---|---|---|---|---|---|---|---|---|
| 1 | 10yr24hr | Type II 24-hr | | Default | 24.00 | 1 | 2.99 | 2 |
| 2 | 25yr24hr | Type II 24-hr | | Default | 24.00 | 1 | 3.55 | 2 |
| 3 | 100yr24hr | Type II 24-hr | | Default | 24.00 | 1 | 4.46 | 2 |

## Area Listing (selected nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 23.658 | 62 | Cultivated Crops, HSG A (40, 43, 44, 45) |
| 408.367 | 71 | Cultivated Crops, HSG B (1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 52, 53, 54, 55, 56, 59, 60, 61) |
| 1,241.009 | 81 | Cultivated Crops, HSG D (1, 2, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67) |
| 3.054 | 30 | Deciduous Forest, HSG A (43, 44) |
| 46.429 | 55 | Deciduous Forest, HSG B (1, 3, 5, 6, 8, 10, 12, 13, 14, 15, 27, 34, 37, 39, 40, 42, 54, 56) |
| 51.463 | 77 | Deciduous Forest, HSG D (5, 6, 8, 14, 15, 24, 26, 27, 28, 39, 40, 43, 44, 45, 49, 52, 53, 54, 57, 61) |
| 0.046 | 81 | Developed Low Intensity, HSG A (44) |
| 6.730 | 88 | Developed Low Intensity, HSG B (2, 5, 6, 8, 9, 11, 21, 26, 32, 34, 35, 37, 38, 41, 43) |
| 40.795 | 93 | Developed Low Intensity, HSG D (1, 2, 6, 8, 16, 17, 20, 21, 26, 31, 32, 33, 34, 35, 38, 41, 43, 44, 47, 48, 49, 50, 54, 55, 57, 58, 59, 63, 64, 65, 67) |
| 0.792 | 89 | Developed Medium Intensity, HSG B (8, 21, 34, 35, 41) |
| 4.524 | 94 | Developed Medium Intensity, HSG D (20, 21, 34, 35, 44, 47, 49, 50, 57, 58, 63, 64, 65, 66, 67) |
| 5.048 | 68 | Developed Open Space, HSG B (2, 7, 8, 9, 13, 14, 34, 35, 37, 38, 39, 41, 42) |
| 16.970 | 84 | Developed Open Space, HSG D (1, 2, 6, 7, 8, 16, 17, 19, 23, 24, 26, 34, 35, 38, 41, 43, 47, 48, 49, 50, 54, 55, 57, 58, 59, 63, 64, 65, 67) |
| 8.630 | 80 | Emergent Herbaceous Wetlands, HSG D (24, 41, 47, 48) |
| 0.328 | 30 | Evergreen Forest, HSG A (44) |
| 19.472 | 55 | Evergreen Forest, HSG B (5, 6, 26) |
| 3.439 | 74 | Evergreen Forest, HSG D (5, 7, 8, 27, 34, 43, 44) |
| 13.969 | 63 | Grassland/Herbaceous, HSG B (3, 12, 13, 14, 15, 34) |
| 2.881 | 85 | Grassland/Herbaceous, HSG D (14, 15, 16, 17, 34, 35, 43, 44) |
| 0.008 | 36 | Mixed Forest, HSG A (43, 44) |
| 9.419 | 60 | Mixed Forest, HSG B (3, 5, 6, 10, 13, 37, 39, 43, 53) |
| 9.945 | 76 | Mixed Forest, HSG D (1, 5, 6, 15, 37, 39, 41, 43, 44, 49, 53) |
| 1.112 | 39 | Pasture/Hay, HSG A (44) |
| 52.934 | 61 | Pasture/Hay, HSG B (1, 2, 3, 5, 8, 9, 10, 11, 12, 13, 14, 26, 28, 34, 35, 36, 38, 39, 40, 42, 52, 54, 61) |
| 59.433 | 80 | Pasture/Hay, HSG D (1, 2, 5, 6, 7, 8, 11, 12, 19, 23, 24, 26, 27, 28, 34, 35, 36, 38, 39, 40, 41, 43, 44, 46, 47, 52, 62) |
| 0.356 | 67 | Shrub/Scrub, HSG B (39, 40, 42) |
| 1.279 | 80 | Shrub/Scrub, HSG D (15, 40) |
| 3.701 | 86 | Woody Wetlands, HSG B (5, 6, 8, 26, 32, 60, 61) |
| 49.338 | 86 | Woody Wetlands, HSG D (5, 6, 7, 8, 19, 22, 23, 24, 26, 32, 42, 47, 48, 52, 62, 67) |

## Area Listing (selected nodes) (continued)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| **2,085.129** | **77** | **TOTAL AREA** |

## Soil Listing (selected nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|---|---|---|
| 28.206 | HSG A | 40, 43, 44, 45 |
| 567.216 | HSG B | 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 52, 53, 54, 55, 56, 59, 60, 61 |
| 0.000 | HSG C | |
| 1,489.707 | HSG D | 1, 2, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67 |
| 0.000 | Other | |
| **2,085.129** | | **TOTAL AREA** |

## Ground Covers (selected nodes)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 23.658 | 408.367 | 0.000 | 1,241.009 | 0.000 | 1,673.035 | Cultivated Crops | 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 3.054 | 46.429 | 0.000 | 51.463 | 0.000 | 100.946 | Deciduous Forest | 1, 3, 5, 6, 8, 10, 12, 13, 14, 15, 24, 26, 27, 28, 34, 37, 39, |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.046 | 6.730 | 0.000 | 40.795 | 0.000 | 47.571 | Developed Low Intensity | 1, 2, 5, 6, 8, 9, 11, 16, 17, 20, 21, 26, 31, 32, 33, 34, 35, 3 |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.000 | 0.792 | 0.000 | 4.524 | 0.000 | 5.316 | Developed Medium Intensity | 8, 20, 21, 34, 35, 41, 44, 47, 49, 50, 57, 58, 63, 64, 65, 66 |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.000 | 5.048 | 0.000 | 16.970 | 0.000 | 22.018 | Developed Open Space | 1, 2, 6, 7, 8, 9, 13, 14, 16, 17, 19, 23, 24, 26, 34, 35, 37, 3 |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.000 | 0.000 | 0.000 | 8.630 | 0.000 | 8.630 | Emergent Herbaceous Wetlands | 24, 41, 47, 48 |
| 0.328 | 19.472 | 0.000 | 3.439 | 0.000 | 23.239 | Evergreen Forest | 5, 6, 7, 8, 26, 27, 34, 43, 44 |
| 0.000 | 13.969 | 0.000 | 2.881 | 0.000 | 16.850 | Grassland/Herbaceous | 3, 12, 13, 14, 15 |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.008 | 9.419 | 0.000 | 9.945 | 0.000 | 19.371 | Mixed Forest | 1, 3, 5, 6, 10, 13, 15, 37, 39, 41, 43, 44, 49, 53 |
| 1.112 | 52.934 | 0.000 | 59.433 | 0.000 | 113.479 | Pasture/Hay | 1, 2, 3, 5, 6 |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.000 | 0.356 | 0.000 | 1.279 | 0.000 | 1.636 | Shrub/Scrub | 15, 39, 40, 42 |
| 0.000 | 3.701 | 0.000 | 49.338 | 0.000 | 53.039 | Woody Wetlands | 5, 6, 7, 8, 19, 22, 23, 24, 26, 32, 42, 47, 48, |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| **28.206** | **567.216** | **0.000** | **1,489.707** | **0.000** | **2,085.129** | **TOTAL AREA** | |

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment1: WS1** Runoff Area=13.742 ac 0.00% Impervious Runoff Depth=0.75"
Flow Length=1,870' Tc=25.9 min CN=71 Runoff=8.61 cfs 0.864 af

**Subcatchment2: WS2** Runoff Area=28.882 ac 0.00% Impervious Runoff Depth=0.54"
Flow Length=1,955' Tc=31.0 min CN=66 Runoff=9.85 cfs 1.300 af

**Subcatchment3: WS3** Runoff Area=10.451 ac 0.00% Impervious Runoff Depth=0.27"
Flow Length=1,032' Tc=18.4 min CN=58 Runoff=1.48 cfs 0.236 af

**Subcatchment5: WS5** Runoff Area=56.549 ac 0.00% Impervious Runoff Depth=0.66"
Flow Length=1,761' Tc=67.6 min CN=69 Runoff=14.86 cfs 3.131 af

**Subcatchment6: WS6** Runoff Area=44.409 ac 0.00% Impervious Runoff Depth=0.90"
Flow Length=2,273' Tc=106.2 min CN=74 Runoff=12.54 cfs 3.338 af

**Subcatchment7: WS7** Runoff Area=11.383 ac 0.00% Impervious Runoff Depth=1.18"
Flow Length=436' Tc=28.8 min CN=79 Runoff=11.57 cfs 1.120 af

**Subcatchment8: WS8** Runoff Area=159.778 ac 0.00% Impervious Runoff Depth=1.18"
Flow Length=3,027' Tc=56.4 min CN=79 Runoff=100.99 cfs 15.727 af

**Subcatchment9: WS9** Runoff Area=11.132 ac 0.00% Impervious Runoff Depth=0.75"
Flow Length=888' Tc=15.4 min CN=71 Runoff=9.67 cfs 0.700 af

**Subcatchment10: WS10** Runoff Area=10.435 ac 0.00% Impervious Runoff Depth=0.66"
Flow Length=988' Tc=19.7 min CN=69 Runoff=6.60 cfs 0.578 af

**Subcatchment11: WS11** Runoff Area=16.148 ac 0.00% Impervious Runoff Depth=0.75"
Flow Length=896' Tc=17.1 min CN=71 Runoff=13.23 cfs 1.016 af

**Subcatchment12: WS12** Runoff Area=23.932 ac 0.00% Impervious Runoff Depth=0.50"
Flow Length=2,043' Tc=44.0 min CN=65 Runoff=5.65 cfs 1.000 af

**Subcatchment13: WS13** Runoff Area=19.692 ac 0.00% Impervious Runoff Depth=0.43"
Flow Length=1,856' Tc=46.3 min CN=63 Runoff=3.51 cfs 0.703 af

**Subcatchment14: WS14** Runoff Area=69.773 ac 0.00% Impervious Runoff Depth=0.90"
Flow Length=3,906' Tc=93.3 min CN=74 Runoff=21.73 cfs 5.244 af

**Subcatchment15: WS15** Runoff Area=15.438 ac 0.00% Impervious Runoff Depth=1.12"
Flow Length=1,445' Tc=25.4 min CN=78 Runoff=16.05 cfs 1.443 af

**Subcatchment16: WS16** Runoff Area=47.898 ac 0.00% Impervious Runoff Depth=1.18"
Flow Length=2,796' Tc=41.9 min CN=79 Runoff=37.52 cfs 4.715 af

**Subcatchment17: WS17** Runoff Area=13.311 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=761' Tc=26.5 min CN=81 Runoff=16.01 cfs 1.448 af

**Subcatchment18: WS18** Runoff Area=5.363 ac 0.00% Impervious Runoff Depth=1.06"
Flow Length=218' Tc=9.3 min CN=77 Runoff=8.77 cfs 0.476 af

**Subcatchment19: WS19** Runoff Area=28.615 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=1,569' Tc=35.1 min CN=81 Runoff=28.53 cfs 3.114 af

**Subcatchment20: WS20** Runoff Area=13.311 ac 0.00% Impervious Runoff Depth=1.37"
Flow Length=1,439' Tc=29.6 min CN=82 Runoff=15.72 cfs 1.521 af

**Subcatchment21: WS21** Runoff Area=16.482 ac 0.00% Impervious Runoff Depth=1.44"
Flow Length=1,616' Tc=29.0 min CN=83 Runoff=20.79 cfs 1.976 af

**Subcatchment22: WS22** Runoff Area=38.847 ac 0.00% Impervious Runoff Depth=1.18"
Flow Length=2,651' Tc=61.5 min CN=79 Runoff=23.02 cfs 3.824 af

**Subcatchment23: WS23** Runoff Area=7.796 ac 0.00% Impervious Runoff Depth=1.51"
Flow Length=630' Tc=85.7 min CN=84 Runoff=4.76 cfs 0.980 af

**Subcatchment24: WS24** Runoff Area=27.435 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=845' Tc=36.2 min CN=81 Runoff=26.77 cfs 2.985 af

**Subcatchment25: WS25** Runoff Area=15.083 ac 0.00% Impervious Runoff Depth=1.01"
Flow Length=1,028' Tc=27.6 min CN=76 Runoff=13.06 cfs 1.267 af

**Subcatchment26: WS26** Runoff Area=24.142 ac 0.00% Impervious Runoff Depth=1.37"
Flow Length=1,225' Tc=69.8 min CN=82 Runoff=15.48 cfs 2.758 af

**Subcatchment27: WS27** Runoff Area=22.172 ac 0.00% Impervious Runoff Depth=1.12"
Flow Length=1,177' Tc=39.8 min CN=78 Runoff=16.95 cfs 2.073 af

**Subcatchment28: WS28** Runoff Area=91.586 ac 0.00% Impervious Runoff Depth=1.18"
Flow Length=1,023' Tc=24.1 min CN=79 Runoff=104.45 cfs 9.015 af

**Subcatchment29: WS29** Runoff Area=25.894 ac 0.00% Impervious Runoff Depth=1.06"
Flow Length=837' Tc=23.1 min CN=77 Runoff=26.84 cfs 2.296 af

**Subcatchment30: WS30** Runoff Area=14.220 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=681' Tc=13.6 min CN=73 Runoff=15.35 cfs 1.009 af

**Subcatchment31: WS31** Runoff Area=5.243 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=569' Tc=10.2 min CN=73 Runoff=6.42 cfs 0.372 af

**Subcatchment32: WS32** Runoff Area=10.108 ac 0.00% Impervious Runoff Depth=1.12"
Flow Length=680' Tc=21.0 min CN=78 Runoff=11.85 cfs 0.945 af

**Subcatchment33: WS33** Runoff Area=15.180 ac 0.00% Impervious Runoff Depth=0.95"
Flow Length=1,329' Tc=27.3 min CN=75 Runoff=12.38 cfs 1.207 af

**Subcatchment34: WS34** Runoff Area=58.029 ac 0.00% Impervious Runoff Depth=0.90"
Flow Length=1,963' Tc=34.2 min CN=74 Runoff=37.77 cfs 4.361 af

**Subcatchment35: WS35** Runoff Area=63.197 ac 0.00% Impervious Runoff Depth=0.95"
Flow Length=1,938' Tc=29.1 min CN=75 Runoff=49.44 cfs 5.025 af

**Subcatchment36: WS36** Runoff Area=28.631 ac 0.00% Impervious Runoff Depth=0.90"
Flow Length=1,196' Tc=69.6 min CN=74 Runoff=11.04 cfs 2.152 af

**Subcatchment37: WS37** Runoff Area=10.404 ac 0.00% Impervious Runoff Depth=0.66"
Flow Length=661' Tc=13.2 min CN=69 Runoff=8.34 cfs 0.576 af

**Subcatchment38: WS38** Runoff Area=14.434 ac 0.00% Impervious Runoff Depth=1.06"
Flow Length=629' Tc=14.5 min CN=77 Runoff=19.55 cfs 1.280 af

**Subcatchment39: WS39** Runoff Area=30.742 ac 0.00% Impervious Runoff Depth=0.58"
Flow Length=707' Tc=15.5 min CN=67 Runoff=18.67 cfs 1.486 af

**Subcatchment40: WS40** Runoff Area=31.131 ac 0.00% Impervious Runoff Depth=1.18"
Flow Length=1,419' Tc=23.0 min CN=79 Runoff=36.60 cfs 3.064 af

**Subcatchment41: WS41** Runoff Area=34.979 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=1,292' Tc=25.9 min CN=81 Runoff=42.68 cfs 3.806 af

**Subcatchment42: WS42** Runoff Area=48.465 ac 0.00% Impervious Runoff Depth=0.80"
Flow Length=912' Tc=18.7 min CN=72 Runoff=40.53 cfs 3.240 af

**Subcatchment43: WS43** Runoff Area=33.037 ac 0.00% Impervious Runoff Depth=1.24"
Flow Length=1,479' Tc=30.5 min CN=80 Runoff=34.29 cfs 3.421 af

**Subcatchment44: WS44** Runoff Area=80.873 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=3,050' Tc=84.9 min CN=73 Runoff=24.91 cfs 5.737 af

**Subcatchment45: WS45** Runoff Area=28.790 ac 0.00% Impervious Runoff Depth=1.12"
Flow Length=1,322' Tc=22.6 min CN=78 Runoff=32.26 cfs 2.691 af

**Subcatchment46: WS46** Runoff Area=27.896 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=1,507' Tc=30.3 min CN=81 Runoff=30.73 cfs 3.036 af

**Subcatchment47: WS47** Runoff Area=45.903 ac 0.00% Impervious Runoff Depth=1.37"
Flow Length=1,645' Tc=35.9 min CN=82 Runoff=47.58 cfs 5.245 af

**Subcatchment48: WS48** Runoff Area=43.068 ac 0.00% Impervious Runoff Depth=1.44"
Flow Length=1,506' Tc=71.6 min CN=83 Runoff=28.60 cfs 5.163 af

**Subcatchment49: WS49** Runoff Area=30.898 ac 0.00% Impervious Runoff Depth=1.37"
Flow Length=1,464' Tc=36.4 min CN=82 Runoff=31.71 cfs 3.530 af

**Subcatchment50: WS50** Runoff Area=54.384 ac 0.00% Impervious Runoff Depth=1.37"
Flow Length=2,572' Tc=66.6 min CN=82 Runoff=36.07 cfs 6.214 af

**Subcatchment51: WS51** Runoff Area=22.968 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=1,683' Tc=40.1 min CN=81 Runoff=20.83 cfs 2.499 af

**Subcatchment52: WS52** Runoff Area=46.992 ac 0.00% Impervious Runoff Depth=1.24"
Flow Length=692' Tc=23.4 min CN=80 Runoff=57.86 cfs 4.866 af

**Subcatchment53: WS53** Runoff Area=17.871 ac 0.00% Impervious Runoff Depth=1.06"
Flow Length=2,016' Tc=94.7 min CN=77 Runoff=6.77 cfs 1.585 af

**Subcatchment54: WS54** Runoff Area=27.065 ac 0.00% Impervious Runoff Depth=1.01"
Flow Length=919' Tc=18.4 min CN=76 Runoff=30.34 cfs 2.274 af

**Subcatchment55: WS55** Runoff Area=14.587 ac 0.00% Impervious Runoff Depth=1.12"
Flow Length=896' Tc=18.9 min CN=78 Runoff=18.20 cfs 1.364 af

**Subcatchment56: WS56** Runoff Area=15.054 ac 0.00% Impervious Runoff Depth=1.18"
Flow Length=1,202' Tc=47.9 min CN=79 Runoff=10.72 cfs 1.482 af

**Subcatchment57: WS57** Runoff Area=28.144 ac 0.00% Impervious Runoff Depth=1.44"
Flow Length=1,151' Tc=25.0 min CN=83 Runoff=39.02 cfs 3.374 af

**Subcatchment58: WS58** Runoff Area=14.565 ac 0.00% Impervious Runoff Depth=1.51"
Flow Length=1,070' Tc=21.4 min CN=84 Runoff=23.35 cfs 1.830 af

**Subcatchment59: WS59** Runoff Area=24.806 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=1,227' Tc=21.8 min CN=81 Runoff=33.71 cfs 2.699 af

**Subcatchment60: WS60** Runoff Area=21.140 ac 0.00% Impervious Runoff Depth=0.95"
Flow Length=1,076' Tc=18.0 min CN=75 Runoff=22.49 cfs 1.681 af

**Subcatchment61: WS61** Runoff Area=11.152 ac 0.00% Impervious Runoff Depth=1.12"
Flow Length=924' Tc=13.6 min CN=78 Runoff=16.56 cfs 1.042 af

**Subcatchment62: WS62** Runoff Area=30.546 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=883' Tc=26.2 min CN=81 Runoff=37.05 cfs 3.324 af

**Subcatchment63: WS63** Runoff Area=63.313 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=883' Tc=24.2 min CN=81 Runoff=80.61 cfs 6.890 af

**Subcatchment64: WS64** Runoff Area=34.388 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=1,314' Tc=25.1 min CN=81 Runoff=42.83 cfs 3.742 af

**Subcatchment65: WS65** Runoff Area=38.606 ac 0.00% Impervious Runoff Depth=1.37"
Flow Length=1,153' Tc=23.0 min CN=82 Runoff=53.56 cfs 4.411 af

**Subcatchment66: WS66** Runoff Area=29.762 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=1,456' Tc=35.7 min CN=81 Runoff=29.30 cfs 3.239 af

**Subcatchment67: WS67** Runoff Area=64.880 ac 0.00% Impervious Runoff Depth=1.37"
Flow Length=1,126' Tc=25.1 min CN=82 Runoff=85.26 cfs 7.413 af

**Total Runoff Area = 2,085.129 ac Runoff Volume = 192.121 af Average Runoff Depth = 1.11"**
**100.00% Pervious = 2,085.129 ac 0.00% Impervious = 0.000 ac**

## Summary for Subcatchment 1: WS1

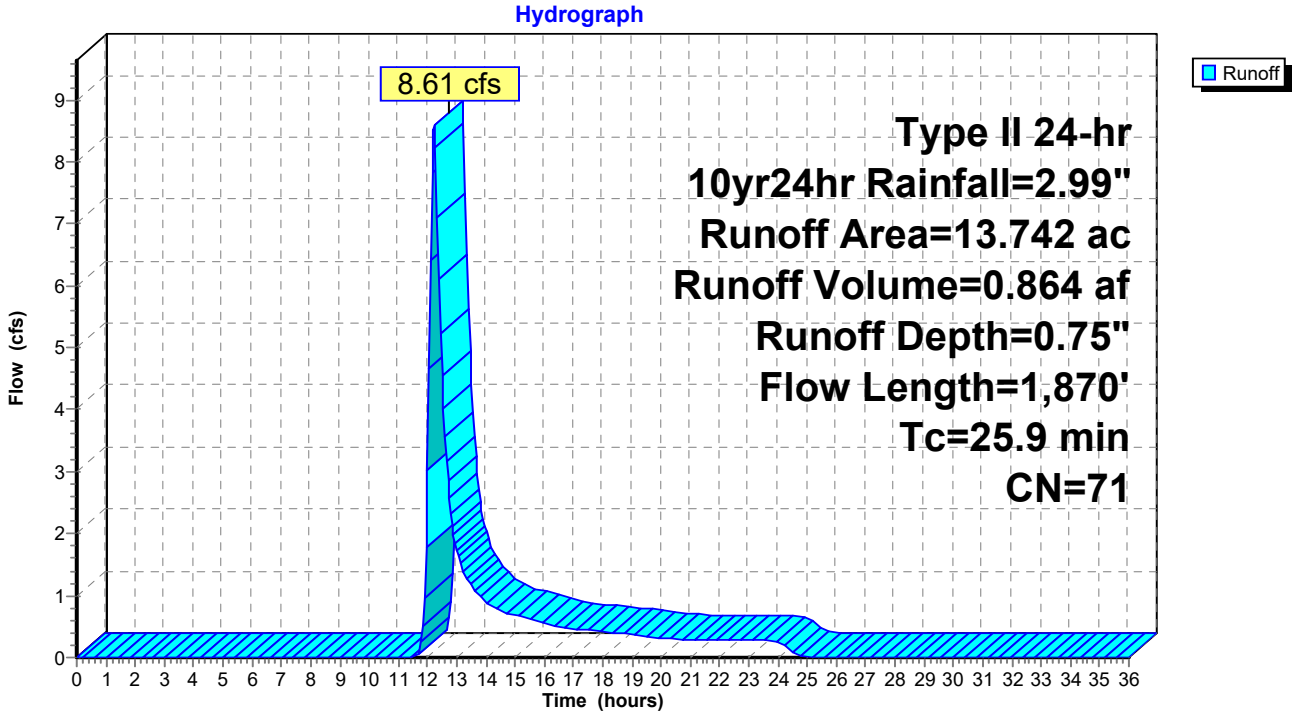
Runoff = 8.61 cfs @ 12.22 hrs, Volume= 0.864 af, Depth= 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.033 | 93 | Developed Low Intensity, HSG D |
| * | 0.085 | 84 | Developed Open Space, HSG D |
| * | 0.188 | 81 | Cultivated Crops, HSG D |
| * | 0.133 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.522 | 76 | Mixed Forest, HSG D |
| * | 0.667 | 81 | Cultivated Crops, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.215 | 81 | Cultivated Crops, HSG D |
| * | 0.007 | 71 | Cultivated Crops, HSG B |
| * | 0.222 | 81 | Cultivated Crops, HSG D |
| * | 0.424 | 80 | Pasture/Hay, HSG D |
| * | 0.039 | 71 | Cultivated Crops, HSG B |
| * | 0.424 | 71 | Cultivated Crops, HSG B |
| * | 0.342 | 81 | Cultivated Crops, HSG D |
| * | 0.001 | 55 | Deciduous Forest, HSG B |
| * | 0.000 | 55 | Deciduous Forest, HSG B |
| * | 0.045 | 61 | Pasture/Hay, HSG B |
| * | 3.348 | 80 | Pasture/Hay, HSG D |
| * | 0.177 | 61 | Pasture/Hay, HSG B |
| * | 5.881 | 61 | Pasture/Hay, HSG B |
| * | 0.322 | 71 | Cultivated Crops, HSG B |
| | 13.742 | 71 | Weighted Average |
| | 13.742 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.3 | 100 | 0.0247 | 0.32 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.2 | 110 | 0.0292 | 1.54 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 252 | 0.0466 | 1.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 454 | 0.0505 | 1.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.7 | 379 | 0.0372 | 1.35 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 51 | 0.0253 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 11 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 155 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 152 | 0.0233 | 1.37 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 98 | 0.0107 | 2.10 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.1 | 109 | 0.1123 | 1.68 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 25.9 | 1,870 | Total | | | |

## Subcatchment 1: WS1



## Summary for Subcatchment 2: WS2

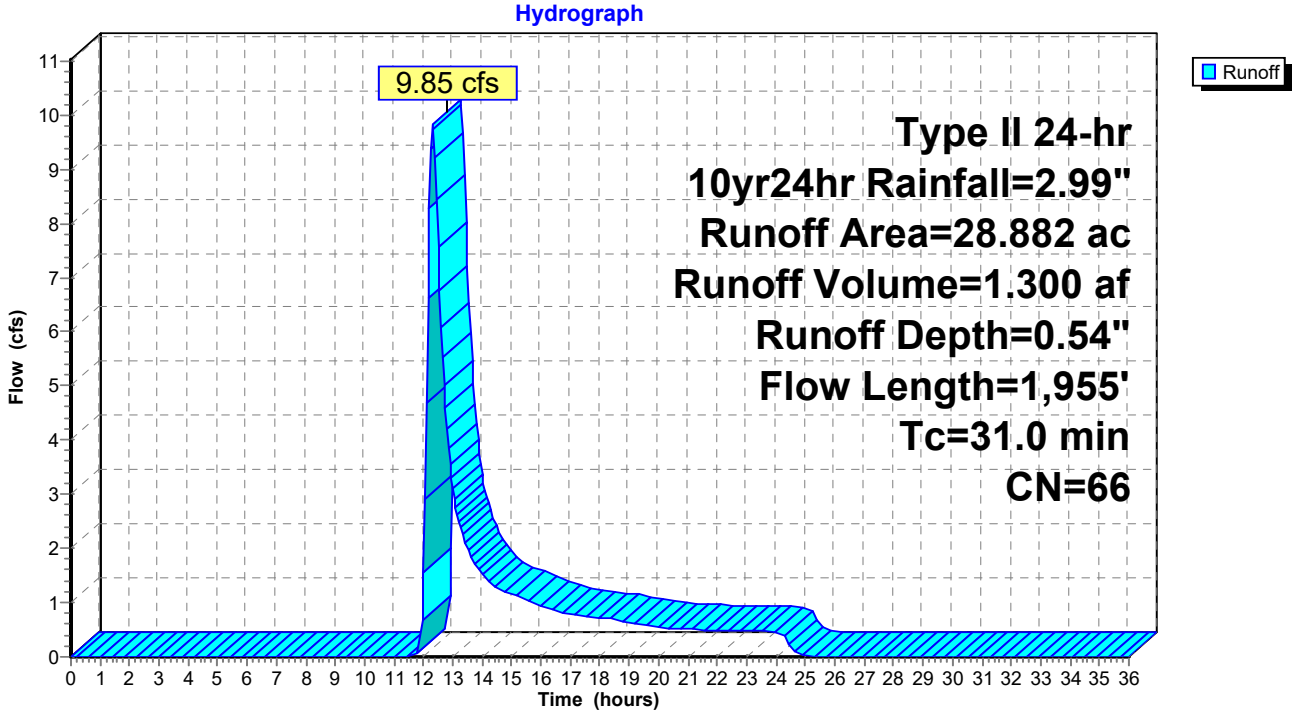
Runoff = 9.85 cfs @ 12.32 hrs, Volume= 1.300 af, Depth= 0.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.021 | 84 | Developed Open Space, HSG D |
| * | 0.697 | 80 | Pasture/Hay, HSG D |
| * | 0.356 | 80 | Pasture/Hay, HSG D |
| * | 0.101 | 93 | Developed Low Intensity, HSG D |
| * | 0.202 | 71 | Cultivated Crops, HSG B |
| * | 0.002 | 71 | Cultivated Crops, HSG B |
| * | 0.119 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 71 | Cultivated Crops, HSG B |
| * | 0.125 | 80 | Pasture/Hay, HSG D |
| * | 1.431 | 61 | Pasture/Hay, HSG B |
| * | 3.409 | 81 | Cultivated Crops, HSG D |
| * | 2.381 | 71 | Cultivated Crops, HSG B |
| * | 0.220 | 81 | Cultivated Crops, HSG D |
| * | 0.069 | 88 | Developed Low Intensity, HSG B |
| * | 0.210 | 88 | Developed Low Intensity, HSG B |
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.038 | 68 | Developed Open Space, HSG B |
| * | 0.658 | 61 | Pasture/Hay, HSG B |
| * | 0.312 | 80 | Pasture/Hay, HSG D |
| * | 4.602 | 61 | Pasture/Hay, HSG B |
| * | 4.093 | 61 | Pasture/Hay, HSG B |
| * | 9.208 | 61 | Pasture/Hay, HSG B |
| * | 0.405 | 71 | Cultivated Crops, HSG B |
| | 28.882 | 66 | Weighted Average |
| | 28.882 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.8 | 100 | 0.0320 | 0.35 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 71 | 0.0205 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.6 | 363 | 0.0347 | 1.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.7 | 546 | 0.0527 | 1.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 150 | 0.0290 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 116 | 0.0116 | 0.97 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 153 | 0.0317 | 1.60 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 37 | 0.0175 | 1.19 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 254 | 0.0179 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.3 | 164 | 0.0054 | 0.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 31.0 | 1,955 | Total | | | |

## Subcatchment 2: WS2



## Summary for Subcatchment 3: WS3

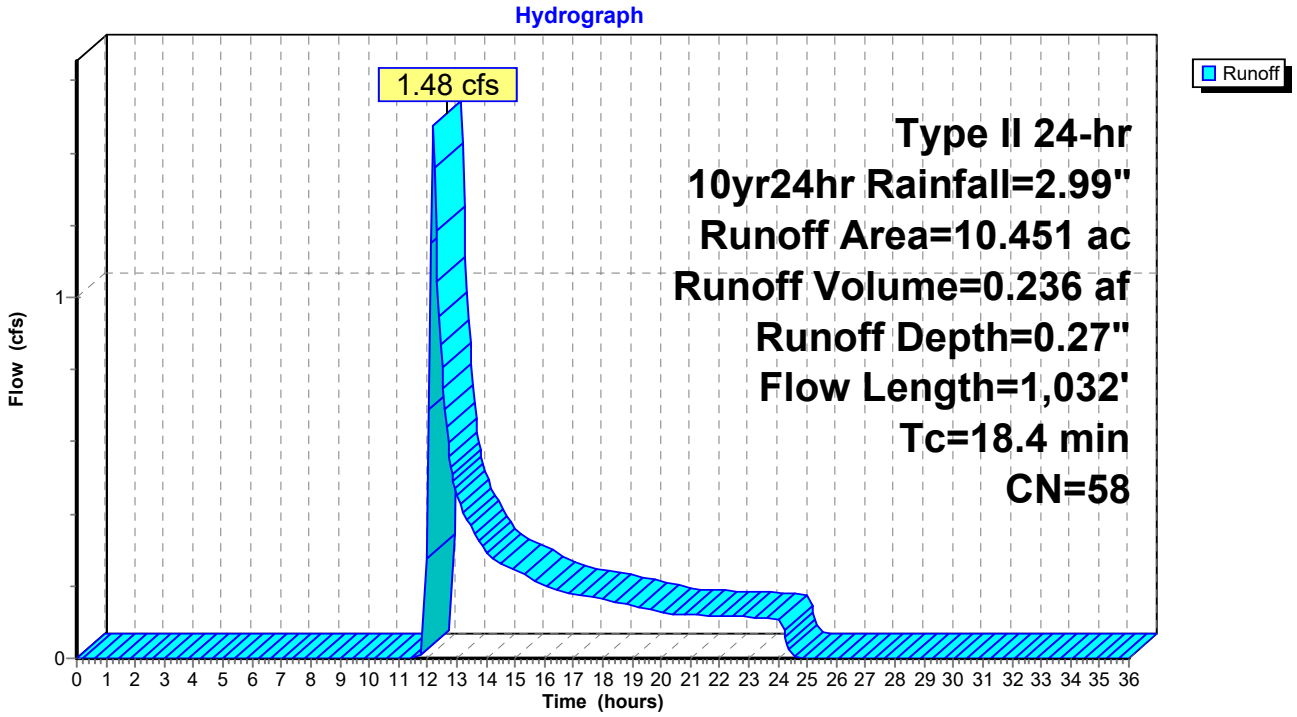
Runoff = 1.48 cfs @ 12.19 hrs, Volume= 0.236 af, Depth= 0.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.119 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.225 | 61 | Pasture/Hay, HSG B |
| * | 0.248 | 61 | Pasture/Hay, HSG B |
| * | 2.121 | 61 | Pasture/Hay, HSG B |
| * | 0.732 | 71 | Cultivated Crops, HSG B |
| * | 0.126 | 71 | Cultivated Crops, HSG B |
| * | 0.180 | 71 | Cultivated Crops, HSG B |
| * | 0.003 | 60 | Mixed Forest, HSG B |
| * | 0.020 | 55 | Deciduous Forest, HSG B |
| * | 0.038 | 55 | Deciduous Forest, HSG B |
| * | 1.353 | 55 | Deciduous Forest, HSG B |
| * | 5.170 | 55 | Deciduous Forest, HSG B |
| * | 0.115 | 60 | Mixed Forest, HSG B |
| | 10.451 | 58 | Weighted Average |
| | 10.451 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 100 | 0.0365 | 0.37 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.8 | 170 | 0.0297 | 1.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 28 | 0.0323 | 1.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.1 | 441 | 0.0434 | 1.04 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.7 | 292 | 0.0430 | 1.04 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 18.4 | 1,032 | Total | | | |

## Subcatchment 3: WS3



## Summary for Subcatchment 5: WS5

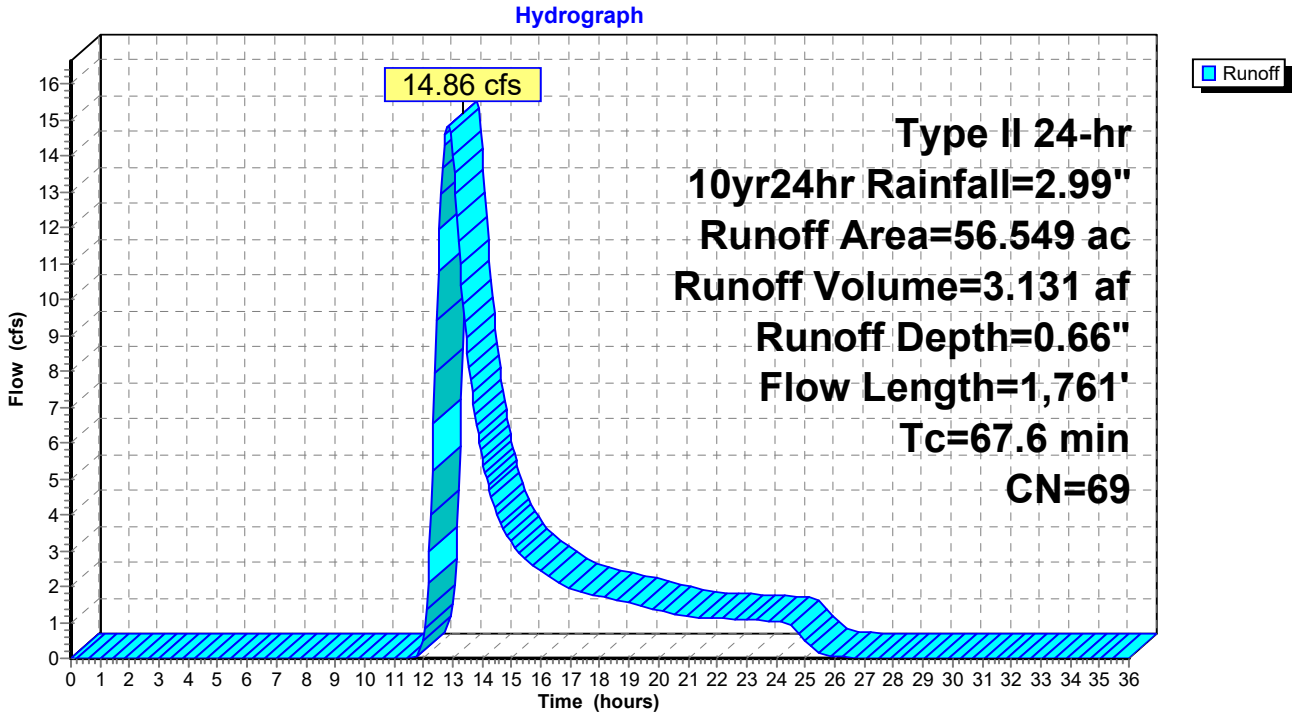
Runoff = 14.86 cfs @ 12.84 hrs, Volume= 3.131 af, Depth= 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.170 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 77 | Deciduous Forest, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.207 | 77 | Deciduous Forest, HSG D |
| * | 0.320 | 80 | Pasture/Hay, HSG D |
| * | 0.222 | 55 | Deciduous Forest, HSG B |
| * | 0.065 | 60 | Mixed Forest, HSG B |
| * | 0.041 | 76 | Mixed Forest, HSG D |
| * | 1.273 | 55 | Deciduous Forest, HSG B |
| * | 0.197 | 77 | Deciduous Forest, HSG D |
| * | 1.557 | 55 | Evergreen Forest, HSG B |
| * | 1.056 | 71 | Cultivated Crops, HSG B |
| * | 5.655 | 81 | Cultivated Crops, HSG D |
| * | 3.495 | 71 | Cultivated Crops, HSG B |
| * | 7.748 | 81 | Cultivated Crops, HSG D |
| * | 0.203 | 55 | Deciduous Forest, HSG B |
| * | 0.134 | 55 | Deciduous Forest, HSG B |
| * | 0.221 | 61 | Pasture/Hay, HSG B |
| * | 1.557 | 61 | Pasture/Hay, HSG B |
| * | 2.669 | 55 | Deciduous Forest, HSG B |
| * | 0.222 | 55 | Deciduous Forest, HSG B |
| * | 0.222 | 86 | Woody Wetlands, HSG B |
| * | 0.667 | 55 | Deciduous Forest, HSG B |
| * | 0.061 | 86 | Woody Wetlands, HSG B |
| * | 0.222 | 60 | Mixed Forest, HSG B |
| * | 0.667 | 86 | Woody Wetlands, HSG B |
| * | 0.139 | 86 | Woody Wetlands, HSG B |
| * | 0.083 | 86 | Woody Wetlands, HSG D |
| * | 12.485 | 55 | Evergreen Forest, HSG B |
| * | 0.508 | 55 | Evergreen Forest, HSG B |
| * | 0.018 | 55 | Evergreen Forest, HSG B |
| * | 0.028 | 74 | Evergreen Forest, HSG D |
| * | 0.143 | 74 | Evergreen Forest, HSG D |
| * | 0.066 | 55 | Evergreen Forest, HSG B |
| * | 0.024 | 55 | Evergreen Forest, HSG B |
| * | 0.037 | 74 | Evergreen Forest, HSG D |
| * | 0.171 | 55 | Deciduous Forest, HSG B |
| * | 0.095 | 55 | Deciduous Forest, HSG B |
| * | 0.875 | 77 | Deciduous Forest, HSG D |
| * | 0.723 | 60 | Mixed Forest, HSG B |
| * | 0.070 | 60 | Mixed Forest, HSG B |
| * | 0.888 | 76 | Mixed Forest, HSG D |
| * | 1.192 | 61 | Pasture/Hay, HSG B |
| * | 0.918 | 80 | Pasture/Hay, HSG D |
| * | 0.033 | 88 | Developed Low Intensity, HSG B |
| * | 0.394 | 71 | Cultivated Crops, HSG B |
| * | 1.346 | 71 | Cultivated Crops, HSG B |
| * | 6.790 | 81 | Cultivated Crops, HSG D |
| | 56.549 | 69 | Weighted Average |
| | 56.549 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.7 | 100 | 0.0070 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.5 | 83 | 0.0038 | 0.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 102 | 0.0264 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.9 | 134 | 0.0008 | 0.14 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 5.5 | 80 | 0.0023 | 0.24 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.4 | 135 | 0.0174 | 0.66 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.6 | 134 | 0.0286 | 0.84 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.1 | 159 | 0.0168 | 0.65 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.6 | 79 | 0.0278 | 0.83 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 78 | 0.0342 | 0.92 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 5.3 | 170 | 0.0116 | 0.54 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.1 | 124 | 0.0178 | 0.67 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.0 | 90 | 0.0227 | 0.75 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.1 | 66 | 0.0218 | 1.03 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 108 | 0.0125 | 0.56 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 12 | 0.0030 | 0.38 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 107 | 0.0021 | 0.32 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 67.6 | 1,761 | Total | | | |

## Subcatchment 5: WS5



## Summary for Subcatchment 6: WS6

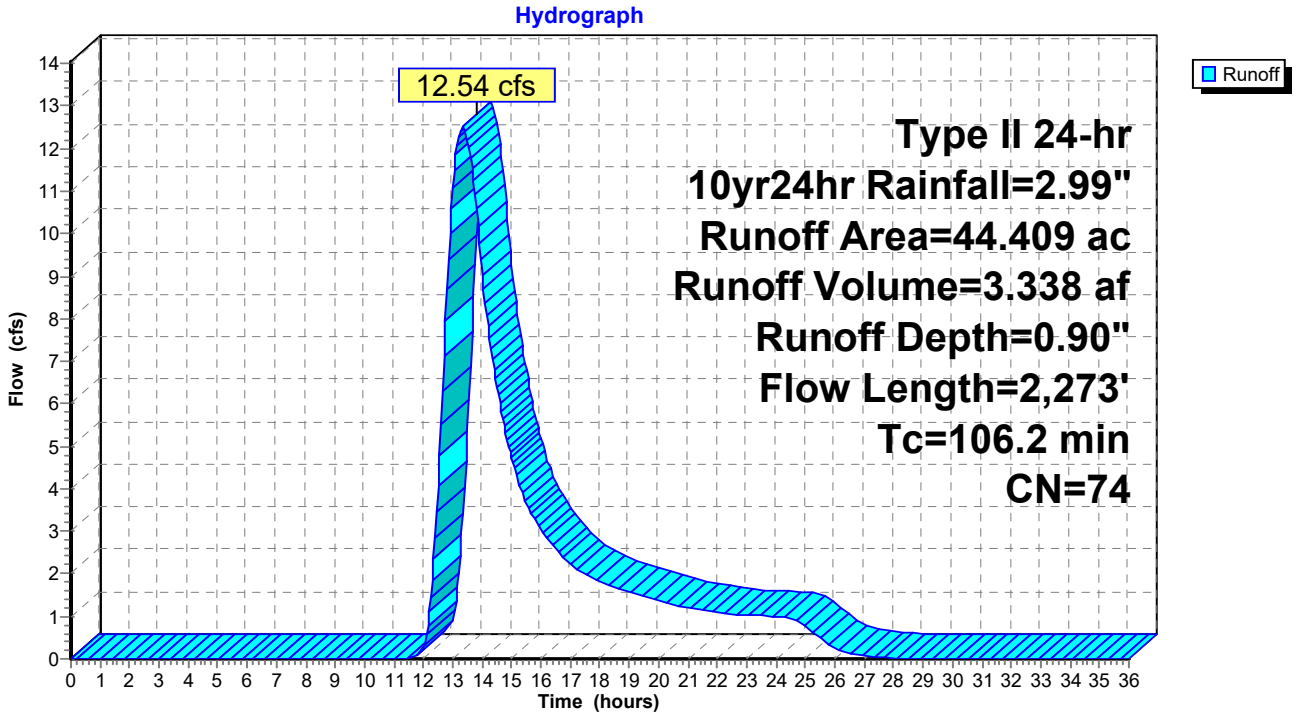
Runoff = 12.54 cfs @ 13.34 hrs, Volume= 3.338 af, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 0.213 | 80 | Pasture/Hay, HSG D |
| * | 1.057 | 71 | Cultivated Crops, HSG B |
| * | 1.741 | 71 | Cultivated Crops, HSG B |
| * | 6.750 | 71 | Cultivated Crops, HSG B |
| * | 7.912 | 81 | Cultivated Crops, HSG D |
| * | 0.978 | 55 | Deciduous Forest, HSG B |
| * | 0.803 | 60 | Mixed Forest, HSG B |
| * | 0.087 | 60 | Mixed Forest, HSG B |
| * | 0.115 | 55 | Evergreen Forest, HSG B |
| * | 0.108 | 55 | Evergreen Forest, HSG B |
| * | 0.125 | 60 | Mixed Forest, HSG B |
| * | 0.130 | 55 | Evergreen Forest, HSG B |
| * | 0.175 | 86 | Woody Wetlands, HSG B |
| * | 0.654 | 86 | Woody Wetlands, HSG B |
| * | 3.259 | 55 | Evergreen Forest, HSG B |
| * | 0.361 | 55 | Evergreen Forest, HSG B |
| * | 0.062 | 55 | Evergreen Forest, HSG B |
| * | 0.004 | 55 | Evergreen Forest, HSG B |
| * | 0.689 | 55 | Evergreen Forest, HSG B |
| * | 1.060 | 55 | Deciduous Forest, HSG B |
| * | 0.150 | 77 | Deciduous Forest, HSG D |
| * | 0.880 | 60 | Mixed Forest, HSG B |
| * | 0.362 | 76 | Mixed Forest, HSG D |
| * | 0.188 | 86 | Woody Wetlands, HSG B |
| * | 1.351 | 86 | Woody Wetlands, HSG B |
| * | 0.632 | 86 | Woody Wetlands, HSG D |
| * | 0.225 | 84 | Developed Open Space, HSG D |
| * | 0.047 | 93 | Developed Low Intensity, HSG D |
| * | 0.128 | 84 | Developed Open Space, HSG D |
| * | 0.049 | 93 | Developed Low Intensity, HSG D |
| * | 0.198 | 88 | Developed Low Intensity, HSG B |
| * | 0.345 | 93 | Developed Low Intensity, HSG D |
| * | 0.790 | 71 | Cultivated Crops, HSG B |
| * | 0.097 | 71 | Cultivated Crops, HSG B |
| * | 12.570 | 81 | Cultivated Crops, HSG D |
| | 44.409 | 74 | Weighted Average |
| | 44.409 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 22.5 | 100 | 0.0294 | 0.07 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.7 | 86 | 0.0286 | 0.85 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 6.9 | 252 | 0.0147 | 0.61 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.9 | 168 | 0.0374 | 0.97 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 21.4 | 107 | 0.0003 | 0.08 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 23.6 | 663 | 0.0027 | 0.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.4 | 745 | 0.0032 | 0.51 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 150 | 0.0098 | 0.89 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 106.2 | 2,273 | Total | | | |

## Subcatchment 6: WS6



## Summary for Subcatchment 7: WS7

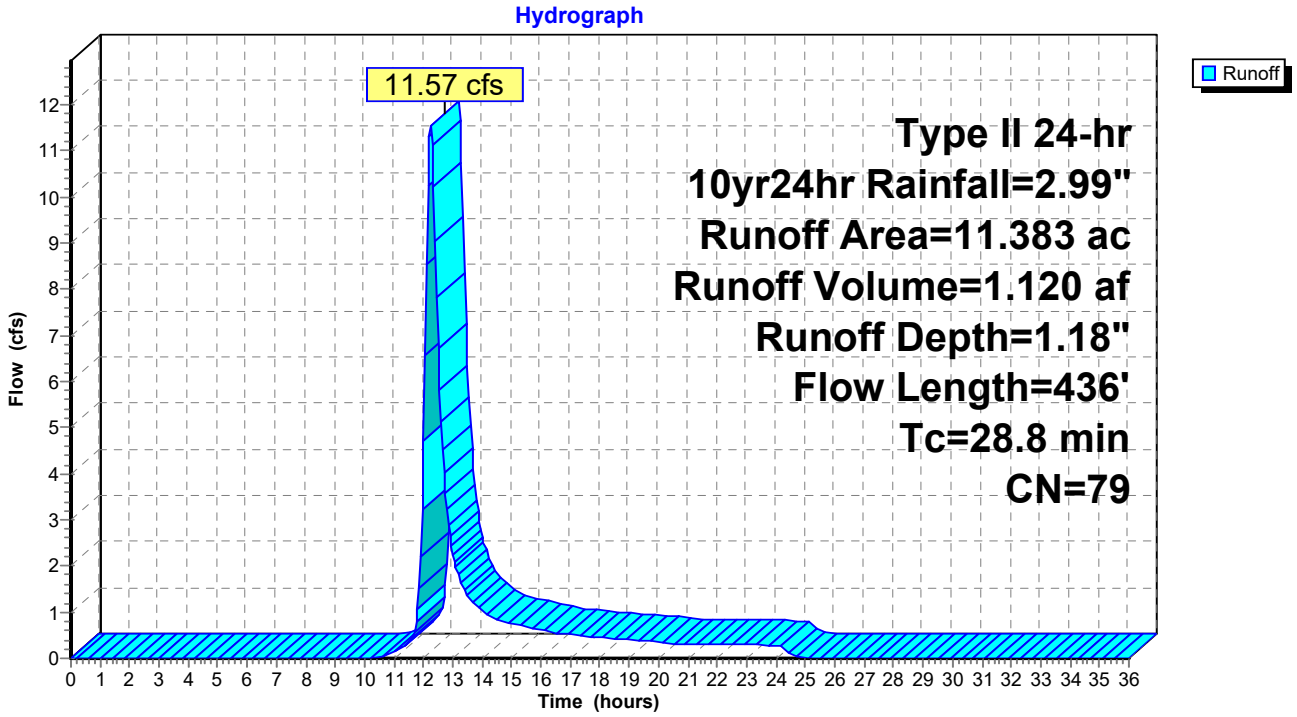
Runoff = 11.57 cfs @ 12.24 hrs, Volume= 1.120 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.227 | 74 | Evergreen Forest, HSG D |
| * | 2.915 | 80 | Pasture/Hay, HSG D |
| * | 0.262 | 80 | Pasture/Hay, HSG D |
| * | 0.052 | 84 | Developed Open Space, HSG D |
| * | 0.034 | 68 | Developed Open Space, HSG B |
| * | 0.019 | 86 | Woody Wetlands, HSG D |
| * | 0.173 | 81 | Cultivated Crops, HSG D |
| * | 6.417 | 81 | Cultivated Crops, HSG D |
| * | 1.284 | 71 | Cultivated Crops, HSG B |
| | 11.383 | 79 | Weighted Average |
| | 11.383 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 22.2 | 100 | 0.0007 | 0.08 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 20 | 0.0139 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 104 | 0.0155 | 1.12 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 69 | 0.0074 | 0.78 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.3 | 144 | 0.0108 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 28.8 | 436 | Total | | | |

## Subcatchment 7: WS7



## Summary for Subcatchment 8: WS8

Runoff = 100.99 cfs @ 12.60 hrs, Volume= 15.727 af, Depth= 1.18"

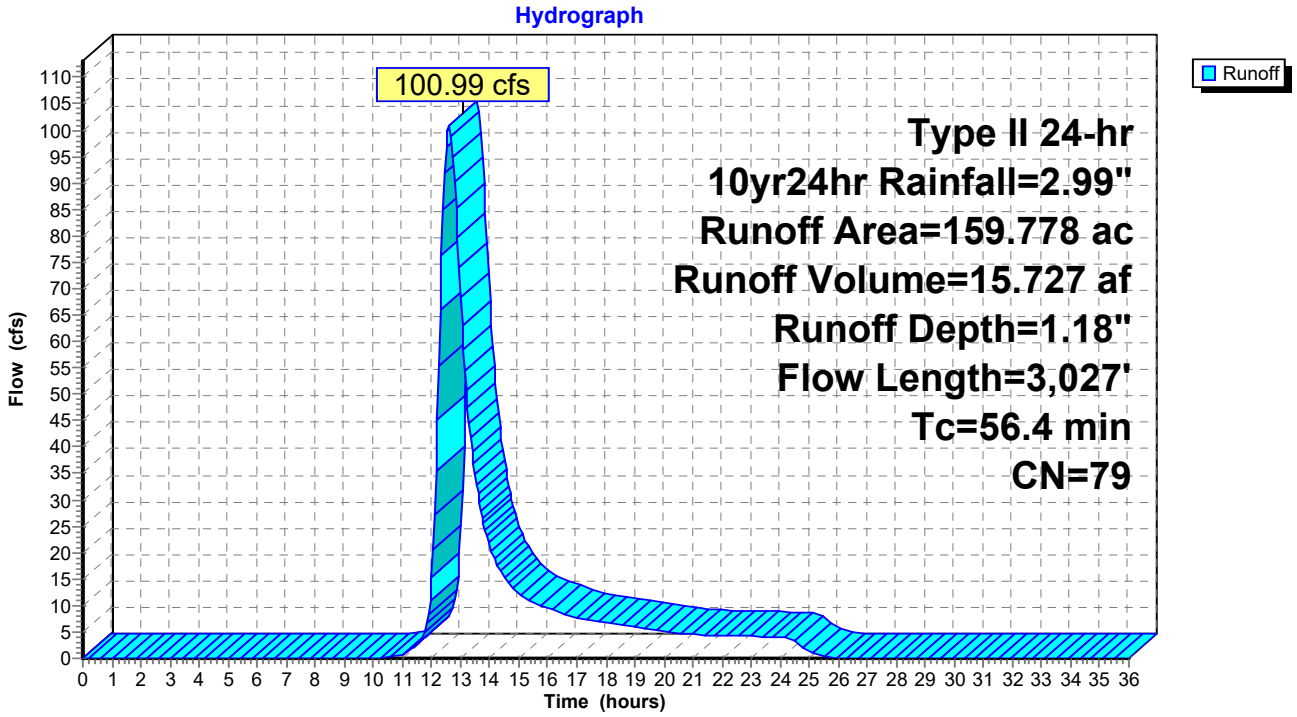
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.381 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 55 | Deciduous Forest, HSG B |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 55 | Deciduous Forest, HSG B |
| * | 0.445 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 80 | Pasture/Hay, HSG D |
| * | 1.334 | 80 | Pasture/Hay, HSG D |
| * | 0.890 | 77 | Deciduous Forest, HSG D |
| * | 1.775 | 80 | Pasture/Hay, HSG D |
| * | 0.468 | 61 | Pasture/Hay, HSG B |
| * | 1.837 | 80 | Pasture/Hay, HSG D |
| * | 0.038 | 80 | Pasture/Hay, HSG D |
| * | 0.662 | 74 | Evergreen Forest, HSG D |
| * | 4.441 | 80 | Pasture/Hay, HSG D |
| * | 1.655 | 61 | Pasture/Hay, HSG B |
| * | 0.489 | 68 | Developed Open Space, HSG B |
| * | 0.047 | 68 | Developed Open Space, HSG B |
| * | 0.667 | 68 | Developed Open Space, HSG B |
| * | 2.294 | 61 | Pasture/Hay, HSG B |
| * | 0.010 | 80 | Pasture/Hay, HSG D |
| * | 0.121 | 68 | Developed Open Space, HSG B |
| * | 0.097 | 68 | Developed Open Space, HSG B |
| * | 0.074 | 68 | Developed Open Space, HSG B |
| * | 0.593 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 89 | Developed Medium Intensity, HSG B |
| * | 0.021 | 68 | Developed Open Space, HSG B |
| * | 0.235 | 93 | Developed Low Intensity, HSG D |
| * | 0.045 | 88 | Developed Low Intensity, HSG B |
| * | 1.339 | 88 | Developed Low Intensity, HSG B |
| * | 0.065 | 86 | Woody Wetlands, HSG D |
| * | 0.040 | 86 | Woody Wetlands, HSG D |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| * | 0.092 | 86 | Woody Wetlands, HSG D |
| * | 3.011 | 86 | Woody Wetlands, HSG D |
| * | 0.229 | 86 | Woody Wetlands, HSG D |
| * | 10.236 | 86 | Woody Wetlands, HSG D |
| * | 1.891 | 86 | Woody Wetlands, HSG D |
| * | 8.521 | 71 | Cultivated Crops, HSG B |
| * | 6.911 | 81 | Cultivated Crops, HSG D |
| * | 7.655 | 71 | Cultivated Crops, HSG B |
| * | 4.194 | 81 | Cultivated Crops, HSG D |
| * | 0.024 | 81 | Cultivated Crops, HSG D |
| * | 2.120 | 71 | Cultivated Crops, HSG B |
| * | 74.112 | 81 | Cultivated Crops, HSG D |
| * | 11.731 | 81 | Cultivated Crops, HSG D |
| * | 7.102 | 71 | Cultivated Crops, HSG B |
| * | 0.055 | 61 | Pasture/Hay, HSG B |
| * | 0.025 | 80 | Pasture/Hay, HSG D |

159.778 79 Weighted Average
159.778 100.00% Pervious Area

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.8 | 100 | 0.0053 | 0.17 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.5 | 185 | 0.0096 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 433 | 0.0381 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 388 | 0.0321 | 1.61 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.8 | 410 | 0.0124 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 100 | 0.0119 | 0.98 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 178 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 180 | 0.0063 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.2 | 232 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.6 | 260 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 160 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.4 | 258 | 0.0194 | 1.25 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 143 | 0.0170 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 56.4 | 3,027 | Total | | | |

## Subcatchment 8: WS8



## Summary for Subcatchment 9: WS9

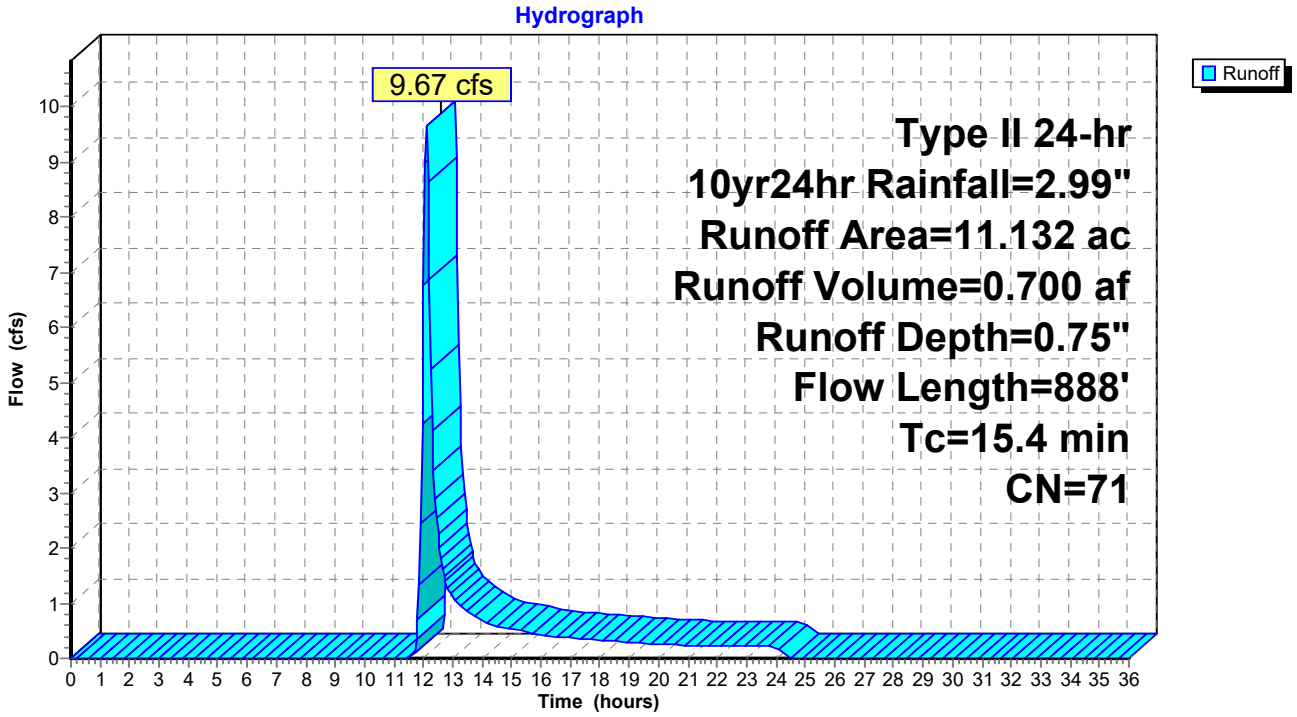
Runoff = 9.67 cfs @ 12.10 hrs, Volume= 0.700 af, Depth= 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.016 | 68 | Developed Open Space, HSG B |
| * | 0.042 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.222 | 88 | Developed Low Intensity, HSG B |
| * | 0.137 | 88 | Developed Low Intensity, HSG B |
| * | 0.131 | 61 | Pasture/Hay, HSG B |
| * | 10.558 | 71 | Cultivated Crops, HSG B |
| | 11.132 | 71 | Weighted Average |
| | 11.132 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.7 | 100 | 0.0136 | 0.25 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.3 | 237 | 0.0381 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 285 | 0.0344 | 1.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 265 | 0.0201 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.4 | 888 | Total | | | |

## Subcatchment 9: WS9



## Summary for Subcatchment 10: WS10

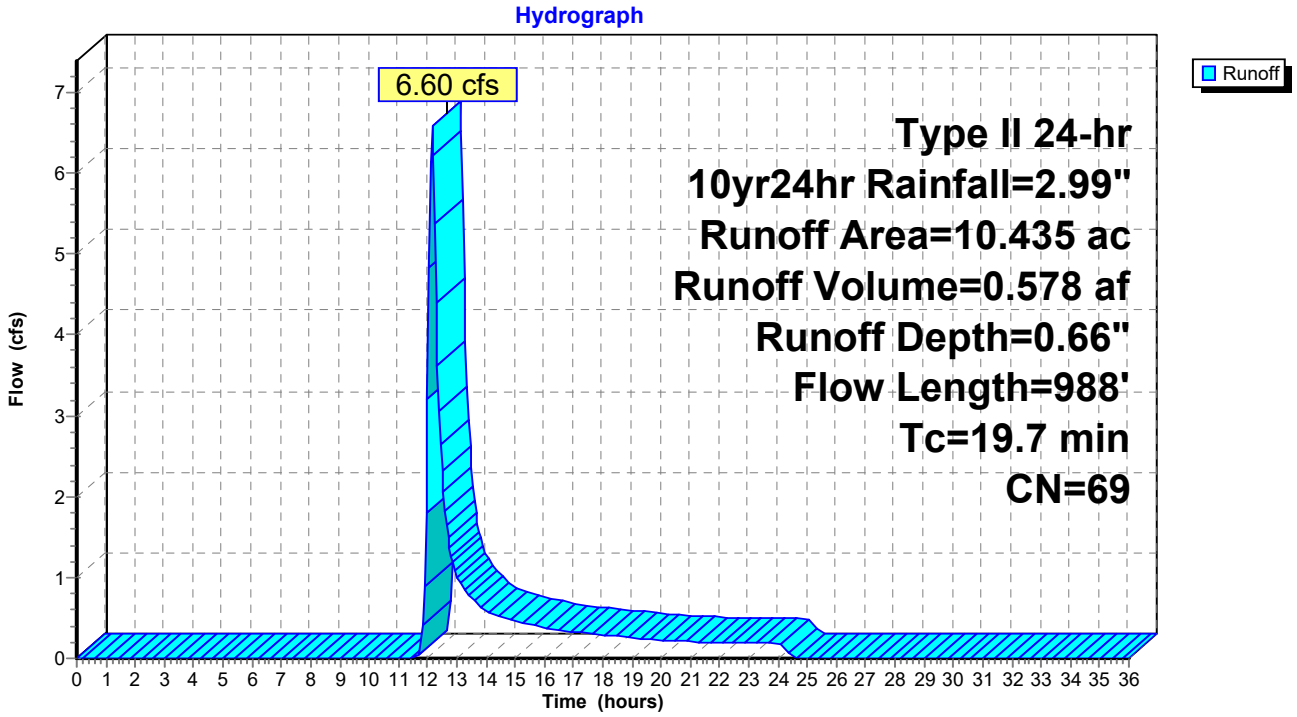
Runoff = 6.60 cfs @ 12.15 hrs, Volume= 0.578 af, Depth= 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.140 | 61 | Pasture/Hay, HSG B |
| * | 0.101 | 55 | Deciduous Forest, HSG B |
| * | 0.140 | 60 | Mixed Forest, HSG B |
| * | 1.044 | 55 | Deciduous Forest, HSG B |
| * | 9.009 | 71 | Cultivated Crops, HSG B |
| | 10.435 | 69 | Weighted Average |
| | 10.435 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.9 | 72 | 0.0265 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.3 | 28 | 0.0062 | 0.14 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.8 | 239 | 0.0132 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 272 | 0.0180 | 1.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 226 | 0.0204 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 151 | 0.0188 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 19.7 | 988 | Total | | | |

## Subcatchment 10: WS10



## Summary for Subcatchment 11: WS11

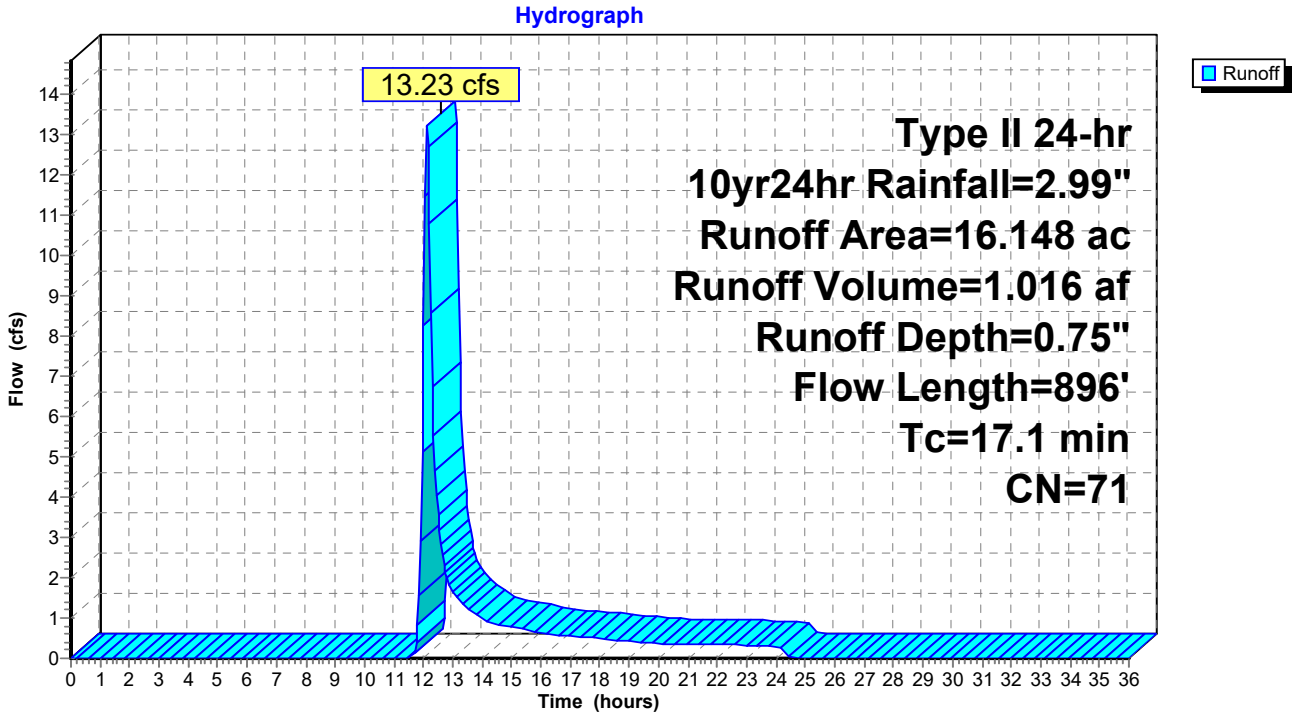
Runoff = 13.23 cfs @ 12.11 hrs, Volume= 1.016 af, Depth= 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.211 | 88 | Developed Low Intensity, HSG B |
| * | 0.445 | 61 | Pasture/Hay, HSG B |
| * | 0.005 | 61 | Pasture/Hay, HSG B |
| * | 0.050 | 80 | Pasture/Hay, HSG D |
| * | 0.048 | 61 | Pasture/Hay, HSG B |
| * | 15.252 | 71 | Cultivated Crops, HSG B |
| * | 0.137 | 81 | Cultivated Crops, HSG D |
| | 16.148 | 71 | Weighted Average |
| | 16.148 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.2 | 100 | 0.0113 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 5.7 | 488 | 0.0250 | 1.42 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 308 | 0.0183 | 1.22 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 17.1 | 896 | Total | | | |

## Subcatchment 11: WS11



## Summary for Subcatchment 12: WS12

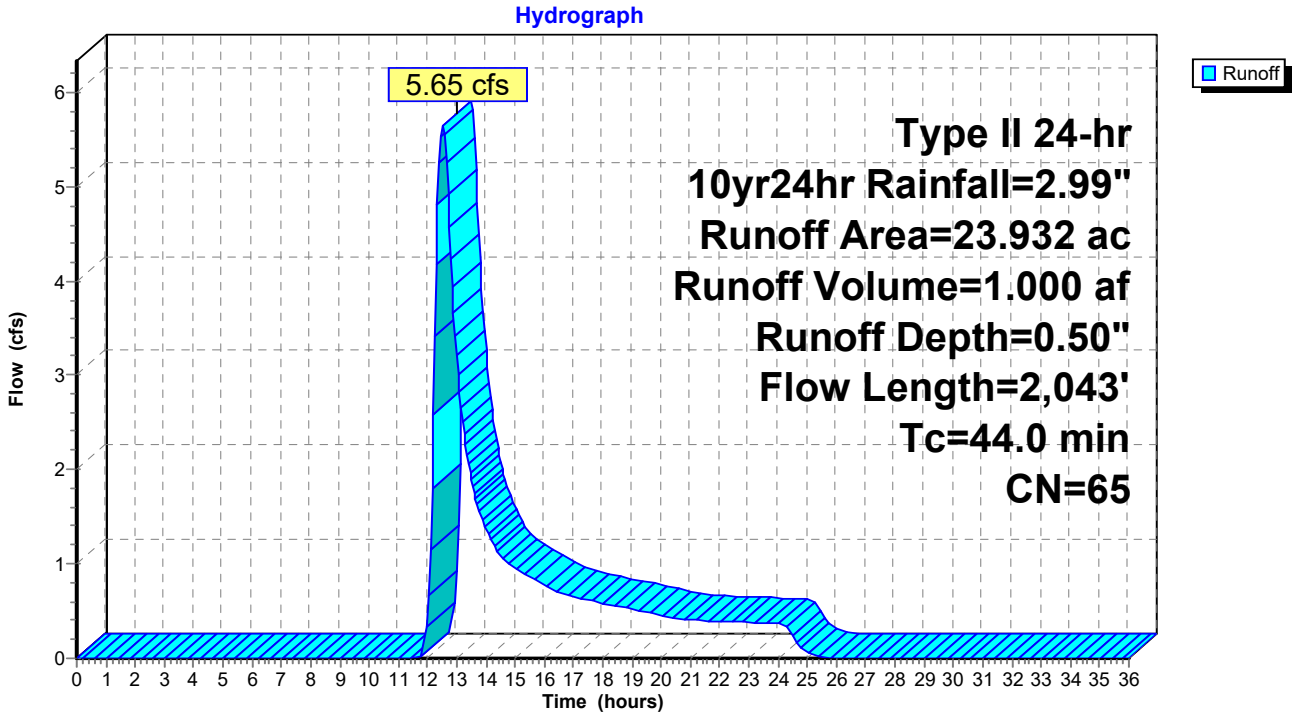
Runoff = 5.65 cfs @ 12.52 hrs, Volume= 1.000 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.058 | 55 | Deciduous Forest, HSG B |
| * | 0.167 | 80 | Pasture/Hay, HSG D |
| * | 0.004 | 71 | Cultivated Crops, HSG B |
| * | 0.445 | 61 | Pasture/Hay, HSG B |
| * | 0.415 | 71 | Cultivated Crops, HSG B |
| * | 0.030 | 81 | Cultivated Crops, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 71 | Cultivated Crops, HSG B |
| * | 4.276 | 61 | Pasture/Hay, HSG B |
| * | 0.527 | 80 | Pasture/Hay, HSG D |
| * | 0.246 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.846 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.654 | 55 | Deciduous Forest, HSG B |
| * | 0.000 | 71 | Cultivated Crops, HSG B |
| * | 2.697 | 71 | Cultivated Crops, HSG B |
| * | 2.901 | 81 | Cultivated Crops, HSG D |
| | 23.932 | 65 | Weighted Average |
| | 23.932 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.9 | 100 | 0.0190 | 0.28 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 14.7 | 569 | 0.0051 | 0.64 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 59 | 0.1043 | 2.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 105 | 0.0414 | 1.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.6 | 350 | 0.0073 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.6 | 50 | 0.0387 | 1.38 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 339 | 0.0282 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 143 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 25 | 0.0181 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.3 | 303 | 0.0129 | 0.80 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 44.0 | 2,043 | Total | | | |

## Subcatchment 12: WS12



## Summary for Subcatchment 13: WS13

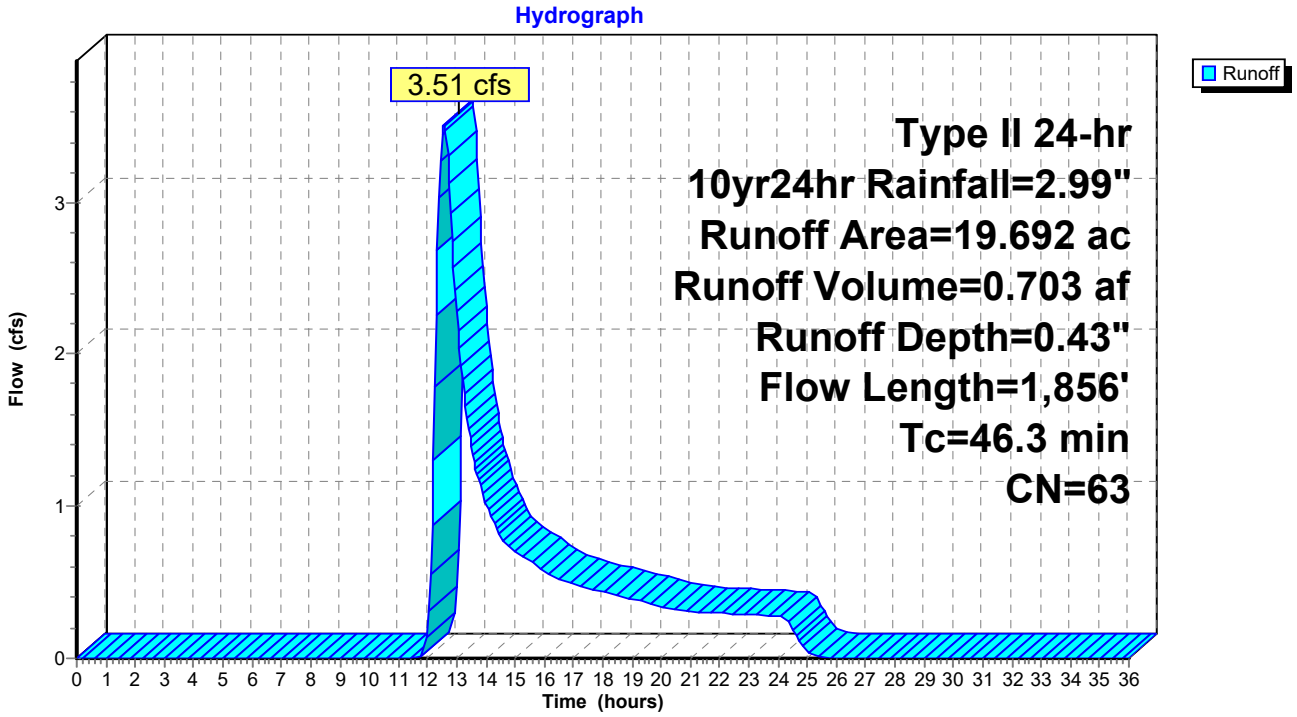
Runoff = 3.51 cfs @ 12.58 hrs, Volume= 0.703 af, Depth= 0.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.709 | 61 | Pasture/Hay, HSG B |
| * | 0.445 | 61 | Pasture/Hay, HSG B |
| * | 0.217 | 68 | Developed Open Space, HSG B |
| * | 2.429 | 60 | Mixed Forest, HSG B |
| * | 0.357 | 55 | Deciduous Forest, HSG B |
| * | 3.573 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.768 | 55 | Deciduous Forest, HSG B |
| * | 6.074 | 71 | Cultivated Crops, HSG B |
| * | 0.120 | 81 | Cultivated Crops, HSG D |
| | 19.692 | 63 | Weighted Average |
| | 19.692 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.1 | 100 | 0.0195 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.6 | 416 | 0.0171 | 0.92 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 9.6 | 318 | 0.0122 | 0.55 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.8 | 174 | 0.0439 | 1.05 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 5.5 | 254 | 0.0238 | 0.77 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 7.2 | 533 | 0.0186 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 62 | 0.0055 | 0.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 46.3 | 1,856 | Total | | | |

## Subcatchment 13: WS13



## Summary for Subcatchment 14: WS14

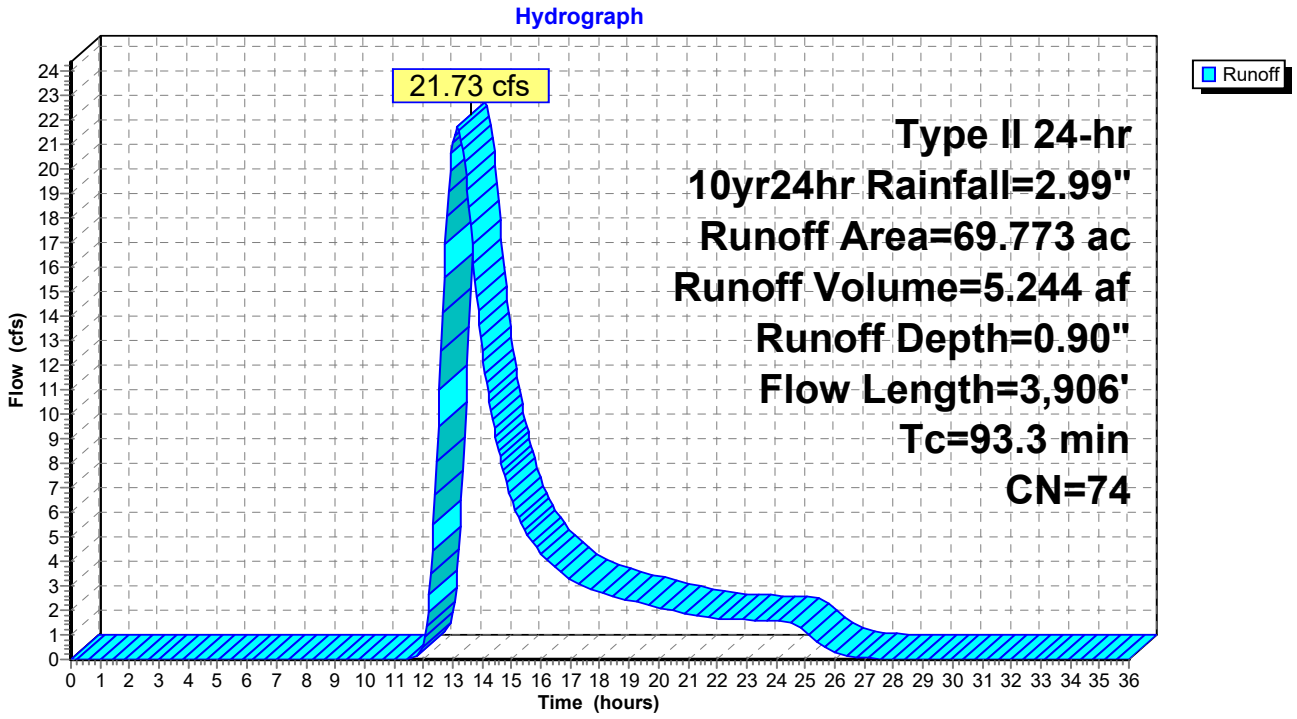
Runoff = 21.73 cfs @ 13.16 hrs, Volume= 5.244 af, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.295 | 55 | Deciduous Forest, HSG B |
| * | 0.007 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.017 | 61 | Pasture/Hay, HSG B |
| * | 0.472 | 61 | Pasture/Hay, HSG B |
| * | 0.003 | 85 | Grassland/Herbaceous, HSG D |
| * | 3.784 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.055 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.025 | 77 | Deciduous Forest, HSG D |
| * | 3.895 | 55 | Deciduous Forest, HSG B |
| * | 1.726 | 55 | Deciduous Forest, HSG B |
| * | 21.731 | 71 | Cultivated Crops, HSG B |
| * | 33.261 | 81 | Cultivated Crops, HSG D |
| * | 4.280 | 71 | Cultivated Crops, HSG B |
| | 69.773 | 74 | Weighted Average |
| | 69.773 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.2 | 100 | 0.0070 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.9 | 259 | 0.0080 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 165 | 0.0074 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.9 | 450 | 0.0188 | 0.69 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.0 | 192 | 0.0258 | 0.80 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.2 | 746 | 0.0224 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 571 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 336 | 0.0153 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.8 | 377 | 0.0022 | 0.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 286 | 0.0182 | 1.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 297 | 0.0207 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 127 | 0.0076 | 0.78 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 93.3 | 3,906 | Total | | | |

## Subcatchment 14: WS14



## Summary for Subcatchment 15: WS15

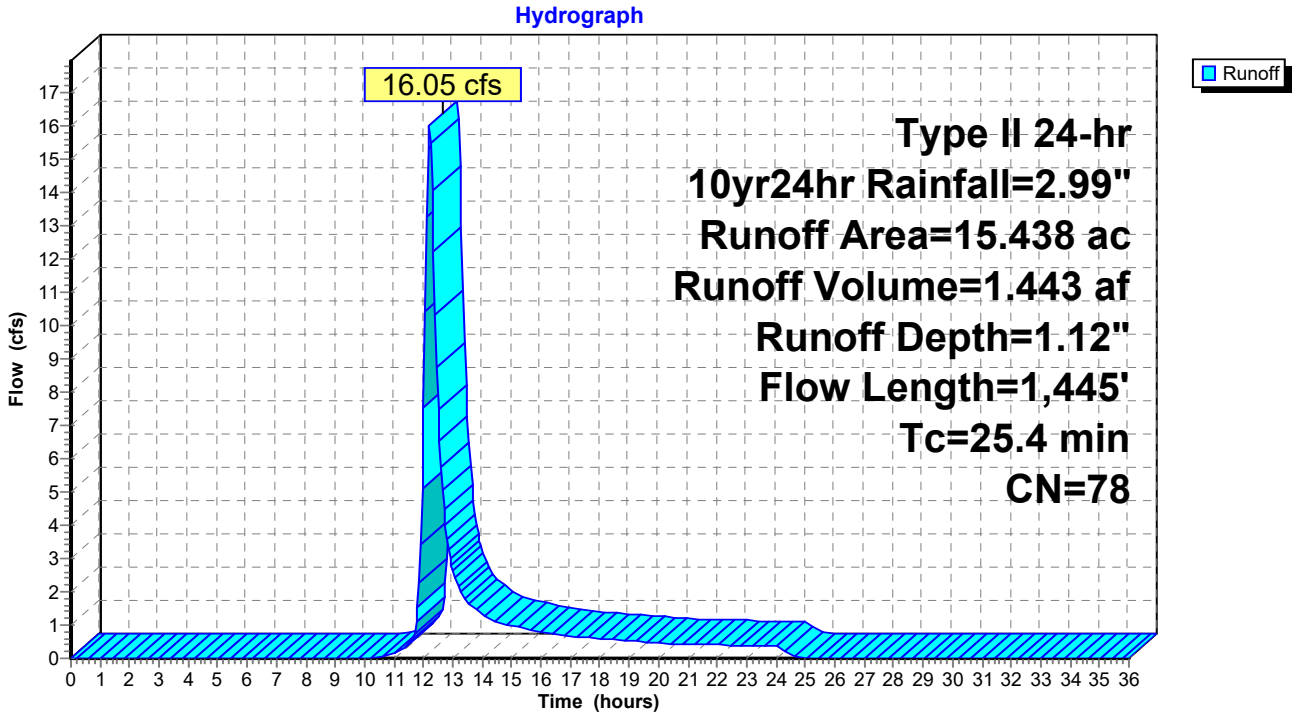
Runoff = 16.05 cfs @ 12.20 hrs, Volume= 1.443 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.042 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.021 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.169 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.126 | 55 | Deciduous Forest, HSG B |
| * | 0.545 | 77 | Deciduous Forest, HSG D |
| * | 2.220 | 77 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Shrub/Scrub, HSG D |
| * | 0.432 | 80 | Shrub/Scrub, HSG D |
| * | 1.112 | 76 | Mixed Forest, HSG D |
| * | 0.000 | 76 | Mixed Forest, HSG D |
| * | 1.895 | 71 | Cultivated Crops, HSG B |
| * | 8.739 | 81 | Cultivated Crops, HSG D |
| * | 0.070 | 81 | Cultivated Crops, HSG D |
| | 15.438 | 78 | Weighted Average |
| | 15.438 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.2 | 100 | 0.0255 | 0.32 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.7 | 205 | 0.0203 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.9 | 427 | 0.0132 | 1.03 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 5 | 0.0165 | 0.64 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.2 | 94 | 0.0197 | 0.70 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 8.3 | 614 | 0.0188 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.4 | 1,445 | Total | | | |

## Subcatchment 15: WS15



## Summary for Subcatchment 16: WS16

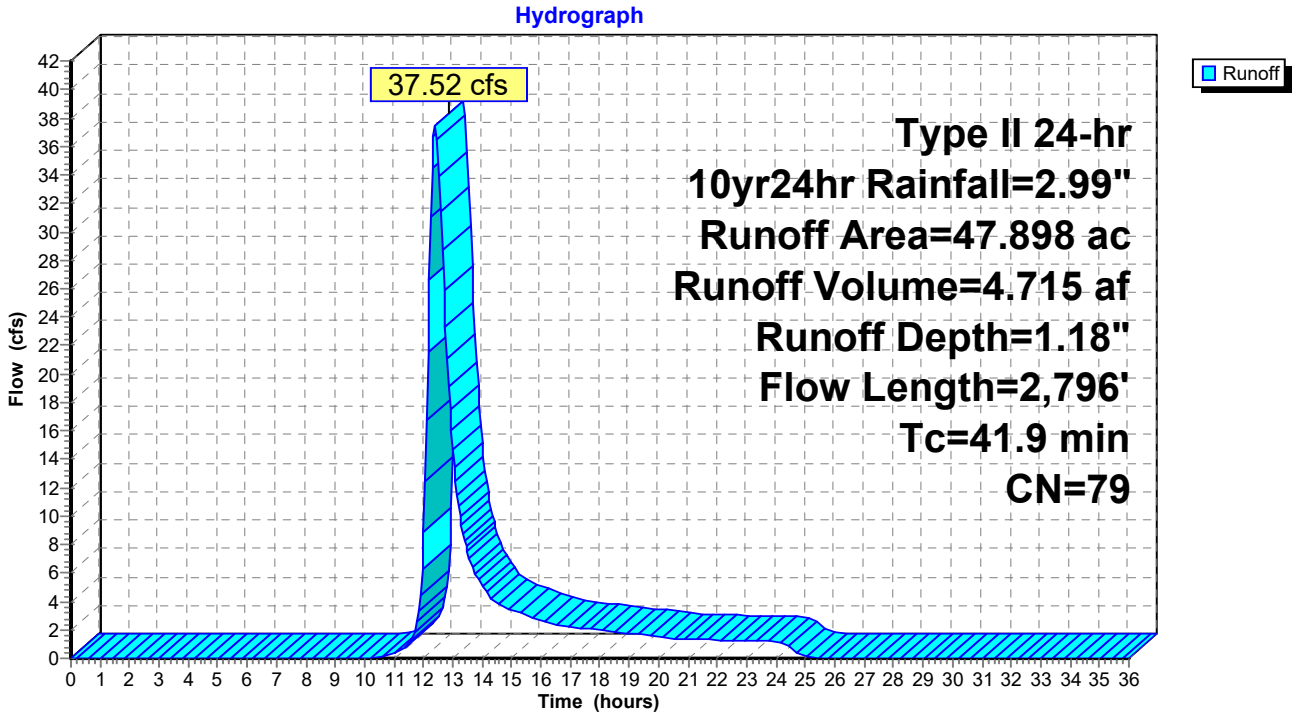
Runoff = 37.52 cfs @ 12.41 hrs, Volume= 4.715 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.205 | 84 | Developed Open Space, HSG D |
| * | 0.128 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.127 | 93 | Developed Low Intensity, HSG D |
| * | 0.287 | 84 | Developed Open Space, HSG D |
| * | 0.713 | 93 | Developed Low Intensity, HSG D |
| * | 0.372 | 84 | Developed Open Space, HSG D |
| * | 6.393 | 71 | Cultivated Crops, HSG B |
| * | 35.785 | 81 | Cultivated Crops, HSG D |
| * | 3.221 | 71 | Cultivated Crops, HSG B |
| | 47.898 | 79 | Weighted Average |
| | 47.898 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.2 | 100 | 0.0431 | 0.39 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.2 | 250 | 0.0431 | 1.87 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 408 | 0.0364 | 1.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.0 | 574 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.7 | 847 | 0.0113 | 0.96 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.8 | 617 | 0.0169 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 41.9 | 2,796 | Total | | | |

## Subcatchment 16: WS16



## Summary for Subcatchment 17: WS17

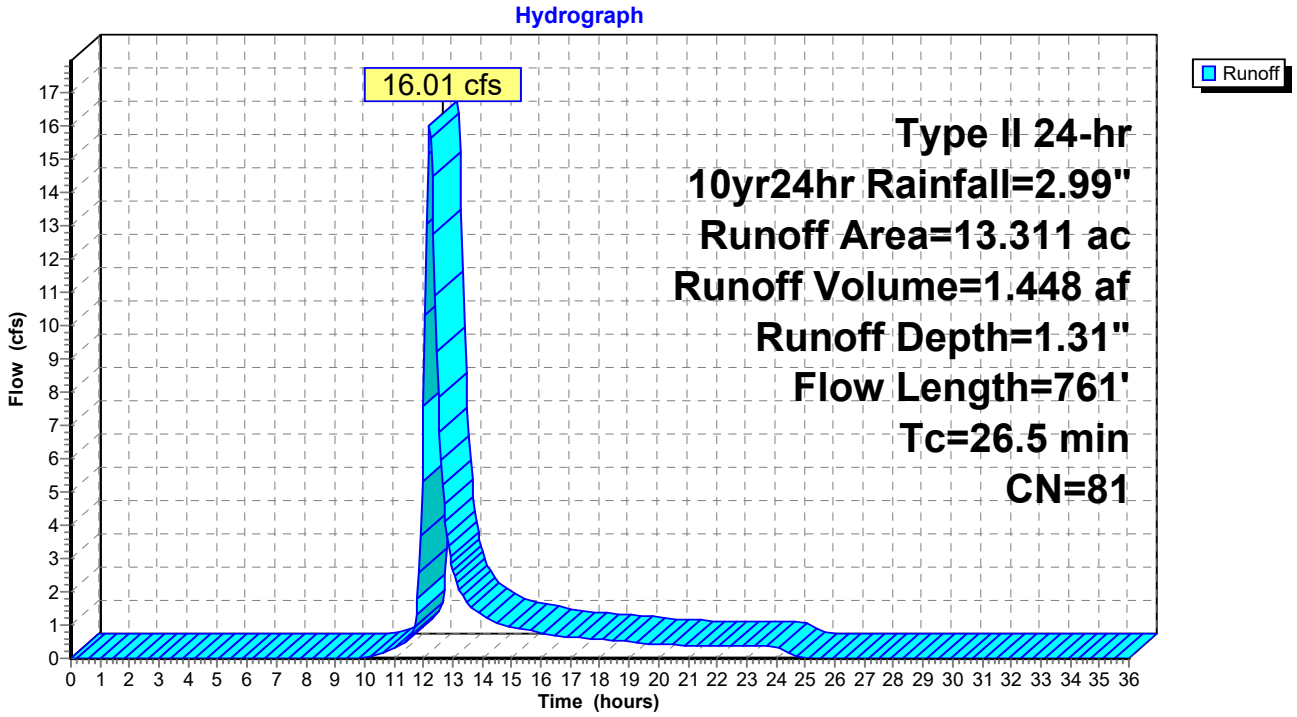
Runoff = 16.01 cfs @ 12.21 hrs, Volume= 1.448 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.046 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.179 | 84 | Developed Open Space, HSG D |
| * | 0.074 | 93 | Developed Low Intensity, HSG D |
| * | 0.072 | 84 | Developed Open Space, HSG D |
| * | 0.107 | 71 | Cultivated Crops, HSG B |
| * | 12.833 | 81 | Cultivated Crops, HSG D |
| | 13.311 | 81 | Weighted Average |
| | 13.311 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.6 | 100 | 0.0073 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.4 | 18 | 0.0058 | 0.68 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 76 | 0.0066 | 0.73 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 114 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.4 | 97 | 0.0027 | 0.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 40 | 0.0073 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 145 | 0.0060 | 0.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.1 | 171 | 0.0039 | 0.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 26.5 | 761 | Total | | | |

## Subcatchment 17: WS17



## Summary for Subcatchment 18: WS18

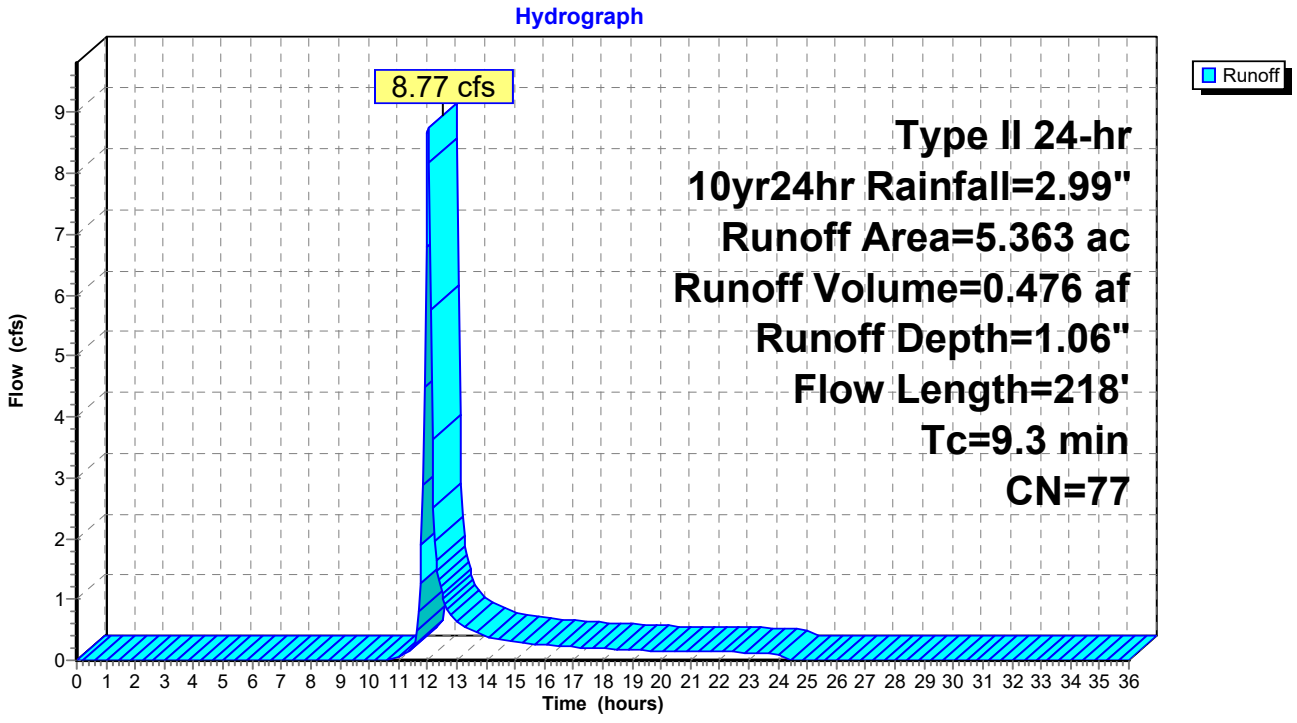
Runoff = 8.77 cfs @ 12.01 hrs, Volume= 0.476 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 2.116 | 71 | Cultivated Crops, HSG B |
| * | 3.247 | 81 | Cultivated Crops, HSG D |
| | 5.363 | 77 | Weighted Average |
| | 5.363 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.6 | 100 | 0.0352 | 0.36 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.2 | 89 | 0.0015 | 0.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 29 | 0.0133 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 218 | Total | | | |

## Subcatchment 18: WS18



## Summary for Subcatchment 19: WS19

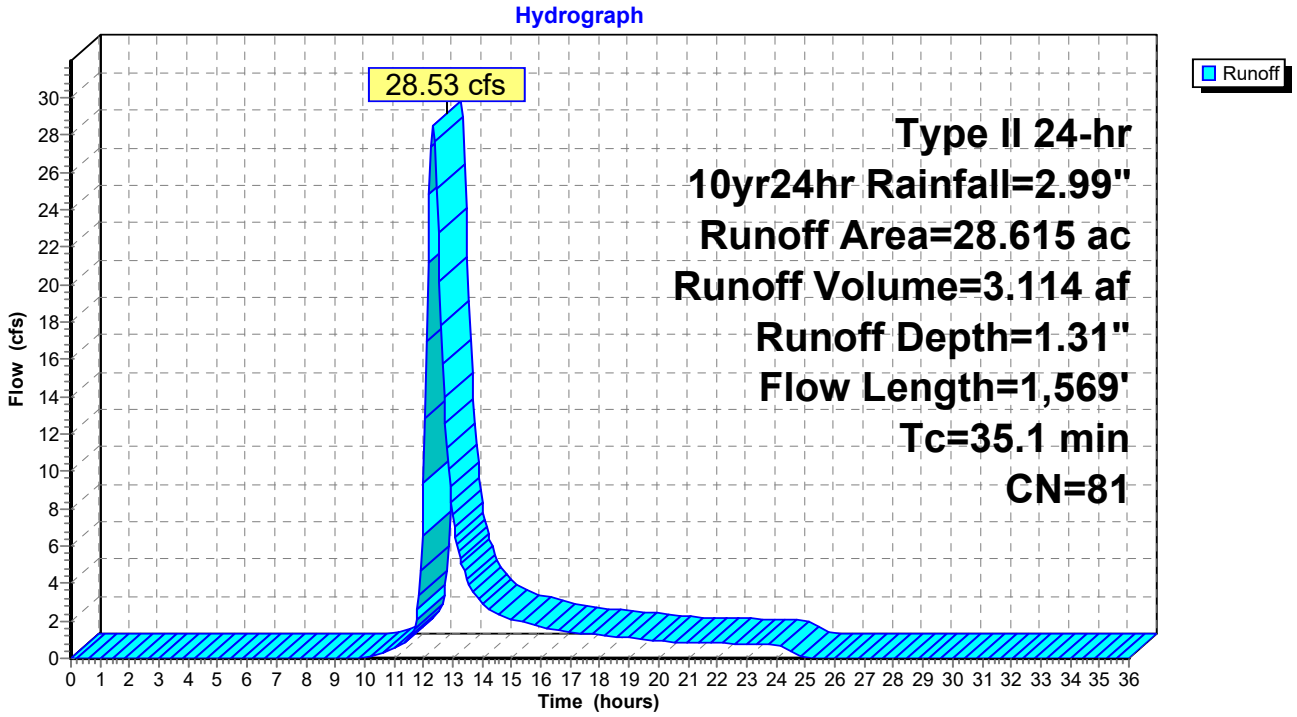
Runoff = 28.53 cfs @ 12.32 hrs, Volume= 3.114 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.077 | 80 | Pasture/Hay, HSG D |
| * | 0.030 | 86 | Woody Wetlands, HSG D |
| * | 0.043 | 84 | Developed Open Space, HSG D |
| * | 0.595 | 84 | Developed Open Space, HSG D |
| * | 27.869 | 81 | Cultivated Crops, HSG D |
| | 28.615 | 81 | Weighted Average |
| | 28.615 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.8 | 100 | 0.0093 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.1 | 158 | 0.0200 | 1.27 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 12.0 | 693 | 0.0115 | 0.96 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.2 | 306 | 0.0083 | 0.82 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.0 | 313 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.1 | 1,569 | Total | | | |

## Subcatchment 19: WS19



## Summary for Subcatchment 20: WS20

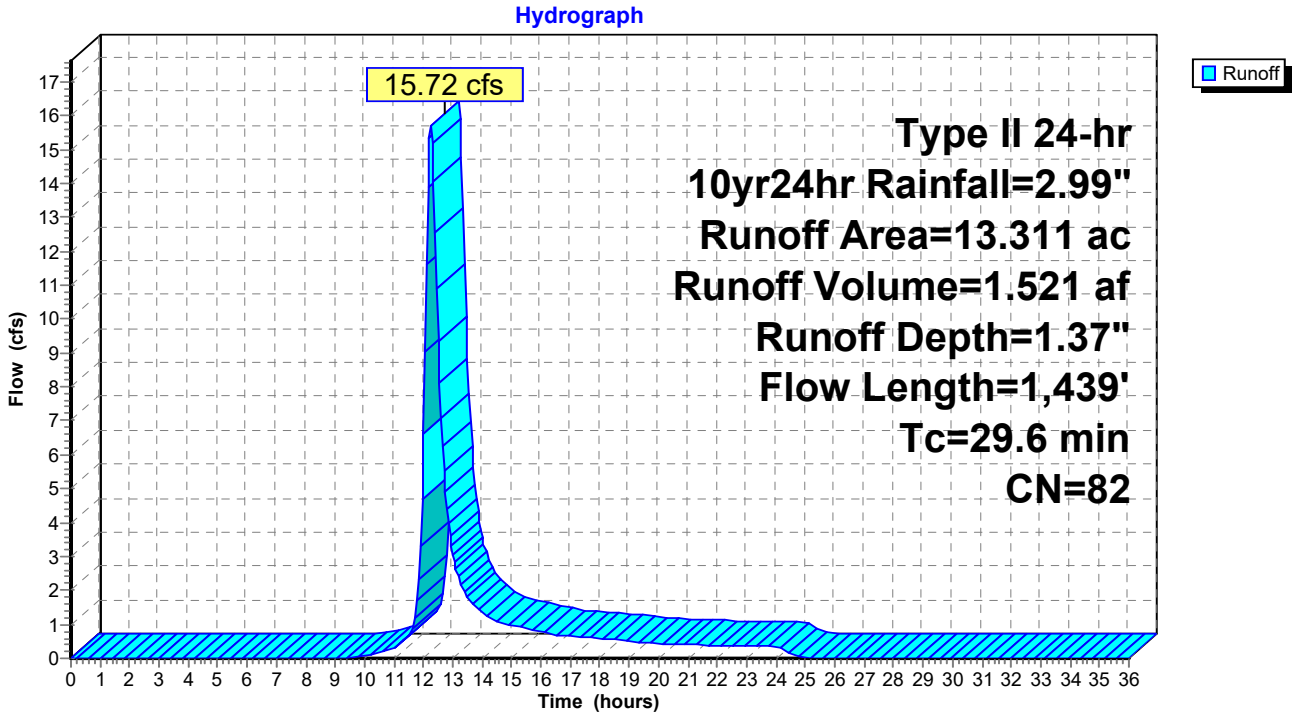
Runoff = 15.72 cfs @ 12.25 hrs, Volume= 1.521 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.283 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 94 | Developed Medium Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 12.515 | 81 | Cultivated Crops, HSG D |
| | 13.311 | 82 | Weighted Average |
| | 13.311 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.4 | 100 | 0.0233 | 0.31 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.3 | 226 | 0.0096 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.3 | 223 | 0.0042 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 268 | 0.0311 | 1.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.5 | 131 | 0.0093 | 0.87 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.4 | 129 | 0.0100 | 0.90 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 139 | 0.0122 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 97 | 0.0043 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 128 | 0.0126 | 2.28 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 29.6 | 1,439 | Total | | | |

## Subcatchment 20: WS20



## Summary for Subcatchment 21: WS21

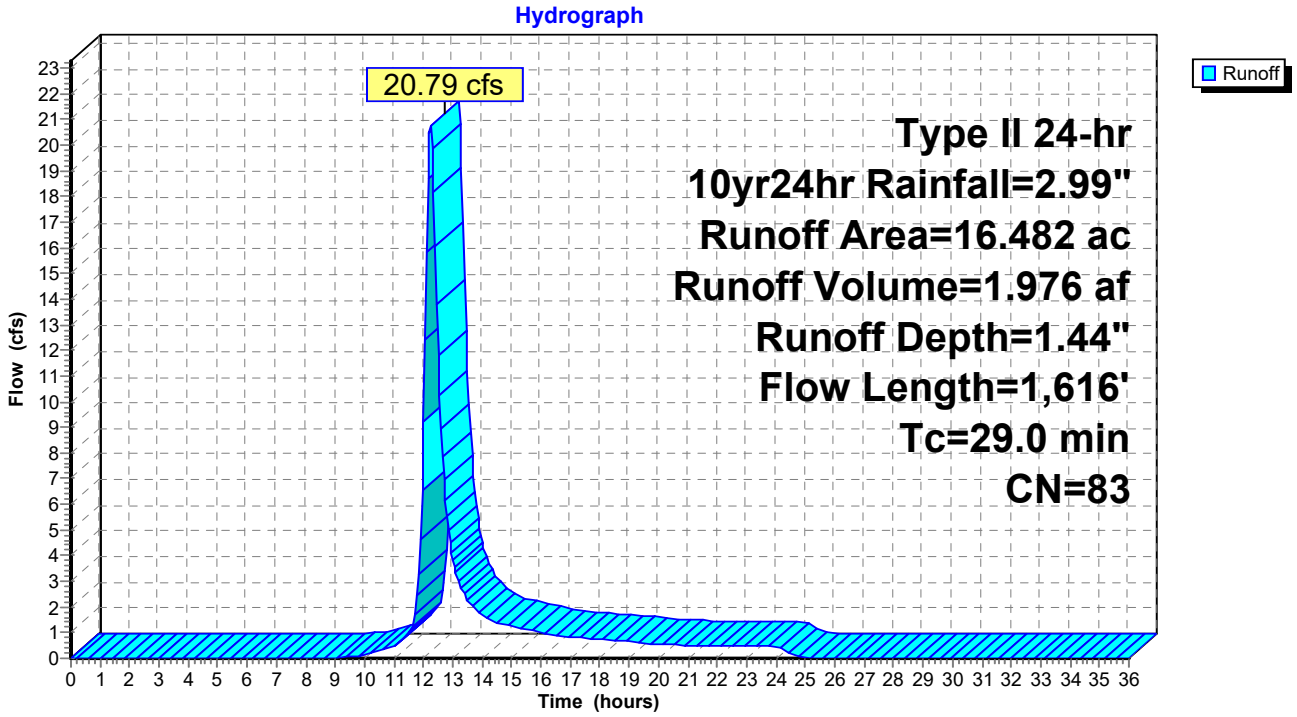
Runoff = 20.79 cfs @ 12.24 hrs, Volume= 1.976 af, Depth= 1.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.154 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 89 | Developed Medium Intensity, HSG B |
| * | 0.435 | 94 | Developed Medium Intensity, HSG D |
| * | 0.295 | 88 | Developed Low Intensity, HSG B |
| * | 2.834 | 93 | Developed Low Intensity, HSG D |
| * | 0.153 | 88 | Developed Low Intensity, HSG B |
| * | 0.136 | 93 | Developed Low Intensity, HSG D |
| * | 1.103 | 71 | Cultivated Crops, HSG B |
| * | 0.243 | 81 | Cultivated Crops, HSG D |
| * | 11.118 | 81 | Cultivated Crops, HSG D |
| | 16.482 | 83 | Weighted Average |
| | 16.482 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.9 | 100 | 0.0189 | 0.28 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.7 | 50 | 0.0180 | 1.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 205 | 0.0146 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.4 | 355 | 0.0149 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.0 | 340 | 0.0109 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 239 | 0.0081 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 84 | 0.0236 | 3.12 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 26 | 0.0201 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 116 | 0.0216 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 100 | 0.0154 | 2.52 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 29.0 | 1,616 | Total | | | |

## Subcatchment 21: WS21



## Summary for Subcatchment 22: WS22

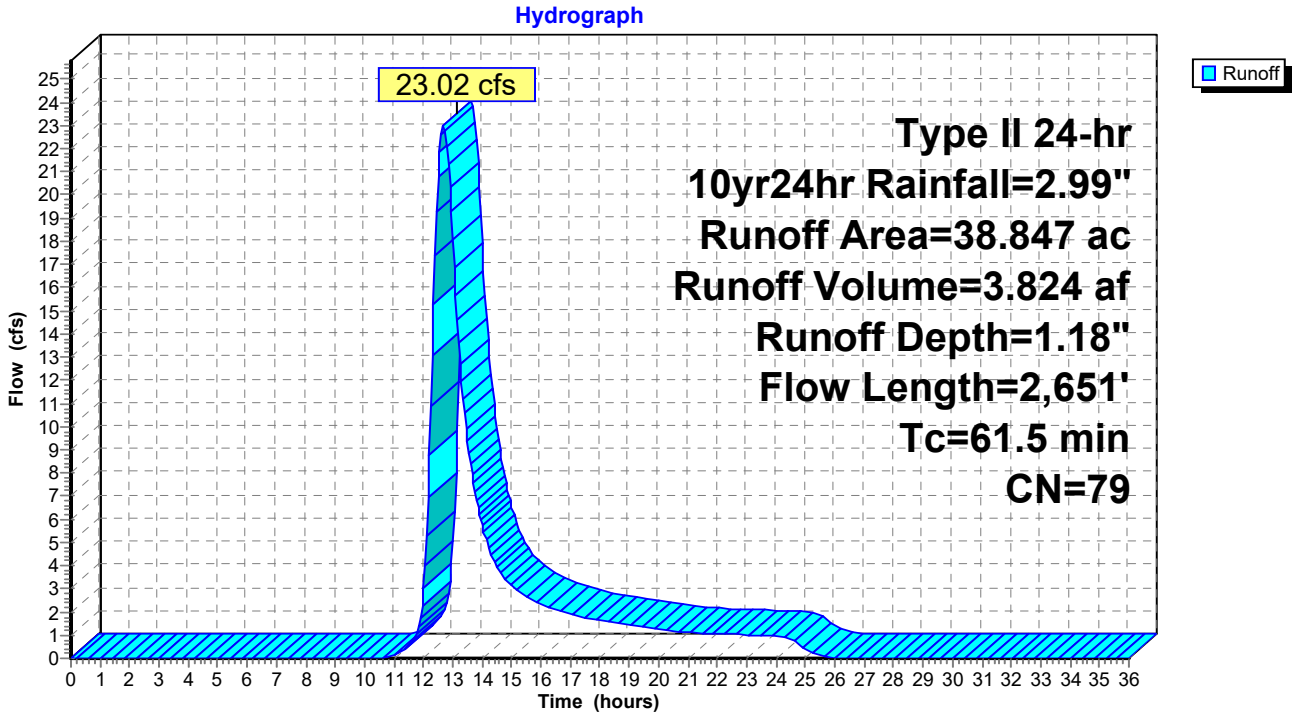
Runoff = 23.02 cfs @ 12.67 hrs, Volume= 3.824 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.005 | 86 | Woody Wetlands, HSG D |
| * | 5.962 | 71 | Cultivated Crops, HSG B |
| * | 2.759 | 81 | Cultivated Crops, HSG D |
| * | 1.588 | 81 | Cultivated Crops, HSG D |
| * | 28.533 | 81 | Cultivated Crops, HSG D |
| | 38.847 | 79 | Weighted Average |
| | 38.847 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.3 | 51 | 0.0172 | 0.05 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 3.4 | 49 | 0.0173 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 11.1 | 660 | 0.0121 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.3 | 580 | 0.0109 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.1 | 560 | 0.0165 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 11.0 | 664 | 0.0126 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 87 | 0.0145 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 61.5 | 2,651 | Total | | | |

## Subcatchment 22: WS22



## Summary for Subcatchment 23: WS23

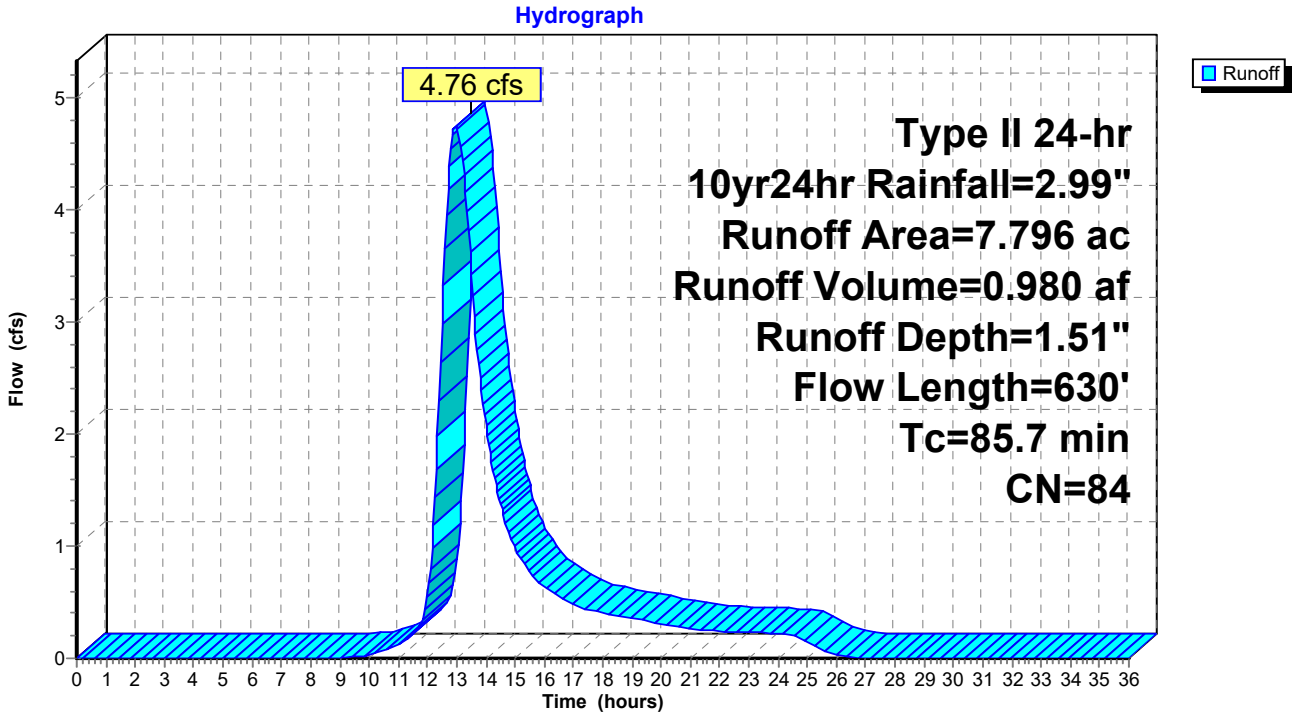
Runoff = 4.76 cfs @ 12.98 hrs, Volume= 0.980 af, Depth= 1.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.781 | 80 | Pasture/Hay, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.192 | 86 | Woody Wetlands, HSG D |
| * | 0.415 | 84 | Developed Open Space, HSG D |
| * | 4.720 | 86 | Woody Wetlands, HSG D |
| * | 1.466 | 81 | Cultivated Crops, HSG D |
| | 7.796 | 84 | Weighted Average |
| | 7.796 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 41.4 | 100 | 0.0064 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 0.2 | 5 | 0.0065 | 0.40 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 27.1 | 263 | 0.0010 | 0.16 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 15.2 | 163 | 0.0013 | 0.18 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.8 | 100 | 0.0020 | 0.90 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 85.7 | 630 | Total | | | |

## Subcatchment 23: WS23



## Summary for Subcatchment 24: WS24

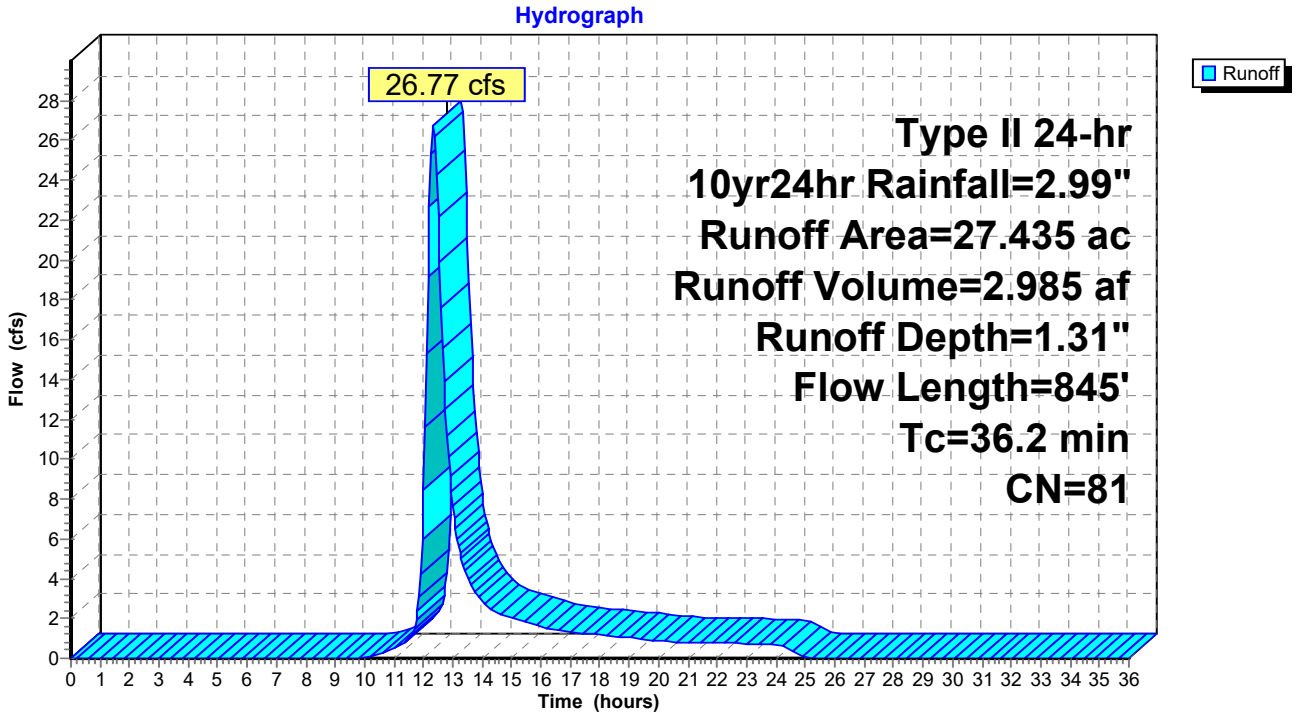
Runoff = 26.77 cfs @ 12.33 hrs, Volume= 2.985 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.383 | 80 | Pasture/Hay, HSG D |
| * | 0.667 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 86 | Woody Wetlands, HSG D |
| * | 0.890 | 80 | Pasture/Hay, HSG D |
| * | 1.451 | 86 | Woody Wetlands, HSG D |
| * | 0.196 | 77 | Deciduous Forest, HSG D |
| * | 0.222 | 86 | Woody Wetlands, HSG D |
| * | 0.217 | 86 | Woody Wetlands, HSG D |
| * | 2.891 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 1.774 | 86 | Woody Wetlands, HSG D |
| * | 1.914 | 71 | Cultivated Crops, HSG B |
| * | 15.923 | 81 | Cultivated Crops, HSG D |
| | 27.435 | 81 | Weighted Average |
| | 27.435 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.5 | 52 | 0.0130 | 0.05 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 3.8 | 48 | 0.0128 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.0 | 247 | 0.0129 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.6 | 162 | 0.0138 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.3 | 337 | 0.0072 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 36.2 | 845 | Total | | | |

## Subcatchment 24: WS24



## Summary for Subcatchment 25: WS25

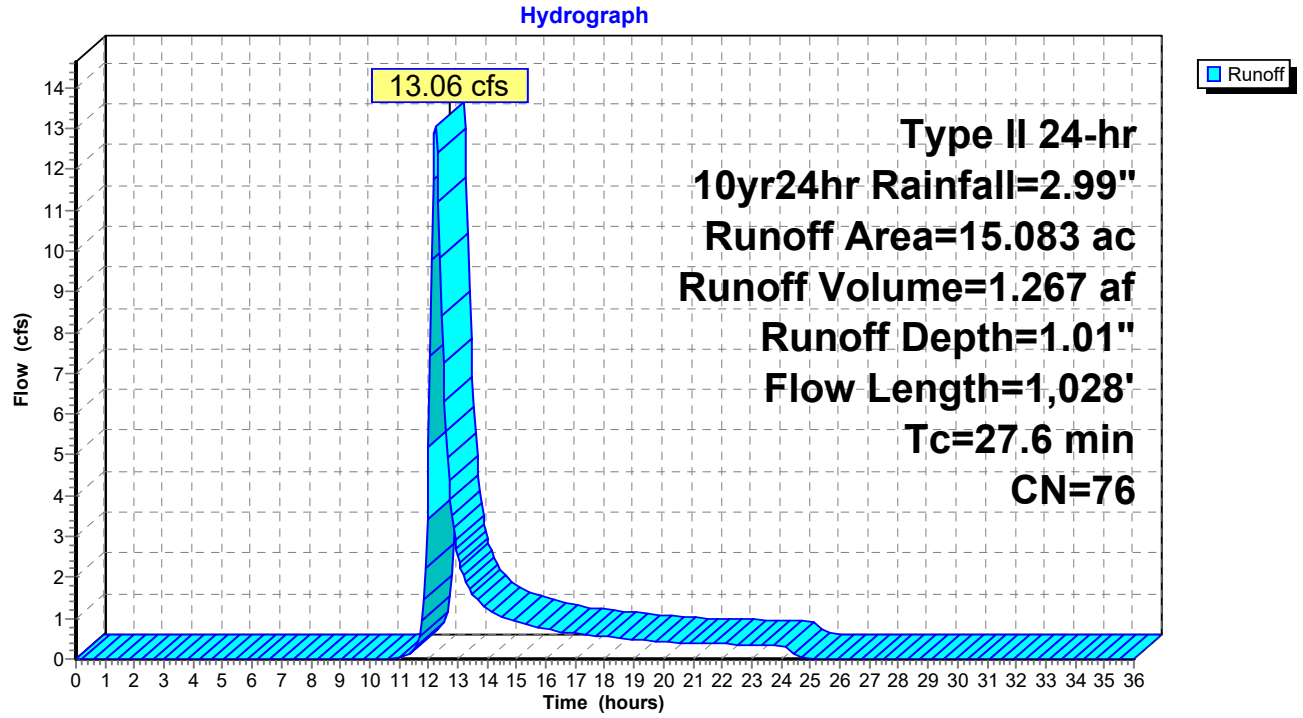
Runoff = 13.06 cfs @ 12.23 hrs, Volume= 1.267 af, Depth= 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 7.008 | 71 | Cultivated Crops, HSG B |
| * | 8.076 | 81 | Cultivated Crops, HSG D |
| | 15.083 | 76 | Weighted Average |
| | 15.083 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.6 | 100 | 0.0056 | 0.17 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.7 | 103 | 0.0027 | 0.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.7 | 239 | 0.0060 | 0.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 271 | 0.0312 | 1.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.8 | 315 | 0.0103 | 0.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.6 | 1,028 | Total | | | |

## Subcatchment 25: WS25



## Summary for Subcatchment 26: WS26

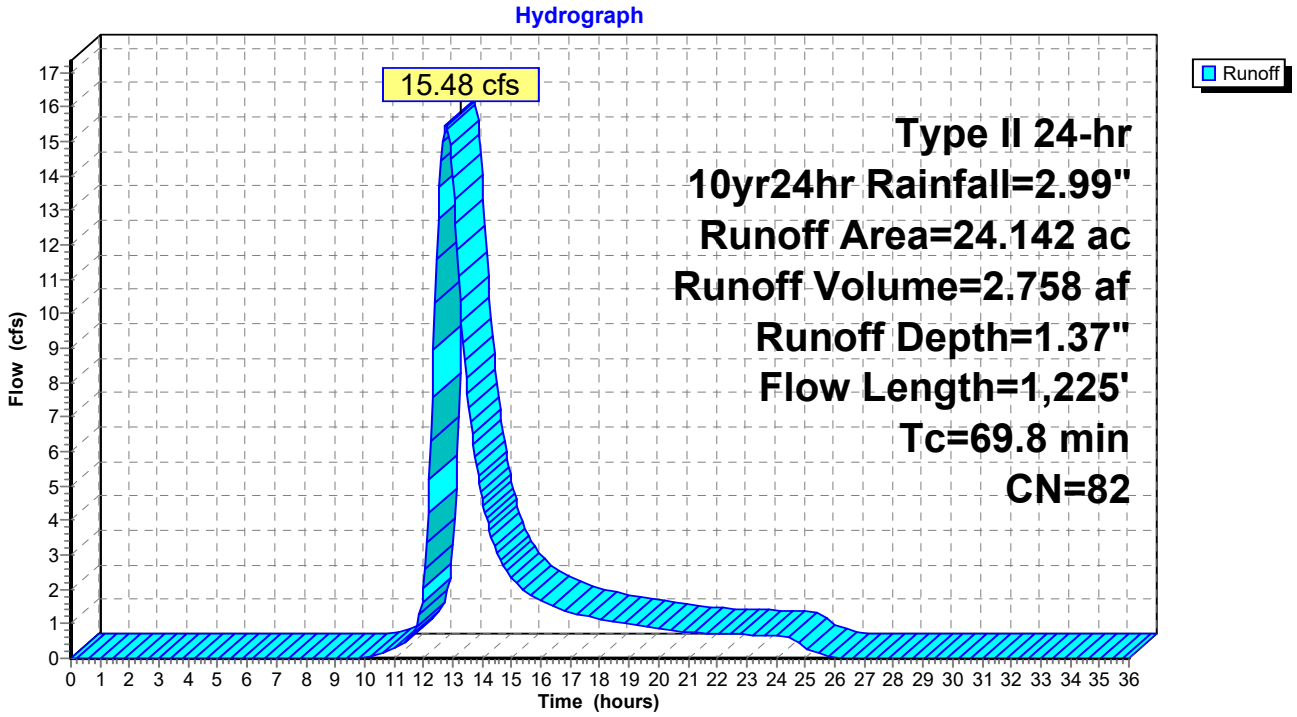
Runoff = 15.48 cfs @ 12.78 hrs, Volume= 2.758 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.020 | 84 | Developed Open Space, HSG D |
| * | 0.777 | 88 | Developed Low Intensity, HSG B |
| * | 0.216 | 93 | Developed Low Intensity, HSG D |
| * | 1.909 | 86 | Woody Wetlands, HSG D |
| * | 1.334 | 77 | Deciduous Forest, HSG D |
| * | 0.088 | 55 | Evergreen Forest, HSG B |
| * | 0.062 | 86 | Woody Wetlands, HSG B |
| * | 0.002 | 86 | Woody Wetlands, HSG B |
| * | 6.771 | 86 | Woody Wetlands, HSG D |
| * | 1.083 | 61 | Pasture/Hay, HSG B |
| * | 0.052 | 61 | Pasture/Hay, HSG B |
| * | 3.489 | 80 | Pasture/Hay, HSG D |
| * | 0.206 | 71 | Cultivated Crops, HSG B |
| * | 8.132 | 81 | Cultivated Crops, HSG D |
| | 24.142 | 82 | Weighted Average |
| | 24.142 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 100 | 0.0275 | 1.28 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 45 | 0.0190 | 2.79 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.5 | 140 | 0.0499 | 1.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 73 | 0.0202 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 115 | 0.0306 | 0.87 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.7 | 150 | 0.0026 | 0.26 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 11.5 | 194 | 0.0031 | 0.28 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 16.3 | 197 | 0.0016 | 0.20 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 25.8 | 211 | 0.0007 | 0.14 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 69.8 | 1,225 | Total | | | |

## Subcatchment 26: WS26



## Summary for Subcatchment 27: WS27

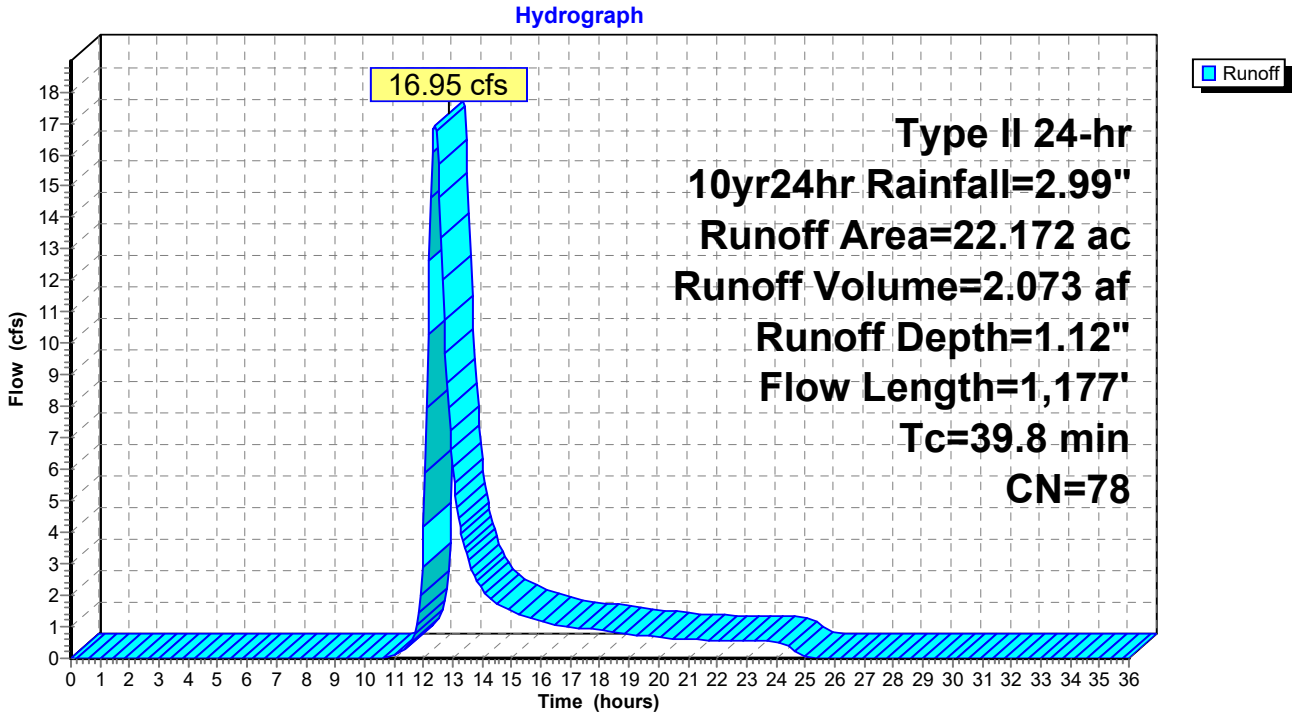
Runoff = 16.95 cfs @ 12.39 hrs, Volume= 2.073 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.445 | 74 | Evergreen Forest, HSG D |
| * | 0.039 | 80 | Pasture/Hay, HSG D |
| * | 0.104 | 55 | Deciduous Forest, HSG B |
| * | 5.233 | 77 | Deciduous Forest, HSG D |
| * | 0.026 | 77 | Deciduous Forest, HSG D |
| * | 1.662 | 77 | Deciduous Forest, HSG D |
| * | 3.945 | 71 | Cultivated Crops, HSG B |
| * | 10.717 | 81 | Cultivated Crops, HSG D |
| | 22.172 | 78 | Weighted Average |
| | 22.172 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.5 | 100 | 0.0148 | 0.26 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.4 | 216 | 0.0288 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 227 | 0.0220 | 1.34 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 20.4 | 201 | 0.0003 | 0.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 172 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.7 | 261 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 39.8 | 1,177 | Total | | | |

## Subcatchment 27: WS27



## Summary for Subcatchment 28: WS28

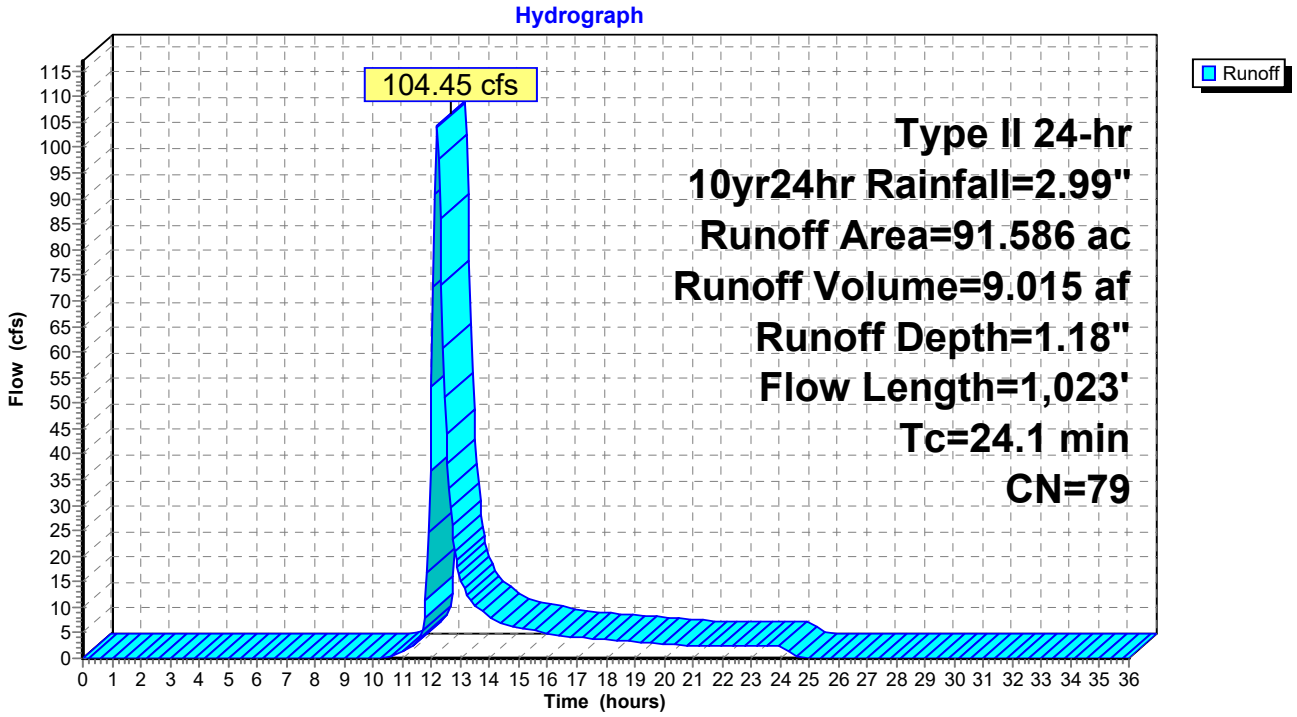
Runoff = 104.45 cfs @ 12.19 hrs, Volume= 9.015 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.197 | 61 | Pasture/Hay, HSG B |
| * | 0.793 | 80 | Pasture/Hay, HSG D |
| * | 0.117 | 77 | Deciduous Forest, HSG D |
| * | 5.160 | 71 | Cultivated Crops, HSG B |
| * | 4.338 | 71 | Cultivated Crops, HSG B |
| * | 4.642 | 71 | Cultivated Crops, HSG B |
| * | 1.274 | 71 | Cultivated Crops, HSG B |
| * | 0.102 | 71 | Cultivated Crops, HSG B |
| * | 74.963 | 81 | Cultivated Crops, HSG D |
| | 91.586 | 79 | Weighted Average |
| | 91.586 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.9 | 100 | 0.0126 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.7 | 222 | 0.0126 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.1 | 313 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 228 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.3 | 161 | 0.0047 | 0.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.1 | 1,023 | Total | | | |

## Subcatchment 28: WS28



## Summary for Subcatchment 29: WS29

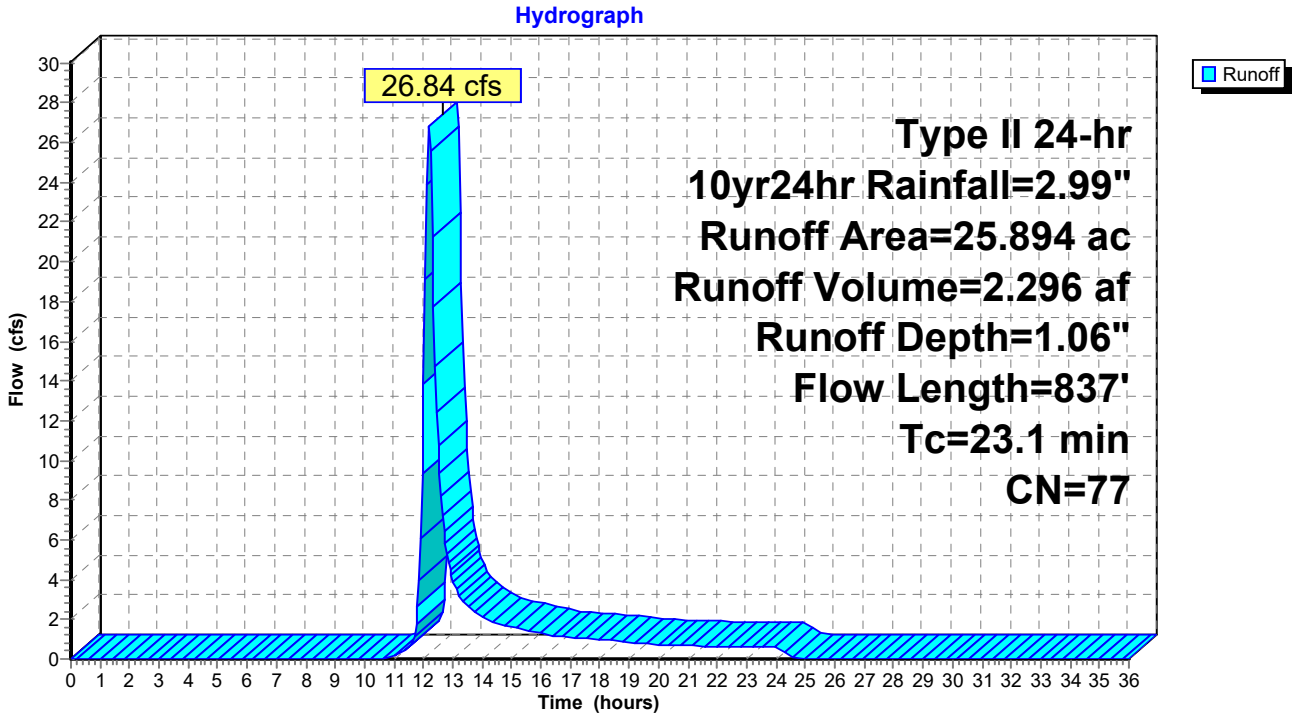
Runoff = 26.84 cfs @ 12.18 hrs, Volume= 2.296 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 8.124 | 71 | Cultivated Crops, HSG B |
| * | 2.358 | 71 | Cultivated Crops, HSG B |
| * | 0.241 | 71 | Cultivated Crops, HSG B |
| * | 15.170 | 81 | Cultivated Crops, HSG D |
| | 25.894 | 77 | Weighted Average |
| | 25.894 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.1 | 100 | 0.0063 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 8.0 | 343 | 0.0063 | 0.71 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.6 | 359 | 0.0139 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 35 | 0.0229 | 1.36 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 23.1 | 837 | Total | | | |

## Subcatchment 29: WS29



## Summary for Subcatchment 30: WS30

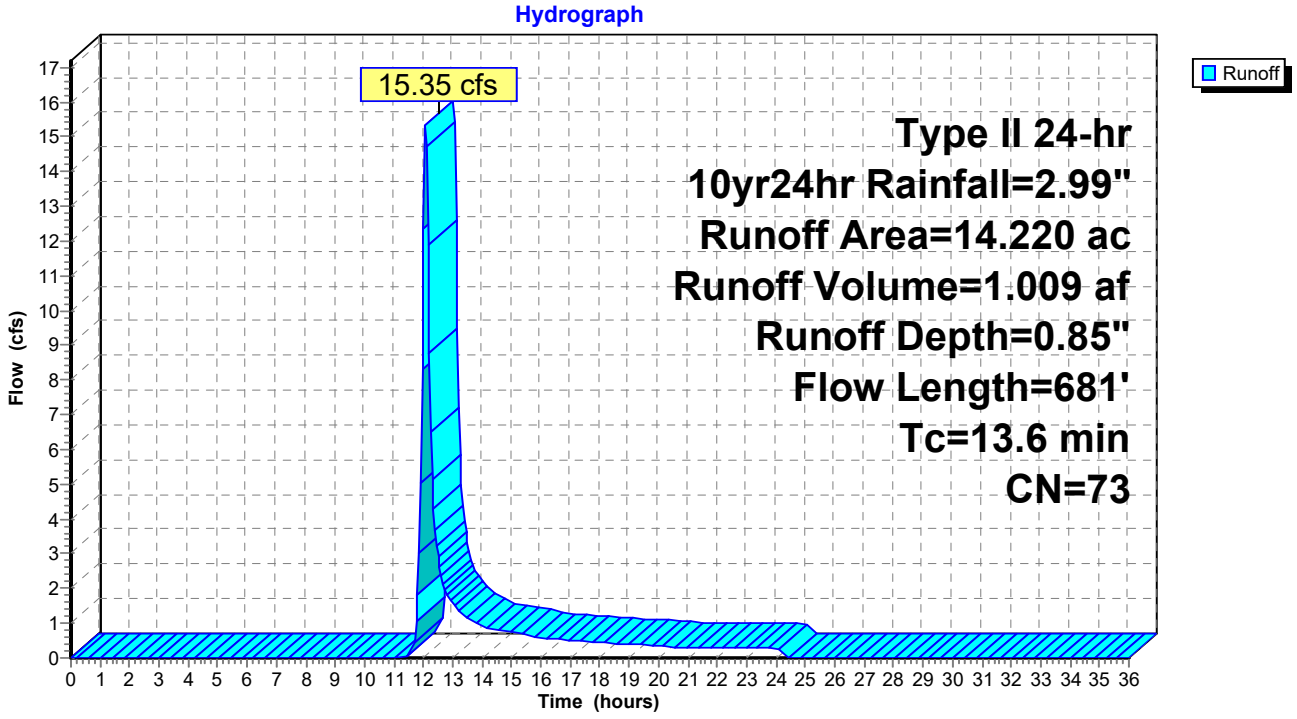
Runoff = 15.35 cfs @ 12.07 hrs, Volume= 1.009 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.211 | 71 | Cultivated Crops, HSG B |
| * | 0.257 | 71 | Cultivated Crops, HSG B |
| * | 9.269 | 71 | Cultivated Crops, HSG B |
| * | 3.483 | 81 | Cultivated Crops, HSG D |
| | 14.220 | 73 | Weighted Average |
| | 14.220 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.2 | 100 | 0.0164 | 0.27 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.5 | 229 | 0.0150 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 353 | 0.0284 | 1.52 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.6 | 681 | Total | | | |

## Subcatchment 30: WS30



## Summary for Subcatchment 31: WS31

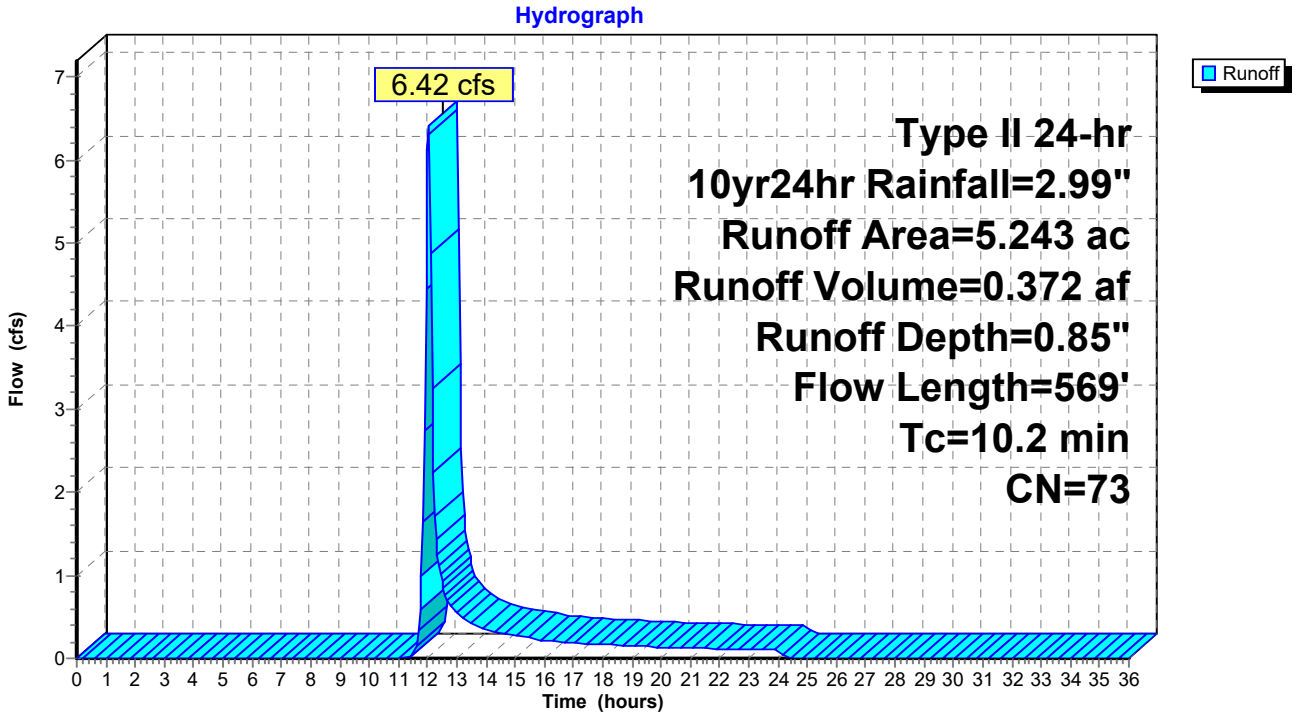
Runoff = 6.42 cfs @ 12.03 hrs, Volume= 0.372 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.184 | 93 | Developed Low Intensity, HSG D |
| * | 4.554 | 71 | Cultivated Crops, HSG B |
| * | 0.504 | 81 | Cultivated Crops, HSG D |
| | 5.243 | 73 | Weighted Average |
| | 5.243 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 81 | 0.0247 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.3 | 19 | 0.0292 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.6 | 138 | 0.0271 | 1.48 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 38 | 0.0534 | 2.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 97 | 0.0588 | 2.18 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 52 | 0.0562 | 2.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 78 | 0.0406 | 1.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 65 | 0.0265 | 1.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.2 | 569 | Total | | | |

## Subcatchment 31: WS31



## Summary for Subcatchment 32: WS32

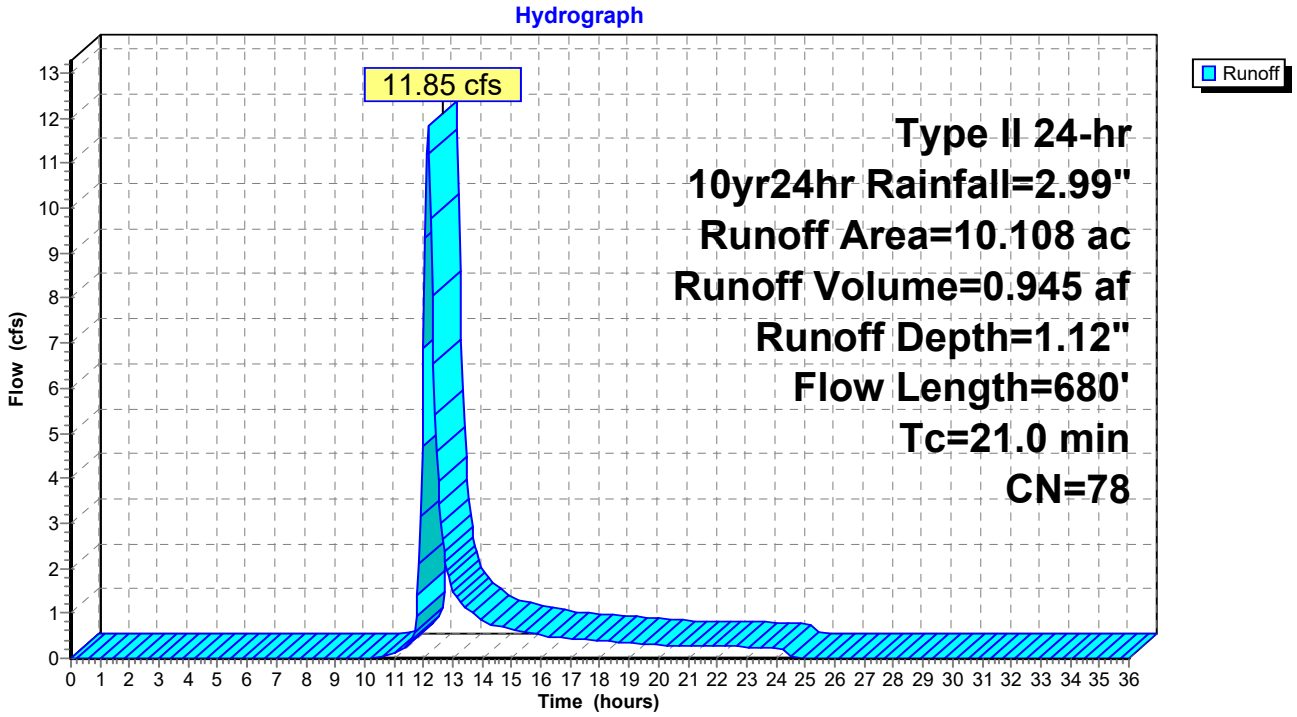
Runoff = 11.85 cfs @ 12.15 hrs, Volume= 0.945 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.081 | 88 | Developed Low Intensity, HSG B |
| * | 0.021 | 93 | Developed Low Intensity, HSG D |
| * | 0.727 | 71 | Cultivated Crops, HSG B |
| * | 0.190 | 81 | Cultivated Crops, HSG D |
| * | 2.804 | 71 | Cultivated Crops, HSG B |
| * | 6.047 | 81 | Cultivated Crops, HSG D |
| * | 0.154 | 86 | Woody Wetlands, HSG D |
| * | 0.085 | 86 | Woody Wetlands, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG D |
| | 10.108 | 78 | Weighted Average |
| | 10.108 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.0 | 100 | 0.0064 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.6 | 114 | 0.0064 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.6 | 143 | 0.0033 | 0.52 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 323 | 0.0155 | 1.12 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 21.0 | 680 | Total | | | |

## Subcatchment 32: WS32



## Summary for Subcatchment 33: WS33

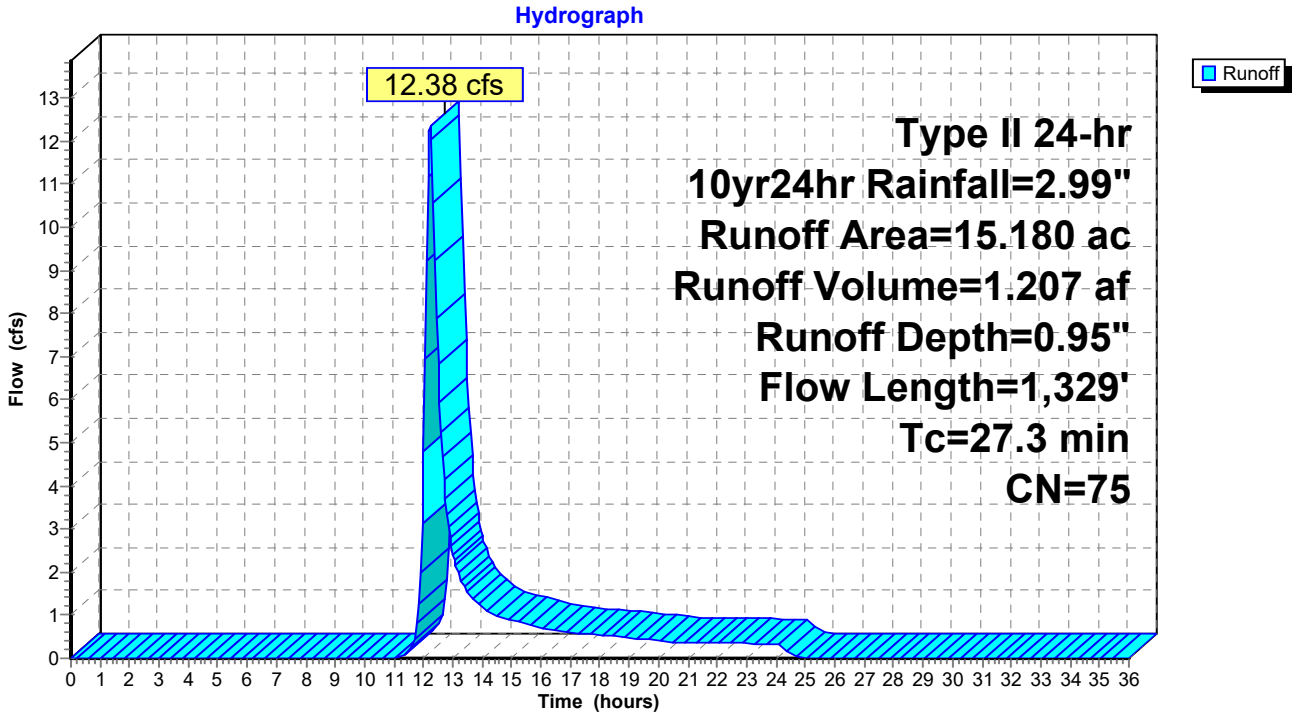
Runoff = 12.38 cfs @ 12.23 hrs, Volume= 1.207 af, Depth= 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.023 | 93 | Developed Low Intensity, HSG D |
| * | 1.066 | 71 | Cultivated Crops, HSG B |
| * | 3.586 | 81 | Cultivated Crops, HSG D |
| * | 2.467 | 81 | Cultivated Crops, HSG D |
| * | 8.038 | 71 | Cultivated Crops, HSG B |
| | 15.180 | 75 | Weighted Average |
| | 15.180 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.8 | 95 | 0.0047 | 0.16 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.5 | 5 | 0.0268 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 72 | 0.0236 | 1.38 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 211 | 0.0190 | 1.24 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 70 | 0.0171 | 1.18 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 143 | 0.0202 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.4 | 205 | 0.0239 | 1.39 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 120 | 0.0166 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 194 | 0.0169 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.4 | 145 | 0.0130 | 1.03 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.1 | 71 | 0.0149 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.3 | 1,329 | Total | | | |

## Subcatchment 33: WS33



## Summary for Subcatchment 34: WS34

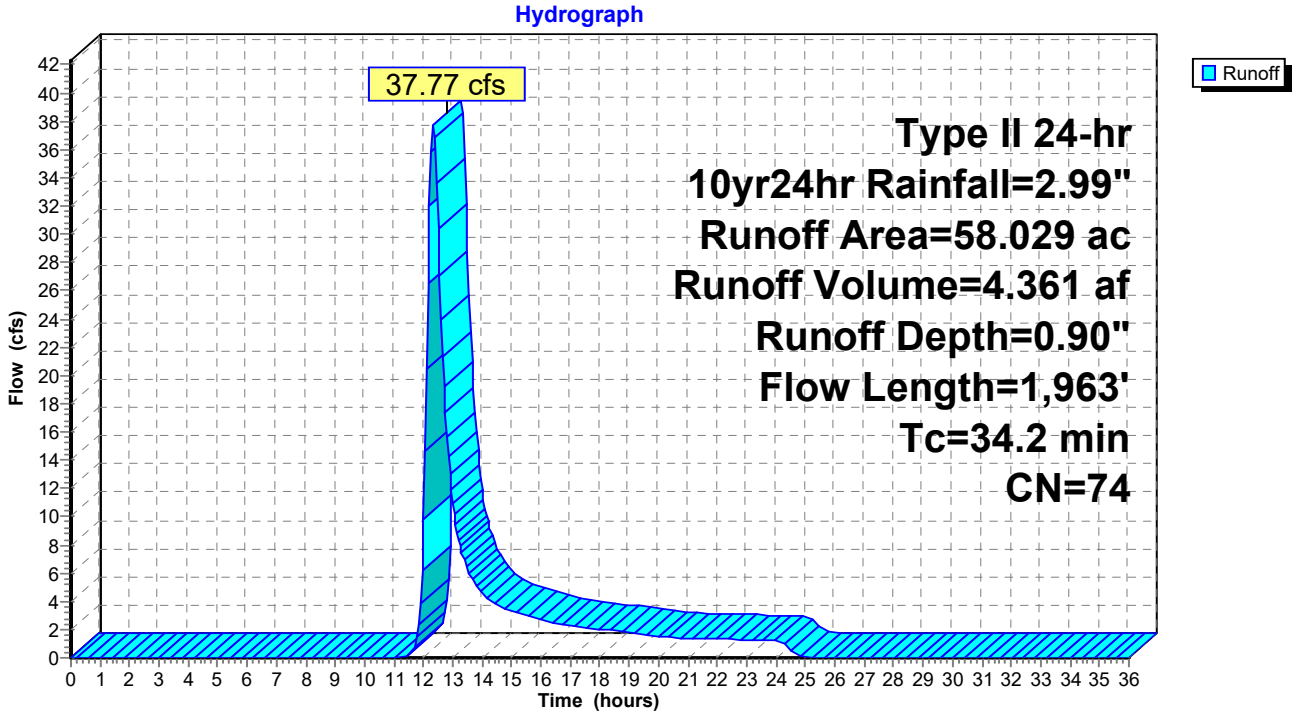
Runoff = 37.77 cfs @ 12.33 hrs, Volume= 4.361 af, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.223 | 74 | Evergreen Forest, HSG D |
| * | 0.016 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.023 | 55 | Deciduous Forest, HSG B |
| * | 0.092 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.259 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.003 | 80 | Pasture/Hay, HSG D |
| * | 1.400 | 61 | Pasture/Hay, HSG B |
| * | 1.086 | 61 | Pasture/Hay, HSG B |
| * | 0.139 | 89 | Developed Medium Intensity, HSG B |
| * | 0.766 | 88 | Developed Low Intensity, HSG B |
| * | 0.179 | 88 | Developed Low Intensity, HSG B |
| * | 0.222 | 89 | Developed Medium Intensity, HSG B |
| * | 0.174 | 89 | Developed Medium Intensity, HSG B |
| * | 0.133 | 88 | Developed Low Intensity, HSG B |
| * | 0.353 | 93 | Developed Low Intensity, HSG D |
| * | 0.150 | 84 | Developed Open Space, HSG D |
| * | 0.890 | 93 | Developed Low Intensity, HSG D |
| * | 0.363 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.194 | 88 | Developed Low Intensity, HSG B |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.513 | 68 | Developed Open Space, HSG B |
| * | 0.148 | 84 | Developed Open Space, HSG D |
| * | 0.212 | 88 | Developed Low Intensity, HSG B |
| * | 1.140 | 93 | Developed Low Intensity, HSG D |
| * | 0.169 | 84 | Developed Open Space, HSG D |
| * | 0.018 | 94 | Developed Medium Intensity, HSG D |
| * | 0.051 | 71 | Cultivated Crops, HSG B |
| * | 0.393 | 81 | Cultivated Crops, HSG D |
| * | 0.529 | 81 | Cultivated Crops, HSG D |
| * | 0.597 | 81 | Cultivated Crops, HSG D |
| * | 6.761 | 71 | Cultivated Crops, HSG B |
| * | 29.701 | 71 | Cultivated Crops, HSG B |
| * | 10.240 | 81 | Cultivated Crops, HSG D |
| | 58.029 | 74 | Weighted Average |
| | 58.029 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.9 | 100 | 0.0251 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 248 | 0.0275 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 493 | 0.0518 | 2.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.0 | 473 | 0.0214 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.3 | 260 | 0.0127 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 99 | 0.0130 | 2.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.7 | 291 | 0.0026 | 1.04 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 34.2 | 1,963 | Total | | | |

## Subcatchment 34: WS34



## Summary for Subcatchment 35: WS35

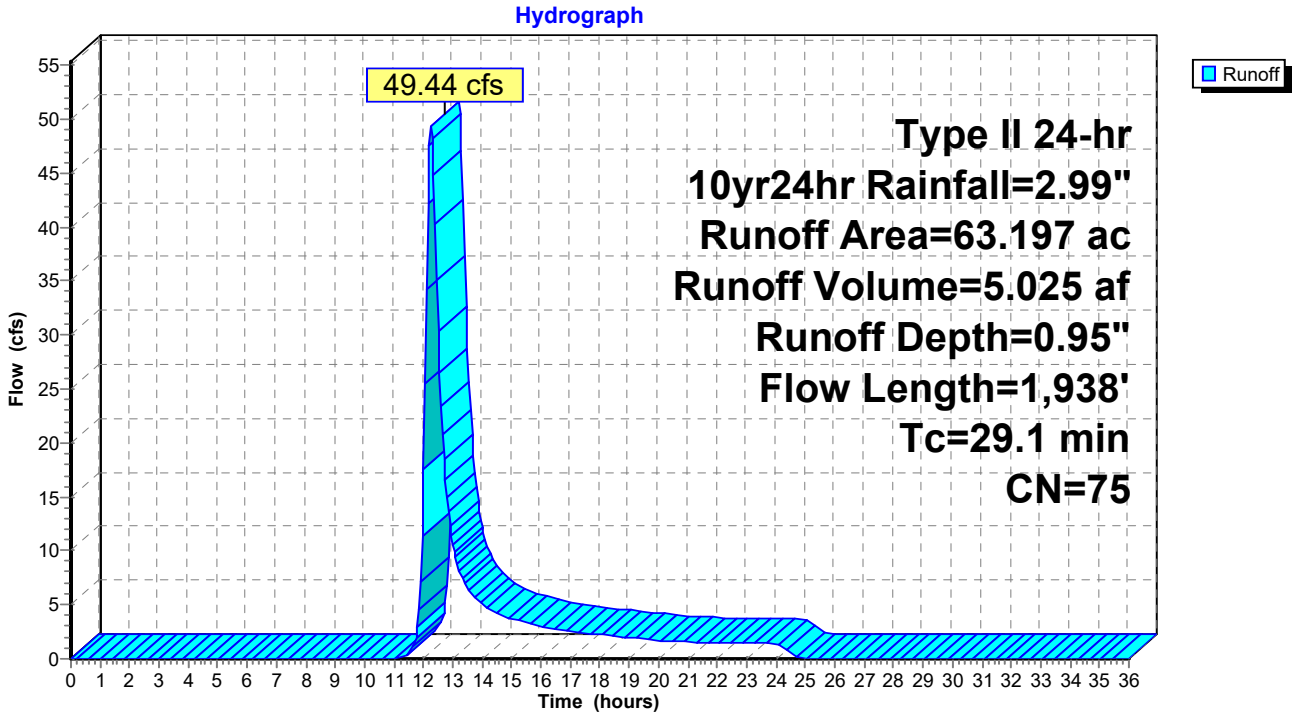
Runoff = 49.44 cfs @ 12.26 hrs, Volume= 5.025 af, Depth= 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.060 | 93 | Developed Low Intensity, HSG D |
| * | 0.072 | 84 | Developed Open Space, HSG D |
| * | 0.305 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.194 | 93 | Developed Low Intensity, HSG D |
| * | 1.190 | 80 | Pasture/Hay, HSG D |
| * | 0.558 | 61 | Pasture/Hay, HSG B |
| * | 0.164 | 89 | Developed Medium Intensity, HSG B |
| * | 0.485 | 94 | Developed Medium Intensity, HSG D |
| * | 0.221 | 68 | Developed Open Space, HSG B |
| * | 0.986 | 88 | Developed Low Intensity, HSG B |
| * | 0.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.002 | 71 | Cultivated Crops, HSG B |
| * | 0.049 | 81 | Cultivated Crops, HSG D |
| * | 7.291 | 71 | Cultivated Crops, HSG B |
| * | 13.448 | 81 | Cultivated Crops, HSG D |
| * | 2.277 | 71 | Cultivated Crops, HSG B |
| * | 7.295 | 71 | Cultivated Crops, HSG B |
| * | 22.072 | 71 | Cultivated Crops, HSG B |
| * | 6.074 | 81 | Cultivated Crops, HSG D |
| | 63.197 | 75 | Weighted Average |
| | 63.197 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 79 | 0.0156 | 0.97 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 21 | 0.0603 | 1.29 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.4 | 83 | 0.0265 | 3.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 3.4 | 291 | 0.0251 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.3 | 303 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 210 | 0.0088 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.6 | 431 | 0.0147 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 87 | 0.0123 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.3 | 434 | 0.0272 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.1 | 1,938 | Total | | | |

## Subcatchment 35: WS35



## Summary for Subcatchment 36: WS36

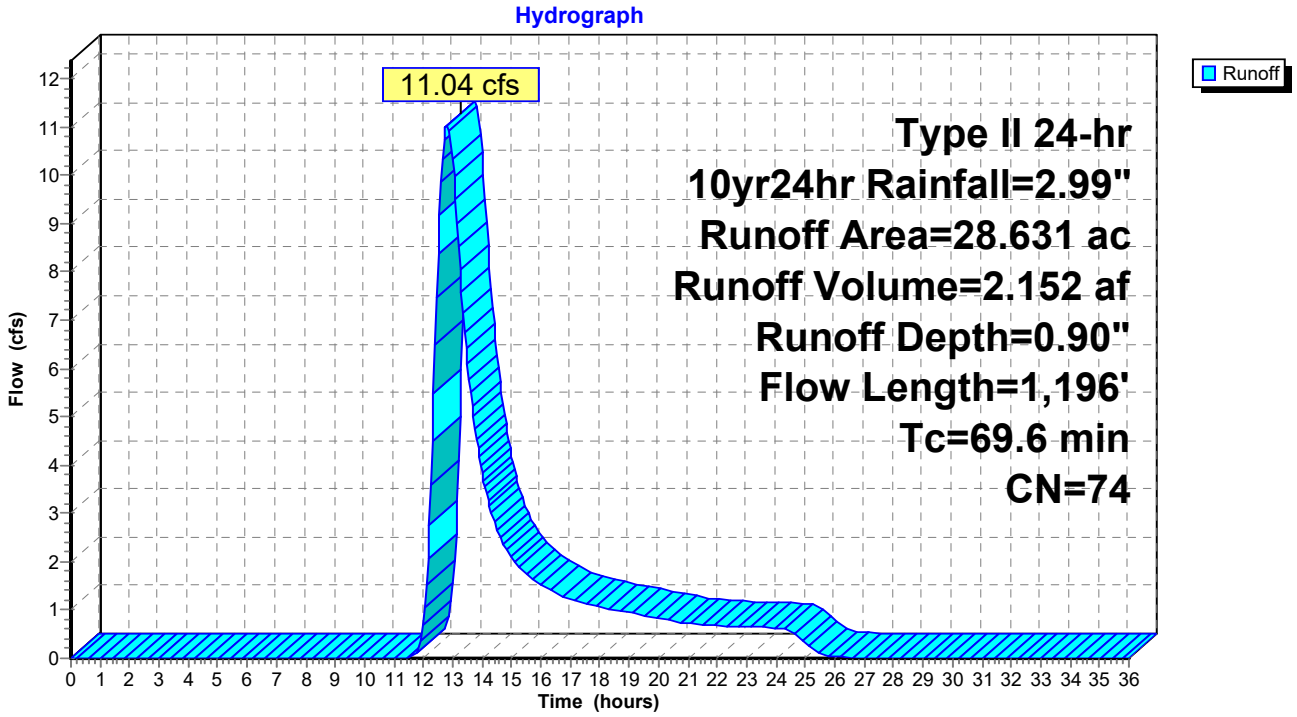
Runoff = 11.04 cfs @ 12.81 hrs, Volume= 2.152 af, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.197 | 61 | Pasture/Hay, HSG B |
| * | 0.628 | 80 | Pasture/Hay, HSG D |
| * | 0.342 | 61 | Pasture/Hay, HSG B |
| * | 16.198 | 71 | Cultivated Crops, HSG B |
| * | 7.258 | 81 | Cultivated Crops, HSG D |
| * | 4.008 | 71 | Cultivated Crops, HSG B |
| | 28.631 | 74 | Weighted Average |
| | 28.631 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.9 | 100 | 0.0040 | 0.15 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 43.1 | 205 | 0.0001 | 0.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.6 | 451 | 0.0222 | 1.34 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.0 | 440 | 0.0067 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 69.6 | 1,196 | Total | | | |

## Subcatchment 36: WS36



## Summary for Subcatchment 37: WS37

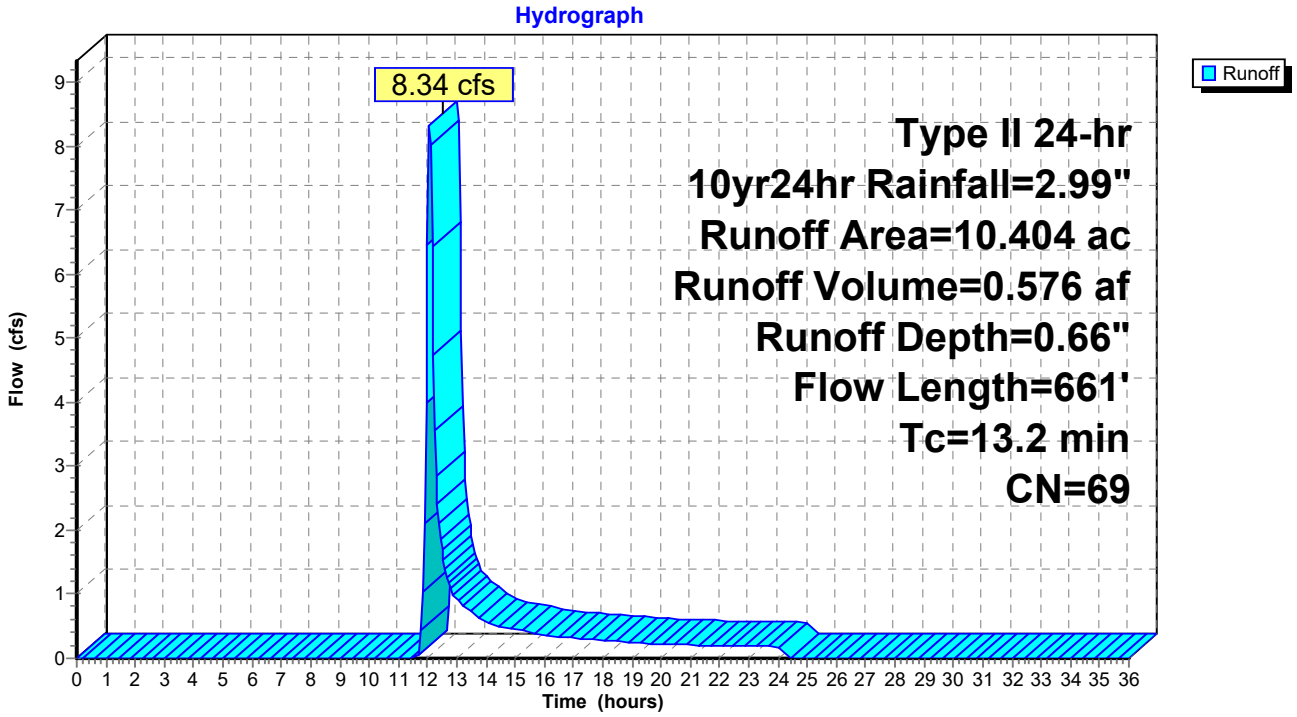
Runoff = 8.34 cfs @ 12.07 hrs, Volume= 0.576 af, Depth= 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.009 | 88 | Developed Low Intensity, HSG B |
| * | 0.007 | 68 | Developed Open Space, HSG B |
| * | 0.044 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 76 | Mixed Forest, HSG D |
| * | 0.127 | 60 | Mixed Forest, HSG B |
| * | 0.744 | 60 | Mixed Forest, HSG B |
| * | 0.996 | 55 | Deciduous Forest, HSG B |
| * | 0.079 | 88 | Developed Low Intensity, HSG B |
| * | 0.019 | 68 | Developed Open Space, HSG B |
| * | 0.341 | 81 | Cultivated Crops, HSG D |
| * | 5.999 | 71 | Cultivated Crops, HSG B |
| * | 2.036 | 71 | Cultivated Crops, HSG B |
| | 10.404 | 69 | Weighted Average |
| | 10.404 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.3 | 100 | 0.0240 | 0.31 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 70 | 0.0201 | 1.27 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 130 | 0.0263 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 139 | 0.0291 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 222 | 0.0108 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.2 | 661 | Total | | | |

## Subcatchment 37: WS37



## Summary for Subcatchment 38: WS38

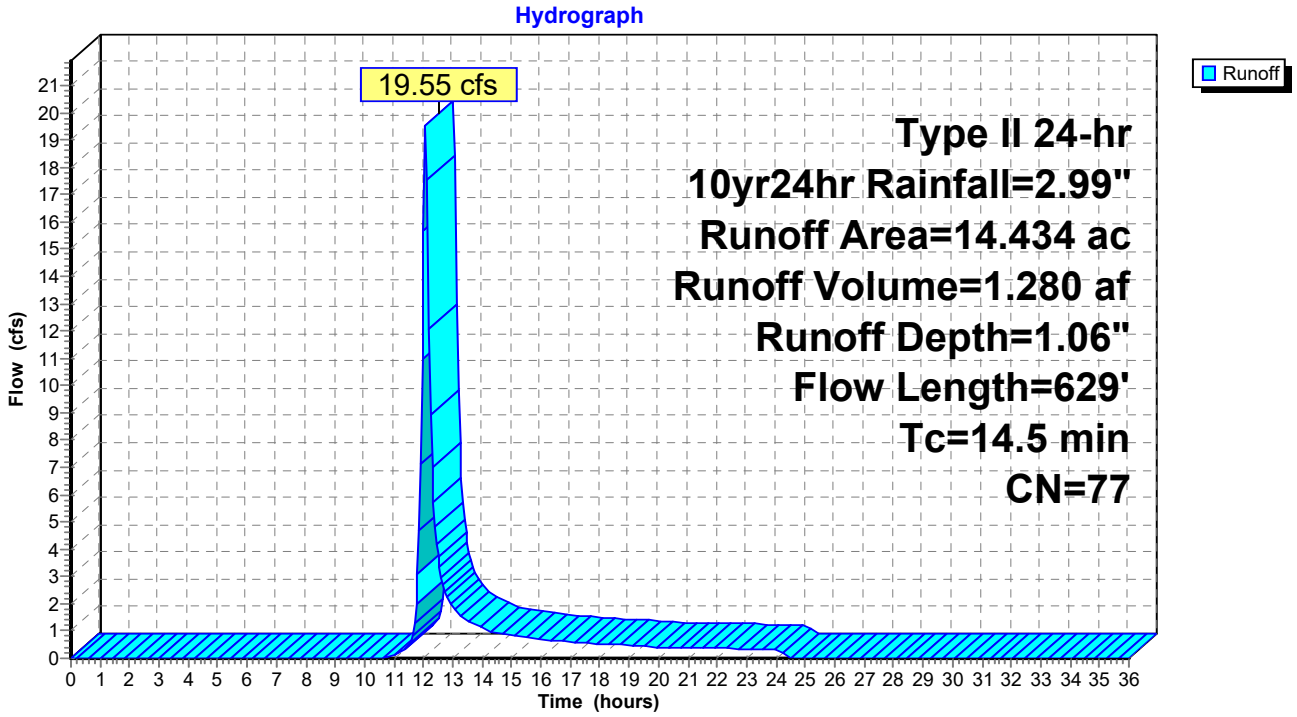
Runoff = 19.55 cfs @ 12.07 hrs, Volume= 1.280 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.049 | 88 | Developed Low Intensity, HSG B |
| * | 0.006 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.018 | 88 | Developed Low Intensity, HSG B |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 0.211 | 84 | Developed Open Space, HSG D |
| * | 0.082 | 93 | Developed Low Intensity, HSG D |
| * | 0.200 | 84 | Developed Open Space, HSG D |
| * | 0.118 | 93 | Developed Low Intensity, HSG D |
| * | 0.043 | 84 | Developed Open Space, HSG D |
| * | 0.046 | 68 | Developed Open Space, HSG B |
| * | 1.159 | 61 | Pasture/Hay, HSG B |
| * | 2.990 | 80 | Pasture/Hay, HSG D |
| * | 3.174 | 71 | Cultivated Crops, HSG B |
| * | 0.055 | 81 | Cultivated Crops, HSG D |
| * | 0.073 | 71 | Cultivated Crops, HSG B |
| * | 0.192 | 71 | Cultivated Crops, HSG B |
| * | 5.982 | 81 | Cultivated Crops, HSG D |
| | 14.434 | 77 | Weighted Average |
| | 14.434 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.9 | 100 | 0.0302 | 0.34 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.7 | 135 | 0.0086 | 0.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 220 | 0.0134 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 43 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 7 | 0.0067 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 124 | 0.0097 | 0.89 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.5 | 629 | Total | | | |

## Subcatchment 38: WS38



## Summary for Subcatchment 39: WS39

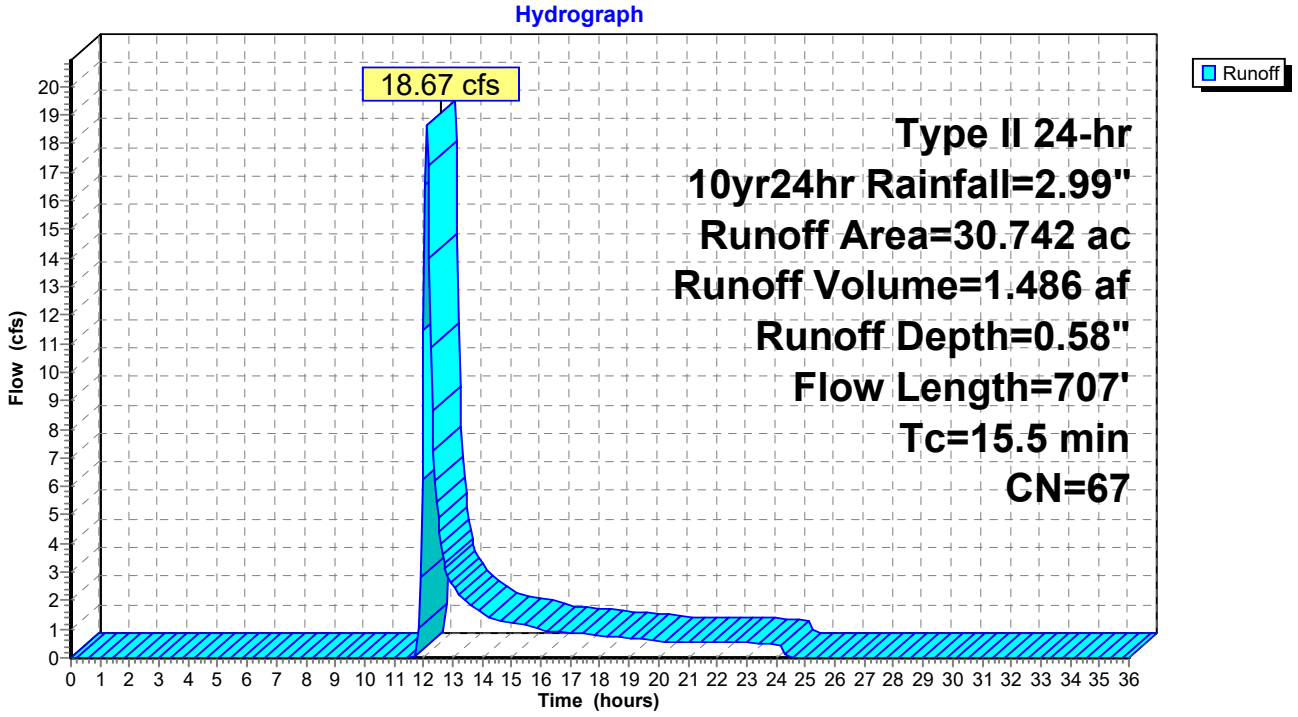
Runoff = 18.67 cfs @ 12.10 hrs, Volume= 1.486 af, Depth= 0.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.176 | 68 | Developed Open Space, HSG B |
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.359 | 68 | Developed Open Space, HSG B |
| * | 0.307 | 68 | Developed Open Space, HSG B |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 1.188 | 61 | Pasture/Hay, HSG B |
| * | 0.222 | 61 | Pasture/Hay, HSG B |
| * | 0.037 | 55 | Deciduous Forest, HSG B |
| * | 0.185 | 55 | Deciduous Forest, HSG B |
| * | 4.448 | 55 | Deciduous Forest, HSG B |
| * | 0.303 | 77 | Deciduous Forest, HSG D |
| * | 0.782 | 60 | Mixed Forest, HSG B |
| * | 0.775 | 60 | Mixed Forest, HSG B |
| * | 0.747 | 60 | Mixed Forest, HSG B |
| * | 0.142 | 76 | Mixed Forest, HSG D |
| * | 2.604 | 71 | Cultivated Crops, HSG B |
| * | 0.038 | 81 | Cultivated Crops, HSG D |
| * | 2.284 | 71 | Cultivated Crops, HSG B |
| * | 0.099 | 71 | Cultivated Crops, HSG B |
| * | 0.023 | 67 | Shrub/Scrub, HSG B |
| * | 2.327 | 55 | Deciduous Forest, HSG B |
| * | 1.422 | 77 | Deciduous Forest, HSG D |
| * | 0.011 | 55 | Deciduous Forest, HSG B |
| * | 1.069 | 61 | Pasture/Hay, HSG B |
| * | 0.304 | 80 | Pasture/Hay, HSG D |
| * | 8.535 | 71 | Cultivated Crops, HSG B |
| * | 2.131 | 81 | Cultivated Crops, HSG D |
| | 30.742 | 67 | Weighted Average |
| | 30.742 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.4 | 89 | 0.0596 | 0.44 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.8 | 11 | 0.0324 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.7 | 63 | 0.0258 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 168 | 0.0255 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 137 | 0.0170 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 144 | 0.0051 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 95 | 0.0146 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 15.5 | 707 | Total | | | |

## Subcatchment 39: WS39



## Summary for Subcatchment 40: WS40

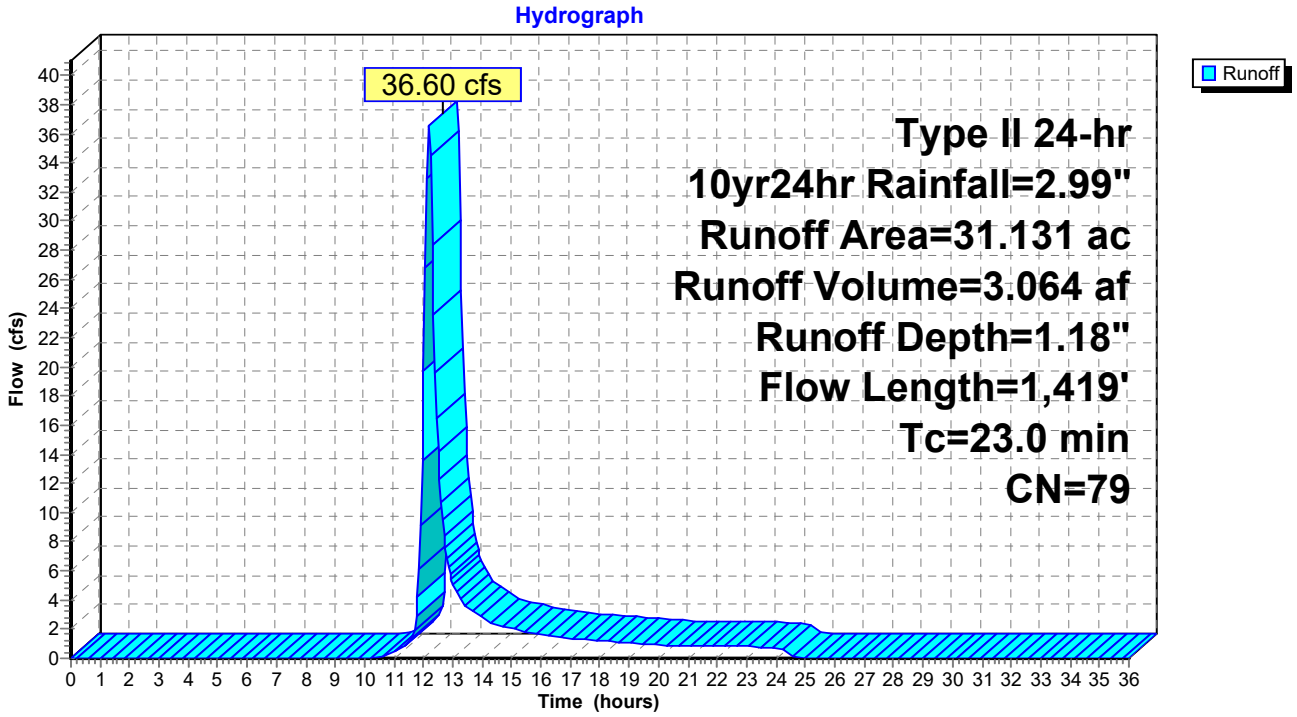
Runoff = 36.60 cfs @ 12.17 hrs, Volume= 3.064 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 81 | Cultivated Crops, HSG D |
| * | 0.123 | 71 | Cultivated Crops, HSG B |
| * | 0.309 | 67 | Shrub/Scrub, HSG B |
| * | 0.780 | 80 | Shrub/Scrub, HSG D |
| * | 0.156 | 55 | Deciduous Forest, HSG B |
| * | 0.140 | 77 | Deciduous Forest, HSG D |
| * | 7.426 | 77 | Deciduous Forest, HSG D |
| * | 0.190 | 77 | Deciduous Forest, HSG D |
| * | 0.082 | 61 | Pasture/Hay, HSG B |
| * | 2.718 | 80 | Pasture/Hay, HSG D |
| * | 0.518 | 80 | Pasture/Hay, HSG D |
| * | 0.302 | 71 | Cultivated Crops, HSG B |
| * | 0.057 | 62 | Cultivated Crops, HSG A |
| * | 3.811 | 81 | Cultivated Crops, HSG D |
| * | 14.460 | 81 | Cultivated Crops, HSG D |
| | 31.131 | 79 | Weighted Average |
| | 31.131 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.5 | 100 | 0.0222 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.1 | 79 | 0.0165 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 145 | 0.0411 | 1.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 129 | 0.0276 | 1.50 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.6 | 57 | 0.0264 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.7 | 300 | 0.0138 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.5 | 294 | 0.0148 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 219 | 0.0300 | 1.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 13 | 0.0151 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 83 | 0.0197 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.0 | 1,419 | Total | | | |

## Subcatchment 40: WS40



## Summary for Subcatchment 41: WS41

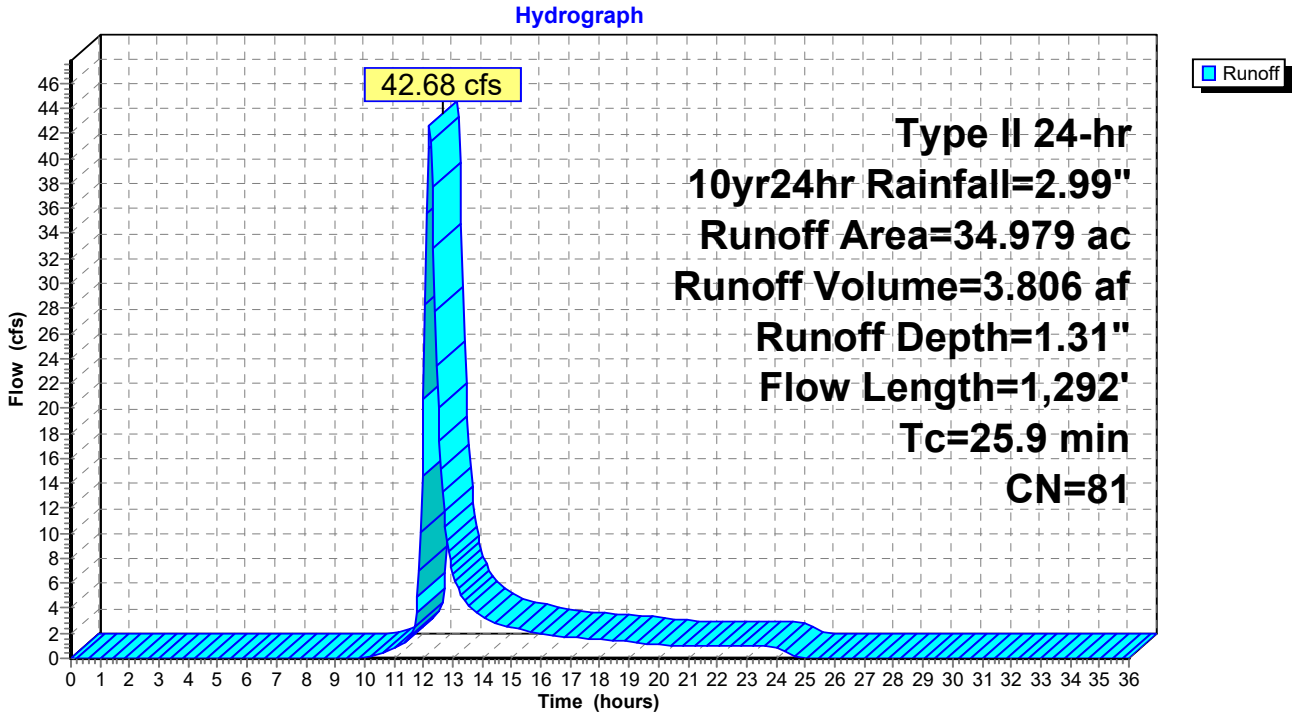
Runoff = 42.68 cfs @ 12.20 hrs, Volume= 3.806 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.146 | 68 | Developed Open Space, HSG B |
| * | 0.081 | 89 | Developed Medium Intensity, HSG B |
| * | 0.083 | 88 | Developed Low Intensity, HSG B |
| * | 0.299 | 93 | Developed Low Intensity, HSG D |
| * | 1.411 | 80 | Pasture/Hay, HSG D |
| * | 3.052 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 1.053 | 84 | Developed Open Space, HSG D |
| * | 0.146 | 93 | Developed Low Intensity, HSG D |
| * | 1.103 | 76 | Mixed Forest, HSG D |
| * | 0.212 | 80 | Pasture/Hay, HSG D |
| * | 0.566 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 80 | Pasture/Hay, HSG D |
| * | 0.021 | 76 | Mixed Forest, HSG D |
| * | 0.921 | 84 | Developed Open Space, HSG D |
| * | 1.187 | 71 | Cultivated Crops, HSG B |
| * | 24.567 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 80 | Pasture/Hay, HSG D |
| * | 0.113 | 81 | Cultivated Crops, HSG D |
| | 34.979 | 81 | Weighted Average |
| | 34.979 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.1 | 100 | 0.0466 | 0.41 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.6 | 63 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 330 | 0.0152 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.7 | 319 | 0.0157 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.5 | 480 | 0.0071 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.9 | 1,292 | Total | | | |

## Subcatchment 41: WS41



## Summary for Subcatchment 42: WS42

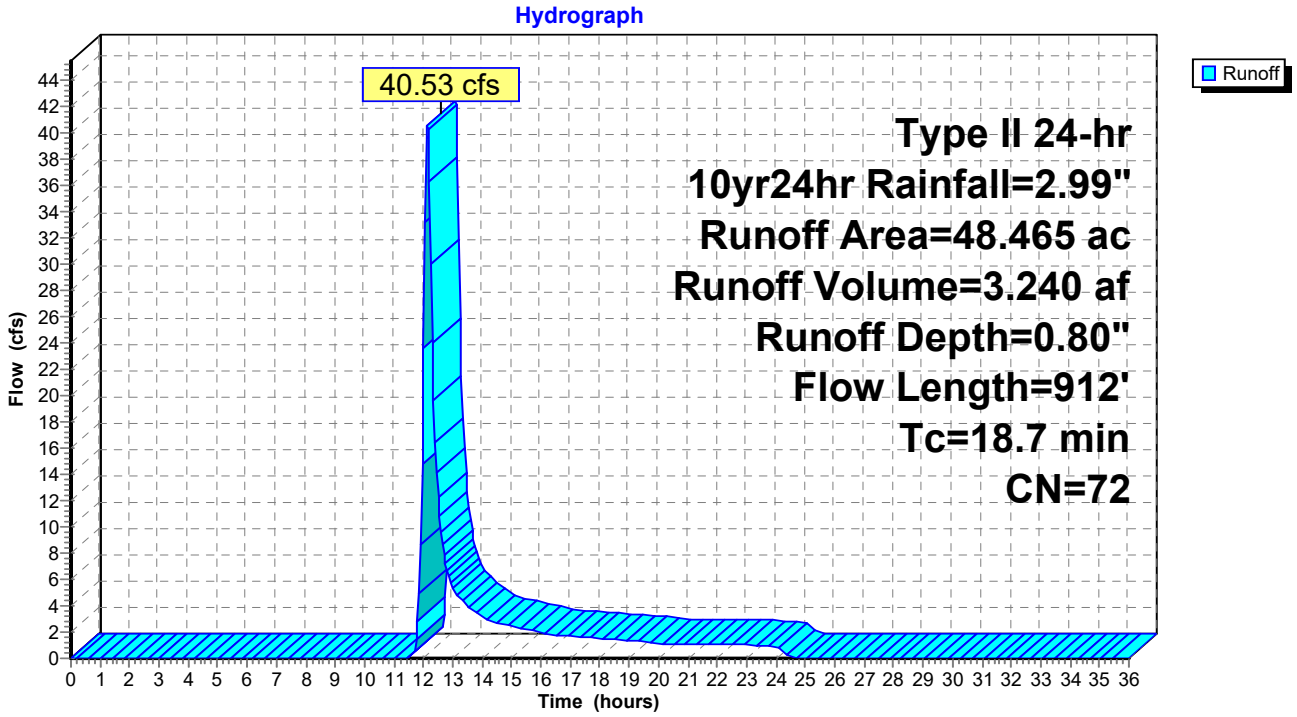
Runoff = 40.53 cfs @ 12.13 hrs, Volume= 3.240 af, Depth= 0.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.091 | 61 | Pasture/Hay, HSG B |
| * | 0.254 | 61 | Pasture/Hay, HSG B |
| * | 0.024 | 67 | Shrub/Scrub, HSG B |
| * | 1.392 | 55 | Deciduous Forest, HSG B |
| * | 7.125 | 81 | Cultivated Crops, HSG D |
| * | 0.957 | 81 | Cultivated Crops, HSG D |
| * | 0.014 | 71 | Cultivated Crops, HSG B |
| * | 0.064 | 81 | Cultivated Crops, HSG D |
| * | 38.091 | 71 | Cultivated Crops, HSG B |
| * | 0.225 | 86 | Woody Wetlands, HSG D |
| * | 0.006 | 86 | Woody Wetlands, HSG D |
| | 48.465 | 72 | Weighted Average |
| | 48.465 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.1 | 100 | 0.0117 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 11.6 | 812 | 0.0168 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.7 | 912 | Total | | | |

## Subcatchment 42: WS42



## Summary for Subcatchment 43: WS43

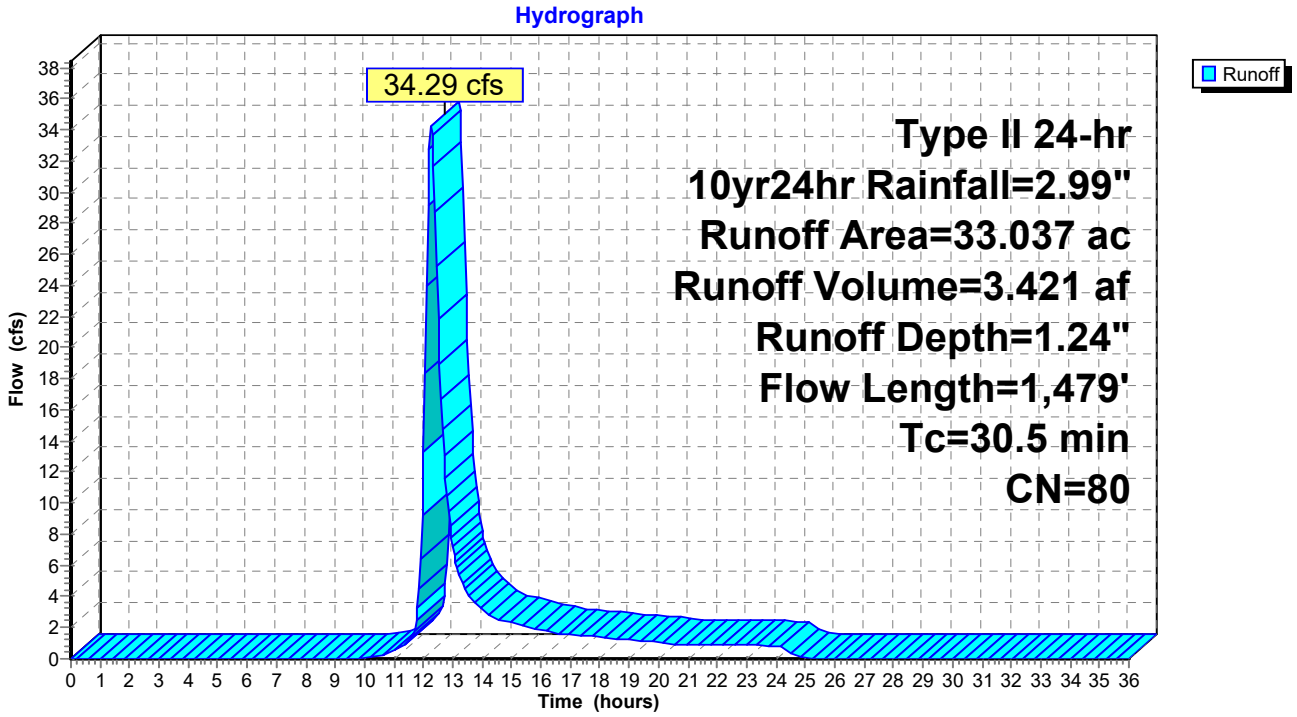
Runoff = 34.29 cfs @ 12.26 hrs, Volume= 3.421 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 77 | Deciduous Forest, HSG D |
| * | 0.032 | 30 | Deciduous Forest, HSG A |
| * | 0.169 | 76 | Mixed Forest, HSG D |
| * | 0.006 | 36 | Mixed Forest, HSG A |
| * | 0.081 | 74 | Evergreen Forest, HSG D |
| * | 0.103 | 76 | Mixed Forest, HSG D |
| * | 1.268 | 76 | Mixed Forest, HSG D |
| * | 0.155 | 76 | Mixed Forest, HSG D |
| * | 0.014 | 60 | Mixed Forest, HSG B |
| * | 0.222 | 76 | Mixed Forest, HSG D |
| * | 0.370 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.029 | 60 | Mixed Forest, HSG B |
| * | 3.432 | 77 | Deciduous Forest, HSG D |
| * | 0.890 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.202 | 93 | Developed Low Intensity, HSG D |
| * | 0.021 | 88 | Developed Low Intensity, HSG B |
| * | 0.183 | 88 | Developed Low Intensity, HSG B |
| * | 0.868 | 84 | Developed Open Space, HSG D |
| * | 0.206 | 84 | Developed Open Space, HSG D |
| * | 0.307 | 93 | Developed Low Intensity, HSG D |
| * | 0.012 | 80 | Pasture/Hay, HSG D |
| * | 0.023 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.035 | 80 | Pasture/Hay, HSG D |
| * | 0.013 | 93 | Developed Low Intensity, HSG D |
| * | 22.349 | 81 | Cultivated Crops, HSG D |
| * | 1.982 | 71 | Cultivated Crops, HSG B |
| * | 0.007 | 62 | Cultivated Crops, HSG A |
| | 33.037 | 80 | Weighted Average |
| | 33.037 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.5 | 100 | 0.0221 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.5 | 40 | 0.0243 | 1.40 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 254 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.2 | 183 | 0.0244 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 348 | 0.0164 | 1.15 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 12.6 | 439 | 0.0041 | 0.58 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 18 | 0.0059 | 1.56 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 33 | 0.0039 | 1.27 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 65 | 0.0069 | 1.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 30.5 | 1,479 | Total | | | |

## Subcatchment 43: WS43



## Summary for Subcatchment 44: WS44

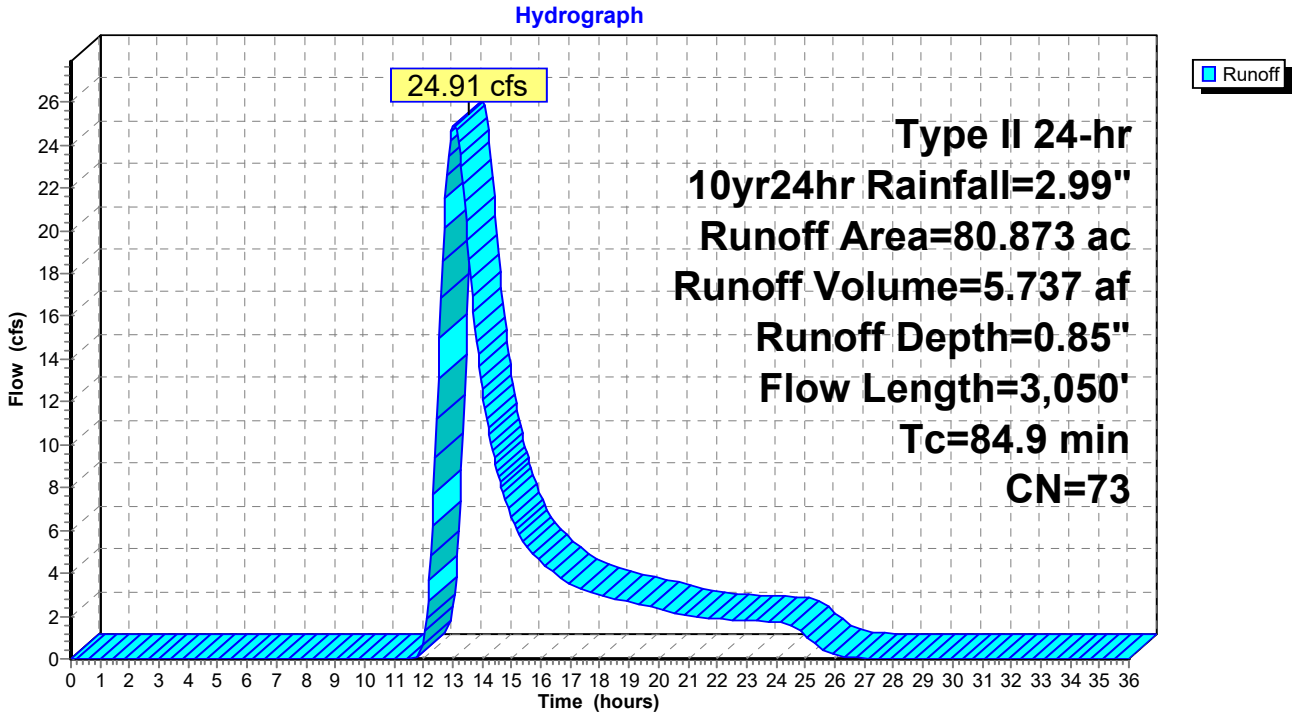
Runoff = 24.91 cfs @ 13.06 hrs, Volume= 5.737 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 0.222 | 39 | Pasture/Hay, HSG A |
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 1.019 | 30 | Deciduous Forest, HSG A |
| * | 0.780 | 30 | Deciduous Forest, HSG A |
| * | 0.046 | 81 | Developed Low Intensity, HSG A |
| * | 0.445 | 30 | Deciduous Forest, HSG A |
| * | 1.557 | 80 | Pasture/Hay, HSG D |
| * | 0.045 | 76 | Mixed Forest, HSG D |
| * | 0.002 | 36 | Mixed Forest, HSG A |
| * | 1.592 | 74 | Evergreen Forest, HSG D |
| * | 0.328 | 30 | Evergreen Forest, HSG A |
| * | 0.720 | 30 | Deciduous Forest, HSG A |
| * | 5.226 | 77 | Deciduous Forest, HSG D |
| * | 6.461 | 77 | Deciduous Forest, HSG D |
| * | 0.057 | 30 | Deciduous Forest, HSG A |
| * | 2.735 | 76 | Mixed Forest, HSG D |
| * | 0.243 | 93 | Developed Low Intensity, HSG D |
| * | 0.965 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.137 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 94 | Developed Medium Intensity, HSG D |
| * | 0.743 | 93 | Developed Low Intensity, HSG D |
| * | 0.888 | 93 | Developed Low Intensity, HSG D |
| * | 0.014 | 93 | Developed Low Intensity, HSG D |
| * | 0.401 | 62 | Cultivated Crops, HSG A |
| * | 17.391 | 62 | Cultivated Crops, HSG A |
| * | 25.630 | 81 | Cultivated Crops, HSG D |
| * | 11.114 | 81 | Cultivated Crops, HSG D |
| * | 0.778 | 62 | Cultivated Crops, HSG A |
| | 80.873 | 73 | Weighted Average |
| | 80.873 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.7 | 100 | 0.0611 | 0.45 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 41 | 0.0503 | 2.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 216 | 0.0304 | 1.57 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.1 | 517 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 186 | 0.0144 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 32.0 | 677 | 0.0050 | 0.35 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.4 | 143 | 0.0118 | 0.98 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 33.2 | 1,171 | 0.0043 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 84.9 | 3,050 | Total | | | |

## Subcatchment 44: WS44



## Summary for Subcatchment 45: WS45

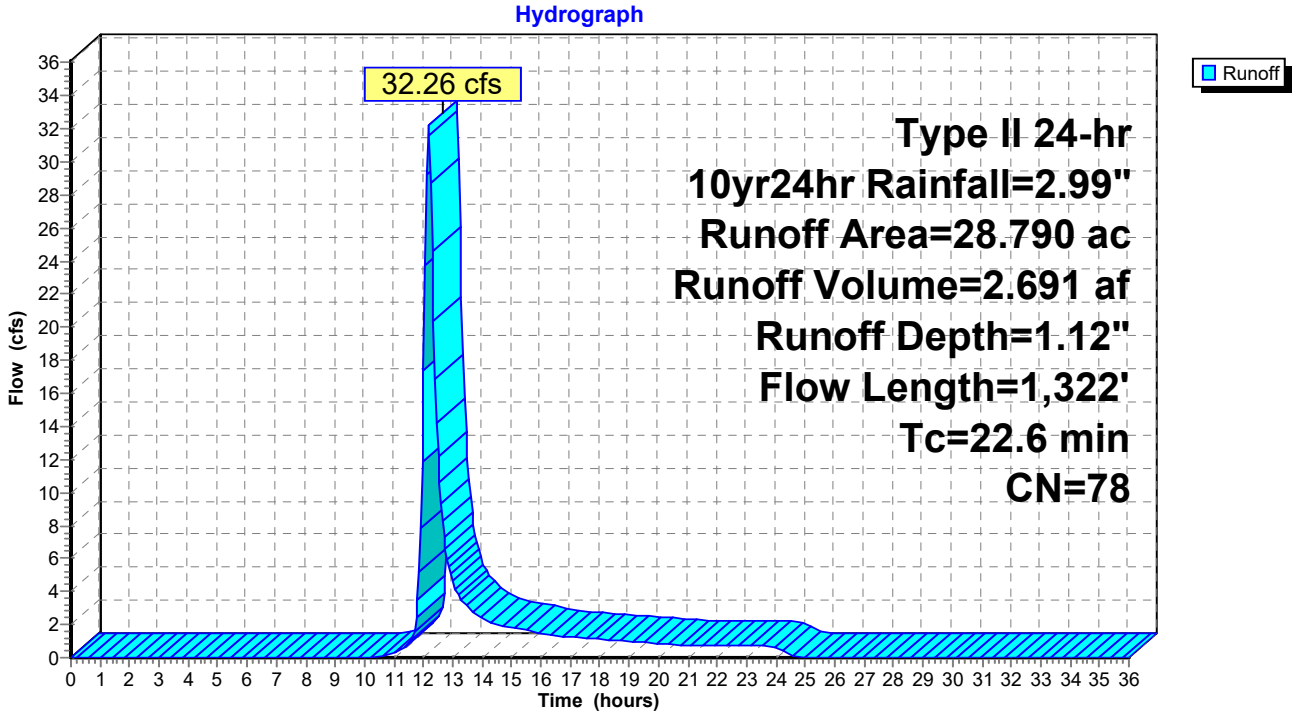
Runoff = 32.26 cfs @ 12.17 hrs, Volume= 2.691 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.658 | 77 | Deciduous Forest, HSG D |
| * | 5.025 | 62 | Cultivated Crops, HSG A |
| * | 23.107 | 81 | Cultivated Crops, HSG D |
| | 28.790 | 78 | Weighted Average |
| | 28.790 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.1 | 100 | 0.0266 | 0.33 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.8 | 287 | 0.0198 | 1.27 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.7 | 935 | 0.0160 | 1.14 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 22.6 | 1,322 | Total | | | |

## Subcatchment 45: WS45



## Summary for Subcatchment 46: WS46

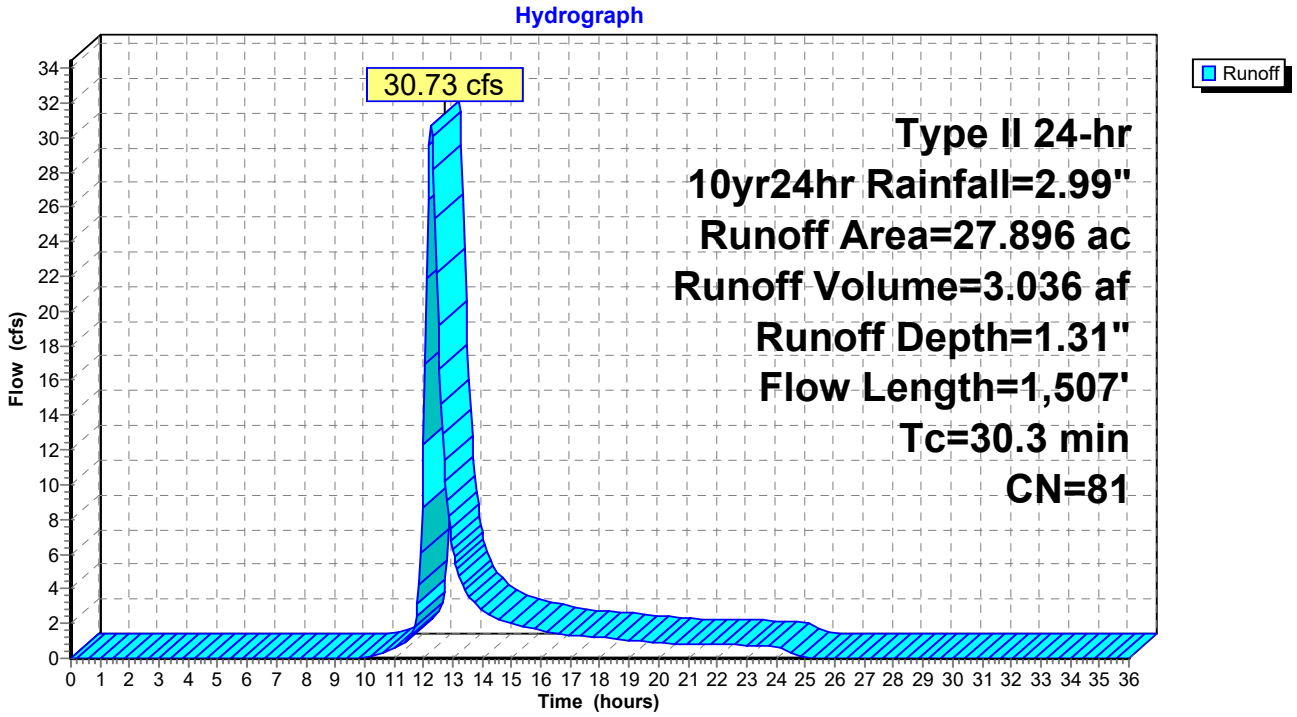
Runoff = 30.73 cfs @ 12.26 hrs, Volume= 3.036 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.444 | 80 | Pasture/Hay, HSG D |
| * | 6.847 | 81 | Cultivated Crops, HSG D |
| * | 19.604 | 81 | Cultivated Crops, HSG D |
| | 27.896 | 81 | Weighted Average |
| | 27.896 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | 100 | 0.0181 | 0.28 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.2 | 91 | 0.0206 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.8 | 223 | 0.0037 | 0.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 383 | 0.0344 | 1.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.1 | 190 | 0.0276 | 1.50 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.6 | 218 | 0.0123 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.8 | 81 | 0.0122 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.0 | 220 | 0.0068 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 30.3 | 1,507 | Total | | | |

## Subcatchment 46: WS46



## Summary for Subcatchment 47: WS47

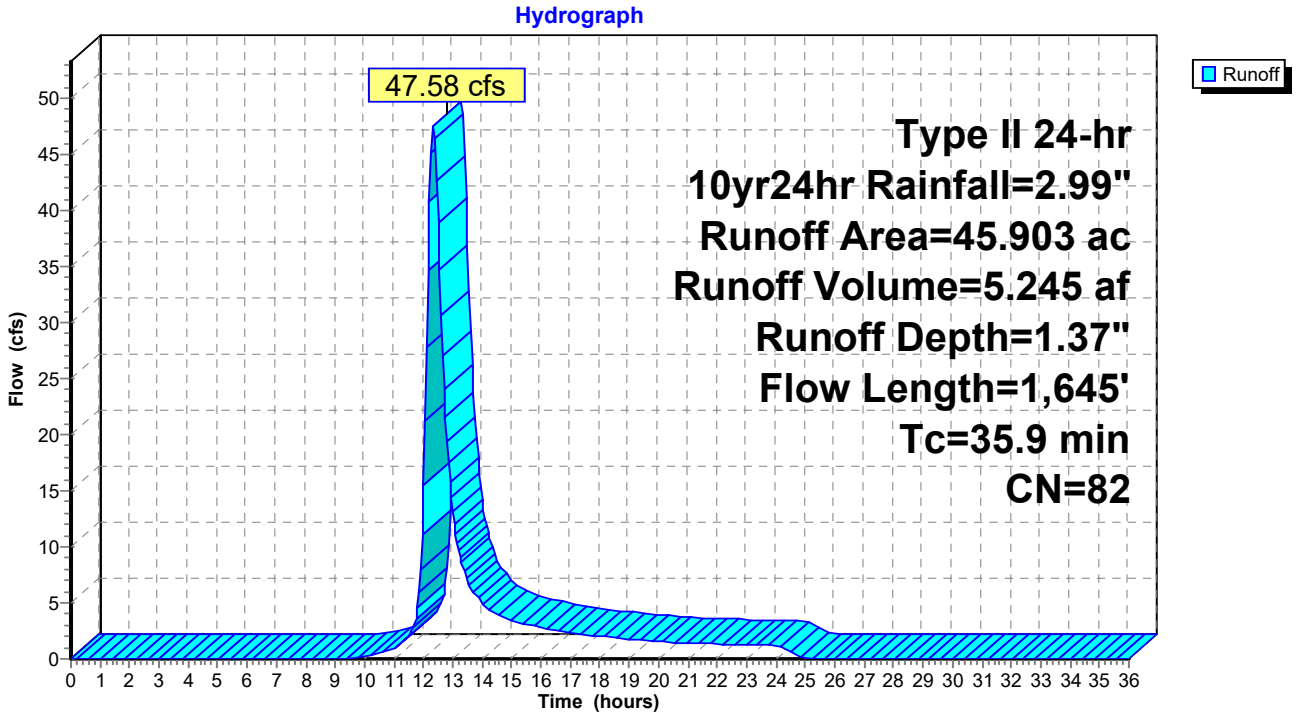
Runoff = 47.58 cfs @ 12.32 hrs, Volume= 5.245 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.007 | 80 | Pasture/Hay, HSG D |
| * | 0.146 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.182 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.424 | 93 | Developed Low Intensity, HSG D |
| * | 0.086 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 0.015 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.119 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.030 | 80 | Pasture/Hay, HSG D |
| * | 0.037 | 80 | Pasture/Hay, HSG D |
| * | 0.039 | 86 | Woody Wetlands, HSG D |
| * | 0.118 | 86 | Woody Wetlands, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.007 | 93 | Developed Low Intensity, HSG D |
| * | 0.438 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 86 | Woody Wetlands, HSG D |
| * | 0.185 | 94 | Developed Medium Intensity, HSG D |
| * | 0.037 | 94 | Developed Medium Intensity, HSG D |
| * | 0.401 | 84 | Developed Open Space, HSG D |
| * | 0.269 | 93 | Developed Low Intensity, HSG D |
| * | 0.259 | 84 | Developed Open Space, HSG D |
| * | 0.581 | 93 | Developed Low Intensity, HSG D |
| * | 0.452 | 81 | Cultivated Crops, HSG D |
| * | 24.057 | 81 | Cultivated Crops, HSG D |
| * | 13.849 | 81 | Cultivated Crops, HSG D |
| * | 3.045 | 81 | Cultivated Crops, HSG D |
| | 45.903 | 82 | Weighted Average |
| | 45.903 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.2 | 100 | 0.0025 | 0.13 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.4 | 145 | 0.0396 | 1.79 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.6 | 264 | 0.0189 | 1.24 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 109 | 0.0228 | 1.36 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 293 | 0.0195 | 1.26 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.4 | 372 | 0.0161 | 1.14 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.4 | 320 | 0.0086 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 42 | 0.0127 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.9 | 1,645 | Total | | | |

## Subcatchment 47: WS47



## Summary for Subcatchment 48: WS48

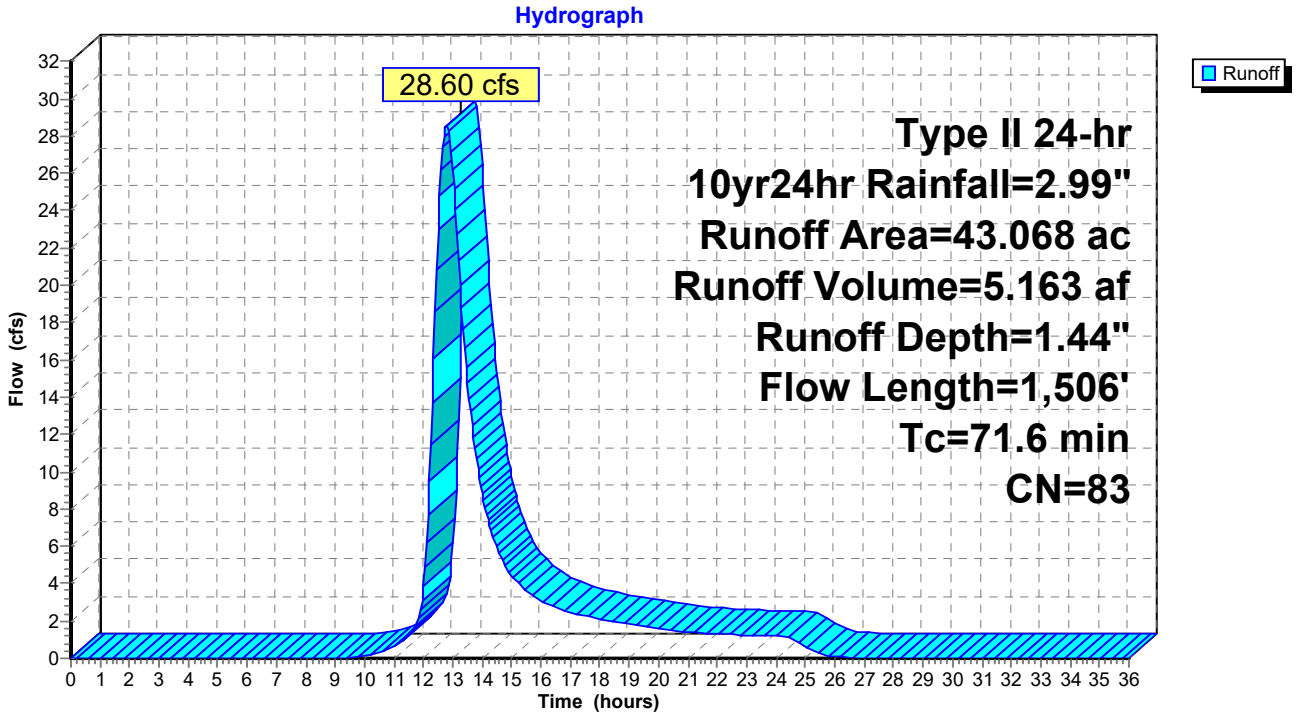
Runoff = 28.60 cfs @ 12.79 hrs, Volume= 5.163 af, Depth= 1.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.059 | 86 | Woody Wetlands, HSG D |
| * | 0.481 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.445 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.923 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.189 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.297 | 93 | Developed Low Intensity, HSG D |
| * | 0.770 | 93 | Developed Low Intensity, HSG D |
| * | 0.778 | 93 | Developed Low Intensity, HSG D |
| * | 0.144 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 11.070 | 86 | Woody Wetlands, HSG D |
| * | 0.082 | 86 | Woody Wetlands, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 3.927 | 81 | Cultivated Crops, HSG D |
| * | 3.192 | 81 | Cultivated Crops, HSG D |
| * | 19.673 | 81 | Cultivated Crops, HSG D |
| | 43.068 | 83 | Weighted Average |
| | 43.068 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.6 | 63 | 0.0685 | 1.68 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 3.2 | 37 | 0.0120 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.9 | 106 | 0.0110 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.2 | 283 | 0.0039 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.1 | 430 | 0.0056 | 0.38 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 31.6 | 588 | 0.0038 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 71.6 | 1,506 | Total | | | |

## Subcatchment 48: WS48



## Summary for Subcatchment 49: WS49

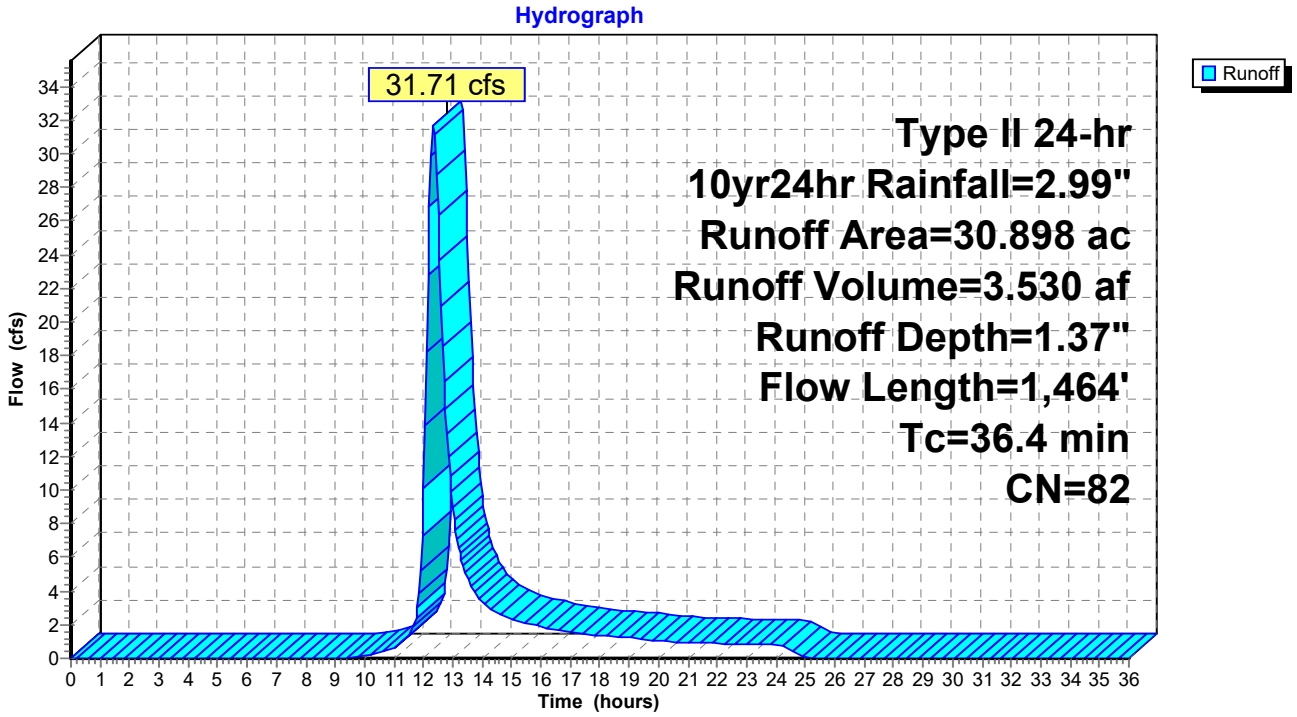
Runoff = 31.71 cfs @ 12.33 hrs, Volume= 3.530 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.667 | 76 | Mixed Forest, HSG D |
| * | 0.784 | 93 | Developed Low Intensity, HSG D |
| * | 0.080 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 76 | Mixed Forest, HSG D |
| * | 0.222 | 77 | Deciduous Forest, HSG D |
| * | 0.317 | 77 | Deciduous Forest, HSG D |
| * | 1.239 | 77 | Deciduous Forest, HSG D |
| * | 0.342 | 94 | Developed Medium Intensity, HSG D |
| * | 0.103 | 94 | Developed Medium Intensity, HSG D |
| * | 0.005 | 84 | Developed Open Space, HSG D |
| * | 0.011 | 84 | Developed Open Space, HSG D |
| * | 0.333 | 93 | Developed Low Intensity, HSG D |
| * | 0.812 | 93 | Developed Low Intensity, HSG D |
| * | 0.328 | 93 | Developed Low Intensity, HSG D |
| * | 1.522 | 81 | Cultivated Crops, HSG D |
| * | 11.291 | 81 | Cultivated Crops, HSG D |
| * | 12.617 | 81 | Cultivated Crops, HSG D |
| | 30.898 | 82 | Weighted Average |
| | 30.898 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.0 | 100 | 0.0066 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 28 | 0.0239 | 1.39 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 311 | 0.0214 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 420 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.9 | 605 | 0.0065 | 0.73 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 36.4 | 1,464 | Total | | | |

## Subcatchment 49: WS49



## Summary for Subcatchment 50: WS50

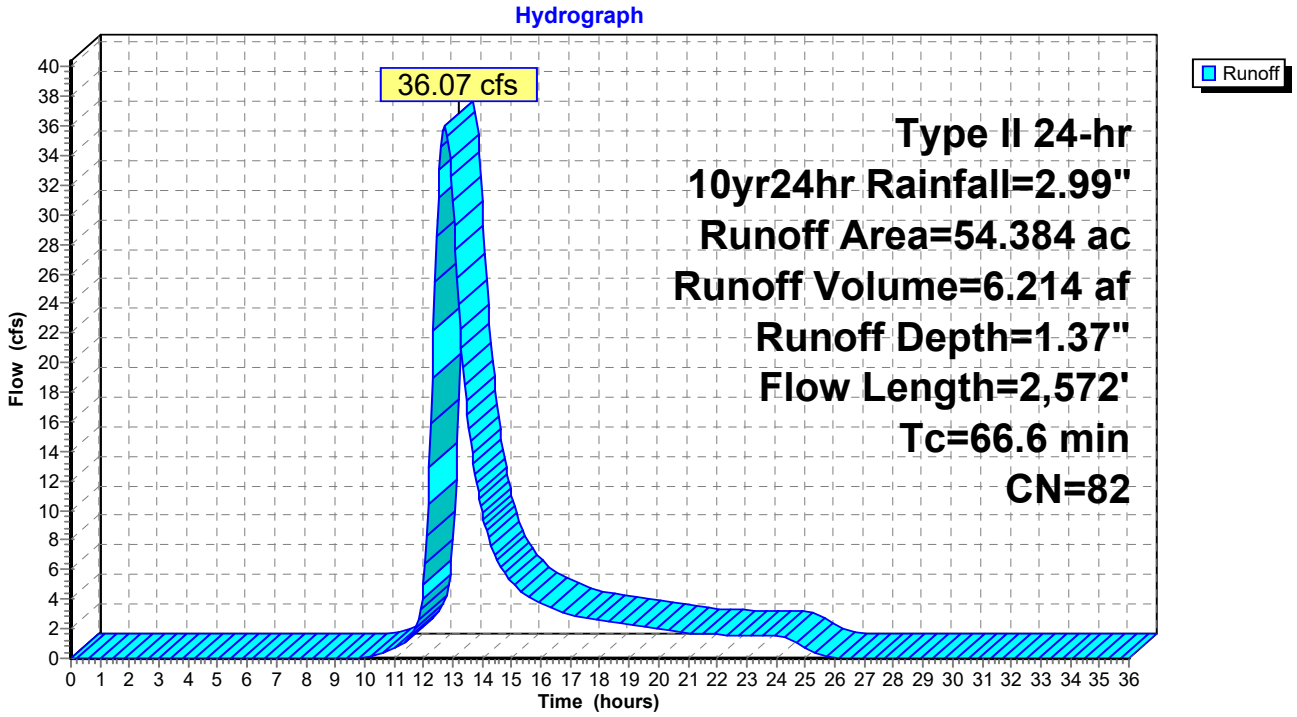
Runoff = 36.07 cfs @ 12.73 hrs, Volume= 6.214 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.217 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.211 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.633 | 93 | Developed Low Intensity, HSG D |
| * | 0.271 | 93 | Developed Low Intensity, HSG D |
| * | 0.107 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.013 | 94 | Developed Medium Intensity, HSG D |
| * | 0.732 | 93 | Developed Low Intensity, HSG D |
| * | 0.279 | 93 | Developed Low Intensity, HSG D |
| * | 0.089 | 84 | Developed Open Space, HSG D |
| * | 0.028 | 93 | Developed Low Intensity, HSG D |
| * | 18.509 | 81 | Cultivated Crops, HSG D |
| * | 25.505 | 81 | Cultivated Crops, HSG D |
| * | 6.901 | 81 | Cultivated Crops, HSG D |
| | 54.384 | 82 | Weighted Average |
| | 54.384 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.3 | 100 | 0.0060 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.8 | 233 | 0.0082 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.4 | 518 | 0.0085 | 0.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.7 | 499 | 0.0114 | 0.96 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 23.1 | 523 | 0.0018 | 0.38 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.3 | 699 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 66.6 | 2,572 | Total | | | |

## Subcatchment 50: WS50



## Summary for Subcatchment 51: WS51

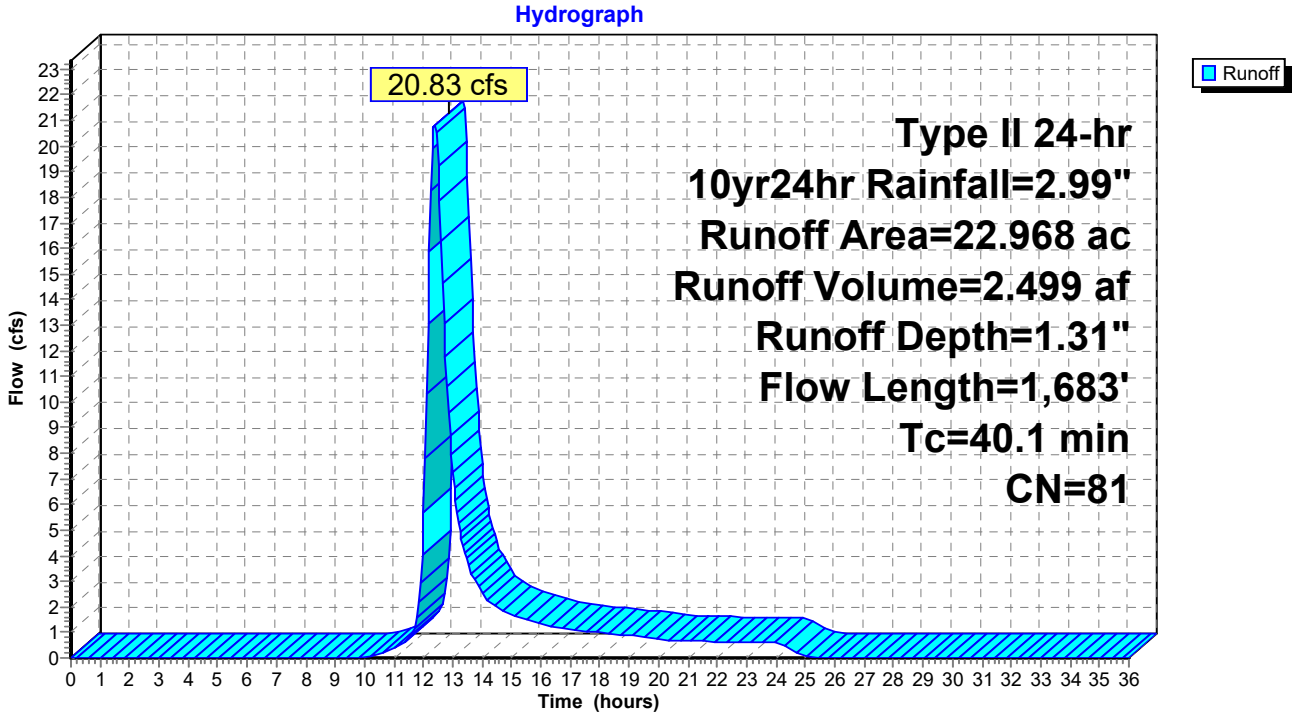
Runoff = 20.83 cfs @ 12.38 hrs, Volume= 2.499 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.232 | 81 | Cultivated Crops, HSG D |
| * | 21.736 | 81 | Cultivated Crops, HSG D |
| | 22.968 | 81 | Weighted Average |
| | 22.968 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.8 | 100 | 0.0092 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 9.9 | 590 | 0.0122 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.4 | 686 | 0.0090 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.0 | 307 | 0.0040 | 0.57 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 40.1 | 1,683 | Total | | | |

## Subcatchment 51: WS51



## Summary for Subcatchment 52: WS52

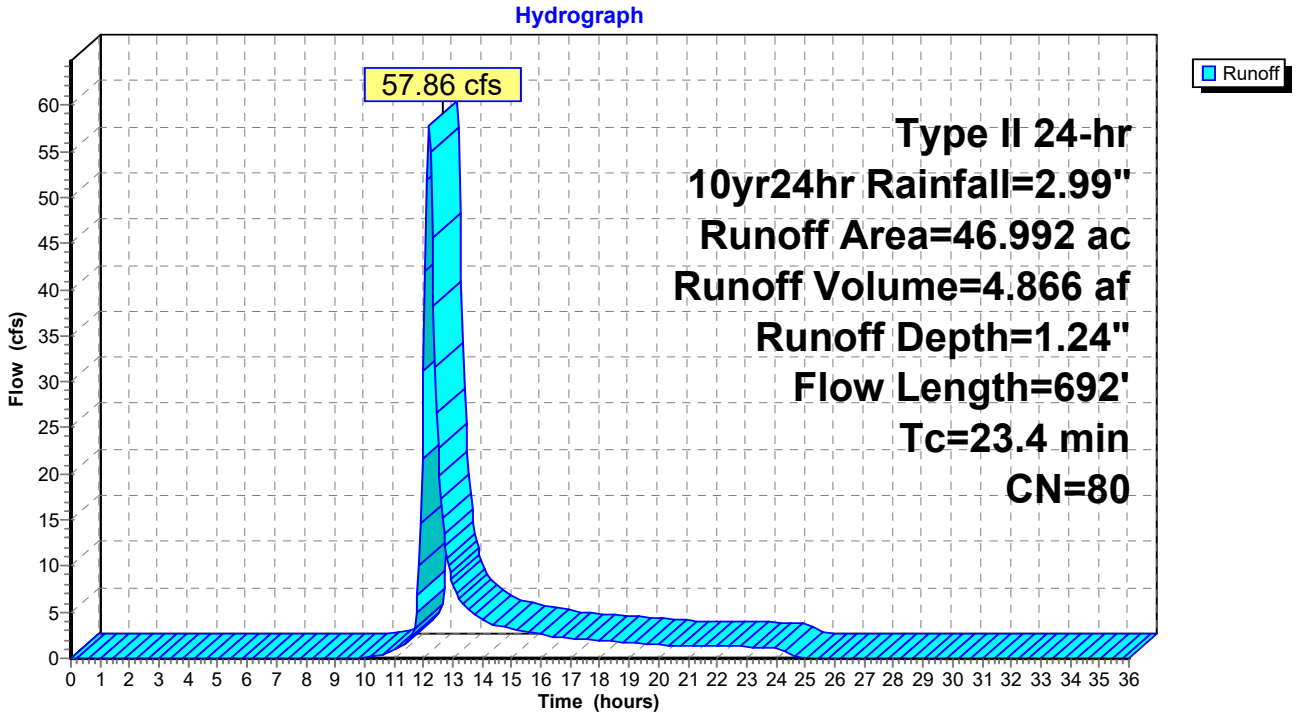
Runoff = 57.86 cfs @ 12.17 hrs, Volume= 4.866 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.777 | 86 | Woody Wetlands, HSG D |
| * | 0.198 | 80 | Pasture/Hay, HSG D |
| * | 0.025 | 80 | Pasture/Hay, HSG D |
| * | 2.475 | 77 | Deciduous Forest, HSG D |
| * | 1.817 | 77 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Pasture/Hay, HSG D |
| * | 0.155 | 80 | Pasture/Hay, HSG D |
| * | 1.958 | 77 | Deciduous Forest, HSG D |
| * | 0.570 | 77 | Deciduous Forest, HSG D |
| * | 0.490 | 77 | Deciduous Forest, HSG D |
| * | 0.003 | 61 | Pasture/Hay, HSG B |
| * | 2.802 | 80 | Pasture/Hay, HSG D |
| * | 0.601 | 80 | Pasture/Hay, HSG D |
| * | 3.187 | 71 | Cultivated Crops, HSG B |
| * | 20.129 | 81 | Cultivated Crops, HSG D |
| * | 10.916 | 81 | Cultivated Crops, HSG D |
| * | 0.822 | 81 | Cultivated Crops, HSG D |
| | 46.992 | 80 | Weighted Average |
| | 46.992 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.3 | 77 | 0.0096 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.2 | 23 | 0.0144 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.4 | 138 | 0.0185 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.2 | 249 | 0.0092 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.3 | 206 | 0.0132 | 0.80 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.4 | 692 | Total | | | |

## Subcatchment 52: WS52



## Summary for Subcatchment 53: WS53

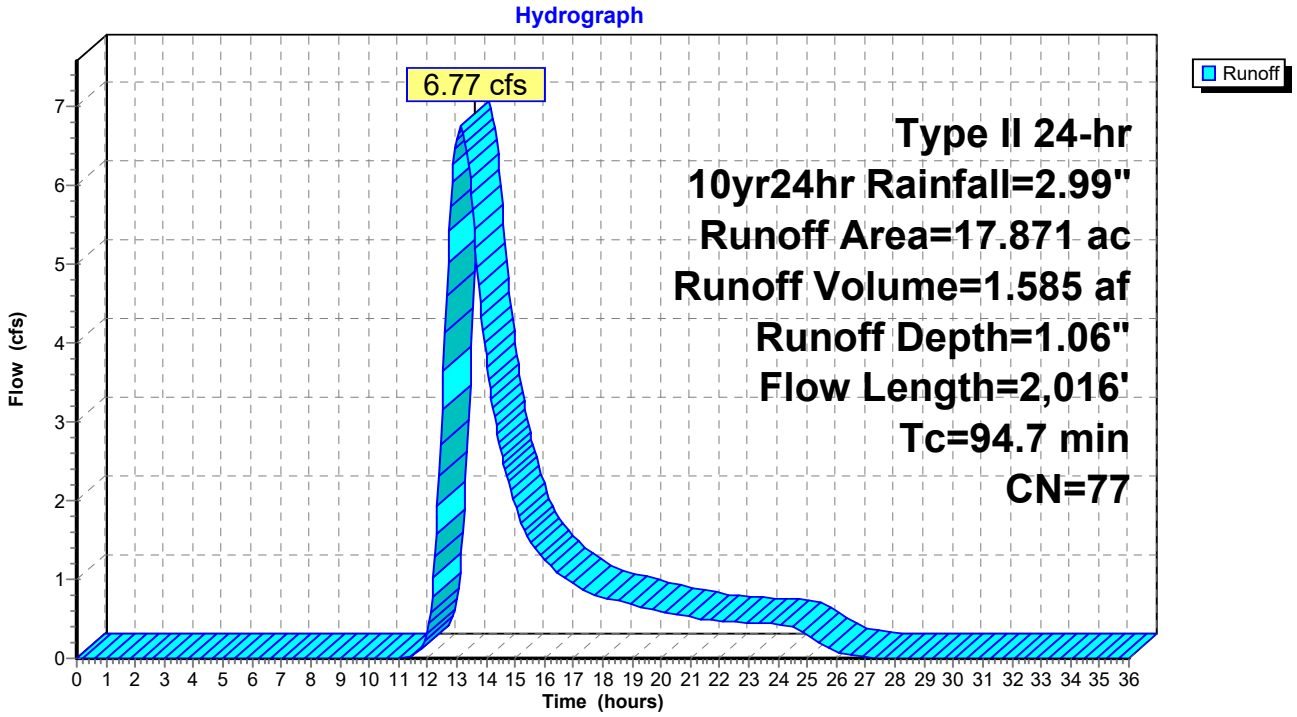
Runoff = 6.77 cfs @ 13.14 hrs, Volume= 1.585 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.579 | 77 | Deciduous Forest, HSG D |
| * | 0.013 | 77 | Deciduous Forest, HSG D |
| * | 0.538 | 60 | Mixed Forest, HSG B |
| * | 0.164 | 76 | Mixed Forest, HSG D |
| * | 5.012 | 71 | Cultivated Crops, HSG B |
| * | 11.565 | 81 | Cultivated Crops, HSG D |
| | 17.871 | 77 | Weighted Average |
| | 17.871 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 46.4 | 100 | 0.0048 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.5 | 83 | 0.0337 | 0.92 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 34 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.5 | 289 | 0.0142 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.3 | 470 | 0.0071 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.8 | 245 | 0.0026 | 0.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.5 | 298 | 0.0034 | 0.52 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.2 | 497 | 0.0048 | 0.63 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 94.7 | 2,016 | Total | | | |

## Subcatchment 53: WS53



## Summary for Subcatchment 54: WS54

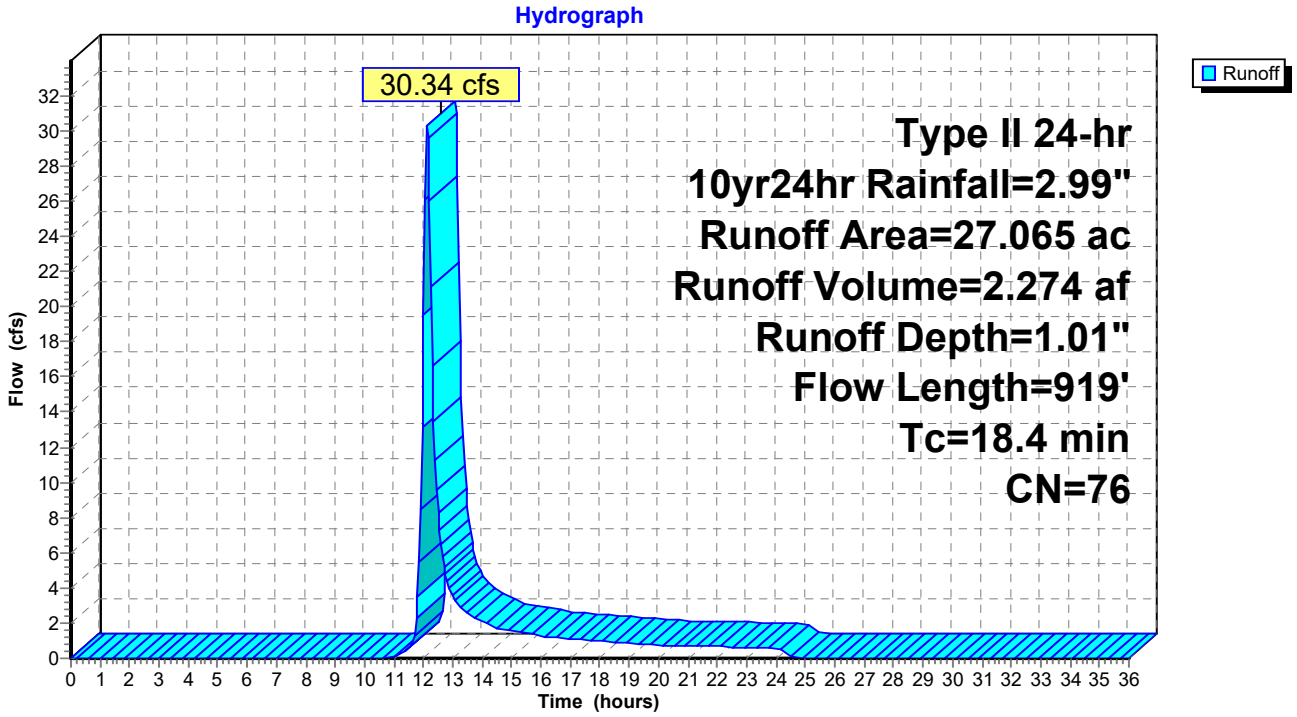
Runoff = 30.34 cfs @ 12.12 hrs, Volume= 2.274 af, Depth= 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.008 | 77 | Deciduous Forest, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.417 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.680 | 61 | Pasture/Hay, HSG B |
| * | 2.775 | 55 | Deciduous Forest, HSG B |
| * | 1.058 | 77 | Deciduous Forest, HSG D |
| * | 0.059 | 93 | Developed Low Intensity, HSG D |
| * | 3.668 | 81 | Cultivated Crops, HSG D |
| * | 4.588 | 71 | Cultivated Crops, HSG B |
| * | 13.120 | 81 | Cultivated Crops, HSG D |
| | 27.065 | 76 | Weighted Average |
| | 27.065 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.8 | 100 | 0.0195 | 0.29 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.0 | 312 | 0.0208 | 1.30 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.6 | 507 | 0.0120 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.4 | 919 | Total | | | |

## Subcatchment 54: WS54



## Summary for Subcatchment 55: WS55

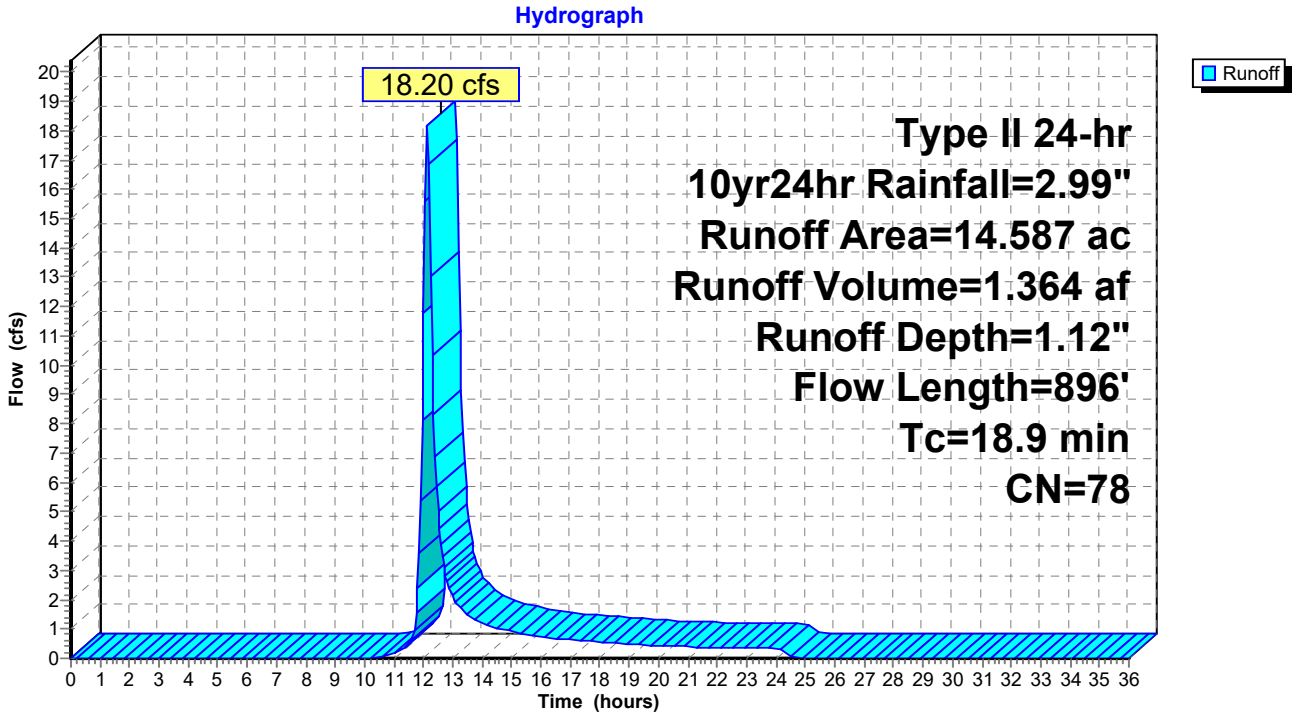
Runoff = 18.20 cfs @ 12.12 hrs, Volume= 1.364 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.010 | 84 | Developed Open Space, HSG D |
| * | 0.225 | 93 | Developed Low Intensity, HSG D |
| * | 0.094 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 81 | Cultivated Crops, HSG D |
| * | 4.829 | 71 | Cultivated Crops, HSG B |
| * | 9.429 | 81 | Cultivated Crops, HSG D |
| | 14.587 | 78 | Weighted Average |
| | 14.587 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.1 | 100 | 0.0116 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.1 | 180 | 0.0116 | 0.97 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 282 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 334 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.9 | 896 | Total | | | |

## Subcatchment 55: WS55



## Summary for Subcatchment 56: WS56

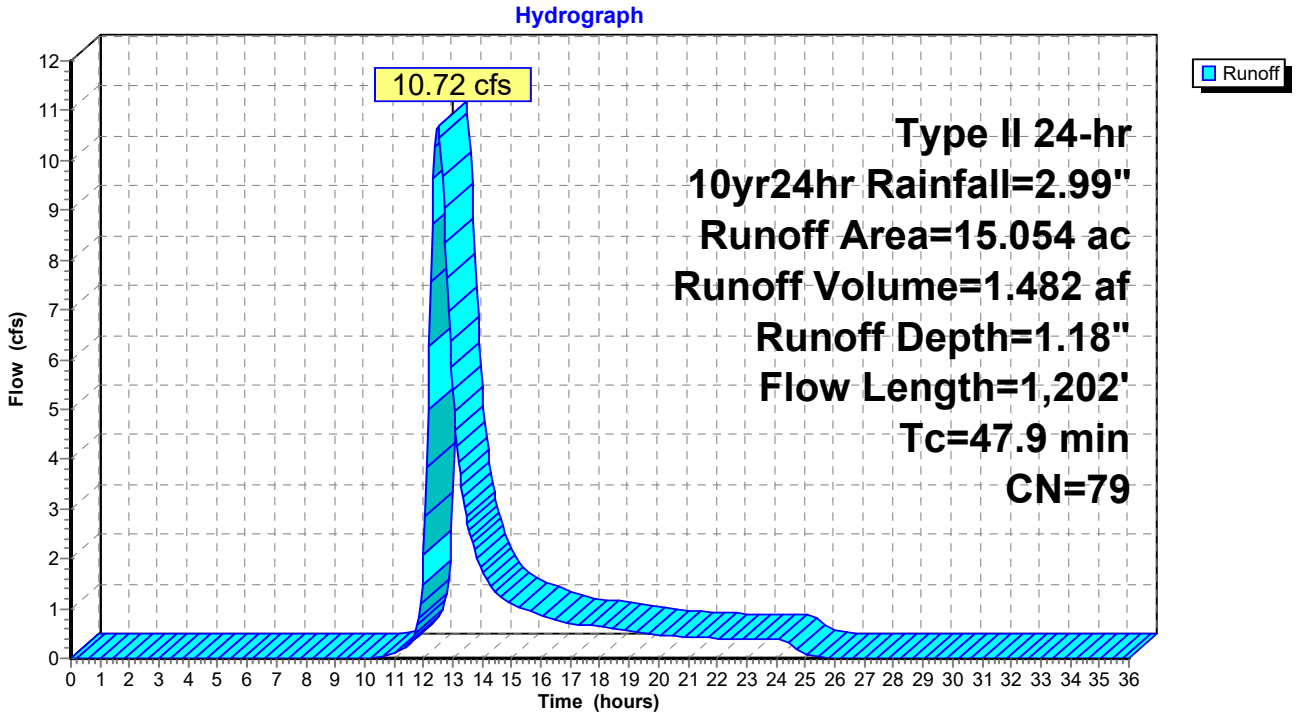
Runoff = 10.72 cfs @ 12.49 hrs, Volume= 1.482 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.006 | 55 | Deciduous Forest, HSG B |
| * | 3.610 | 71 | Cultivated Crops, HSG B |
| * | 11.438 | 81 | Cultivated Crops, HSG D |
| | 15.054 | 79 | Weighted Average |
| | 15.054 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.1 | 100 | 0.0084 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.4 | 123 | 0.0089 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 172 | 0.0257 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 184 | 0.0140 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 29.2 | 368 | 0.0005 | 0.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.3 | 254 | 0.0209 | 1.30 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 47.9 | 1,202 | Total | | | |

## Subcatchment 56: WS56



## Summary for Subcatchment 57: WS57

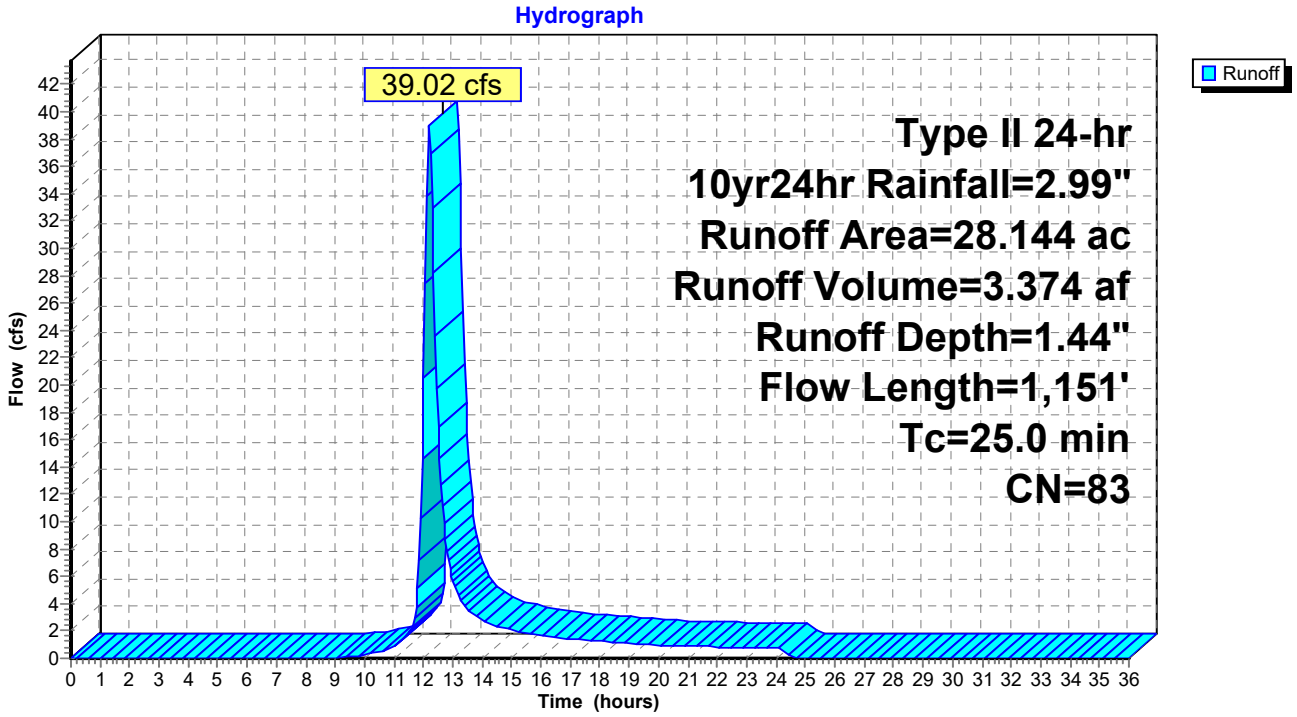
Runoff = 39.02 cfs @ 12.19 hrs, Volume= 3.374 af, Depth= 1.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.213 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.799 | 77 | Deciduous Forest, HSG D |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 1.219 | 81 | Cultivated Crops, HSG D |
| * | 0.119 | 94 | Developed Medium Intensity, HSG D |
| * | 0.116 | 93 | Developed Low Intensity, HSG D |
| * | 0.620 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 94 | Developed Medium Intensity, HSG D |
| * | 0.091 | 93 | Developed Low Intensity, HSG D |
| * | 0.093 | 94 | Developed Medium Intensity, HSG D |
| * | 0.092 | 93 | Developed Low Intensity, HSG D |
| * | 0.562 | 84 | Developed Open Space, HSG D |
| * | 0.907 | 93 | Developed Low Intensity, HSG D |
| * | 20.825 | 81 | Cultivated Crops, HSG D |
| * | 0.285 | 81 | Cultivated Crops, HSG D |
| | 28.144 | 83 | Weighted Average |
| | 28.144 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.9 | 38 | 0.0016 | 0.34 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 4.4 | 62 | 0.0147 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 11 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 121 | 0.0290 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 153 | 0.0150 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 96 | 0.0281 | 3.40 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.0 | 13 | 0.2090 | 9.28 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 12.5 | 475 | 0.0049 | 0.63 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 73 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.1 | 109 | 0.0309 | 1.58 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.0 | 1,151 | Total | | | |

## Subcatchment 57: WS57



## Summary for Subcatchment 58: WS58

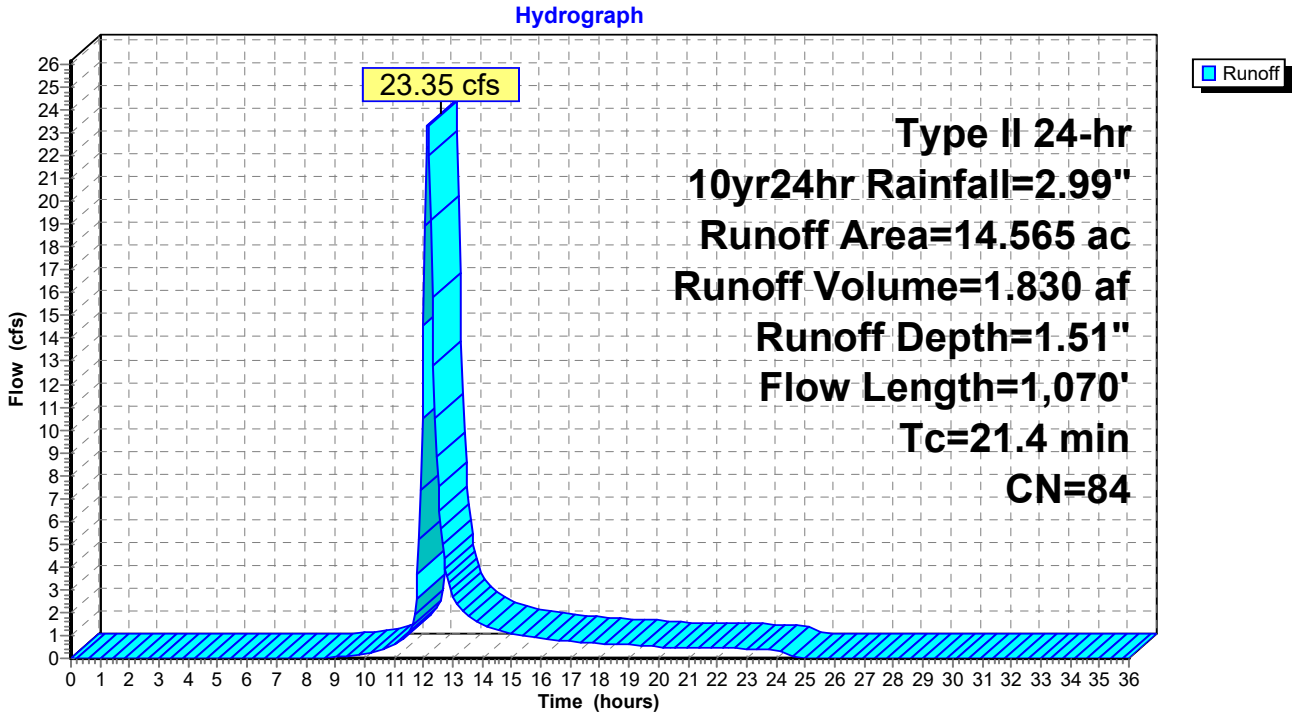
Runoff = 23.35 cfs @ 12.15 hrs, Volume= 1.830 af, Depth= 1.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.103 | 94 | Developed Medium Intensity, HSG D |
| * | 0.106 | 93 | Developed Low Intensity, HSG D |
| * | 0.715 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 94 | Developed Medium Intensity, HSG D |
| * | 0.131 | 93 | Developed Low Intensity, HSG D |
| * | 0.076 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.188 | 81 | Cultivated Crops, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.343 | 93 | Developed Low Intensity, HSG D |
| * | 2.330 | 93 | Developed Low Intensity, HSG D |
| * | 10.203 | 81 | Cultivated Crops, HSG D |
| | 14.565 | 84 | Weighted Average |
| | 14.565 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.4 | 100 | 0.0107 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.2 | 266 | 0.0240 | 1.39 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 11 | 0.0245 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 22 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 14 | 0.0245 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 23 | 0.0212 | 1.31 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 152 | 0.0088 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.6 | 47 | 0.0186 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 68 | 0.0210 | 1.31 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.5 | 214 | 0.0079 | 0.80 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 153 | 0.0281 | 3.40 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 21.4 | 1,070 | Total | | | |

## Subcatchment 58: WS58



## Summary for Subcatchment 59: WS59

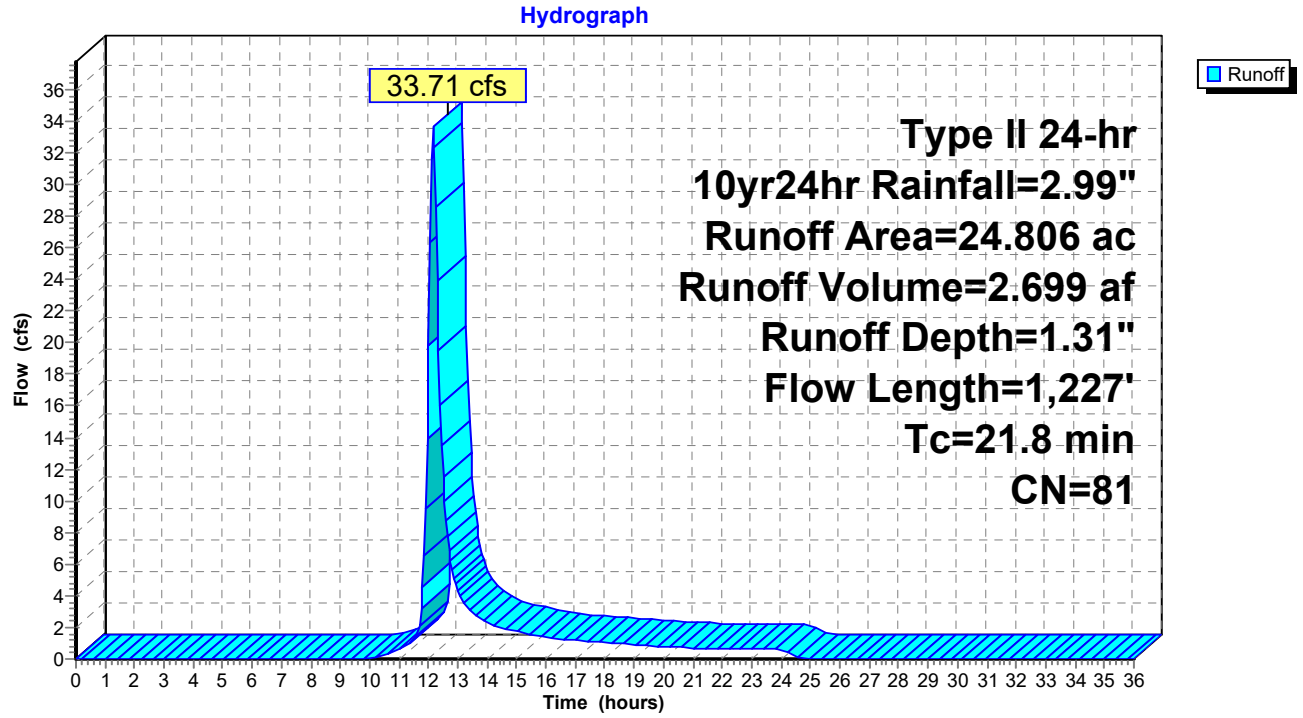
Runoff = 33.71 cfs @ 12.15 hrs, Volume= 2.699 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.484 | 84 | Developed Open Space, HSG D |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 2.998 | 81 | Cultivated Crops, HSG D |
| * | 1.587 | 71 | Cultivated Crops, HSG B |
| * | 18.470 | 81 | Cultivated Crops, HSG D |
| | 24.806 | 81 | Weighted Average |
| | 24.806 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 309 | 0.0160 | 1.14 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 216 | 0.0170 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.2 | 702 | 0.0083 | 0.82 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 21.8 | 1,227 | Total | | | |

## Subcatchment 59: WS59



## Summary for Subcatchment 60: WS60

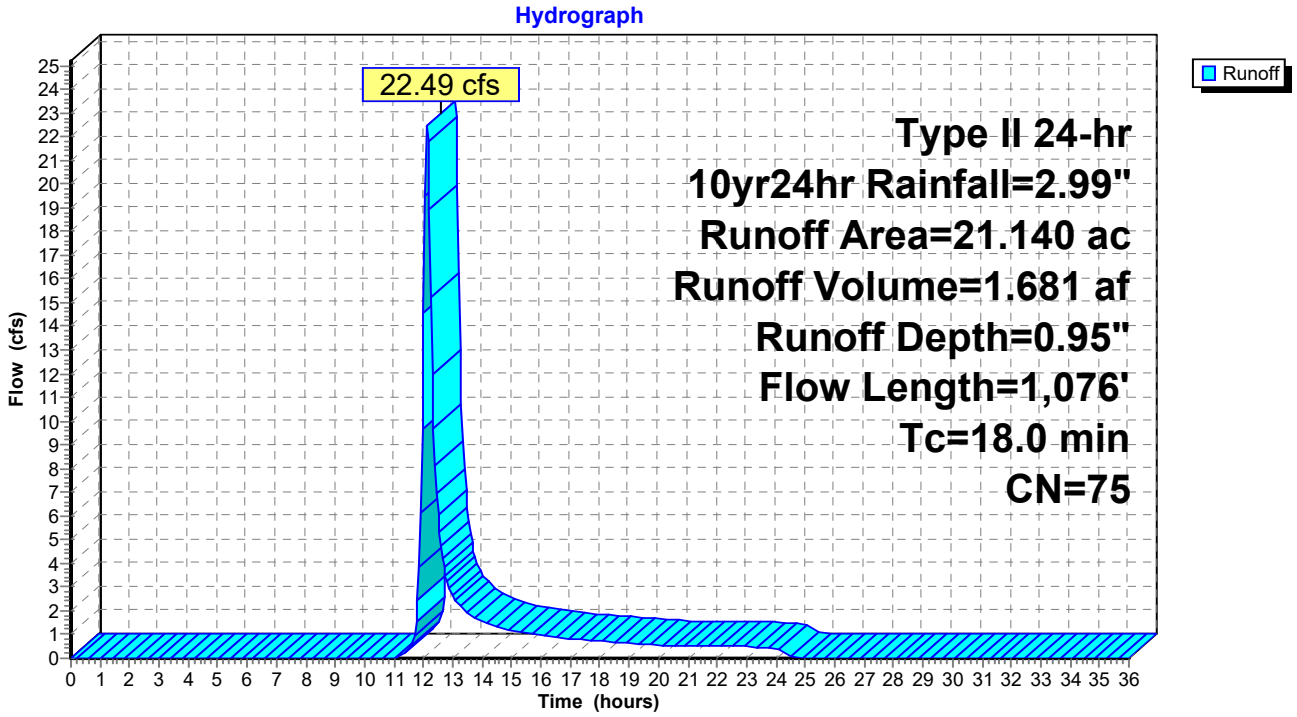
Runoff = 22.49 cfs @ 12.12 hrs, Volume= 1.681 af, Depth= 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.863 | 81 | Cultivated Crops, HSG D |
| * | 12.490 | 71 | Cultivated Crops, HSG B |
| * | 0.964 | 81 | Cultivated Crops, HSG D |
| * | 5.877 | 81 | Cultivated Crops, HSG D |
| * | 0.946 | 71 | Cultivated Crops, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| | 21.140 | 75 | Weighted Average |
| | 21.140 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.7 | 100 | 0.0072 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 30 | 0.0299 | 1.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 230 | 0.0450 | 1.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.8 | 190 | 0.0387 | 1.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 294 | 0.0414 | 1.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.5 | 232 | 0.0296 | 1.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.0 | 1,076 | Total | | | |

## Subcatchment 60: WS60



## Summary for Subcatchment 61: WS61

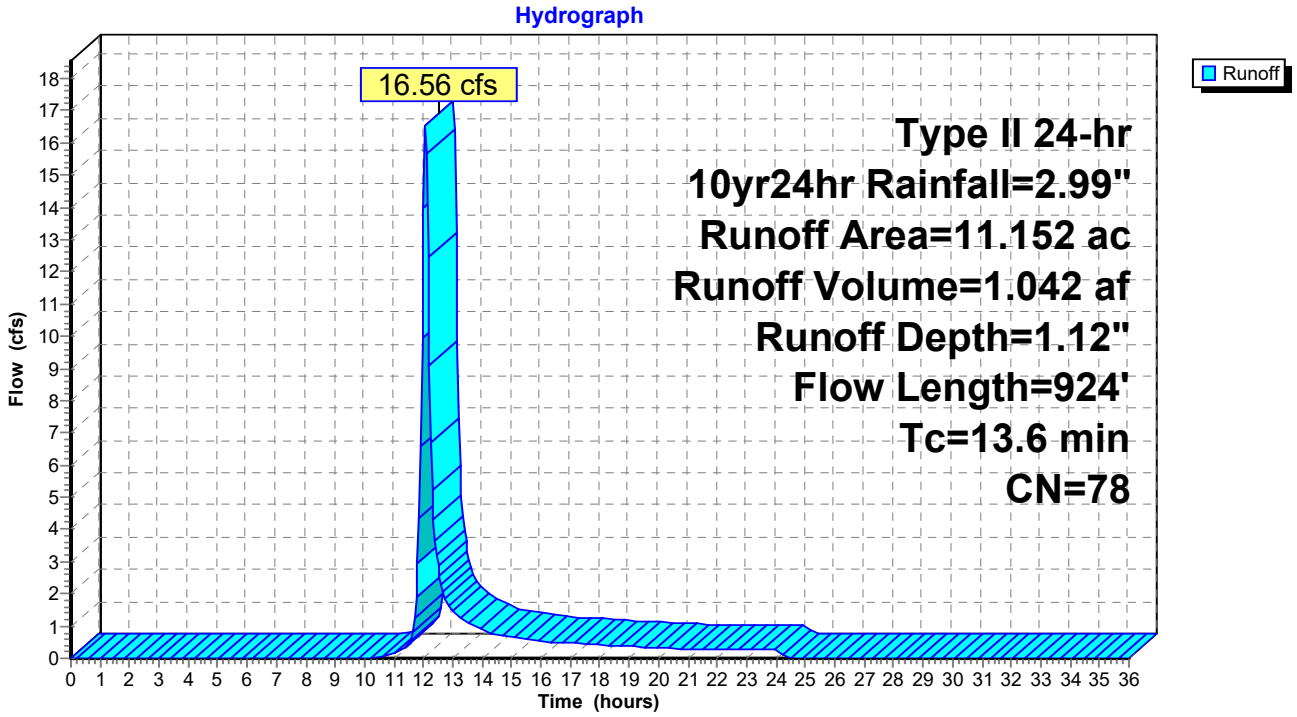
Runoff = 16.56 cfs @ 12.06 hrs, Volume= 1.042 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.005 | 61 | Pasture/Hay, HSG B |
| * | 0.480 | 77 | Deciduous Forest, HSG D |
| * | 0.986 | 81 | Cultivated Crops, HSG D |
| * | 1.432 | 71 | Cultivated Crops, HSG B |
| * | 1.596 | 81 | Cultivated Crops, HSG D |
| * | 5.178 | 81 | Cultivated Crops, HSG D |
| * | 1.380 | 71 | Cultivated Crops, HSG B |
| * | 0.095 | 86 | Woody Wetlands, HSG B |
| | 11.152 | 78 | Weighted Average |
| | 11.152 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.8 | 100 | 0.0307 | 0.34 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.0 | 167 | 0.1012 | 2.86 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.1 | 236 | 0.0423 | 1.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.4 | 409 | 0.0194 | 1.25 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 12 | 0.0126 | 0.56 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 13.6 | 924 | Total | | | |

## Subcatchment 61: WS61



## Summary for Subcatchment 62: WS62

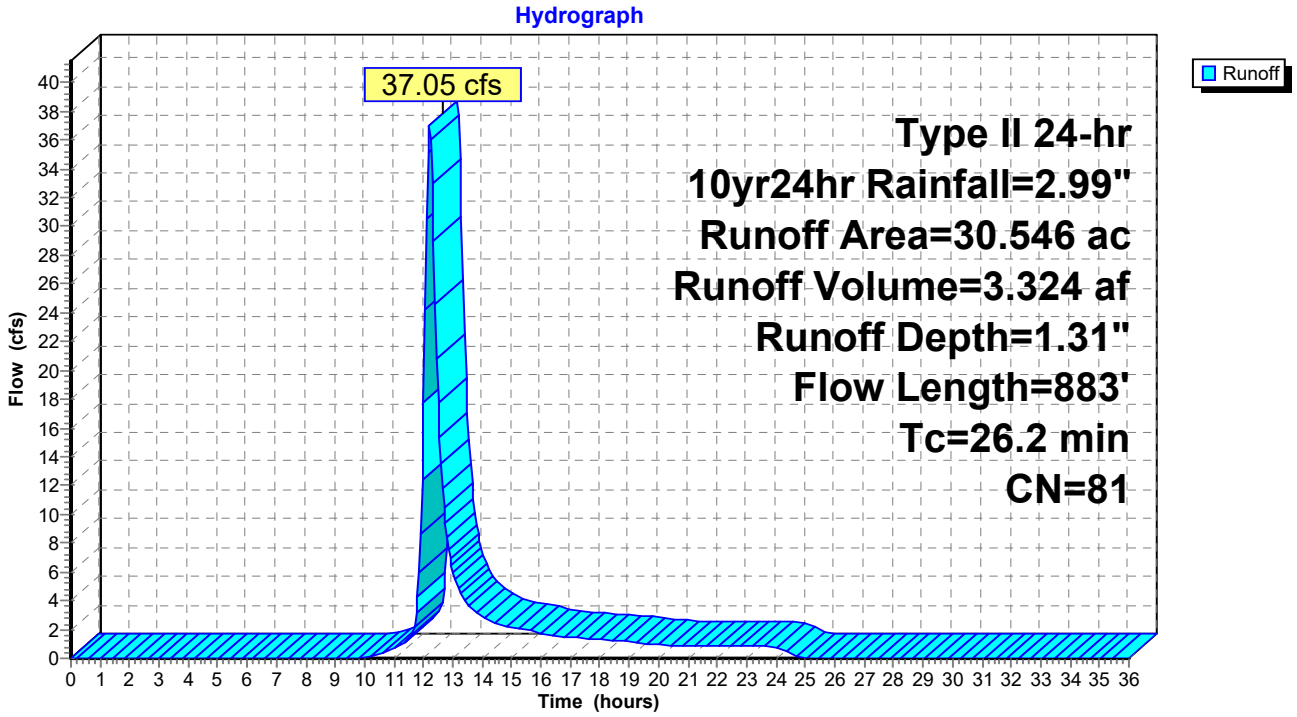
Runoff = 37.05 cfs @ 12.21 hrs, Volume= 3.324 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 81 | Cultivated Crops, HSG D |
| * | 1.620 | 86 | Woody Wetlands, HSG D |
| * | 12.298 | 80 | Pasture/Hay, HSG D |
| * | 2.076 | 81 | Cultivated Crops, HSG D |
| * | 14.330 | 81 | Cultivated Crops, HSG D |
| | 30.546 | 81 | Weighted Average |
| | 30.546 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.2 | 100 | 0.0031 | 0.14 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 10 | 0.0203 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 80 | 0.0256 | 1.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 158 | 0.0093 | 0.68 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 219 | 0.0186 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 12 | 0.0179 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 304 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 26.2 | 883 | Total | | | |

## Subcatchment 62: WS62



## Summary for Subcatchment 63: WS63

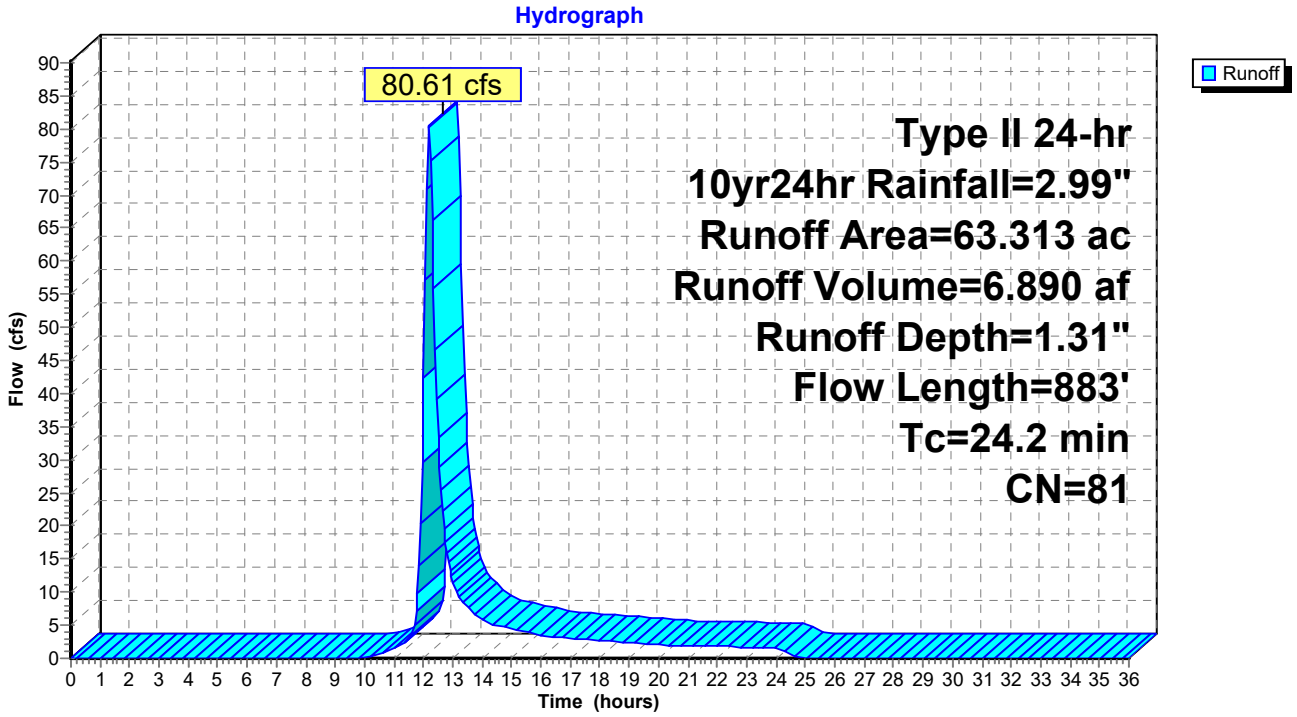
Runoff = 80.61 cfs @ 12.18 hrs, Volume= 6.890 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.064 | 84 | Developed Open Space, HSG D |
| * | 0.210 | 93 | Developed Low Intensity, HSG D |
| * | 0.440 | 84 | Developed Open Space, HSG D |
| * | 0.667 | 93 | Developed Low Intensity, HSG D |
| * | 0.592 | 93 | Developed Low Intensity, HSG D |
| * | 0.522 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 93 | Developed Low Intensity, HSG D |
| * | 0.068 | 84 | Developed Open Space, HSG D |
| * | 4.209 | 81 | Cultivated Crops, HSG D |
| * | 6.667 | 81 | Cultivated Crops, HSG D |
| * | 49.863 | 81 | Cultivated Crops, HSG D |
| | 63.313 | 81 | Weighted Average |
| | 63.313 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.2 | 100 | 0.0031 | 0.14 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 10 | 0.0203 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 80 | 0.0256 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 158 | 0.0093 | 0.87 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 219 | 0.0186 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 12 | 0.0179 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 304 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.2 | 883 | Total | | | |

## Subcatchment 63: WS63



## Summary for Subcatchment 64: WS64

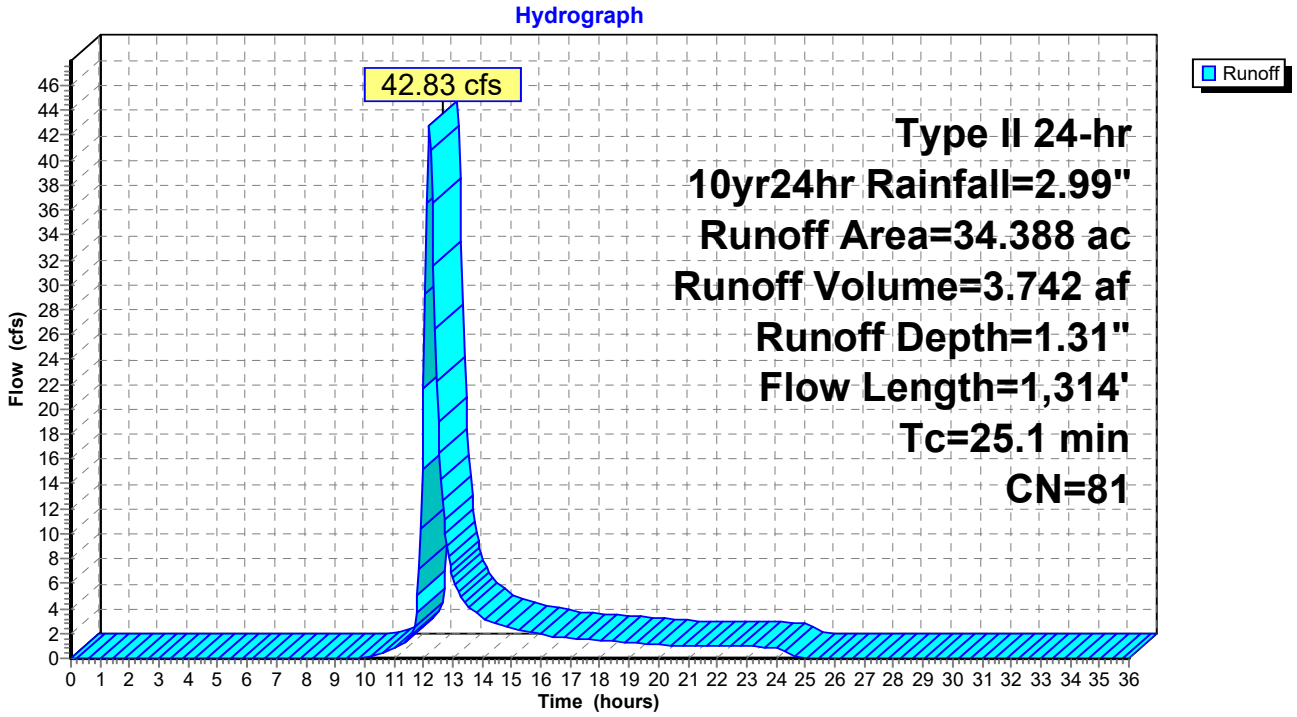
Runoff = 42.83 cfs @ 12.19 hrs, Volume= 3.742 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.070 | 94 | Developed Medium Intensity, HSG D |
| * | 0.213 | 81 | Cultivated Crops, HSG D |
| * | 0.051 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.004 | 84 | Developed Open Space, HSG D |
| * | 0.241 | 93 | Developed Low Intensity, HSG D |
| * | 0.120 | 84 | Developed Open Space, HSG D |
| * | 0.388 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 84 | Developed Open Space, HSG D |
| * | 12.373 | 81 | Cultivated Crops, HSG D |
| * | 0.204 | 81 | Cultivated Crops, HSG D |
| * | 20.370 | 81 | Cultivated Crops, HSG D |
| | 34.388 | 81 | Weighted Average |
| | 34.388 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.2 | 100 | 0.0166 | 0.27 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.1 | 80 | 0.0166 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 223 | 0.0232 | 1.37 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 170 | 0.0116 | 0.97 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 277 | 0.0148 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.8 | 329 | 0.0110 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 97 | 0.0086 | 0.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 37 | 0.0086 | 1.88 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 25.1 | 1,314 | Total | | | |

## Subcatchment 64: WS64



## Summary for Subcatchment 65: WS65

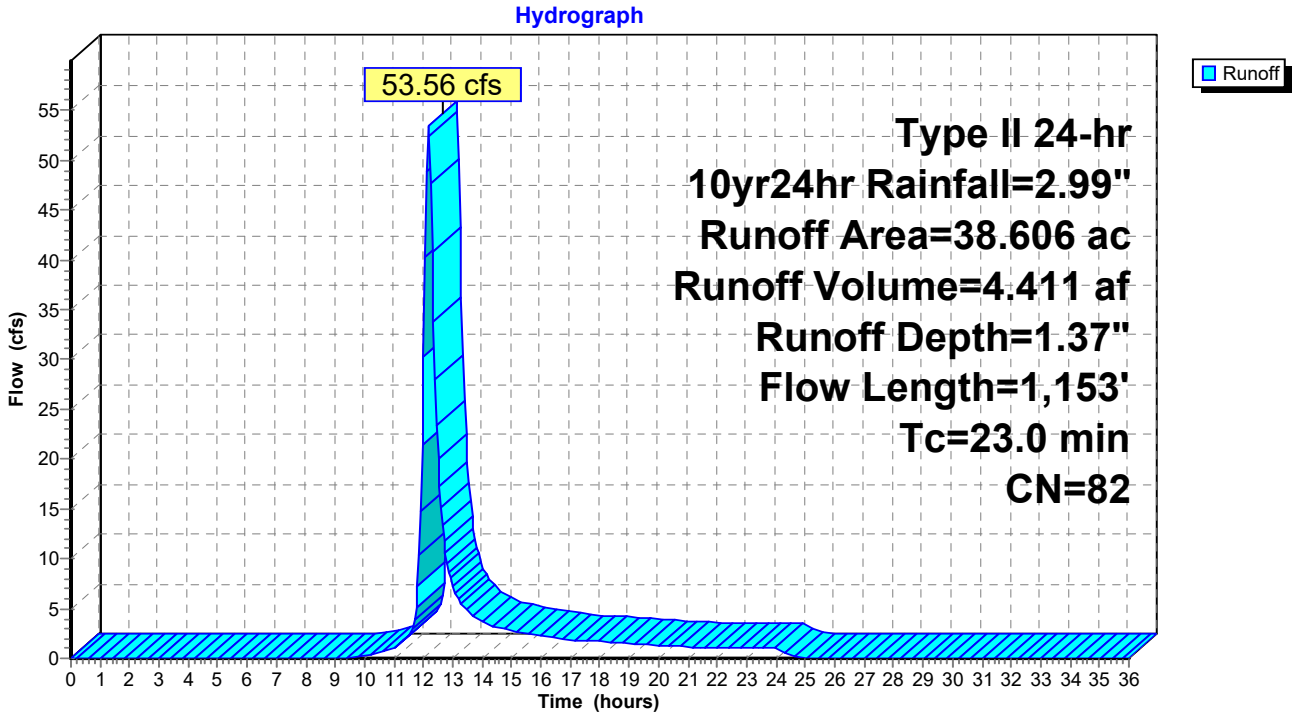
Runoff = 53.56 cfs @ 12.17 hrs, Volume= 4.411 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.808 | 84 | Developed Open Space, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 93 | Developed Low Intensity, HSG D |
| * | 1.978 | 93 | Developed Low Intensity, HSG D |
| * | 0.220 | 94 | Developed Medium Intensity, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.187 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 81 | Cultivated Crops, HSG D |
| * | 23.476 | 81 | Cultivated Crops, HSG D |
| * | 4.971 | 81 | Cultivated Crops, HSG D |
| * | 6.092 | 81 | Cultivated Crops, HSG D |
| | 38.606 | 82 | Weighted Average |
| | 38.606 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.6 | 100 | 0.0072 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.6 | 44 | 0.0194 | 1.25 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 173 | 0.0382 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 195 | 0.0356 | 1.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.1 | 163 | 0.0216 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.6 | 228 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.6 | 250 | 0.0100 | 0.90 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 23.0 | 1,153 | Total | | | |

## Subcatchment 65: WS65



## Summary for Subcatchment 66: WS66

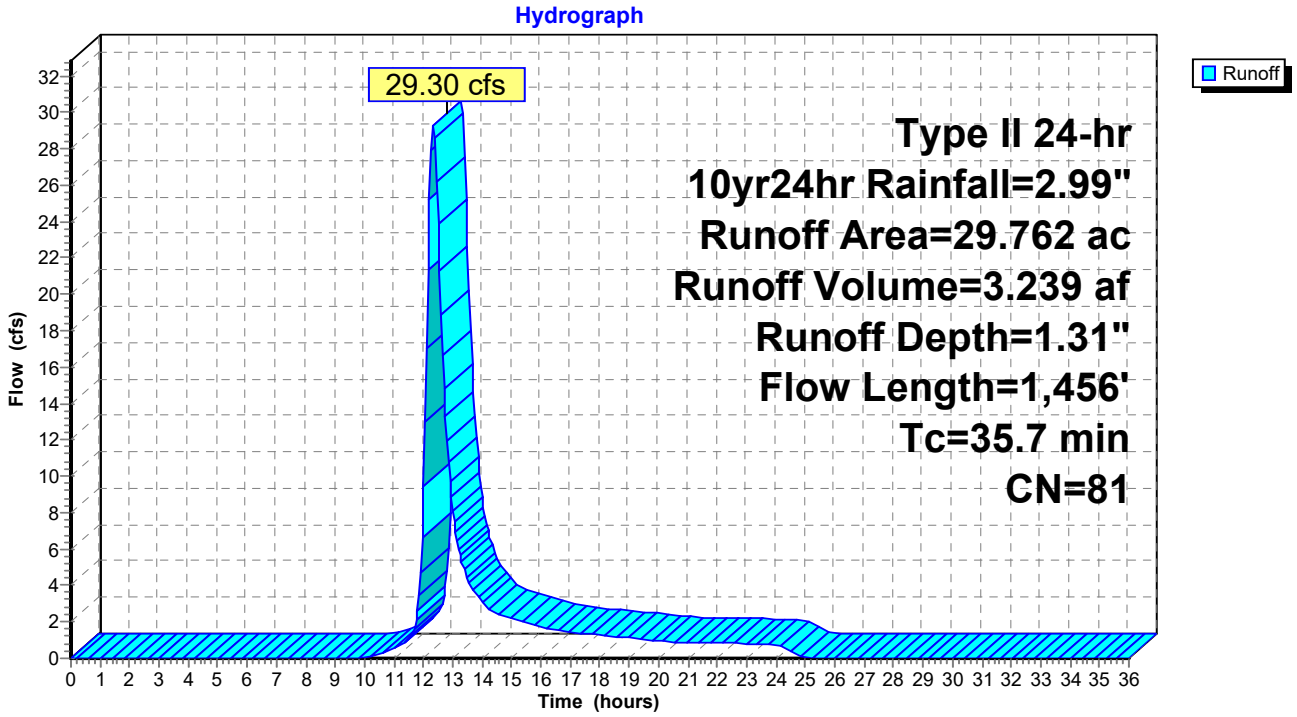
Runoff = 29.30 cfs @ 12.33 hrs, Volume= 3.239 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.002 | 94 | Developed Medium Intensity, HSG D |
| * | 19.133 | 81 | Cultivated Crops, HSG D |
| * | 1.365 | 81 | Cultivated Crops, HSG D |
| * | 9.261 | 81 | Cultivated Crops, HSG D |
| | 29.762 | 81 | Weighted Average |
| | 29.762 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.6 | 100 | 0.0218 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.5 | 152 | 0.0124 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.2 | 150 | 0.0074 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 291 | 0.0302 | 1.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.8 | 111 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 54 | 0.0098 | 0.89 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 5 | 0.0053 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 109 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 26 | 0.0214 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 91 | 0.0125 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.1 | 366 | 0.0020 | 0.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.7 | 1,456 | Total | | | |

## Subcatchment 66: WS66



## Summary for Subcatchment 67: WS67

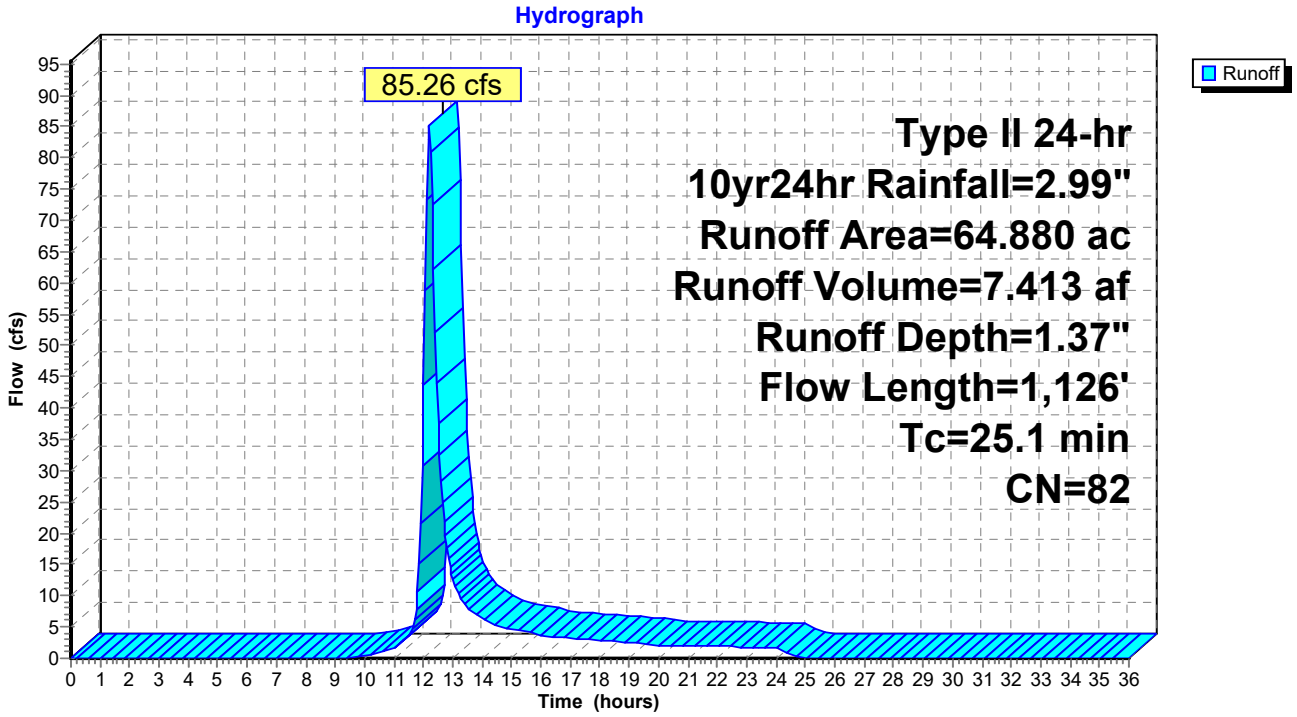
Runoff = 85.26 cfs @ 12.19 hrs, Volume= 7.413 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.065 | 93 | Developed Low Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.110 | 94 | Developed Medium Intensity, HSG D |
| * | 0.317 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.210 | 93 | Developed Low Intensity, HSG D |
| * | 0.490 | 93 | Developed Low Intensity, HSG D |
| * | 0.053 | 84 | Developed Open Space, HSG D |
| * | 0.070 | 84 | Developed Open Space, HSG D |
| * | 0.234 | 86 | Woody Wetlands, HSG D |
| * | 0.117 | 93 | Developed Low Intensity, HSG D |
| * | 0.583 | 93 | Developed Low Intensity, HSG D |
| * | 0.347 | 93 | Developed Low Intensity, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 0.257 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.850 | 93 | Developed Low Intensity, HSG D |
| * | 0.173 | 84 | Developed Open Space, HSG D |
| * | 0.904 | 86 | Woody Wetlands, HSG D |
| * | 0.000 | 93 | Developed Low Intensity, HSG D |
| * | 0.585 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 84 | Developed Open Space, HSG D |
| * | 23.511 | 81 | Cultivated Crops, HSG D |
| * | 19.988 | 81 | Cultivated Crops, HSG D |
| * | 15.002 | 81 | Cultivated Crops, HSG D |
| | 64.880 | 82 | Weighted Average |
| | 64.880 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.4 | 100 | 0.0059 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 5.8 | 257 | 0.0068 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 375 | 0.0197 | 1.26 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 394 | 0.0215 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.1 | 1,126 | Total | | | |

## Subcatchment 67: WS67



Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment1: WS1** Runoff Area=13.742 ac 0.00% Impervious Runoff Depth=1.10"
Flow Length=1,870' Tc=25.9 min CN=71 Runoff=13.25 cfs 1.255 af

**Subcatchment2: WS2** Runoff Area=28.882 ac 0.00% Impervious Runoff Depth=0.83"
Flow Length=1,955' Tc=31.0 min CN=66 Runoff=16.98 cfs 1.992 af

**Subcatchment3: WS3** Runoff Area=10.451 ac 0.00% Impervious Runoff Depth=0.47"
Flow Length=1,032' Tc=18.4 min CN=58 Runoff=3.72 cfs 0.412 af

**Subcatchment5: WS5** Runoff Area=56.549 ac 0.00% Impervious Runoff Depth=0.98"
Flow Length=1,761' Tc=67.6 min CN=69 Runoff=23.77 cfs 4.637 af

**Subcatchment6: WS6** Runoff Area=44.409 ac 0.00% Impervious Runoff Depth=1.27"
Flow Length=2,273' Tc=106.2 min CN=74 Runoff=18.48 cfs 4.717 af

**Subcatchment7: WS7** Runoff Area=11.383 ac 0.00% Impervious Runoff Depth=1.60"
Flow Length=436' Tc=28.8 min CN=79 Runoff=15.99 cfs 1.522 af

**Subcatchment8: WS8** Runoff Area=159.778 ac 0.00% Impervious Runoff Depth=1.60"
Flow Length=3,027' Tc=56.4 min CN=79 Runoff=140.17 cfs 21.369 af

**Subcatchment9: WS9** Runoff Area=11.132 ac 0.00% Impervious Runoff Depth=1.10"
Flow Length=888' Tc=15.4 min CN=71 Runoff=14.71 cfs 1.016 af

**Subcatchment10: WS10** Runoff Area=10.435 ac 0.00% Impervious Runoff Depth=0.98"
Flow Length=988' Tc=19.7 min CN=69 Runoff=10.49 cfs 0.856 af

**Subcatchment11: WS11** Runoff Area=16.148 ac 0.00% Impervious Runoff Depth=1.10"
Flow Length=896' Tc=17.1 min CN=71 Runoff=20.18 cfs 1.474 af

**Subcatchment12: WS12** Runoff Area=23.932 ac 0.00% Impervious Runoff Depth=0.78"
Flow Length=2,043' Tc=44.0 min CN=65 Runoff=9.99 cfs 1.552 af

**Subcatchment13: WS13** Runoff Area=19.692 ac 0.00% Impervious Runoff Depth=0.68"
Flow Length=1,856' Tc=46.3 min CN=63 Runoff=6.56 cfs 1.123 af

**Subcatchment14: WS14** Runoff Area=69.773 ac 0.00% Impervious Runoff Depth=1.27"
Flow Length=3,906' Tc=93.3 min CN=74 Runoff=32.04 cfs 7.411 af

**Subcatchment15: WS15** Runoff Area=15.438 ac 0.00% Impervious Runoff Depth=1.54"
Flow Length=1,445' Tc=25.4 min CN=78 Runoff=22.40 cfs 1.975 af

**Subcatchment16: WS16** Runoff Area=47.898 ac 0.00% Impervious Runoff Depth=1.60"
Flow Length=2,796' Tc=41.9 min CN=79 Runoff=52.01 cfs 6.406 af

**Subcatchment17: WS17** Runoff Area=13.311 ac 0.00% Impervious Runoff Depth=1.75"
Flow Length=761' Tc=26.5 min CN=81 Runoff=21.67 cfs 1.940 af

**Subcatchment18: WS18** Runoff Area=5.363 ac 0.00% Impervious Runoff Depth=1.47"
Flow Length=218' Tc=9.3 min CN=77 Runoff=12.22 cfs 0.656 af

**Subcatchment19: WS19** Runoff Area=28.615 ac 0.00% Impervious Runoff Depth=1.75"
Flow Length=1,569' Tc=35.1 min CN=81 Runoff=38.72 cfs 4.171 af

**Subcatchment20: WS20** Runoff Area=13.311 ac 0.00% Impervious Runoff Depth=1.82"
Flow Length=1,439' Tc=29.6 min CN=82 Runoff=21.11 cfs 2.023 af

**Subcatchment21: WS21** Runoff Area=16.482 ac 0.00% Impervious Runoff Depth=1.90"
Flow Length=1,616' Tc=29.0 min CN=83 Runoff=27.65 cfs 2.611 af

**Subcatchment22: WS22** Runoff Area=38.847 ac 0.00% Impervious Runoff Depth=1.60"
Flow Length=2,651' Tc=61.5 min CN=79 Runoff=31.97 cfs 5.196 af

**Subcatchment23: WS23** Runoff Area=7.796 ac 0.00% Impervious Runoff Depth=1.98"
Flow Length=630' Tc=85.7 min CN=84 Runoff=6.30 cfs 1.286 af

**Subcatchment24: WS24** Runoff Area=27.435 ac 0.00% Impervious Runoff Depth=1.75"
Flow Length=845' Tc=36.2 min CN=81 Runoff=36.34 cfs 3.999 af

**Subcatchment25: WS25** Runoff Area=15.083 ac 0.00% Impervious Runoff Depth=1.40"
Flow Length=1,028' Tc=27.6 min CN=76 Runoff=18.68 cfs 1.762 af

**Subcatchment26: WS26** Runoff Area=24.142 ac 0.00% Impervious Runoff Depth=1.82"
Flow Length=1,225' Tc=69.8 min CN=82 Runoff=20.83 cfs 3.670 af

**Subcatchment27: WS27** Runoff Area=22.172 ac 0.00% Impervious Runoff Depth=1.54"
Flow Length=1,177' Tc=39.8 min CN=78 Runoff=23.75 cfs 2.837 af

**Subcatchment28: WS28** Runoff Area=91.586 ac 0.00% Impervious Runoff Depth=1.60"
Flow Length=1,023' Tc=24.1 min CN=79 Runoff=144.12 cfs 12.249 af

**Subcatchment29: WS29** Runoff Area=25.894 ac 0.00% Impervious Runoff Depth=1.47"
Flow Length=837' Tc=23.1 min CN=77 Runoff=37.95 cfs 3.167 af

**Subcatchment30: WS30** Runoff Area=14.220 ac 0.00% Impervious Runoff Depth=1.21"
Flow Length=681' Tc=13.6 min CN=73 Runoff=22.58 cfs 1.438 af

**Subcatchment31: WS31** Runoff Area=5.243 ac 0.00% Impervious Runoff Depth=1.21"
Flow Length=569' Tc=10.2 min CN=73 Runoff=9.39 cfs 0.530 af

**Subcatchment32: WS32** Runoff Area=10.108 ac 0.00% Impervious Runoff Depth=1.54"
Flow Length=680' Tc=21.0 min CN=78 Runoff=16.50 cfs 1.293 af

**Subcatchment33: WS33** Runoff Area=15.180 ac 0.00% Impervious Runoff Depth=1.34"
Flow Length=1,329' Tc=27.3 min CN=75 Runoff=17.96 cfs 1.692 af

**Subcatchment34: WS34** Runoff Area=58.029 ac 0.00% Impervious Runoff Depth=1.27"
Flow Length=1,963' Tc=34.2 min CN=74 Runoff=55.65 cfs 6.163 af

**Subcatchment35: WS35** Runoff Area=63.197 ac 0.00% Impervious Runoff Depth=1.34"
Flow Length=1,938' Tc=29.1 min CN=75 Runoff=71.65 cfs 7.043 af

**Subcatchment36: WS36** Runoff Area=28.631 ac 0.00% Impervious Runoff Depth=1.27"
Flow Length=1,196' Tc=69.6 min CN=74 Runoff=16.32 cfs 3.041 af

**Subcatchment37: WS37** Runoff Area=10.404 ac 0.00% Impervious Runoff Depth=0.98"
Flow Length=661' Tc=13.2 min CN=69 Runoff=13.11 cfs 0.853 af

**Subcatchment38: WS38** Runoff Area=14.434 ac 0.00% Impervious Runoff Depth=1.47"
Flow Length=629' Tc=14.5 min CN=77 Runoff=27.40 cfs 1.765 af

**Subcatchment39: WS39** Runoff Area=30.742 ac 0.00% Impervious Runoff Depth=0.88"
Flow Length=707' Tc=15.5 min CN=67 Runoff=30.83 cfs 2.250 af

**Subcatchment40: WS40** Runoff Area=31.131 ac 0.00% Impervious Runoff Depth=1.60"
Flow Length=1,419' Tc=23.0 min CN=79 Runoff=50.50 cfs 4.164 af

**Subcatchment41: WS41** Runoff Area=34.979 ac 0.00% Impervious Runoff Depth=1.75"
Flow Length=1,292' Tc=25.9 min CN=81 Runoff=57.78 cfs 5.098 af

**Subcatchment42: WS42** Runoff Area=48.465 ac 0.00% Impervious Runoff Depth=1.15"
Flow Length=912' Tc=18.7 min CN=72 Runoff=60.92 cfs 4.660 af

**Subcatchment43: WS43** Runoff Area=33.037 ac 0.00% Impervious Runoff Depth=1.68"
Flow Length=1,479' Tc=30.5 min CN=80 Runoff=46.95 cfs 4.615 af

**Subcatchment44: WS44** Runoff Area=80.873 ac 0.00% Impervious Runoff Depth=1.21"
Flow Length=3,050' Tc=84.9 min CN=73 Runoff=37.30 cfs 8.177 af

**Subcatchment45: WS45** Runoff Area=28.790 ac 0.00% Impervious Runoff Depth=1.54"
Flow Length=1,322' Tc=22.6 min CN=78 Runoff=44.97 cfs 3.684 af

**Subcatchment46: WS46** Runoff Area=27.896 ac 0.00% Impervious Runoff Depth=1.75"
Flow Length=1,507' Tc=30.3 min CN=81 Runoff=41.66 cfs 4.066 af

**Subcatchment47: WS47** Runoff Area=45.903 ac 0.00% Impervious Runoff Depth=1.82"
Flow Length=1,645' Tc=35.9 min CN=82 Runoff=63.97 cfs 6.977 af

**Subcatchment48: WS48** Runoff Area=43.068 ac 0.00% Impervious Runoff Depth=1.90"
Flow Length=1,506' Tc=71.6 min CN=83 Runoff=38.18 cfs 6.822 af

**Subcatchment49: WS49** Runoff Area=30.898 ac 0.00% Impervious Runoff Depth=1.82"
Flow Length=1,464' Tc=36.4 min CN=82 Runoff=42.62 cfs 4.696 af

**Subcatchment50: WS50** Runoff Area=54.384 ac 0.00% Impervious Runoff Depth=1.82"
Flow Length=2,572' Tc=66.6 min CN=82 Runoff=48.61 cfs 8.266 af

**Subcatchment51: WS51** Runoff Area=22.968 ac 0.00% Impervious Runoff Depth=1.75"
Flow Length=1,683' Tc=40.1 min CN=81 Runoff=28.33 cfs 3.348 af

**Subcatchment52: WS52** Runoff Area=46.992 ac 0.00% Impervious Runoff Depth=1.68"
Flow Length=692' Tc=23.4 min CN=80 Runoff=79.05 cfs 6.564 af

**Subcatchment53: WS53** Runoff Area=17.871 ac 0.00% Impervious Runoff Depth=1.47"
Flow Length=2,016' Tc=94.7 min CN=77 Runoff=9.61 cfs 2.186 af

**Subcatchment54: WS54** Runoff Area=27.065 ac 0.00% Impervious Runoff Depth=1.40"
Flow Length=919' Tc=18.4 min CN=76 Runoff=43.14 cfs 3.161 af

**Subcatchment55: WS55** Runoff Area=14.587 ac 0.00% Impervious Runoff Depth=1.54"
Flow Length=896' Tc=18.9 min CN=78 Runoff=25.31 cfs 1.866 af

**Subcatchment56: WS56** Runoff Area=15.054 ac 0.00% Impervious Runoff Depth=1.60"
Flow Length=1,202' Tc=47.9 min CN=79 Runoff=14.86 cfs 2.013 af

**Subcatchment57: WS57** Runoff Area=28.144 ac 0.00% Impervious Runoff Depth=1.90"
Flow Length=1,151' Tc=25.0 min CN=83 Runoff=51.85 cfs 4.458 af

**Subcatchment58: WS58** Runoff Area=14.565 ac 0.00% Impervious Runoff Depth=1.98"
Flow Length=1,070' Tc=21.4 min CN=84 Runoff=30.72 cfs 2.402 af

**Subcatchment59: WS59** Runoff Area=24.806 ac 0.00% Impervious Runoff Depth=1.75"
Flow Length=1,227' Tc=21.8 min CN=81 Runoff=45.56 cfs 3.616 af

**Subcatchment60: WS60** Runoff Area=21.140 ac 0.00% Impervious Runoff Depth=1.34"
Flow Length=1,076' Tc=18.0 min CN=75 Runoff=32.37 cfs 2.356 af

**Subcatchment61: WS61** Runoff Area=11.152 ac 0.00% Impervious Runoff Depth=1.54"
Flow Length=924' Tc=13.6 min CN=78 Runoff=22.94 cfs 1.427 af

**Subcatchment62: WS62** Runoff Area=30.546 ac 0.00% Impervious Runoff Depth=1.75"
Flow Length=883' Tc=26.2 min CN=81 Runoff=50.17 cfs 4.452 af

**Subcatchment63: WS63** Runoff Area=63.313 ac 0.00% Impervious Runoff Depth=1.75"
Flow Length=883' Tc=24.2 min CN=81 Runoff=109.06 cfs 9.229 af

**Subcatchment64: WS64** Runoff Area=34.388 ac 0.00% Impervious Runoff Depth=1.75"
Flow Length=1,314' Tc=25.1 min CN=81 Runoff=57.97 cfs 5.012 af

**Subcatchment65: WS65** Runoff Area=38.606 ac 0.00% Impervious Runoff Depth=1.82"
Flow Length=1,153' Tc=23.0 min CN=82 Runoff=71.78 cfs 5.868 af

**Subcatchment66: WS66** Runoff Area=29.762 ac 0.00% Impervious Runoff Depth=1.75"
Flow Length=1,456' Tc=35.7 min CN=81 Runoff=39.79 cfs 4.338 af

**Subcatchment67: WS67** Runoff Area=64.880 ac 0.00% Impervious Runoff Depth=1.82"
Flow Length=1,126' Tc=25.1 min CN=82 Runoff=114.32 cfs 9.862 af

**Total Runoff Area = 2,085.129 ac Runoff Volume = 262.736 af Average Runoff Depth = 1.51"**
**100.00% Pervious = 2,085.129 ac 0.00% Impervious = 0.000 ac**

## Summary for Subcatchment 1: WS1

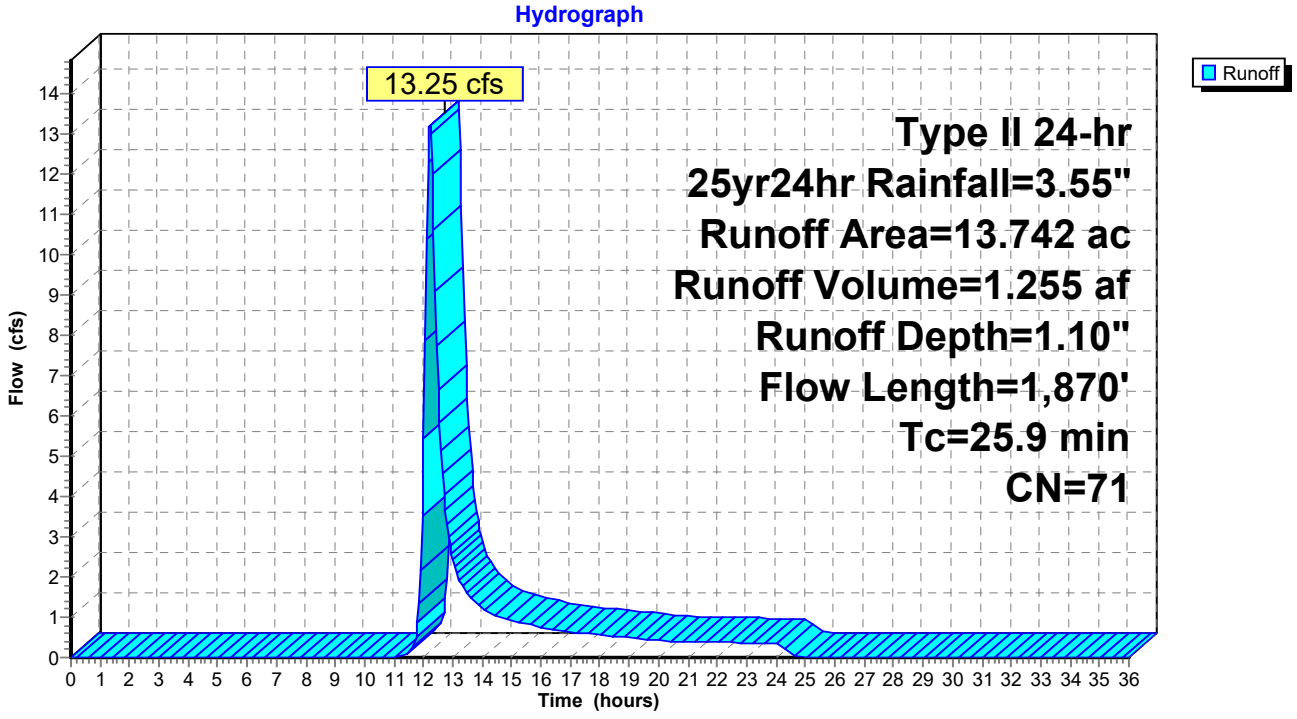
Runoff = 13.25 cfs @ 12.22 hrs, Volume= 1.255 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.033 | 93 | Developed Low Intensity, HSG D |
| * | 0.085 | 84 | Developed Open Space, HSG D |
| * | 0.188 | 81 | Cultivated Crops, HSG D |
| * | 0.133 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.522 | 76 | Mixed Forest, HSG D |
| * | 0.667 | 81 | Cultivated Crops, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.215 | 81 | Cultivated Crops, HSG D |
| * | 0.007 | 71 | Cultivated Crops, HSG B |
| * | 0.222 | 81 | Cultivated Crops, HSG D |
| * | 0.424 | 80 | Pasture/Hay, HSG D |
| * | 0.039 | 71 | Cultivated Crops, HSG B |
| * | 0.424 | 71 | Cultivated Crops, HSG B |
| * | 0.342 | 81 | Cultivated Crops, HSG D |
| * | 0.001 | 55 | Deciduous Forest, HSG B |
| * | 0.000 | 55 | Deciduous Forest, HSG B |
| * | 0.045 | 61 | Pasture/Hay, HSG B |
| * | 3.348 | 80 | Pasture/Hay, HSG D |
| * | 0.177 | 61 | Pasture/Hay, HSG B |
| * | 5.881 | 61 | Pasture/Hay, HSG B |
| * | 0.322 | 71 | Cultivated Crops, HSG B |
| | 13.742 | 71 | Weighted Average |
| | 13.742 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.3 | 100 | 0.0247 | 0.32 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.2 | 110 | 0.0292 | 1.54 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 252 | 0.0466 | 1.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 454 | 0.0505 | 1.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.7 | 379 | 0.0372 | 1.35 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 51 | 0.0253 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 11 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 155 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 152 | 0.0233 | 1.37 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 98 | 0.0107 | 2.10 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.1 | 109 | 0.1123 | 1.68 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 25.9 | 1,870 | Total | | | |

## Subcatchment 1: WS1



## Summary for Subcatchment 2: WS2

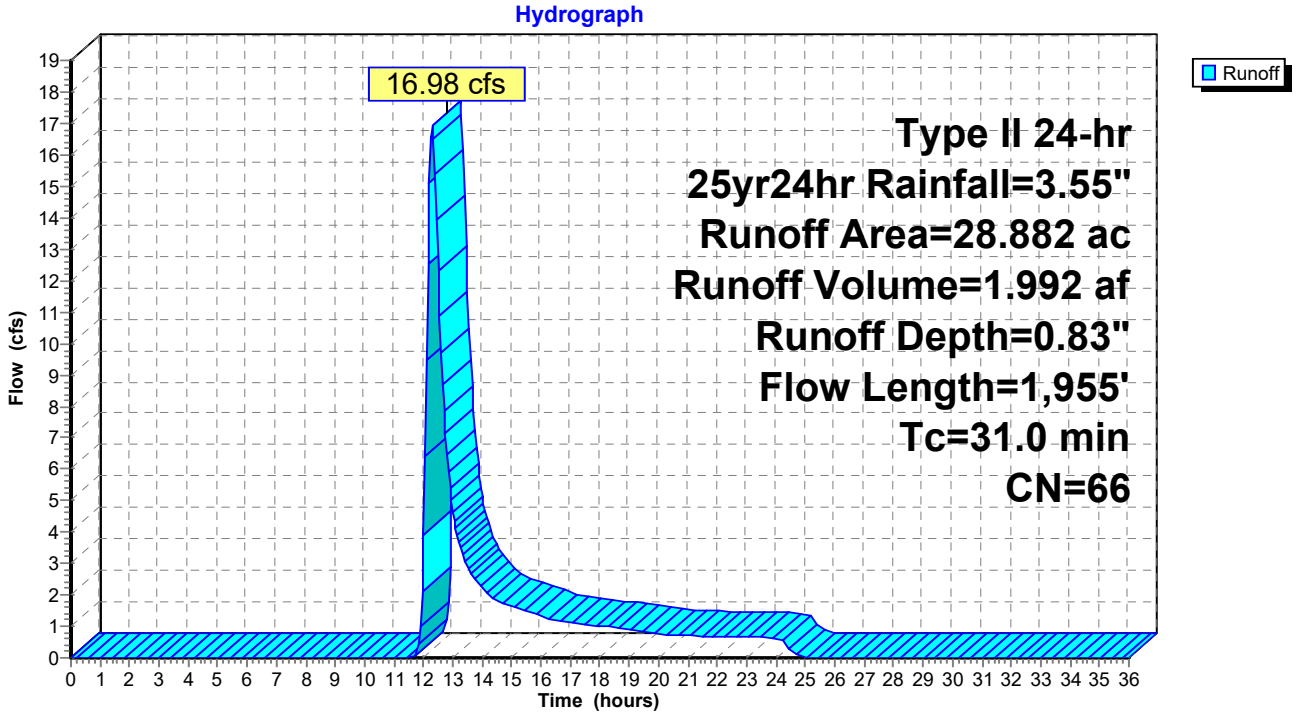
Runoff = 16.98 cfs @ 12.30 hrs, Volume= 1.992 af, Depth= 0.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.021 | 84 | Developed Open Space, HSG D |
| * | 0.697 | 80 | Pasture/Hay, HSG D |
| * | 0.356 | 80 | Pasture/Hay, HSG D |
| * | 0.101 | 93 | Developed Low Intensity, HSG D |
| * | 0.202 | 71 | Cultivated Crops, HSG B |
| * | 0.002 | 71 | Cultivated Crops, HSG B |
| * | 0.119 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 71 | Cultivated Crops, HSG B |
| * | 0.125 | 80 | Pasture/Hay, HSG D |
| * | 1.431 | 61 | Pasture/Hay, HSG B |
| * | 3.409 | 81 | Cultivated Crops, HSG D |
| * | 2.381 | 71 | Cultivated Crops, HSG B |
| * | 0.220 | 81 | Cultivated Crops, HSG D |
| * | 0.069 | 88 | Developed Low Intensity, HSG B |
| * | 0.210 | 88 | Developed Low Intensity, HSG B |
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.038 | 68 | Developed Open Space, HSG B |
| * | 0.658 | 61 | Pasture/Hay, HSG B |
| * | 0.312 | 80 | Pasture/Hay, HSG D |
| * | 4.602 | 61 | Pasture/Hay, HSG B |
| * | 4.093 | 61 | Pasture/Hay, HSG B |
| * | 9.208 | 61 | Pasture/Hay, HSG B |
| * | 0.405 | 71 | Cultivated Crops, HSG B |
| | 28.882 | 66 | Weighted Average |
| | 28.882 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.8 | 100 | 0.0320 | 0.35 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 71 | 0.0205 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.6 | 363 | 0.0347 | 1.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.7 | 546 | 0.0527 | 1.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 150 | 0.0290 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 116 | 0.0116 | 0.97 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 153 | 0.0317 | 1.60 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 37 | 0.0175 | 1.19 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 254 | 0.0179 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.3 | 164 | 0.0054 | 0.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 31.0 | 1,955 | Total | | | |

## Subcatchment 2: WS2



## Summary for Subcatchment 3: WS3

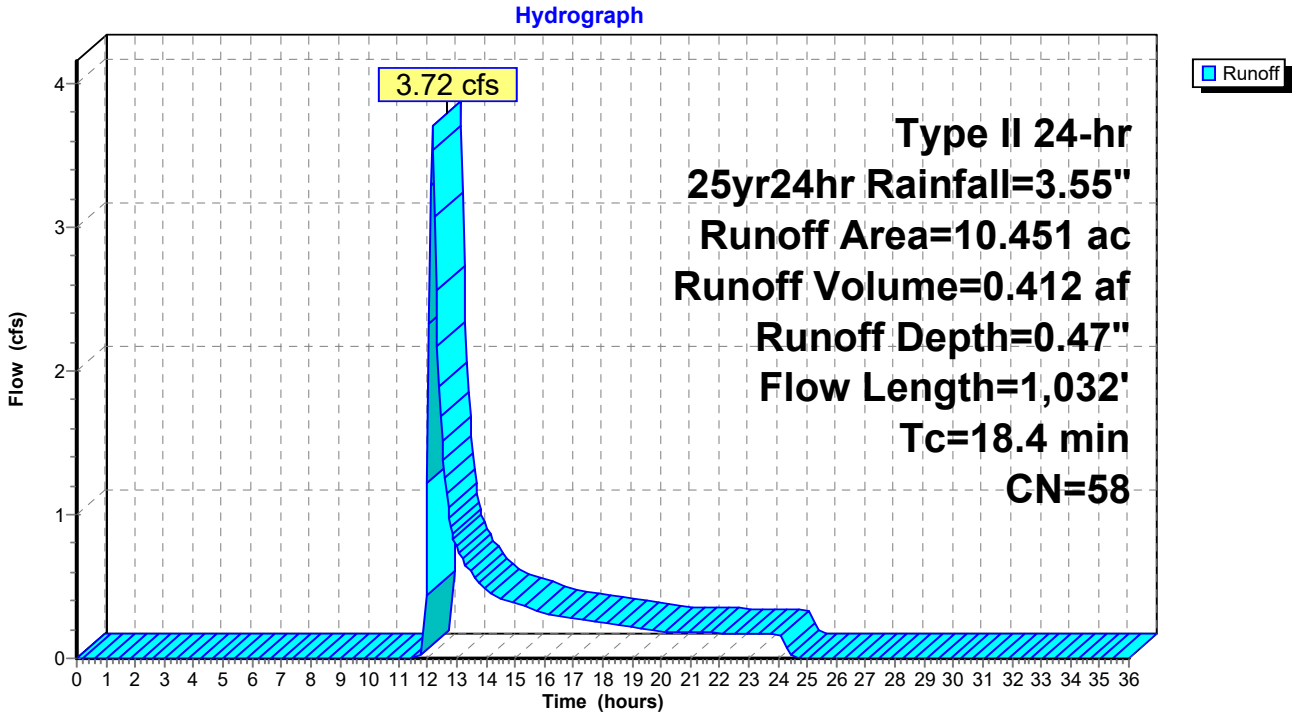
Runoff = 3.72 cfs @ 12.16 hrs, Volume= 0.412 af, Depth= 0.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.119 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.225 | 61 | Pasture/Hay, HSG B |
| * | 0.248 | 61 | Pasture/Hay, HSG B |
| * | 2.121 | 61 | Pasture/Hay, HSG B |
| * | 0.732 | 71 | Cultivated Crops, HSG B |
| * | 0.126 | 71 | Cultivated Crops, HSG B |
| * | 0.180 | 71 | Cultivated Crops, HSG B |
| * | 0.003 | 60 | Mixed Forest, HSG B |
| * | 0.020 | 55 | Deciduous Forest, HSG B |
| * | 0.038 | 55 | Deciduous Forest, HSG B |
| * | 1.353 | 55 | Deciduous Forest, HSG B |
| * | 5.170 | 55 | Deciduous Forest, HSG B |
| * | 0.115 | 60 | Mixed Forest, HSG B |
| | 10.451 | 58 | Weighted Average |
| | 10.451 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 100 | 0.0365 | 0.37 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.8 | 170 | 0.0297 | 1.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 28 | 0.0323 | 1.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.1 | 441 | 0.0434 | 1.04 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.7 | 292 | 0.0430 | 1.04 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 18.4 | 1,032 | Total | | | |

## Subcatchment 3: WS3



## Summary for Subcatchment 5: WS5

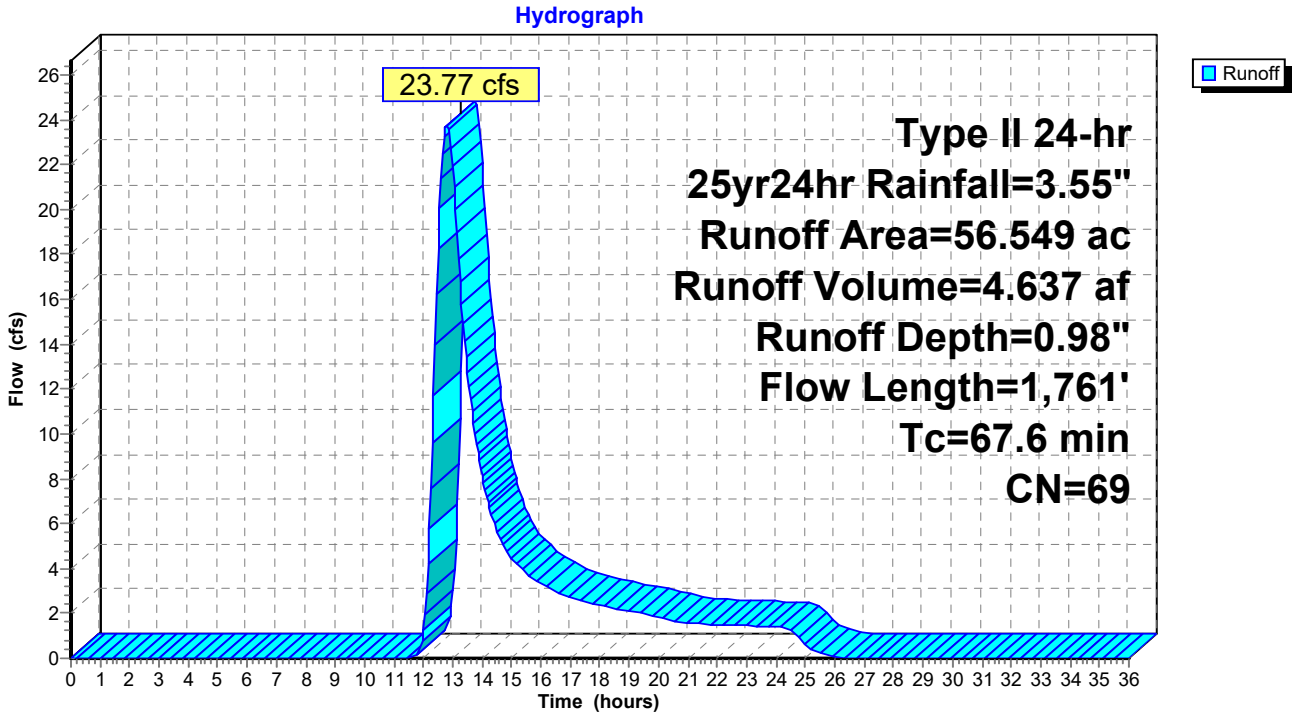
Runoff = 23.77 cfs @ 12.81 hrs, Volume= 4.637 af, Depth= 0.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.170 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 77 | Deciduous Forest, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.207 | 77 | Deciduous Forest, HSG D |
| * | 0.320 | 80 | Pasture/Hay, HSG D |
| * | 0.222 | 55 | Deciduous Forest, HSG B |
| * | 0.065 | 60 | Mixed Forest, HSG B |
| * | 0.041 | 76 | Mixed Forest, HSG D |
| * | 1.273 | 55 | Deciduous Forest, HSG B |
| * | 0.197 | 77 | Deciduous Forest, HSG D |
| * | 1.557 | 55 | Evergreen Forest, HSG B |
| * | 1.056 | 71 | Cultivated Crops, HSG B |
| * | 5.655 | 81 | Cultivated Crops, HSG D |
| * | 3.495 | 71 | Cultivated Crops, HSG B |
| * | 7.748 | 81 | Cultivated Crops, HSG D |
| * | 0.203 | 55 | Deciduous Forest, HSG B |
| * | 0.134 | 55 | Deciduous Forest, HSG B |
| * | 0.221 | 61 | Pasture/Hay, HSG B |
| * | 1.557 | 61 | Pasture/Hay, HSG B |
| * | 2.669 | 55 | Deciduous Forest, HSG B |
| * | 0.222 | 55 | Deciduous Forest, HSG B |
| * | 0.222 | 86 | Woody Wetlands, HSG B |
| * | 0.667 | 55 | Deciduous Forest, HSG B |
| * | 0.061 | 86 | Woody Wetlands, HSG B |
| * | 0.222 | 60 | Mixed Forest, HSG B |
| * | 0.667 | 86 | Woody Wetlands, HSG B |
| * | 0.139 | 86 | Woody Wetlands, HSG B |
| * | 0.083 | 86 | Woody Wetlands, HSG D |
| * | 12.485 | 55 | Evergreen Forest, HSG B |
| * | 0.508 | 55 | Evergreen Forest, HSG B |
| * | 0.018 | 55 | Evergreen Forest, HSG B |
| * | 0.028 | 74 | Evergreen Forest, HSG D |
| * | 0.143 | 74 | Evergreen Forest, HSG D |
| * | 0.066 | 55 | Evergreen Forest, HSG B |
| * | 0.024 | 55 | Evergreen Forest, HSG B |
| * | 0.037 | 74 | Evergreen Forest, HSG D |
| * | 0.171 | 55 | Deciduous Forest, HSG B |
| * | 0.095 | 55 | Deciduous Forest, HSG B |
| * | 0.875 | 77 | Deciduous Forest, HSG D |
| * | 0.723 | 60 | Mixed Forest, HSG B |
| * | 0.070 | 60 | Mixed Forest, HSG B |
| * | 0.888 | 76 | Mixed Forest, HSG D |
| * | 1.192 | 61 | Pasture/Hay, HSG B |
| * | 0.918 | 80 | Pasture/Hay, HSG D |
| * | 0.033 | 88 | Developed Low Intensity, HSG B |
| * | 0.394 | 71 | Cultivated Crops, HSG B |
| * | 1.346 | 71 | Cultivated Crops, HSG B |
| * | 6.790 | 81 | Cultivated Crops, HSG D |
| | 56.549 | 69 | Weighted Average |
| | 56.549 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.7 | 100 | 0.0070 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.5 | 83 | 0.0038 | 0.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 102 | 0.0264 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.9 | 134 | 0.0008 | 0.14 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 5.5 | 80 | 0.0023 | 0.24 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.4 | 135 | 0.0174 | 0.66 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.6 | 134 | 0.0286 | 0.84 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.1 | 159 | 0.0168 | 0.65 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.6 | 79 | 0.0278 | 0.83 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 78 | 0.0342 | 0.92 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 5.3 | 170 | 0.0116 | 0.54 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.1 | 124 | 0.0178 | 0.67 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.0 | 90 | 0.0227 | 0.75 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.1 | 66 | 0.0218 | 1.03 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 108 | 0.0125 | 0.56 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 12 | 0.0030 | 0.38 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 107 | 0.0021 | 0.32 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 67.6 | 1,761 | Total | | | |

## Subcatchment 5: WS5



## Summary for Subcatchment 6: WS6

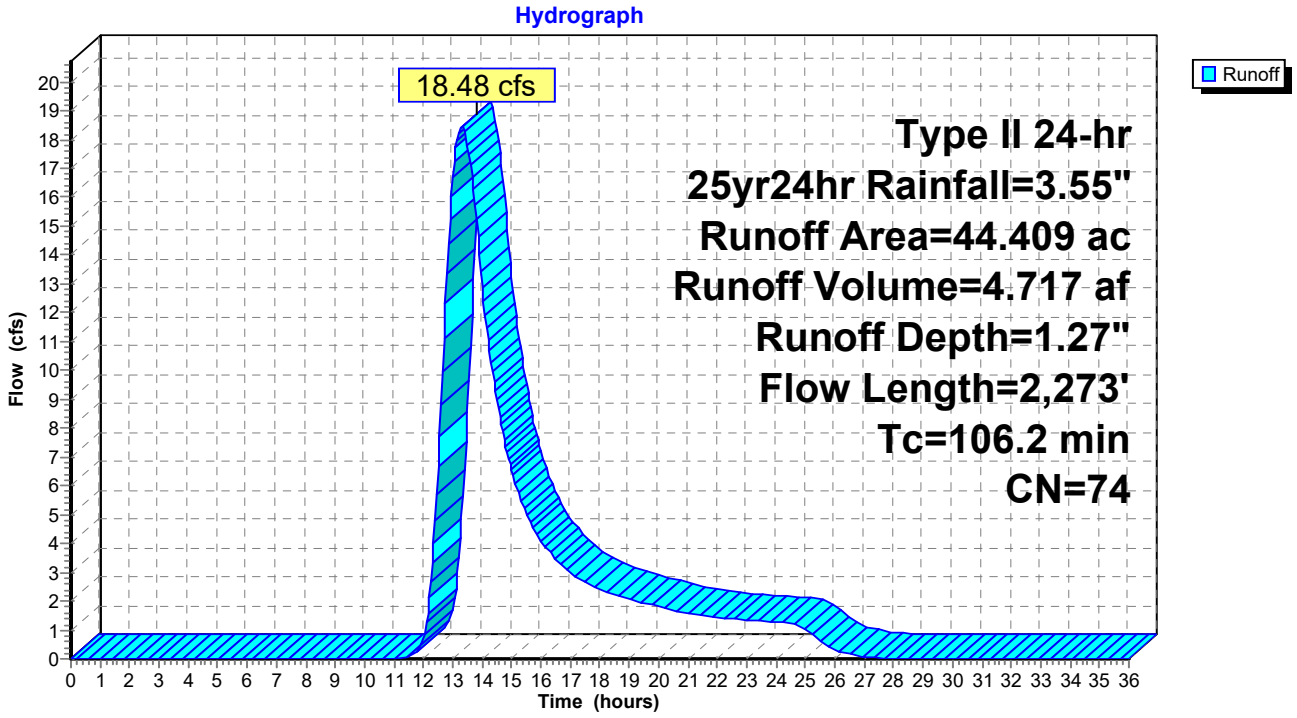
Runoff = 18.48 cfs @ 13.33 hrs, Volume= 4.717 af, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 0.213 | 80 | Pasture/Hay, HSG D |
| * | 1.057 | 71 | Cultivated Crops, HSG B |
| * | 1.741 | 71 | Cultivated Crops, HSG B |
| * | 6.750 | 71 | Cultivated Crops, HSG B |
| * | 7.912 | 81 | Cultivated Crops, HSG D |
| * | 0.978 | 55 | Deciduous Forest, HSG B |
| * | 0.803 | 60 | Mixed Forest, HSG B |
| * | 0.087 | 60 | Mixed Forest, HSG B |
| * | 0.115 | 55 | Evergreen Forest, HSG B |
| * | 0.108 | 55 | Evergreen Forest, HSG B |
| * | 0.125 | 60 | Mixed Forest, HSG B |
| * | 0.130 | 55 | Evergreen Forest, HSG B |
| * | 0.175 | 86 | Woody Wetlands, HSG B |
| * | 0.654 | 86 | Woody Wetlands, HSG B |
| * | 3.259 | 55 | Evergreen Forest, HSG B |
| * | 0.361 | 55 | Evergreen Forest, HSG B |
| * | 0.062 | 55 | Evergreen Forest, HSG B |
| * | 0.004 | 55 | Evergreen Forest, HSG B |
| * | 0.689 | 55 | Evergreen Forest, HSG B |
| * | 1.060 | 55 | Deciduous Forest, HSG B |
| * | 0.150 | 77 | Deciduous Forest, HSG D |
| * | 0.880 | 60 | Mixed Forest, HSG B |
| * | 0.362 | 76 | Mixed Forest, HSG D |
| * | 0.188 | 86 | Woody Wetlands, HSG B |
| * | 1.351 | 86 | Woody Wetlands, HSG B |
| * | 0.632 | 86 | Woody Wetlands, HSG D |
| * | 0.225 | 84 | Developed Open Space, HSG D |
| * | 0.047 | 93 | Developed Low Intensity, HSG D |
| * | 0.128 | 84 | Developed Open Space, HSG D |
| * | 0.049 | 93 | Developed Low Intensity, HSG D |
| * | 0.198 | 88 | Developed Low Intensity, HSG B |
| * | 0.345 | 93 | Developed Low Intensity, HSG D |
| * | 0.790 | 71 | Cultivated Crops, HSG B |
| * | 0.097 | 71 | Cultivated Crops, HSG B |
| * | 12.570 | 81 | Cultivated Crops, HSG D |
| | 44.409 | 74 | Weighted Average |
| | 44.409 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 22.5 | 100 | 0.0294 | 0.07 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.7 | 86 | 0.0286 | 0.85 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 6.9 | 252 | 0.0147 | 0.61 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.9 | 168 | 0.0374 | 0.97 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 21.4 | 107 | 0.0003 | 0.08 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 23.6 | 663 | 0.0027 | 0.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.4 | 745 | 0.0032 | 0.51 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 150 | 0.0098 | 0.89 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 106.2 | 2,273 | Total | | | |

## Subcatchment 6: WS6



## Summary for Subcatchment 7: WS7

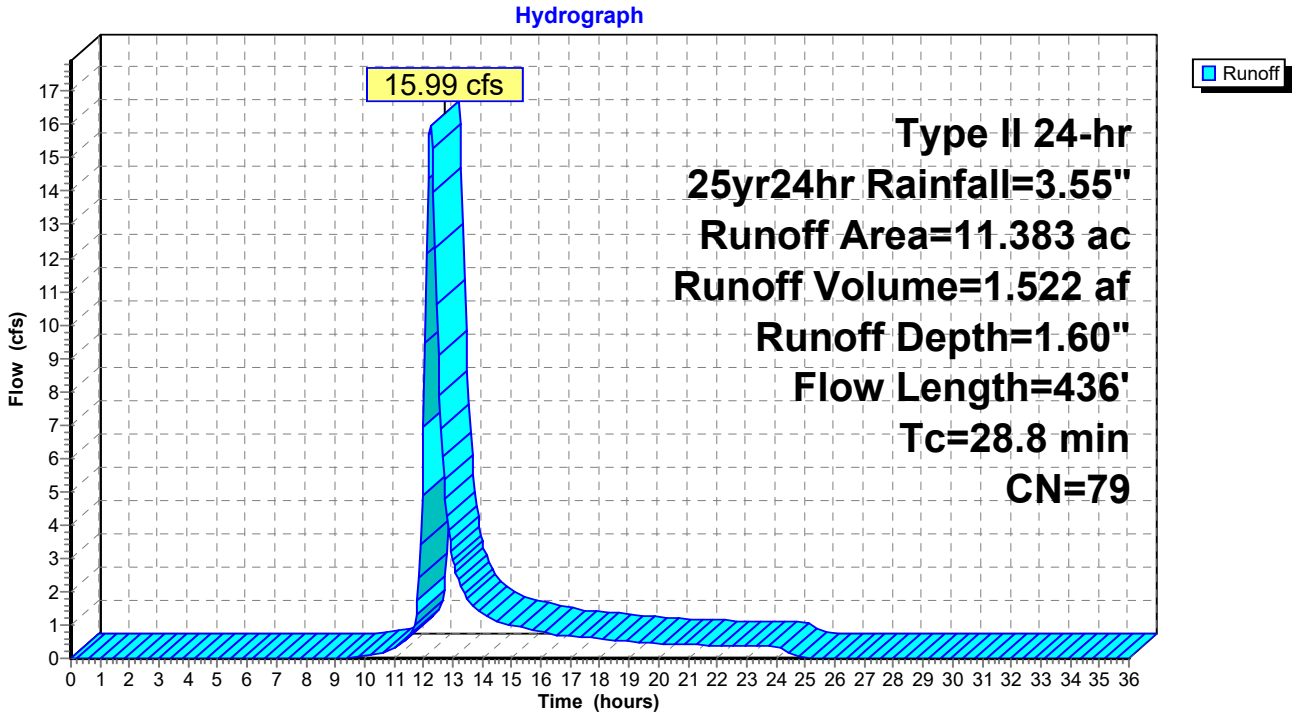
Runoff = 15.99 cfs @ 12.24 hrs, Volume= 1.522 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.227 | 74 | Evergreen Forest, HSG D |
| * | 2.915 | 80 | Pasture/Hay, HSG D |
| * | 0.262 | 80 | Pasture/Hay, HSG D |
| * | 0.052 | 84 | Developed Open Space, HSG D |
| * | 0.034 | 68 | Developed Open Space, HSG B |
| * | 0.019 | 86 | Woody Wetlands, HSG D |
| * | 0.173 | 81 | Cultivated Crops, HSG D |
| * | 6.417 | 81 | Cultivated Crops, HSG D |
| * | 1.284 | 71 | Cultivated Crops, HSG B |
| | 11.383 | 79 | Weighted Average |
| | 11.383 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 22.2 | 100 | 0.0007 | 0.08 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 20 | 0.0139 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 104 | 0.0155 | 1.12 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 69 | 0.0074 | 0.78 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.3 | 144 | 0.0108 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 28.8 | 436 | Total | | | |

## Subcatchment 7: WS7



## Summary for Subcatchment 8: WS8

Runoff = 140.17 cfs @ 12.60 hrs, Volume= 21.369 af, Depth= 1.60"

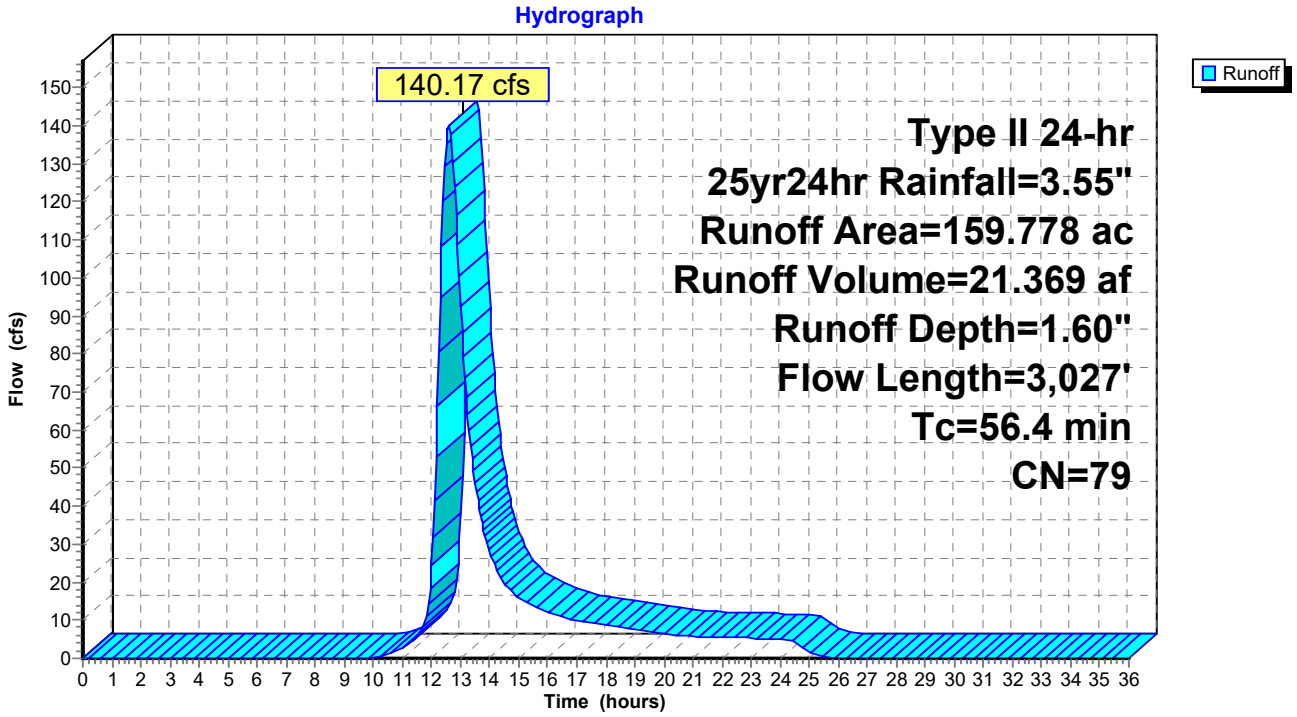
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.381 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 55 | Deciduous Forest, HSG B |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 55 | Deciduous Forest, HSG B |
| * | 0.445 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 80 | Pasture/Hay, HSG D |
| * | 1.334 | 80 | Pasture/Hay, HSG D |
| * | 0.890 | 77 | Deciduous Forest, HSG D |
| * | 1.775 | 80 | Pasture/Hay, HSG D |
| * | 0.468 | 61 | Pasture/Hay, HSG B |
| * | 1.837 | 80 | Pasture/Hay, HSG D |
| * | 0.038 | 80 | Pasture/Hay, HSG D |
| * | 0.662 | 74 | Evergreen Forest, HSG D |
| * | 4.441 | 80 | Pasture/Hay, HSG D |
| * | 1.655 | 61 | Pasture/Hay, HSG B |
| * | 0.489 | 68 | Developed Open Space, HSG B |
| * | 0.047 | 68 | Developed Open Space, HSG B |
| * | 0.667 | 68 | Developed Open Space, HSG B |
| * | 2.294 | 61 | Pasture/Hay, HSG B |
| * | 0.010 | 80 | Pasture/Hay, HSG D |
| * | 0.121 | 68 | Developed Open Space, HSG B |
| * | 0.097 | 68 | Developed Open Space, HSG B |
| * | 0.074 | 68 | Developed Open Space, HSG B |
| * | 0.593 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 89 | Developed Medium Intensity, HSG B |
| * | 0.021 | 68 | Developed Open Space, HSG B |
| * | 0.235 | 93 | Developed Low Intensity, HSG D |
| * | 0.045 | 88 | Developed Low Intensity, HSG B |
| * | 1.339 | 88 | Developed Low Intensity, HSG B |
| * | 0.065 | 86 | Woody Wetlands, HSG D |
| * | 0.040 | 86 | Woody Wetlands, HSG D |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| * | 0.092 | 86 | Woody Wetlands, HSG D |
| * | 3.011 | 86 | Woody Wetlands, HSG D |
| * | 0.229 | 86 | Woody Wetlands, HSG D |
| * | 10.236 | 86 | Woody Wetlands, HSG D |
| * | 1.891 | 86 | Woody Wetlands, HSG D |
| * | 8.521 | 71 | Cultivated Crops, HSG B |
| * | 6.911 | 81 | Cultivated Crops, HSG D |
| * | 7.655 | 71 | Cultivated Crops, HSG B |
| * | 4.194 | 81 | Cultivated Crops, HSG D |
| * | 0.024 | 81 | Cultivated Crops, HSG D |
| * | 2.120 | 71 | Cultivated Crops, HSG B |
| * | 74.112 | 81 | Cultivated Crops, HSG D |
| * | 11.731 | 81 | Cultivated Crops, HSG D |
| * | 7.102 | 71 | Cultivated Crops, HSG B |
| * | 0.055 | 61 | Pasture/Hay, HSG B |
| * | 0.025 | 80 | Pasture/Hay, HSG D |

159.778 79 Weighted Average
159.778 100.00% Pervious Area

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.8 | 100 | 0.0053 | 0.17 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.5 | 185 | 0.0096 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 433 | 0.0381 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 388 | 0.0321 | 1.61 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.8 | 410 | 0.0124 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 100 | 0.0119 | 0.98 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 178 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 180 | 0.0063 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.2 | 232 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.6 | 260 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 160 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.4 | 258 | 0.0194 | 1.25 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 143 | 0.0170 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 56.4 | 3,027 | Total | | | |

## Subcatchment 8: WS8



## Summary for Subcatchment 9: WS9

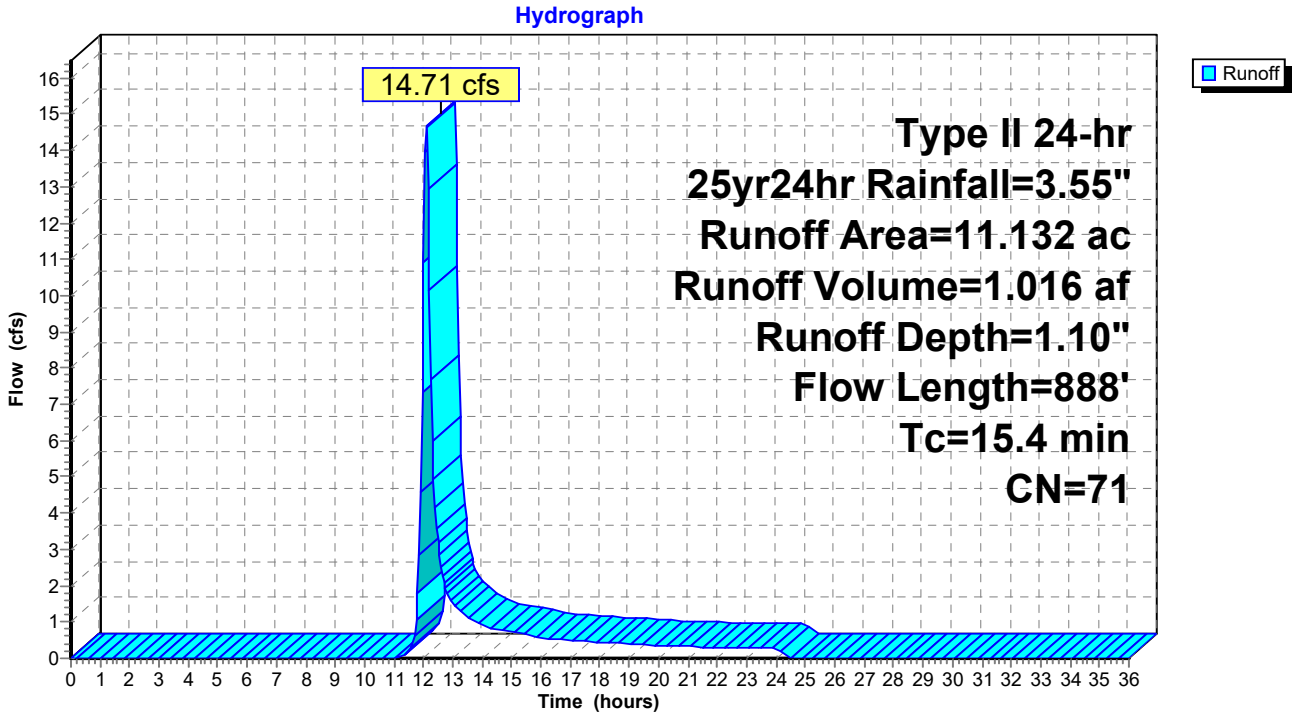
Runoff = 14.71 cfs @ 12.09 hrs, Volume= 1.016 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.016 | 68 | Developed Open Space, HSG B |
| * | 0.042 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.222 | 88 | Developed Low Intensity, HSG B |
| * | 0.137 | 88 | Developed Low Intensity, HSG B |
| * | 0.131 | 61 | Pasture/Hay, HSG B |
| * | 10.558 | 71 | Cultivated Crops, HSG B |
| | 11.132 | 71 | Weighted Average |
| | 11.132 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.7 | 100 | 0.0136 | 0.25 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.3 | 237 | 0.0381 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 285 | 0.0344 | 1.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 265 | 0.0201 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.4 | 888 | Total | | | |

## Subcatchment 9: WS9



## Summary for Subcatchment 10: WS10

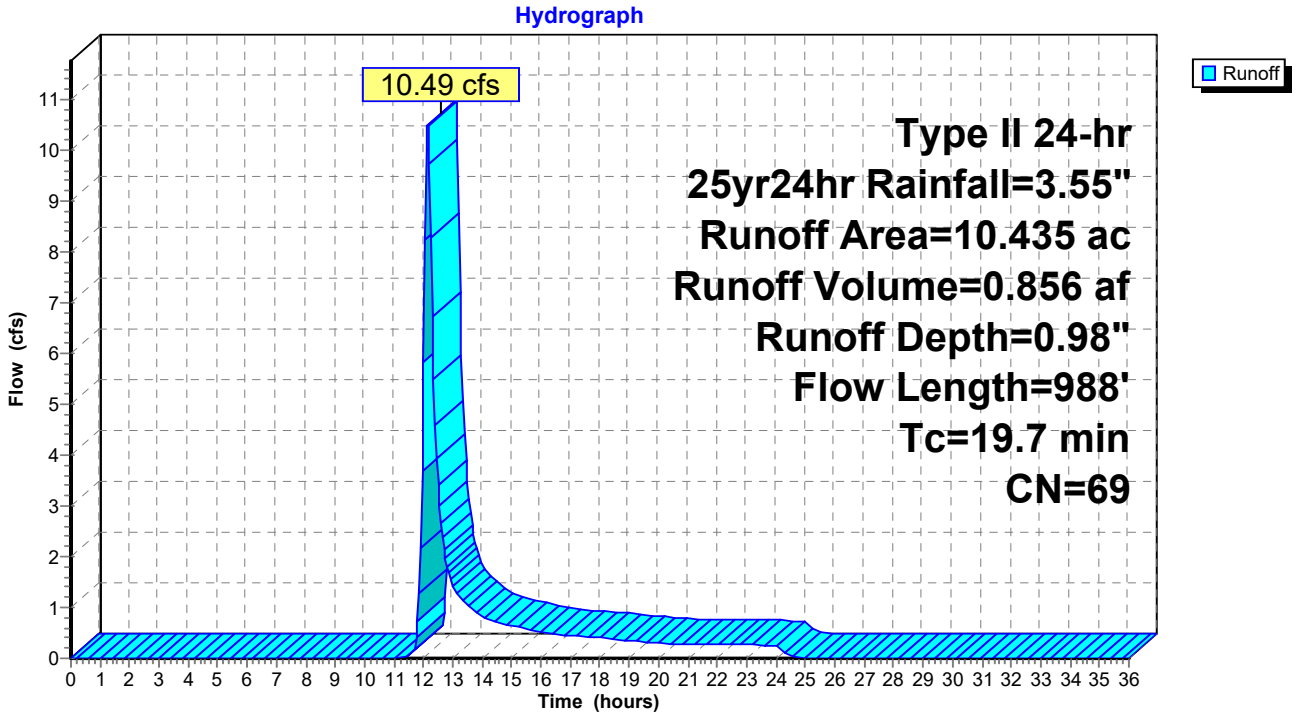
Runoff = 10.49 cfs @ 12.14 hrs, Volume= 0.856 af, Depth= 0.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.140 | 61 | Pasture/Hay, HSG B |
| * | 0.101 | 55 | Deciduous Forest, HSG B |
| * | 0.140 | 60 | Mixed Forest, HSG B |
| * | 1.044 | 55 | Deciduous Forest, HSG B |
| * | 9.009 | 71 | Cultivated Crops, HSG B |
| | 10.435 | 69 | Weighted Average |
| | 10.435 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.9 | 72 | 0.0265 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.3 | 28 | 0.0062 | 0.14 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.8 | 239 | 0.0132 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 272 | 0.0180 | 1.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 226 | 0.0204 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 151 | 0.0188 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 19.7 | 988 | Total | | | |

## Subcatchment 10: WS10



## Summary for Subcatchment 11: WS11

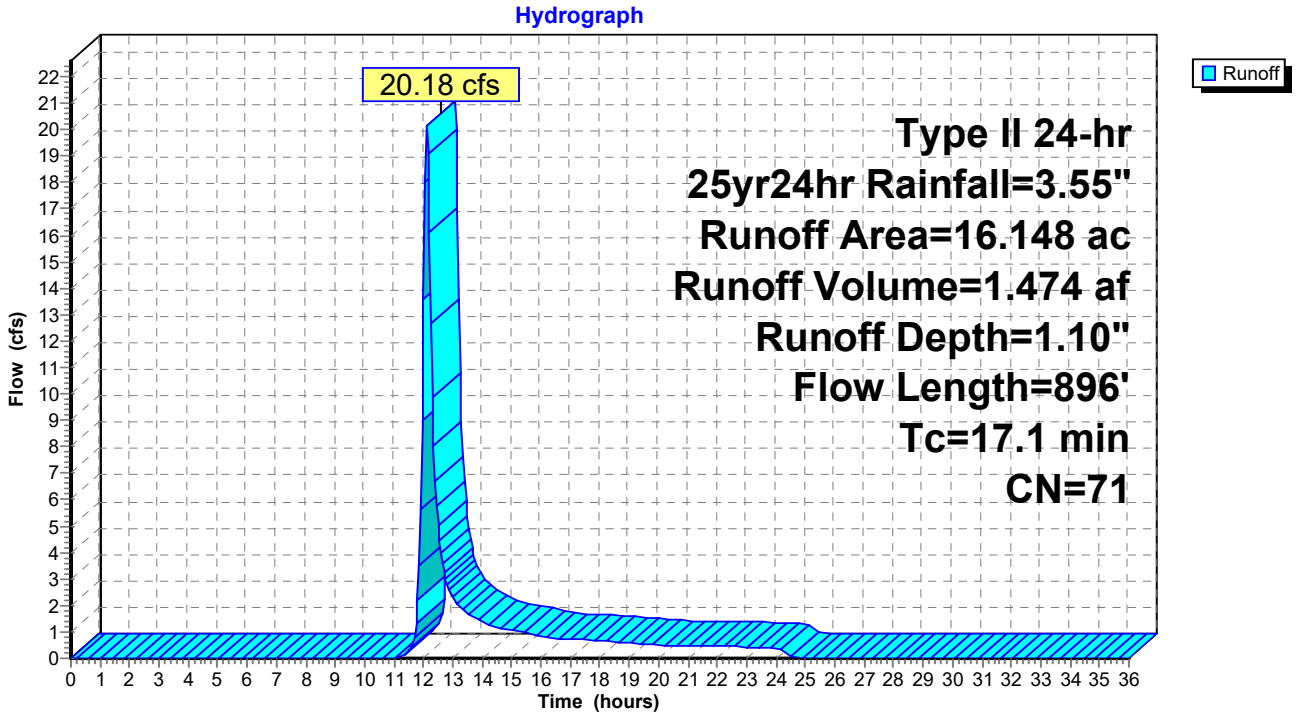
Runoff = 20.18 cfs @ 12.11 hrs, Volume= 1.474 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.211 | 88 | Developed Low Intensity, HSG B |
| * | 0.445 | 61 | Pasture/Hay, HSG B |
| * | 0.005 | 61 | Pasture/Hay, HSG B |
| * | 0.050 | 80 | Pasture/Hay, HSG D |
| * | 0.048 | 61 | Pasture/Hay, HSG B |
| * | 15.252 | 71 | Cultivated Crops, HSG B |
| * | 0.137 | 81 | Cultivated Crops, HSG D |
| | 16.148 | 71 | Weighted Average |
| | 16.148 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.2 | 100 | 0.0113 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 5.7 | 488 | 0.0250 | 1.42 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 308 | 0.0183 | 1.22 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 17.1 | 896 | Total | | | |

## Subcatchment 11: WS11



## Summary for Subcatchment 12: WS12

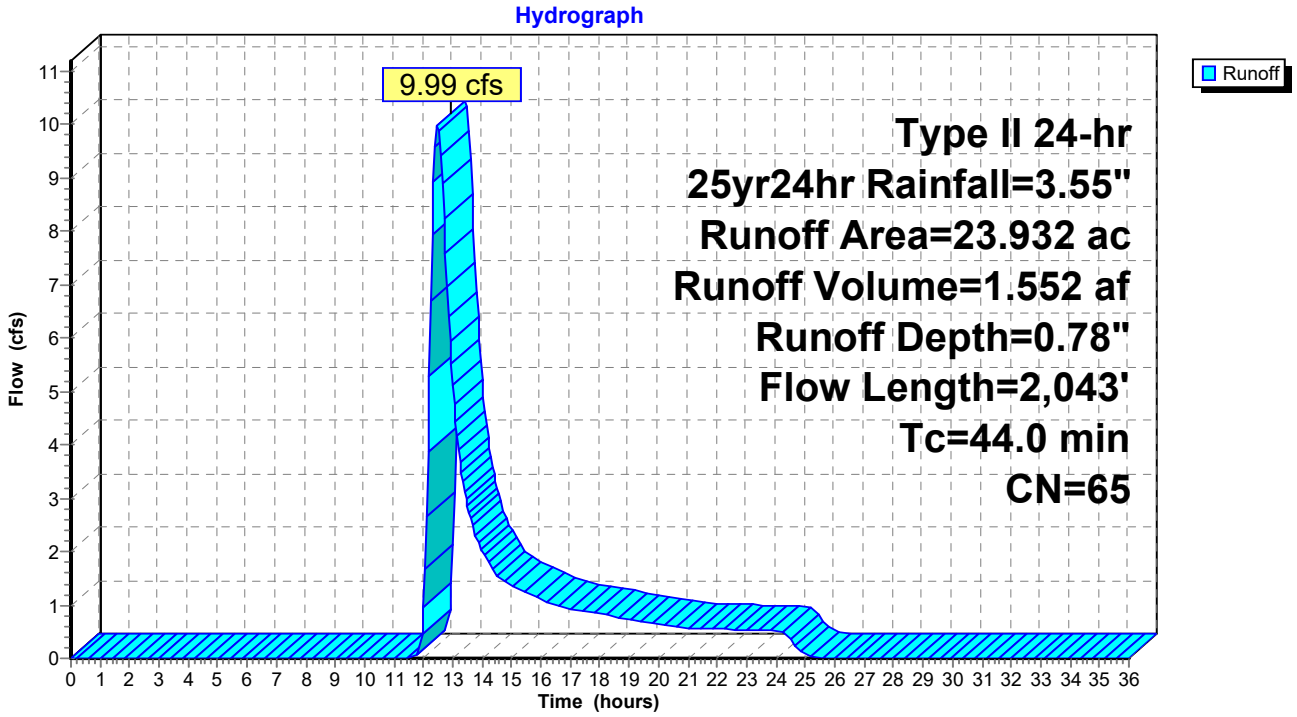
Runoff = 9.99 cfs @ 12.48 hrs, Volume= 1.552 af, Depth= 0.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.058 | 55 | Deciduous Forest, HSG B |
| * | 0.167 | 80 | Pasture/Hay, HSG D |
| * | 0.004 | 71 | Cultivated Crops, HSG B |
| * | 0.445 | 61 | Pasture/Hay, HSG B |
| * | 0.415 | 71 | Cultivated Crops, HSG B |
| * | 0.030 | 81 | Cultivated Crops, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 71 | Cultivated Crops, HSG B |
| * | 4.276 | 61 | Pasture/Hay, HSG B |
| * | 0.527 | 80 | Pasture/Hay, HSG D |
| * | 0.246 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.846 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.654 | 55 | Deciduous Forest, HSG B |
| * | 0.000 | 71 | Cultivated Crops, HSG B |
| * | 2.697 | 71 | Cultivated Crops, HSG B |
| * | 2.901 | 81 | Cultivated Crops, HSG D |
| | 23.932 | 65 | Weighted Average |
| | 23.932 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.9 | 100 | 0.0190 | 0.28 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 14.7 | 569 | 0.0051 | 0.64 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 59 | 0.1043 | 2.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 105 | 0.0414 | 1.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.6 | 350 | 0.0073 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.6 | 50 | 0.0387 | 1.38 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 339 | 0.0282 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 143 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 25 | 0.0181 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.3 | 303 | 0.0129 | 0.80 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 44.0 | 2,043 | Total | | | |

## Subcatchment 12: WS12



## Summary for Subcatchment 13: WS13

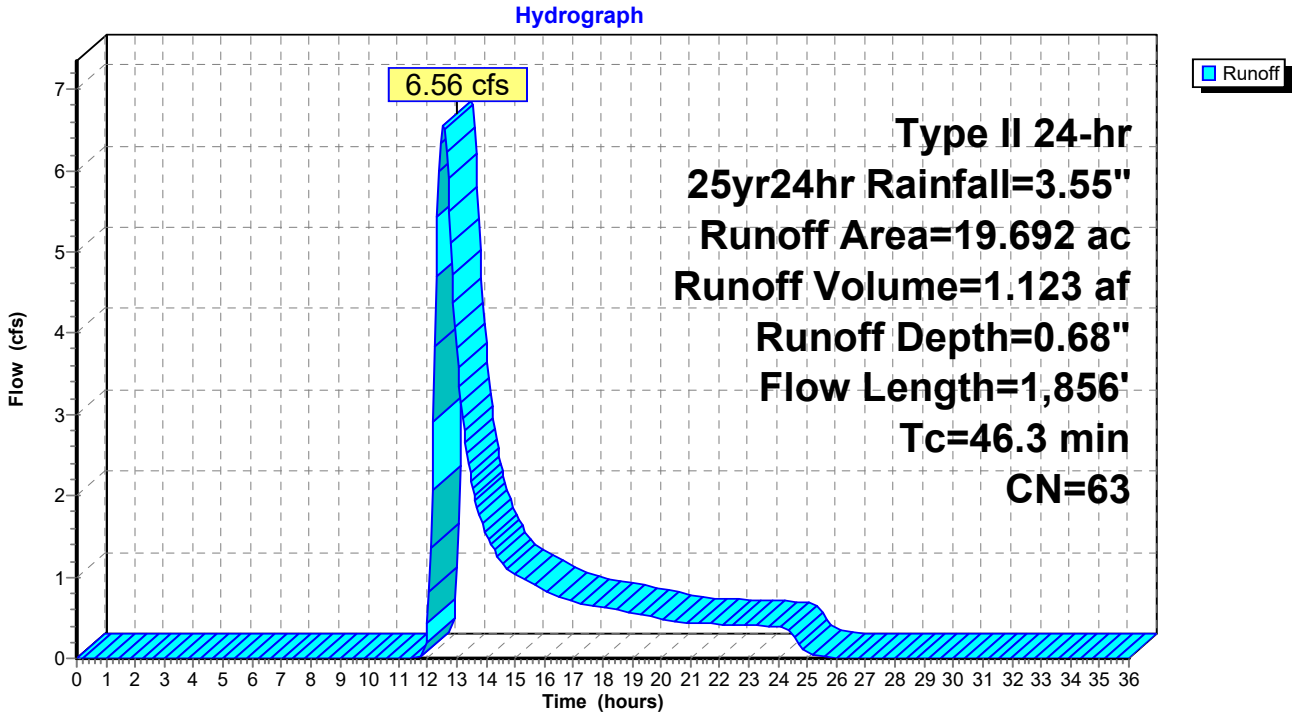
Runoff = 6.56 cfs @ 12.53 hrs, Volume= 1.123 af, Depth= 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.709 | 61 | Pasture/Hay, HSG B |
| * | 0.445 | 61 | Pasture/Hay, HSG B |
| * | 0.217 | 68 | Developed Open Space, HSG B |
| * | 2.429 | 60 | Mixed Forest, HSG B |
| * | 0.357 | 55 | Deciduous Forest, HSG B |
| * | 3.573 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.768 | 55 | Deciduous Forest, HSG B |
| * | 6.074 | 71 | Cultivated Crops, HSG B |
| * | 0.120 | 81 | Cultivated Crops, HSG D |
| | 19.692 | 63 | Weighted Average |
| | 19.692 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.1 | 100 | 0.0195 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.6 | 416 | 0.0171 | 0.92 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 9.6 | 318 | 0.0122 | 0.55 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.8 | 174 | 0.0439 | 1.05 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 5.5 | 254 | 0.0238 | 0.77 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 7.2 | 533 | 0.0186 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 62 | 0.0055 | 0.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 46.3 | 1,856 | Total | | | |

## Subcatchment 13: WS13



## Summary for Subcatchment 14: WS14

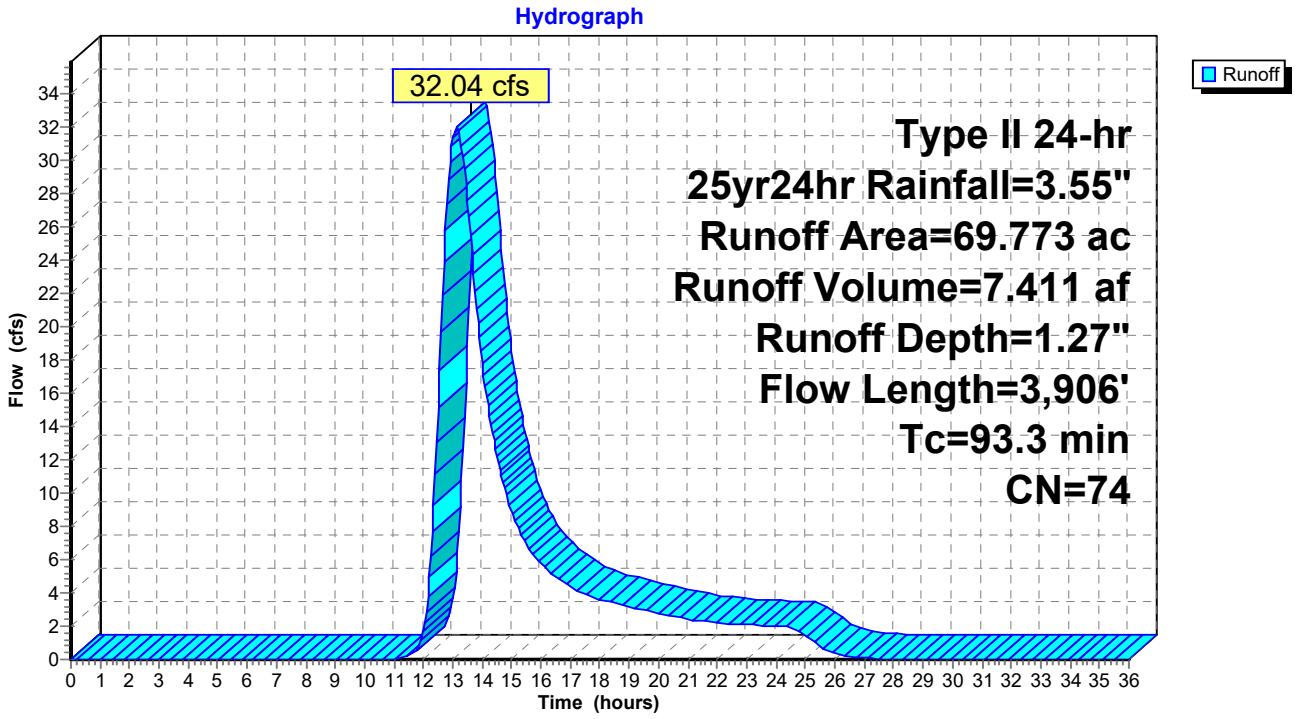
Runoff = 32.04 cfs @ 13.14 hrs, Volume= 7.411 af, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.295 | 55 | Deciduous Forest, HSG B |
| * | 0.007 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.017 | 61 | Pasture/Hay, HSG B |
| * | 0.472 | 61 | Pasture/Hay, HSG B |
| * | 0.003 | 85 | Grassland/Herbaceous, HSG D |
| * | 3.784 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.055 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.025 | 77 | Deciduous Forest, HSG D |
| * | 3.895 | 55 | Deciduous Forest, HSG B |
| * | 1.726 | 55 | Deciduous Forest, HSG B |
| * | 21.731 | 71 | Cultivated Crops, HSG B |
| * | 33.261 | 81 | Cultivated Crops, HSG D |
| * | 4.280 | 71 | Cultivated Crops, HSG B |
| | 69.773 | 74 | Weighted Average |
| | 69.773 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.2 | 100 | 0.0070 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.9 | 259 | 0.0080 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 165 | 0.0074 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.9 | 450 | 0.0188 | 0.69 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.0 | 192 | 0.0258 | 0.80 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.2 | 746 | 0.0224 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 571 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 336 | 0.0153 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.8 | 377 | 0.0022 | 0.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 286 | 0.0182 | 1.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 297 | 0.0207 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 127 | 0.0076 | 0.78 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 93.3 | 3,906 | Total | | | |

## Subcatchment 14: WS14



## Summary for Subcatchment 15: WS15

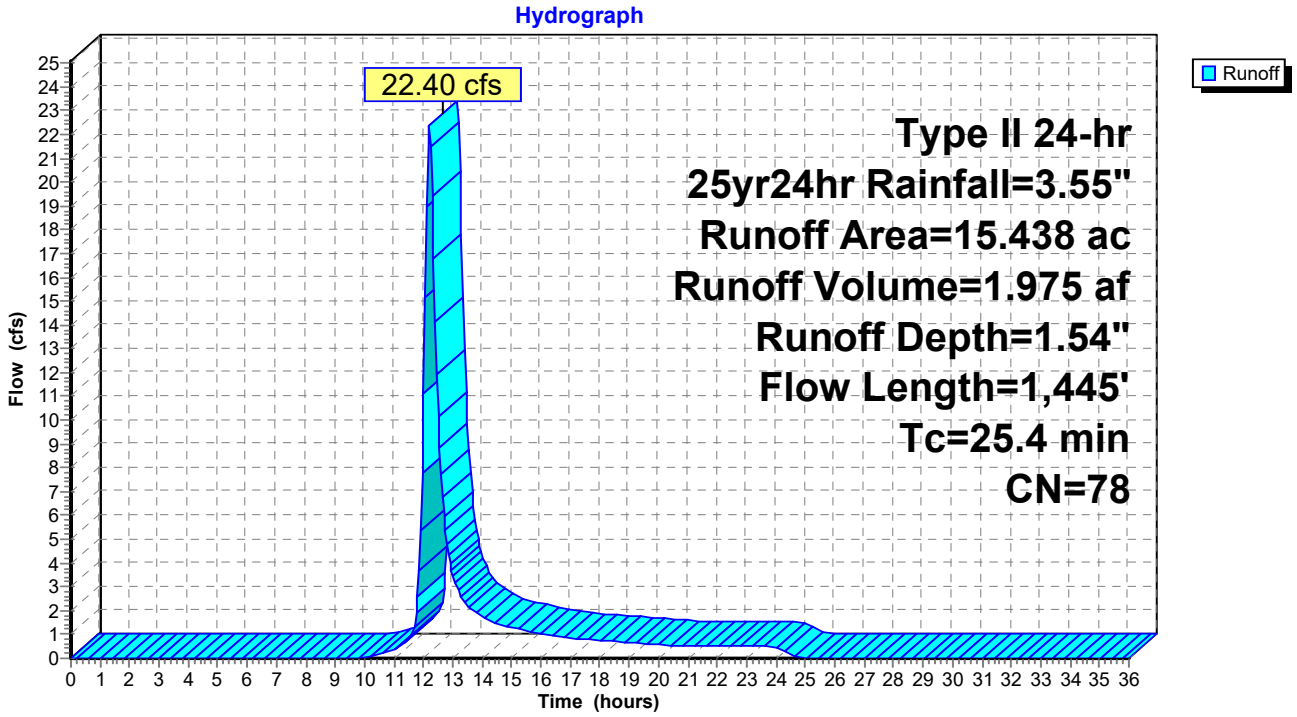
Runoff = 22.40 cfs @ 12.20 hrs, Volume= 1.975 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.042 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.021 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.169 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.126 | 55 | Deciduous Forest, HSG B |
| * | 0.545 | 77 | Deciduous Forest, HSG D |
| * | 2.220 | 77 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Shrub/Scrub, HSG D |
| * | 0.432 | 80 | Shrub/Scrub, HSG D |
| * | 1.112 | 76 | Mixed Forest, HSG D |
| * | 0.000 | 76 | Mixed Forest, HSG D |
| * | 1.895 | 71 | Cultivated Crops, HSG B |
| * | 8.739 | 81 | Cultivated Crops, HSG D |
| * | 0.070 | 81 | Cultivated Crops, HSG D |
| | 15.438 | 78 | Weighted Average |
| | 15.438 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.2 | 100 | 0.0255 | 0.32 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.7 | 205 | 0.0203 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.9 | 427 | 0.0132 | 1.03 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 5 | 0.0165 | 0.64 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.2 | 94 | 0.0197 | 0.70 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 8.3 | 614 | 0.0188 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.4 | 1,445 | Total | | | |

## Subcatchment 15: WS15



## Summary for Subcatchment 16: WS16

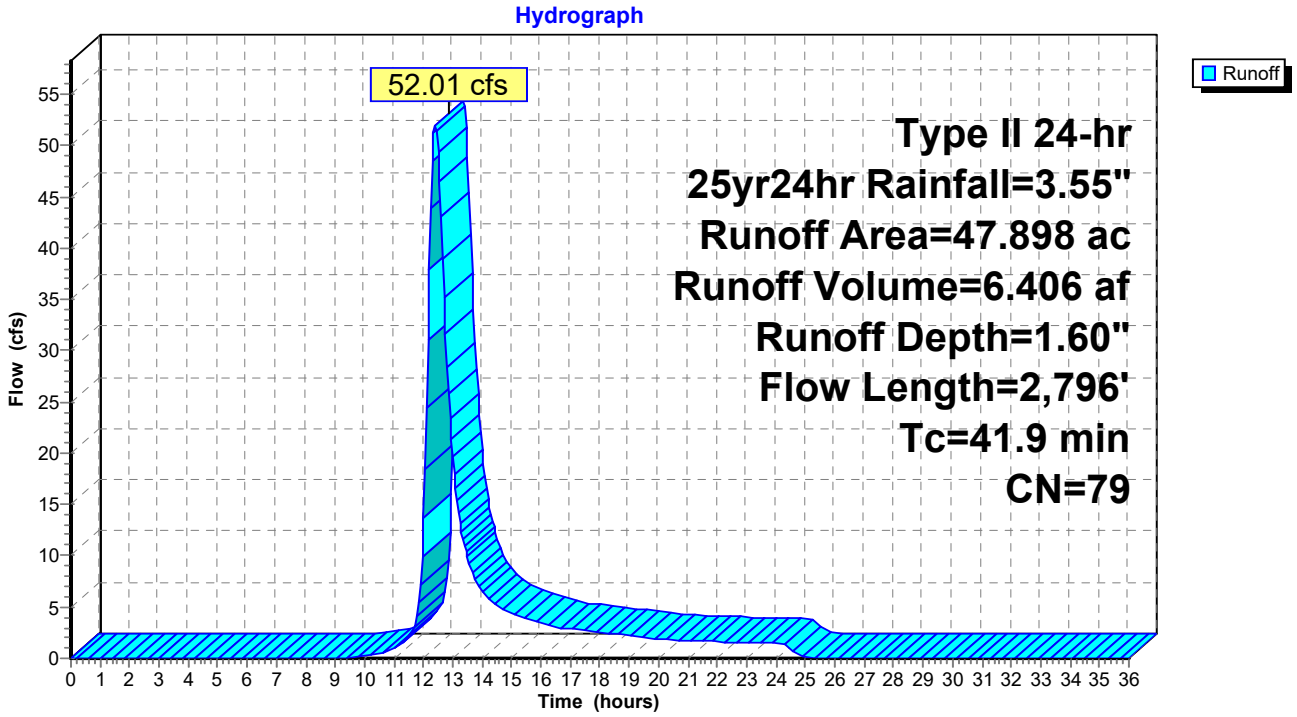
Runoff = 52.01 cfs @ 12.40 hrs, Volume= 6.406 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.205 | 84 | Developed Open Space, HSG D |
| * | 0.128 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.127 | 93 | Developed Low Intensity, HSG D |
| * | 0.287 | 84 | Developed Open Space, HSG D |
| * | 0.713 | 93 | Developed Low Intensity, HSG D |
| * | 0.372 | 84 | Developed Open Space, HSG D |
| * | 6.393 | 71 | Cultivated Crops, HSG B |
| * | 35.785 | 81 | Cultivated Crops, HSG D |
| * | 3.221 | 71 | Cultivated Crops, HSG B |
| | 47.898 | 79 | Weighted Average |
| | 47.898 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.2 | 100 | 0.0431 | 0.39 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.2 | 250 | 0.0431 | 1.87 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 408 | 0.0364 | 1.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.0 | 574 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.7 | 847 | 0.0113 | 0.96 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.8 | 617 | 0.0169 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 41.9 | 2,796 | Total | | | |

## Subcatchment 16: WS16



## Summary for Subcatchment 17: WS17

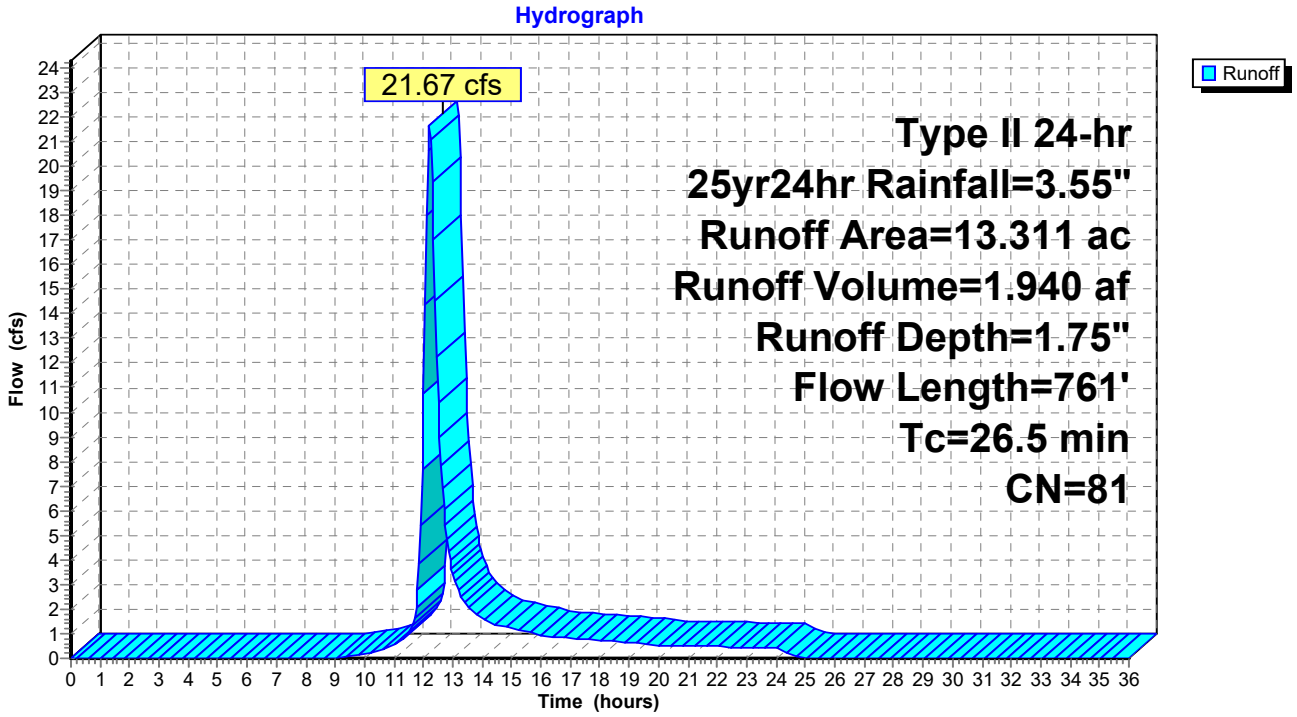
Runoff = 21.67 cfs @ 12.21 hrs, Volume= 1.940 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.046 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.179 | 84 | Developed Open Space, HSG D |
| * | 0.074 | 93 | Developed Low Intensity, HSG D |
| * | 0.072 | 84 | Developed Open Space, HSG D |
| * | 0.107 | 71 | Cultivated Crops, HSG B |
| * | 12.833 | 81 | Cultivated Crops, HSG D |
| | 13.311 | 81 | Weighted Average |
| | 13.311 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.6 | 100 | 0.0073 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.4 | 18 | 0.0058 | 0.68 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 76 | 0.0066 | 0.73 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 114 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.4 | 97 | 0.0027 | 0.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 40 | 0.0073 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 145 | 0.0060 | 0.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.1 | 171 | 0.0039 | 0.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 26.5 | 761 | Total | | | |

## Subcatchment 17: WS17



## Summary for Subcatchment 18: WS18

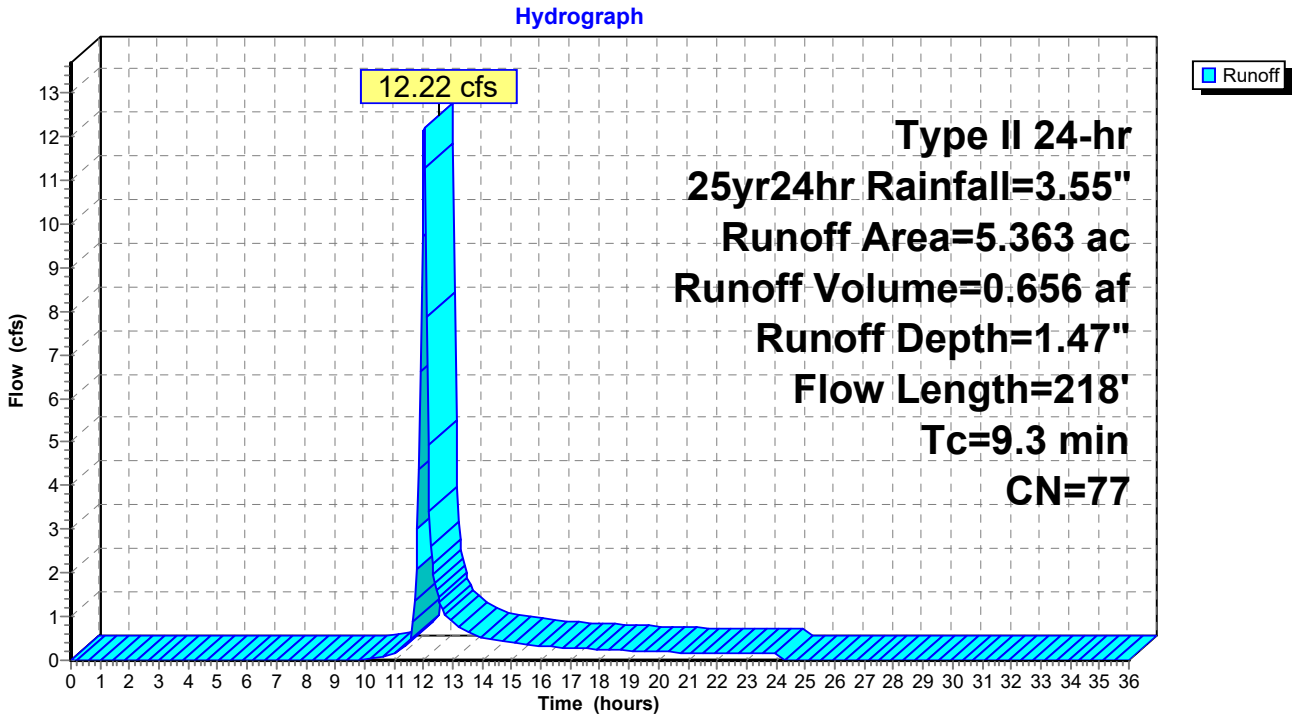
Runoff = 12.22 cfs @ 12.01 hrs, Volume= 0.656 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 2.116 | 71 | Cultivated Crops, HSG B |
| * | 3.247 | 81 | Cultivated Crops, HSG D |
| | 5.363 | 77 | Weighted Average |
| | 5.363 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.6 | 100 | 0.0352 | 0.36 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.2 | 89 | 0.0015 | 0.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 29 | 0.0133 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 218 | Total | | | |

## Subcatchment 18: WS18



## Summary for Subcatchment 19: WS19

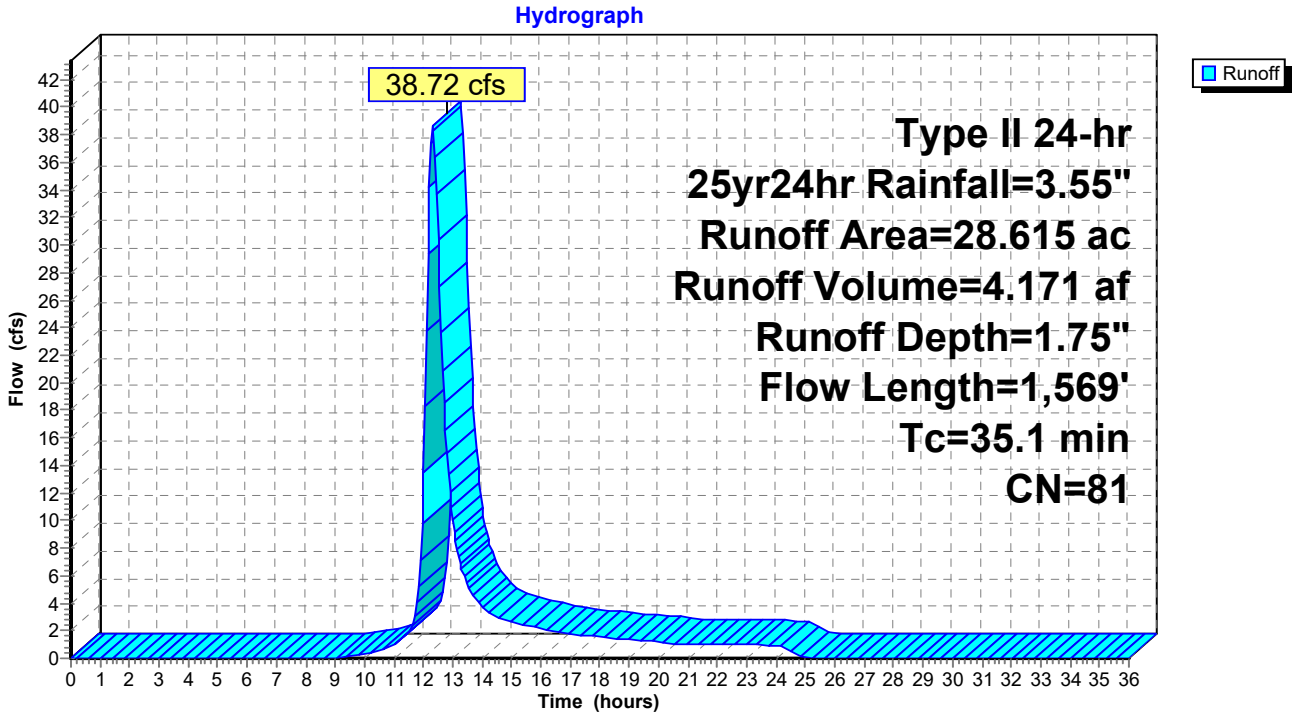
Runoff = 38.72 cfs @ 12.31 hrs, Volume= 4.171 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.077 | 80 | Pasture/Hay, HSG D |
| * | 0.030 | 86 | Woody Wetlands, HSG D |
| * | 0.043 | 84 | Developed Open Space, HSG D |
| * | 0.595 | 84 | Developed Open Space, HSG D |
| * | 27.869 | 81 | Cultivated Crops, HSG D |
| | 28.615 | 81 | Weighted Average |
| | 28.615 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.8 | 100 | 0.0093 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.1 | 158 | 0.0200 | 1.27 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 12.0 | 693 | 0.0115 | 0.96 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.2 | 306 | 0.0083 | 0.82 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.0 | 313 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.1 | 1,569 | Total | | | |

## Subcatchment 19: WS19



## Summary for Subcatchment 20: WS20

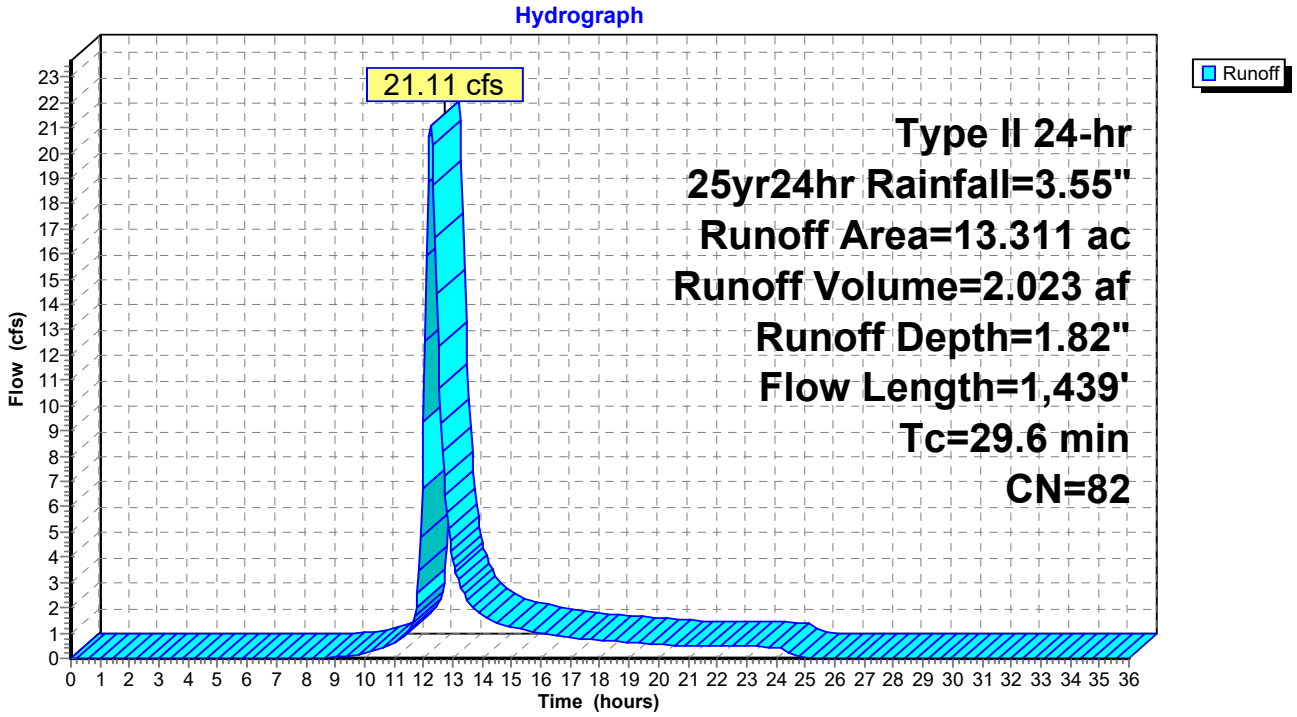
Runoff = 21.11 cfs @ 12.24 hrs, Volume= 2.023 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.283 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 94 | Developed Medium Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 12.515 | 81 | Cultivated Crops, HSG D |
| | 13.311 | 82 | Weighted Average |
| | 13.311 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.4 | 100 | 0.0233 | 0.31 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.3 | 226 | 0.0096 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.3 | 223 | 0.0042 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 268 | 0.0311 | 1.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.5 | 131 | 0.0093 | 0.87 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.4 | 129 | 0.0100 | 0.90 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 139 | 0.0122 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 97 | 0.0043 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 128 | 0.0126 | 2.28 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 29.6 | 1,439 | Total | | | |

## Subcatchment 20: WS20



## Summary for Subcatchment 21: WS21

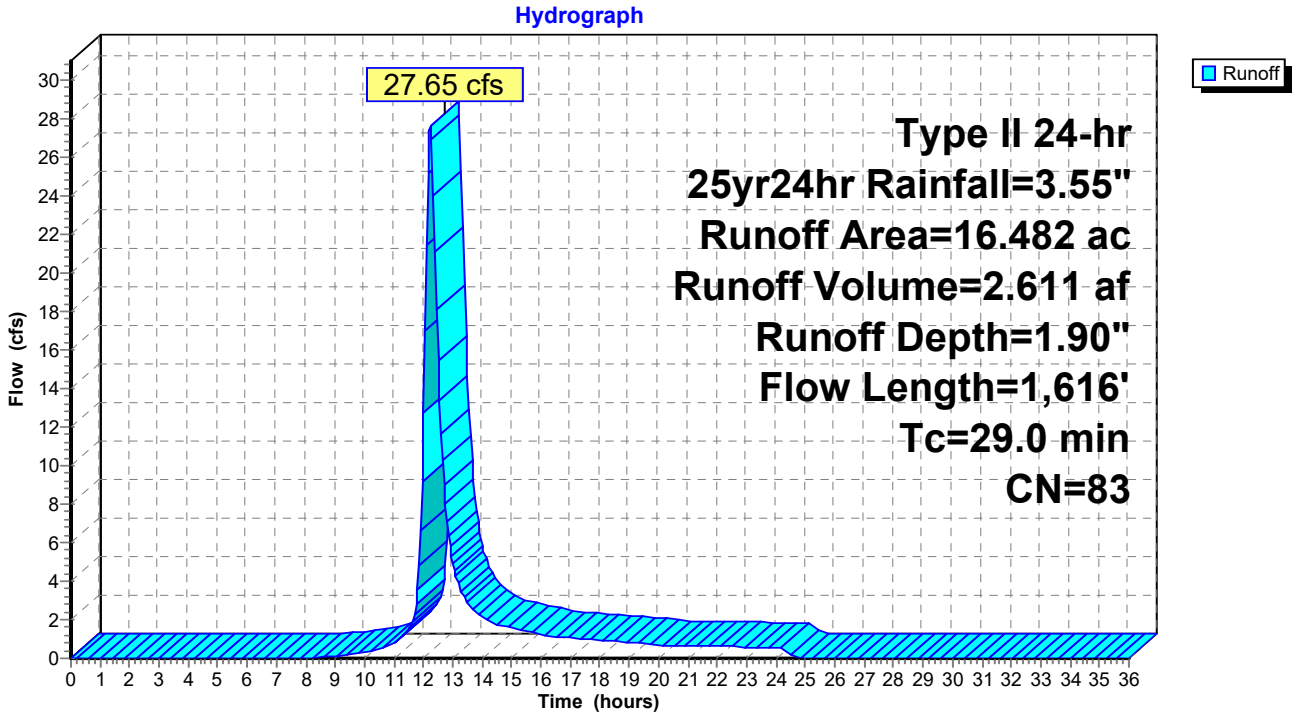
Runoff = 27.65 cfs @ 12.23 hrs, Volume= 2.611 af, Depth= 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.154 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 89 | Developed Medium Intensity, HSG B |
| * | 0.435 | 94 | Developed Medium Intensity, HSG D |
| * | 0.295 | 88 | Developed Low Intensity, HSG B |
| * | 2.834 | 93 | Developed Low Intensity, HSG D |
| * | 0.153 | 88 | Developed Low Intensity, HSG B |
| * | 0.136 | 93 | Developed Low Intensity, HSG D |
| * | 1.103 | 71 | Cultivated Crops, HSG B |
| * | 0.243 | 81 | Cultivated Crops, HSG D |
| * | 11.118 | 81 | Cultivated Crops, HSG D |
| | 16.482 | 83 | Weighted Average |
| | 16.482 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.9 | 100 | 0.0189 | 0.28 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.7 | 50 | 0.0180 | 1.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 205 | 0.0146 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.4 | 355 | 0.0149 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.0 | 340 | 0.0109 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 239 | 0.0081 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 84 | 0.0236 | 3.12 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 26 | 0.0201 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 116 | 0.0216 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 100 | 0.0154 | 2.52 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 29.0 | 1,616 | Total | | | |

## Subcatchment 21: WS21



## Summary for Subcatchment 22: WS22

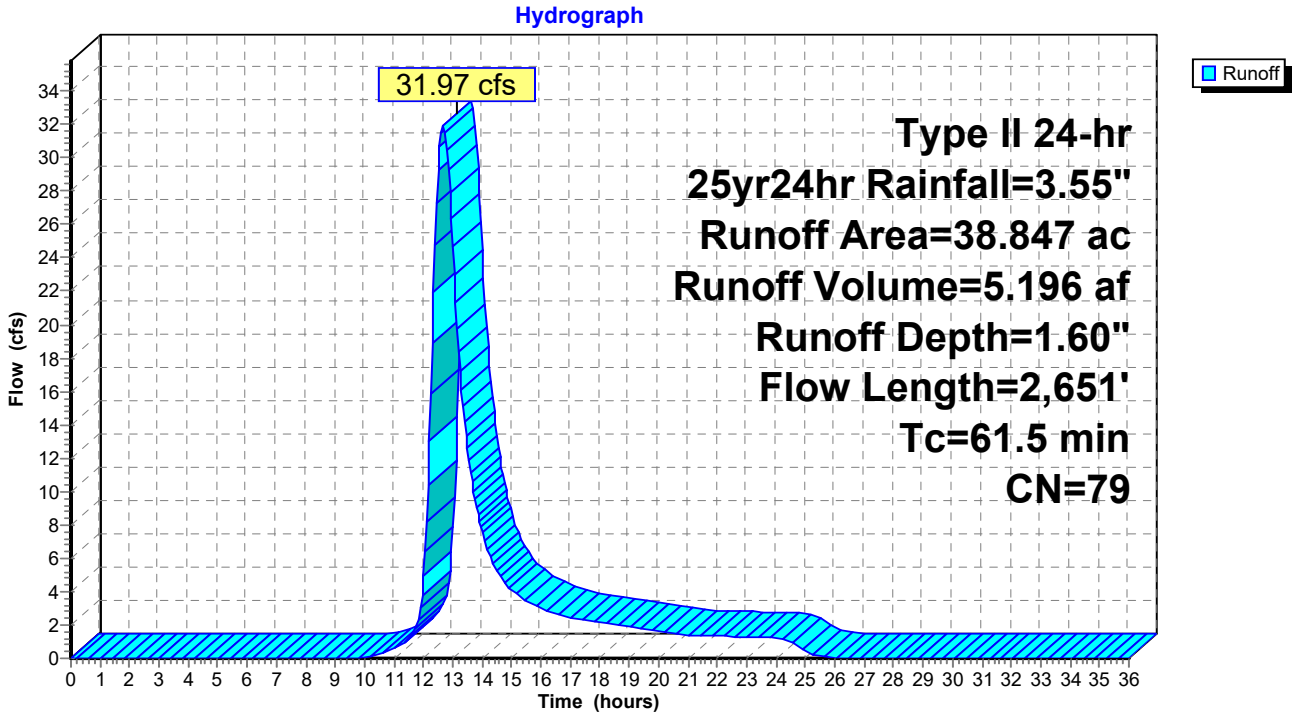
Runoff = 31.97 cfs @ 12.66 hrs, Volume= 5.196 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.005 | 86 | Woody Wetlands, HSG D |
| * | 5.962 | 71 | Cultivated Crops, HSG B |
| * | 2.759 | 81 | Cultivated Crops, HSG D |
| * | 1.588 | 81 | Cultivated Crops, HSG D |
| * | 28.533 | 81 | Cultivated Crops, HSG D |
| | 38.847 | 79 | Weighted Average |
| | 38.847 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.3 | 51 | 0.0172 | 0.05 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 3.4 | 49 | 0.0173 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 11.1 | 660 | 0.0121 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.3 | 580 | 0.0109 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.1 | 560 | 0.0165 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 11.0 | 664 | 0.0126 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 87 | 0.0145 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 61.5 | 2,651 | Total | | | |

## Subcatchment 22: WS22



## Summary for Subcatchment 23: WS23

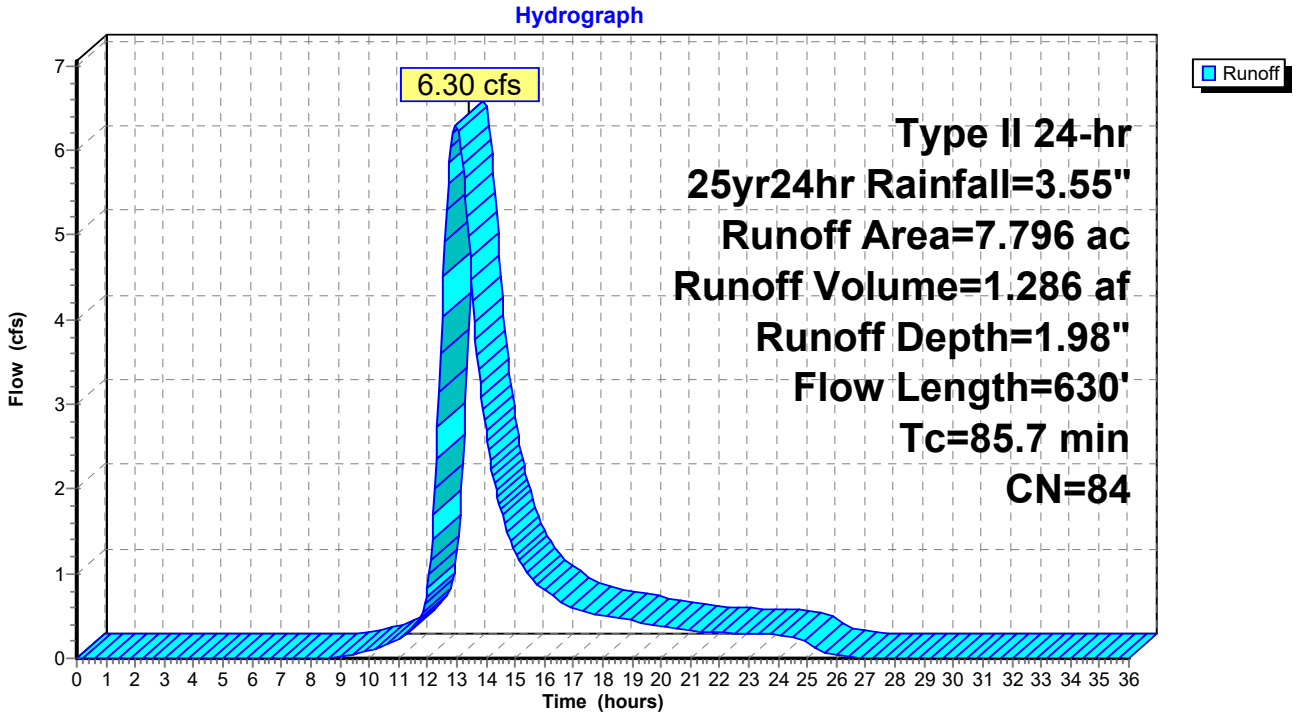
Runoff = 6.30 cfs @ 12.96 hrs, Volume= 1.286 af, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.781 | 80 | Pasture/Hay, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.192 | 86 | Woody Wetlands, HSG D |
| * | 0.415 | 84 | Developed Open Space, HSG D |
| * | 4.720 | 86 | Woody Wetlands, HSG D |
| * | 1.466 | 81 | Cultivated Crops, HSG D |
| | 7.796 | 84 | Weighted Average |
| | 7.796 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 41.4 | 100 | 0.0064 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 0.2 | 5 | 0.0065 | 0.40 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 27.1 | 263 | 0.0010 | 0.16 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 15.2 | 163 | 0.0013 | 0.18 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.8 | 100 | 0.0020 | 0.90 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 85.7 | 630 | Total | | | |

## Subcatchment 23: WS23



## Summary for Subcatchment 24: WS24

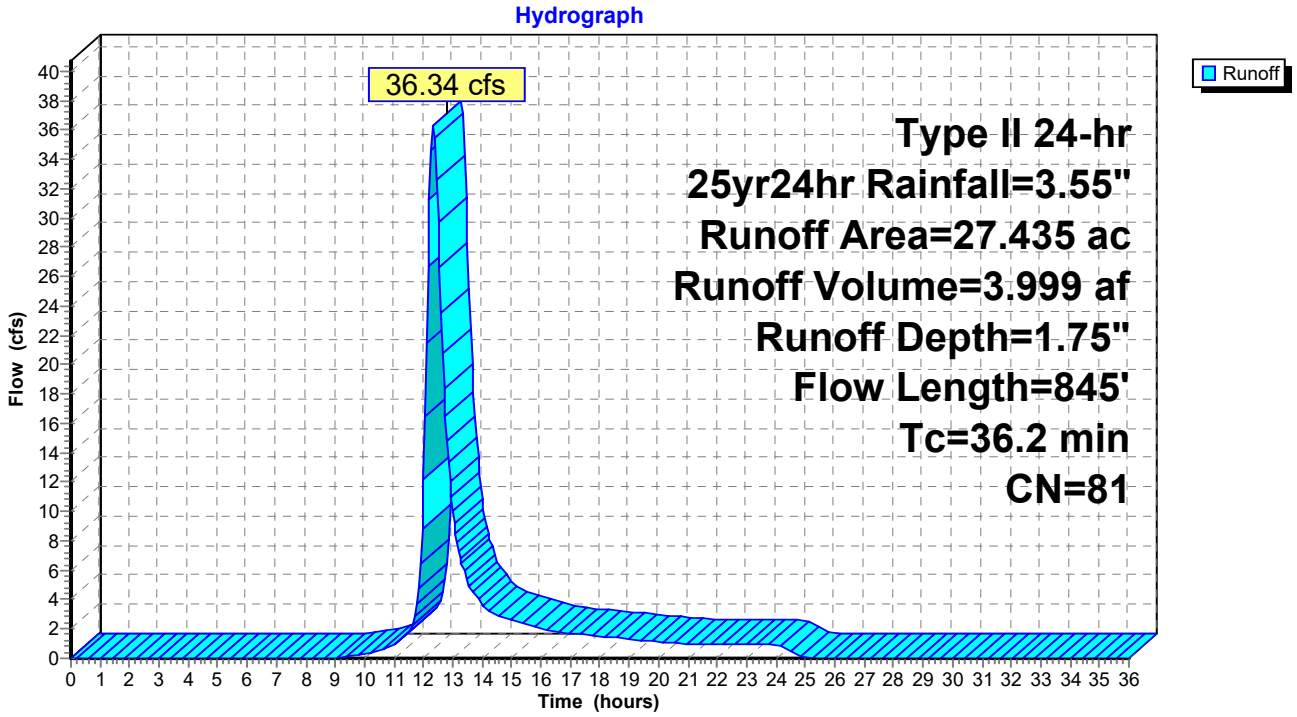
Runoff = 36.34 cfs @ 12.33 hrs, Volume= 3.999 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.383 | 80 | Pasture/Hay, HSG D |
| * | 0.667 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 86 | Woody Wetlands, HSG D |
| * | 0.890 | 80 | Pasture/Hay, HSG D |
| * | 1.451 | 86 | Woody Wetlands, HSG D |
| * | 0.196 | 77 | Deciduous Forest, HSG D |
| * | 0.222 | 86 | Woody Wetlands, HSG D |
| * | 0.217 | 86 | Woody Wetlands, HSG D |
| * | 2.891 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 1.774 | 86 | Woody Wetlands, HSG D |
| * | 1.914 | 71 | Cultivated Crops, HSG B |
| * | 15.923 | 81 | Cultivated Crops, HSG D |
| | 27.435 | 81 | Weighted Average |
| | 27.435 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.5 | 52 | 0.0130 | 0.05 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 3.8 | 48 | 0.0128 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.0 | 247 | 0.0129 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.6 | 162 | 0.0138 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.3 | 337 | 0.0072 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 36.2 | 845 | Total | | | |

## Subcatchment 24: WS24



## Summary for Subcatchment 25: WS25

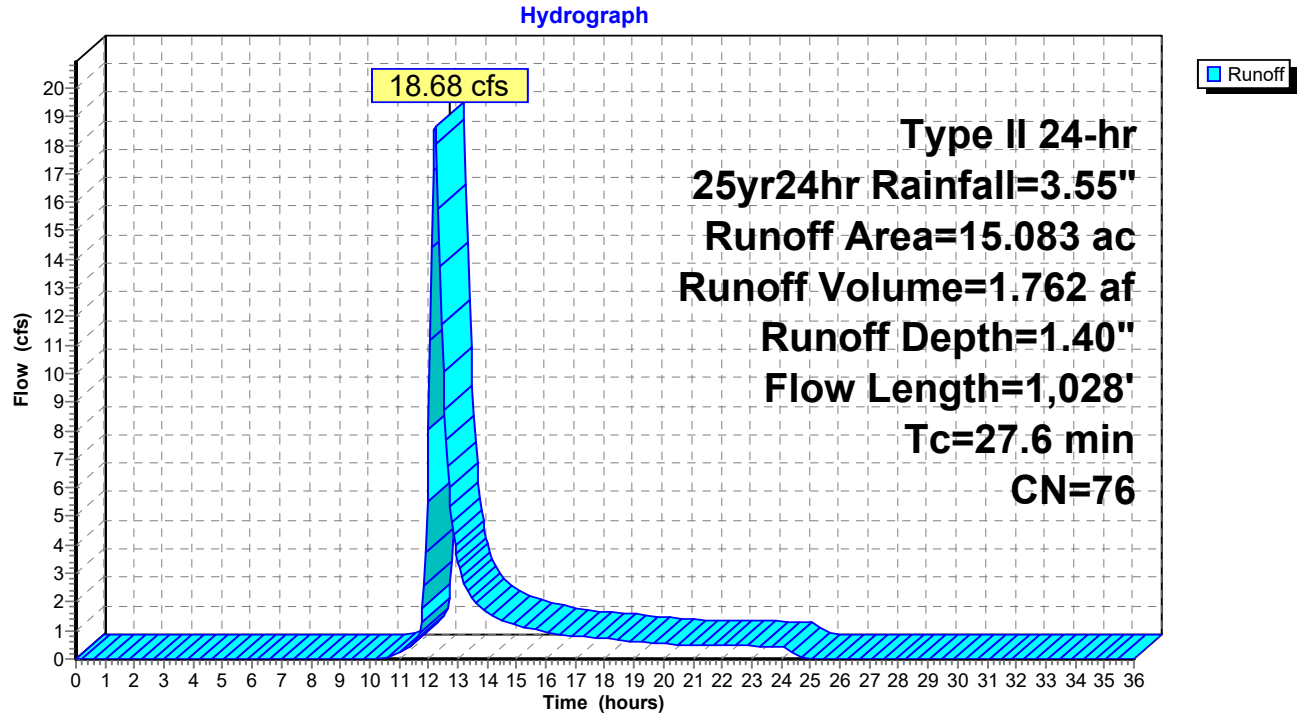
Runoff = 18.68 cfs @ 12.23 hrs, Volume= 1.762 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 7.008 | 71 | Cultivated Crops, HSG B |
| * | 8.076 | 81 | Cultivated Crops, HSG D |
| | 15.083 | 76 | Weighted Average |
| | 15.083 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.6 | 100 | 0.0056 | 0.17 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.7 | 103 | 0.0027 | 0.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.7 | 239 | 0.0060 | 0.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 271 | 0.0312 | 1.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.8 | 315 | 0.0103 | 0.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.6 | 1,028 | Total | | | |

## Subcatchment 25: WS25



## Summary for Subcatchment 26: WS26

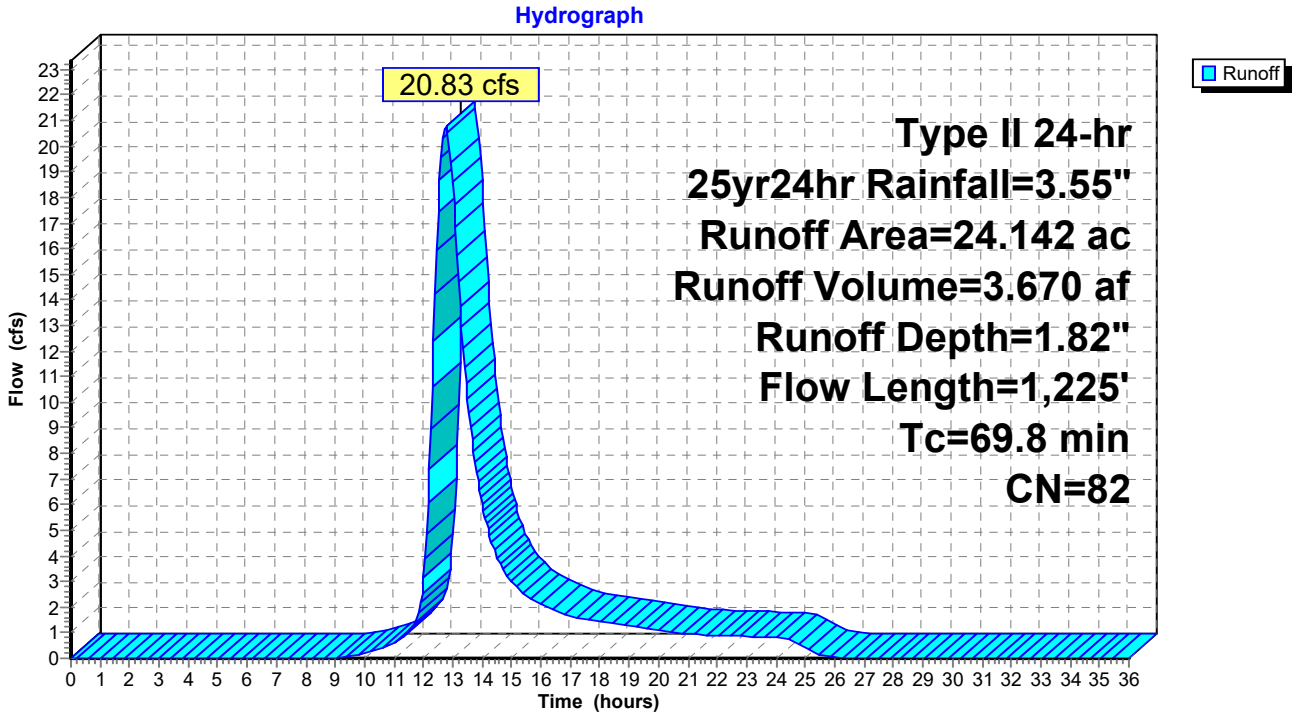
Runoff = 20.83 cfs @ 12.77 hrs, Volume= 3.670 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.020 | 84 | Developed Open Space, HSG D |
| * | 0.777 | 88 | Developed Low Intensity, HSG B |
| * | 0.216 | 93 | Developed Low Intensity, HSG D |
| * | 1.909 | 86 | Woody Wetlands, HSG D |
| * | 1.334 | 77 | Deciduous Forest, HSG D |
| * | 0.088 | 55 | Evergreen Forest, HSG B |
| * | 0.062 | 86 | Woody Wetlands, HSG B |
| * | 0.002 | 86 | Woody Wetlands, HSG B |
| * | 6.771 | 86 | Woody Wetlands, HSG D |
| * | 1.083 | 61 | Pasture/Hay, HSG B |
| * | 0.052 | 61 | Pasture/Hay, HSG B |
| * | 3.489 | 80 | Pasture/Hay, HSG D |
| * | 0.206 | 71 | Cultivated Crops, HSG B |
| * | 8.132 | 81 | Cultivated Crops, HSG D |
| | 24.142 | 82 | Weighted Average |
| | 24.142 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 100 | 0.0275 | 1.28 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 45 | 0.0190 | 2.79 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.5 | 140 | 0.0499 | 1.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 73 | 0.0202 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 115 | 0.0306 | 0.87 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.7 | 150 | 0.0026 | 0.26 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 11.5 | 194 | 0.0031 | 0.28 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 16.3 | 197 | 0.0016 | 0.20 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 25.8 | 211 | 0.0007 | 0.14 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 69.8 | 1,225 | Total | | | |

## Subcatchment 26: WS26



## Summary for Subcatchment 27: WS27

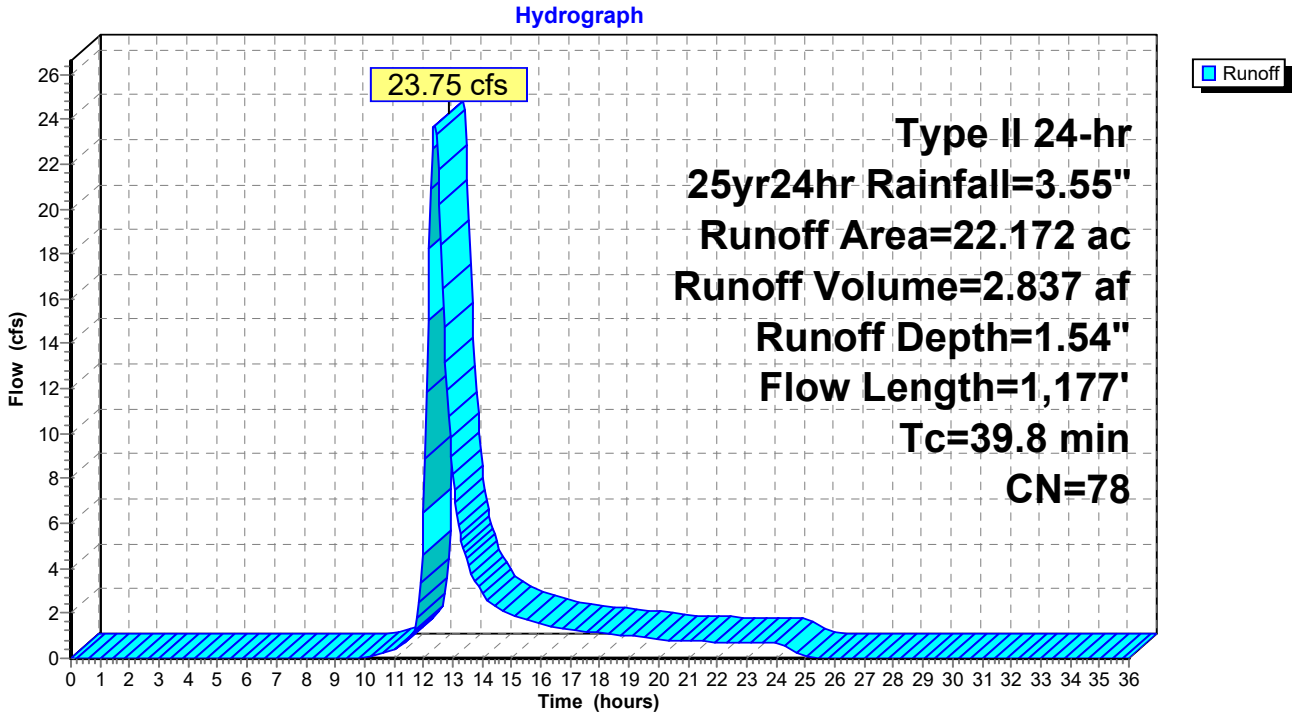
Runoff = 23.75 cfs @ 12.38 hrs, Volume= 2.837 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.445 | 74 | Evergreen Forest, HSG D |
| * | 0.039 | 80 | Pasture/Hay, HSG D |
| * | 0.104 | 55 | Deciduous Forest, HSG B |
| * | 5.233 | 77 | Deciduous Forest, HSG D |
| * | 0.026 | 77 | Deciduous Forest, HSG D |
| * | 1.662 | 77 | Deciduous Forest, HSG D |
| * | 3.945 | 71 | Cultivated Crops, HSG B |
| * | 10.717 | 81 | Cultivated Crops, HSG D |
| | 22.172 | 78 | Weighted Average |
| | 22.172 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.5 | 100 | 0.0148 | 0.26 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.4 | 216 | 0.0288 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 227 | 0.0220 | 1.34 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 20.4 | 201 | 0.0003 | 0.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 172 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.7 | 261 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 39.8 | 1,177 | Total | | | |

## Subcatchment 27: WS27



## Summary for Subcatchment 28: WS28

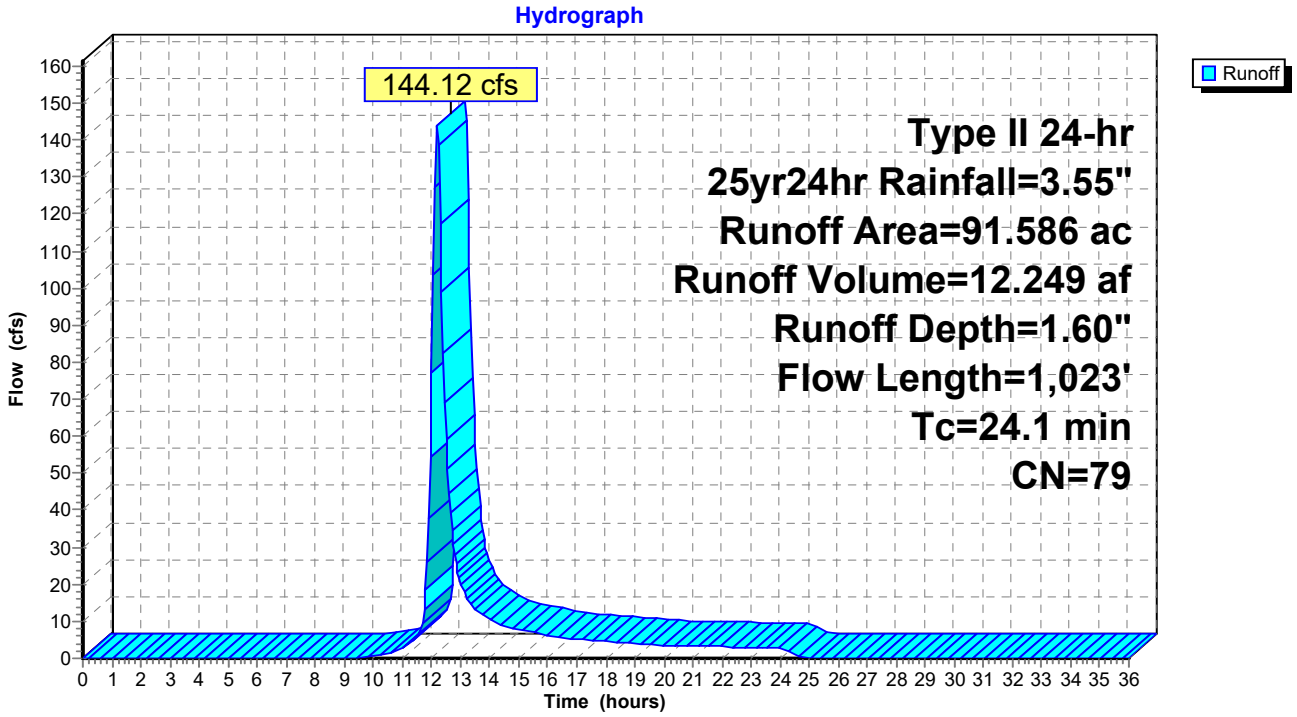
Runoff = 144.12 cfs @ 12.18 hrs, Volume= 12.249 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.197 | 61 | Pasture/Hay, HSG B |
| * | 0.793 | 80 | Pasture/Hay, HSG D |
| * | 0.117 | 77 | Deciduous Forest, HSG D |
| * | 5.160 | 71 | Cultivated Crops, HSG B |
| * | 4.338 | 71 | Cultivated Crops, HSG B |
| * | 4.642 | 71 | Cultivated Crops, HSG B |
| * | 1.274 | 71 | Cultivated Crops, HSG B |
| * | 0.102 | 71 | Cultivated Crops, HSG B |
| * | 74.963 | 81 | Cultivated Crops, HSG D |
| | 91.586 | 79 | Weighted Average |
| | 91.586 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.9 | 100 | 0.0126 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.7 | 222 | 0.0126 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.1 | 313 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 228 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.3 | 161 | 0.0047 | 0.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.1 | 1,023 | Total | | | |

## Subcatchment 28: WS28



## Summary for Subcatchment 29: WS29

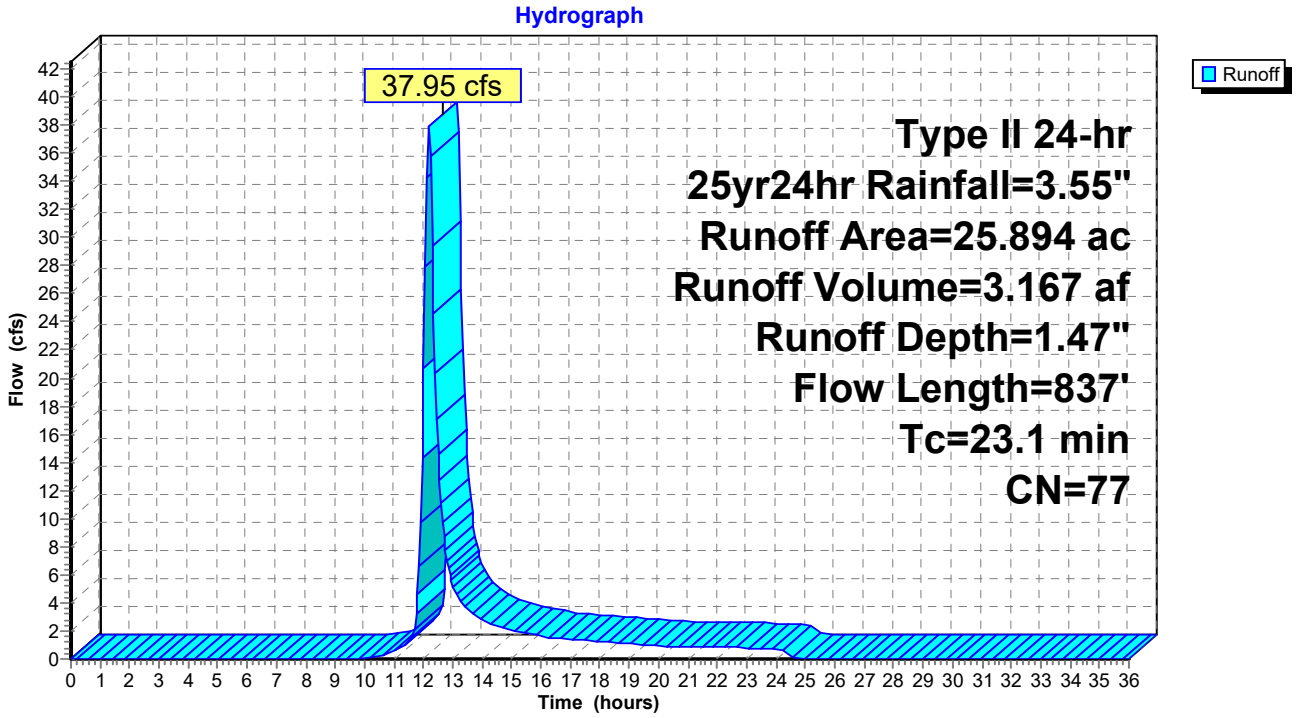
Runoff = 37.95 cfs @ 12.17 hrs, Volume= 3.167 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 8.124 | 71 | Cultivated Crops, HSG B |
| * | 2.358 | 71 | Cultivated Crops, HSG B |
| * | 0.241 | 71 | Cultivated Crops, HSG B |
| * | 15.170 | 81 | Cultivated Crops, HSG D |
| | 25.894 | 77 | Weighted Average |
| | 25.894 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.1 | 100 | 0.0063 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 8.0 | 343 | 0.0063 | 0.71 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.6 | 359 | 0.0139 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 35 | 0.0229 | 1.36 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 23.1 | 837 | Total | | | |

## Subcatchment 29: WS29



## Summary for Subcatchment 30: WS30

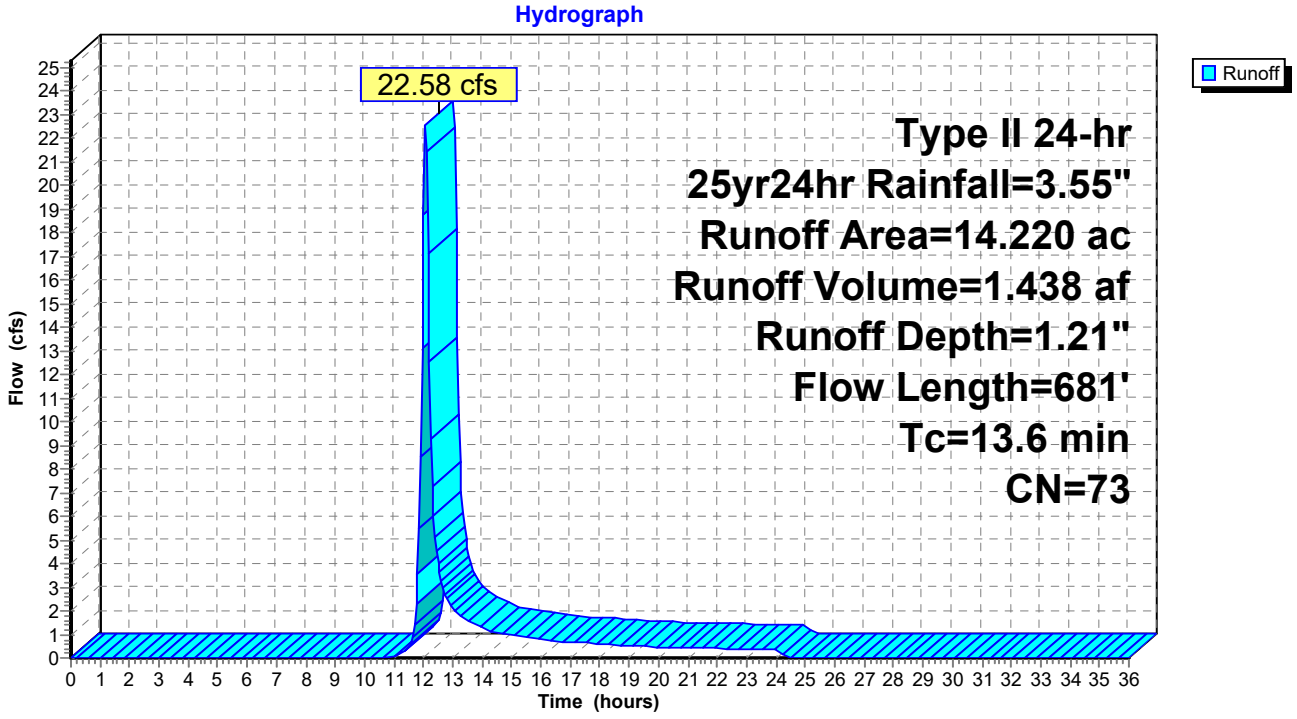
Runoff = 22.58 cfs @ 12.06 hrs, Volume= 1.438 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.211 | 71 | Cultivated Crops, HSG B |
| * | 0.257 | 71 | Cultivated Crops, HSG B |
| * | 9.269 | 71 | Cultivated Crops, HSG B |
| * | 3.483 | 81 | Cultivated Crops, HSG D |
| | 14.220 | 73 | Weighted Average |
| | 14.220 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.2 | 100 | 0.0164 | 0.27 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.5 | 229 | 0.0150 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 353 | 0.0284 | 1.52 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.6 | 681 | Total | | | |

## Subcatchment 30: WS30



## Summary for Subcatchment 31: WS31

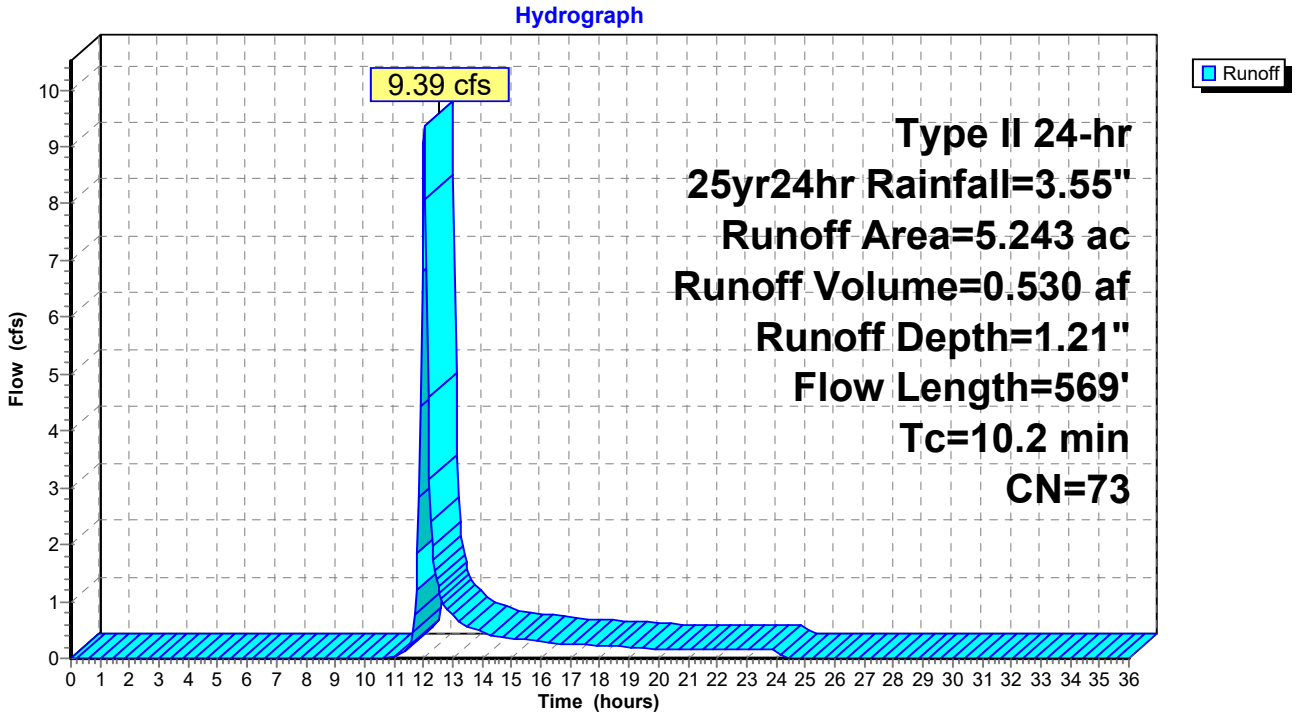
Runoff = 9.39 cfs @ 12.03 hrs, Volume= 0.530 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.184 | 93 | Developed Low Intensity, HSG D |
| * | 4.554 | 71 | Cultivated Crops, HSG B |
| * | 0.504 | 81 | Cultivated Crops, HSG D |
| | 5.243 | 73 | Weighted Average |
| | 5.243 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 81 | 0.0247 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.3 | 19 | 0.0292 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.6 | 138 | 0.0271 | 1.48 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 38 | 0.0534 | 2.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 97 | 0.0588 | 2.18 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 52 | 0.0562 | 2.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 78 | 0.0406 | 1.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 65 | 0.0265 | 1.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.2 | 569 | Total | | | |

## Subcatchment 31: WS31



## Summary for Subcatchment 32: WS32

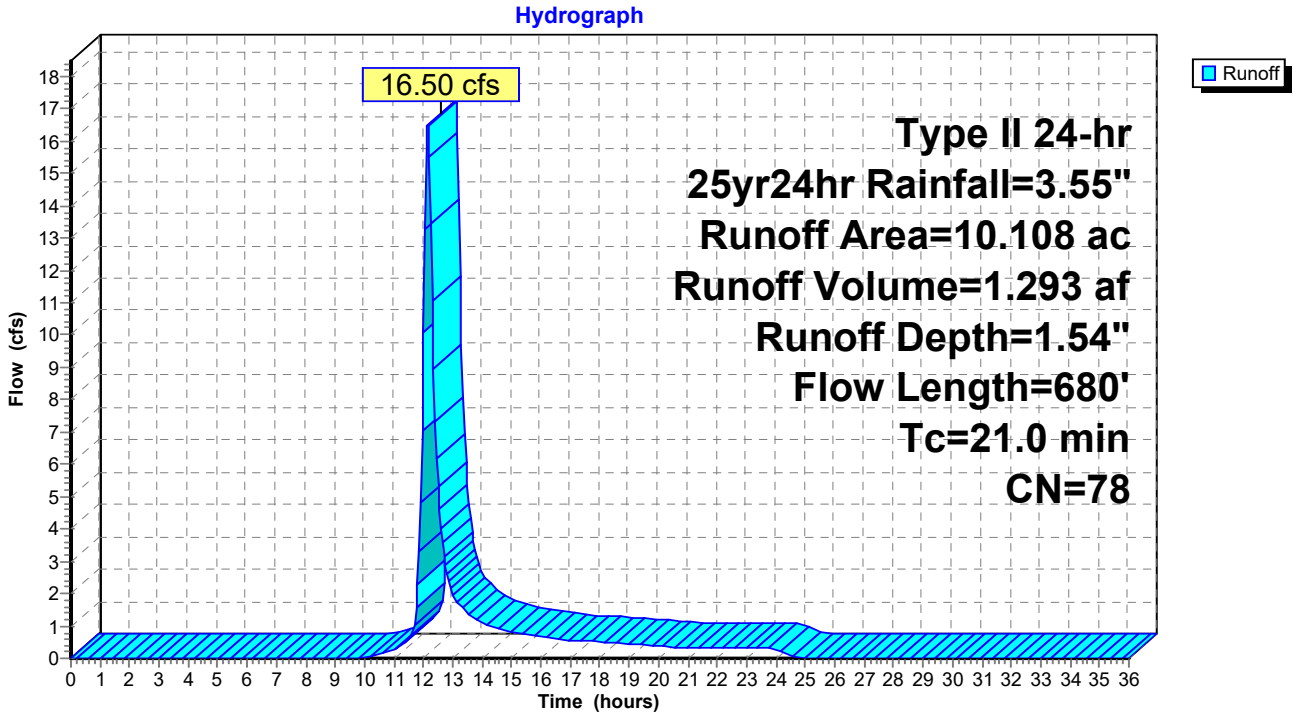
Runoff = 16.50 cfs @ 12.15 hrs, Volume= 1.293 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.081 | 88 | Developed Low Intensity, HSG B |
| * | 0.021 | 93 | Developed Low Intensity, HSG D |
| * | 0.727 | 71 | Cultivated Crops, HSG B |
| * | 0.190 | 81 | Cultivated Crops, HSG D |
| * | 2.804 | 71 | Cultivated Crops, HSG B |
| * | 6.047 | 81 | Cultivated Crops, HSG D |
| * | 0.154 | 86 | Woody Wetlands, HSG D |
| * | 0.085 | 86 | Woody Wetlands, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG D |
| | 10.108 | 78 | Weighted Average |
| | 10.108 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.0 | 100 | 0.0064 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.6 | 114 | 0.0064 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.6 | 143 | 0.0033 | 0.52 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 323 | 0.0155 | 1.12 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 21.0 | 680 | Total | | | |

## Subcatchment 32: WS32



## Summary for Subcatchment 33: WS33

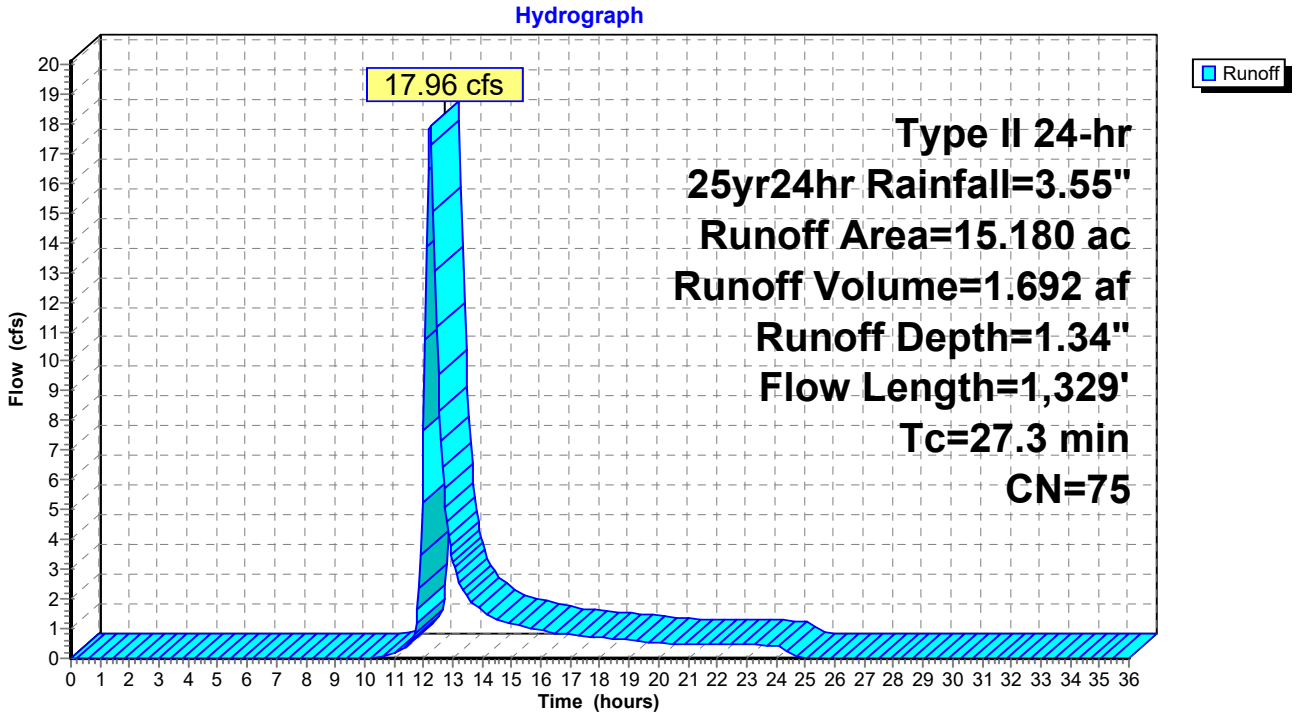
Runoff = 17.96 cfs @ 12.22 hrs, Volume= 1.692 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.023 | 93 | Developed Low Intensity, HSG D |
| * | 1.066 | 71 | Cultivated Crops, HSG B |
| * | 3.586 | 81 | Cultivated Crops, HSG D |
| * | 2.467 | 81 | Cultivated Crops, HSG D |
| * | 8.038 | 71 | Cultivated Crops, HSG B |
| | 15.180 | 75 | Weighted Average |
| | 15.180 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.8 | 95 | 0.0047 | 0.16 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.5 | 5 | 0.0268 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 72 | 0.0236 | 1.38 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 211 | 0.0190 | 1.24 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 70 | 0.0171 | 1.18 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 143 | 0.0202 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.4 | 205 | 0.0239 | 1.39 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 120 | 0.0166 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 194 | 0.0169 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.4 | 145 | 0.0130 | 1.03 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.1 | 71 | 0.0149 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.3 | 1,329 | Total | | | |

## Subcatchment 33: WS33



## Summary for Subcatchment 34: WS34

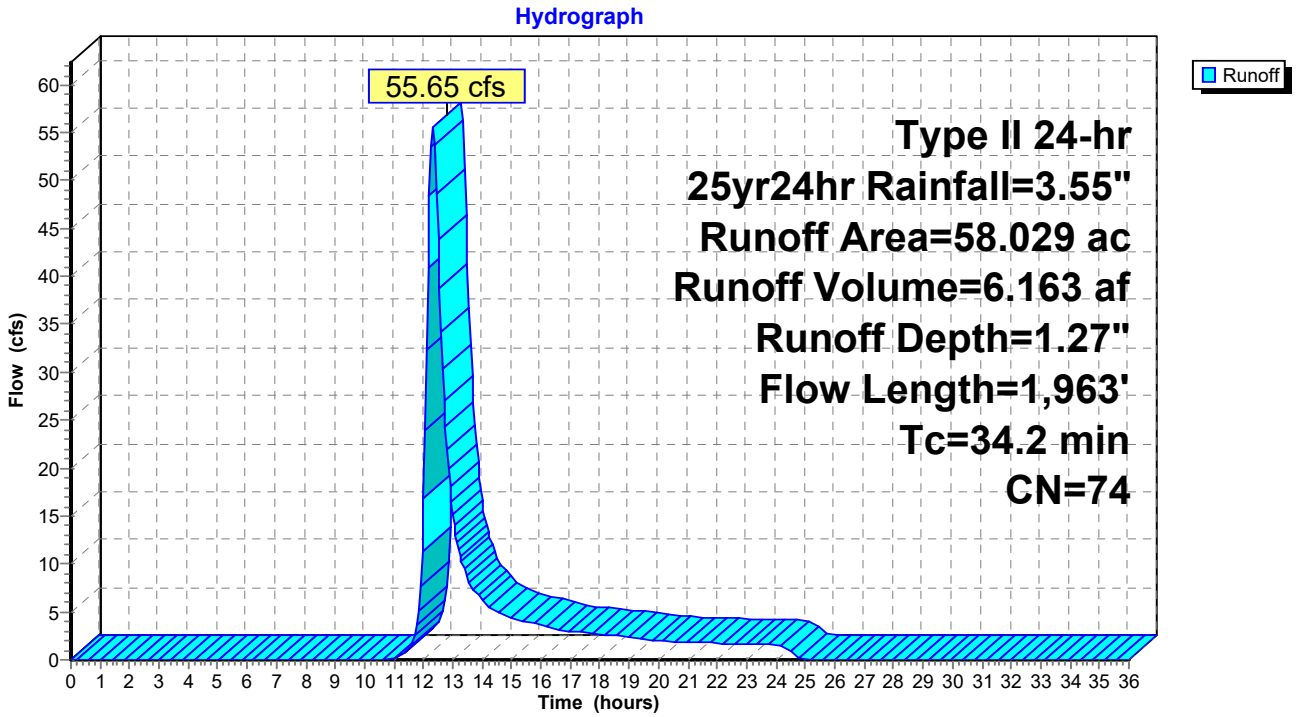
Runoff = 55.65 cfs @ 12.32 hrs, Volume= 6.163 af, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.223 | 74 | Evergreen Forest, HSG D |
| * | 0.016 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.023 | 55 | Deciduous Forest, HSG B |
| * | 0.092 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.259 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.003 | 80 | Pasture/Hay, HSG D |
| * | 1.400 | 61 | Pasture/Hay, HSG B |
| * | 1.086 | 61 | Pasture/Hay, HSG B |
| * | 0.139 | 89 | Developed Medium Intensity, HSG B |
| * | 0.766 | 88 | Developed Low Intensity, HSG B |
| * | 0.179 | 88 | Developed Low Intensity, HSG B |
| * | 0.222 | 89 | Developed Medium Intensity, HSG B |
| * | 0.174 | 89 | Developed Medium Intensity, HSG B |
| * | 0.133 | 88 | Developed Low Intensity, HSG B |
| * | 0.353 | 93 | Developed Low Intensity, HSG D |
| * | 0.150 | 84 | Developed Open Space, HSG D |
| * | 0.890 | 93 | Developed Low Intensity, HSG D |
| * | 0.363 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.194 | 88 | Developed Low Intensity, HSG B |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.513 | 68 | Developed Open Space, HSG B |
| * | 0.148 | 84 | Developed Open Space, HSG D |
| * | 0.212 | 88 | Developed Low Intensity, HSG B |
| * | 1.140 | 93 | Developed Low Intensity, HSG D |
| * | 0.169 | 84 | Developed Open Space, HSG D |
| * | 0.018 | 94 | Developed Medium Intensity, HSG D |
| * | 0.051 | 71 | Cultivated Crops, HSG B |
| * | 0.393 | 81 | Cultivated Crops, HSG D |
| * | 0.529 | 81 | Cultivated Crops, HSG D |
| * | 0.597 | 81 | Cultivated Crops, HSG D |
| * | 6.761 | 71 | Cultivated Crops, HSG B |
| * | 29.701 | 71 | Cultivated Crops, HSG B |
| * | 10.240 | 81 | Cultivated Crops, HSG D |
| | 58.029 | 74 | Weighted Average |
| | 58.029 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.9 | 100 | 0.0251 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 248 | 0.0275 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 493 | 0.0518 | 2.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.0 | 473 | 0.0214 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.3 | 260 | 0.0127 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 99 | 0.0130 | 2.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.7 | 291 | 0.0026 | 1.04 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 34.2 | 1,963 | Total | | | |

## Subcatchment 34: WS34



## Summary for Subcatchment 35: WS35

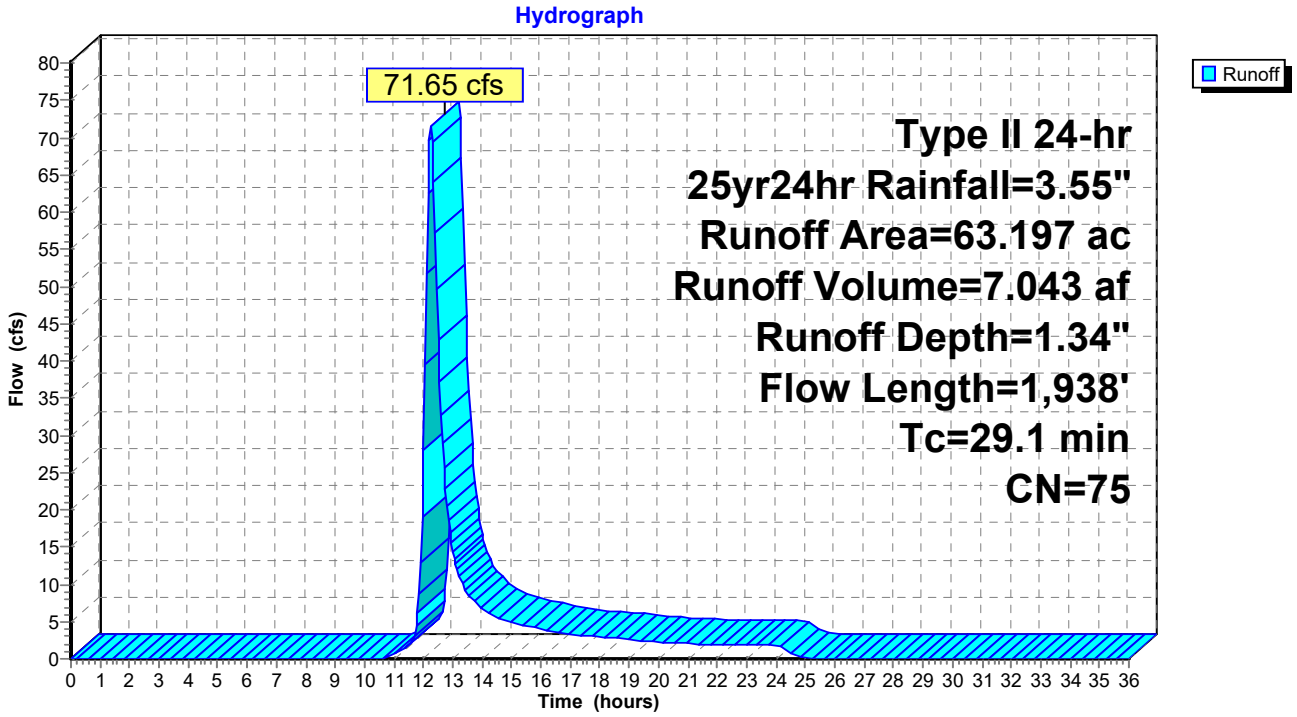
Runoff = 71.65 cfs @ 12.25 hrs, Volume= 7.043 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.060 | 93 | Developed Low Intensity, HSG D |
| * | 0.072 | 84 | Developed Open Space, HSG D |
| * | 0.305 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.194 | 93 | Developed Low Intensity, HSG D |
| * | 1.190 | 80 | Pasture/Hay, HSG D |
| * | 0.558 | 61 | Pasture/Hay, HSG B |
| * | 0.164 | 89 | Developed Medium Intensity, HSG B |
| * | 0.485 | 94 | Developed Medium Intensity, HSG D |
| * | 0.221 | 68 | Developed Open Space, HSG B |
| * | 0.986 | 88 | Developed Low Intensity, HSG B |
| * | 0.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.002 | 71 | Cultivated Crops, HSG B |
| * | 0.049 | 81 | Cultivated Crops, HSG D |
| * | 7.291 | 71 | Cultivated Crops, HSG B |
| * | 13.448 | 81 | Cultivated Crops, HSG D |
| * | 2.277 | 71 | Cultivated Crops, HSG B |
| * | 7.295 | 71 | Cultivated Crops, HSG B |
| * | 22.072 | 71 | Cultivated Crops, HSG B |
| * | 6.074 | 81 | Cultivated Crops, HSG D |
| | 63.197 | 75 | Weighted Average |
| | 63.197 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 79 | 0.0156 | 0.97 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 21 | 0.0603 | 1.29 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.4 | 83 | 0.0265 | 3.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 3.4 | 291 | 0.0251 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.3 | 303 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 210 | 0.0088 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.6 | 431 | 0.0147 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 87 | 0.0123 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.3 | 434 | 0.0272 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.1 | 1,938 | Total | | | |

**Subcatchment 35: WS35**



## Summary for Subcatchment 36: WS36

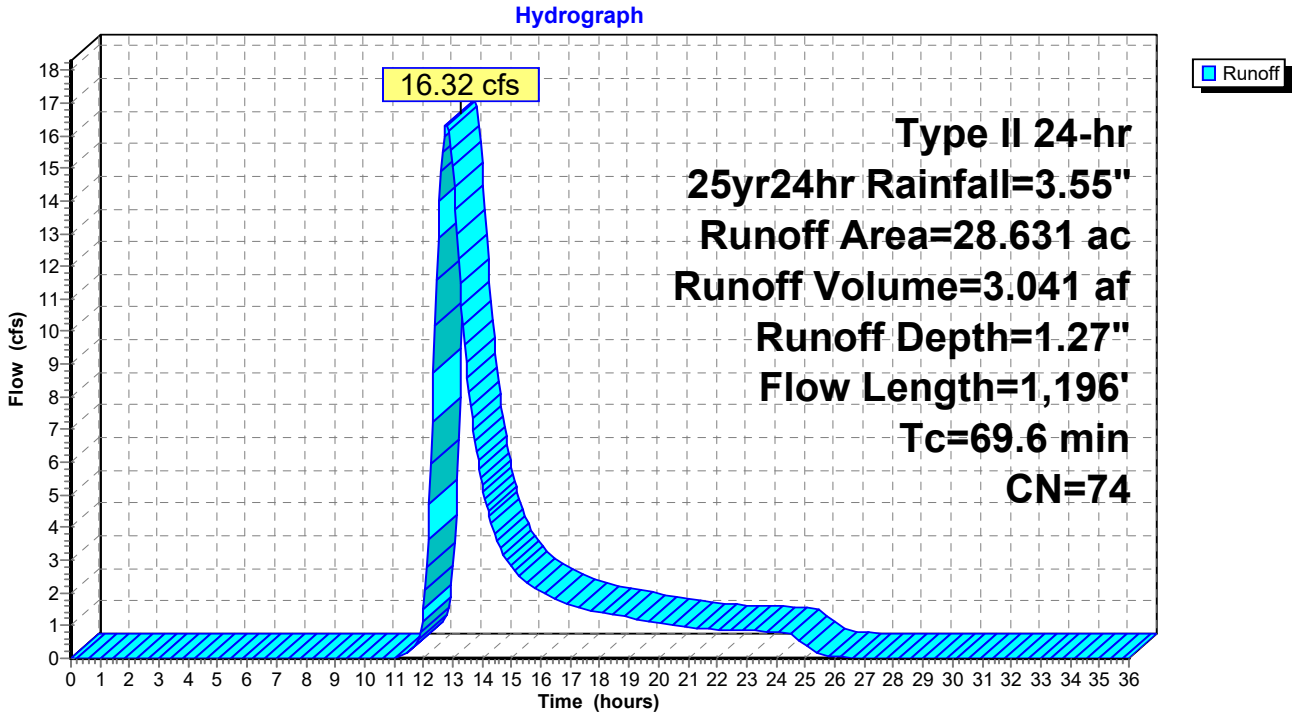
Runoff = 16.32 cfs @ 12.78 hrs, Volume= 3.041 af, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.197 | 61 | Pasture/Hay, HSG B |
| * | 0.628 | 80 | Pasture/Hay, HSG D |
| * | 0.342 | 61 | Pasture/Hay, HSG B |
| * | 16.198 | 71 | Cultivated Crops, HSG B |
| * | 7.258 | 81 | Cultivated Crops, HSG D |
| * | 4.008 | 71 | Cultivated Crops, HSG B |
| | 28.631 | 74 | Weighted Average |
| | 28.631 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.9 | 100 | 0.0040 | 0.15 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 43.1 | 205 | 0.0001 | 0.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.6 | 451 | 0.0222 | 1.34 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.0 | 440 | 0.0067 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 69.6 | 1,196 | Total | | | |

## Subcatchment 36: WS36



## Summary for Subcatchment 37: WS37

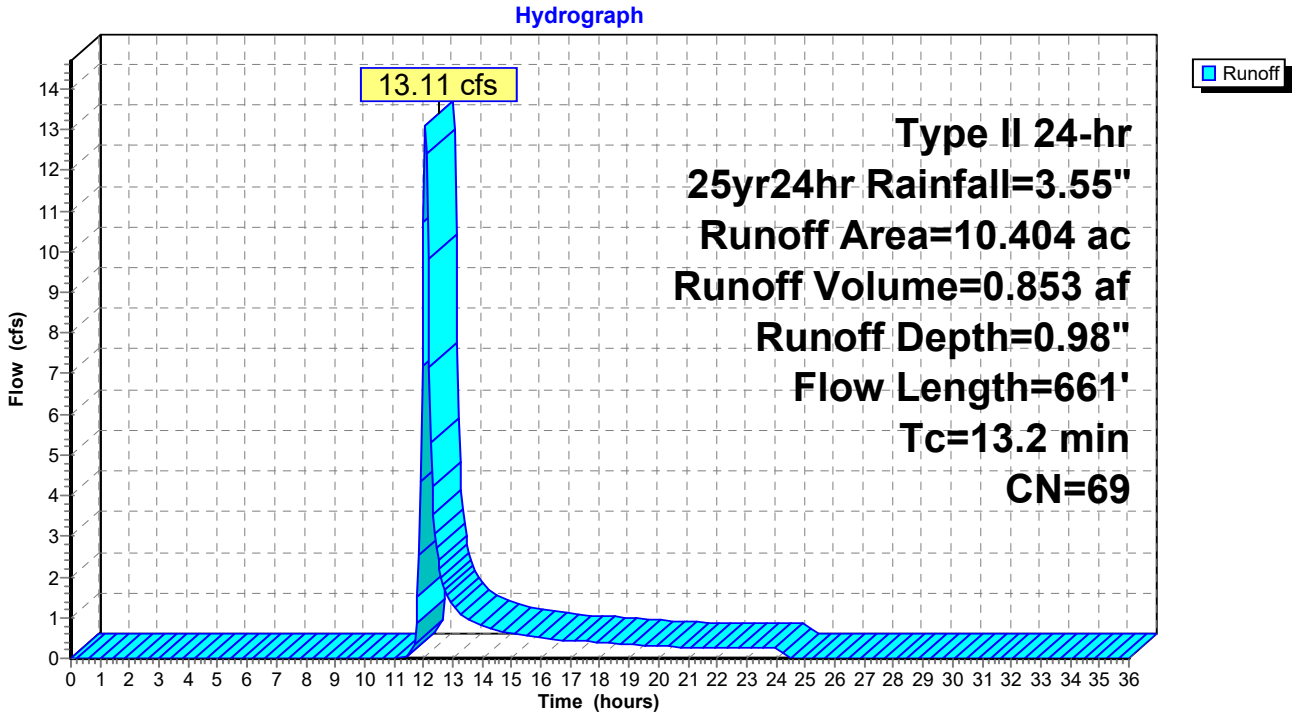
Runoff = 13.11 cfs @ 12.06 hrs, Volume= 0.853 af, Depth= 0.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.009 | 88 | Developed Low Intensity, HSG B |
| * | 0.007 | 68 | Developed Open Space, HSG B |
| * | 0.044 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 76 | Mixed Forest, HSG D |
| * | 0.127 | 60 | Mixed Forest, HSG B |
| * | 0.744 | 60 | Mixed Forest, HSG B |
| * | 0.996 | 55 | Deciduous Forest, HSG B |
| * | 0.079 | 88 | Developed Low Intensity, HSG B |
| * | 0.019 | 68 | Developed Open Space, HSG B |
| * | 0.341 | 81 | Cultivated Crops, HSG D |
| * | 5.999 | 71 | Cultivated Crops, HSG B |
| * | 2.036 | 71 | Cultivated Crops, HSG B |
| | 10.404 | 69 | Weighted Average |
| | 10.404 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.3 | 100 | 0.0240 | 0.31 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 70 | 0.0201 | 1.27 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 130 | 0.0263 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 139 | 0.0291 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 222 | 0.0108 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.2 | 661 | Total | | | |

## Subcatchment 37: WS37



## Summary for Subcatchment 38: WS38

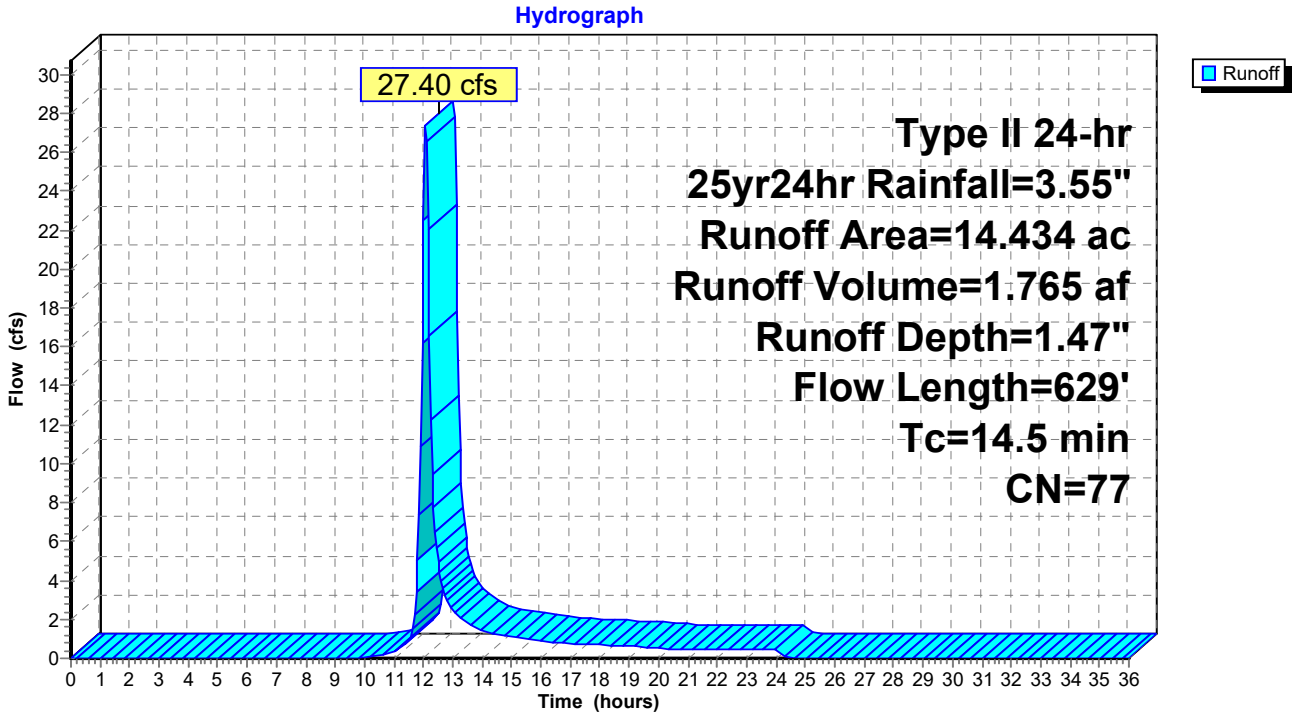
Runoff = 27.40 cfs @ 12.07 hrs, Volume= 1.765 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.049 | 88 | Developed Low Intensity, HSG B |
| * | 0.006 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.018 | 88 | Developed Low Intensity, HSG B |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 0.211 | 84 | Developed Open Space, HSG D |
| * | 0.082 | 93 | Developed Low Intensity, HSG D |
| * | 0.200 | 84 | Developed Open Space, HSG D |
| * | 0.118 | 93 | Developed Low Intensity, HSG D |
| * | 0.043 | 84 | Developed Open Space, HSG D |
| * | 0.046 | 68 | Developed Open Space, HSG B |
| * | 1.159 | 61 | Pasture/Hay, HSG B |
| * | 2.990 | 80 | Pasture/Hay, HSG D |
| * | 3.174 | 71 | Cultivated Crops, HSG B |
| * | 0.055 | 81 | Cultivated Crops, HSG D |
| * | 0.073 | 71 | Cultivated Crops, HSG B |
| * | 0.192 | 71 | Cultivated Crops, HSG B |
| * | 5.982 | 81 | Cultivated Crops, HSG D |
| | 14.434 | 77 | Weighted Average |
| | 14.434 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.9 | 100 | 0.0302 | 0.34 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.7 | 135 | 0.0086 | 0.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 220 | 0.0134 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 43 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 7 | 0.0067 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 124 | 0.0097 | 0.89 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.5 | 629 | Total | | | |

## Subcatchment 38: WS38



## Summary for Subcatchment 39: WS39

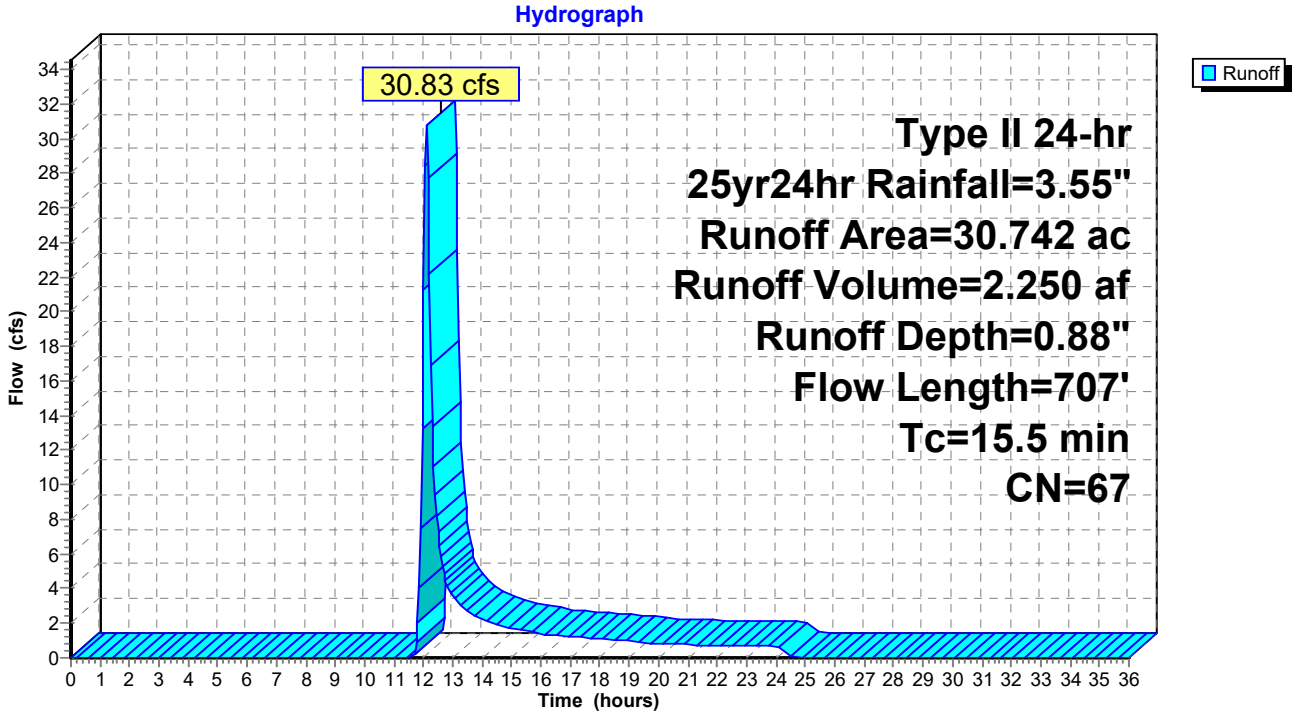
Runoff = 30.83 cfs @ 12.10 hrs, Volume= 2.250 af, Depth= 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.176 | 68 | Developed Open Space, HSG B |
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.359 | 68 | Developed Open Space, HSG B |
| * | 0.307 | 68 | Developed Open Space, HSG B |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 1.188 | 61 | Pasture/Hay, HSG B |
| * | 0.222 | 61 | Pasture/Hay, HSG B |
| * | 0.037 | 55 | Deciduous Forest, HSG B |
| * | 0.185 | 55 | Deciduous Forest, HSG B |
| * | 4.448 | 55 | Deciduous Forest, HSG B |
| * | 0.303 | 77 | Deciduous Forest, HSG D |
| * | 0.782 | 60 | Mixed Forest, HSG B |
| * | 0.775 | 60 | Mixed Forest, HSG B |
| * | 0.747 | 60 | Mixed Forest, HSG B |
| * | 0.142 | 76 | Mixed Forest, HSG D |
| * | 2.604 | 71 | Cultivated Crops, HSG B |
| * | 0.038 | 81 | Cultivated Crops, HSG D |
| * | 2.284 | 71 | Cultivated Crops, HSG B |
| * | 0.099 | 71 | Cultivated Crops, HSG B |
| * | 0.023 | 67 | Shrub/Scrub, HSG B |
| * | 2.327 | 55 | Deciduous Forest, HSG B |
| * | 1.422 | 77 | Deciduous Forest, HSG D |
| * | 0.011 | 55 | Deciduous Forest, HSG B |
| * | 1.069 | 61 | Pasture/Hay, HSG B |
| * | 0.304 | 80 | Pasture/Hay, HSG D |
| * | 8.535 | 71 | Cultivated Crops, HSG B |
| * | 2.131 | 81 | Cultivated Crops, HSG D |
| | 30.742 | 67 | Weighted Average |
| | 30.742 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.4 | 89 | 0.0596 | 0.44 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.8 | 11 | 0.0324 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.7 | 63 | 0.0258 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 168 | 0.0255 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 137 | 0.0170 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 144 | 0.0051 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 95 | 0.0146 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 15.5 | 707 | Total | | | |

## Subcatchment 39: WS39



## Summary for Subcatchment 40: WS40

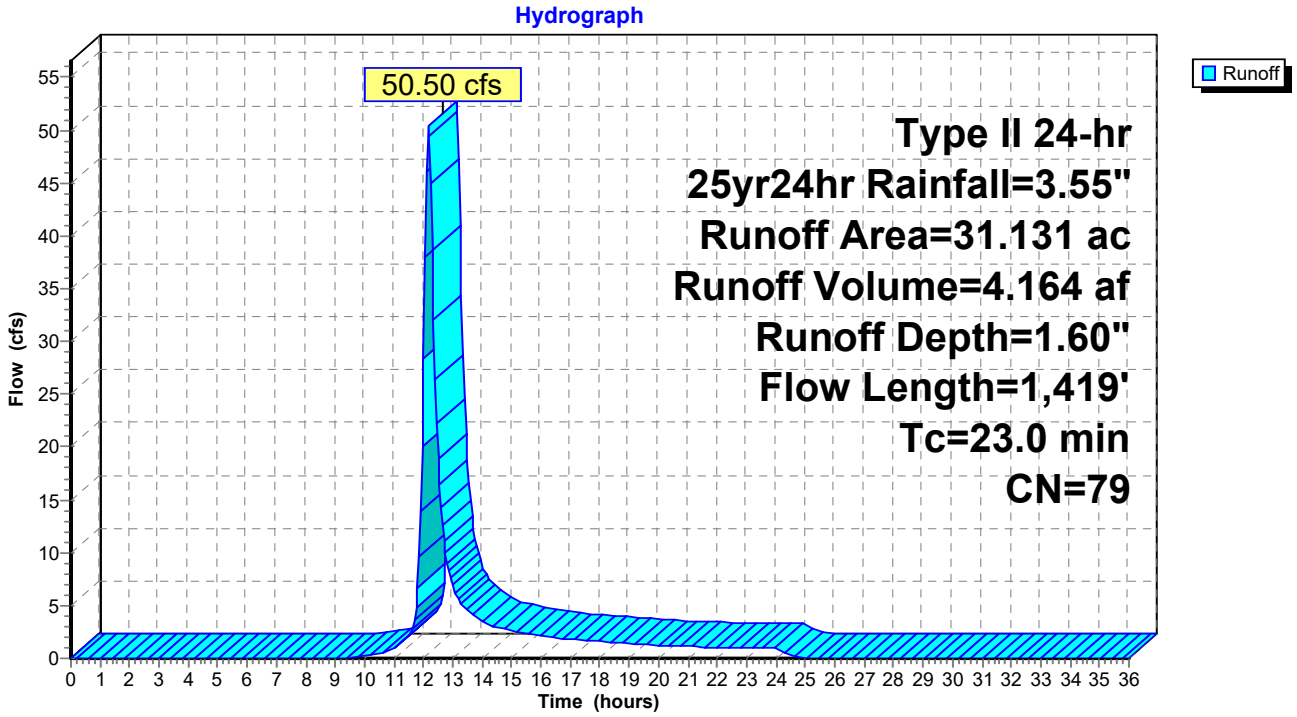
Runoff = 50.50 cfs @ 12.17 hrs, Volume= 4.164 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 81 | Cultivated Crops, HSG D |
| * | 0.123 | 71 | Cultivated Crops, HSG B |
| * | 0.309 | 67 | Shrub/Scrub, HSG B |
| * | 0.780 | 80 | Shrub/Scrub, HSG D |
| * | 0.156 | 55 | Deciduous Forest, HSG B |
| * | 0.140 | 77 | Deciduous Forest, HSG D |
| * | 7.426 | 77 | Deciduous Forest, HSG D |
| * | 0.190 | 77 | Deciduous Forest, HSG D |
| * | 0.082 | 61 | Pasture/Hay, HSG B |
| * | 2.718 | 80 | Pasture/Hay, HSG D |
| * | 0.518 | 80 | Pasture/Hay, HSG D |
| * | 0.302 | 71 | Cultivated Crops, HSG B |
| * | 0.057 | 62 | Cultivated Crops, HSG A |
| * | 3.811 | 81 | Cultivated Crops, HSG D |
| * | 14.460 | 81 | Cultivated Crops, HSG D |
| | 31.131 | 79 | Weighted Average |
| | 31.131 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.5 | 100 | 0.0222 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.1 | 79 | 0.0165 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 145 | 0.0411 | 1.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 129 | 0.0276 | 1.50 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.6 | 57 | 0.0264 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.7 | 300 | 0.0138 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.5 | 294 | 0.0148 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 219 | 0.0300 | 1.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 13 | 0.0151 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 83 | 0.0197 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.0 | 1,419 | Total | | | |

## Subcatchment 40: WS40



## Summary for Subcatchment 41: WS41

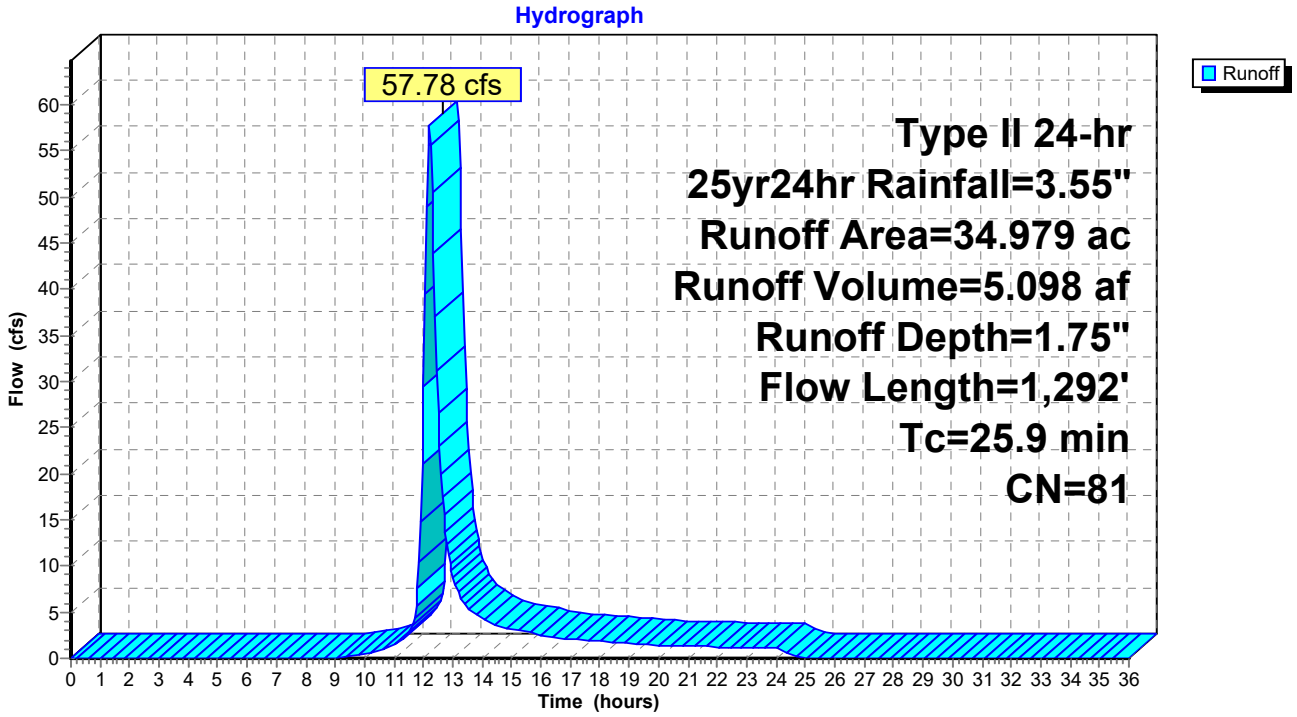
Runoff = 57.78 cfs @ 12.20 hrs, Volume= 5.098 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.146 | 68 | Developed Open Space, HSG B |
| * | 0.081 | 89 | Developed Medium Intensity, HSG B |
| * | 0.083 | 88 | Developed Low Intensity, HSG B |
| * | 0.299 | 93 | Developed Low Intensity, HSG D |
| * | 1.411 | 80 | Pasture/Hay, HSG D |
| * | 3.052 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 1.053 | 84 | Developed Open Space, HSG D |
| * | 0.146 | 93 | Developed Low Intensity, HSG D |
| * | 1.103 | 76 | Mixed Forest, HSG D |
| * | 0.212 | 80 | Pasture/Hay, HSG D |
| * | 0.566 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 80 | Pasture/Hay, HSG D |
| * | 0.021 | 76 | Mixed Forest, HSG D |
| * | 0.921 | 84 | Developed Open Space, HSG D |
| * | 1.187 | 71 | Cultivated Crops, HSG B |
| * | 24.567 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 80 | Pasture/Hay, HSG D |
| * | 0.113 | 81 | Cultivated Crops, HSG D |
| | 34.979 | 81 | Weighted Average |
| | 34.979 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.1 | 100 | 0.0466 | 0.41 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.6 | 63 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 330 | 0.0152 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.7 | 319 | 0.0157 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.5 | 480 | 0.0071 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.9 | 1,292 | Total | | | |

## Subcatchment 41: WS41



## Summary for Subcatchment 42: WS42

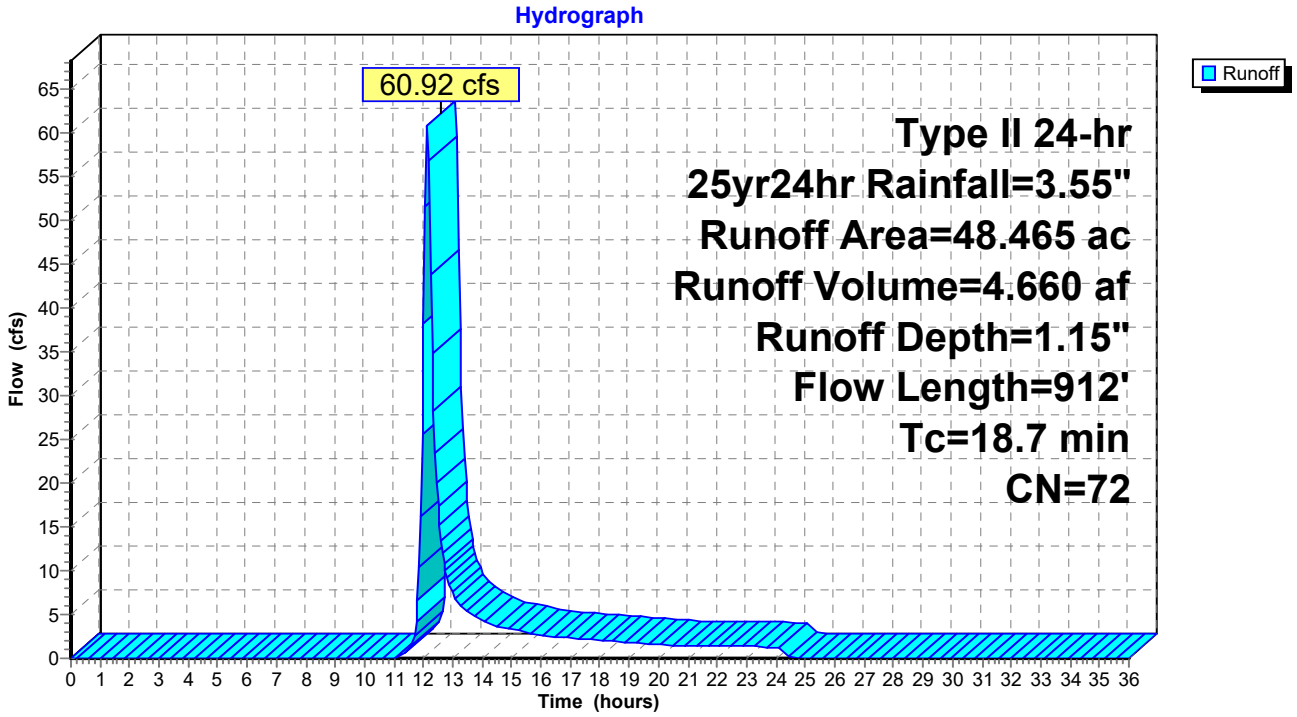
Runoff = 60.92 cfs @ 12.13 hrs, Volume= 4.660 af, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.091 | 61 | Pasture/Hay, HSG B |
| * | 0.254 | 61 | Pasture/Hay, HSG B |
| * | 0.024 | 67 | Shrub/Scrub, HSG B |
| * | 1.392 | 55 | Deciduous Forest, HSG B |
| * | 7.125 | 81 | Cultivated Crops, HSG D |
| * | 0.957 | 81 | Cultivated Crops, HSG D |
| * | 0.014 | 71 | Cultivated Crops, HSG B |
| * | 0.064 | 81 | Cultivated Crops, HSG D |
| * | 38.091 | 71 | Cultivated Crops, HSG B |
| * | 0.225 | 86 | Woody Wetlands, HSG D |
| * | 0.006 | 86 | Woody Wetlands, HSG D |
| | 48.465 | 72 | Weighted Average |
| | 48.465 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.1 | 100 | 0.0117 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 11.6 | 812 | 0.0168 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.7 | 912 | Total | | | |

## Subcatchment 42: WS42



## Summary for Subcatchment 43: WS43

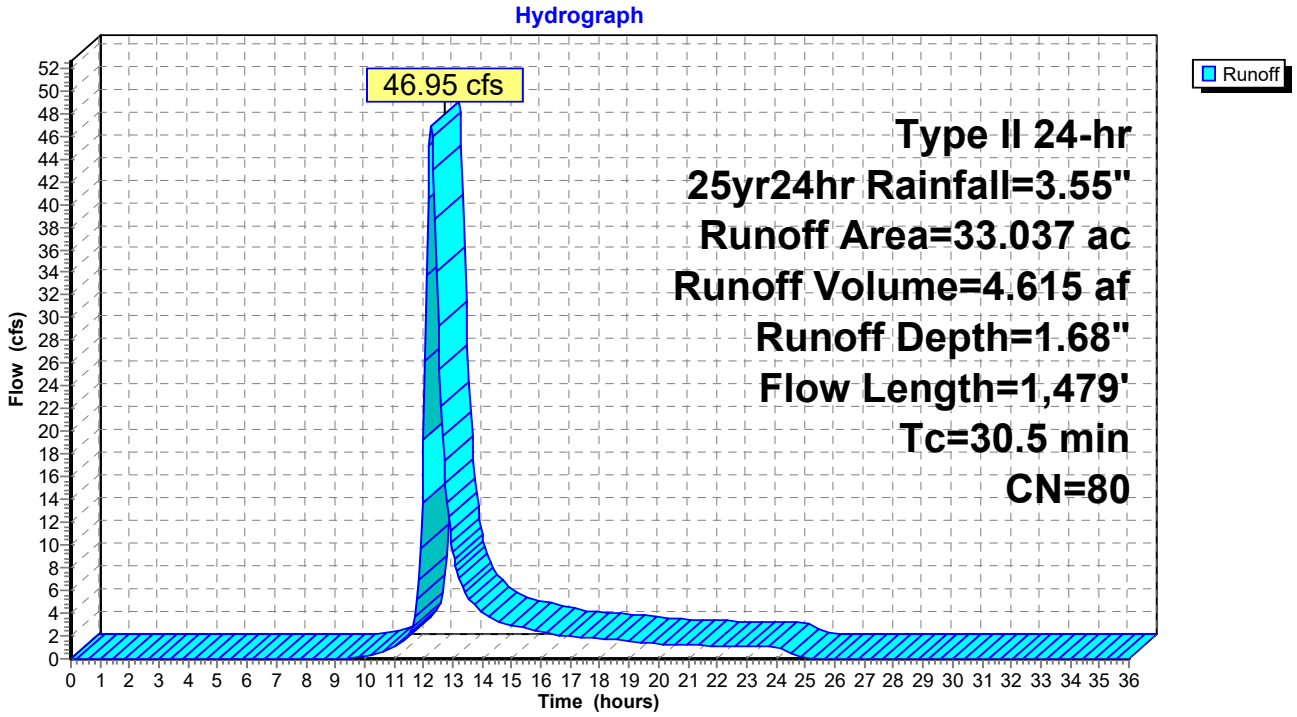
Runoff = 46.95 cfs @ 12.26 hrs, Volume= 4.615 af, Depth= 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 77 | Deciduous Forest, HSG D |
| * | 0.032 | 30 | Deciduous Forest, HSG A |
| * | 0.169 | 76 | Mixed Forest, HSG D |
| * | 0.006 | 36 | Mixed Forest, HSG A |
| * | 0.081 | 74 | Evergreen Forest, HSG D |
| * | 0.103 | 76 | Mixed Forest, HSG D |
| * | 1.268 | 76 | Mixed Forest, HSG D |
| * | 0.155 | 76 | Mixed Forest, HSG D |
| * | 0.014 | 60 | Mixed Forest, HSG B |
| * | 0.222 | 76 | Mixed Forest, HSG D |
| * | 0.370 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.029 | 60 | Mixed Forest, HSG B |
| * | 3.432 | 77 | Deciduous Forest, HSG D |
| * | 0.890 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.202 | 93 | Developed Low Intensity, HSG D |
| * | 0.021 | 88 | Developed Low Intensity, HSG B |
| * | 0.183 | 88 | Developed Low Intensity, HSG B |
| * | 0.868 | 84 | Developed Open Space, HSG D |
| * | 0.206 | 84 | Developed Open Space, HSG D |
| * | 0.307 | 93 | Developed Low Intensity, HSG D |
| * | 0.012 | 80 | Pasture/Hay, HSG D |
| * | 0.023 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.035 | 80 | Pasture/Hay, HSG D |
| * | 0.013 | 93 | Developed Low Intensity, HSG D |
| * | 22.349 | 81 | Cultivated Crops, HSG D |
| * | 1.982 | 71 | Cultivated Crops, HSG B |
| * | 0.007 | 62 | Cultivated Crops, HSG A |
| | 33.037 | 80 | Weighted Average |
| | 33.037 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.5 | 100 | 0.0221 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.5 | 40 | 0.0243 | 1.40 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 254 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.2 | 183 | 0.0244 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 348 | 0.0164 | 1.15 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 12.6 | 439 | 0.0041 | 0.58 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 18 | 0.0059 | 1.56 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 33 | 0.0039 | 1.27 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 65 | 0.0069 | 1.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 30.5 | 1,479 | Total | | | |

## Subcatchment 43: WS43



## Summary for Subcatchment 44: WS44

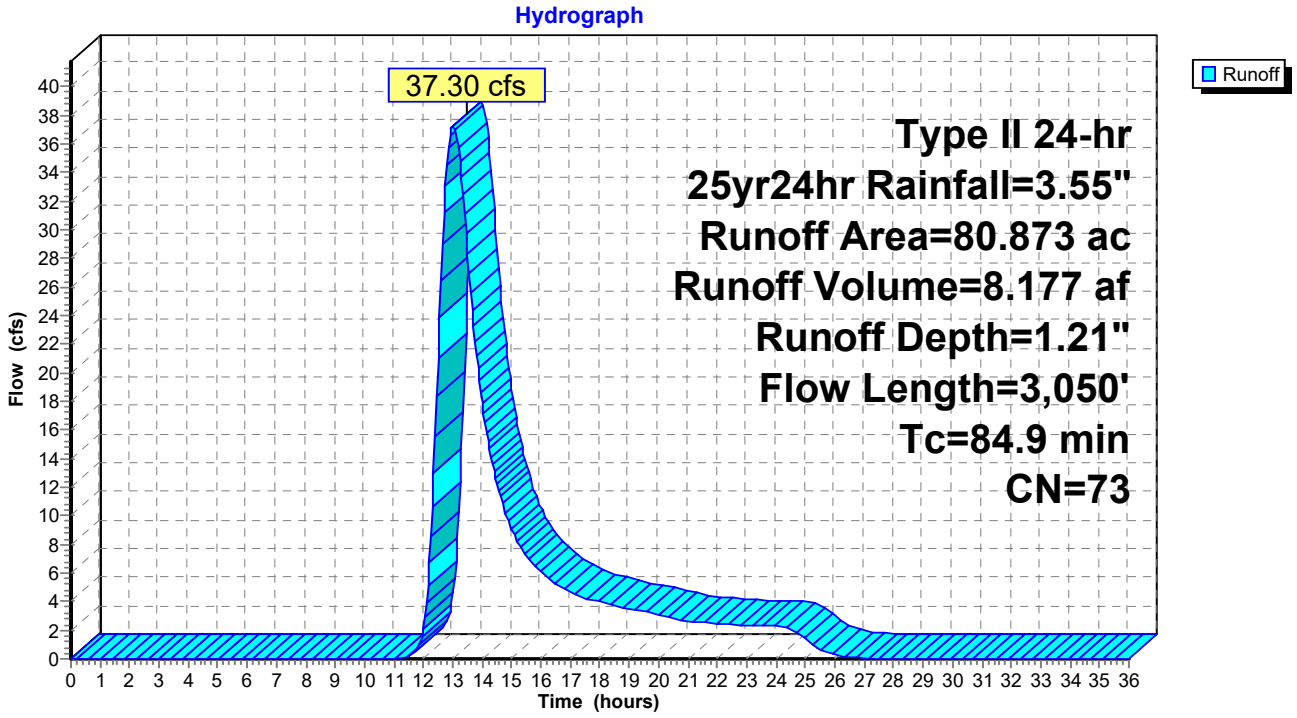
Runoff = 37.30 cfs @ 13.01 hrs, Volume= 8.177 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 0.222 | 39 | Pasture/Hay, HSG A |
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 1.019 | 30 | Deciduous Forest, HSG A |
| * | 0.780 | 30 | Deciduous Forest, HSG A |
| * | 0.046 | 81 | Developed Low Intensity, HSG A |
| * | 0.445 | 30 | Deciduous Forest, HSG A |
| * | 1.557 | 80 | Pasture/Hay, HSG D |
| * | 0.045 | 76 | Mixed Forest, HSG D |
| * | 0.002 | 36 | Mixed Forest, HSG A |
| * | 1.592 | 74 | Evergreen Forest, HSG D |
| * | 0.328 | 30 | Evergreen Forest, HSG A |
| * | 0.720 | 30 | Deciduous Forest, HSG A |
| * | 5.226 | 77 | Deciduous Forest, HSG D |
| * | 6.461 | 77 | Deciduous Forest, HSG D |
| * | 0.057 | 30 | Deciduous Forest, HSG A |
| * | 2.735 | 76 | Mixed Forest, HSG D |
| * | 0.243 | 93 | Developed Low Intensity, HSG D |
| * | 0.965 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.137 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 94 | Developed Medium Intensity, HSG D |
| * | 0.743 | 93 | Developed Low Intensity, HSG D |
| * | 0.888 | 93 | Developed Low Intensity, HSG D |
| * | 0.014 | 93 | Developed Low Intensity, HSG D |
| * | 0.401 | 62 | Cultivated Crops, HSG A |
| * | 17.391 | 62 | Cultivated Crops, HSG A |
| * | 25.630 | 81 | Cultivated Crops, HSG D |
| * | 11.114 | 81 | Cultivated Crops, HSG D |
| * | 0.778 | 62 | Cultivated Crops, HSG A |
| | 80.873 | 73 | Weighted Average |
| | 80.873 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.7 | 100 | 0.0611 | 0.45 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 41 | 0.0503 | 2.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 216 | 0.0304 | 1.57 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.1 | 517 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 186 | 0.0144 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 32.0 | 677 | 0.0050 | 0.35 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.4 | 143 | 0.0118 | 0.98 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 33.2 | 1,171 | 0.0043 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 84.9 | 3,050 | Total | | | |

## Subcatchment 44: WS44



## Summary for Subcatchment 45: WS45

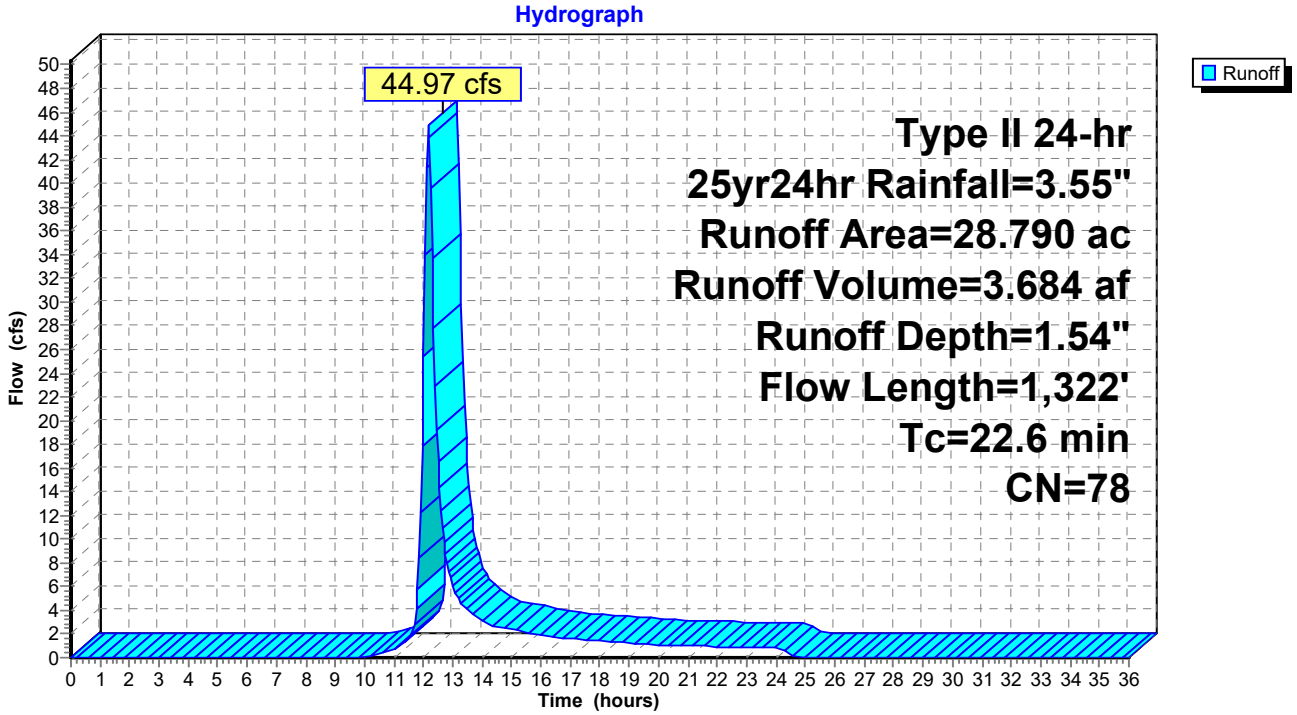
Runoff = 44.97 cfs @ 12.16 hrs, Volume= 3.684 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.658 | 77 | Deciduous Forest, HSG D |
| * | 5.025 | 62 | Cultivated Crops, HSG A |
| * | 23.107 | 81 | Cultivated Crops, HSG D |
| | 28.790 | 78 | Weighted Average |
| | 28.790 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.1 | 100 | 0.0266 | 0.33 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.8 | 287 | 0.0198 | 1.27 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.7 | 935 | 0.0160 | 1.14 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 22.6 | 1,322 | Total | | | |

## Subcatchment 45: WS45



## Summary for Subcatchment 46: WS46

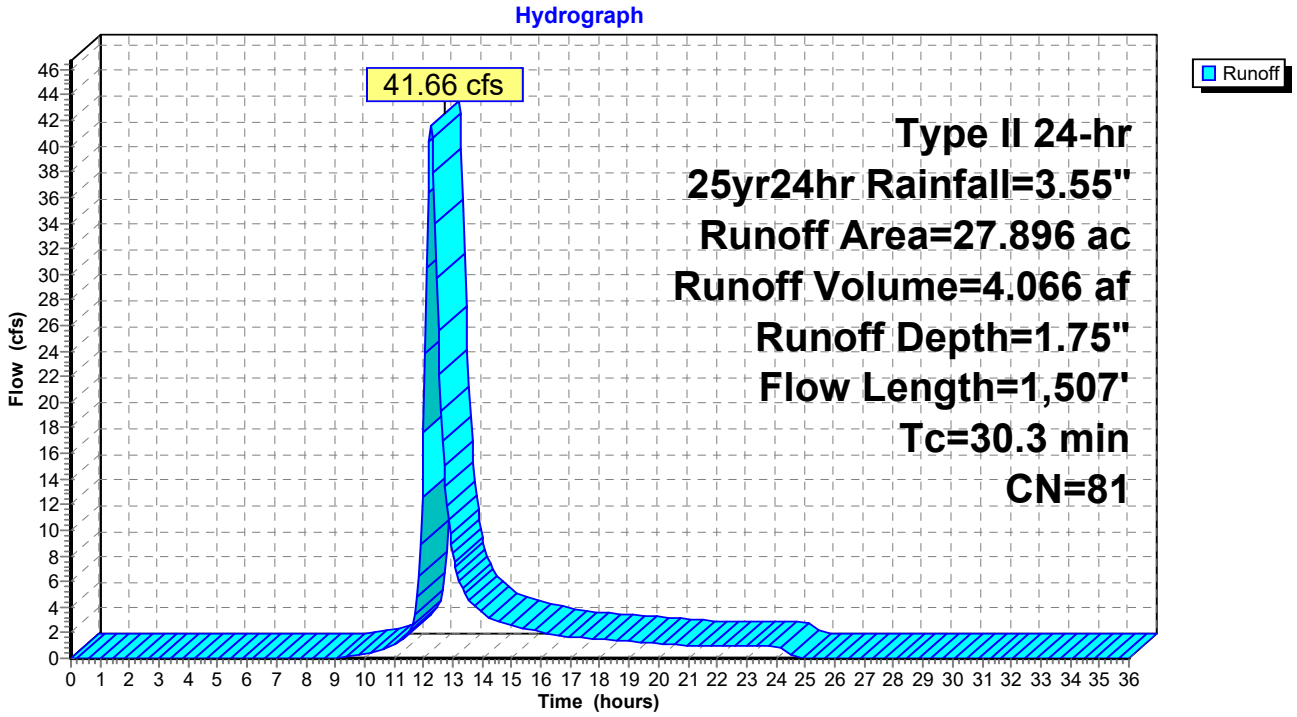
Runoff = 41.66 cfs @ 12.25 hrs, Volume= 4.066 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.444 | 80 | Pasture/Hay, HSG D |
| * | 6.847 | 81 | Cultivated Crops, HSG D |
| * | 19.604 | 81 | Cultivated Crops, HSG D |
| | 27.896 | 81 | Weighted Average |
| | 27.896 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | 100 | 0.0181 | 0.28 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.2 | 91 | 0.0206 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.8 | 223 | 0.0037 | 0.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 383 | 0.0344 | 1.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.1 | 190 | 0.0276 | 1.50 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.6 | 218 | 0.0123 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.8 | 81 | 0.0122 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.0 | 220 | 0.0068 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 30.3 | 1,507 | Total | | | |

## Subcatchment 46: WS46



## Summary for Subcatchment 47: WS47

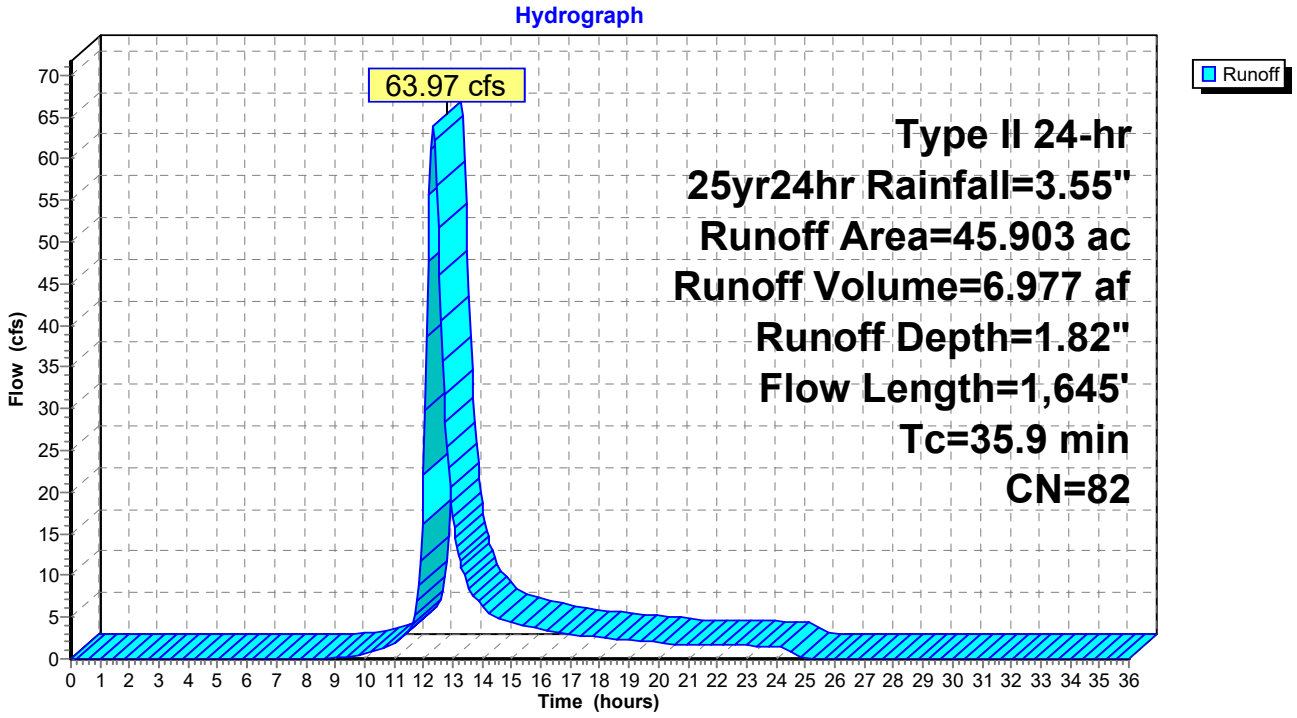
Runoff = 63.97 cfs @ 12.32 hrs, Volume= 6.977 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.007 | 80 | Pasture/Hay, HSG D |
| * | 0.146 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.182 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.424 | 93 | Developed Low Intensity, HSG D |
| * | 0.086 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 0.015 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.119 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.030 | 80 | Pasture/Hay, HSG D |
| * | 0.037 | 80 | Pasture/Hay, HSG D |
| * | 0.039 | 86 | Woody Wetlands, HSG D |
| * | 0.118 | 86 | Woody Wetlands, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.007 | 93 | Developed Low Intensity, HSG D |
| * | 0.438 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 86 | Woody Wetlands, HSG D |
| * | 0.185 | 94 | Developed Medium Intensity, HSG D |
| * | 0.037 | 94 | Developed Medium Intensity, HSG D |
| * | 0.401 | 84 | Developed Open Space, HSG D |
| * | 0.269 | 93 | Developed Low Intensity, HSG D |
| * | 0.259 | 84 | Developed Open Space, HSG D |
| * | 0.581 | 93 | Developed Low Intensity, HSG D |
| * | 0.452 | 81 | Cultivated Crops, HSG D |
| * | 24.057 | 81 | Cultivated Crops, HSG D |
| * | 13.849 | 81 | Cultivated Crops, HSG D |
| * | 3.045 | 81 | Cultivated Crops, HSG D |
| | 45.903 | 82 | Weighted Average |
| | 45.903 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.2 | 100 | 0.0025 | 0.13 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.4 | 145 | 0.0396 | 1.79 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.6 | 264 | 0.0189 | 1.24 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 109 | 0.0228 | 1.36 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 293 | 0.0195 | 1.26 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.4 | 372 | 0.0161 | 1.14 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.4 | 320 | 0.0086 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 42 | 0.0127 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.9 | 1,645 | Total | | | |

## Subcatchment 47: WS47



## Summary for Subcatchment 48: WS48

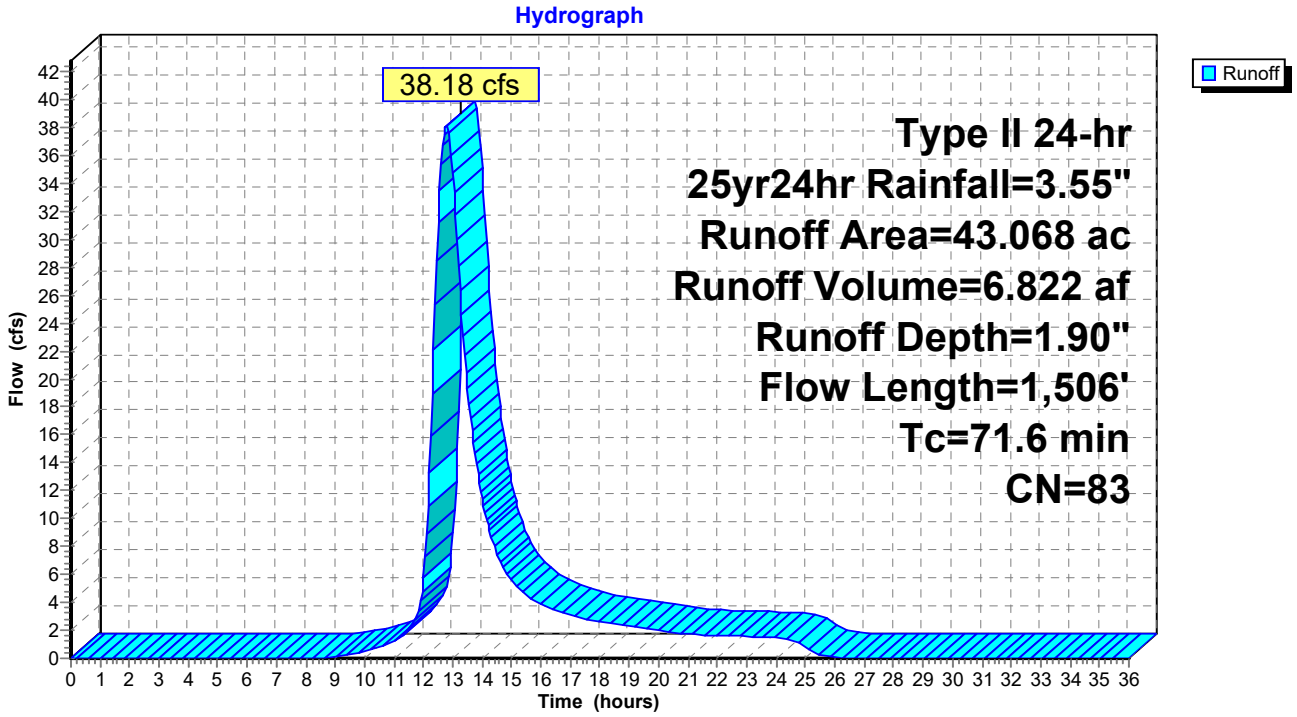
Runoff = 38.18 cfs @ 12.79 hrs, Volume= 6.822 af, Depth= 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.059 | 86 | Woody Wetlands, HSG D |
| * | 0.481 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.445 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.923 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.189 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.297 | 93 | Developed Low Intensity, HSG D |
| * | 0.770 | 93 | Developed Low Intensity, HSG D |
| * | 0.778 | 93 | Developed Low Intensity, HSG D |
| * | 0.144 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 11.070 | 86 | Woody Wetlands, HSG D |
| * | 0.082 | 86 | Woody Wetlands, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 3.927 | 81 | Cultivated Crops, HSG D |
| * | 3.192 | 81 | Cultivated Crops, HSG D |
| * | 19.673 | 81 | Cultivated Crops, HSG D |
| | 43.068 | 83 | Weighted Average |
| | 43.068 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.6 | 63 | 0.0685 | 1.68 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 3.2 | 37 | 0.0120 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.9 | 106 | 0.0110 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.2 | 283 | 0.0039 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.1 | 430 | 0.0056 | 0.38 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 31.6 | 588 | 0.0038 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 71.6 | 1,506 | Total | | | |

## Subcatchment 48: WS48



## Summary for Subcatchment 49: WS49

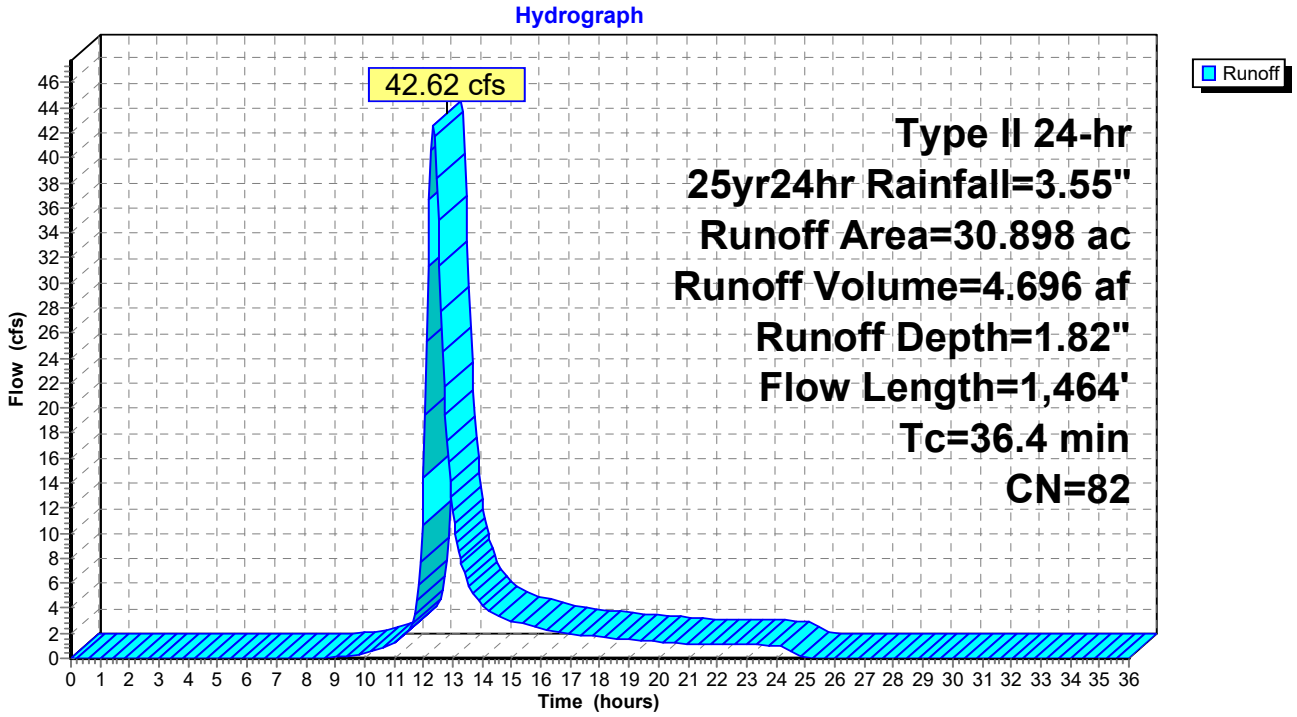
Runoff = 42.62 cfs @ 12.33 hrs, Volume= 4.696 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.667 | 76 | Mixed Forest, HSG D |
| * | 0.784 | 93 | Developed Low Intensity, HSG D |
| * | 0.080 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 76 | Mixed Forest, HSG D |
| * | 0.222 | 77 | Deciduous Forest, HSG D |
| * | 0.317 | 77 | Deciduous Forest, HSG D |
| * | 1.239 | 77 | Deciduous Forest, HSG D |
| * | 0.342 | 94 | Developed Medium Intensity, HSG D |
| * | 0.103 | 94 | Developed Medium Intensity, HSG D |
| * | 0.005 | 84 | Developed Open Space, HSG D |
| * | 0.011 | 84 | Developed Open Space, HSG D |
| * | 0.333 | 93 | Developed Low Intensity, HSG D |
| * | 0.812 | 93 | Developed Low Intensity, HSG D |
| * | 0.328 | 93 | Developed Low Intensity, HSG D |
| * | 1.522 | 81 | Cultivated Crops, HSG D |
| * | 11.291 | 81 | Cultivated Crops, HSG D |
| * | 12.617 | 81 | Cultivated Crops, HSG D |
| | 30.898 | 82 | Weighted Average |
| | 30.898 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.0 | 100 | 0.0066 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 28 | 0.0239 | 1.39 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 311 | 0.0214 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 420 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.9 | 605 | 0.0065 | 0.73 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 36.4 | 1,464 | Total | | | |

## Subcatchment 49: WS49



## Summary for Subcatchment 50: WS50

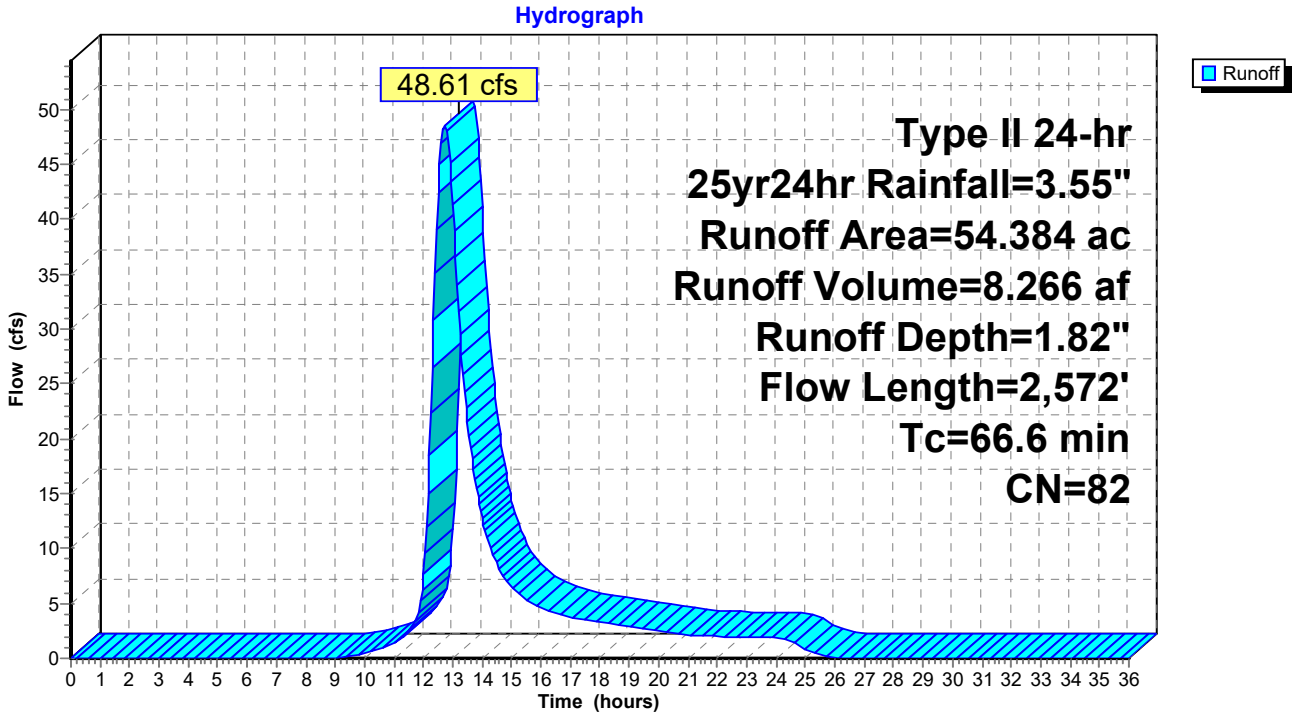
Runoff = 48.61 cfs @ 12.72 hrs, Volume= 8.266 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.217 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.211 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.633 | 93 | Developed Low Intensity, HSG D |
| * | 0.271 | 93 | Developed Low Intensity, HSG D |
| * | 0.107 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.013 | 94 | Developed Medium Intensity, HSG D |
| * | 0.732 | 93 | Developed Low Intensity, HSG D |
| * | 0.279 | 93 | Developed Low Intensity, HSG D |
| * | 0.089 | 84 | Developed Open Space, HSG D |
| * | 0.028 | 93 | Developed Low Intensity, HSG D |
| * | 18.509 | 81 | Cultivated Crops, HSG D |
| * | 25.505 | 81 | Cultivated Crops, HSG D |
| * | 6.901 | 81 | Cultivated Crops, HSG D |
| | 54.384 | 82 | Weighted Average |
| | 54.384 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.3 | 100 | 0.0060 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.8 | 233 | 0.0082 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.4 | 518 | 0.0085 | 0.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.7 | 499 | 0.0114 | 0.96 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 23.1 | 523 | 0.0018 | 0.38 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.3 | 699 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 66.6 | 2,572 | Total | | | |

## Subcatchment 50: WS50



## Summary for Subcatchment 51: WS51

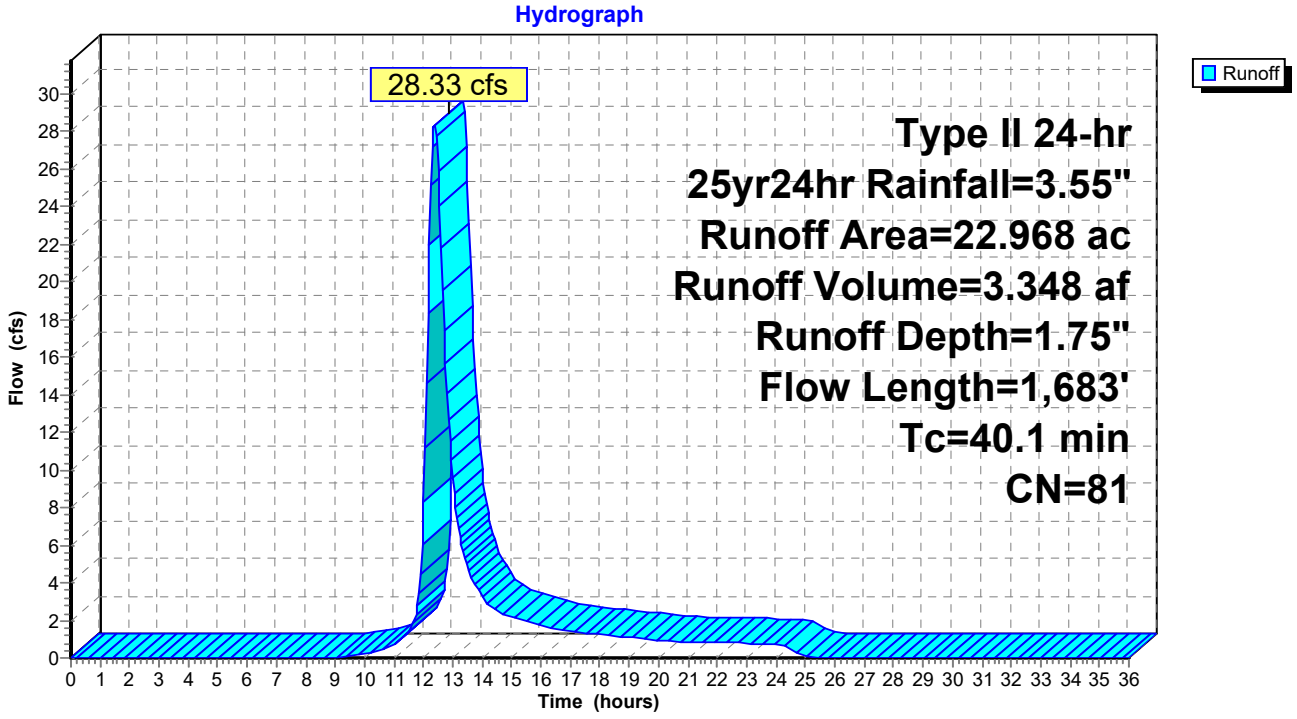
Runoff = 28.33 cfs @ 12.37 hrs, Volume= 3.348 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.232 | 81 | Cultivated Crops, HSG D |
| * | 21.736 | 81 | Cultivated Crops, HSG D |
| | 22.968 | 81 | Weighted Average |
| | 22.968 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.8 | 100 | 0.0092 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 9.9 | 590 | 0.0122 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.4 | 686 | 0.0090 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.0 | 307 | 0.0040 | 0.57 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 40.1 | 1,683 | Total | | | |

## Subcatchment 51: WS51



## Summary for Subcatchment 52: WS52

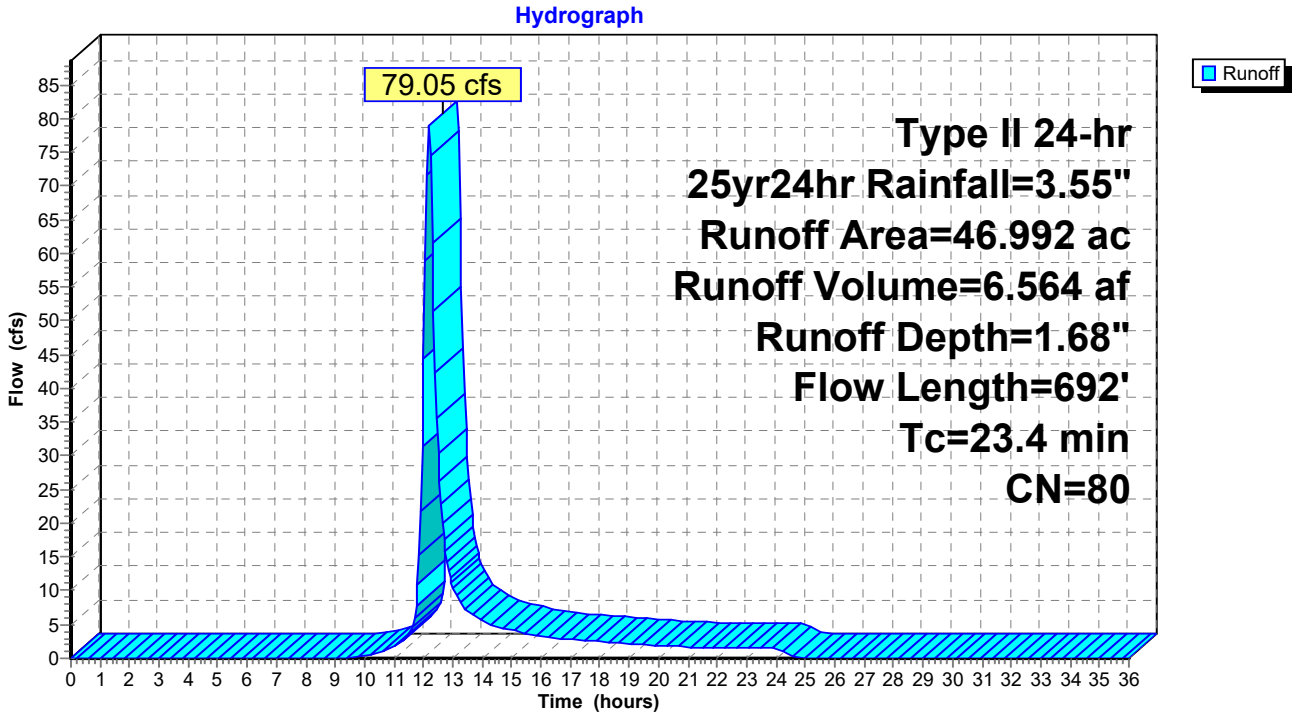
Runoff = 79.05 cfs @ 12.17 hrs, Volume= 6.564 af, Depth= 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.777 | 86 | Woody Wetlands, HSG D |
| * | 0.198 | 80 | Pasture/Hay, HSG D |
| * | 0.025 | 80 | Pasture/Hay, HSG D |
| * | 2.475 | 77 | Deciduous Forest, HSG D |
| * | 1.817 | 77 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Pasture/Hay, HSG D |
| * | 0.155 | 80 | Pasture/Hay, HSG D |
| * | 1.958 | 77 | Deciduous Forest, HSG D |
| * | 0.570 | 77 | Deciduous Forest, HSG D |
| * | 0.490 | 77 | Deciduous Forest, HSG D |
| * | 0.003 | 61 | Pasture/Hay, HSG B |
| * | 2.802 | 80 | Pasture/Hay, HSG D |
| * | 0.601 | 80 | Pasture/Hay, HSG D |
| * | 3.187 | 71 | Cultivated Crops, HSG B |
| * | 20.129 | 81 | Cultivated Crops, HSG D |
| * | 10.916 | 81 | Cultivated Crops, HSG D |
| * | 0.822 | 81 | Cultivated Crops, HSG D |
| | 46.992 | 80 | Weighted Average |
| | 46.992 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.3 | 77 | 0.0096 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.2 | 23 | 0.0144 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.4 | 138 | 0.0185 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.2 | 249 | 0.0092 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.3 | 206 | 0.0132 | 0.80 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.4 | 692 | Total | | | |

## Subcatchment 52: WS52



## Summary for Subcatchment 53: WS53

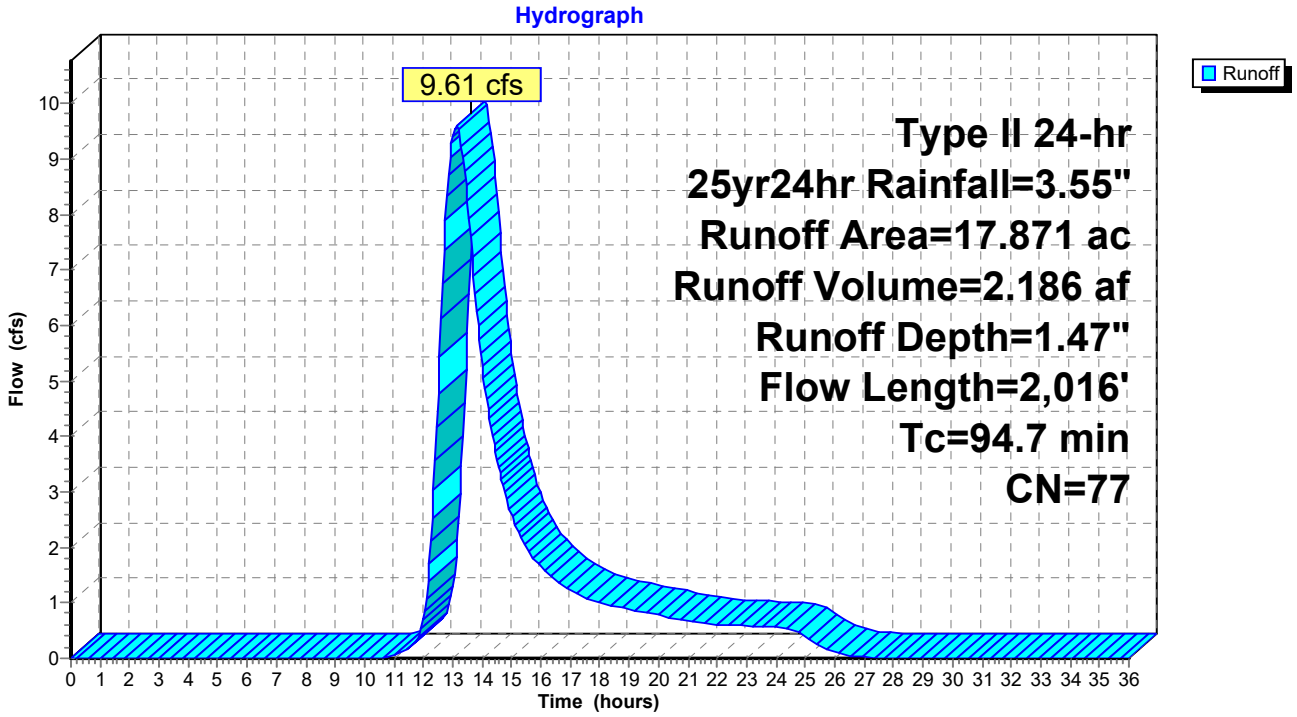
Runoff = 9.61 cfs @ 13.14 hrs, Volume= 2.186 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.579 | 77 | Deciduous Forest, HSG D |
| * | 0.013 | 77 | Deciduous Forest, HSG D |
| * | 0.538 | 60 | Mixed Forest, HSG B |
| * | 0.164 | 76 | Mixed Forest, HSG D |
| * | 5.012 | 71 | Cultivated Crops, HSG B |
| * | 11.565 | 81 | Cultivated Crops, HSG D |
| | 17.871 | 77 | Weighted Average |
| | 17.871 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 46.4 | 100 | 0.0048 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.5 | 83 | 0.0337 | 0.92 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 34 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.5 | 289 | 0.0142 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.3 | 470 | 0.0071 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.8 | 245 | 0.0026 | 0.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.5 | 298 | 0.0034 | 0.52 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.2 | 497 | 0.0048 | 0.63 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 94.7 | 2,016 | Total | | | |

## Subcatchment 53: WS53



## Summary for Subcatchment 54: WS54

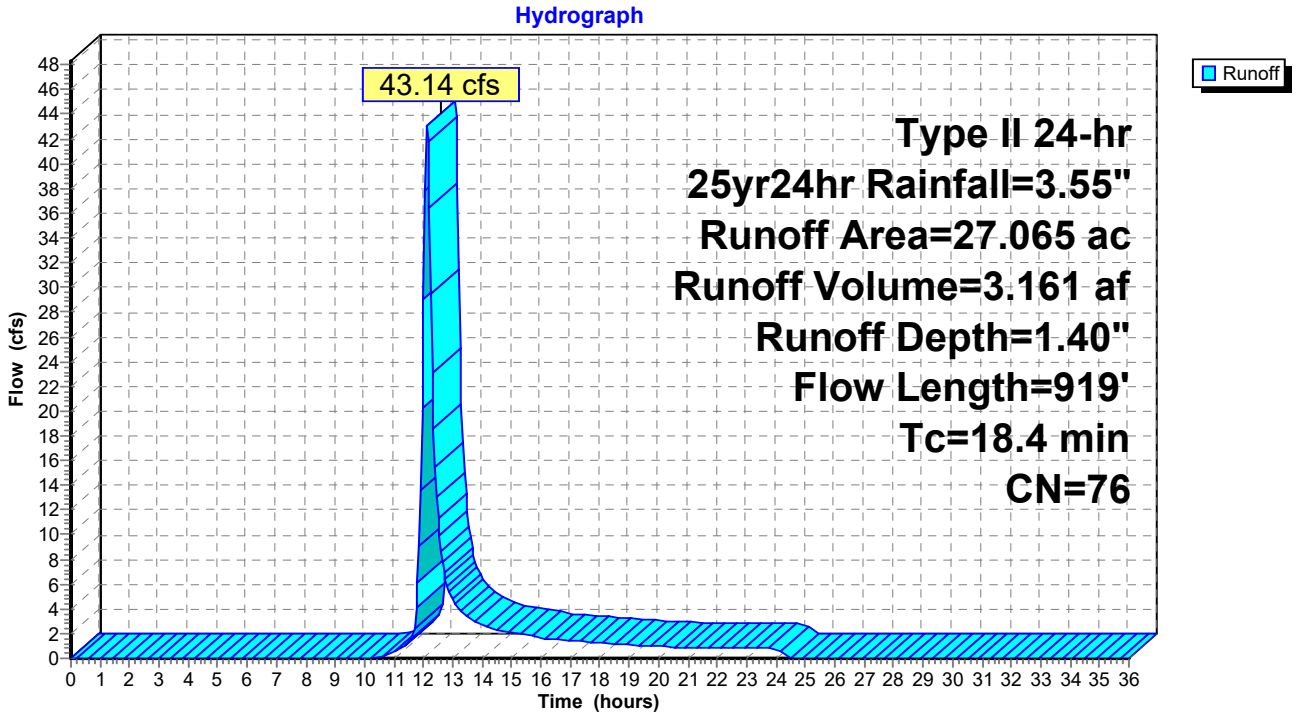
Runoff = 43.14 cfs @ 12.12 hrs, Volume= 3.161 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.008 | 77 | Deciduous Forest, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.417 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.680 | 61 | Pasture/Hay, HSG B |
| * | 2.775 | 55 | Deciduous Forest, HSG B |
| * | 1.058 | 77 | Deciduous Forest, HSG D |
| * | 0.059 | 93 | Developed Low Intensity, HSG D |
| * | 3.668 | 81 | Cultivated Crops, HSG D |
| * | 4.588 | 71 | Cultivated Crops, HSG B |
| * | 13.120 | 81 | Cultivated Crops, HSG D |
| | 27.065 | 76 | Weighted Average |
| | 27.065 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.8 | 100 | 0.0195 | 0.29 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.0 | 312 | 0.0208 | 1.30 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.6 | 507 | 0.0120 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.4 | 919 | Total | | | |

## Subcatchment 54: WS54



## Summary for Subcatchment 55: WS55

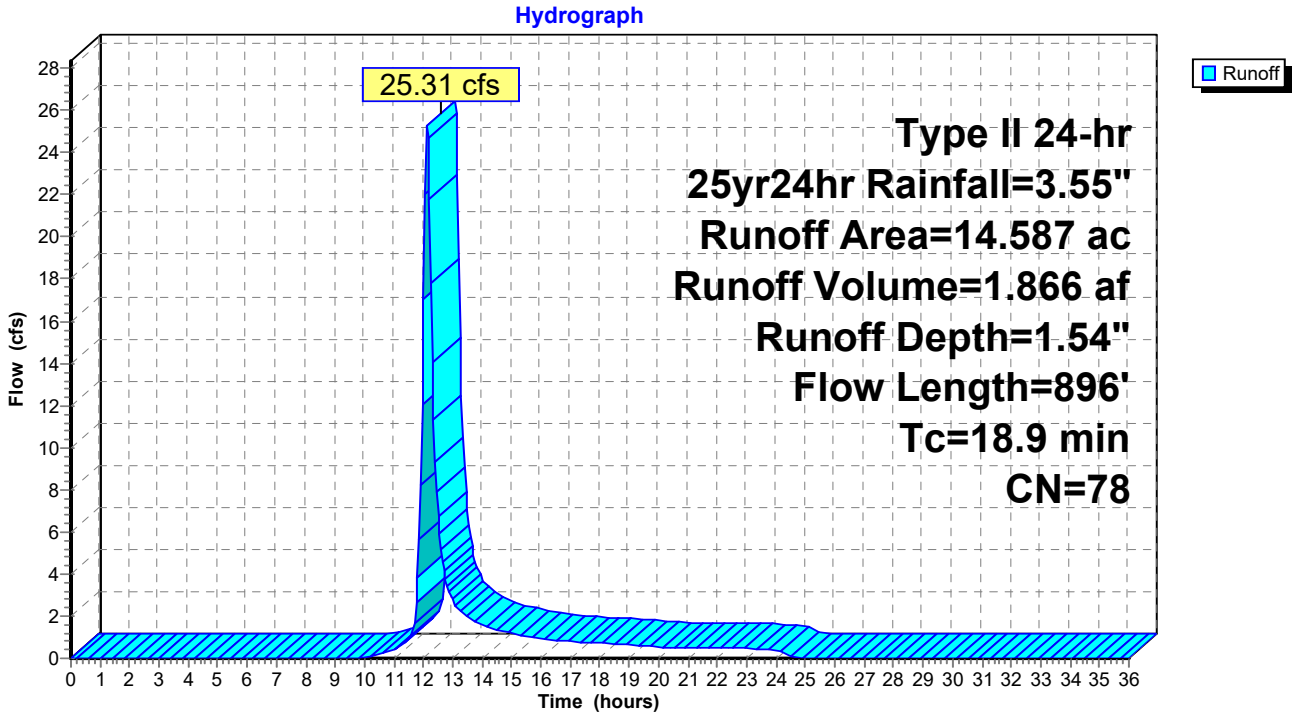
Runoff = 25.31 cfs @ 12.12 hrs, Volume= 1.866 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.010 | 84 | Developed Open Space, HSG D |
| * | 0.225 | 93 | Developed Low Intensity, HSG D |
| * | 0.094 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 81 | Cultivated Crops, HSG D |
| * | 4.829 | 71 | Cultivated Crops, HSG B |
| * | 9.429 | 81 | Cultivated Crops, HSG D |
| | 14.587 | 78 | Weighted Average |
| | 14.587 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.1 | 100 | 0.0116 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.1 | 180 | 0.0116 | 0.97 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 282 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 334 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.9 | 896 | Total | | | |

## Subcatchment 55: WS55



## Summary for Subcatchment 56: WS56

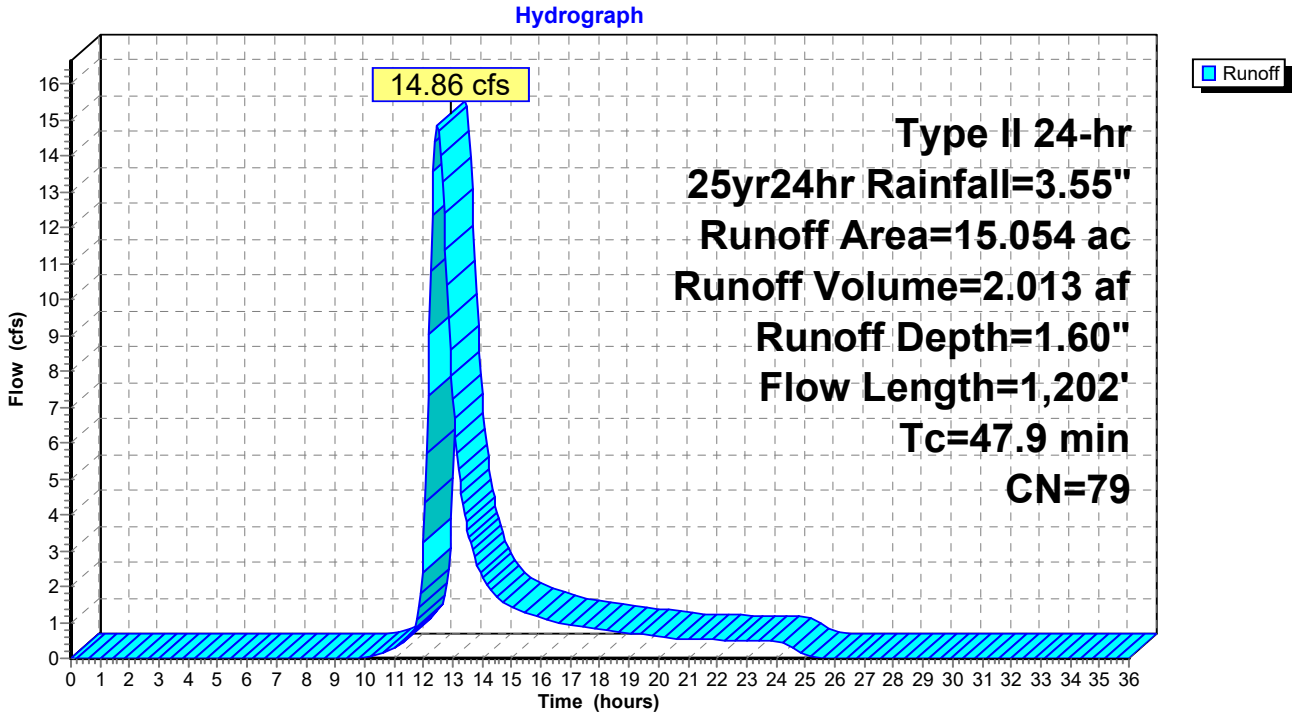
Runoff = 14.86 cfs @ 12.48 hrs, Volume= 2.013 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.006 | 55 | Deciduous Forest, HSG B |
| * | 3.610 | 71 | Cultivated Crops, HSG B |
| * | 11.438 | 81 | Cultivated Crops, HSG D |
| | 15.054 | 79 | Weighted Average |
| | 15.054 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.1 | 100 | 0.0084 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.4 | 123 | 0.0089 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 172 | 0.0257 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 184 | 0.0140 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 29.2 | 368 | 0.0005 | 0.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.3 | 254 | 0.0209 | 1.30 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 47.9 | 1,202 | Total | | | |

## Subcatchment 56: WS56



## Summary for Subcatchment 57: WS57

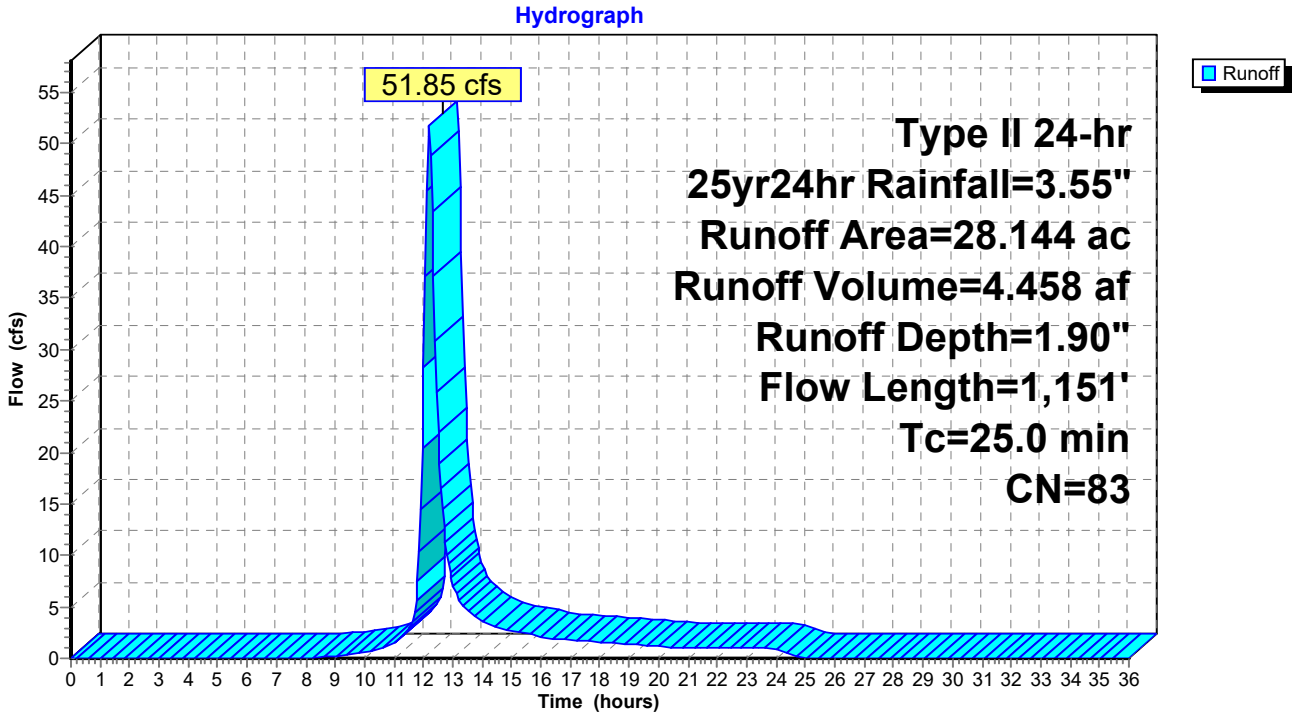
Runoff = 51.85 cfs @ 12.19 hrs, Volume= 4.458 af, Depth= 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.213 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.799 | 77 | Deciduous Forest, HSG D |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 1.219 | 81 | Cultivated Crops, HSG D |
| * | 0.119 | 94 | Developed Medium Intensity, HSG D |
| * | 0.116 | 93 | Developed Low Intensity, HSG D |
| * | 0.620 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 94 | Developed Medium Intensity, HSG D |
| * | 0.091 | 93 | Developed Low Intensity, HSG D |
| * | 0.093 | 94 | Developed Medium Intensity, HSG D |
| * | 0.092 | 93 | Developed Low Intensity, HSG D |
| * | 0.562 | 84 | Developed Open Space, HSG D |
| * | 0.907 | 93 | Developed Low Intensity, HSG D |
| * | 20.825 | 81 | Cultivated Crops, HSG D |
| * | 0.285 | 81 | Cultivated Crops, HSG D |
| | 28.144 | 83 | Weighted Average |
| | 28.144 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.9 | 38 | 0.0016 | 0.34 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 4.4 | 62 | 0.0147 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 11 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 121 | 0.0290 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 153 | 0.0150 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 96 | 0.0281 | 3.40 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.0 | 13 | 0.2090 | 9.28 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 12.5 | 475 | 0.0049 | 0.63 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 73 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.1 | 109 | 0.0309 | 1.58 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.0 | 1,151 | Total | | | |

## Subcatchment 57: WS57



## Summary for Subcatchment 58: WS58

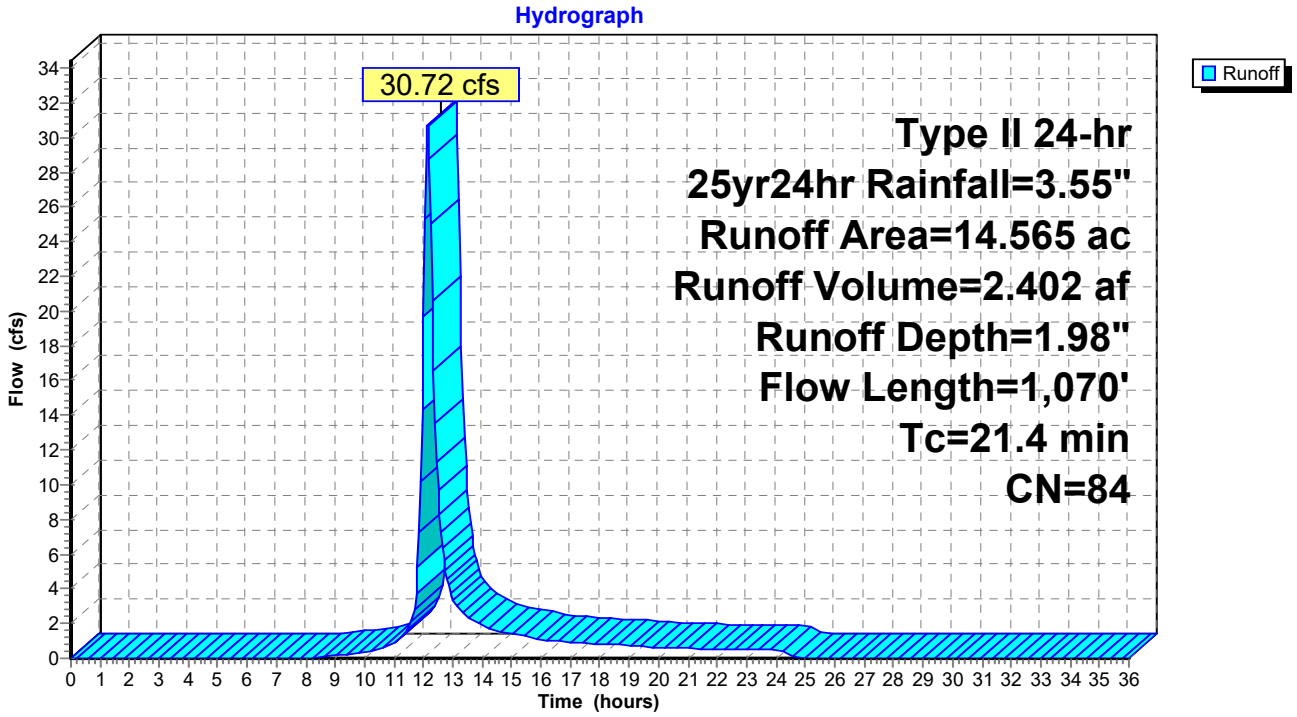
Runoff = 30.72 cfs @ 12.14 hrs, Volume= 2.402 af, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.103 | 94 | Developed Medium Intensity, HSG D |
| * | 0.106 | 93 | Developed Low Intensity, HSG D |
| * | 0.715 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 94 | Developed Medium Intensity, HSG D |
| * | 0.131 | 93 | Developed Low Intensity, HSG D |
| * | 0.076 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.188 | 81 | Cultivated Crops, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.343 | 93 | Developed Low Intensity, HSG D |
| * | 2.330 | 93 | Developed Low Intensity, HSG D |
| * | 10.203 | 81 | Cultivated Crops, HSG D |
| | 14.565 | 84 | Weighted Average |
| | 14.565 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.4 | 100 | 0.0107 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.2 | 266 | 0.0240 | 1.39 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 11 | 0.0245 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 22 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 14 | 0.0245 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 23 | 0.0212 | 1.31 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 152 | 0.0088 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.6 | 47 | 0.0186 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 68 | 0.0210 | 1.31 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.5 | 214 | 0.0079 | 0.80 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 153 | 0.0281 | 3.40 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 21.4 | 1,070 | Total | | | |

## Subcatchment 58: WS58



## Summary for Subcatchment 59: WS59

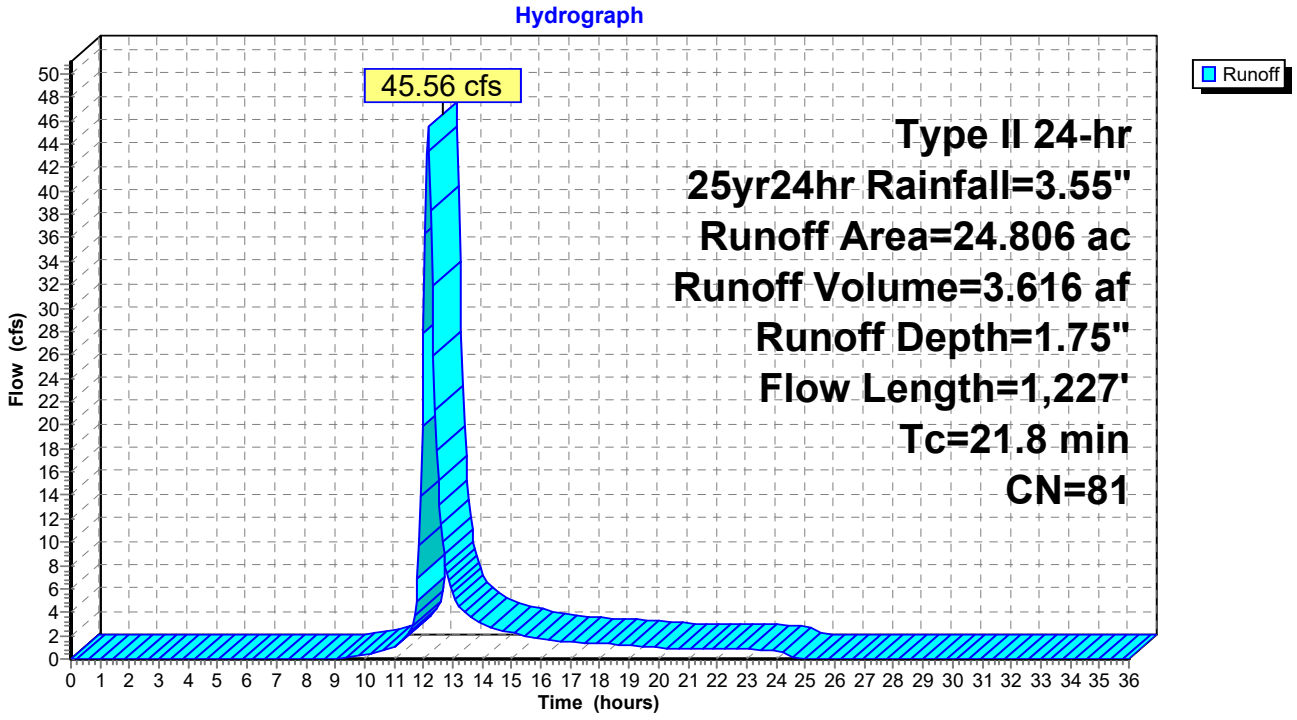
Runoff = 45.56 cfs @ 12.15 hrs, Volume= 3.616 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.484 | 84 | Developed Open Space, HSG D |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 2.998 | 81 | Cultivated Crops, HSG D |
| * | 1.587 | 71 | Cultivated Crops, HSG B |
| * | 18.470 | 81 | Cultivated Crops, HSG D |
| | 24.806 | 81 | Weighted Average |
| | 24.806 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 309 | 0.0160 | 1.14 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 216 | 0.0170 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.2 | 702 | 0.0083 | 0.82 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 21.8 | 1,227 | Total | | | |

## Subcatchment 59: WS59



## Summary for Subcatchment 60: WS60

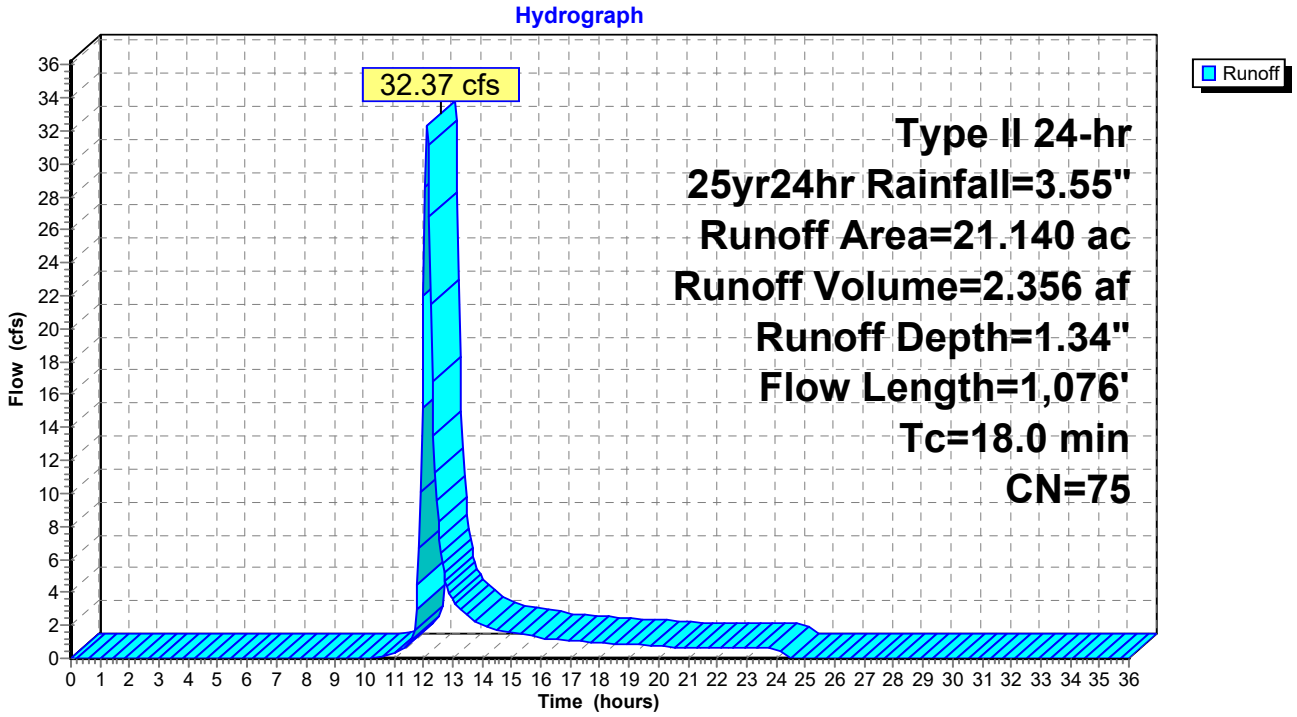
Runoff = 32.37 cfs @ 12.11 hrs, Volume= 2.356 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.863 | 81 | Cultivated Crops, HSG D |
| * | 12.490 | 71 | Cultivated Crops, HSG B |
| * | 0.964 | 81 | Cultivated Crops, HSG D |
| * | 5.877 | 81 | Cultivated Crops, HSG D |
| * | 0.946 | 71 | Cultivated Crops, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| | 21.140 | 75 | Weighted Average |
| | 21.140 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.7 | 100 | 0.0072 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 30 | 0.0299 | 1.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 230 | 0.0450 | 1.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.8 | 190 | 0.0387 | 1.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 294 | 0.0414 | 1.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.5 | 232 | 0.0296 | 1.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.0 | 1,076 | Total | | | |

## Subcatchment 60: WS60



## Summary for Subcatchment 61: WS61

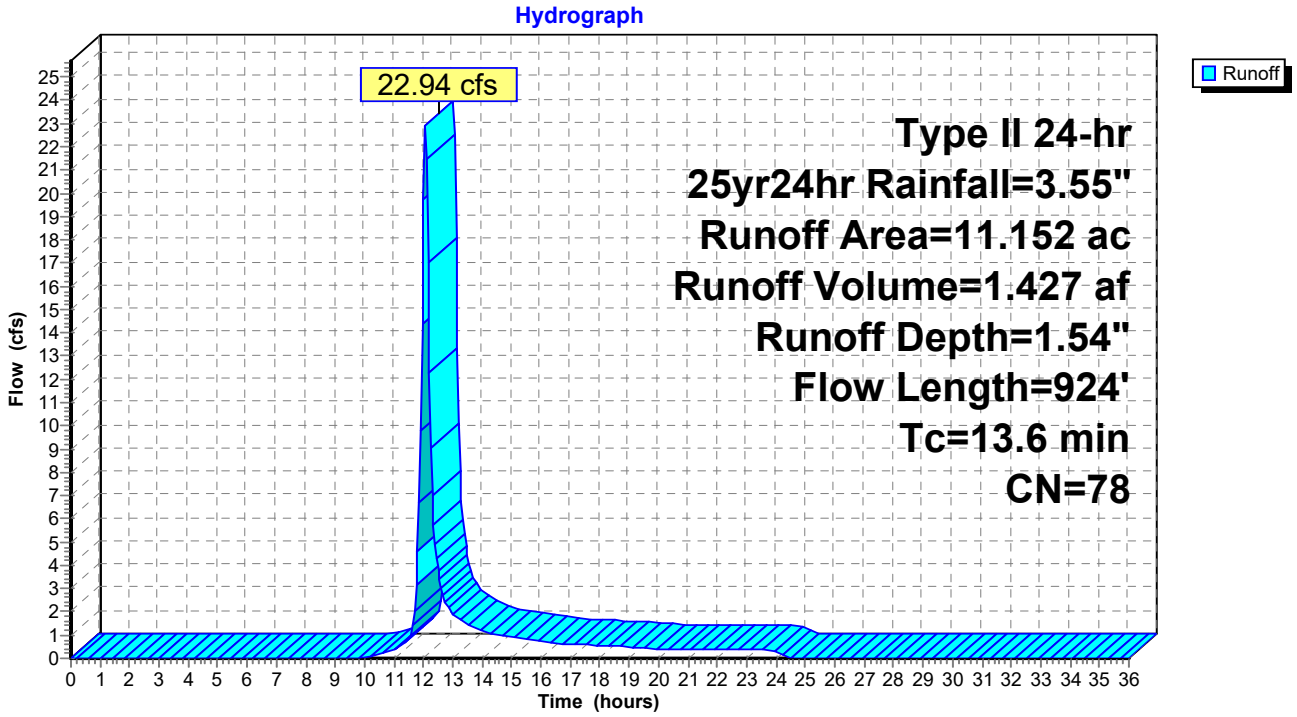
Runoff = 22.94 cfs @ 12.06 hrs, Volume= 1.427 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.005 | 61 | Pasture/Hay, HSG B |
| * | 0.480 | 77 | Deciduous Forest, HSG D |
| * | 0.986 | 81 | Cultivated Crops, HSG D |
| * | 1.432 | 71 | Cultivated Crops, HSG B |
| * | 1.596 | 81 | Cultivated Crops, HSG D |
| * | 5.178 | 81 | Cultivated Crops, HSG D |
| * | 1.380 | 71 | Cultivated Crops, HSG B |
| * | 0.095 | 86 | Woody Wetlands, HSG B |
| | 11.152 | 78 | Weighted Average |
| | 11.152 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.8 | 100 | 0.0307 | 0.34 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.0 | 167 | 0.1012 | 2.86 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.1 | 236 | 0.0423 | 1.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.4 | 409 | 0.0194 | 1.25 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 12 | 0.0126 | 0.56 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 13.6 | 924 | Total | | | |

## Subcatchment 61: WS61



## Summary for Subcatchment 62: WS62

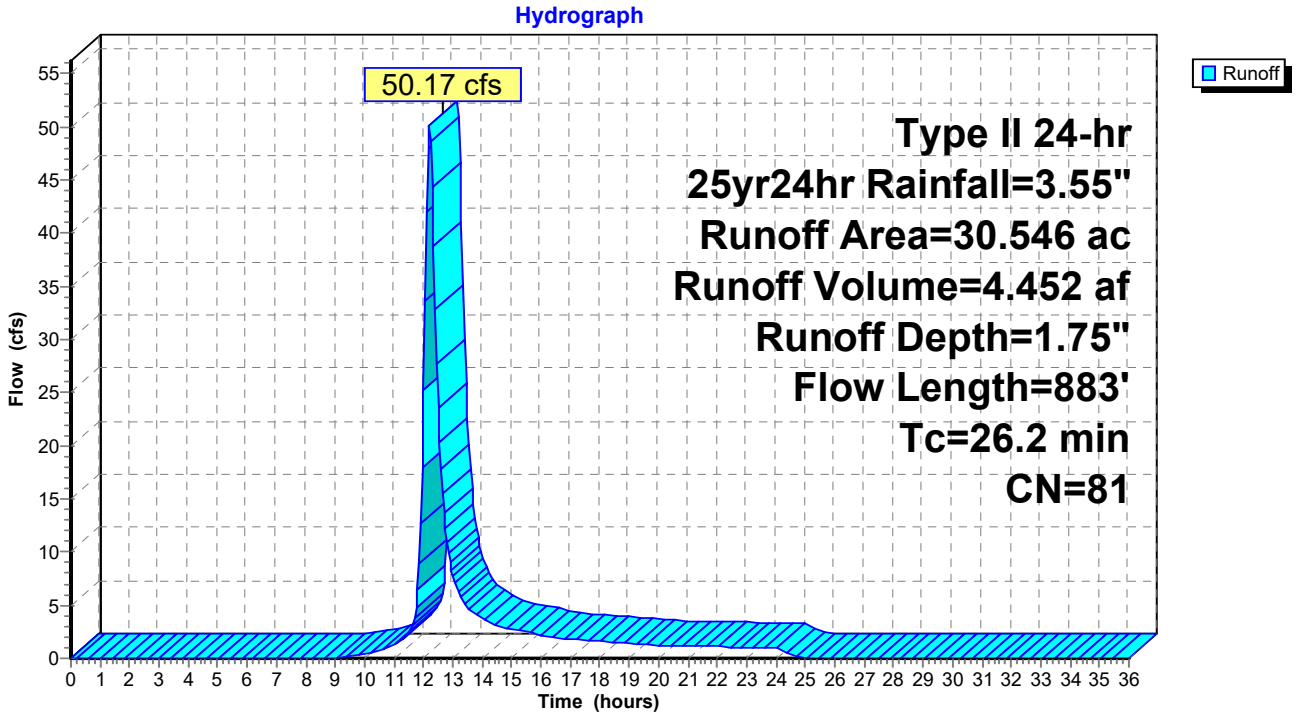
Runoff = 50.17 cfs @ 12.20 hrs, Volume= 4.452 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 81 | Cultivated Crops, HSG D |
| * | 1.620 | 86 | Woody Wetlands, HSG D |
| * | 12.298 | 80 | Pasture/Hay, HSG D |
| * | 2.076 | 81 | Cultivated Crops, HSG D |
| * | 14.330 | 81 | Cultivated Crops, HSG D |
| | 30.546 | 81 | Weighted Average |
| | 30.546 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.2 | 100 | 0.0031 | 0.14 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 10 | 0.0203 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 80 | 0.0256 | 1.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 158 | 0.0093 | 0.68 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 219 | 0.0186 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 12 | 0.0179 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 304 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 26.2 | 883 | Total | | | |

## Subcatchment 62: WS62



## Summary for Subcatchment 63: WS63

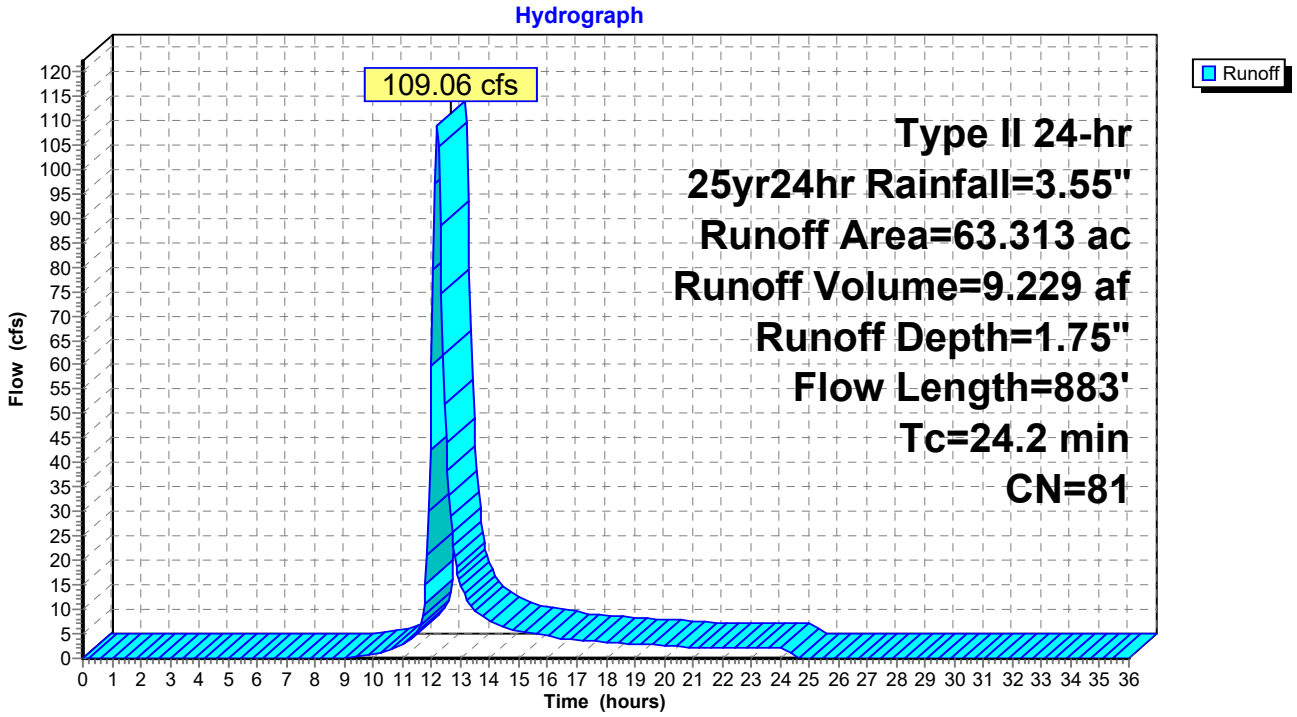
Runoff = 109.06 cfs @ 12.18 hrs, Volume= 9.229 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.064 | 84 | Developed Open Space, HSG D |
| * | 0.210 | 93 | Developed Low Intensity, HSG D |
| * | 0.440 | 84 | Developed Open Space, HSG D |
| * | 0.667 | 93 | Developed Low Intensity, HSG D |
| * | 0.592 | 93 | Developed Low Intensity, HSG D |
| * | 0.522 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 93 | Developed Low Intensity, HSG D |
| * | 0.068 | 84 | Developed Open Space, HSG D |
| * | 4.209 | 81 | Cultivated Crops, HSG D |
| * | 6.667 | 81 | Cultivated Crops, HSG D |
| * | 49.863 | 81 | Cultivated Crops, HSG D |
| | 63.313 | 81 | Weighted Average |
| | 63.313 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.2 | 100 | 0.0031 | 0.14 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 10 | 0.0203 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 80 | 0.0256 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 158 | 0.0093 | 0.87 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 219 | 0.0186 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 12 | 0.0179 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 304 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.2 | 883 | Total | | | |

## Subcatchment 63: WS63



## Summary for Subcatchment 64: WS64

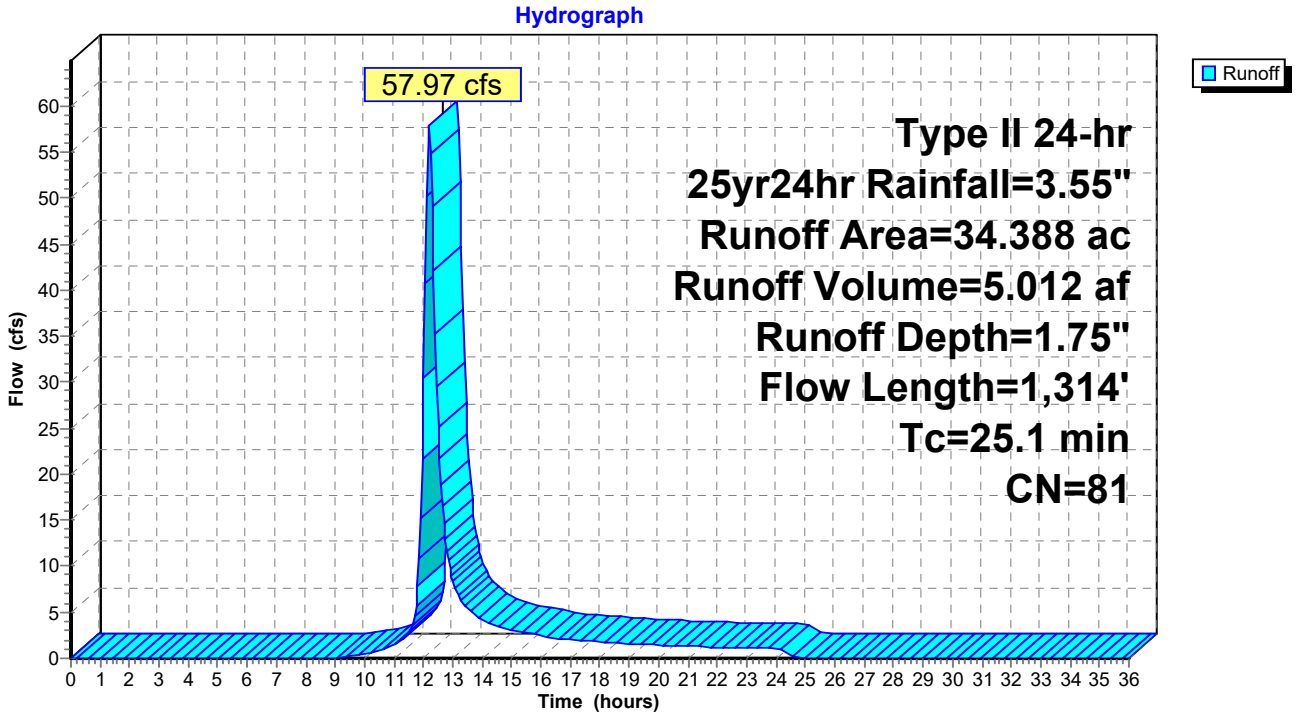
Runoff = 57.97 cfs @ 12.19 hrs, Volume= 5.012 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.070 | 94 | Developed Medium Intensity, HSG D |
| * | 0.213 | 81 | Cultivated Crops, HSG D |
| * | 0.051 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.004 | 84 | Developed Open Space, HSG D |
| * | 0.241 | 93 | Developed Low Intensity, HSG D |
| * | 0.120 | 84 | Developed Open Space, HSG D |
| * | 0.388 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 84 | Developed Open Space, HSG D |
| * | 12.373 | 81 | Cultivated Crops, HSG D |
| * | 0.204 | 81 | Cultivated Crops, HSG D |
| * | 20.370 | 81 | Cultivated Crops, HSG D |
| | 34.388 | 81 | Weighted Average |
| | 34.388 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.2 | 100 | 0.0166 | 0.27 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.1 | 80 | 0.0166 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 223 | 0.0232 | 1.37 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 170 | 0.0116 | 0.97 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 277 | 0.0148 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.8 | 329 | 0.0110 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 97 | 0.0086 | 0.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 37 | 0.0086 | 1.88 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 25.1 | 1,314 | Total | | | |

## Subcatchment 64: WS64



## Summary for Subcatchment 65: WS65

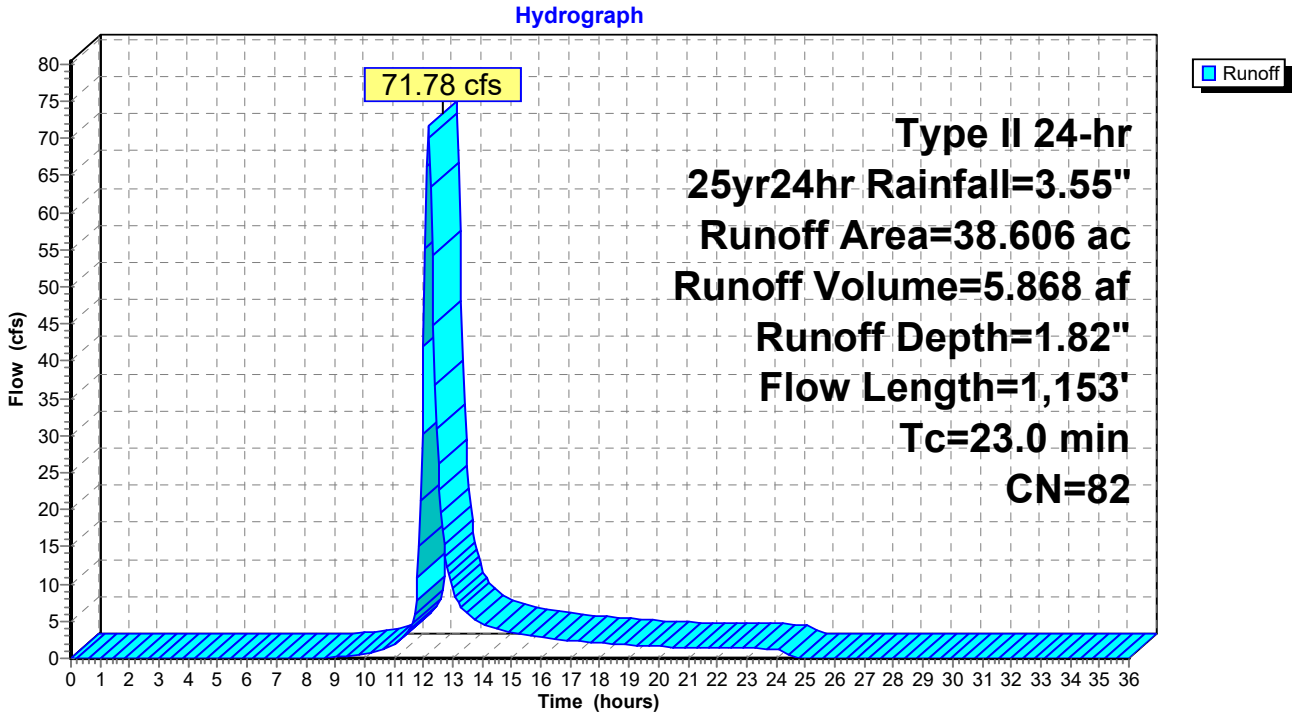
Runoff = 71.78 cfs @ 12.16 hrs, Volume= 5.868 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.808 | 84 | Developed Open Space, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 93 | Developed Low Intensity, HSG D |
| * | 1.978 | 93 | Developed Low Intensity, HSG D |
| * | 0.220 | 94 | Developed Medium Intensity, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.187 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 81 | Cultivated Crops, HSG D |
| * | 23.476 | 81 | Cultivated Crops, HSG D |
| * | 4.971 | 81 | Cultivated Crops, HSG D |
| * | 6.092 | 81 | Cultivated Crops, HSG D |
| | 38.606 | 82 | Weighted Average |
| | 38.606 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.6 | 100 | 0.0072 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.6 | 44 | 0.0194 | 1.25 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 173 | 0.0382 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 195 | 0.0356 | 1.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.1 | 163 | 0.0216 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.6 | 228 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.6 | 250 | 0.0100 | 0.90 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 23.0 | 1,153 | Total | | | |

## Subcatchment 65: WS65



## Summary for Subcatchment 66: WS66

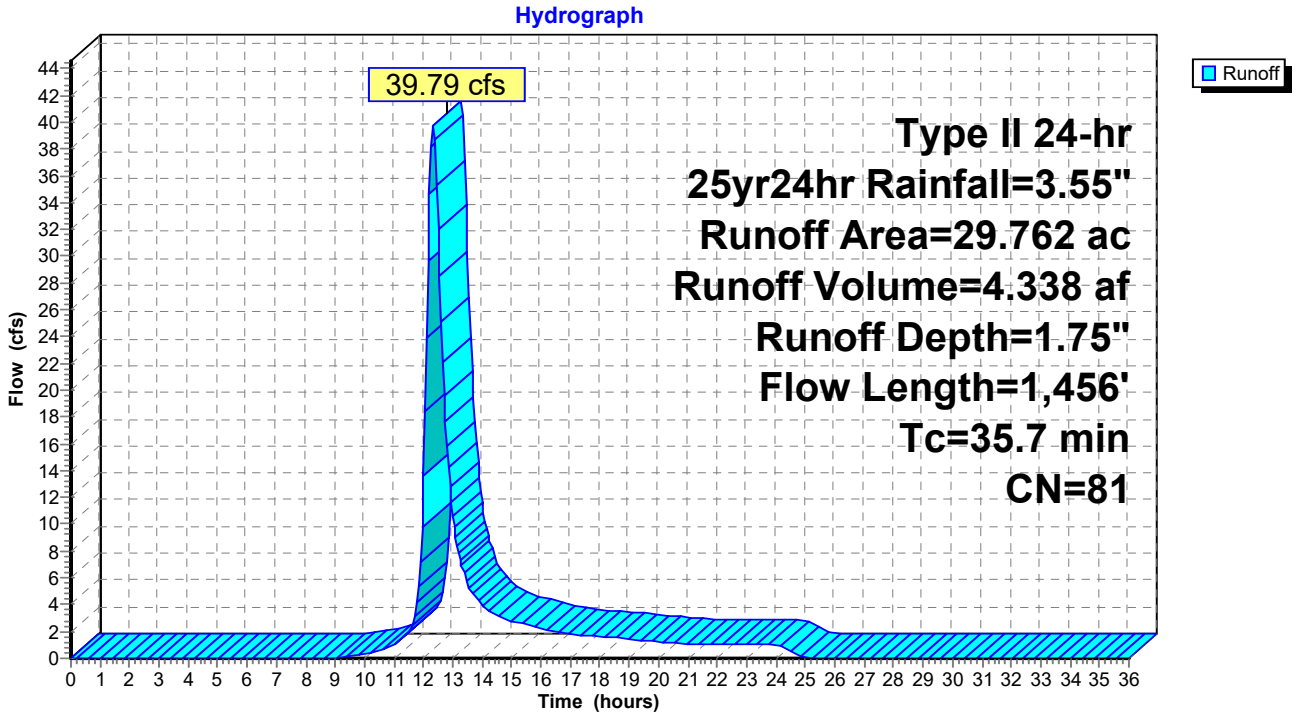
Runoff = 39.79 cfs @ 12.32 hrs, Volume= 4.338 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.002 | 94 | Developed Medium Intensity, HSG D |
| * | 19.133 | 81 | Cultivated Crops, HSG D |
| * | 1.365 | 81 | Cultivated Crops, HSG D |
| * | 9.261 | 81 | Cultivated Crops, HSG D |
| | 29.762 | 81 | Weighted Average |
| | 29.762 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.6 | 100 | 0.0218 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.5 | 152 | 0.0124 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.2 | 150 | 0.0074 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 291 | 0.0302 | 1.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.8 | 111 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 54 | 0.0098 | 0.89 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 5 | 0.0053 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 109 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 26 | 0.0214 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 91 | 0.0125 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.1 | 366 | 0.0020 | 0.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.7 | 1,456 | Total | | | |

## Subcatchment 66: WS66



## Summary for Subcatchment 67: WS67

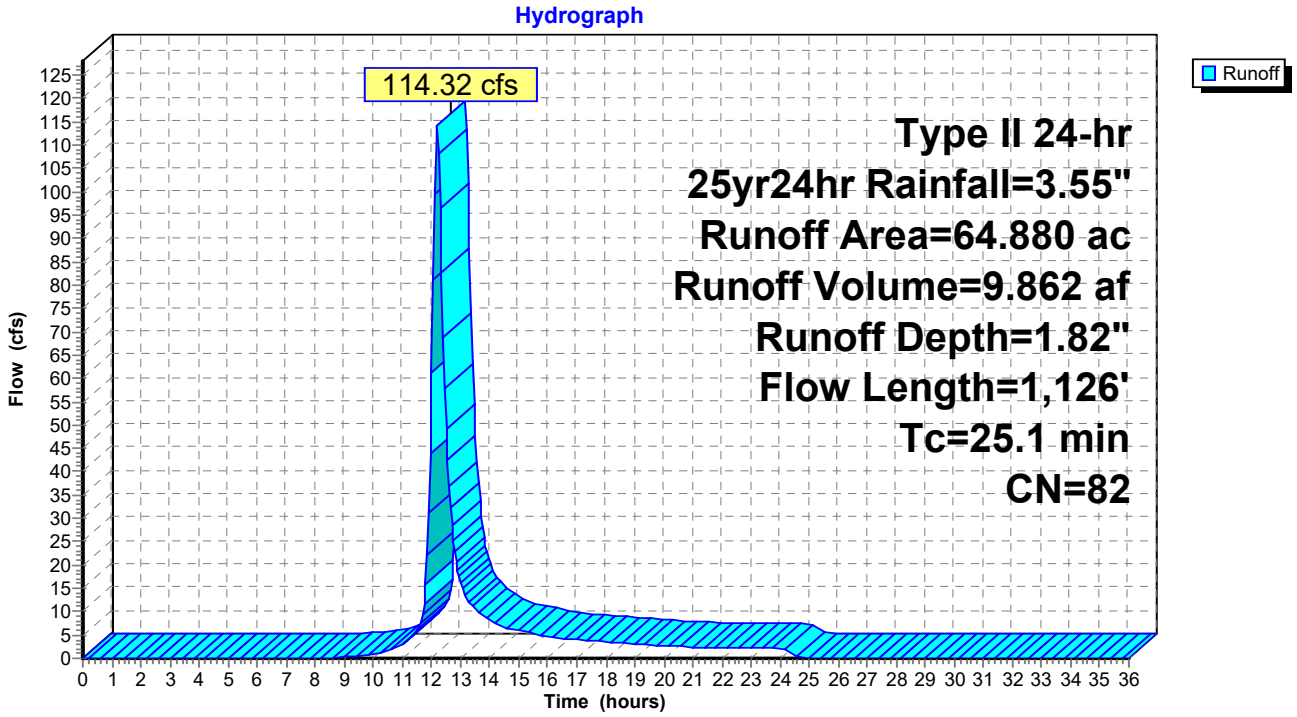
Runoff = 114.32 cfs @ 12.19 hrs, Volume= 9.862 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.065 | 93 | Developed Low Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.110 | 94 | Developed Medium Intensity, HSG D |
| * | 0.317 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.210 | 93 | Developed Low Intensity, HSG D |
| * | 0.490 | 93 | Developed Low Intensity, HSG D |
| * | 0.053 | 84 | Developed Open Space, HSG D |
| * | 0.070 | 84 | Developed Open Space, HSG D |
| * | 0.234 | 86 | Woody Wetlands, HSG D |
| * | 0.117 | 93 | Developed Low Intensity, HSG D |
| * | 0.583 | 93 | Developed Low Intensity, HSG D |
| * | 0.347 | 93 | Developed Low Intensity, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 0.257 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.850 | 93 | Developed Low Intensity, HSG D |
| * | 0.173 | 84 | Developed Open Space, HSG D |
| * | 0.904 | 86 | Woody Wetlands, HSG D |
| * | 0.000 | 93 | Developed Low Intensity, HSG D |
| * | 0.585 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 84 | Developed Open Space, HSG D |
| * | 23.511 | 81 | Cultivated Crops, HSG D |
| * | 19.988 | 81 | Cultivated Crops, HSG D |
| * | 15.002 | 81 | Cultivated Crops, HSG D |
| | 64.880 | 82 | Weighted Average |
| | 64.880 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.4 | 100 | 0.0059 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 5.8 | 257 | 0.0068 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 375 | 0.0197 | 1.26 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 394 | 0.0215 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.1 | 1,126 | Total | | | |

## Subcatchment 67: WS67



Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment1: WS1** Runoff Area=13.742 ac 0.00% Impervious Runoff Depth=1.72"
Flow Length=1,870' Tc=25.9 min CN=71 Runoff=21.69 cfs 1.967 af

**Subcatchment2: WS2** Runoff Area=28.882 ac 0.00% Impervious Runoff Depth=1.37"
Flow Length=1,955' Tc=31.0 min CN=66 Runoff=30.78 cfs 3.299 af

**Subcatchment3: WS3** Runoff Area=10.451 ac 0.00% Impervious Runoff Depth=0.88"
Flow Length=1,032' Tc=18.4 min CN=58 Runoff=8.75 cfs 0.770 af

**Subcatchment5: WS5** Runoff Area=56.549 ac 0.00% Impervious Runoff Depth=1.57"
Flow Length=1,761' Tc=67.6 min CN=69 Runoff=40.61 cfs 7.421 af

**Subcatchment6: WS6** Runoff Area=44.409 ac 0.00% Impervious Runoff Depth=1.94"
Flow Length=2,273' Tc=106.2 min CN=74 Runoff=29.13 cfs 7.186 af

**Subcatchment7: WS7** Runoff Area=11.383 ac 0.00% Impervious Runoff Depth=2.34"
Flow Length=436' Tc=28.8 min CN=79 Runoff=23.62 cfs 2.223 af

**Subcatchment8: WS8** Runoff Area=159.778 ac 0.00% Impervious Runoff Depth=2.34"
Flow Length=3,027' Tc=56.4 min CN=79 Runoff=207.93 cfs 31.196 af

**Subcatchment9: WS9** Runoff Area=11.132 ac 0.00% Impervious Runoff Depth=1.72"
Flow Length=888' Tc=15.4 min CN=71 Runoff=23.80 cfs 1.593 af

**Subcatchment10: WS10** Runoff Area=10.435 ac 0.00% Impervious Runoff Depth=1.57"
Flow Length=988' Tc=19.7 min CN=69 Runoff=17.65 cfs 1.369 af

**Subcatchment11: WS11** Runoff Area=16.148 ac 0.00% Impervious Runoff Depth=1.72"
Flow Length=896' Tc=17.1 min CN=71 Runoff=32.74 cfs 2.311 af

**Subcatchment12: WS12** Runoff Area=23.932 ac 0.00% Impervious Runoff Depth=1.31"
Flow Length=2,043' Tc=44.0 min CN=65 Runoff=18.65 cfs 2.603 af

**Subcatchment13: WS13** Runoff Area=19.692 ac 0.00% Impervious Runoff Depth=1.18"
Flow Length=1,856' Tc=46.3 min CN=63 Runoff=12.92 cfs 1.934 af

**Subcatchment14: WS14** Runoff Area=69.773 ac 0.00% Impervious Runoff Depth=1.94"
Flow Length=3,906' Tc=93.3 min CN=74 Runoff=50.51 cfs 11.290 af

**Subcatchment15: WS15** Runoff Area=15.438 ac 0.00% Impervious Runoff Depth=2.26"
Flow Length=1,445' Tc=25.4 min CN=78 Runoff=33.40 cfs 2.907 af

**Subcatchment16: WS16** Runoff Area=47.898 ac 0.00% Impervious Runoff Depth=2.34"
Flow Length=2,796' Tc=41.9 min CN=79 Runoff=77.05 cfs 9.352 af

**Subcatchment17: WS17** Runoff Area=13.311 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=761' Tc=26.5 min CN=81 Runoff=31.33 cfs 2.788 af

**Subcatchment18: WS18** Runoff Area=5.363 ac 0.00% Impervious Runoff Depth=2.18"
Flow Length=218' Tc=9.3 min CN=77 Runoff=18.20 cfs 0.974 af

**Subcatchment19: WS19** Runoff Area=28.615 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=1,569' Tc=35.1 min CN=81 Runoff=56.09 cfs 5.994 af

**Subcatchment20: WS20** Runoff Area=13.311 ac 0.00% Impervious Runoff Depth=2.60"
Flow Length=1,439' Tc=29.6 min CN=82 Runoff=30.24 cfs 2.885 af

**Subcatchment21: WS21** Runoff Area=16.482 ac 0.00% Impervious Runoff Depth=2.69"
Flow Length=1,616' Tc=29.0 min CN=83 Runoff=39.23 cfs 3.695 af

**Subcatchment22: WS22** Runoff Area=38.847 ac 0.00% Impervious Runoff Depth=2.34"
Flow Length=2,651' Tc=61.5 min CN=79 Runoff=47.44 cfs 7.585 af

**Subcatchment23: WS23** Runoff Area=7.796 ac 0.00% Impervious Runoff Depth=2.78"
Flow Length=630' Tc=85.7 min CN=84 Runoff=8.89 cfs 1.806 af

**Subcatchment24: WS24** Runoff Area=27.435 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=845' Tc=36.2 min CN=81 Runoff=52.67 cfs 5.746 af

**Subcatchment25: WS25** Runoff Area=15.083 ac 0.00% Impervious Runoff Depth=2.10"
Flow Length=1,028' Tc=27.6 min CN=76 Runoff=28.59 cfs 2.637 af

**Subcatchment26: WS26** Runoff Area=24.142 ac 0.00% Impervious Runoff Depth=2.60"
Flow Length=1,225' Tc=69.8 min CN=82 Runoff=29.95 cfs 5.233 af

**Subcatchment27: WS27** Runoff Area=22.172 ac 0.00% Impervious Runoff Depth=2.26"
Flow Length=1,177' Tc=39.8 min CN=78 Runoff=35.61 cfs 4.175 af

**Subcatchment28: WS28** Runoff Area=91.586 ac 0.00% Impervious Runoff Depth=2.34"
Flow Length=1,023' Tc=24.1 min CN=79 Runoff=212.48 cfs 17.882 af

**Subcatchment29: WS29** Runoff Area=25.894 ac 0.00% Impervious Runoff Depth=2.18"
Flow Length=837' Tc=23.1 min CN=77 Runoff=57.19 cfs 4.700 af

**Subcatchment30: WS30** Runoff Area=14.220 ac 0.00% Impervious Runoff Depth=1.87"
Flow Length=681' Tc=13.6 min CN=73 Runoff=35.46 cfs 2.211 af

**Subcatchment31: WS31** Runoff Area=5.243 ac 0.00% Impervious Runoff Depth=1.87"
Flow Length=569' Tc=10.2 min CN=73 Runoff=14.65 cfs 0.815 af

**Subcatchment32: WS32** Runoff Area=10.108 ac 0.00% Impervious Runoff Depth=2.26"
Flow Length=680' Tc=21.0 min CN=78 Runoff=24.55 cfs 1.904 af

**Subcatchment33: WS33** Runoff Area=15.180 ac 0.00% Impervious Runoff Depth=2.02"
Flow Length=1,329' Tc=27.3 min CN=75 Runoff=27.79 cfs 2.554 af

**Subcatchment34: WS34** Runoff Area=58.029 ac 0.00% Impervious Runoff Depth=1.94"
Flow Length=1,963' Tc=34.2 min CN=74 Runoff=87.47 cfs 9.389 af

**Subcatchment35: WS35** Runoff Area=63.197 ac 0.00% Impervious Runoff Depth=2.02"
Flow Length=1,938' Tc=29.1 min CN=75 Runoff=110.93 cfs 10.633 af

**Subcatchment36: WS36** Runoff Area=28.631 ac 0.00% Impervious Runoff Depth=1.94"
Flow Length=1,196' Tc=69.6 min CN=74 Runoff=25.83 cfs 4.633 af

**Subcatchment37: WS37** Runoff Area=10.404 ac 0.00% Impervious Runoff Depth=1.57"
Flow Length=661' Tc=13.2 min CN=69 Runoff=21.86 cfs 1.365 af

**Subcatchment38: WS38** Runoff Area=14.434 ac 0.00% Impervious Runoff Depth=2.18"
Flow Length=629' Tc=14.5 min CN=77 Runoff=41.03 cfs 2.620 af

**Subcatchment39: WS39** Runoff Area=30.742 ac 0.00% Impervious Runoff Depth=1.44"
Flow Length=707' Tc=15.5 min CN=67 Runoff=53.54 cfs 3.682 af

**Subcatchment40: WS40** Runoff Area=31.131 ac 0.00% Impervious Runoff Depth=2.34"
Flow Length=1,419' Tc=23.0 min CN=79 Runoff=74.42 cfs 6.078 af

**Subcatchment41: WS41** Runoff Area=34.979 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=1,292' Tc=25.9 min CN=81 Runoff=83.50 cfs 7.327 af

**Subcatchment42: WS42** Runoff Area=48.465 ac 0.00% Impervious Runoff Depth=1.79"
Flow Length=912' Tc=18.7 min CN=72 Runoff=97.94 cfs 7.233 af

**Subcatchment43: WS43** Runoff Area=33.037 ac 0.00% Impervious Runoff Depth=2.43"
Flow Length=1,479' Tc=30.5 min CN=80 Runoff=68.64 cfs 6.683 af

**Subcatchment44: WS44** Runoff Area=80.873 ac 0.00% Impervious Runoff Depth=1.87"
Flow Length=3,050' Tc=84.9 min CN=73 Runoff=59.82 cfs 12.573 af

**Subcatchment45: WS45** Runoff Area=28.790 ac 0.00% Impervious Runoff Depth=2.26"
Flow Length=1,322' Tc=22.6 min CN=78 Runoff=66.98 cfs 5.422 af

**Subcatchment46: WS46** Runoff Area=27.896 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=1,507' Tc=30.3 min CN=81 Runoff=60.29 cfs 5.843 af

**Subcatchment47: WS47** Runoff Area=45.903 ac 0.00% Impervious Runoff Depth=2.60"
Flow Length=1,645' Tc=35.9 min CN=82 Runoff=91.77 cfs 9.950 af

**Subcatchment48: WS48** Runoff Area=43.068 ac 0.00% Impervious Runoff Depth=2.69"
Flow Length=1,506' Tc=71.6 min CN=83 Runoff=54.37 cfs 9.655 af

**Subcatchment49: WS49** Runoff Area=30.898 ac 0.00% Impervious Runoff Depth=2.60"
Flow Length=1,464' Tc=36.4 min CN=82 Runoff=61.18 cfs 6.697 af

**Subcatchment50: WS50** Runoff Area=54.384 ac 0.00% Impervious Runoff Depth=2.60"
Flow Length=2,572' Tc=66.6 min CN=82 Runoff=69.94 cfs 11.788 af

**Subcatchment51: WS51** Runoff Area=22.968 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=1,683' Tc=40.1 min CN=81 Runoff=41.09 cfs 4.811 af

**Subcatchment52: WS52** Runoff Area=46.992 ac 0.00% Impervious Runoff Depth=2.43"
Flow Length=692' Tc=23.4 min CN=80 Runoff=115.30 cfs 9.506 af

**Subcatchment53: WS53** Runoff Area=17.871 ac 0.00% Impervious Runoff Depth=2.18"
Flow Length=2,016' Tc=94.7 min CN=77 Runoff=14.59 cfs 3.244 af

**Subcatchment54: WS54** Runoff Area=27.065 ac 0.00% Impervious Runoff Depth=2.10"
Flow Length=919' Tc=18.4 min CN=76 Runoff=65.57 cfs 4.732 af

**Subcatchment55: WS55** Runoff Area=14.587 ac 0.00% Impervious Runoff Depth=2.26"
Flow Length=896' Tc=18.9 min CN=78 Runoff=37.62 cfs 2.747 af

**Subcatchment56: WS56** Runoff Area=15.054 ac 0.00% Impervious Runoff Depth=2.34"
Flow Length=1,202' Tc=47.9 min CN=79 Runoff=22.03 cfs 2.939 af

**Subcatchment57: WS57** Runoff Area=28.144 ac 0.00% Impervious Runoff Depth=2.69"
Flow Length=1,151' Tc=25.0 min CN=83 Runoff=73.45 cfs 6.309 af

**Subcatchment58: WS58** Runoff Area=14.565 ac 0.00% Impervious Runoff Depth=2.78"
Flow Length=1,070' Tc=21.4 min CN=84 Runoff=43.05 cfs 3.375 af

**Subcatchment59: WS59** Runoff Area=24.806 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=1,227' Tc=21.8 min CN=81 Runoff=65.72 cfs 5.196 af

**Subcatchment60: WS60** Runoff Area=21.140 ac 0.00% Impervious Runoff Depth=2.02"
Flow Length=1,076' Tc=18.0 min CN=75 Runoff=49.77 cfs 3.557 af

**Subcatchment61: WS61** Runoff Area=11.152 ac 0.00% Impervious Runoff Depth=2.26"
Flow Length=924' Tc=13.6 min CN=78 Runoff=33.94 cfs 2.100 af

**Subcatchment62: WS62** Runoff Area=30.546 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=883' Tc=26.2 min CN=81 Runoff=72.50 cfs 6.398 af

**Subcatchment63: WS63** Runoff Area=63.313 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=883' Tc=24.2 min CN=81 Runoff=157.49 cfs 13.261 af

**Subcatchment64: WS64** Runoff Area=34.388 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=1,314' Tc=25.1 min CN=81 Runoff=83.73 cfs 7.203 af

**Subcatchment65: WS65** Runoff Area=38.606 ac 0.00% Impervious Runoff Depth=2.60"
Flow Length=1,153' Tc=23.0 min CN=82 Runoff=102.60 cfs 8.368 af

**Subcatchment66: WS66** Runoff Area=29.762 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=1,456' Tc=35.7 min CN=81 Runoff=57.65 cfs 6.234 af

**Subcatchment67: WS67** Runoff Area=64.880 ac 0.00% Impervious Runoff Depth=2.60"
Flow Length=1,126' Tc=25.1 min CN=82 Runoff=163.51 cfs 14.063 af

**Total Runoff Area = 2,085.129 ac Runoff Volume = 386.619 af Average Runoff Depth = 2.23"**
**100.00% Pervious = 2,085.129 ac 0.00% Impervious = 0.000 ac**

## Summary for Subcatchment 1: WS1

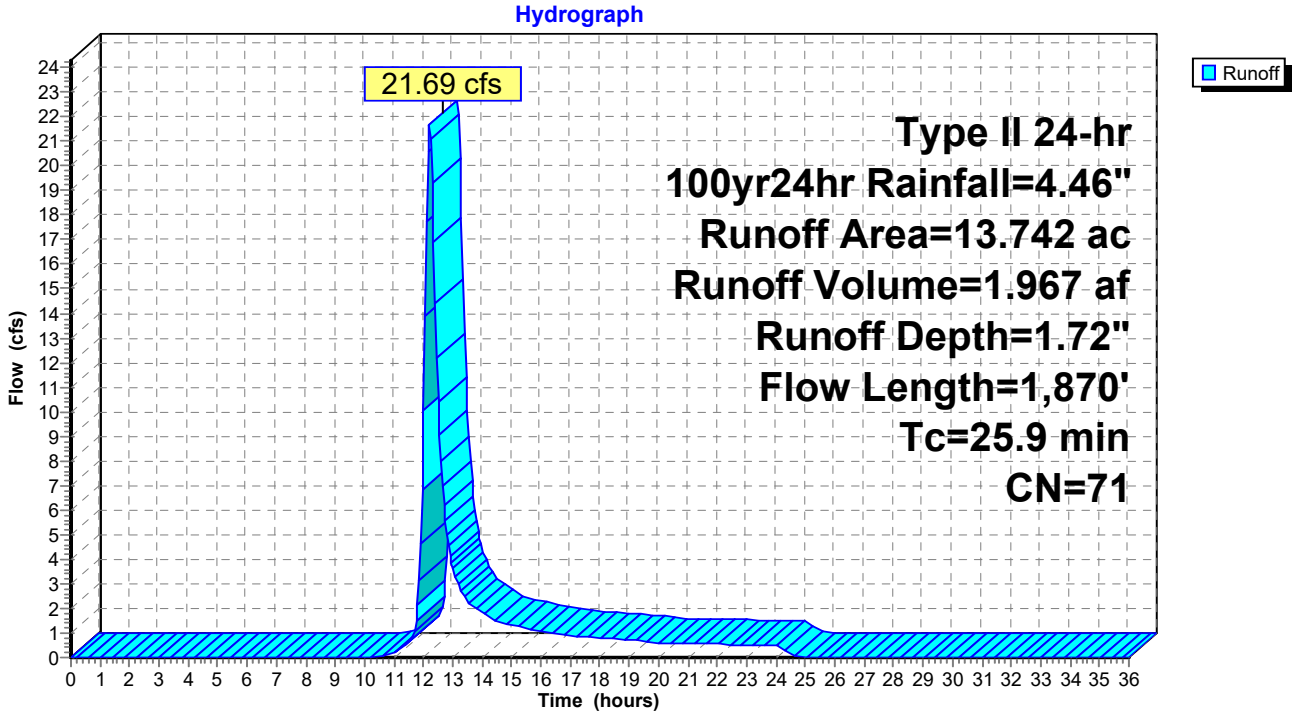
Runoff = 21.69 cfs @ 12.21 hrs, Volume= 1.967 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.033 | 93 | Developed Low Intensity, HSG D |
| * | 0.085 | 84 | Developed Open Space, HSG D |
| * | 0.188 | 81 | Cultivated Crops, HSG D |
| * | 0.133 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.522 | 76 | Mixed Forest, HSG D |
| * | 0.667 | 81 | Cultivated Crops, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.215 | 81 | Cultivated Crops, HSG D |
| * | 0.007 | 71 | Cultivated Crops, HSG B |
| * | 0.222 | 81 | Cultivated Crops, HSG D |
| * | 0.424 | 80 | Pasture/Hay, HSG D |
| * | 0.039 | 71 | Cultivated Crops, HSG B |
| * | 0.424 | 71 | Cultivated Crops, HSG B |
| * | 0.342 | 81 | Cultivated Crops, HSG D |
| * | 0.001 | 55 | Deciduous Forest, HSG B |
| * | 0.000 | 55 | Deciduous Forest, HSG B |
| * | 0.045 | 61 | Pasture/Hay, HSG B |
| * | 3.348 | 80 | Pasture/Hay, HSG D |
| * | 0.177 | 61 | Pasture/Hay, HSG B |
| * | 5.881 | 61 | Pasture/Hay, HSG B |
| * | 0.322 | 71 | Cultivated Crops, HSG B |
| | 13.742 | 71 | Weighted Average |
| | 13.742 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.3 | 100 | 0.0247 | 0.32 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.2 | 110 | 0.0292 | 1.54 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 252 | 0.0466 | 1.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 454 | 0.0505 | 1.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.7 | 379 | 0.0372 | 1.35 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 51 | 0.0253 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 11 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 155 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 152 | 0.0233 | 1.37 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 98 | 0.0107 | 2.10 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.1 | 109 | 0.1123 | 1.68 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 25.9 | 1,870 | Total | | | |

## Subcatchment 1: WS1



## Summary for Subcatchment 2: WS2

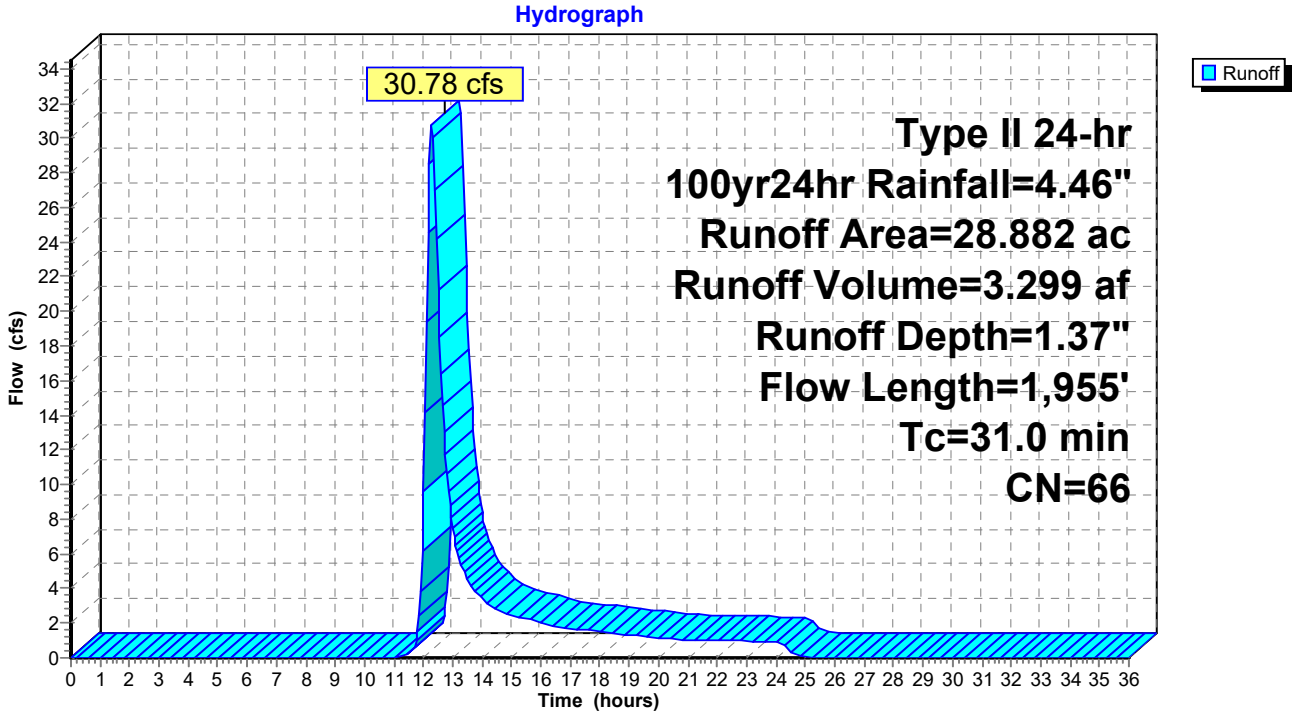
Runoff = 30.78 cfs @ 12.28 hrs, Volume= 3.299 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.021 | 84 | Developed Open Space, HSG D |
| * | 0.697 | 80 | Pasture/Hay, HSG D |
| * | 0.356 | 80 | Pasture/Hay, HSG D |
| * | 0.101 | 93 | Developed Low Intensity, HSG D |
| * | 0.202 | 71 | Cultivated Crops, HSG B |
| * | 0.002 | 71 | Cultivated Crops, HSG B |
| * | 0.119 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 71 | Cultivated Crops, HSG B |
| * | 0.125 | 80 | Pasture/Hay, HSG D |
| * | 1.431 | 61 | Pasture/Hay, HSG B |
| * | 3.409 | 81 | Cultivated Crops, HSG D |
| * | 2.381 | 71 | Cultivated Crops, HSG B |
| * | 0.220 | 81 | Cultivated Crops, HSG D |
| * | 0.069 | 88 | Developed Low Intensity, HSG B |
| * | 0.210 | 88 | Developed Low Intensity, HSG B |
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.038 | 68 | Developed Open Space, HSG B |
| * | 0.658 | 61 | Pasture/Hay, HSG B |
| * | 0.312 | 80 | Pasture/Hay, HSG D |
| * | 4.602 | 61 | Pasture/Hay, HSG B |
| * | 4.093 | 61 | Pasture/Hay, HSG B |
| * | 9.208 | 61 | Pasture/Hay, HSG B |
| * | 0.405 | 71 | Cultivated Crops, HSG B |
| | 28.882 | 66 | Weighted Average |
| | 28.882 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.8 | 100 | 0.0320 | 0.35 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 71 | 0.0205 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.6 | 363 | 0.0347 | 1.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.7 | 546 | 0.0527 | 1.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 150 | 0.0290 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 116 | 0.0116 | 0.97 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 153 | 0.0317 | 1.60 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 37 | 0.0175 | 1.19 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 254 | 0.0179 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.3 | 164 | 0.0054 | 0.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 31.0 | 1,955 | Total | | | |

## Subcatchment 2: WS2



## Summary for Subcatchment 3: WS3

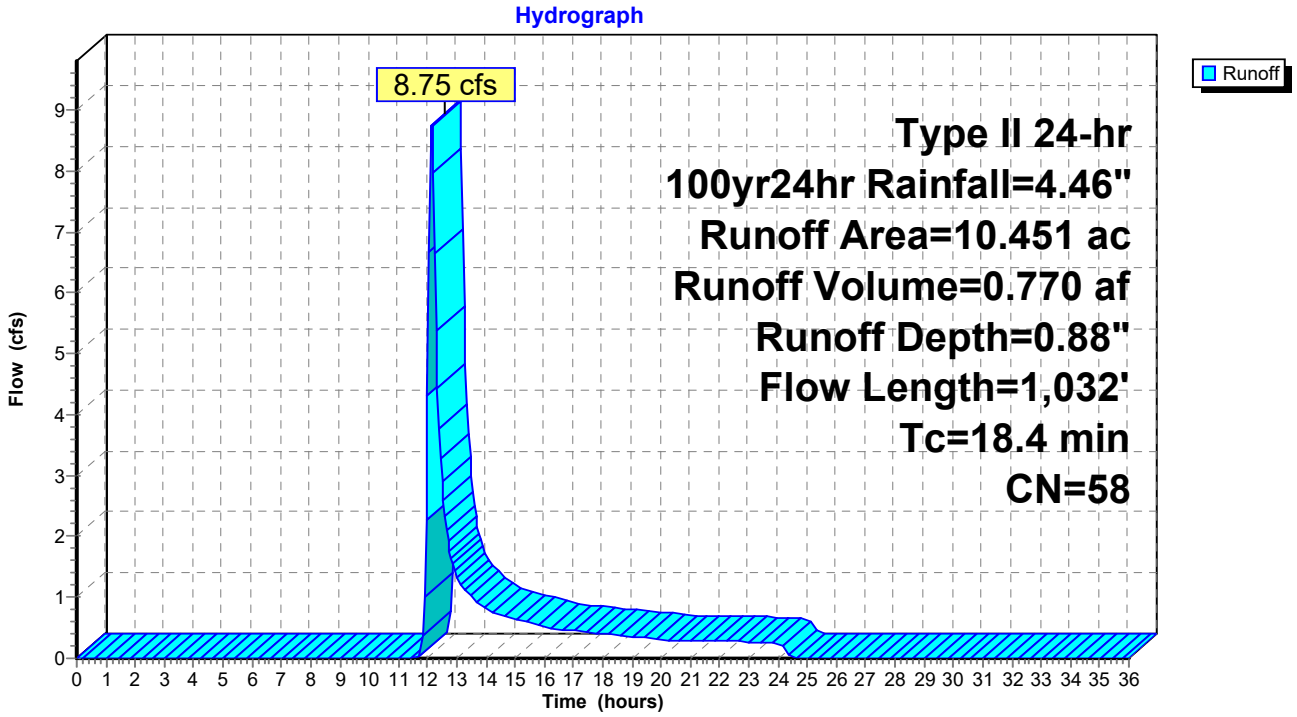
Runoff = 8.75 cfs @ 12.14 hrs, Volume= 0.770 af, Depth= 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.119 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.225 | 61 | Pasture/Hay, HSG B |
| * | 0.248 | 61 | Pasture/Hay, HSG B |
| * | 2.121 | 61 | Pasture/Hay, HSG B |
| * | 0.732 | 71 | Cultivated Crops, HSG B |
| * | 0.126 | 71 | Cultivated Crops, HSG B |
| * | 0.180 | 71 | Cultivated Crops, HSG B |
| * | 0.003 | 60 | Mixed Forest, HSG B |
| * | 0.020 | 55 | Deciduous Forest, HSG B |
| * | 0.038 | 55 | Deciduous Forest, HSG B |
| * | 1.353 | 55 | Deciduous Forest, HSG B |
| * | 5.170 | 55 | Deciduous Forest, HSG B |
| * | 0.115 | 60 | Mixed Forest, HSG B |
| | 10.451 | 58 | Weighted Average |
| | 10.451 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 100 | 0.0365 | 0.37 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.8 | 170 | 0.0297 | 1.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 28 | 0.0323 | 1.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.1 | 441 | 0.0434 | 1.04 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.7 | 292 | 0.0430 | 1.04 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 18.4 | 1,032 | Total | | | |

## Subcatchment 3: WS3



## Summary for Subcatchment 5: WS5

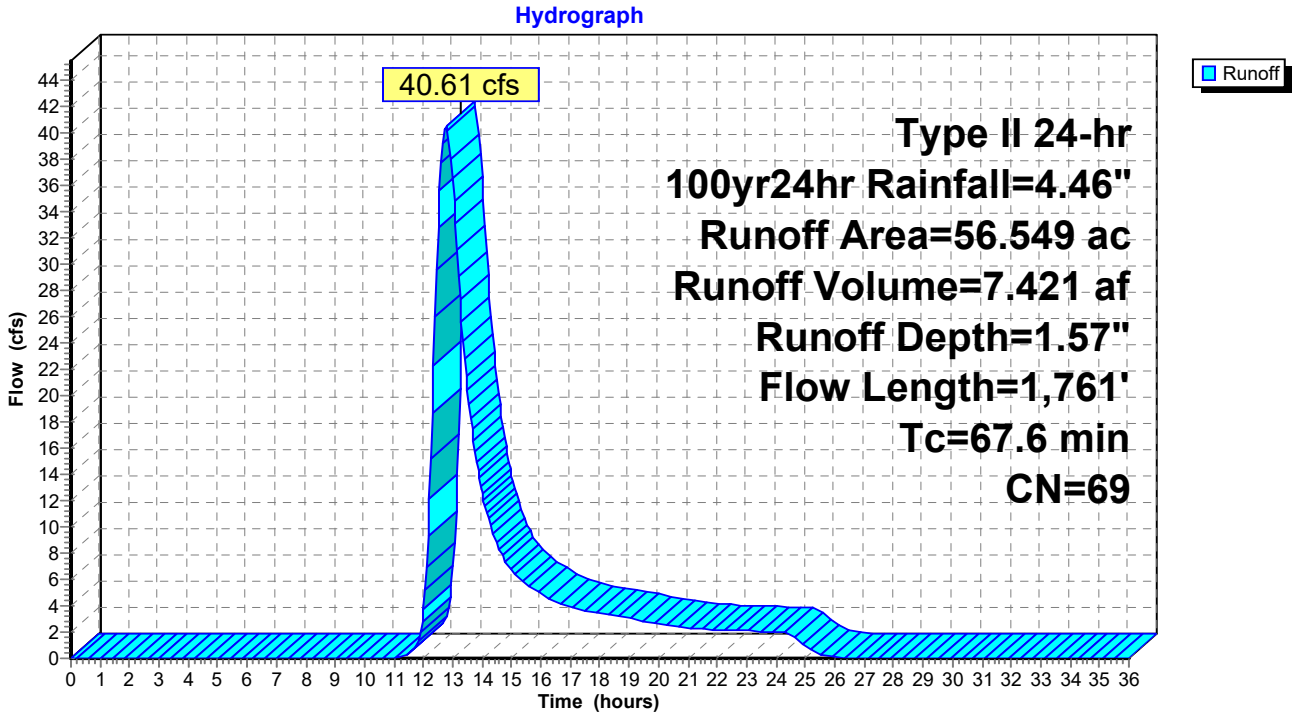
Runoff = 40.61 cfs @ 12.77 hrs, Volume= 7.421 af, Depth= 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.170 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 77 | Deciduous Forest, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.207 | 77 | Deciduous Forest, HSG D |
| * | 0.320 | 80 | Pasture/Hay, HSG D |
| * | 0.222 | 55 | Deciduous Forest, HSG B |
| * | 0.065 | 60 | Mixed Forest, HSG B |
| * | 0.041 | 76 | Mixed Forest, HSG D |
| * | 1.273 | 55 | Deciduous Forest, HSG B |
| * | 0.197 | 77 | Deciduous Forest, HSG D |
| * | 1.557 | 55 | Evergreen Forest, HSG B |
| * | 1.056 | 71 | Cultivated Crops, HSG B |
| * | 5.655 | 81 | Cultivated Crops, HSG D |
| * | 3.495 | 71 | Cultivated Crops, HSG B |
| * | 7.748 | 81 | Cultivated Crops, HSG D |
| * | 0.203 | 55 | Deciduous Forest, HSG B |
| * | 0.134 | 55 | Deciduous Forest, HSG B |
| * | 0.221 | 61 | Pasture/Hay, HSG B |
| * | 1.557 | 61 | Pasture/Hay, HSG B |
| * | 2.669 | 55 | Deciduous Forest, HSG B |
| * | 0.222 | 55 | Deciduous Forest, HSG B |
| * | 0.222 | 86 | Woody Wetlands, HSG B |
| * | 0.667 | 55 | Deciduous Forest, HSG B |
| * | 0.061 | 86 | Woody Wetlands, HSG B |
| * | 0.222 | 60 | Mixed Forest, HSG B |
| * | 0.667 | 86 | Woody Wetlands, HSG B |
| * | 0.139 | 86 | Woody Wetlands, HSG B |
| * | 0.083 | 86 | Woody Wetlands, HSG D |
| * | 12.485 | 55 | Evergreen Forest, HSG B |
| * | 0.508 | 55 | Evergreen Forest, HSG B |
| * | 0.018 | 55 | Evergreen Forest, HSG B |
| * | 0.028 | 74 | Evergreen Forest, HSG D |
| * | 0.143 | 74 | Evergreen Forest, HSG D |
| * | 0.066 | 55 | Evergreen Forest, HSG B |
| * | 0.024 | 55 | Evergreen Forest, HSG B |
| * | 0.037 | 74 | Evergreen Forest, HSG D |
| * | 0.171 | 55 | Deciduous Forest, HSG B |
| * | 0.095 | 55 | Deciduous Forest, HSG B |
| * | 0.875 | 77 | Deciduous Forest, HSG D |
| * | 0.723 | 60 | Mixed Forest, HSG B |
| * | 0.070 | 60 | Mixed Forest, HSG B |
| * | 0.888 | 76 | Mixed Forest, HSG D |
| * | 1.192 | 61 | Pasture/Hay, HSG B |
| * | 0.918 | 80 | Pasture/Hay, HSG D |
| * | 0.033 | 88 | Developed Low Intensity, HSG B |
| * | 0.394 | 71 | Cultivated Crops, HSG B |
| * | 1.346 | 71 | Cultivated Crops, HSG B |
| * | 6.790 | 81 | Cultivated Crops, HSG D |
| | 56.549 | 69 | Weighted Average |
| | 56.549 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.7 | 100 | 0.0070 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.5 | 83 | 0.0038 | 0.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 102 | 0.0264 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.9 | 134 | 0.0008 | 0.14 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 5.5 | 80 | 0.0023 | 0.24 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.4 | 135 | 0.0174 | 0.66 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.6 | 134 | 0.0286 | 0.84 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.1 | 159 | 0.0168 | 0.65 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.6 | 79 | 0.0278 | 0.83 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 78 | 0.0342 | 0.92 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 5.3 | 170 | 0.0116 | 0.54 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.1 | 124 | 0.0178 | 0.67 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.0 | 90 | 0.0227 | 0.75 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.1 | 66 | 0.0218 | 1.03 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 108 | 0.0125 | 0.56 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 12 | 0.0030 | 0.38 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 107 | 0.0021 | 0.32 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 67.6 | 1,761 | Total | | | |

## Subcatchment 5: WS5



## Summary for Subcatchment 6: WS6

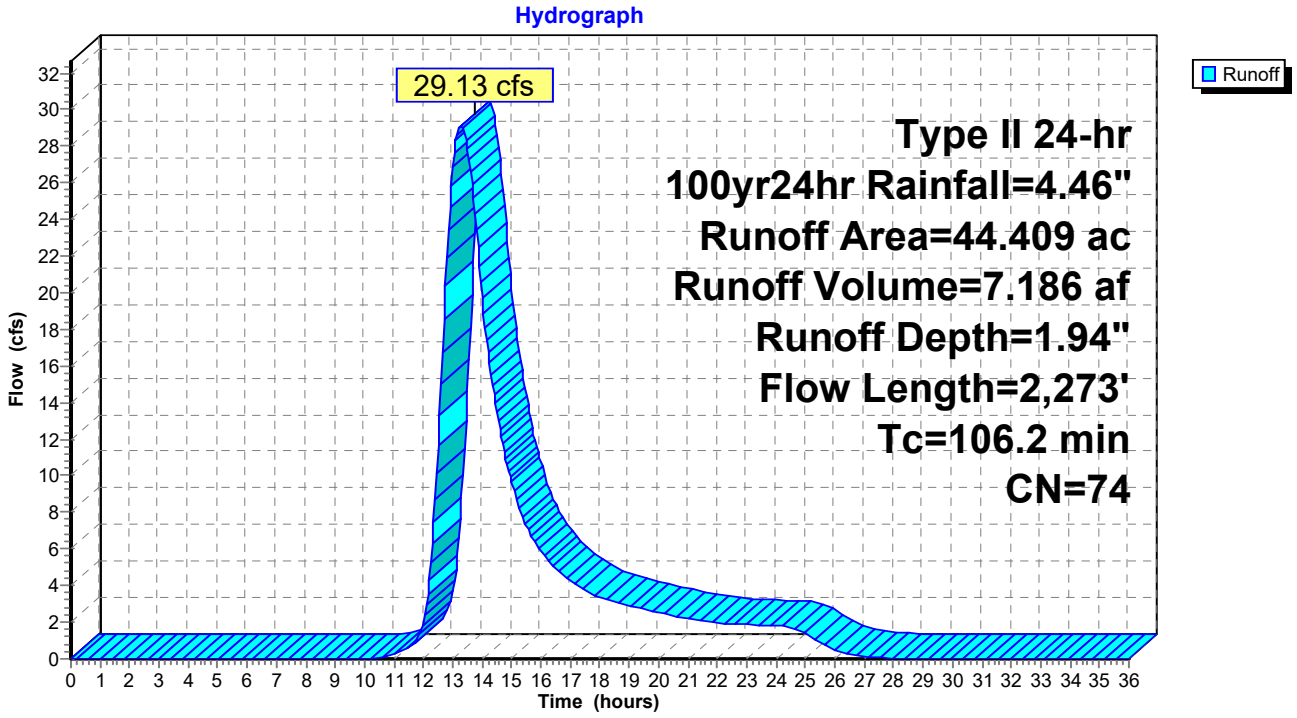
Runoff = 29.13 cfs @ 13.30 hrs, Volume= 7.186 af, Depth= 1.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 0.213 | 80 | Pasture/Hay, HSG D |
| * | 1.057 | 71 | Cultivated Crops, HSG B |
| * | 1.741 | 71 | Cultivated Crops, HSG B |
| * | 6.750 | 71 | Cultivated Crops, HSG B |
| * | 7.912 | 81 | Cultivated Crops, HSG D |
| * | 0.978 | 55 | Deciduous Forest, HSG B |
| * | 0.803 | 60 | Mixed Forest, HSG B |
| * | 0.087 | 60 | Mixed Forest, HSG B |
| * | 0.115 | 55 | Evergreen Forest, HSG B |
| * | 0.108 | 55 | Evergreen Forest, HSG B |
| * | 0.125 | 60 | Mixed Forest, HSG B |
| * | 0.130 | 55 | Evergreen Forest, HSG B |
| * | 0.175 | 86 | Woody Wetlands, HSG B |
| * | 0.654 | 86 | Woody Wetlands, HSG B |
| * | 3.259 | 55 | Evergreen Forest, HSG B |
| * | 0.361 | 55 | Evergreen Forest, HSG B |
| * | 0.062 | 55 | Evergreen Forest, HSG B |
| * | 0.004 | 55 | Evergreen Forest, HSG B |
| * | 0.689 | 55 | Evergreen Forest, HSG B |
| * | 1.060 | 55 | Deciduous Forest, HSG B |
| * | 0.150 | 77 | Deciduous Forest, HSG D |
| * | 0.880 | 60 | Mixed Forest, HSG B |
| * | 0.362 | 76 | Mixed Forest, HSG D |
| * | 0.188 | 86 | Woody Wetlands, HSG B |
| * | 1.351 | 86 | Woody Wetlands, HSG B |
| * | 0.632 | 86 | Woody Wetlands, HSG D |
| * | 0.225 | 84 | Developed Open Space, HSG D |
| * | 0.047 | 93 | Developed Low Intensity, HSG D |
| * | 0.128 | 84 | Developed Open Space, HSG D |
| * | 0.049 | 93 | Developed Low Intensity, HSG D |
| * | 0.198 | 88 | Developed Low Intensity, HSG B |
| * | 0.345 | 93 | Developed Low Intensity, HSG D |
| * | 0.790 | 71 | Cultivated Crops, HSG B |
| * | 0.097 | 71 | Cultivated Crops, HSG B |
| * | 12.570 | 81 | Cultivated Crops, HSG D |
| | 44.409 | 74 | Weighted Average |
| | 44.409 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 22.5 | 100 | 0.0294 | 0.07 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.7 | 86 | 0.0286 | 0.85 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 6.9 | 252 | 0.0147 | 0.61 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.9 | 168 | 0.0374 | 0.97 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 21.4 | 107 | 0.0003 | 0.08 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 23.6 | 663 | 0.0027 | 0.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.4 | 745 | 0.0032 | 0.51 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 150 | 0.0098 | 0.89 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 106.2 | 2,273 | Total | | | |

## Subcatchment 6: WS6



## Summary for Subcatchment 7: WS7

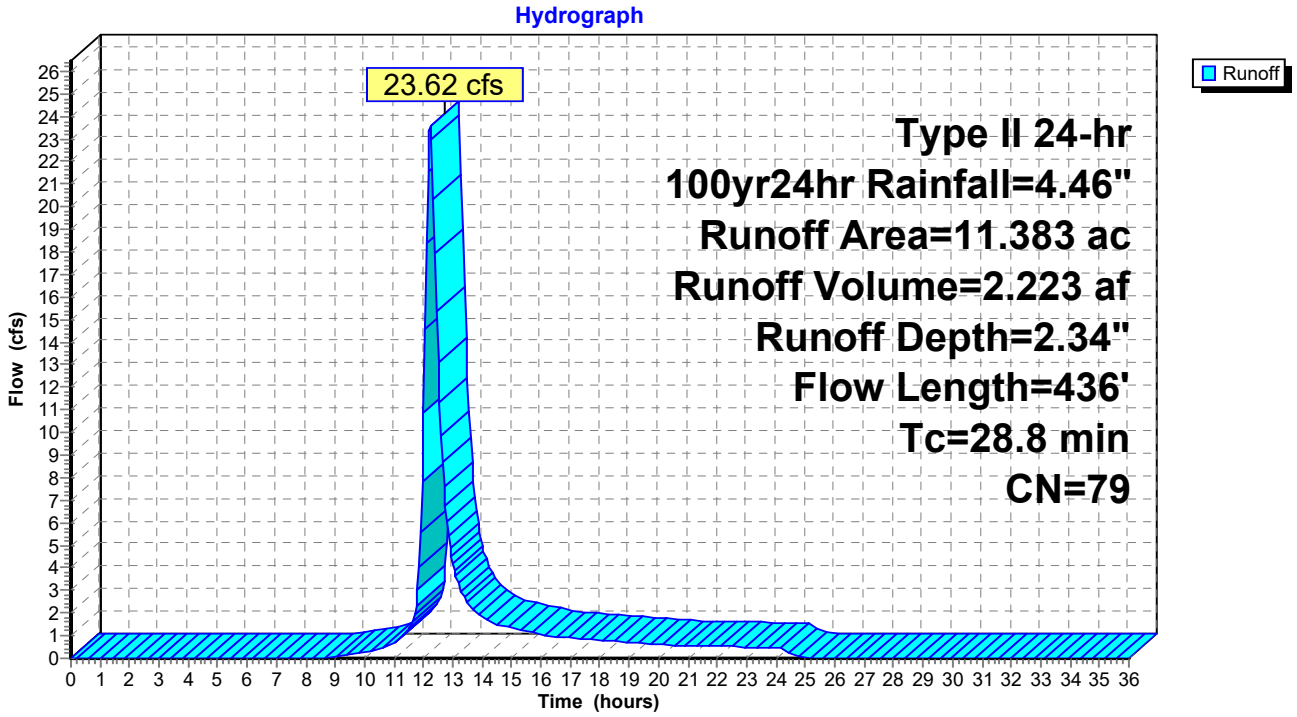
Runoff = 23.62 cfs @ 12.23 hrs, Volume= 2.223 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.227 | 74 | Evergreen Forest, HSG D |
| * | 2.915 | 80 | Pasture/Hay, HSG D |
| * | 0.262 | 80 | Pasture/Hay, HSG D |
| * | 0.052 | 84 | Developed Open Space, HSG D |
| * | 0.034 | 68 | Developed Open Space, HSG B |
| * | 0.019 | 86 | Woody Wetlands, HSG D |
| * | 0.173 | 81 | Cultivated Crops, HSG D |
| * | 6.417 | 81 | Cultivated Crops, HSG D |
| * | 1.284 | 71 | Cultivated Crops, HSG B |
| | 11.383 | 79 | Weighted Average |
| | 11.383 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 22.2 | 100 | 0.0007 | 0.08 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 20 | 0.0139 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 104 | 0.0155 | 1.12 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 69 | 0.0074 | 0.78 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.3 | 144 | 0.0108 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 28.8 | 436 | Total | | | |

## Subcatchment 7: WS7



## Summary for Subcatchment 8: WS8

Runoff = 207.93 cfs @ 12.59 hrs, Volume= 31.196 af, Depth= 2.34"

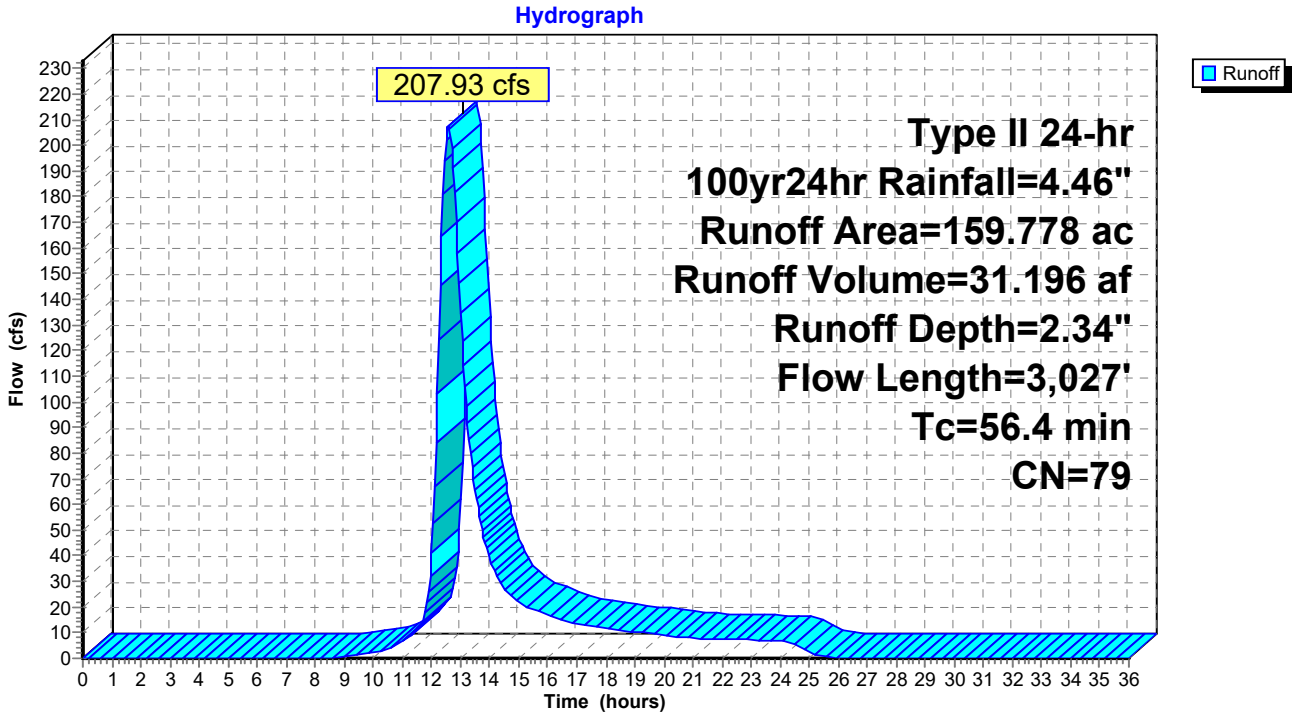
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.381 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 55 | Deciduous Forest, HSG B |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 55 | Deciduous Forest, HSG B |
| * | 0.445 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 80 | Pasture/Hay, HSG D |
| * | 1.334 | 80 | Pasture/Hay, HSG D |
| * | 0.890 | 77 | Deciduous Forest, HSG D |
| * | 1.775 | 80 | Pasture/Hay, HSG D |
| * | 0.468 | 61 | Pasture/Hay, HSG B |
| * | 1.837 | 80 | Pasture/Hay, HSG D |
| * | 0.038 | 80 | Pasture/Hay, HSG D |
| * | 0.662 | 74 | Evergreen Forest, HSG D |
| * | 4.441 | 80 | Pasture/Hay, HSG D |
| * | 1.655 | 61 | Pasture/Hay, HSG B |
| * | 0.489 | 68 | Developed Open Space, HSG B |
| * | 0.047 | 68 | Developed Open Space, HSG B |
| * | 0.667 | 68 | Developed Open Space, HSG B |
| * | 2.294 | 61 | Pasture/Hay, HSG B |
| * | 0.010 | 80 | Pasture/Hay, HSG D |
| * | 0.121 | 68 | Developed Open Space, HSG B |
| * | 0.097 | 68 | Developed Open Space, HSG B |
| * | 0.074 | 68 | Developed Open Space, HSG B |
| * | 0.593 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 89 | Developed Medium Intensity, HSG B |
| * | 0.021 | 68 | Developed Open Space, HSG B |
| * | 0.235 | 93 | Developed Low Intensity, HSG D |
| * | 0.045 | 88 | Developed Low Intensity, HSG B |
| * | 1.339 | 88 | Developed Low Intensity, HSG B |
| * | 0.065 | 86 | Woody Wetlands, HSG D |
| * | 0.040 | 86 | Woody Wetlands, HSG D |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| * | 0.092 | 86 | Woody Wetlands, HSG D |
| * | 3.011 | 86 | Woody Wetlands, HSG D |
| * | 0.229 | 86 | Woody Wetlands, HSG D |
| * | 10.236 | 86 | Woody Wetlands, HSG D |
| * | 1.891 | 86 | Woody Wetlands, HSG D |
| * | 8.521 | 71 | Cultivated Crops, HSG B |
| * | 6.911 | 81 | Cultivated Crops, HSG D |
| * | 7.655 | 71 | Cultivated Crops, HSG B |
| * | 4.194 | 81 | Cultivated Crops, HSG D |
| * | 0.024 | 81 | Cultivated Crops, HSG D |
| * | 2.120 | 71 | Cultivated Crops, HSG B |
| * | 74.112 | 81 | Cultivated Crops, HSG D |
| * | 11.731 | 81 | Cultivated Crops, HSG D |
| * | 7.102 | 71 | Cultivated Crops, HSG B |
| * | 0.055 | 61 | Pasture/Hay, HSG B |
| * | 0.025 | 80 | Pasture/Hay, HSG D |

159.778 79 Weighted Average
159.778 100.00% Pervious Area

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.8 | 100 | 0.0053 | 0.17 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.5 | 185 | 0.0096 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 433 | 0.0381 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 388 | 0.0321 | 1.61 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.8 | 410 | 0.0124 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 100 | 0.0119 | 0.98 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 178 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 180 | 0.0063 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.2 | 232 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.6 | 260 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 160 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.4 | 258 | 0.0194 | 1.25 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 143 | 0.0170 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 56.4 | 3,027 | Total | | | |

## Subcatchment 8: WS8



## Summary for Subcatchment 9: WS9

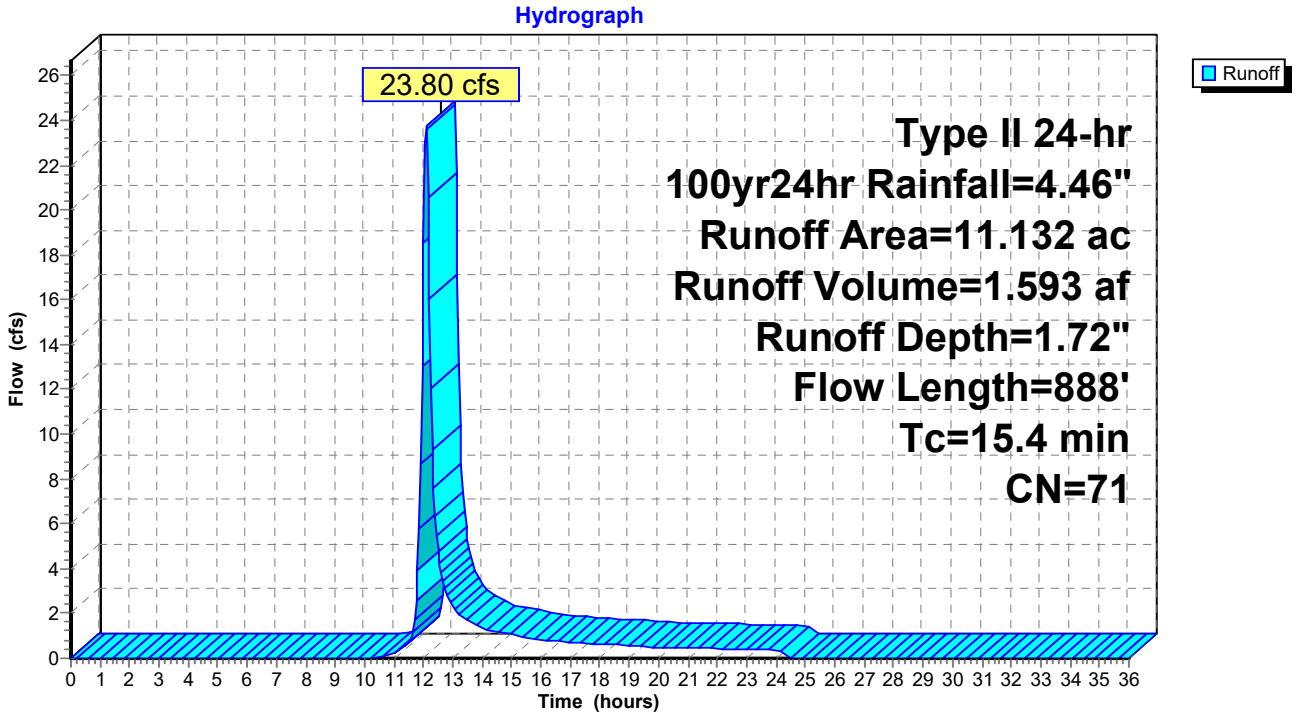
Runoff = 23.80 cfs @ 12.08 hrs, Volume= 1.593 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.016 | 68 | Developed Open Space, HSG B |
| * | 0.042 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.222 | 88 | Developed Low Intensity, HSG B |
| * | 0.137 | 88 | Developed Low Intensity, HSG B |
| * | 0.131 | 61 | Pasture/Hay, HSG B |
| * | 10.558 | 71 | Cultivated Crops, HSG B |
| | 11.132 | 71 | Weighted Average |
| | 11.132 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.7 | 100 | 0.0136 | 0.25 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.3 | 237 | 0.0381 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 285 | 0.0344 | 1.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 265 | 0.0201 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.4 | 888 | Total | | | |

## Subcatchment 9: WS9



## Summary for Subcatchment 10: WS10

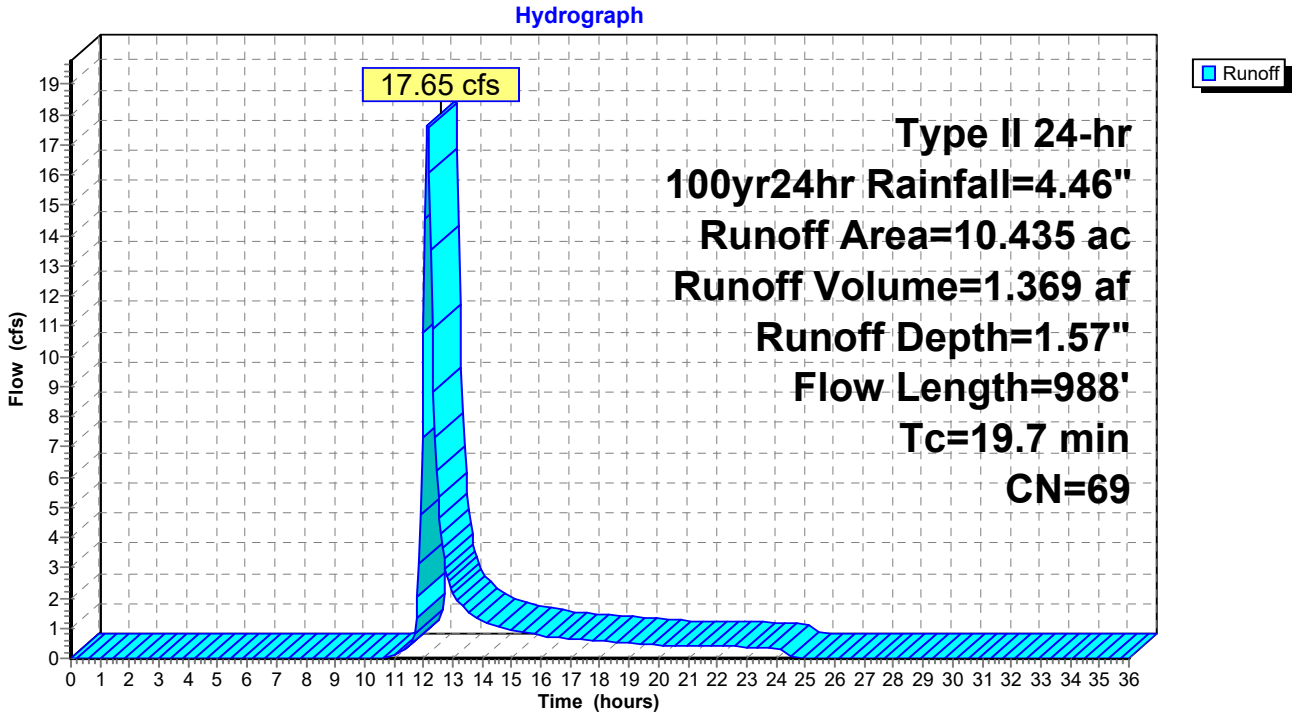
Runoff = 17.65 cfs @ 12.14 hrs, Volume= 1.369 af, Depth= 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.140 | 61 | Pasture/Hay, HSG B |
| * | 0.101 | 55 | Deciduous Forest, HSG B |
| * | 0.140 | 60 | Mixed Forest, HSG B |
| * | 1.044 | 55 | Deciduous Forest, HSG B |
| * | 9.009 | 71 | Cultivated Crops, HSG B |
| | 10.435 | 69 | Weighted Average |
| | 10.435 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.9 | 72 | 0.0265 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.3 | 28 | 0.0062 | 0.14 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.8 | 239 | 0.0132 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 272 | 0.0180 | 1.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 226 | 0.0204 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 151 | 0.0188 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 19.7 | 988 | Total | | | |

## Subcatchment 10: WS10



## Summary for Subcatchment 11: WS11

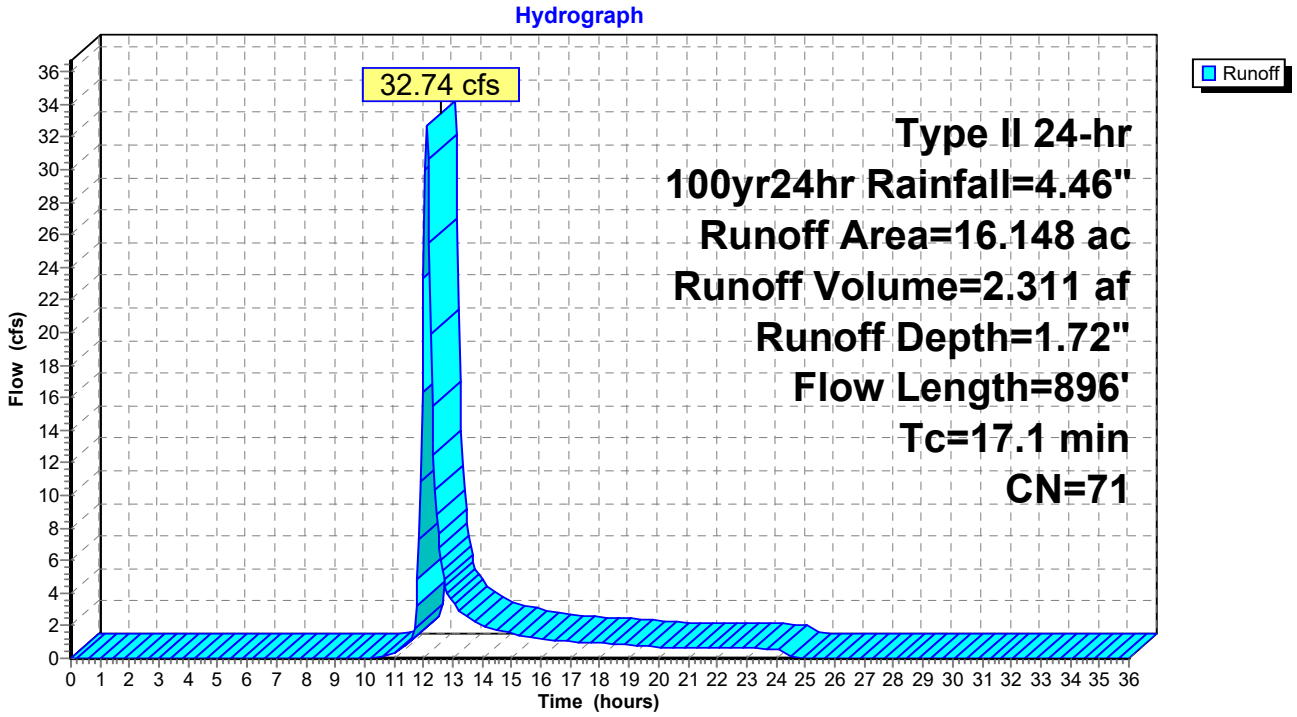
Runoff = 32.74 cfs @ 12.10 hrs, Volume= 2.311 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.211 | 88 | Developed Low Intensity, HSG B |
| * | 0.445 | 61 | Pasture/Hay, HSG B |
| * | 0.005 | 61 | Pasture/Hay, HSG B |
| * | 0.050 | 80 | Pasture/Hay, HSG D |
| * | 0.048 | 61 | Pasture/Hay, HSG B |
| * | 15.252 | 71 | Cultivated Crops, HSG B |
| * | 0.137 | 81 | Cultivated Crops, HSG D |
| | 16.148 | 71 | Weighted Average |
| | 16.148 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.2 | 100 | 0.0113 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 5.7 | 488 | 0.0250 | 1.42 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 308 | 0.0183 | 1.22 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 17.1 | 896 | Total | | | |

## Subcatchment 11: WS11



## Summary for Subcatchment 12: WS12

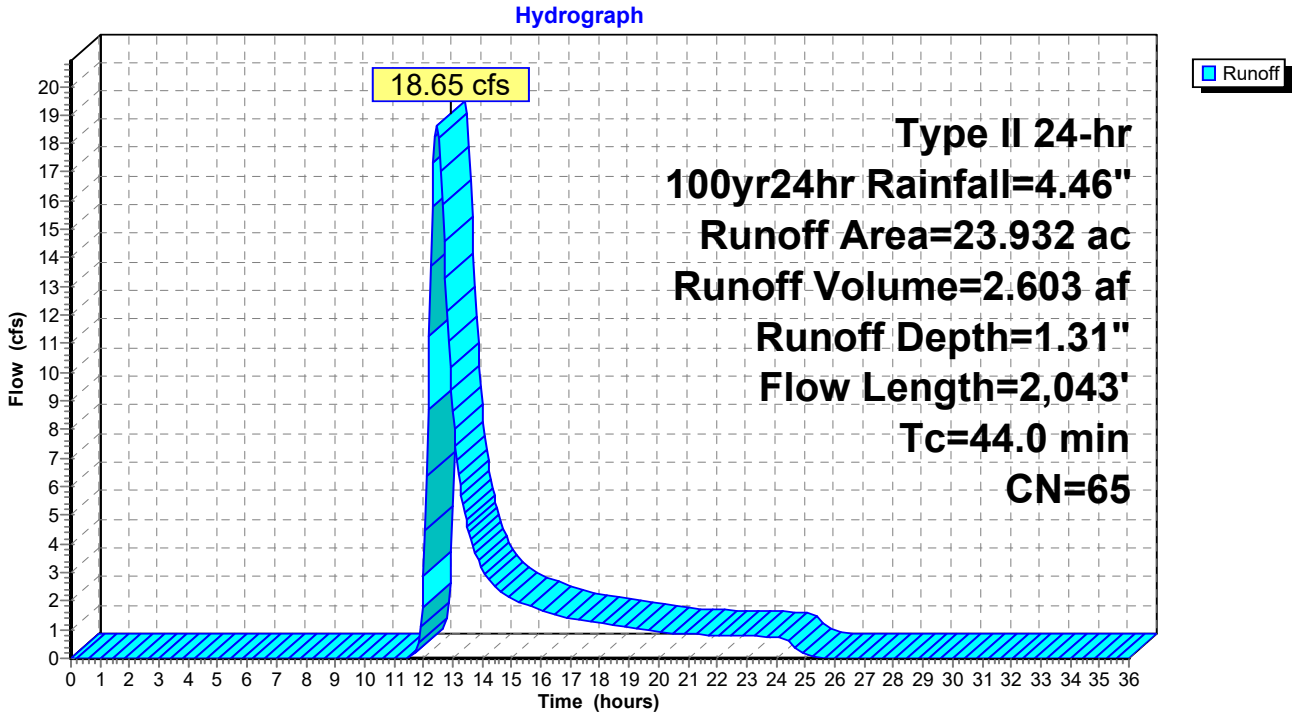
Runoff = 18.65 cfs @ 12.46 hrs, Volume= 2.603 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.058 | 55 | Deciduous Forest, HSG B |
| * | 0.167 | 80 | Pasture/Hay, HSG D |
| * | 0.004 | 71 | Cultivated Crops, HSG B |
| * | 0.445 | 61 | Pasture/Hay, HSG B |
| * | 0.415 | 71 | Cultivated Crops, HSG B |
| * | 0.030 | 81 | Cultivated Crops, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 71 | Cultivated Crops, HSG B |
| * | 4.276 | 61 | Pasture/Hay, HSG B |
| * | 0.527 | 80 | Pasture/Hay, HSG D |
| * | 0.246 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.846 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.654 | 55 | Deciduous Forest, HSG B |
| * | 0.000 | 71 | Cultivated Crops, HSG B |
| * | 2.697 | 71 | Cultivated Crops, HSG B |
| * | 2.901 | 81 | Cultivated Crops, HSG D |
| | 23.932 | 65 | Weighted Average |
| | 23.932 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.9 | 100 | 0.0190 | 0.28 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 14.7 | 569 | 0.0051 | 0.64 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 59 | 0.1043 | 2.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 105 | 0.0414 | 1.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.6 | 350 | 0.0073 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.6 | 50 | 0.0387 | 1.38 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 339 | 0.0282 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 143 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 25 | 0.0181 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.3 | 303 | 0.0129 | 0.80 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 44.0 | 2,043 | Total | | | |

## Subcatchment 12: WS12



## Summary for Subcatchment 13: WS13

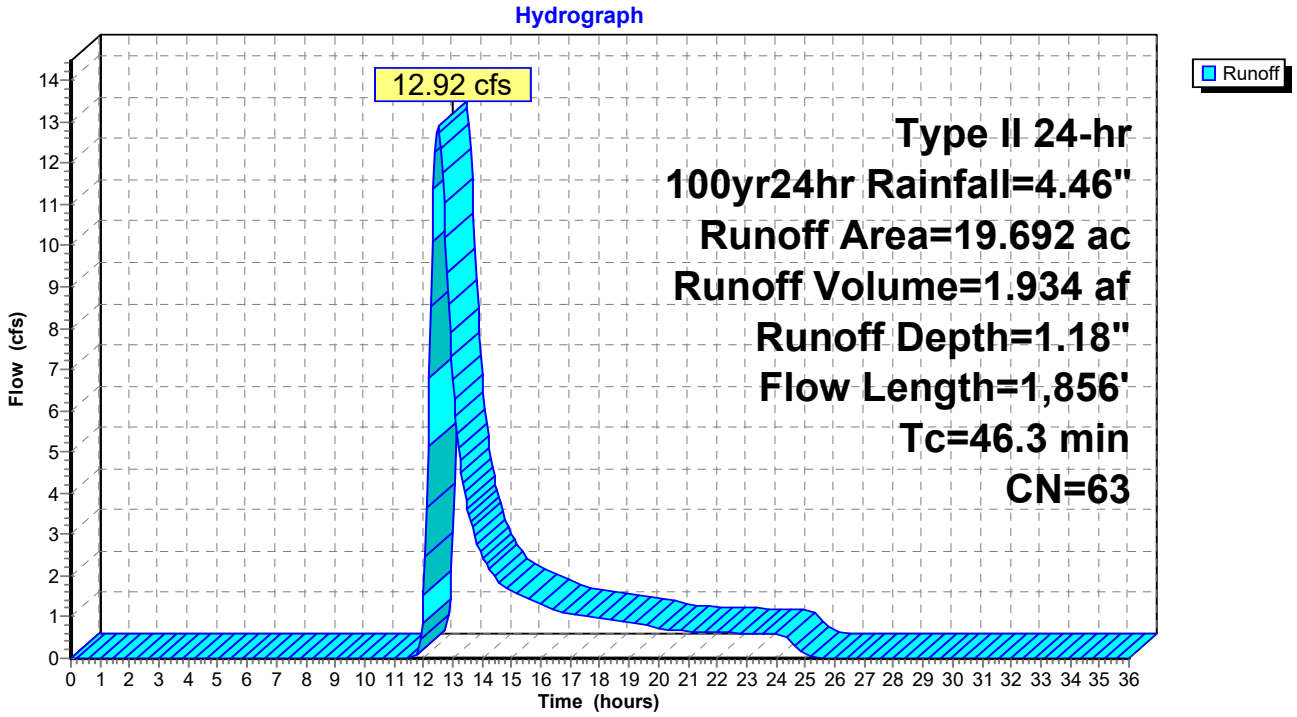
Runoff = 12.92 cfs @ 12.50 hrs, Volume= 1.934 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.709 | 61 | Pasture/Hay, HSG B |
| * | 0.445 | 61 | Pasture/Hay, HSG B |
| * | 0.217 | 68 | Developed Open Space, HSG B |
| * | 2.429 | 60 | Mixed Forest, HSG B |
| * | 0.357 | 55 | Deciduous Forest, HSG B |
| * | 3.573 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.768 | 55 | Deciduous Forest, HSG B |
| * | 6.074 | 71 | Cultivated Crops, HSG B |
| * | 0.120 | 81 | Cultivated Crops, HSG D |
| | 19.692 | 63 | Weighted Average |
| | 19.692 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.1 | 100 | 0.0195 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.6 | 416 | 0.0171 | 0.92 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 9.6 | 318 | 0.0122 | 0.55 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.8 | 174 | 0.0439 | 1.05 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 5.5 | 254 | 0.0238 | 0.77 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 7.2 | 533 | 0.0186 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 62 | 0.0055 | 0.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 46.3 | 1,856 | Total | | | |

## Subcatchment 13: WS13



## Summary for Subcatchment 14: WS14

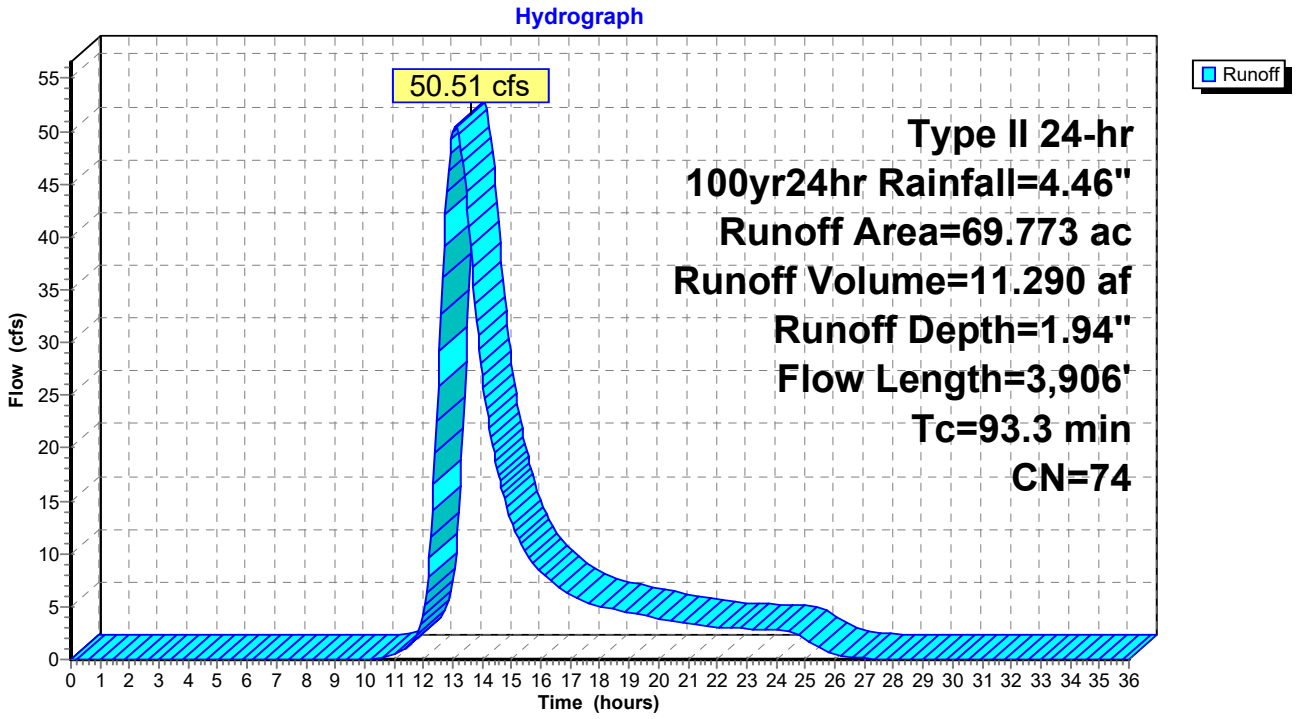
Runoff = 50.51 cfs @ 13.13 hrs, Volume= 11.290 af, Depth= 1.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.295 | 55 | Deciduous Forest, HSG B |
| * | 0.007 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.017 | 61 | Pasture/Hay, HSG B |
| * | 0.472 | 61 | Pasture/Hay, HSG B |
| * | 0.003 | 85 | Grassland/Herbaceous, HSG D |
| * | 3.784 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.055 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.025 | 77 | Deciduous Forest, HSG D |
| * | 3.895 | 55 | Deciduous Forest, HSG B |
| * | 1.726 | 55 | Deciduous Forest, HSG B |
| * | 21.731 | 71 | Cultivated Crops, HSG B |
| * | 33.261 | 81 | Cultivated Crops, HSG D |
| * | 4.280 | 71 | Cultivated Crops, HSG B |
| | 69.773 | 74 | Weighted Average |
| | 69.773 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.2 | 100 | 0.0070 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.9 | 259 | 0.0080 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 165 | 0.0074 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.9 | 450 | 0.0188 | 0.69 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.0 | 192 | 0.0258 | 0.80 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.2 | 746 | 0.0224 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 571 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 336 | 0.0153 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.8 | 377 | 0.0022 | 0.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 286 | 0.0182 | 1.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 297 | 0.0207 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 127 | 0.0076 | 0.78 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 93.3 | 3,906 | Total | | | |

## Subcatchment 14: WS14



## Summary for Subcatchment 15: WS15

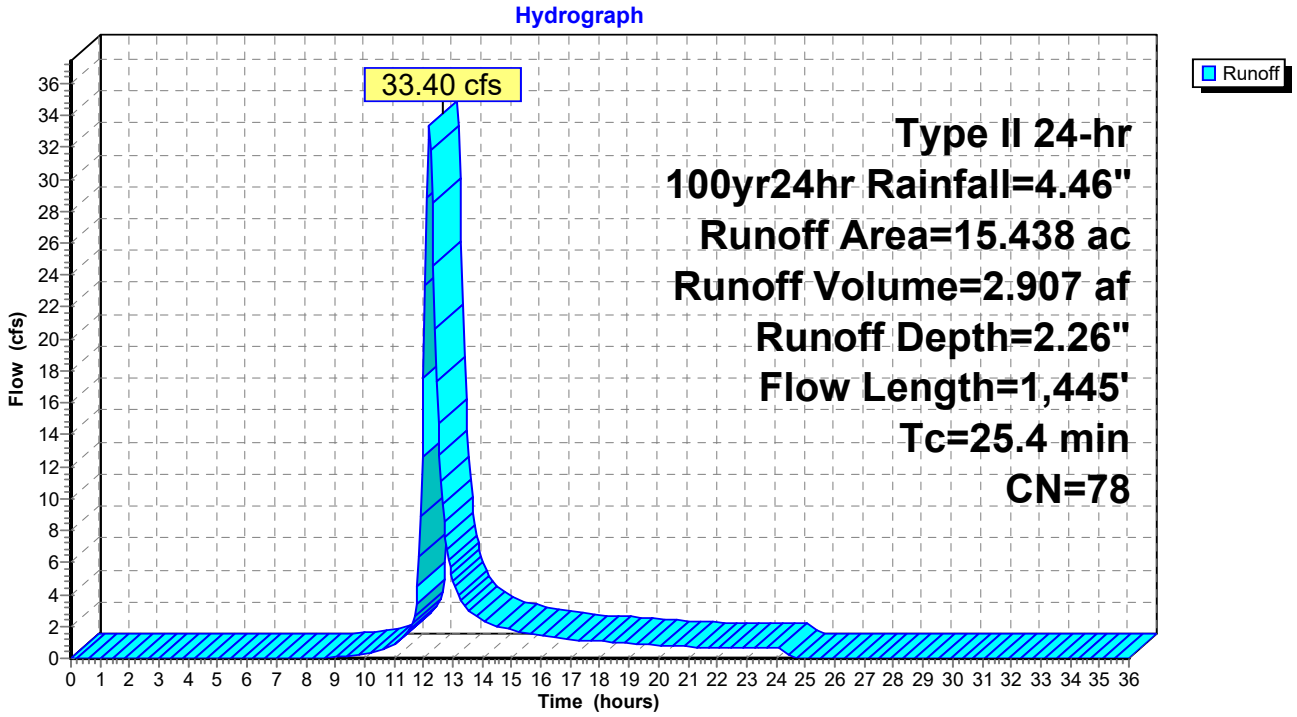
Runoff = 33.40 cfs @ 12.19 hrs, Volume= 2.907 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.042 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.021 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.169 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.126 | 55 | Deciduous Forest, HSG B |
| * | 0.545 | 77 | Deciduous Forest, HSG D |
| * | 2.220 | 77 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Shrub/Scrub, HSG D |
| * | 0.432 | 80 | Shrub/Scrub, HSG D |
| * | 1.112 | 76 | Mixed Forest, HSG D |
| * | 0.000 | 76 | Mixed Forest, HSG D |
| * | 1.895 | 71 | Cultivated Crops, HSG B |
| * | 8.739 | 81 | Cultivated Crops, HSG D |
| * | 0.070 | 81 | Cultivated Crops, HSG D |
| | 15.438 | 78 | Weighted Average |
| | 15.438 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.2 | 100 | 0.0255 | 0.32 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.7 | 205 | 0.0203 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.9 | 427 | 0.0132 | 1.03 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 5 | 0.0165 | 0.64 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.2 | 94 | 0.0197 | 0.70 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 8.3 | 614 | 0.0188 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.4 | 1,445 | Total | | | |

## Subcatchment 15: WS15



## Summary for Subcatchment 16: WS16

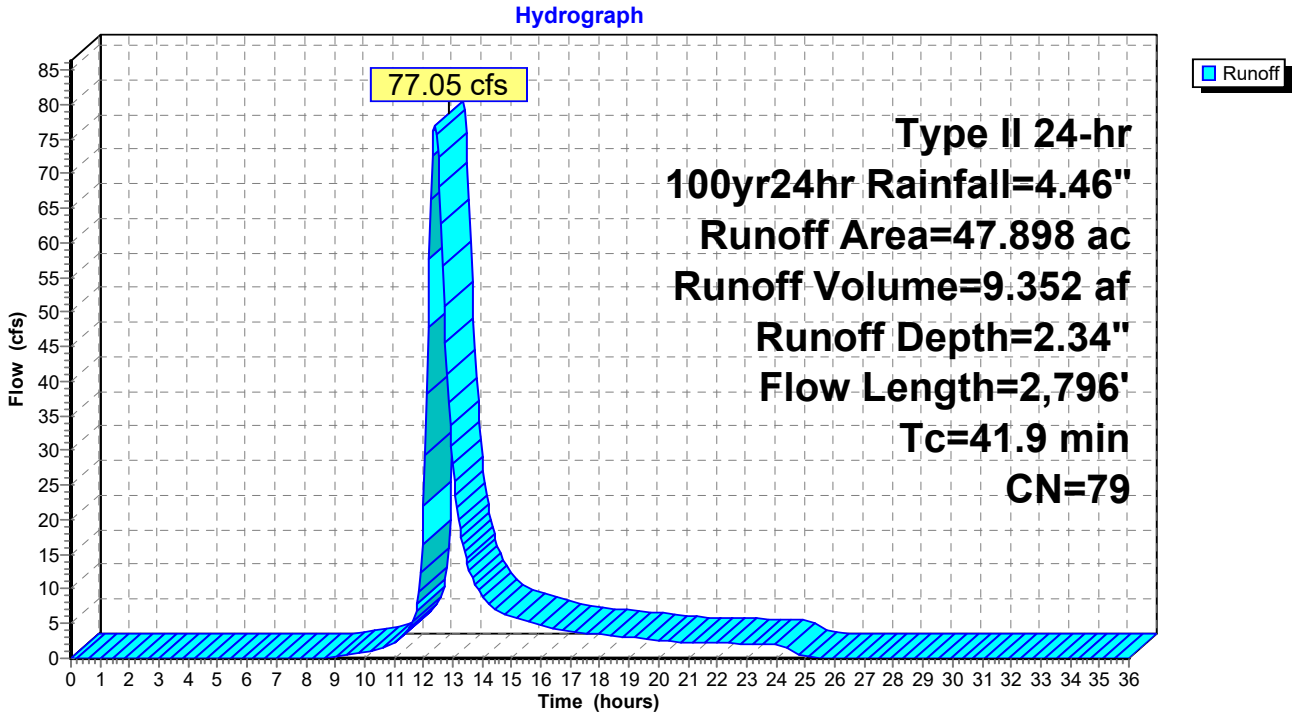
Runoff = 77.05 cfs @ 12.40 hrs, Volume= 9.352 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.205 | 84 | Developed Open Space, HSG D |
| * | 0.128 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.127 | 93 | Developed Low Intensity, HSG D |
| * | 0.287 | 84 | Developed Open Space, HSG D |
| * | 0.713 | 93 | Developed Low Intensity, HSG D |
| * | 0.372 | 84 | Developed Open Space, HSG D |
| * | 6.393 | 71 | Cultivated Crops, HSG B |
| * | 35.785 | 81 | Cultivated Crops, HSG D |
| * | 3.221 | 71 | Cultivated Crops, HSG B |
| | 47.898 | 79 | Weighted Average |
| | 47.898 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.2 | 100 | 0.0431 | 0.39 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.2 | 250 | 0.0431 | 1.87 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 408 | 0.0364 | 1.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.0 | 574 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.7 | 847 | 0.0113 | 0.96 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.8 | 617 | 0.0169 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 41.9 | 2,796 | Total | | | |

## Subcatchment 16: WS16



## Summary for Subcatchment 17: WS17

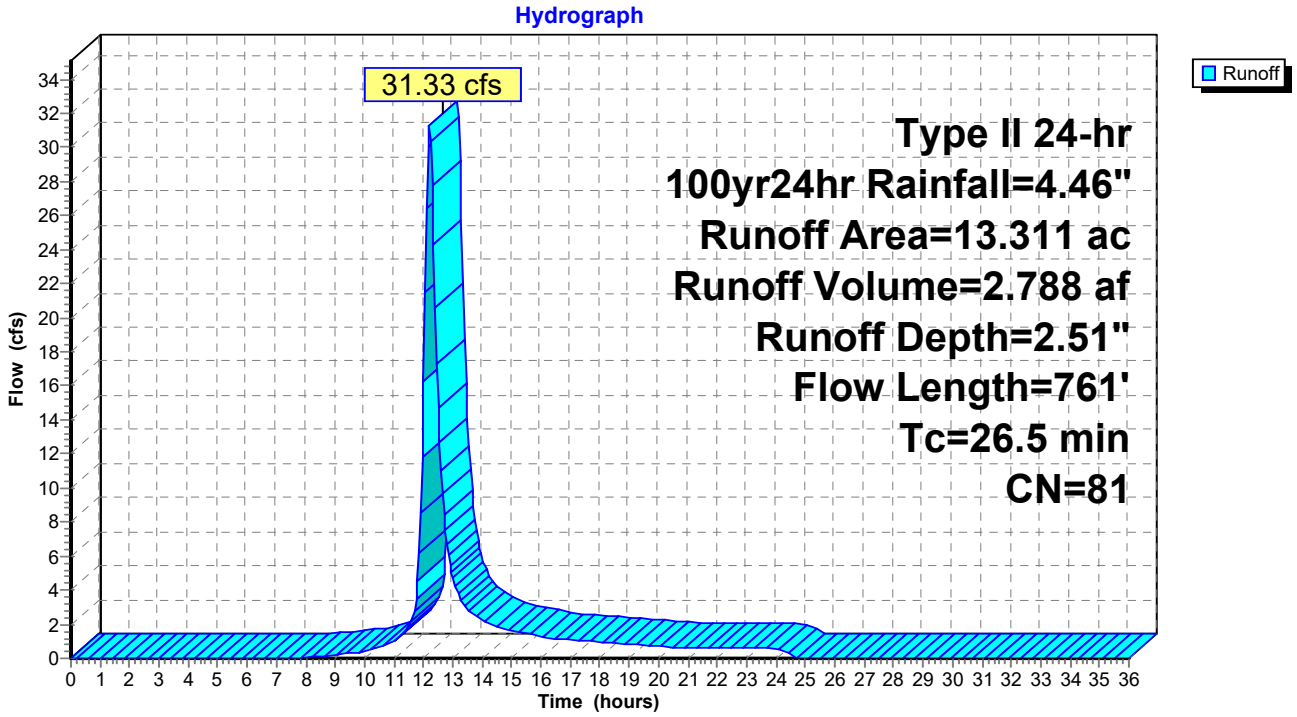
Runoff = 31.33 cfs @ 12.20 hrs, Volume= 2.788 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.046 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.179 | 84 | Developed Open Space, HSG D |
| * | 0.074 | 93 | Developed Low Intensity, HSG D |
| * | 0.072 | 84 | Developed Open Space, HSG D |
| * | 0.107 | 71 | Cultivated Crops, HSG B |
| * | 12.833 | 81 | Cultivated Crops, HSG D |
| | 13.311 | 81 | Weighted Average |
| | 13.311 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.6 | 100 | 0.0073 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.4 | 18 | 0.0058 | 0.68 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 76 | 0.0066 | 0.73 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 114 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.4 | 97 | 0.0027 | 0.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 40 | 0.0073 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 145 | 0.0060 | 0.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.1 | 171 | 0.0039 | 0.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 26.5 | 761 | Total | | | |

## Subcatchment 17: WS17



## Summary for Subcatchment 18: WS18

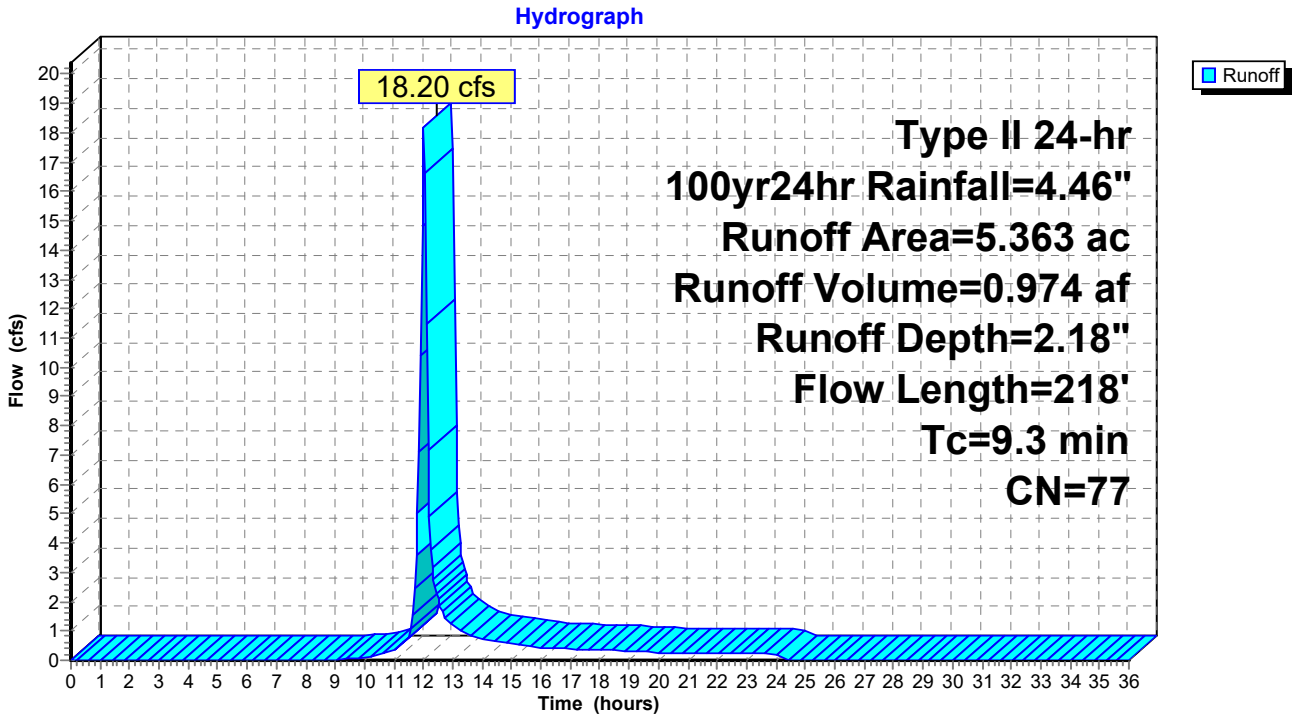
Runoff = 18.20 cfs @ 12.01 hrs, Volume= 0.974 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 2.116 | 71 | Cultivated Crops, HSG B |
| * | 3.247 | 81 | Cultivated Crops, HSG D |
| | 5.363 | 77 | Weighted Average |
| | 5.363 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.6 | 100 | 0.0352 | 0.36 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.2 | 89 | 0.0015 | 0.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 29 | 0.0133 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 218 | Total | | | |

## Subcatchment 18: WS18



## Summary for Subcatchment 19: WS19

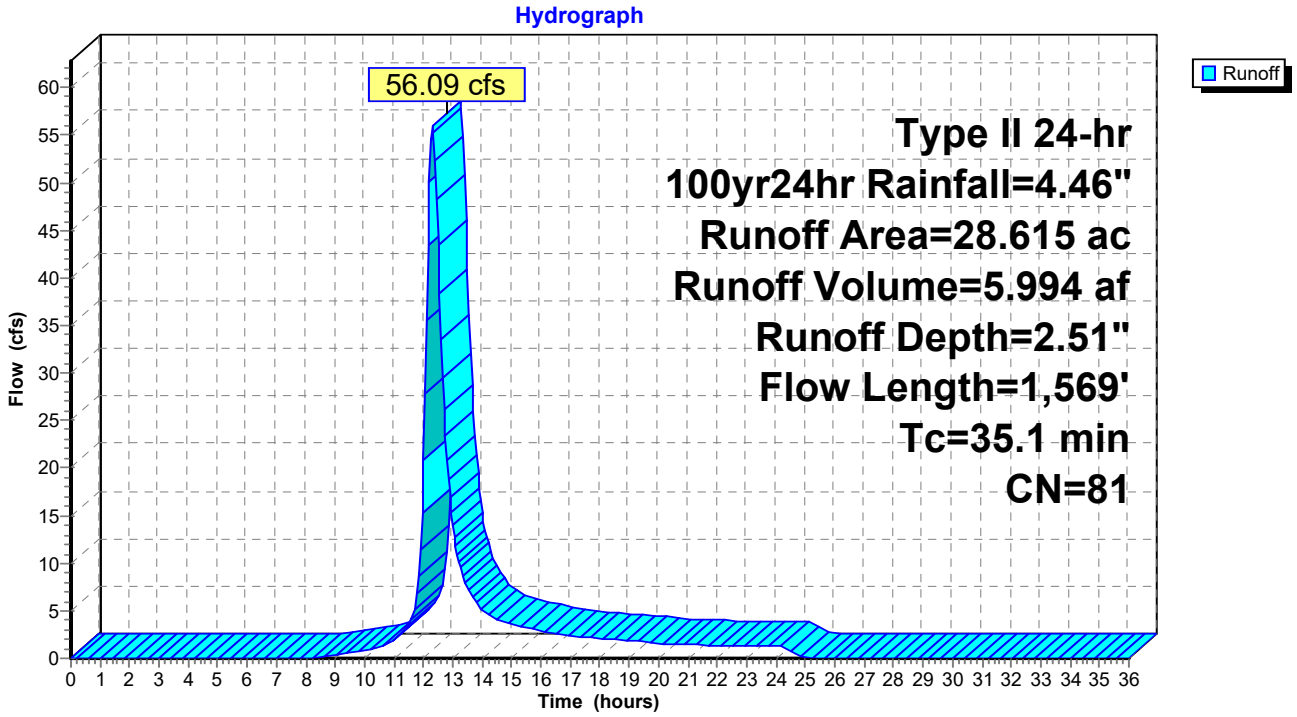
Runoff = 56.09 cfs @ 12.31 hrs, Volume= 5.994 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.077 | 80 | Pasture/Hay, HSG D |
| * | 0.030 | 86 | Woody Wetlands, HSG D |
| * | 0.043 | 84 | Developed Open Space, HSG D |
| * | 0.595 | 84 | Developed Open Space, HSG D |
| * | 27.869 | 81 | Cultivated Crops, HSG D |
| | 28.615 | 81 | Weighted Average |
| | 28.615 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.8 | 100 | 0.0093 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.1 | 158 | 0.0200 | 1.27 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 12.0 | 693 | 0.0115 | 0.96 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.2 | 306 | 0.0083 | 0.82 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.0 | 313 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.1 | 1,569 | Total | | | |

## Subcatchment 19: WS19



## Summary for Subcatchment 20: WS20

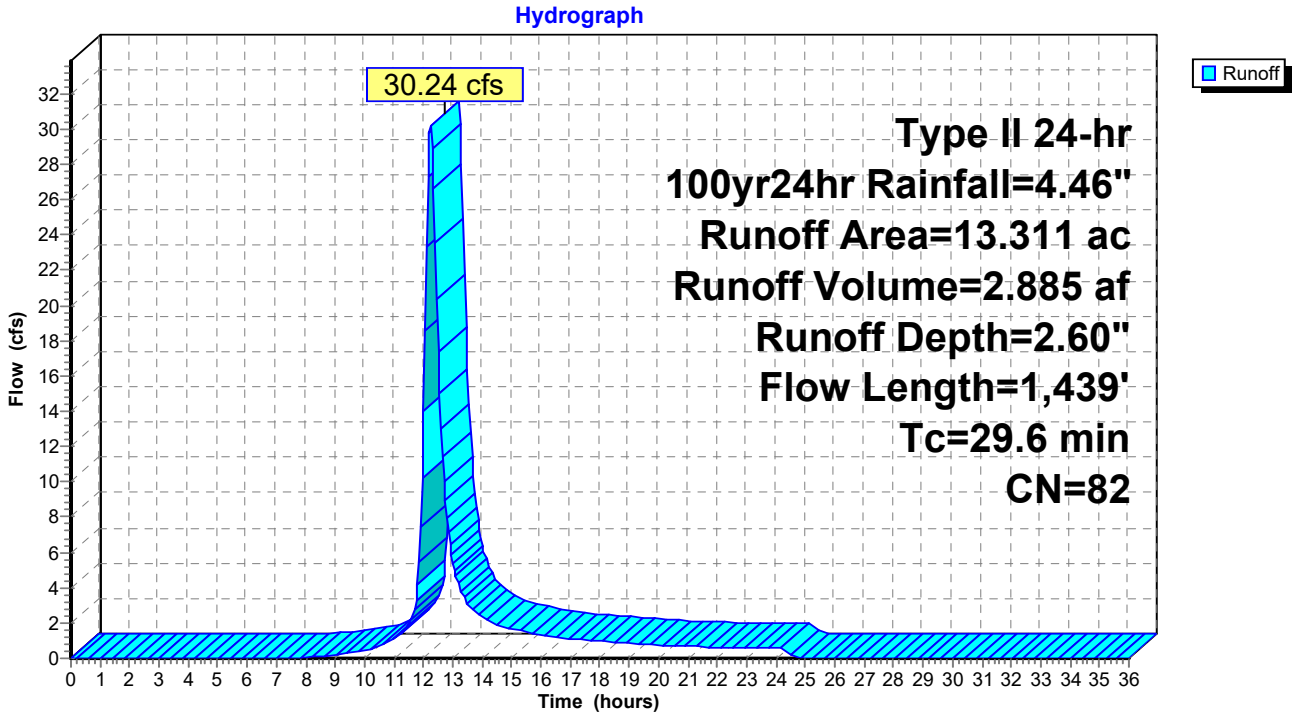
Runoff = 30.24 cfs @ 12.24 hrs, Volume= 2.885 af, Depth= 2.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.283 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 94 | Developed Medium Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 12.515 | 81 | Cultivated Crops, HSG D |
| | 13.311 | 82 | Weighted Average |
| | 13.311 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.4 | 100 | 0.0233 | 0.31 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.3 | 226 | 0.0096 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.3 | 223 | 0.0042 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 268 | 0.0311 | 1.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.5 | 131 | 0.0093 | 0.87 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.4 | 129 | 0.0100 | 0.90 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 139 | 0.0122 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 97 | 0.0043 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 128 | 0.0126 | 2.28 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 29.6 | 1,439 | Total | | | |

## Subcatchment 20: WS20



## Summary for Subcatchment 21: WS21

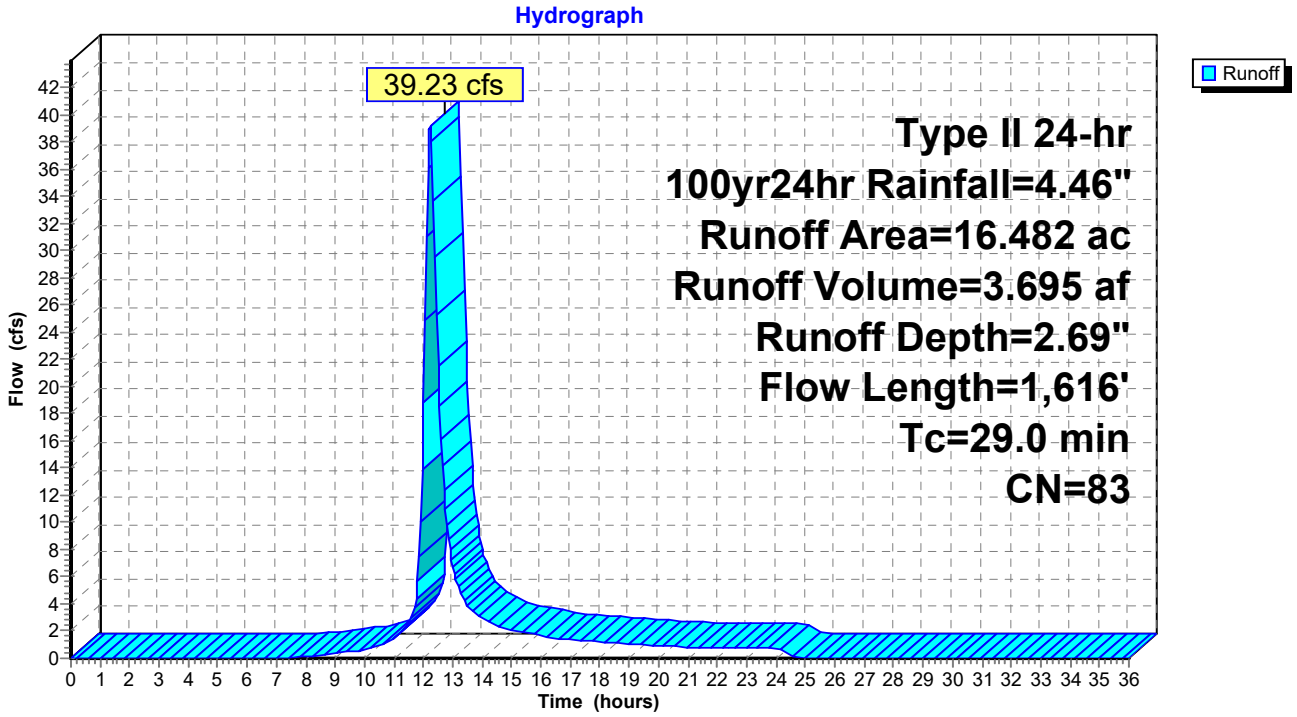
Runoff = 39.23 cfs @ 12.23 hrs, Volume= 3.695 af, Depth= 2.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.154 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 89 | Developed Medium Intensity, HSG B |
| * | 0.435 | 94 | Developed Medium Intensity, HSG D |
| * | 0.295 | 88 | Developed Low Intensity, HSG B |
| * | 2.834 | 93 | Developed Low Intensity, HSG D |
| * | 0.153 | 88 | Developed Low Intensity, HSG B |
| * | 0.136 | 93 | Developed Low Intensity, HSG D |
| * | 1.103 | 71 | Cultivated Crops, HSG B |
| * | 0.243 | 81 | Cultivated Crops, HSG D |
| * | 11.118 | 81 | Cultivated Crops, HSG D |
| | 16.482 | 83 | Weighted Average |
| | 16.482 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.9 | 100 | 0.0189 | 0.28 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.7 | 50 | 0.0180 | 1.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 205 | 0.0146 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.4 | 355 | 0.0149 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.0 | 340 | 0.0109 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 239 | 0.0081 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 84 | 0.0236 | 3.12 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 26 | 0.0201 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 116 | 0.0216 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 100 | 0.0154 | 2.52 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 29.0 | 1,616 | Total | | | |

## Subcatchment 21: WS21



## Summary for Subcatchment 22: WS22

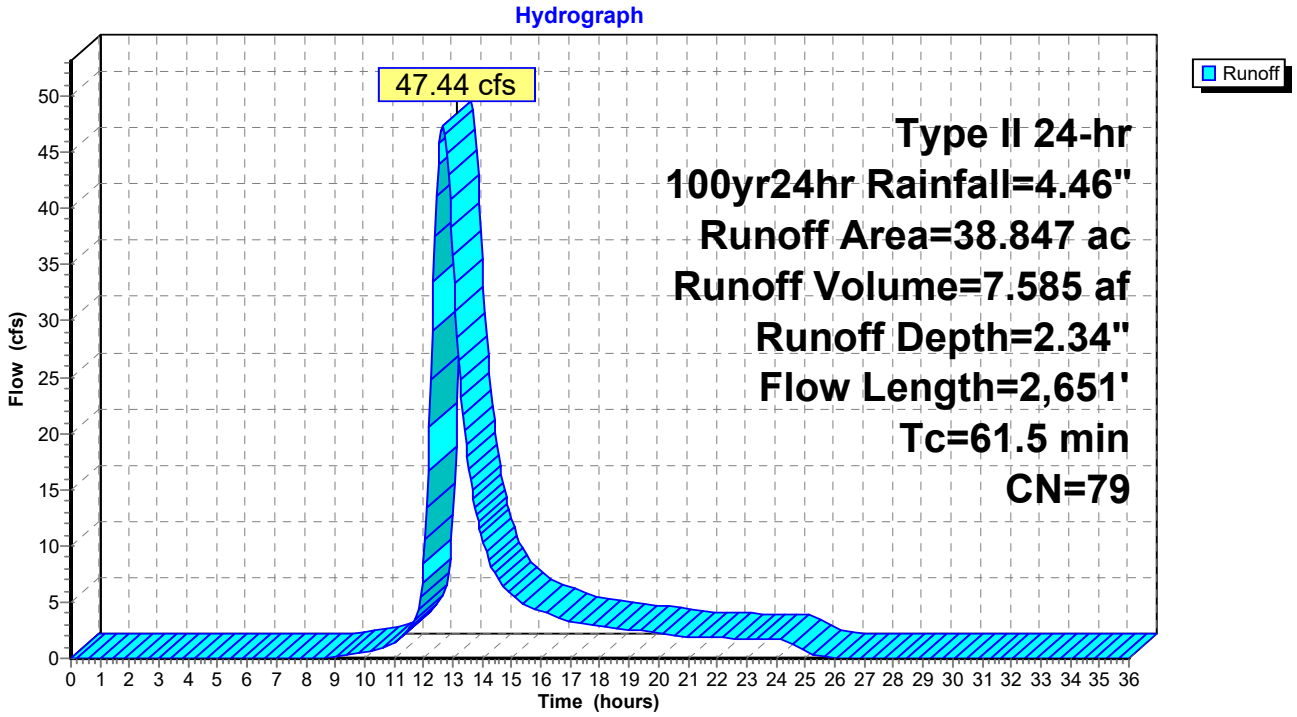
Runoff = 47.44 cfs @ 12.65 hrs, Volume= 7.585 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.005 | 86 | Woody Wetlands, HSG D |
| * | 5.962 | 71 | Cultivated Crops, HSG B |
| * | 2.759 | 81 | Cultivated Crops, HSG D |
| * | 1.588 | 81 | Cultivated Crops, HSG D |
| * | 28.533 | 81 | Cultivated Crops, HSG D |
| | 38.847 | 79 | Weighted Average |
| | 38.847 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.3 | 51 | 0.0172 | 0.05 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 3.4 | 49 | 0.0173 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 11.1 | 660 | 0.0121 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.3 | 580 | 0.0109 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.1 | 560 | 0.0165 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 11.0 | 664 | 0.0126 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 87 | 0.0145 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 61.5 | 2,651 | Total | | | |

## Subcatchment 22: WS22



## Summary for Subcatchment 23: WS23

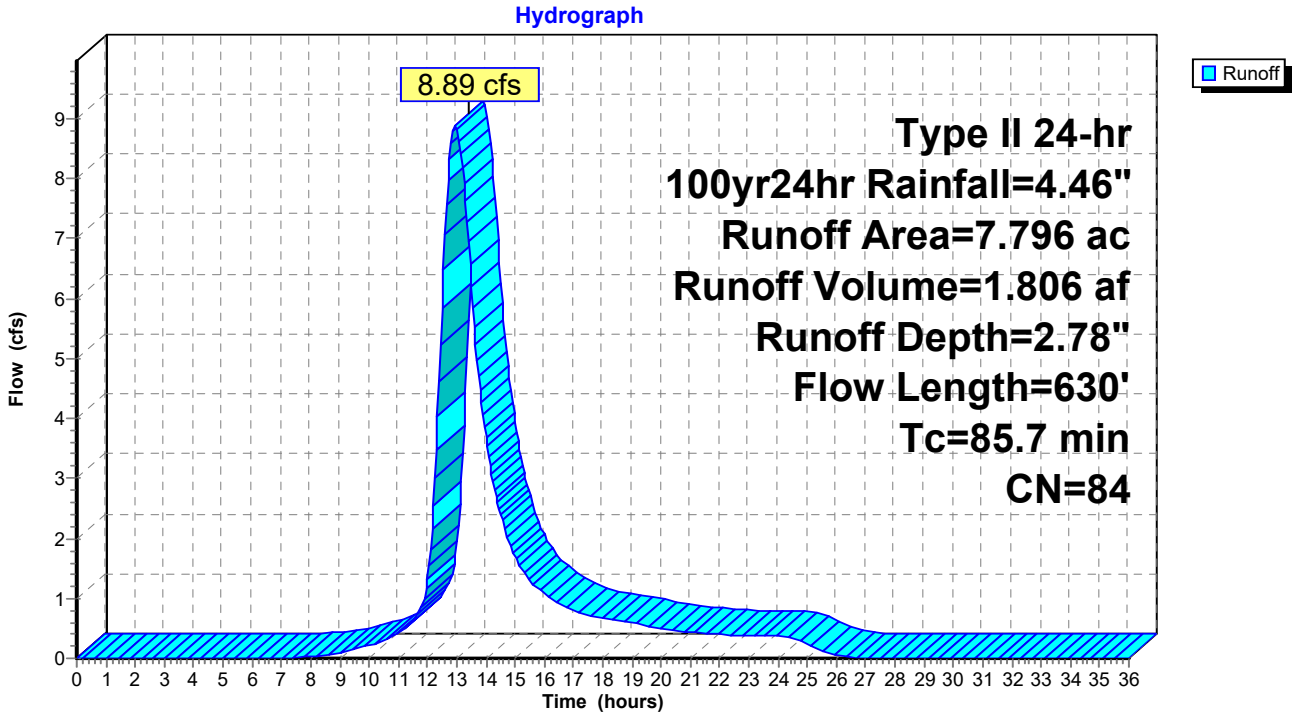
Runoff = 8.89 cfs @ 12.95 hrs, Volume= 1.806 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.781 | 80 | Pasture/Hay, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.192 | 86 | Woody Wetlands, HSG D |
| * | 0.415 | 84 | Developed Open Space, HSG D |
| * | 4.720 | 86 | Woody Wetlands, HSG D |
| * | 1.466 | 81 | Cultivated Crops, HSG D |
| | 7.796 | 84 | Weighted Average |
| | 7.796 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 41.4 | 100 | 0.0064 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 0.2 | 5 | 0.0065 | 0.40 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 27.1 | 263 | 0.0010 | 0.16 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 15.2 | 163 | 0.0013 | 0.18 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.8 | 100 | 0.0020 | 0.90 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 85.7 | 630 | Total | | | |

## Subcatchment 23: WS23



## Summary for Subcatchment 24: WS24

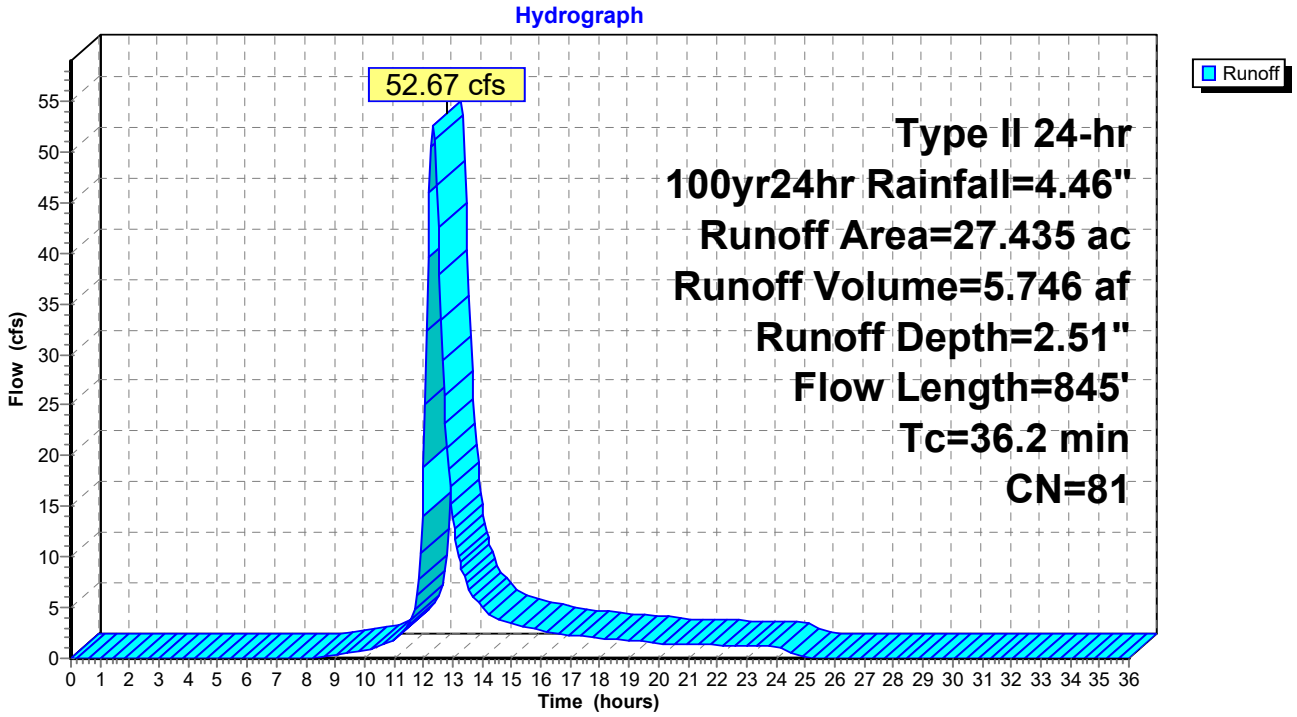
Runoff = 52.67 cfs @ 12.32 hrs, Volume= 5.746 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.383 | 80 | Pasture/Hay, HSG D |
| * | 0.667 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 86 | Woody Wetlands, HSG D |
| * | 0.890 | 80 | Pasture/Hay, HSG D |
| * | 1.451 | 86 | Woody Wetlands, HSG D |
| * | 0.196 | 77 | Deciduous Forest, HSG D |
| * | 0.222 | 86 | Woody Wetlands, HSG D |
| * | 0.217 | 86 | Woody Wetlands, HSG D |
| * | 2.891 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 1.774 | 86 | Woody Wetlands, HSG D |
| * | 1.914 | 71 | Cultivated Crops, HSG B |
| * | 15.923 | 81 | Cultivated Crops, HSG D |
| | 27.435 | 81 | Weighted Average |
| | 27.435 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.5 | 52 | 0.0130 | 0.05 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 3.8 | 48 | 0.0128 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.0 | 247 | 0.0129 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.6 | 162 | 0.0138 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.3 | 337 | 0.0072 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 36.2 | 845 | Total | | | |

## Subcatchment 24: WS24



## Summary for Subcatchment 25: WS25

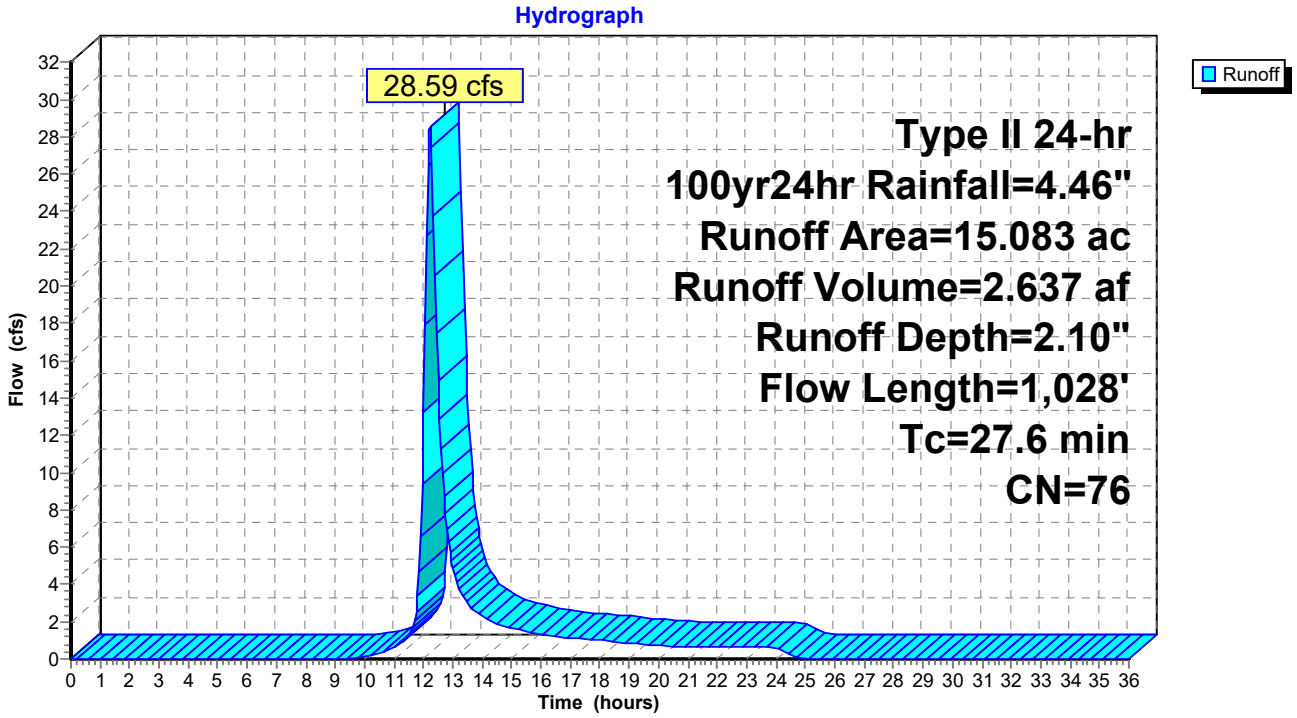
Runoff = 28.59 cfs @ 12.22 hrs, Volume= 2.637 af, Depth= 2.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 7.008 | 71 | Cultivated Crops, HSG B |
| * | 8.076 | 81 | Cultivated Crops, HSG D |
| | 15.083 | 76 | Weighted Average |
| | 15.083 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.6 | 100 | 0.0056 | 0.17 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.7 | 103 | 0.0027 | 0.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.7 | 239 | 0.0060 | 0.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 271 | 0.0312 | 1.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.8 | 315 | 0.0103 | 0.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.6 | 1,028 | Total | | | |

## Subcatchment 25: WS25



## Summary for Subcatchment 26: WS26

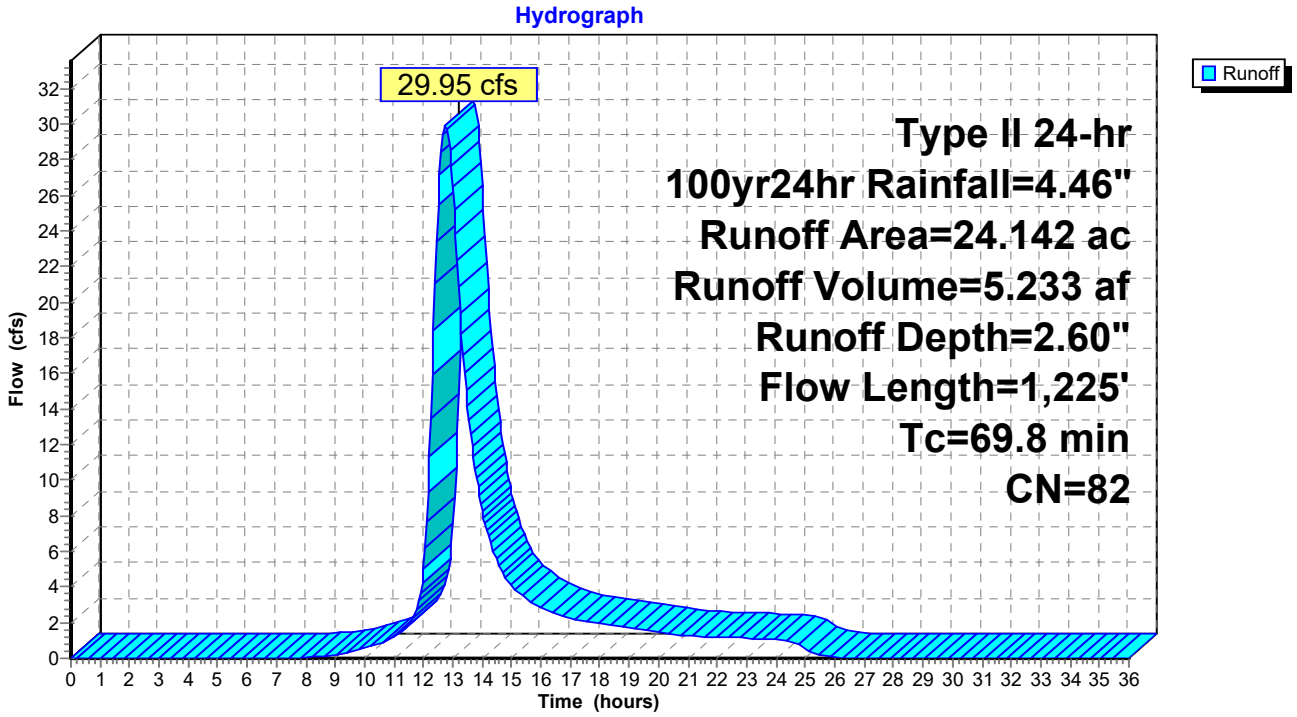
Runoff = 29.95 cfs @ 12.76 hrs, Volume= 5.233 af, Depth= 2.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.020 | 84 | Developed Open Space, HSG D |
| * | 0.777 | 88 | Developed Low Intensity, HSG B |
| * | 0.216 | 93 | Developed Low Intensity, HSG D |
| * | 1.909 | 86 | Woody Wetlands, HSG D |
| * | 1.334 | 77 | Deciduous Forest, HSG D |
| * | 0.088 | 55 | Evergreen Forest, HSG B |
| * | 0.062 | 86 | Woody Wetlands, HSG B |
| * | 0.002 | 86 | Woody Wetlands, HSG B |
| * | 6.771 | 86 | Woody Wetlands, HSG D |
| * | 1.083 | 61 | Pasture/Hay, HSG B |
| * | 0.052 | 61 | Pasture/Hay, HSG B |
| * | 3.489 | 80 | Pasture/Hay, HSG D |
| * | 0.206 | 71 | Cultivated Crops, HSG B |
| * | 8.132 | 81 | Cultivated Crops, HSG D |
| | 24.142 | 82 | Weighted Average |
| | 24.142 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 100 | 0.0275 | 1.28 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 45 | 0.0190 | 2.79 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.5 | 140 | 0.0499 | 1.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 73 | 0.0202 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 115 | 0.0306 | 0.87 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.7 | 150 | 0.0026 | 0.26 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 11.5 | 194 | 0.0031 | 0.28 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 16.3 | 197 | 0.0016 | 0.20 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 25.8 | 211 | 0.0007 | 0.14 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 69.8 | 1,225 | Total | | | |

## Subcatchment 26: WS26



## Summary for Subcatchment 27: WS27

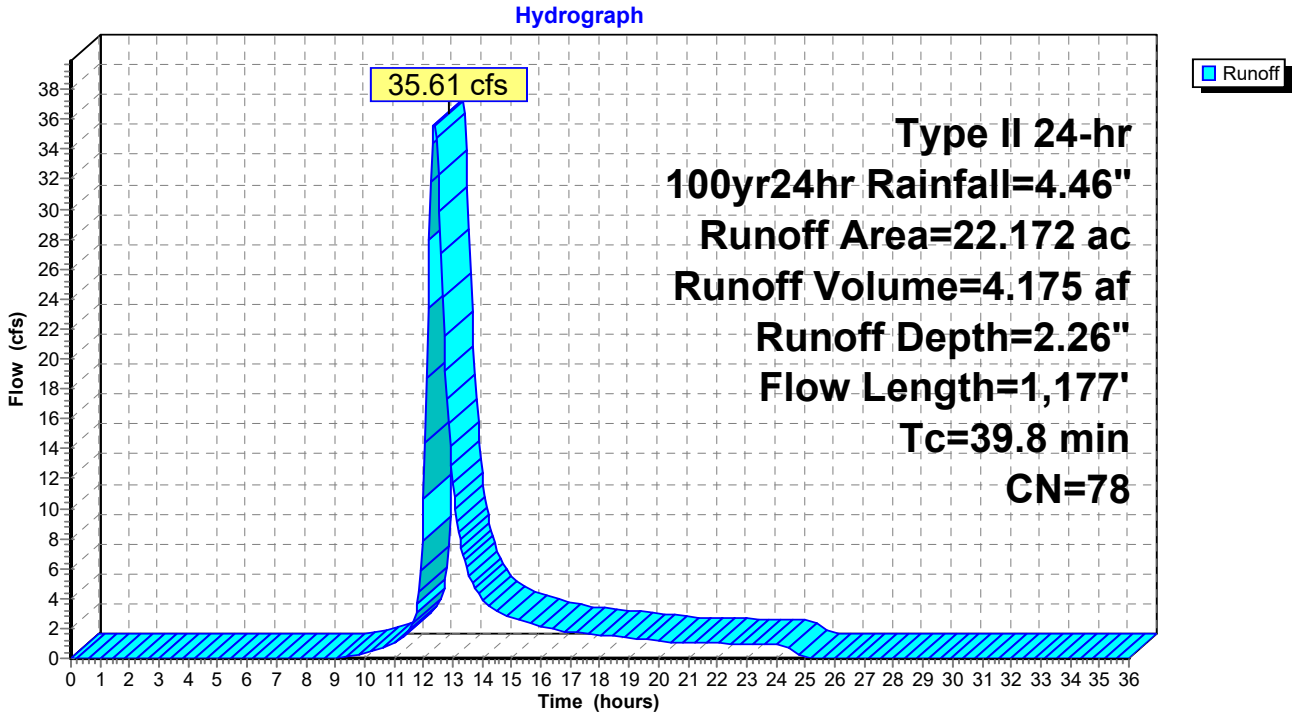
Runoff = 35.61 cfs @ 12.37 hrs, Volume= 4.175 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.445 | 74 | Evergreen Forest, HSG D |
| * | 0.039 | 80 | Pasture/Hay, HSG D |
| * | 0.104 | 55 | Deciduous Forest, HSG B |
| * | 5.233 | 77 | Deciduous Forest, HSG D |
| * | 0.026 | 77 | Deciduous Forest, HSG D |
| * | 1.662 | 77 | Deciduous Forest, HSG D |
| * | 3.945 | 71 | Cultivated Crops, HSG B |
| * | 10.717 | 81 | Cultivated Crops, HSG D |
| | 22.172 | 78 | Weighted Average |
| | 22.172 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.5 | 100 | 0.0148 | 0.26 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.4 | 216 | 0.0288 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 227 | 0.0220 | 1.34 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 20.4 | 201 | 0.0003 | 0.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 172 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.7 | 261 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 39.8 | 1,177 | Total | | | |

## Subcatchment 27: WS27



## Summary for Subcatchment 28: WS28

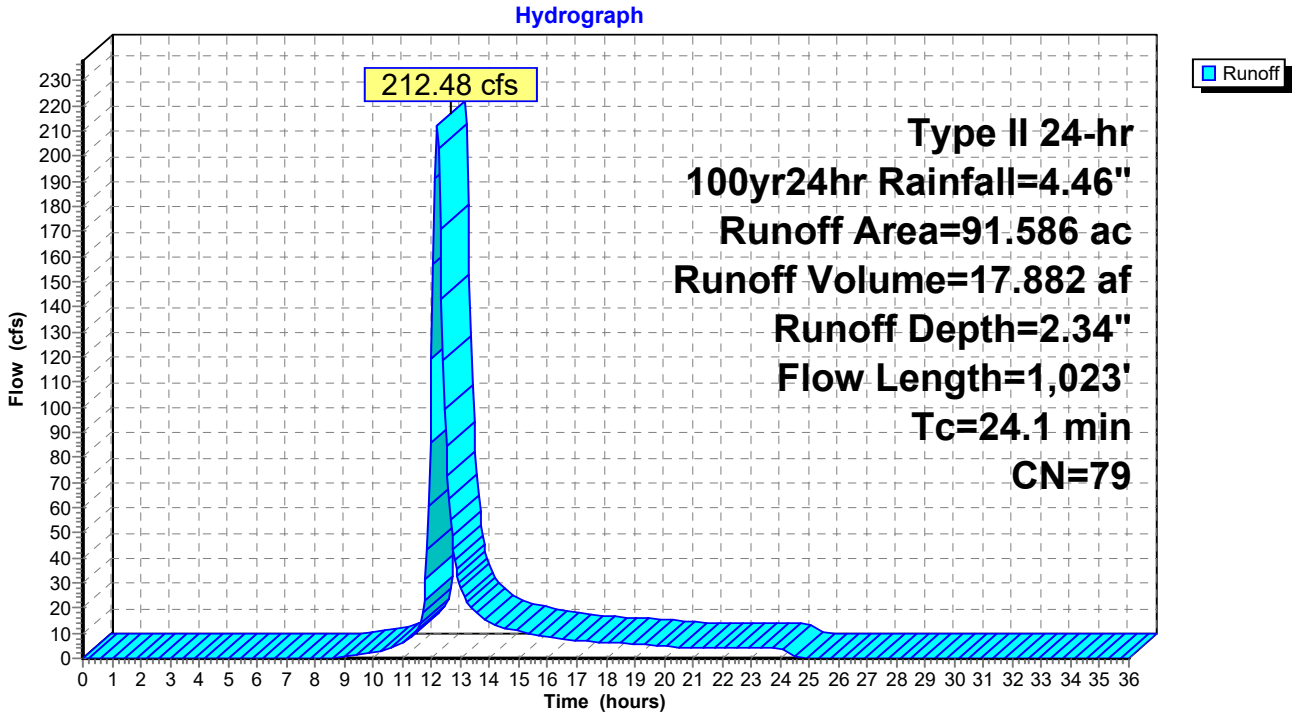
Runoff = 212.48 cfs @ 12.18 hrs, Volume= 17.882 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.197 | 61 | Pasture/Hay, HSG B |
| * | 0.793 | 80 | Pasture/Hay, HSG D |
| * | 0.117 | 77 | Deciduous Forest, HSG D |
| * | 5.160 | 71 | Cultivated Crops, HSG B |
| * | 4.338 | 71 | Cultivated Crops, HSG B |
| * | 4.642 | 71 | Cultivated Crops, HSG B |
| * | 1.274 | 71 | Cultivated Crops, HSG B |
| * | 0.102 | 71 | Cultivated Crops, HSG B |
| * | 74.963 | 81 | Cultivated Crops, HSG D |
| | 91.586 | 79 | Weighted Average |
| | 91.586 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.9 | 100 | 0.0126 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.7 | 222 | 0.0126 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.1 | 313 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 228 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.3 | 161 | 0.0047 | 0.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.1 | 1,023 | Total | | | |

## Subcatchment 28: WS28



## Summary for Subcatchment 29: WS29

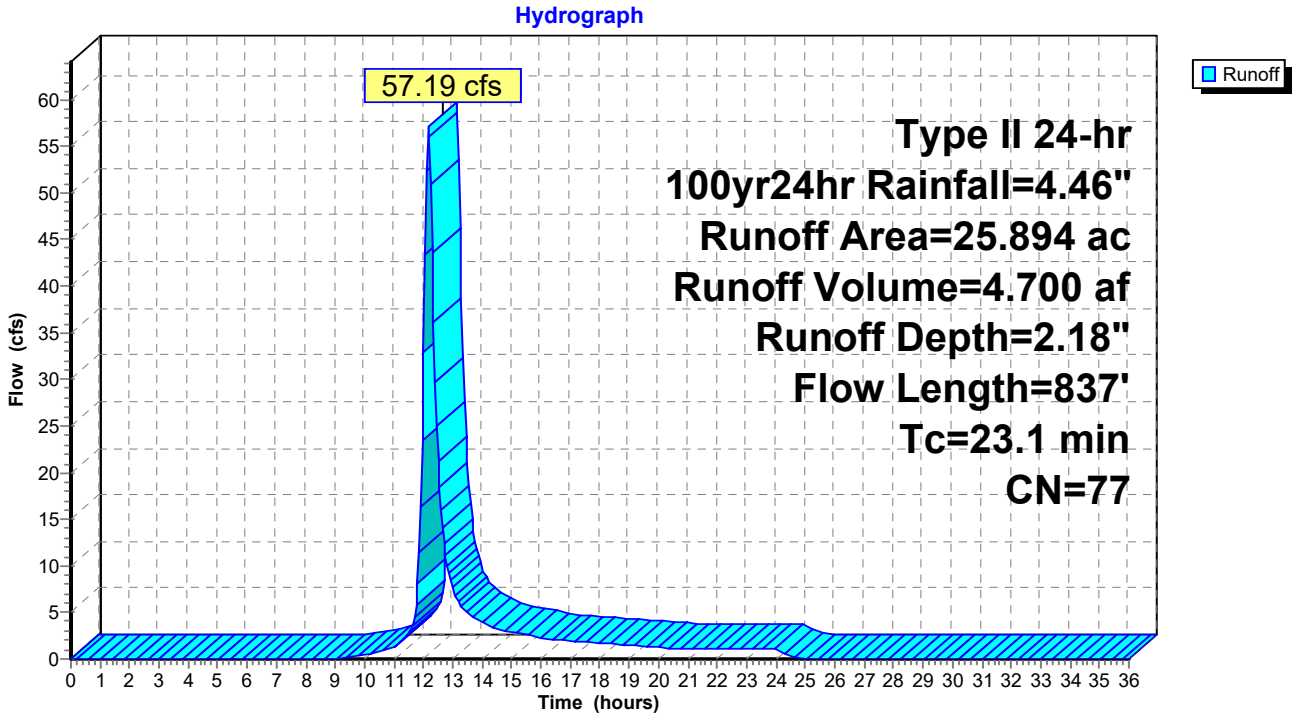
Runoff = 57.19 cfs @ 12.17 hrs, Volume= 4.700 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 8.124 | 71 | Cultivated Crops, HSG B |
| * | 2.358 | 71 | Cultivated Crops, HSG B |
| * | 0.241 | 71 | Cultivated Crops, HSG B |
| * | 15.170 | 81 | Cultivated Crops, HSG D |
| | 25.894 | 77 | Weighted Average |
| | 25.894 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.1 | 100 | 0.0063 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 8.0 | 343 | 0.0063 | 0.71 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.6 | 359 | 0.0139 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 35 | 0.0229 | 1.36 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 23.1 | 837 | Total | | | |

## Subcatchment 29: WS29



## Summary for Subcatchment 30: WS30

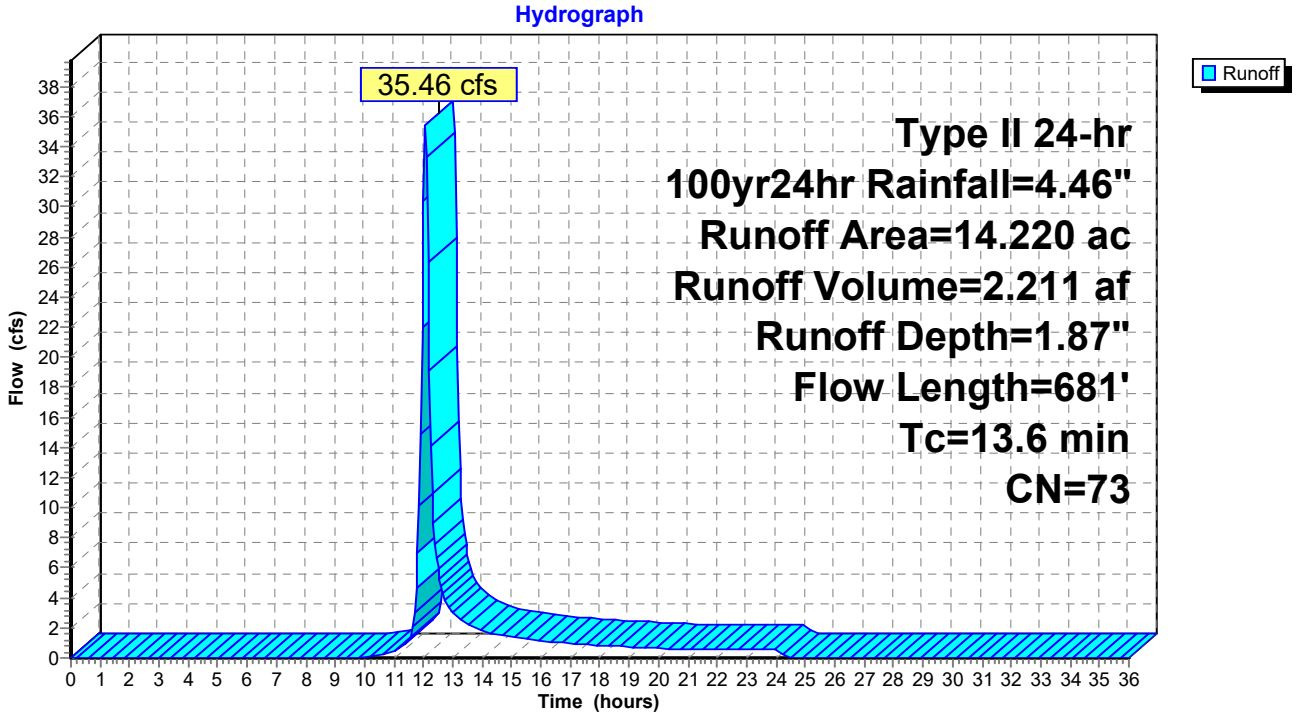
Runoff = 35.46 cfs @ 12.06 hrs, Volume= 2.211 af, Depth= 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.211 | 71 | Cultivated Crops, HSG B |
| * | 0.257 | 71 | Cultivated Crops, HSG B |
| * | 9.269 | 71 | Cultivated Crops, HSG B |
| * | 3.483 | 81 | Cultivated Crops, HSG D |
| | 14.220 | 73 | Weighted Average |
| | 14.220 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.2 | 100 | 0.0164 | 0.27 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.5 | 229 | 0.0150 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 353 | 0.0284 | 1.52 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.6 | 681 | Total | | | |

## Subcatchment 30: WS30



## Summary for Subcatchment 31: WS31

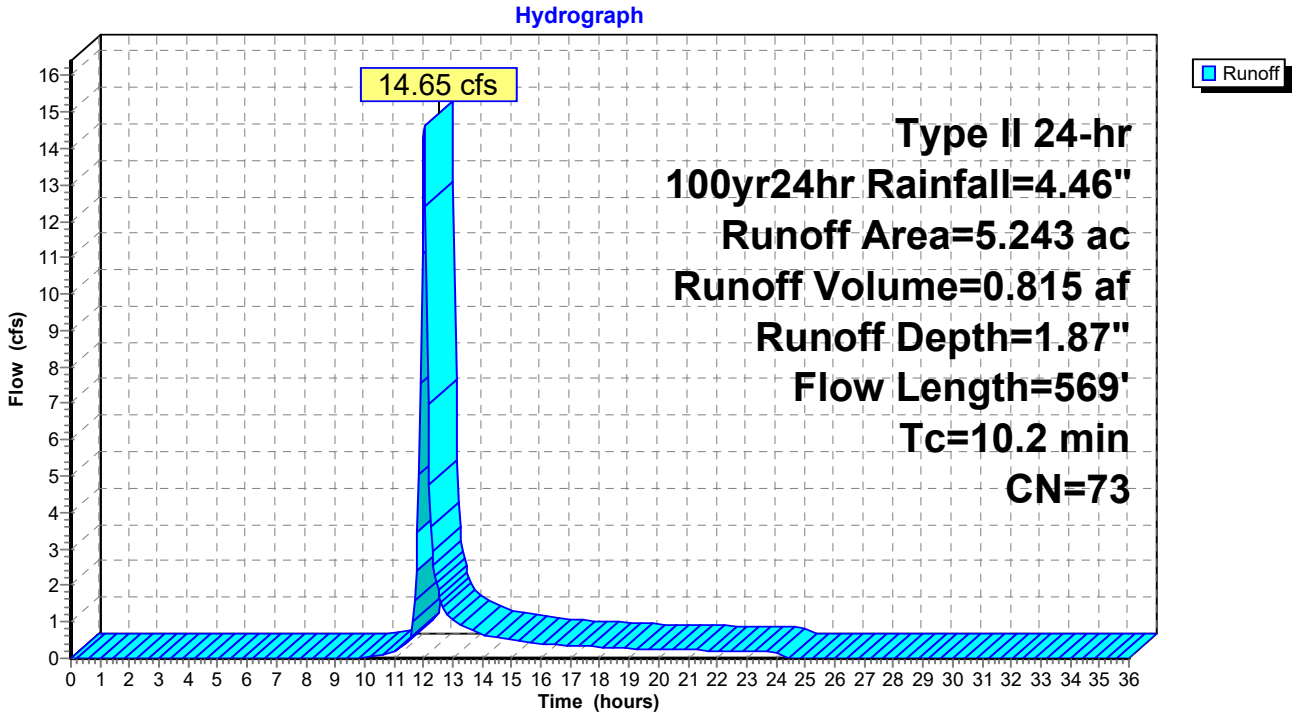
Runoff = 14.65 cfs @ 12.02 hrs, Volume= 0.815 af, Depth= 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.184 | 93 | Developed Low Intensity, HSG D |
| * | 4.554 | 71 | Cultivated Crops, HSG B |
| * | 0.504 | 81 | Cultivated Crops, HSG D |
| | 5.243 | 73 | Weighted Average |
| | 5.243 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 81 | 0.0247 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.3 | 19 | 0.0292 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.6 | 138 | 0.0271 | 1.48 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 38 | 0.0534 | 2.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 97 | 0.0588 | 2.18 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 52 | 0.0562 | 2.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 78 | 0.0406 | 1.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 65 | 0.0265 | 1.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.2 | 569 | Total | | | |

## Subcatchment 31: WS31



## Summary for Subcatchment 32: WS32

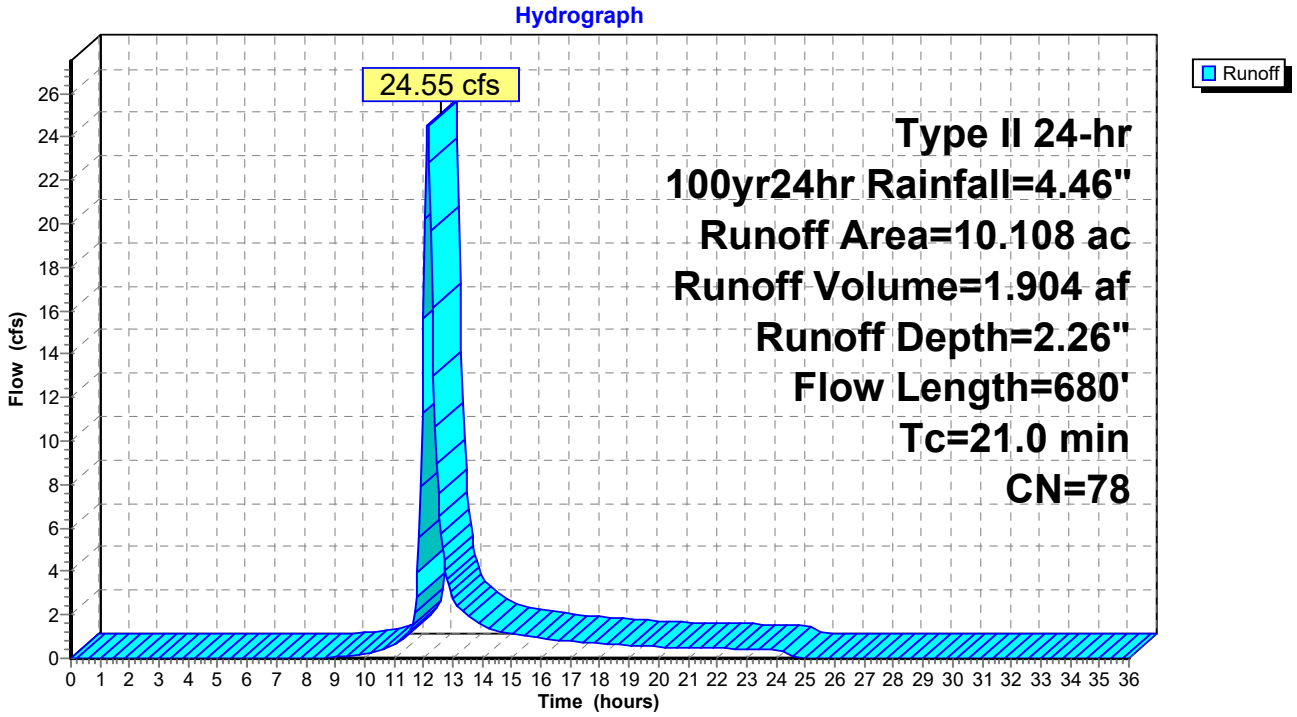
Runoff = 24.55 cfs @ 12.14 hrs, Volume= 1.904 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.081 | 88 | Developed Low Intensity, HSG B |
| * | 0.021 | 93 | Developed Low Intensity, HSG D |
| * | 0.727 | 71 | Cultivated Crops, HSG B |
| * | 0.190 | 81 | Cultivated Crops, HSG D |
| * | 2.804 | 71 | Cultivated Crops, HSG B |
| * | 6.047 | 81 | Cultivated Crops, HSG D |
| * | 0.154 | 86 | Woody Wetlands, HSG D |
| * | 0.085 | 86 | Woody Wetlands, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG D |
| | 10.108 | 78 | Weighted Average |
| | 10.108 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.0 | 100 | 0.0064 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.6 | 114 | 0.0064 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.6 | 143 | 0.0033 | 0.52 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 323 | 0.0155 | 1.12 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 21.0 | 680 | Total | | | |

## Subcatchment 32: WS32



## Summary for Subcatchment 33: WS33

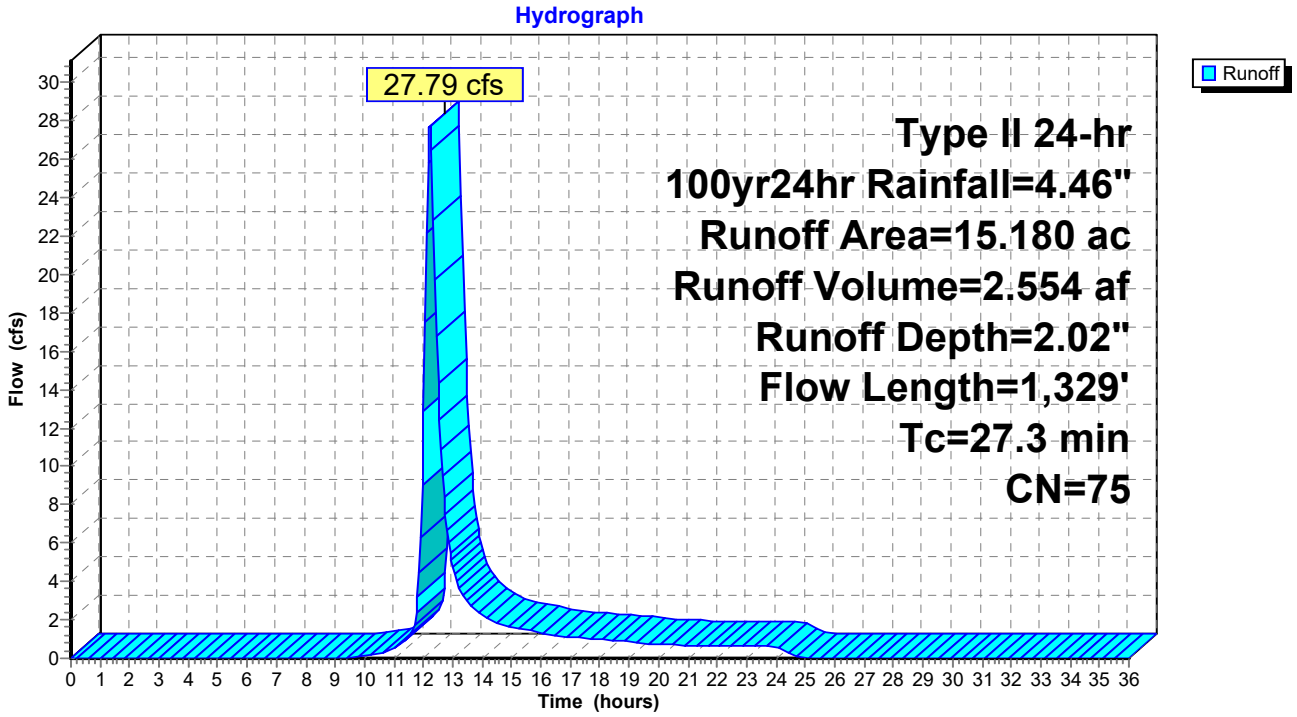
Runoff = 27.79 cfs @ 12.22 hrs, Volume= 2.554 af, Depth= 2.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.023 | 93 | Developed Low Intensity, HSG D |
| * | 1.066 | 71 | Cultivated Crops, HSG B |
| * | 3.586 | 81 | Cultivated Crops, HSG D |
| * | 2.467 | 81 | Cultivated Crops, HSG D |
| * | 8.038 | 71 | Cultivated Crops, HSG B |
| | 15.180 | 75 | Weighted Average |
| | 15.180 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.8 | 95 | 0.0047 | 0.16 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.5 | 5 | 0.0268 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 72 | 0.0236 | 1.38 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 211 | 0.0190 | 1.24 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 70 | 0.0171 | 1.18 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 143 | 0.0202 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.4 | 205 | 0.0239 | 1.39 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 120 | 0.0166 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 194 | 0.0169 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.4 | 145 | 0.0130 | 1.03 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.1 | 71 | 0.0149 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.3 | 1,329 | Total | | | |

## Subcatchment 33: WS33



## Summary for Subcatchment 34: WS34

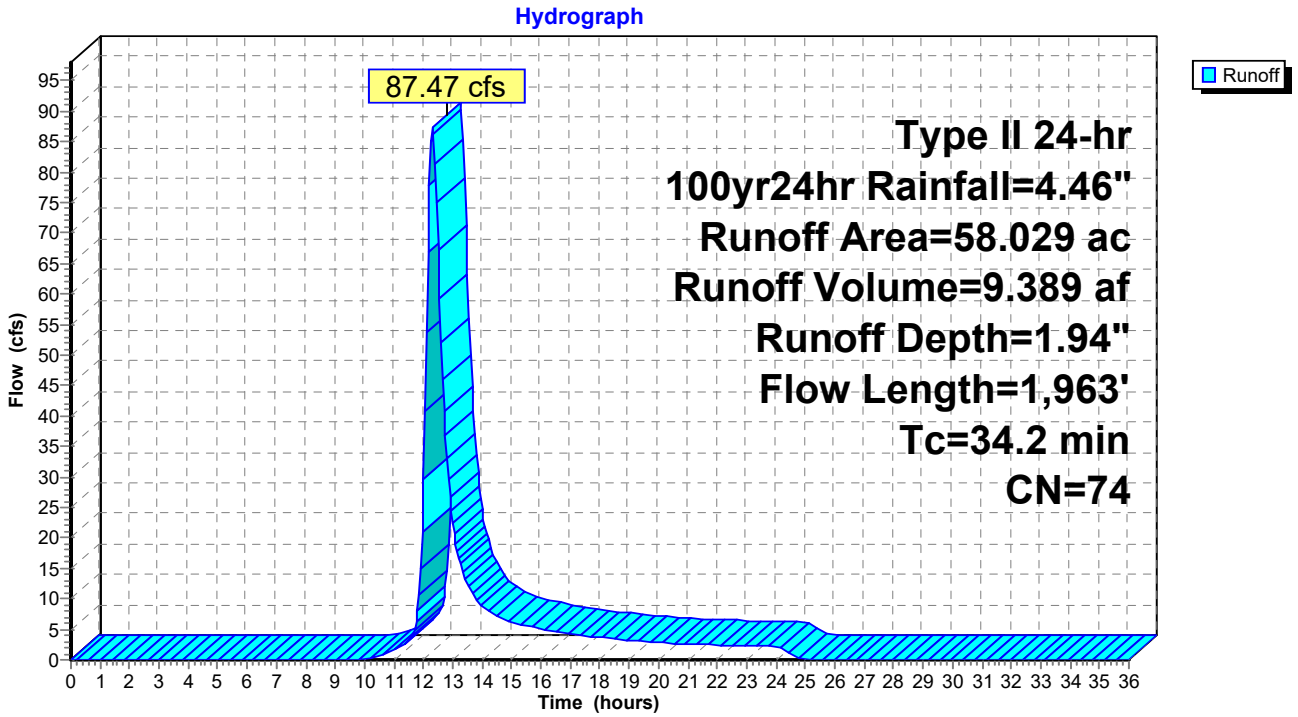
Runoff = 87.47 cfs @ 12.31 hrs, Volume= 9.389 af, Depth= 1.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.223 | 74 | Evergreen Forest, HSG D |
| * | 0.016 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.023 | 55 | Deciduous Forest, HSG B |
| * | 0.092 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.259 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.003 | 80 | Pasture/Hay, HSG D |
| * | 1.400 | 61 | Pasture/Hay, HSG B |
| * | 1.086 | 61 | Pasture/Hay, HSG B |
| * | 0.139 | 89 | Developed Medium Intensity, HSG B |
| * | 0.766 | 88 | Developed Low Intensity, HSG B |
| * | 0.179 | 88 | Developed Low Intensity, HSG B |
| * | 0.222 | 89 | Developed Medium Intensity, HSG B |
| * | 0.174 | 89 | Developed Medium Intensity, HSG B |
| * | 0.133 | 88 | Developed Low Intensity, HSG B |
| * | 0.353 | 93 | Developed Low Intensity, HSG D |
| * | 0.150 | 84 | Developed Open Space, HSG D |
| * | 0.890 | 93 | Developed Low Intensity, HSG D |
| * | 0.363 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.194 | 88 | Developed Low Intensity, HSG B |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.513 | 68 | Developed Open Space, HSG B |
| * | 0.148 | 84 | Developed Open Space, HSG D |
| * | 0.212 | 88 | Developed Low Intensity, HSG B |
| * | 1.140 | 93 | Developed Low Intensity, HSG D |
| * | 0.169 | 84 | Developed Open Space, HSG D |
| * | 0.018 | 94 | Developed Medium Intensity, HSG D |
| * | 0.051 | 71 | Cultivated Crops, HSG B |
| * | 0.393 | 81 | Cultivated Crops, HSG D |
| * | 0.529 | 81 | Cultivated Crops, HSG D |
| * | 0.597 | 81 | Cultivated Crops, HSG D |
| * | 6.761 | 71 | Cultivated Crops, HSG B |
| * | 29.701 | 71 | Cultivated Crops, HSG B |
| * | 10.240 | 81 | Cultivated Crops, HSG D |
| | 58.029 | 74 | Weighted Average |
| | 58.029 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.9 | 100 | 0.0251 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 248 | 0.0275 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 493 | 0.0518 | 2.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.0 | 473 | 0.0214 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.3 | 260 | 0.0127 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 99 | 0.0130 | 2.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.7 | 291 | 0.0026 | 1.04 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 34.2 | 1,963 | Total | | | |

## Subcatchment 34: WS34



## Summary for Subcatchment 35: WS35

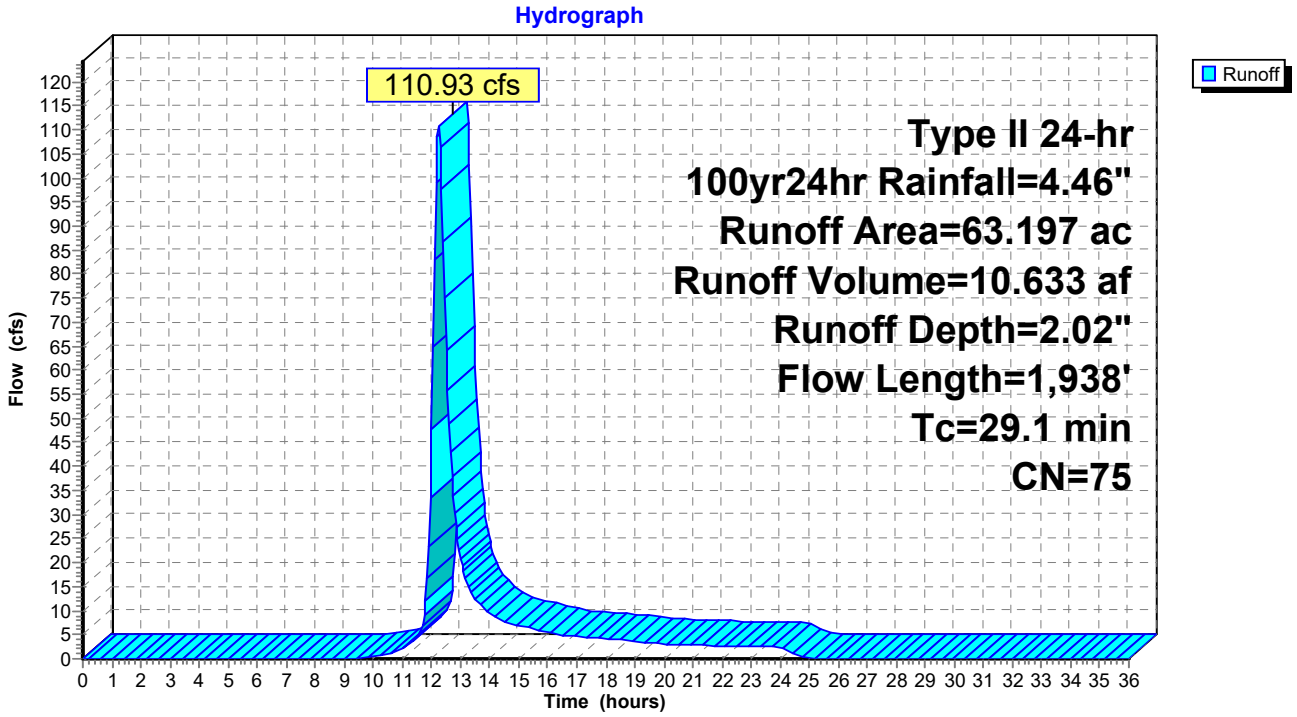
Runoff = 110.93 cfs @ 12.24 hrs, Volume= 10.633 af, Depth= 2.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.060 | 93 | Developed Low Intensity, HSG D |
| * | 0.072 | 84 | Developed Open Space, HSG D |
| * | 0.305 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.194 | 93 | Developed Low Intensity, HSG D |
| * | 1.190 | 80 | Pasture/Hay, HSG D |
| * | 0.558 | 61 | Pasture/Hay, HSG B |
| * | 0.164 | 89 | Developed Medium Intensity, HSG B |
| * | 0.485 | 94 | Developed Medium Intensity, HSG D |
| * | 0.221 | 68 | Developed Open Space, HSG B |
| * | 0.986 | 88 | Developed Low Intensity, HSG B |
| * | 0.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.002 | 71 | Cultivated Crops, HSG B |
| * | 0.049 | 81 | Cultivated Crops, HSG D |
| * | 7.291 | 71 | Cultivated Crops, HSG B |
| * | 13.448 | 81 | Cultivated Crops, HSG D |
| * | 2.277 | 71 | Cultivated Crops, HSG B |
| * | 7.295 | 71 | Cultivated Crops, HSG B |
| * | 22.072 | 71 | Cultivated Crops, HSG B |
| * | 6.074 | 81 | Cultivated Crops, HSG D |
| | 63.197 | 75 | Weighted Average |
| | 63.197 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 79 | 0.0156 | 0.97 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 21 | 0.0603 | 1.29 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.4 | 83 | 0.0265 | 3.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 3.4 | 291 | 0.0251 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.3 | 303 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 210 | 0.0088 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.6 | 431 | 0.0147 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 87 | 0.0123 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.3 | 434 | 0.0272 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.1 | 1,938 | Total | | | |

## Subcatchment 35: WS35



## Summary for Subcatchment 36: WS36

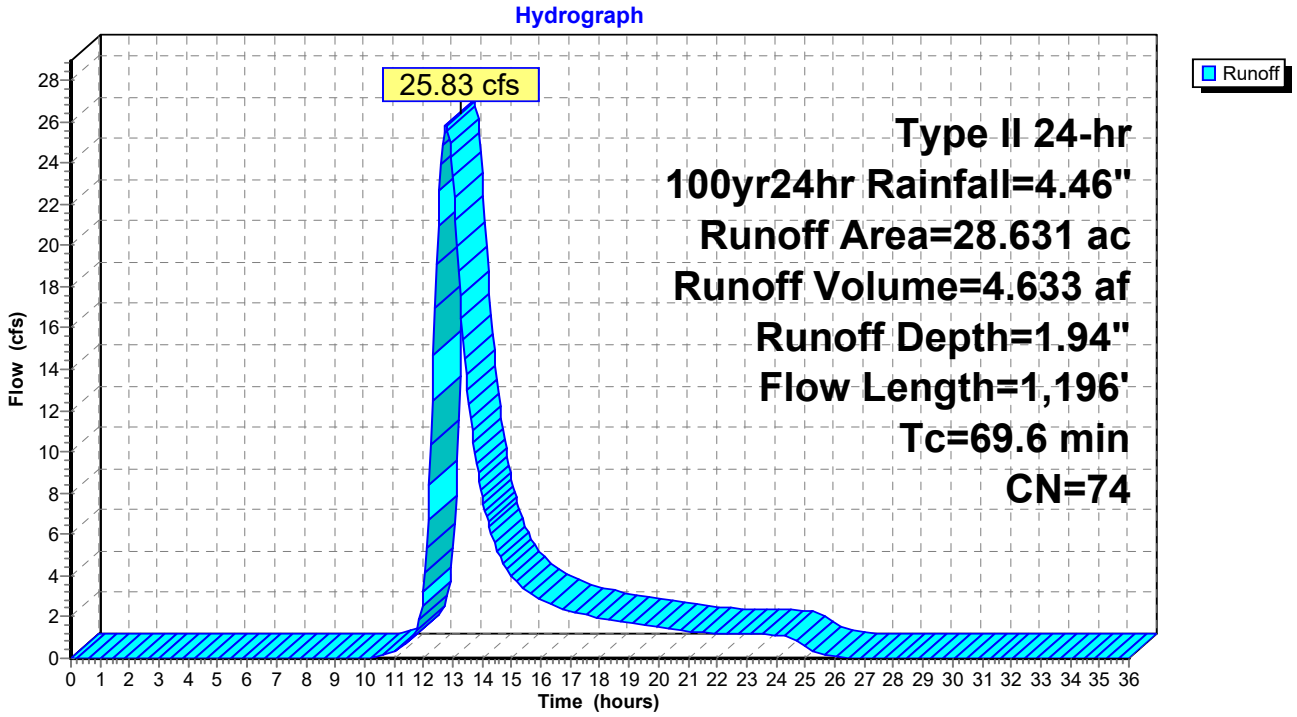
Runoff = 25.83 cfs @ 12.77 hrs, Volume= 4.633 af, Depth= 1.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.197 | 61 | Pasture/Hay, HSG B |
| * | 0.628 | 80 | Pasture/Hay, HSG D |
| * | 0.342 | 61 | Pasture/Hay, HSG B |
| * | 16.198 | 71 | Cultivated Crops, HSG B |
| * | 7.258 | 81 | Cultivated Crops, HSG D |
| * | 4.008 | 71 | Cultivated Crops, HSG B |
| | 28.631 | 74 | Weighted Average |
| | 28.631 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.9 | 100 | 0.0040 | 0.15 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 43.1 | 205 | 0.0001 | 0.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.6 | 451 | 0.0222 | 1.34 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.0 | 440 | 0.0067 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 69.6 | 1,196 | Total | | | |

## Subcatchment 36: WS36



## Summary for Subcatchment 37: WS37

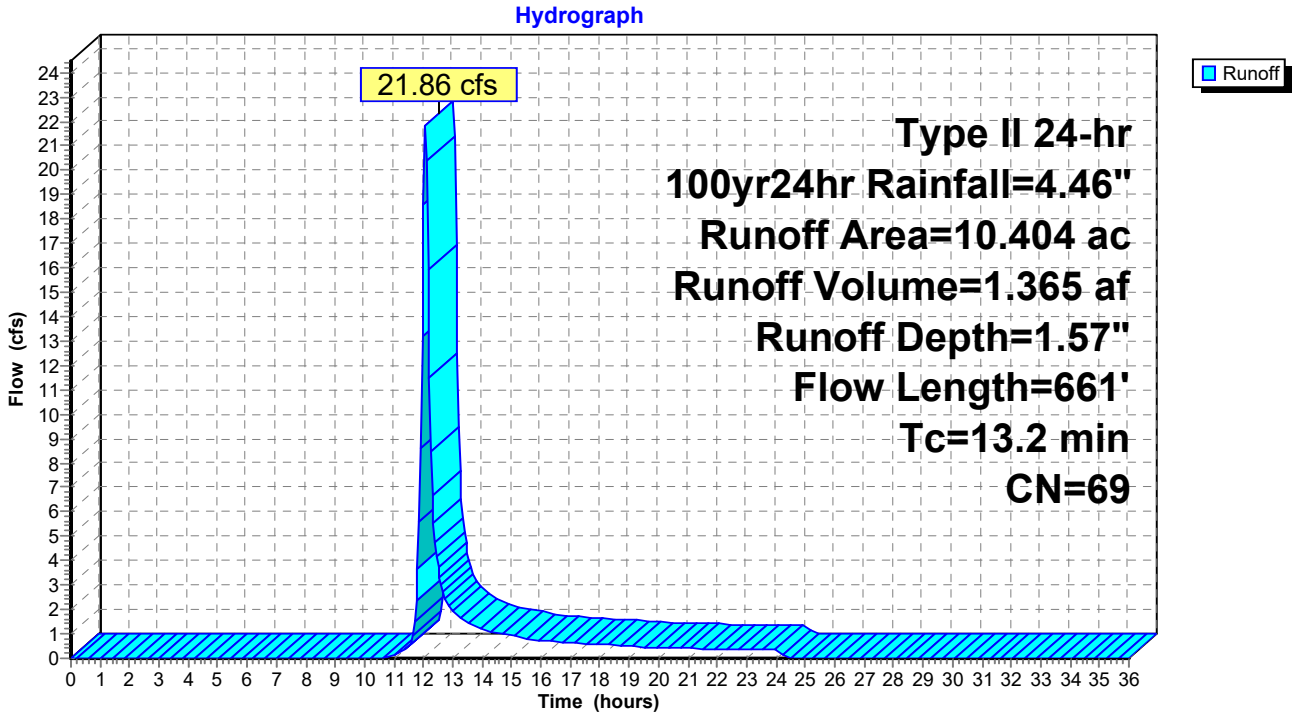
Runoff = 21.86 cfs @ 12.06 hrs, Volume= 1.365 af, Depth= 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.009 | 88 | Developed Low Intensity, HSG B |
| * | 0.007 | 68 | Developed Open Space, HSG B |
| * | 0.044 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 76 | Mixed Forest, HSG D |
| * | 0.127 | 60 | Mixed Forest, HSG B |
| * | 0.744 | 60 | Mixed Forest, HSG B |
| * | 0.996 | 55 | Deciduous Forest, HSG B |
| * | 0.079 | 88 | Developed Low Intensity, HSG B |
| * | 0.019 | 68 | Developed Open Space, HSG B |
| * | 0.341 | 81 | Cultivated Crops, HSG D |
| * | 5.999 | 71 | Cultivated Crops, HSG B |
| * | 2.036 | 71 | Cultivated Crops, HSG B |
| | 10.404 | 69 | Weighted Average |
| | 10.404 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.3 | 100 | 0.0240 | 0.31 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 70 | 0.0201 | 1.27 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 130 | 0.0263 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 139 | 0.0291 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 222 | 0.0108 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.2 | 661 | Total | | | |

## Subcatchment 37: WS37



## Summary for Subcatchment 38: WS38

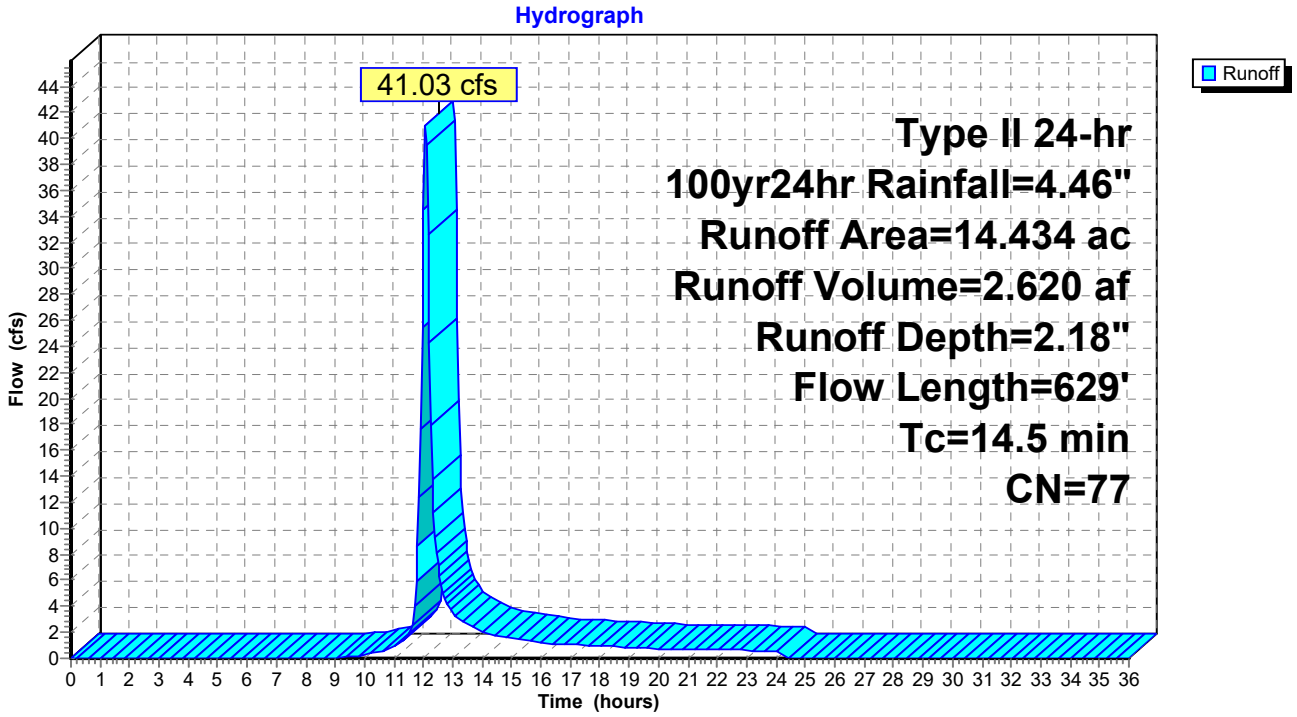
Runoff = 41.03 cfs @ 12.07 hrs, Volume= 2.620 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.049 | 88 | Developed Low Intensity, HSG B |
| * | 0.006 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.018 | 88 | Developed Low Intensity, HSG B |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 0.211 | 84 | Developed Open Space, HSG D |
| * | 0.082 | 93 | Developed Low Intensity, HSG D |
| * | 0.200 | 84 | Developed Open Space, HSG D |
| * | 0.118 | 93 | Developed Low Intensity, HSG D |
| * | 0.043 | 84 | Developed Open Space, HSG D |
| * | 0.046 | 68 | Developed Open Space, HSG B |
| * | 1.159 | 61 | Pasture/Hay, HSG B |
| * | 2.990 | 80 | Pasture/Hay, HSG D |
| * | 3.174 | 71 | Cultivated Crops, HSG B |
| * | 0.055 | 81 | Cultivated Crops, HSG D |
| * | 0.073 | 71 | Cultivated Crops, HSG B |
| * | 0.192 | 71 | Cultivated Crops, HSG B |
| * | 5.982 | 81 | Cultivated Crops, HSG D |
| | 14.434 | 77 | Weighted Average |
| | 14.434 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.9 | 100 | 0.0302 | 0.34 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.7 | 135 | 0.0086 | 0.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 220 | 0.0134 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 43 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 7 | 0.0067 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 124 | 0.0097 | 0.89 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.5 | 629 | Total | | | |

## Subcatchment 38: WS38



## Summary for Subcatchment 39: WS39

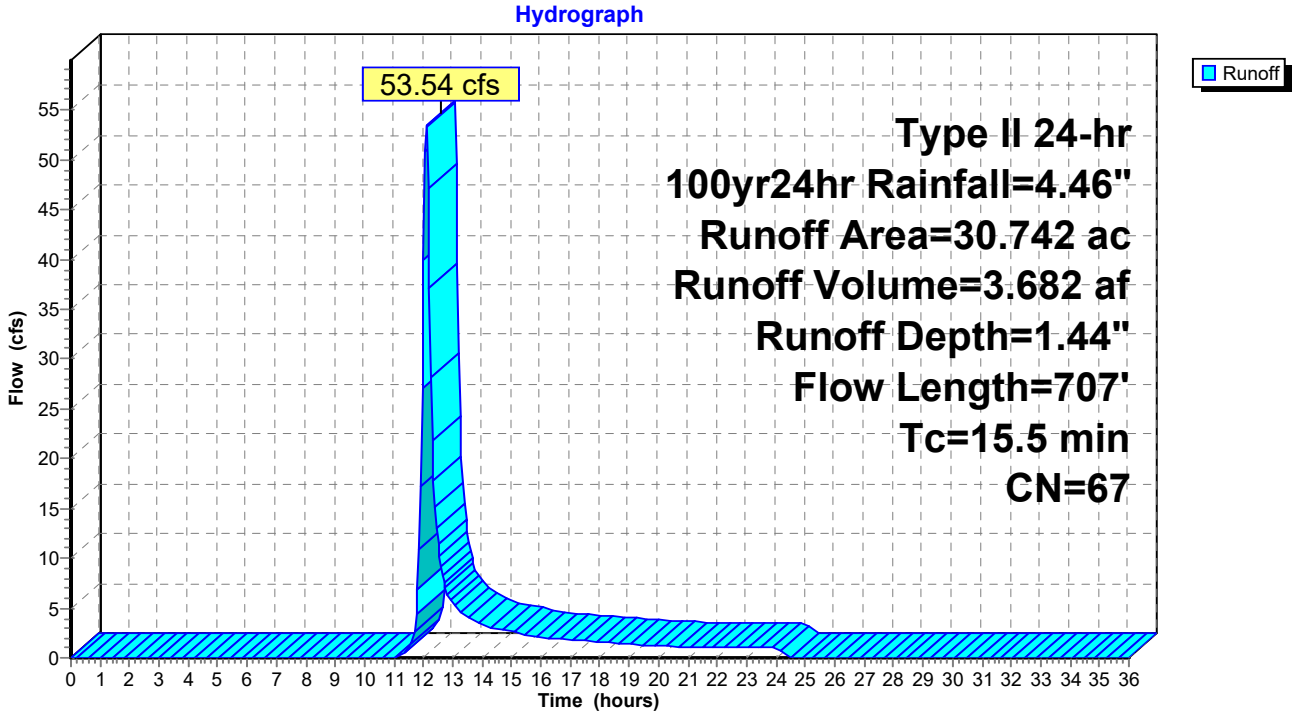
Runoff = 53.54 cfs @ 12.09 hrs, Volume= 3.682 af, Depth= 1.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.176 | 68 | Developed Open Space, HSG B |
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.359 | 68 | Developed Open Space, HSG B |
| * | 0.307 | 68 | Developed Open Space, HSG B |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 1.188 | 61 | Pasture/Hay, HSG B |
| * | 0.222 | 61 | Pasture/Hay, HSG B |
| * | 0.037 | 55 | Deciduous Forest, HSG B |
| * | 0.185 | 55 | Deciduous Forest, HSG B |
| * | 4.448 | 55 | Deciduous Forest, HSG B |
| * | 0.303 | 77 | Deciduous Forest, HSG D |
| * | 0.782 | 60 | Mixed Forest, HSG B |
| * | 0.775 | 60 | Mixed Forest, HSG B |
| * | 0.747 | 60 | Mixed Forest, HSG B |
| * | 0.142 | 76 | Mixed Forest, HSG D |
| * | 2.604 | 71 | Cultivated Crops, HSG B |
| * | 0.038 | 81 | Cultivated Crops, HSG D |
| * | 2.284 | 71 | Cultivated Crops, HSG B |
| * | 0.099 | 71 | Cultivated Crops, HSG B |
| * | 0.023 | 67 | Shrub/Scrub, HSG B |
| * | 2.327 | 55 | Deciduous Forest, HSG B |
| * | 1.422 | 77 | Deciduous Forest, HSG D |
| * | 0.011 | 55 | Deciduous Forest, HSG B |
| * | 1.069 | 61 | Pasture/Hay, HSG B |
| * | 0.304 | 80 | Pasture/Hay, HSG D |
| * | 8.535 | 71 | Cultivated Crops, HSG B |
| * | 2.131 | 81 | Cultivated Crops, HSG D |
| | 30.742 | 67 | Weighted Average |
| | 30.742 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.4 | 89 | 0.0596 | 0.44 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.8 | 11 | 0.0324 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.7 | 63 | 0.0258 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 168 | 0.0255 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 137 | 0.0170 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 144 | 0.0051 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 95 | 0.0146 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 15.5 | 707 | Total | | | |

## Subcatchment 39: WS39



## Summary for Subcatchment 40: WS40

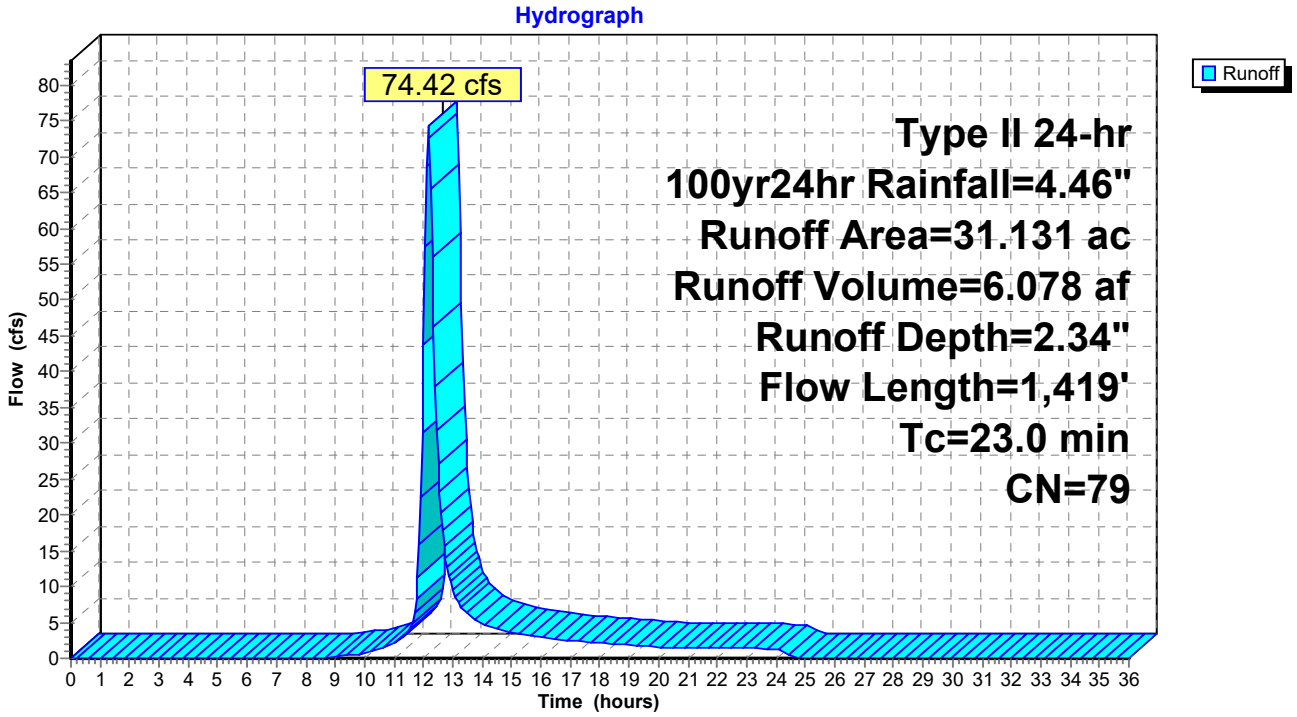
Runoff = 74.42 cfs @ 12.16 hrs, Volume= 6.078 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 81 | Cultivated Crops, HSG D |
| * | 0.123 | 71 | Cultivated Crops, HSG B |
| * | 0.309 | 67 | Shrub/Scrub, HSG B |
| * | 0.780 | 80 | Shrub/Scrub, HSG D |
| * | 0.156 | 55 | Deciduous Forest, HSG B |
| * | 0.140 | 77 | Deciduous Forest, HSG D |
| * | 7.426 | 77 | Deciduous Forest, HSG D |
| * | 0.190 | 77 | Deciduous Forest, HSG D |
| * | 0.082 | 61 | Pasture/Hay, HSG B |
| * | 2.718 | 80 | Pasture/Hay, HSG D |
| * | 0.518 | 80 | Pasture/Hay, HSG D |
| * | 0.302 | 71 | Cultivated Crops, HSG B |
| * | 0.057 | 62 | Cultivated Crops, HSG A |
| * | 3.811 | 81 | Cultivated Crops, HSG D |
| * | 14.460 | 81 | Cultivated Crops, HSG D |
| | 31.131 | 79 | Weighted Average |
| | 31.131 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.5 | 100 | 0.0222 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.1 | 79 | 0.0165 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 145 | 0.0411 | 1.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 129 | 0.0276 | 1.50 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.6 | 57 | 0.0264 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.7 | 300 | 0.0138 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.5 | 294 | 0.0148 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 219 | 0.0300 | 1.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 13 | 0.0151 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 83 | 0.0197 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.0 | 1,419 | Total | | | |

## Subcatchment 40: WS40



## Summary for Subcatchment 41: WS41

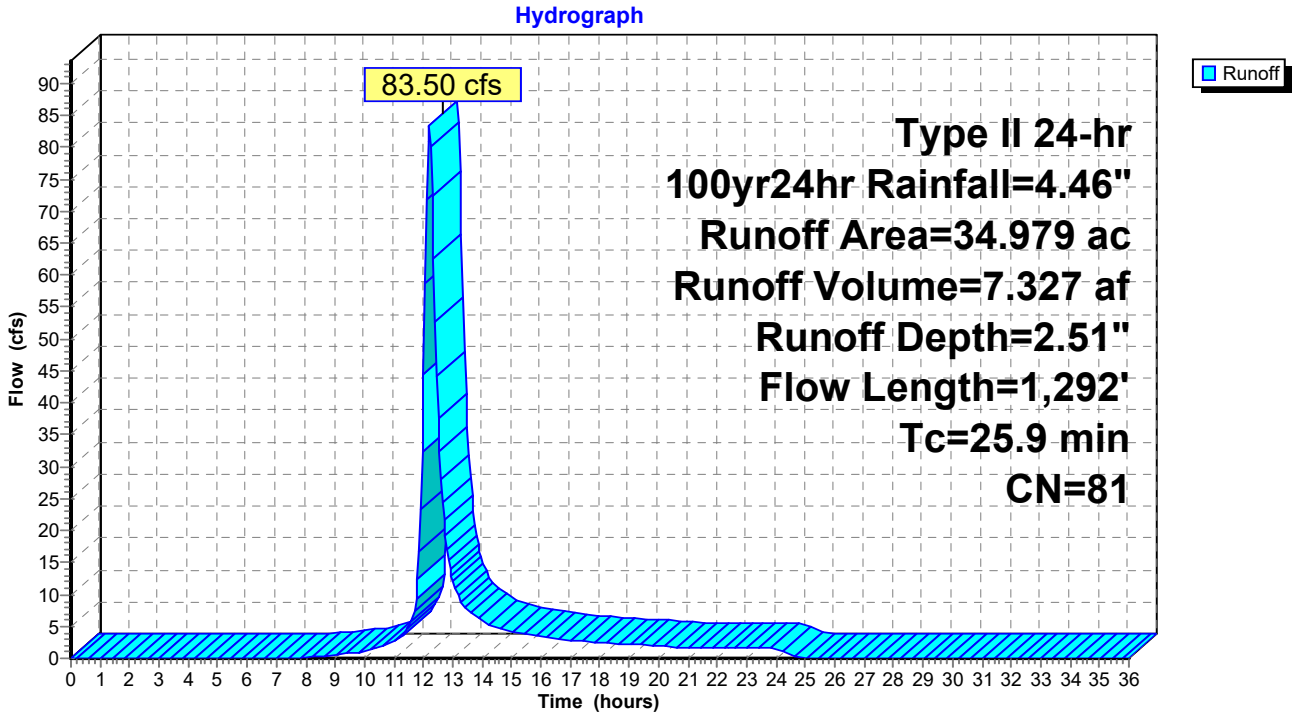
Runoff = 83.50 cfs @ 12.20 hrs, Volume= 7.327 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.146 | 68 | Developed Open Space, HSG B |
| * | 0.081 | 89 | Developed Medium Intensity, HSG B |
| * | 0.083 | 88 | Developed Low Intensity, HSG B |
| * | 0.299 | 93 | Developed Low Intensity, HSG D |
| * | 1.411 | 80 | Pasture/Hay, HSG D |
| * | 3.052 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 1.053 | 84 | Developed Open Space, HSG D |
| * | 0.146 | 93 | Developed Low Intensity, HSG D |
| * | 1.103 | 76 | Mixed Forest, HSG D |
| * | 0.212 | 80 | Pasture/Hay, HSG D |
| * | 0.566 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 80 | Pasture/Hay, HSG D |
| * | 0.021 | 76 | Mixed Forest, HSG D |
| * | 0.921 | 84 | Developed Open Space, HSG D |
| * | 1.187 | 71 | Cultivated Crops, HSG B |
| * | 24.567 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 80 | Pasture/Hay, HSG D |
| * | 0.113 | 81 | Cultivated Crops, HSG D |
| | 34.979 | 81 | Weighted Average |
| | 34.979 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.1 | 100 | 0.0466 | 0.41 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.6 | 63 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 330 | 0.0152 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.7 | 319 | 0.0157 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.5 | 480 | 0.0071 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.9 | 1,292 | Total | | | |

## Subcatchment 41: WS41



## Summary for Subcatchment 42: WS42

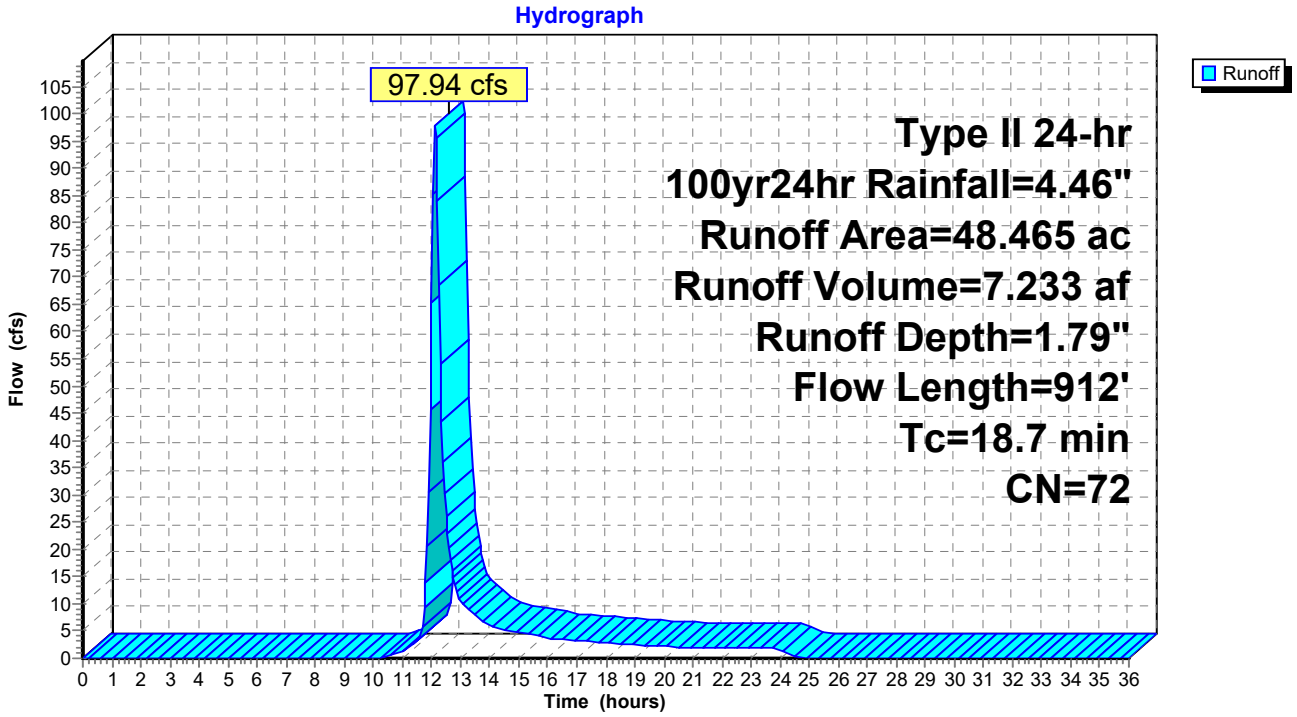
Runoff = 97.94 cfs @ 12.12 hrs, Volume= 7.233 af, Depth= 1.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.091 | 61 | Pasture/Hay, HSG B |
| * | 0.254 | 61 | Pasture/Hay, HSG B |
| * | 0.024 | 67 | Shrub/Scrub, HSG B |
| * | 1.392 | 55 | Deciduous Forest, HSG B |
| * | 7.125 | 81 | Cultivated Crops, HSG D |
| * | 0.957 | 81 | Cultivated Crops, HSG D |
| * | 0.014 | 71 | Cultivated Crops, HSG B |
| * | 0.064 | 81 | Cultivated Crops, HSG D |
| * | 38.091 | 71 | Cultivated Crops, HSG B |
| * | 0.225 | 86 | Woody Wetlands, HSG D |
| * | 0.006 | 86 | Woody Wetlands, HSG D |
| | 48.465 | 72 | Weighted Average |
| | 48.465 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.1 | 100 | 0.0117 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 11.6 | 812 | 0.0168 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.7 | 912 | Total | | | |

## Subcatchment 42: WS42



## Summary for Subcatchment 43: WS43

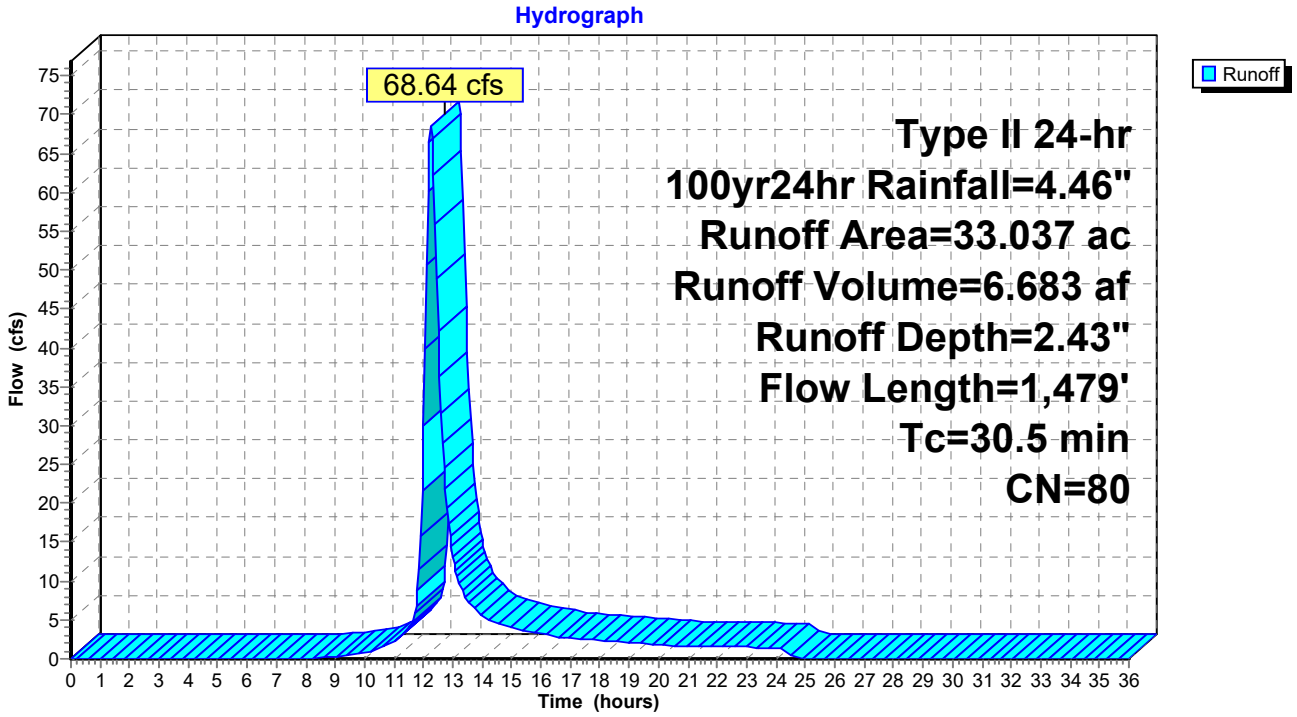
Runoff = 68.64 cfs @ 12.25 hrs, Volume= 6.683 af, Depth= 2.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 77 | Deciduous Forest, HSG D |
| * | 0.032 | 30 | Deciduous Forest, HSG A |
| * | 0.169 | 76 | Mixed Forest, HSG D |
| * | 0.006 | 36 | Mixed Forest, HSG A |
| * | 0.081 | 74 | Evergreen Forest, HSG D |
| * | 0.103 | 76 | Mixed Forest, HSG D |
| * | 1.268 | 76 | Mixed Forest, HSG D |
| * | 0.155 | 76 | Mixed Forest, HSG D |
| * | 0.014 | 60 | Mixed Forest, HSG B |
| * | 0.222 | 76 | Mixed Forest, HSG D |
| * | 0.370 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.029 | 60 | Mixed Forest, HSG B |
| * | 3.432 | 77 | Deciduous Forest, HSG D |
| * | 0.890 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.202 | 93 | Developed Low Intensity, HSG D |
| * | 0.021 | 88 | Developed Low Intensity, HSG B |
| * | 0.183 | 88 | Developed Low Intensity, HSG B |
| * | 0.868 | 84 | Developed Open Space, HSG D |
| * | 0.206 | 84 | Developed Open Space, HSG D |
| * | 0.307 | 93 | Developed Low Intensity, HSG D |
| * | 0.012 | 80 | Pasture/Hay, HSG D |
| * | 0.023 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.035 | 80 | Pasture/Hay, HSG D |
| * | 0.013 | 93 | Developed Low Intensity, HSG D |
| * | 22.349 | 81 | Cultivated Crops, HSG D |
| * | 1.982 | 71 | Cultivated Crops, HSG B |
| * | 0.007 | 62 | Cultivated Crops, HSG A |
| | 33.037 | 80 | Weighted Average |
| | 33.037 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.5 | 100 | 0.0221 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.5 | 40 | 0.0243 | 1.40 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 254 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.2 | 183 | 0.0244 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 348 | 0.0164 | 1.15 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 12.6 | 439 | 0.0041 | 0.58 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 18 | 0.0059 | 1.56 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 33 | 0.0039 | 1.27 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 65 | 0.0069 | 1.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 30.5 | 1,479 | Total | | | |

## Subcatchment 43: WS43



## Summary for Subcatchment 44: WS44

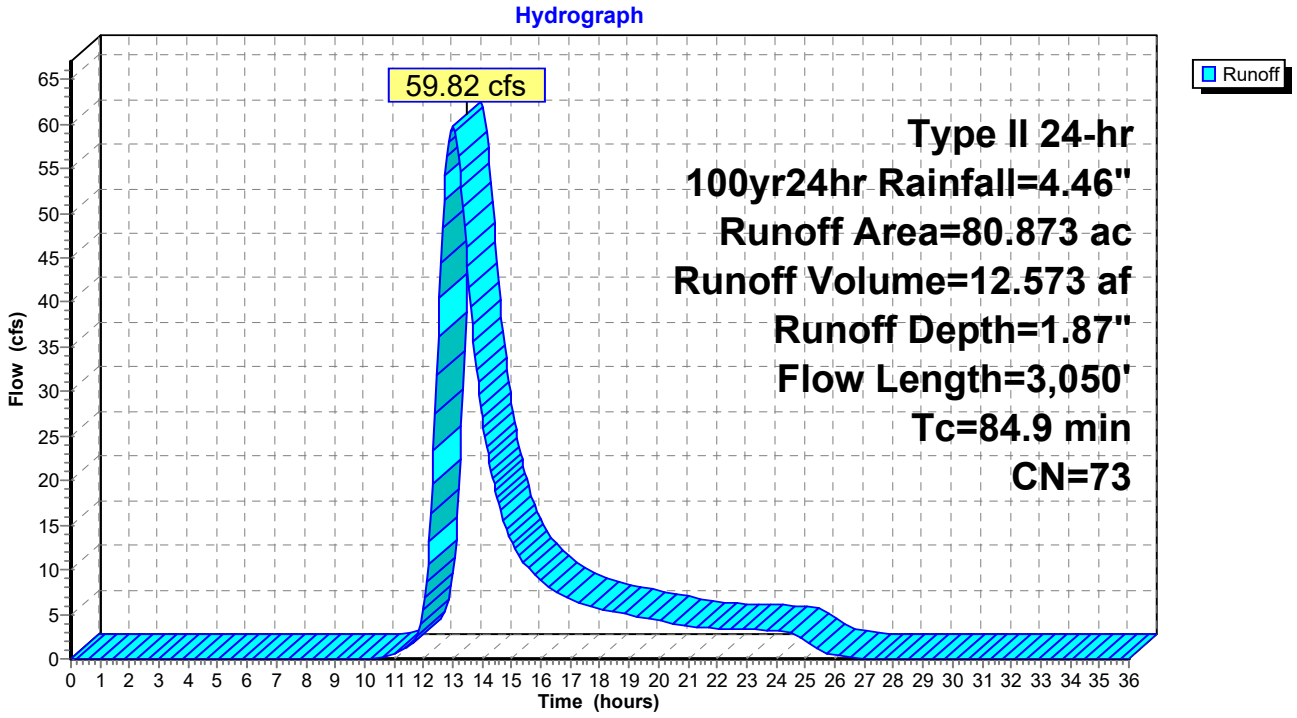
Runoff = 59.82 cfs @ 12.97 hrs, Volume= 12.573 af, Depth= 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 0.222 | 39 | Pasture/Hay, HSG A |
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 1.019 | 30 | Deciduous Forest, HSG A |
| * | 0.780 | 30 | Deciduous Forest, HSG A |
| * | 0.046 | 81 | Developed Low Intensity, HSG A |
| * | 0.445 | 30 | Deciduous Forest, HSG A |
| * | 1.557 | 80 | Pasture/Hay, HSG D |
| * | 0.045 | 76 | Mixed Forest, HSG D |
| * | 0.002 | 36 | Mixed Forest, HSG A |
| * | 1.592 | 74 | Evergreen Forest, HSG D |
| * | 0.328 | 30 | Evergreen Forest, HSG A |
| * | 0.720 | 30 | Deciduous Forest, HSG A |
| * | 5.226 | 77 | Deciduous Forest, HSG D |
| * | 6.461 | 77 | Deciduous Forest, HSG D |
| * | 0.057 | 30 | Deciduous Forest, HSG A |
| * | 2.735 | 76 | Mixed Forest, HSG D |
| * | 0.243 | 93 | Developed Low Intensity, HSG D |
| * | 0.965 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.137 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 94 | Developed Medium Intensity, HSG D |
| * | 0.743 | 93 | Developed Low Intensity, HSG D |
| * | 0.888 | 93 | Developed Low Intensity, HSG D |
| * | 0.014 | 93 | Developed Low Intensity, HSG D |
| * | 0.401 | 62 | Cultivated Crops, HSG A |
| * | 17.391 | 62 | Cultivated Crops, HSG A |
| * | 25.630 | 81 | Cultivated Crops, HSG D |
| * | 11.114 | 81 | Cultivated Crops, HSG D |
| * | 0.778 | 62 | Cultivated Crops, HSG A |
| | 80.873 | 73 | Weighted Average |
| | 80.873 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.7 | 100 | 0.0611 | 0.45 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 41 | 0.0503 | 2.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 216 | 0.0304 | 1.57 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.1 | 517 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 186 | 0.0144 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 32.0 | 677 | 0.0050 | 0.35 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 2.4 | 143 | 0.0118 | 0.98 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 33.2 | 1,171 | 0.0043 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 84.9 | 3,050 | Total | | | |

## Subcatchment 44: WS44



## Summary for Subcatchment 45: WS45

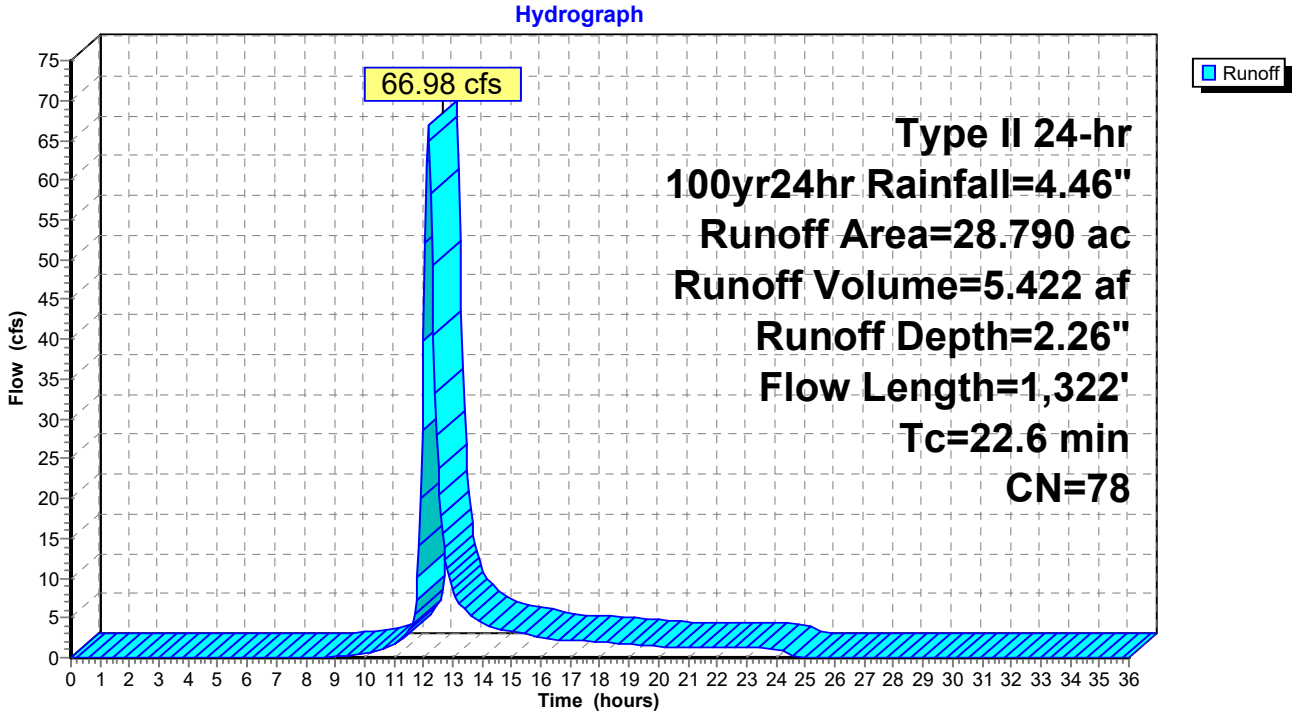
Runoff = 66.98 cfs @ 12.16 hrs, Volume= 5.422 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.658 | 77 | Deciduous Forest, HSG D |
| * | 5.025 | 62 | Cultivated Crops, HSG A |
| * | 23.107 | 81 | Cultivated Crops, HSG D |
| | 28.790 | 78 | Weighted Average |
| | 28.790 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.1 | 100 | 0.0266 | 0.33 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.8 | 287 | 0.0198 | 1.27 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.7 | 935 | 0.0160 | 1.14 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 22.6 | 1,322 | Total | | | |

## Subcatchment 45: WS45



## Summary for Subcatchment 46: WS46

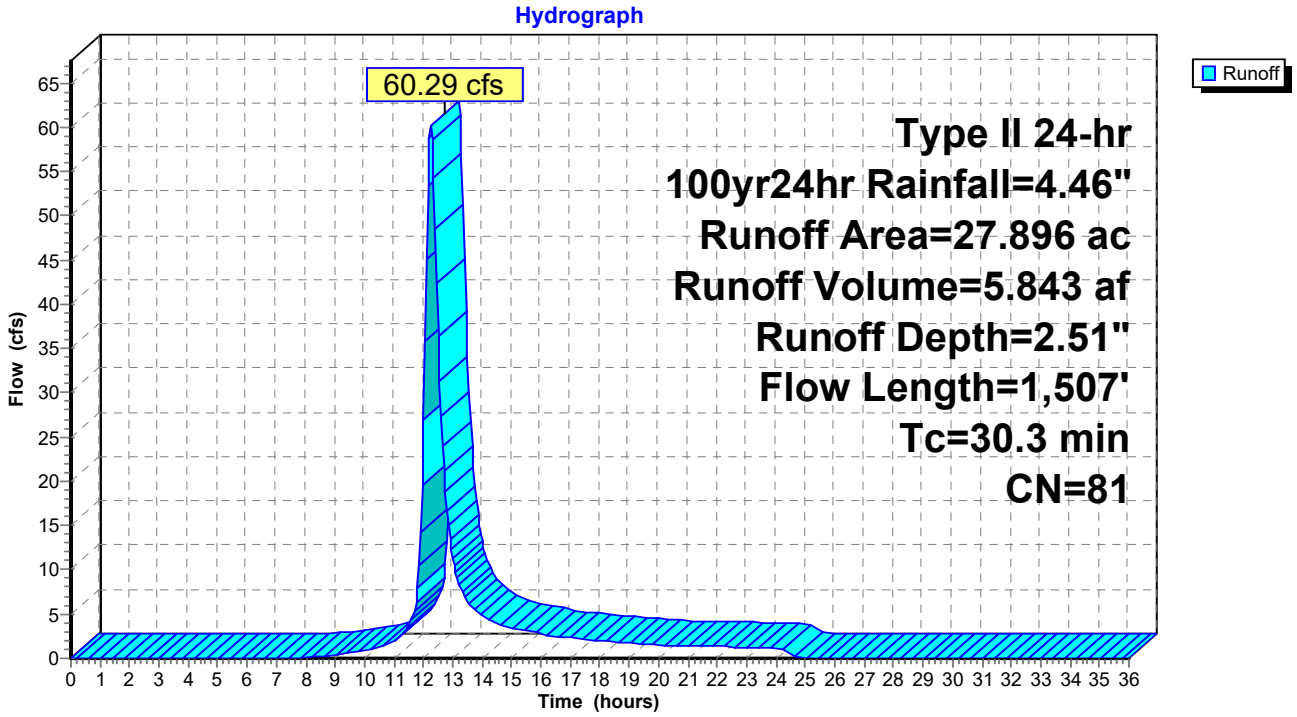
Runoff = 60.29 cfs @ 12.25 hrs, Volume= 5.843 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.444 | 80 | Pasture/Hay, HSG D |
| * | 6.847 | 81 | Cultivated Crops, HSG D |
| * | 19.604 | 81 | Cultivated Crops, HSG D |
| | 27.896 | 81 | Weighted Average |
| | 27.896 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | 100 | 0.0181 | 0.28 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.2 | 91 | 0.0206 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.8 | 223 | 0.0037 | 0.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 383 | 0.0344 | 1.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.1 | 190 | 0.0276 | 1.50 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.6 | 218 | 0.0123 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.8 | 81 | 0.0122 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.0 | 220 | 0.0068 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 30.3 | 1,507 | Total | | | |

## Subcatchment 46: WS46



## Summary for Subcatchment 47: WS47

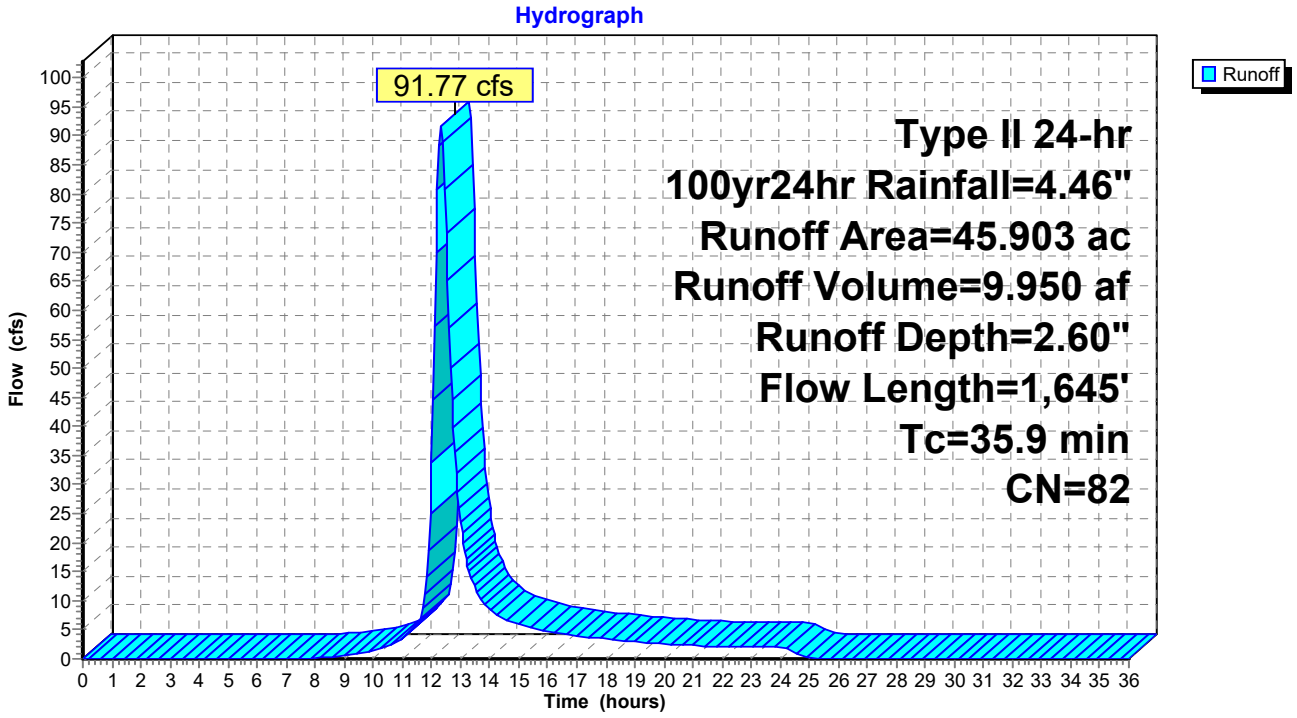
Runoff = 91.77 cfs @ 12.31 hrs, Volume= 9.950 af, Depth= 2.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.007 | 80 | Pasture/Hay, HSG D |
| * | 0.146 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.182 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.424 | 93 | Developed Low Intensity, HSG D |
| * | 0.086 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 0.015 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.119 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.030 | 80 | Pasture/Hay, HSG D |
| * | 0.037 | 80 | Pasture/Hay, HSG D |
| * | 0.039 | 86 | Woody Wetlands, HSG D |
| * | 0.118 | 86 | Woody Wetlands, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.007 | 93 | Developed Low Intensity, HSG D |
| * | 0.438 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 86 | Woody Wetlands, HSG D |
| * | 0.185 | 94 | Developed Medium Intensity, HSG D |
| * | 0.037 | 94 | Developed Medium Intensity, HSG D |
| * | 0.401 | 84 | Developed Open Space, HSG D |
| * | 0.269 | 93 | Developed Low Intensity, HSG D |
| * | 0.259 | 84 | Developed Open Space, HSG D |
| * | 0.581 | 93 | Developed Low Intensity, HSG D |
| * | 0.452 | 81 | Cultivated Crops, HSG D |
| * | 24.057 | 81 | Cultivated Crops, HSG D |
| * | 13.849 | 81 | Cultivated Crops, HSG D |
| * | 3.045 | 81 | Cultivated Crops, HSG D |
| | 45.903 | 82 | Weighted Average |
| | 45.903 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.2 | 100 | 0.0025 | 0.13 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.4 | 145 | 0.0396 | 1.79 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.6 | 264 | 0.0189 | 1.24 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 109 | 0.0228 | 1.36 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 293 | 0.0195 | 1.26 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.4 | 372 | 0.0161 | 1.14 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 6.4 | 320 | 0.0086 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 42 | 0.0127 | 1.01 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.9 | 1,645 | Total | | | |

## Subcatchment 47: WS47



## Summary for Subcatchment 48: WS48

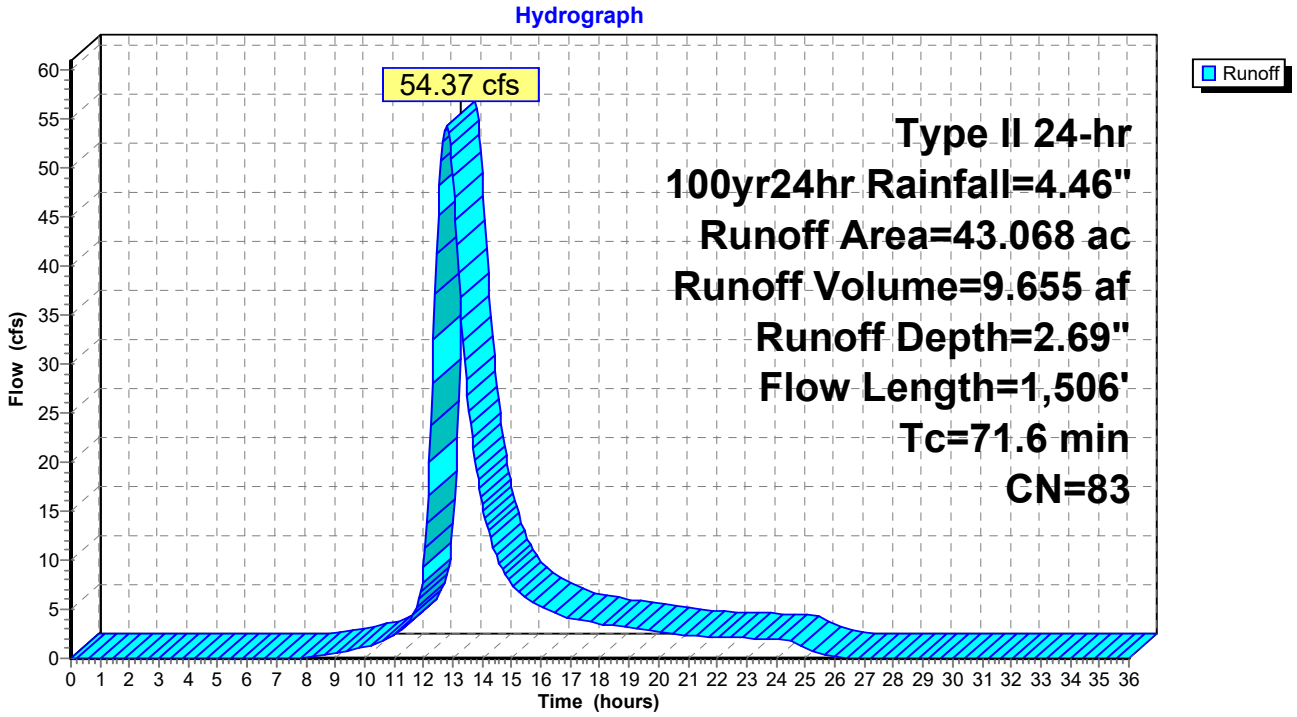
Runoff = 54.37 cfs @ 12.78 hrs, Volume= 9.655 af, Depth= 2.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.059 | 86 | Woody Wetlands, HSG D |
| * | 0.481 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.445 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.923 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.189 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.297 | 93 | Developed Low Intensity, HSG D |
| * | 0.770 | 93 | Developed Low Intensity, HSG D |
| * | 0.778 | 93 | Developed Low Intensity, HSG D |
| * | 0.144 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 11.070 | 86 | Woody Wetlands, HSG D |
| * | 0.082 | 86 | Woody Wetlands, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 3.927 | 81 | Cultivated Crops, HSG D |
| * | 3.192 | 81 | Cultivated Crops, HSG D |
| * | 19.673 | 81 | Cultivated Crops, HSG D |
| | 43.068 | 83 | Weighted Average |
| | 43.068 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.6 | 63 | 0.0685 | 1.68 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 3.2 | 37 | 0.0120 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.9 | 106 | 0.0110 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.2 | 283 | 0.0039 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.1 | 430 | 0.0056 | 0.38 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 31.6 | 588 | 0.0038 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 71.6 | 1,506 | Total | | | |

## Subcatchment 48: WS48



## Summary for Subcatchment 49: WS49

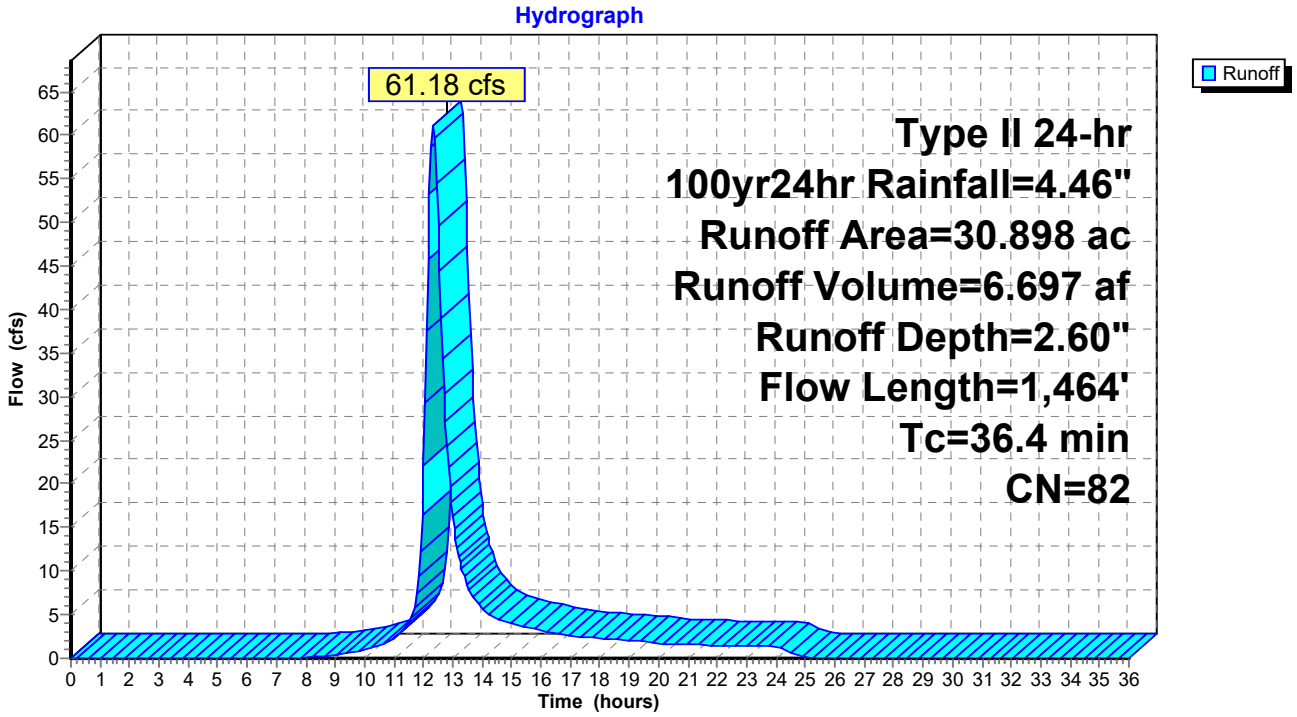
Runoff = 61.18 cfs @ 12.32 hrs, Volume= 6.697 af, Depth= 2.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.667 | 76 | Mixed Forest, HSG D |
| * | 0.784 | 93 | Developed Low Intensity, HSG D |
| * | 0.080 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 76 | Mixed Forest, HSG D |
| * | 0.222 | 77 | Deciduous Forest, HSG D |
| * | 0.317 | 77 | Deciduous Forest, HSG D |
| * | 1.239 | 77 | Deciduous Forest, HSG D |
| * | 0.342 | 94 | Developed Medium Intensity, HSG D |
| * | 0.103 | 94 | Developed Medium Intensity, HSG D |
| * | 0.005 | 84 | Developed Open Space, HSG D |
| * | 0.011 | 84 | Developed Open Space, HSG D |
| * | 0.333 | 93 | Developed Low Intensity, HSG D |
| * | 0.812 | 93 | Developed Low Intensity, HSG D |
| * | 0.328 | 93 | Developed Low Intensity, HSG D |
| * | 1.522 | 81 | Cultivated Crops, HSG D |
| * | 11.291 | 81 | Cultivated Crops, HSG D |
| * | 12.617 | 81 | Cultivated Crops, HSG D |
| | 30.898 | 82 | Weighted Average |
| | 30.898 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.0 | 100 | 0.0066 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 28 | 0.0239 | 1.39 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 311 | 0.0214 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 420 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.9 | 605 | 0.0065 | 0.73 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 36.4 | 1,464 | Total | | | |

## Subcatchment 49: WS49



## Summary for Subcatchment 50: WS50

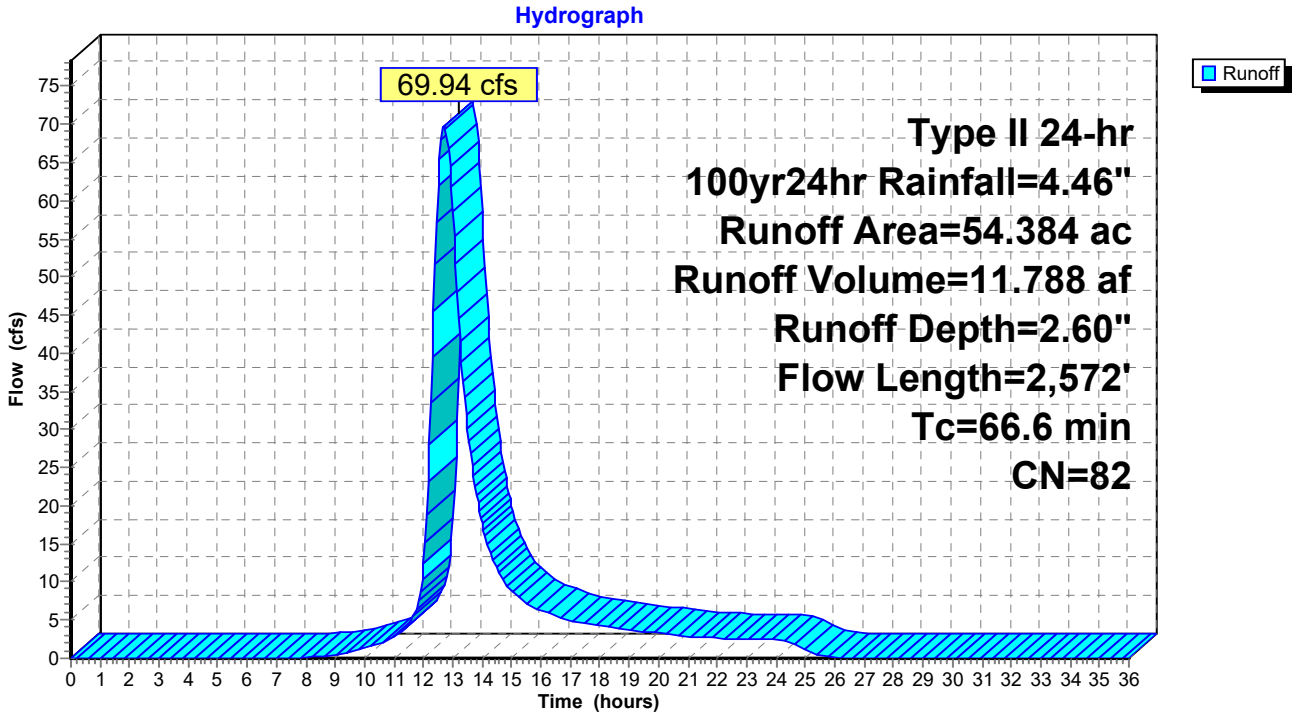
Runoff = 69.94 cfs @ 12.70 hrs, Volume= 11.788 af, Depth= 2.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.217 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.211 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.633 | 93 | Developed Low Intensity, HSG D |
| * | 0.271 | 93 | Developed Low Intensity, HSG D |
| * | 0.107 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.013 | 94 | Developed Medium Intensity, HSG D |
| * | 0.732 | 93 | Developed Low Intensity, HSG D |
| * | 0.279 | 93 | Developed Low Intensity, HSG D |
| * | 0.089 | 84 | Developed Open Space, HSG D |
| * | 0.028 | 93 | Developed Low Intensity, HSG D |
| * | 18.509 | 81 | Cultivated Crops, HSG D |
| * | 25.505 | 81 | Cultivated Crops, HSG D |
| * | 6.901 | 81 | Cultivated Crops, HSG D |
| | 54.384 | 82 | Weighted Average |
| | 54.384 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.3 | 100 | 0.0060 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.8 | 233 | 0.0082 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.4 | 518 | 0.0085 | 0.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.7 | 499 | 0.0114 | 0.96 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 23.1 | 523 | 0.0018 | 0.38 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.3 | 699 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 66.6 | 2,572 | Total | | | |

## Subcatchment 50: WS50



## Summary for Subcatchment 51: WS51

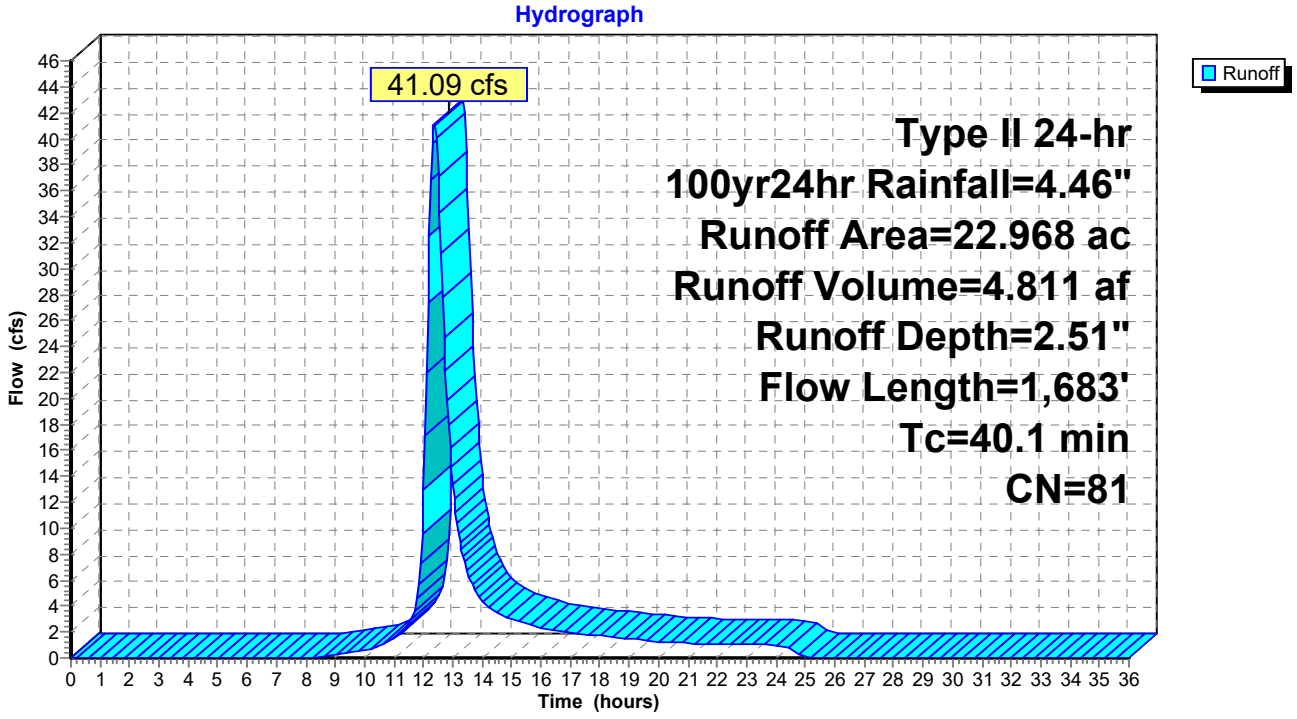
Runoff = 41.09 cfs @ 12.37 hrs, Volume= 4.811 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.232 | 81 | Cultivated Crops, HSG D |
| * | 21.736 | 81 | Cultivated Crops, HSG D |
| | 22.968 | 81 | Weighted Average |
| | 22.968 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.8 | 100 | 0.0092 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 9.9 | 590 | 0.0122 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.4 | 686 | 0.0090 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.0 | 307 | 0.0040 | 0.57 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 40.1 | 1,683 | Total | | | |

## Subcatchment 51: WS51



## Summary for Subcatchment 52: WS52

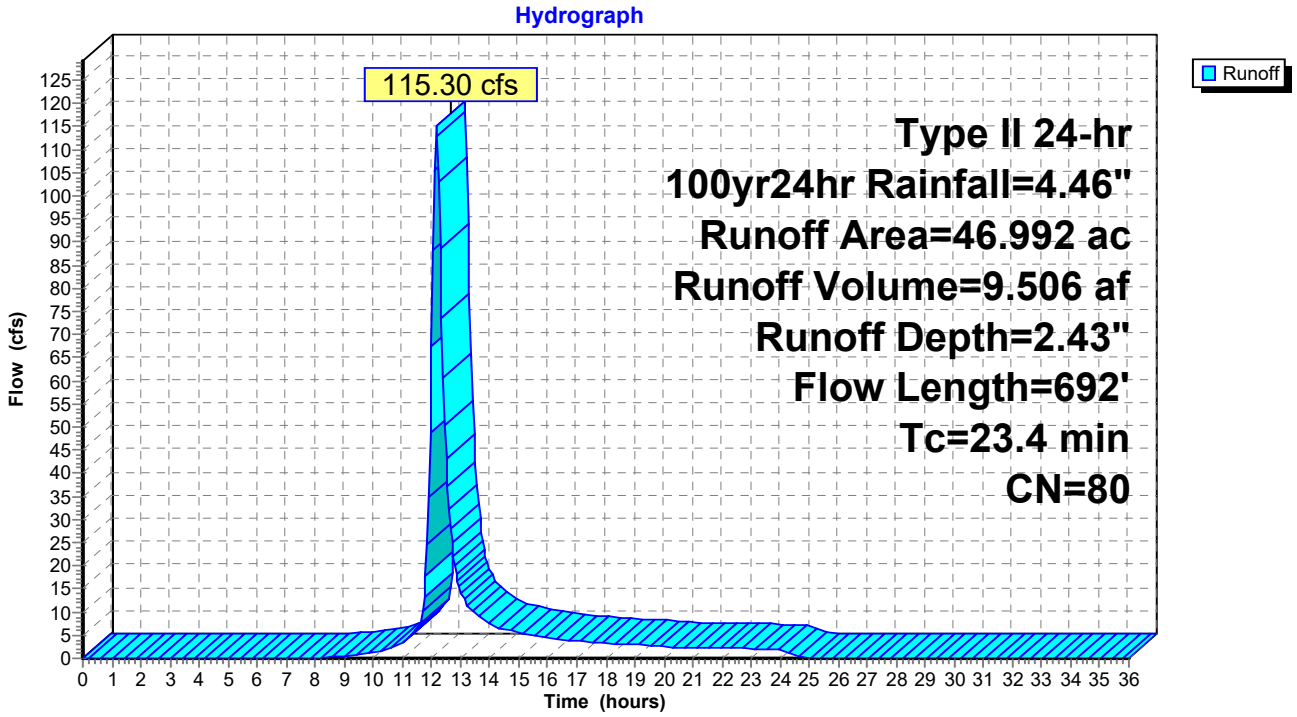
Runoff = 115.30 cfs @ 12.17 hrs, Volume= 9.506 af, Depth= 2.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.777 | 86 | Woody Wetlands, HSG D |
| * | 0.198 | 80 | Pasture/Hay, HSG D |
| * | 0.025 | 80 | Pasture/Hay, HSG D |
| * | 2.475 | 77 | Deciduous Forest, HSG D |
| * | 1.817 | 77 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Pasture/Hay, HSG D |
| * | 0.155 | 80 | Pasture/Hay, HSG D |
| * | 1.958 | 77 | Deciduous Forest, HSG D |
| * | 0.570 | 77 | Deciduous Forest, HSG D |
| * | 0.490 | 77 | Deciduous Forest, HSG D |
| * | 0.003 | 61 | Pasture/Hay, HSG B |
| * | 2.802 | 80 | Pasture/Hay, HSG D |
| * | 0.601 | 80 | Pasture/Hay, HSG D |
| * | 3.187 | 71 | Cultivated Crops, HSG B |
| * | 20.129 | 81 | Cultivated Crops, HSG D |
| * | 10.916 | 81 | Cultivated Crops, HSG D |
| * | 0.822 | 81 | Cultivated Crops, HSG D |
| | 46.992 | 80 | Weighted Average |
| | 46.992 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.3 | 77 | 0.0096 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.2 | 23 | 0.0144 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.4 | 138 | 0.0185 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.2 | 249 | 0.0092 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.3 | 206 | 0.0132 | 0.80 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.4 | 692 | Total | | | |

## Subcatchment 52: WS52



## Summary for Subcatchment 53: WS53

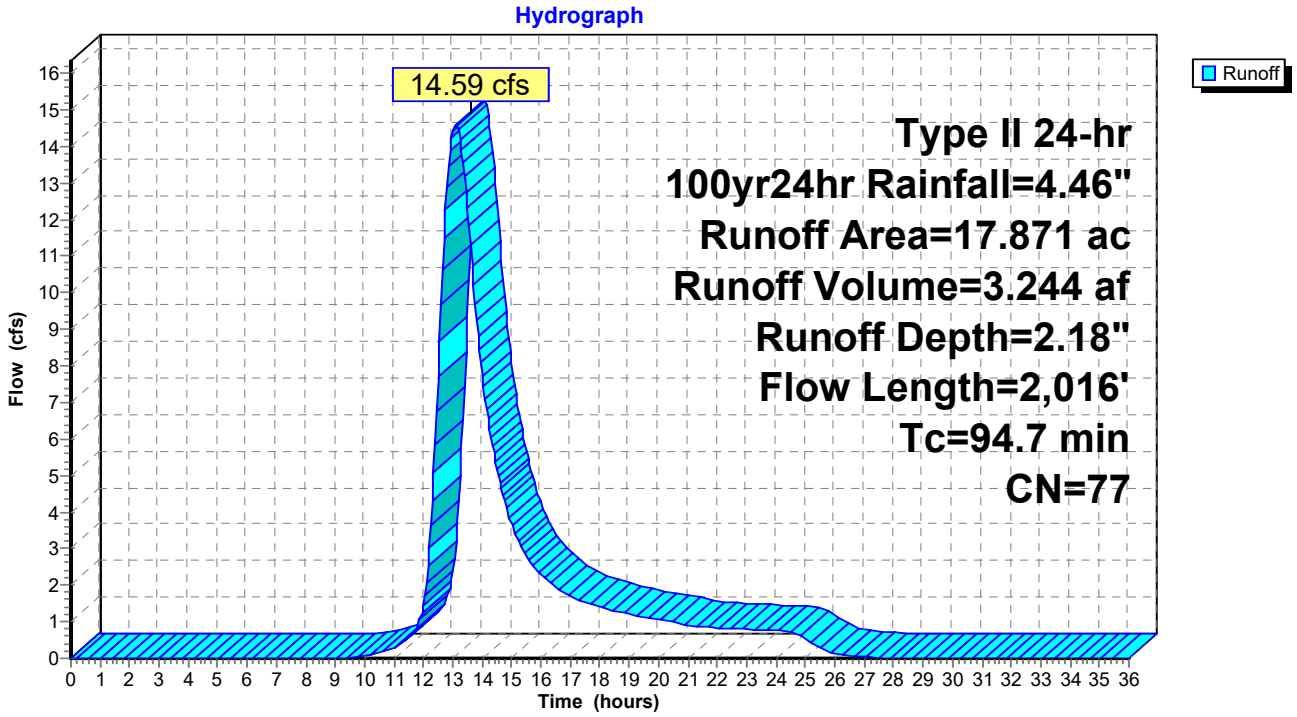
Runoff = 14.59 cfs @ 13.13 hrs, Volume= 3.244 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.579 | 77 | Deciduous Forest, HSG D |
| * | 0.013 | 77 | Deciduous Forest, HSG D |
| * | 0.538 | 60 | Mixed Forest, HSG B |
| * | 0.164 | 76 | Mixed Forest, HSG D |
| * | 5.012 | 71 | Cultivated Crops, HSG B |
| * | 11.565 | 81 | Cultivated Crops, HSG D |
| | 17.871 | 77 | Weighted Average |
| | 17.871 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 46.4 | 100 | 0.0048 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.5 | 83 | 0.0337 | 0.92 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 34 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.5 | 289 | 0.0142 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.3 | 470 | 0.0071 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.8 | 245 | 0.0026 | 0.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.5 | 298 | 0.0034 | 0.52 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.2 | 497 | 0.0048 | 0.63 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 94.7 | 2,016 | Total | | | |

## Subcatchment 53: WS53



## Summary for Subcatchment 54: WS54

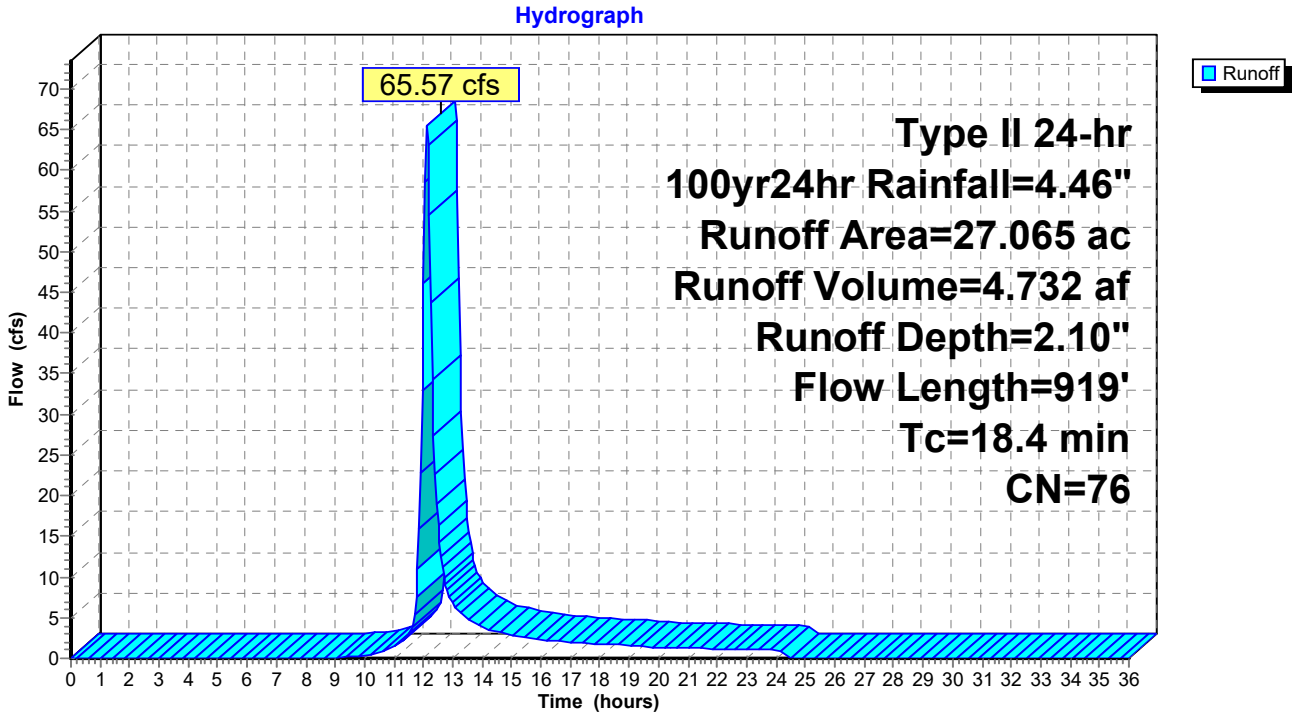
Runoff = 65.57 cfs @ 12.11 hrs, Volume= 4.732 af, Depth= 2.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.008 | 77 | Deciduous Forest, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.417 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.680 | 61 | Pasture/Hay, HSG B |
| * | 2.775 | 55 | Deciduous Forest, HSG B |
| * | 1.058 | 77 | Deciduous Forest, HSG D |
| * | 0.059 | 93 | Developed Low Intensity, HSG D |
| * | 3.668 | 81 | Cultivated Crops, HSG D |
| * | 4.588 | 71 | Cultivated Crops, HSG B |
| * | 13.120 | 81 | Cultivated Crops, HSG D |
| | 27.065 | 76 | Weighted Average |
| | 27.065 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.8 | 100 | 0.0195 | 0.29 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.0 | 312 | 0.0208 | 1.30 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.6 | 507 | 0.0120 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.4 | 919 | Total | | | |

## Subcatchment 54: WS54



## Summary for Subcatchment 55: WS55

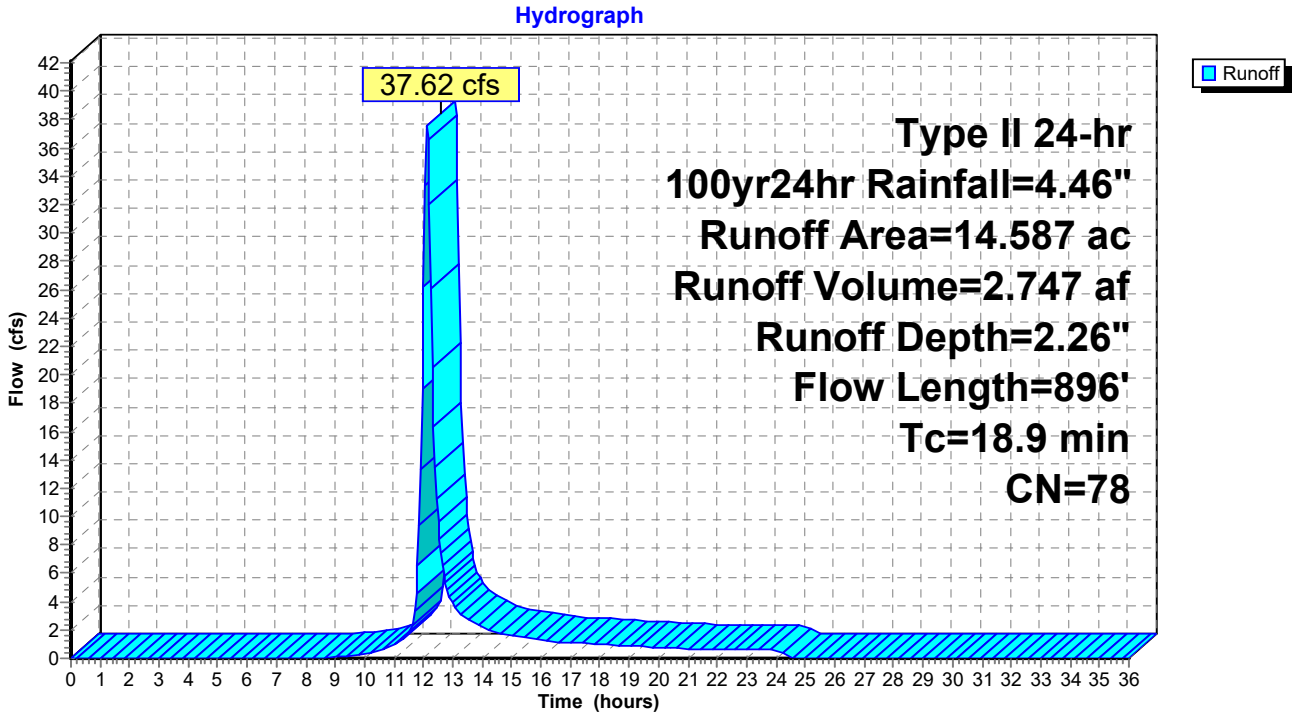
Runoff = 37.62 cfs @ 12.12 hrs, Volume= 2.747 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.010 | 84 | Developed Open Space, HSG D |
| * | 0.225 | 93 | Developed Low Intensity, HSG D |
| * | 0.094 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 81 | Cultivated Crops, HSG D |
| * | 4.829 | 71 | Cultivated Crops, HSG B |
| * | 9.429 | 81 | Cultivated Crops, HSG D |
| | 14.587 | 78 | Weighted Average |
| | 14.587 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.1 | 100 | 0.0116 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.1 | 180 | 0.0116 | 0.97 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 282 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 334 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.9 | 896 | Total | | | |

## Subcatchment 55: WS55



## Summary for Subcatchment 56: WS56

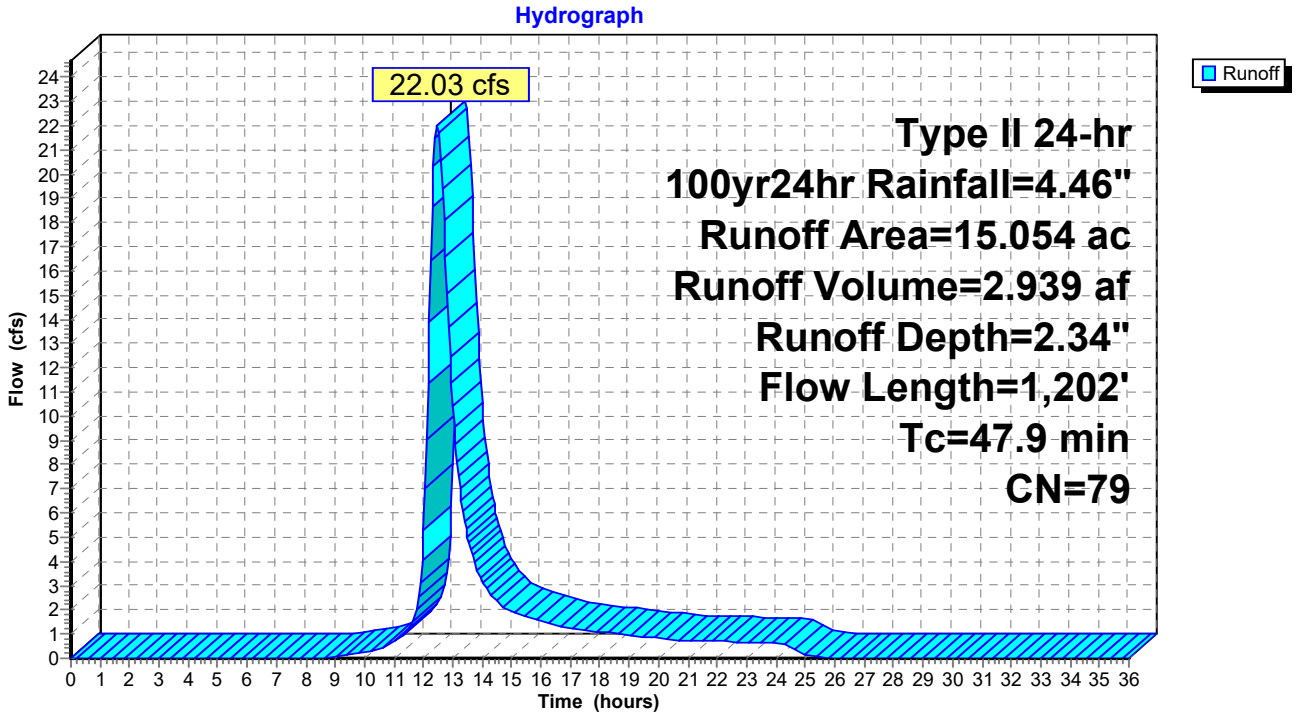
Runoff = 22.03 cfs @ 12.48 hrs, Volume= 2.939 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.006 | 55 | Deciduous Forest, HSG B |
| * | 3.610 | 71 | Cultivated Crops, HSG B |
| * | 11.438 | 81 | Cultivated Crops, HSG D |
| | 15.054 | 79 | Weighted Average |
| | 15.054 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.1 | 100 | 0.0084 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.4 | 123 | 0.0089 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 172 | 0.0257 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 184 | 0.0140 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 29.2 | 368 | 0.0005 | 0.21 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.3 | 254 | 0.0209 | 1.30 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 47.9 | 1,202 | Total | | | |

## Subcatchment 56: WS56



## Summary for Subcatchment 57: WS57

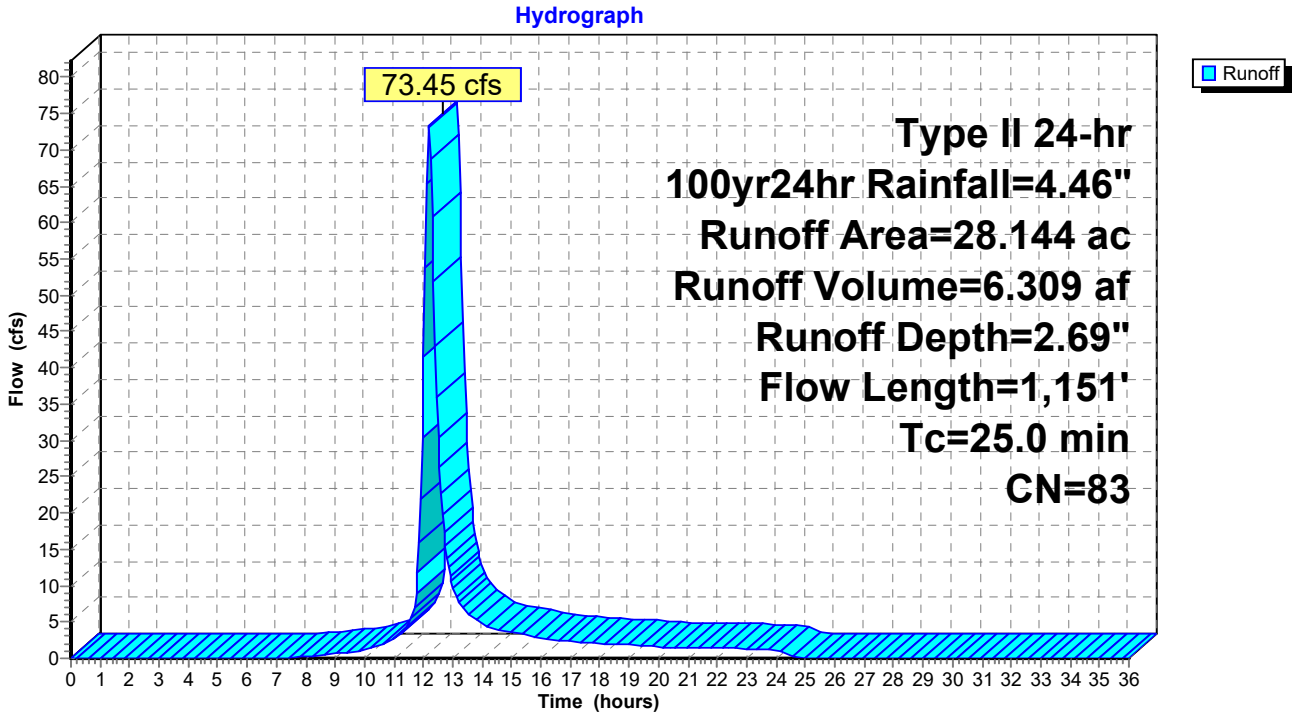
Runoff = 73.45 cfs @ 12.18 hrs, Volume= 6.309 af, Depth= 2.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.213 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.799 | 77 | Deciduous Forest, HSG D |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 1.219 | 81 | Cultivated Crops, HSG D |
| * | 0.119 | 94 | Developed Medium Intensity, HSG D |
| * | 0.116 | 93 | Developed Low Intensity, HSG D |
| * | 0.620 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 94 | Developed Medium Intensity, HSG D |
| * | 0.091 | 93 | Developed Low Intensity, HSG D |
| * | 0.093 | 94 | Developed Medium Intensity, HSG D |
| * | 0.092 | 93 | Developed Low Intensity, HSG D |
| * | 0.562 | 84 | Developed Open Space, HSG D |
| * | 0.907 | 93 | Developed Low Intensity, HSG D |
| * | 20.825 | 81 | Cultivated Crops, HSG D |
| * | 0.285 | 81 | Cultivated Crops, HSG D |
| | 28.144 | 83 | Weighted Average |
| | 28.144 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.9 | 38 | 0.0016 | 0.34 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 4.4 | 62 | 0.0147 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 11 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 121 | 0.0290 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 153 | 0.0150 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 96 | 0.0281 | 3.40 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.0 | 13 | 0.2090 | 9.28 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 12.5 | 475 | 0.0049 | 0.63 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 73 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.1 | 109 | 0.0309 | 1.58 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.0 | 1,151 | Total | | | |

## Subcatchment 57: WS57



## Summary for Subcatchment 58: WS58

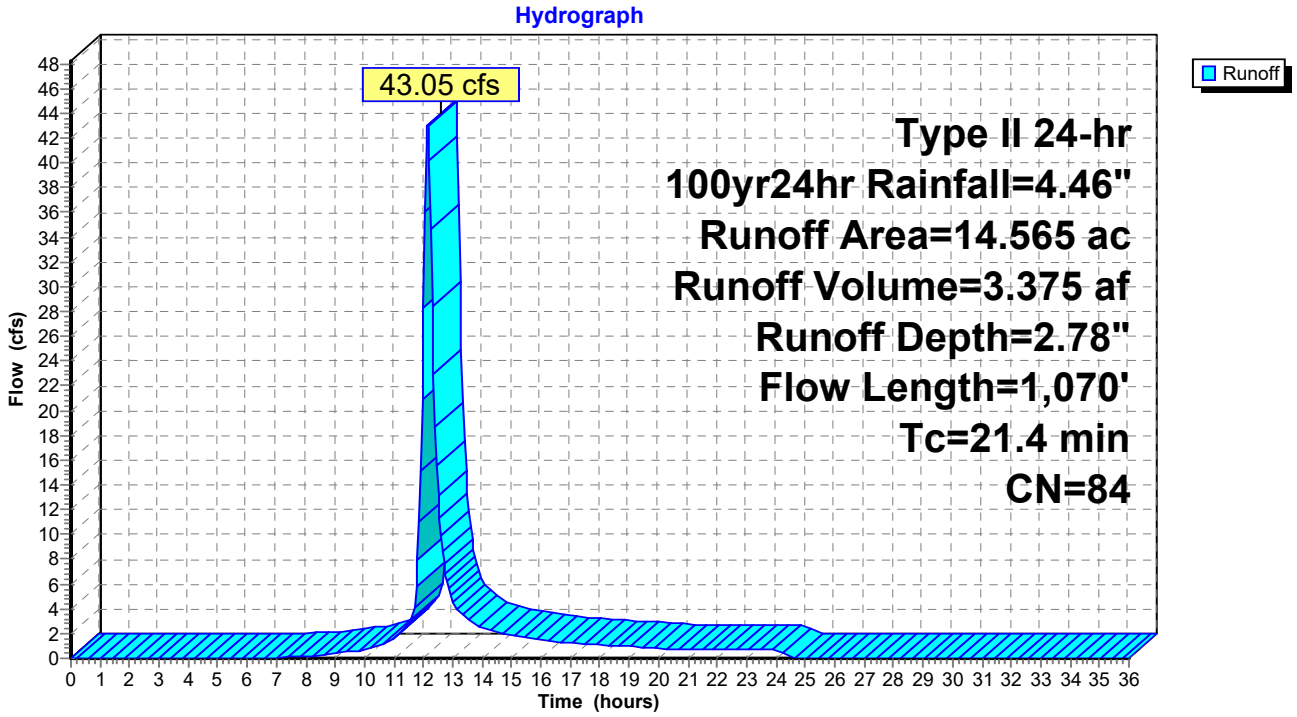
Runoff = 43.05 cfs @ 12.14 hrs, Volume= 3.375 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.103 | 94 | Developed Medium Intensity, HSG D |
| * | 0.106 | 93 | Developed Low Intensity, HSG D |
| * | 0.715 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 94 | Developed Medium Intensity, HSG D |
| * | 0.131 | 93 | Developed Low Intensity, HSG D |
| * | 0.076 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.188 | 81 | Cultivated Crops, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.343 | 93 | Developed Low Intensity, HSG D |
| * | 2.330 | 93 | Developed Low Intensity, HSG D |
| * | 10.203 | 81 | Cultivated Crops, HSG D |
| | 14.565 | 84 | Weighted Average |
| | 14.565 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.4 | 100 | 0.0107 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.2 | 266 | 0.0240 | 1.39 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 11 | 0.0245 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 22 | 0.0112 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 14 | 0.0245 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 23 | 0.0212 | 1.31 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 152 | 0.0088 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.6 | 47 | 0.0186 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 68 | 0.0210 | 1.31 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.5 | 214 | 0.0079 | 0.80 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 153 | 0.0281 | 3.40 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 21.4 | 1,070 | Total | | | |

## Subcatchment 58: WS58



## Summary for Subcatchment 59: WS59

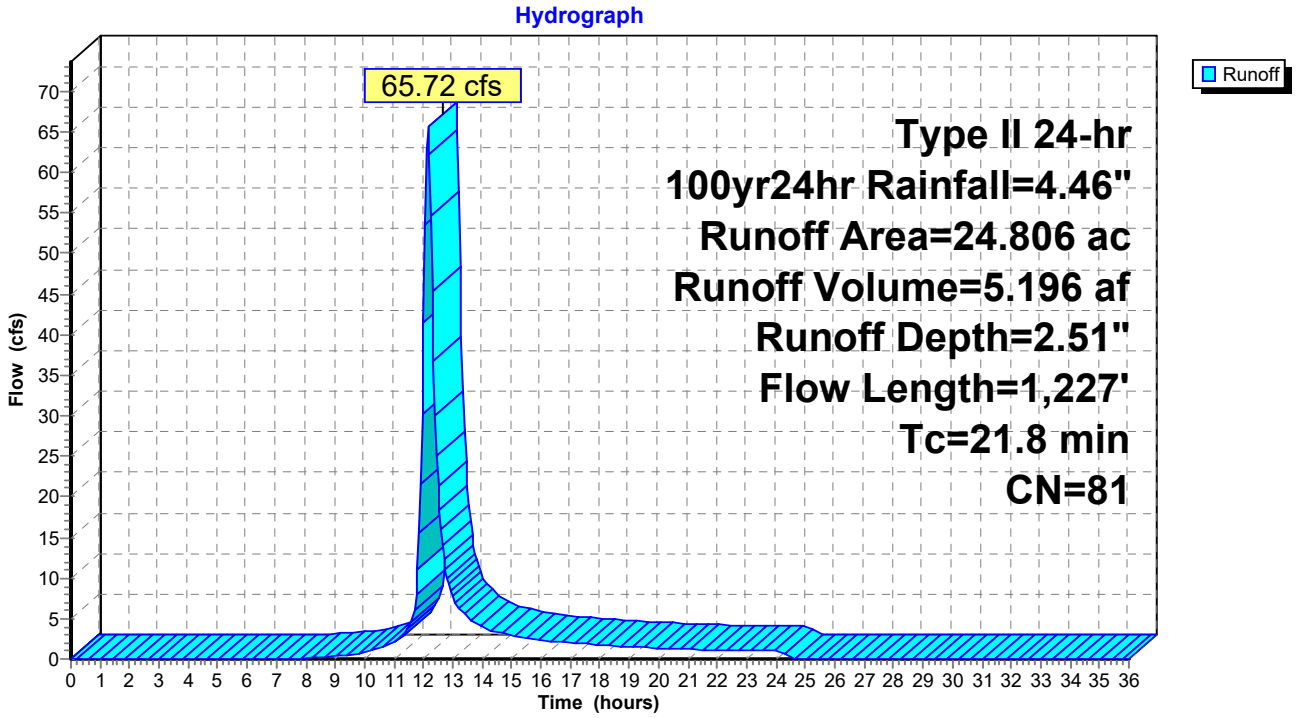
Runoff = 65.72 cfs @ 12.15 hrs, Volume= 5.196 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.484 | 84 | Developed Open Space, HSG D |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 2.998 | 81 | Cultivated Crops, HSG D |
| * | 1.587 | 71 | Cultivated Crops, HSG B |
| * | 18.470 | 81 | Cultivated Crops, HSG D |
| | 24.806 | 81 | Weighted Average |
| | 24.806 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 309 | 0.0160 | 1.14 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 216 | 0.0170 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.2 | 702 | 0.0083 | 0.82 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 21.8 | 1,227 | Total | | | |

## Subcatchment 59: WS59



## Summary for Subcatchment 60: WS60

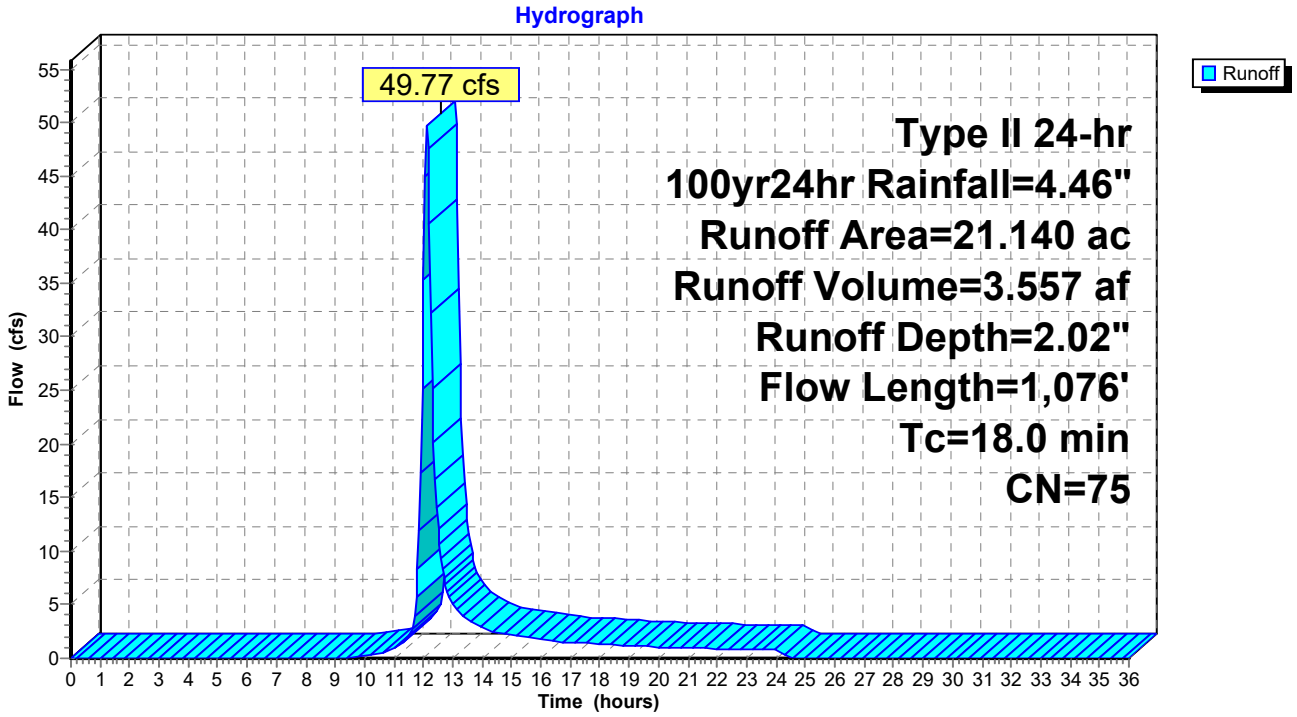
Runoff = 49.77 cfs @ 12.11 hrs, Volume= 3.557 af, Depth= 2.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.863 | 81 | Cultivated Crops, HSG D |
| * | 12.490 | 71 | Cultivated Crops, HSG B |
| * | 0.964 | 81 | Cultivated Crops, HSG D |
| * | 5.877 | 81 | Cultivated Crops, HSG D |
| * | 0.946 | 71 | Cultivated Crops, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| | 21.140 | 75 | Weighted Average |
| | 21.140 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.7 | 100 | 0.0072 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 30 | 0.0299 | 1.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.0 | 230 | 0.0450 | 1.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.8 | 190 | 0.0387 | 1.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 294 | 0.0414 | 1.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.5 | 232 | 0.0296 | 1.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.0 | 1,076 | Total | | | |

## Subcatchment 60: WS60



## Summary for Subcatchment 61: WS61

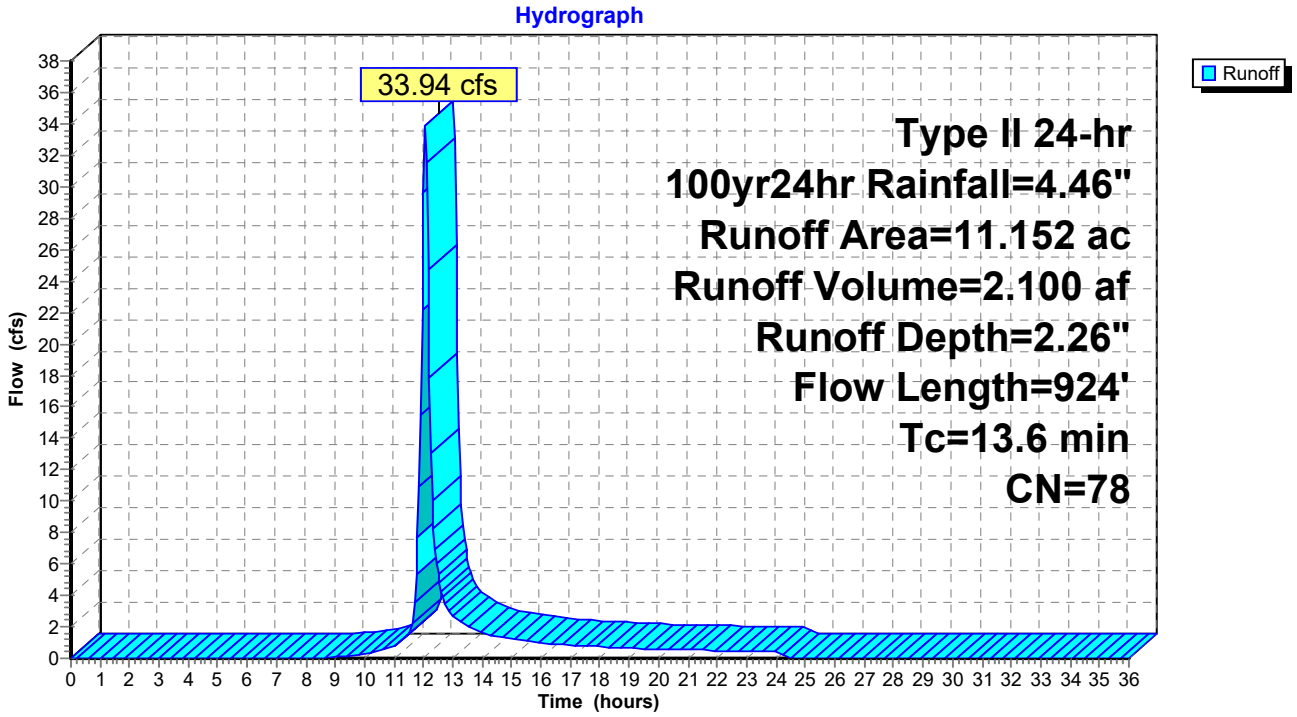
Runoff = 33.94 cfs @ 12.06 hrs, Volume= 2.100 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.005 | 61 | Pasture/Hay, HSG B |
| * | 0.480 | 77 | Deciduous Forest, HSG D |
| * | 0.986 | 81 | Cultivated Crops, HSG D |
| * | 1.432 | 71 | Cultivated Crops, HSG B |
| * | 1.596 | 81 | Cultivated Crops, HSG D |
| * | 5.178 | 81 | Cultivated Crops, HSG D |
| * | 1.380 | 71 | Cultivated Crops, HSG B |
| * | 0.095 | 86 | Woody Wetlands, HSG B |
| | 11.152 | 78 | Weighted Average |
| | 11.152 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.8 | 100 | 0.0307 | 0.34 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.0 | 167 | 0.1012 | 2.86 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.1 | 236 | 0.0423 | 1.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.4 | 409 | 0.0194 | 1.25 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 12 | 0.0126 | 0.56 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 13.6 | 924 | Total | | | |

## Subcatchment 61: WS61



## Summary for Subcatchment 62: WS62

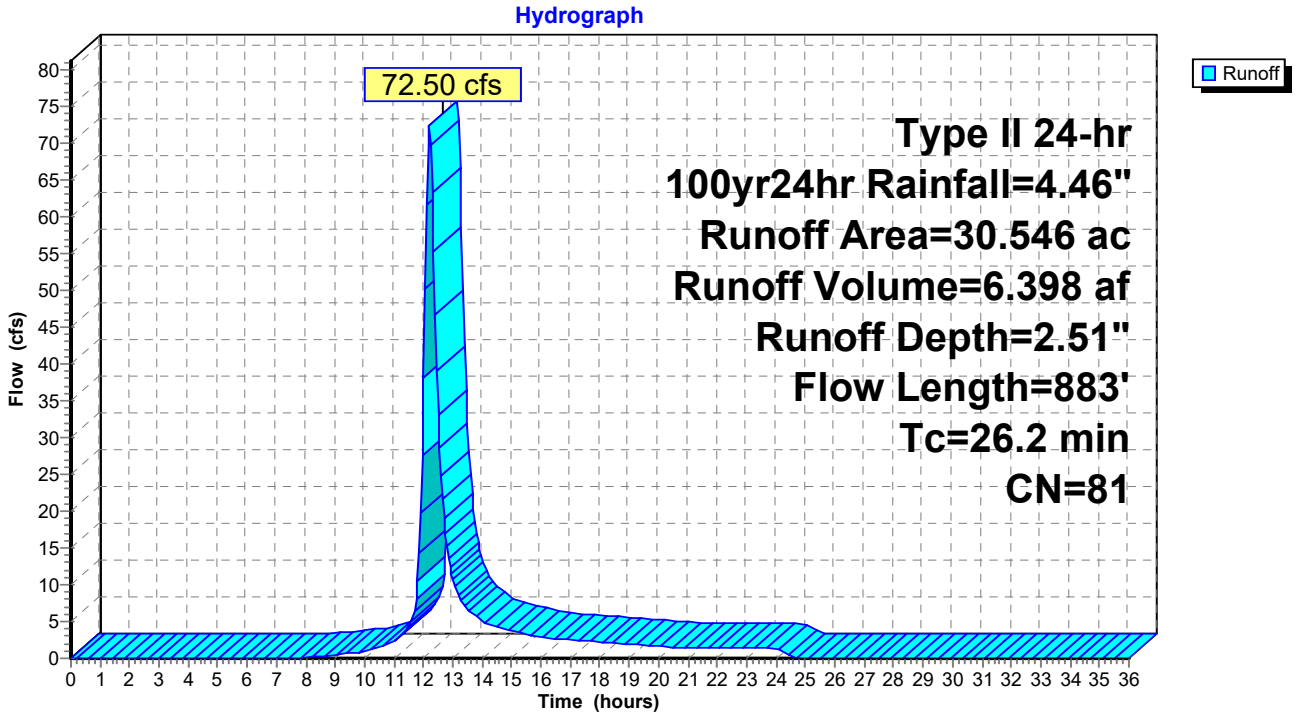
Runoff = 72.50 cfs @ 12.20 hrs, Volume= 6.398 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 81 | Cultivated Crops, HSG D |
| * | 1.620 | 86 | Woody Wetlands, HSG D |
| * | 12.298 | 80 | Pasture/Hay, HSG D |
| * | 2.076 | 81 | Cultivated Crops, HSG D |
| * | 14.330 | 81 | Cultivated Crops, HSG D |
| | 30.546 | 81 | Weighted Average |
| | 30.546 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.2 | 100 | 0.0031 | 0.14 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 10 | 0.0203 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 80 | 0.0256 | 1.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 158 | 0.0093 | 0.68 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 219 | 0.0186 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 12 | 0.0179 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 304 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 26.2 | 883 | Total | | | |

## Subcatchment 62: WS62



## Summary for Subcatchment 63: WS63

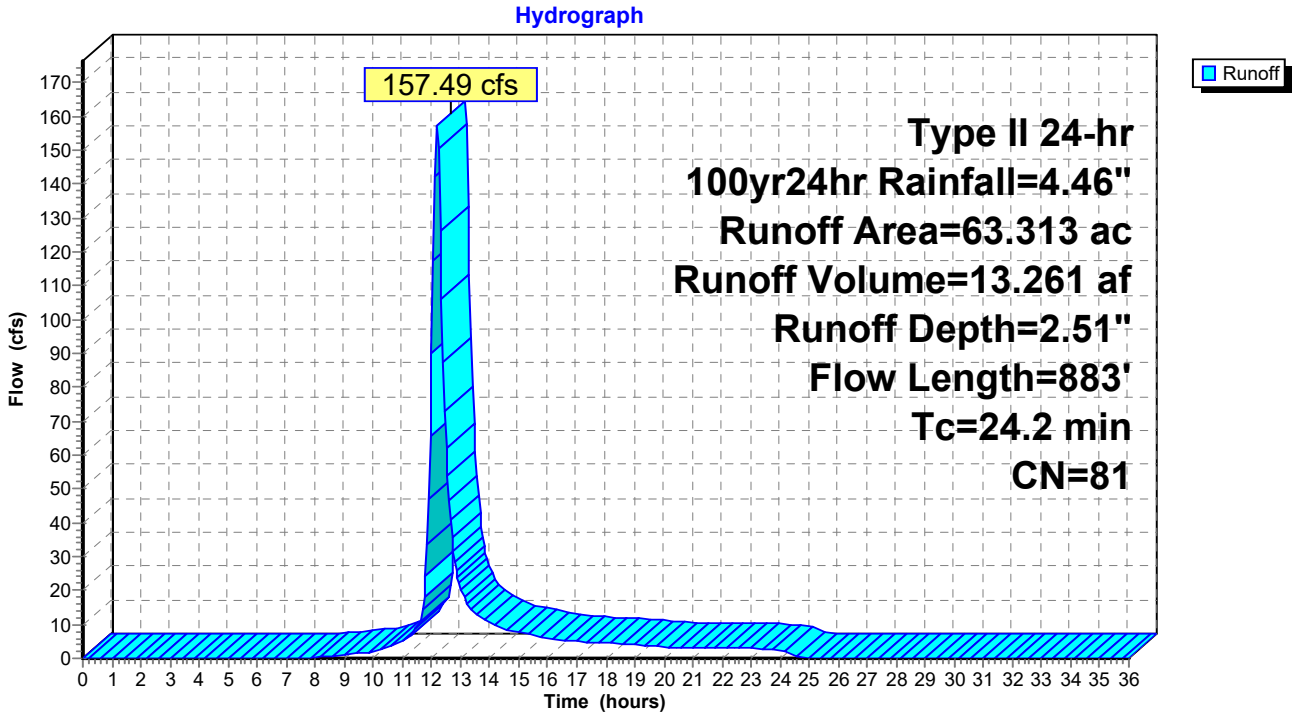
Runoff = 157.49 cfs @ 12.18 hrs, Volume= 13.261 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.064 | 84 | Developed Open Space, HSG D |
| * | 0.210 | 93 | Developed Low Intensity, HSG D |
| * | 0.440 | 84 | Developed Open Space, HSG D |
| * | 0.667 | 93 | Developed Low Intensity, HSG D |
| * | 0.592 | 93 | Developed Low Intensity, HSG D |
| * | 0.522 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 93 | Developed Low Intensity, HSG D |
| * | 0.068 | 84 | Developed Open Space, HSG D |
| * | 4.209 | 81 | Cultivated Crops, HSG D |
| * | 6.667 | 81 | Cultivated Crops, HSG D |
| * | 49.863 | 81 | Cultivated Crops, HSG D |
| | 63.313 | 81 | Weighted Average |
| | 63.313 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.2 | 100 | 0.0031 | 0.14 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 10 | 0.0203 | 1.28 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 80 | 0.0256 | 1.44 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 158 | 0.0093 | 0.87 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 219 | 0.0186 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 12 | 0.0179 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 304 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.2 | 883 | Total | | | |

## Subcatchment 63: WS63



## Summary for Subcatchment 64: WS64

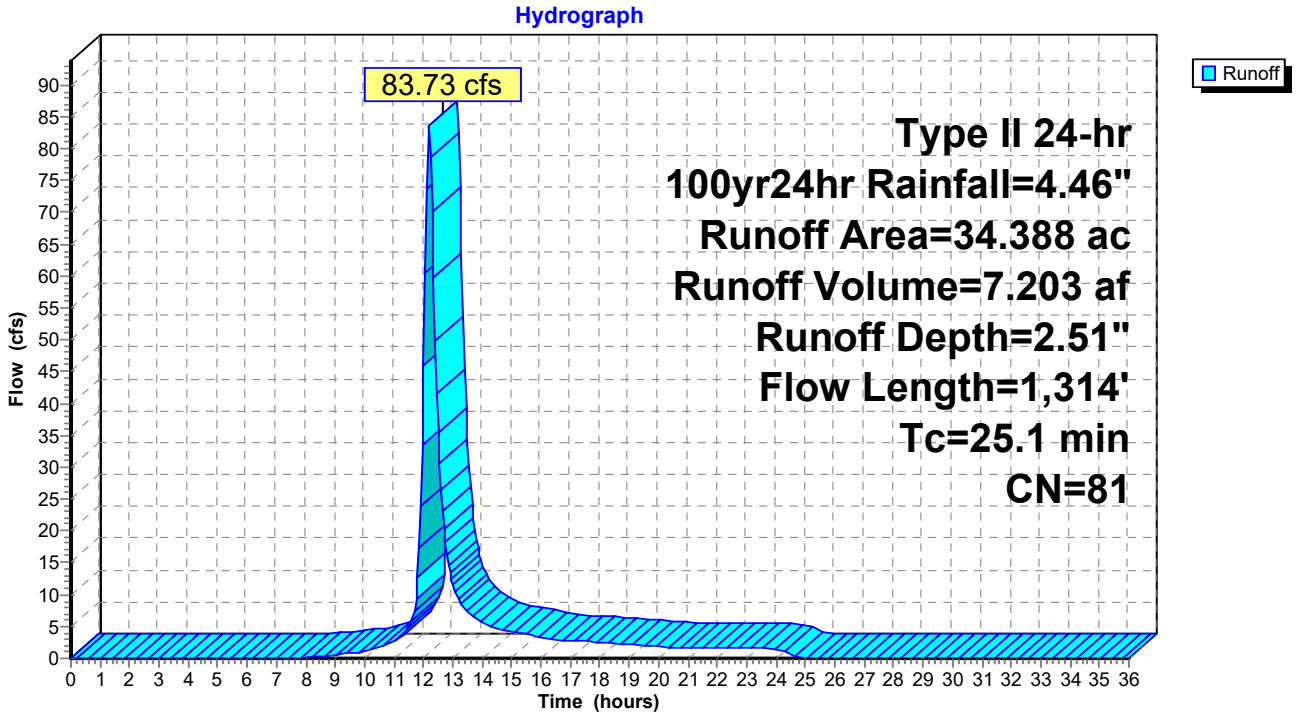
Runoff = 83.73 cfs @ 12.19 hrs, Volume= 7.203 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.070 | 94 | Developed Medium Intensity, HSG D |
| * | 0.213 | 81 | Cultivated Crops, HSG D |
| * | 0.051 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.004 | 84 | Developed Open Space, HSG D |
| * | 0.241 | 93 | Developed Low Intensity, HSG D |
| * | 0.120 | 84 | Developed Open Space, HSG D |
| * | 0.388 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 84 | Developed Open Space, HSG D |
| * | 12.373 | 81 | Cultivated Crops, HSG D |
| * | 0.204 | 81 | Cultivated Crops, HSG D |
| * | 20.370 | 81 | Cultivated Crops, HSG D |
| | 34.388 | 81 | Weighted Average |
| | 34.388 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.2 | 100 | 0.0166 | 0.27 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.1 | 80 | 0.0166 | 1.16 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.7 | 223 | 0.0232 | 1.37 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 170 | 0.0116 | 0.97 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 277 | 0.0148 | 1.09 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.8 | 329 | 0.0110 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 97 | 0.0086 | 0.83 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 37 | 0.0086 | 1.88 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 25.1 | 1,314 | Total | | | |

## Subcatchment 64: WS64



## Summary for Subcatchment 65: WS65

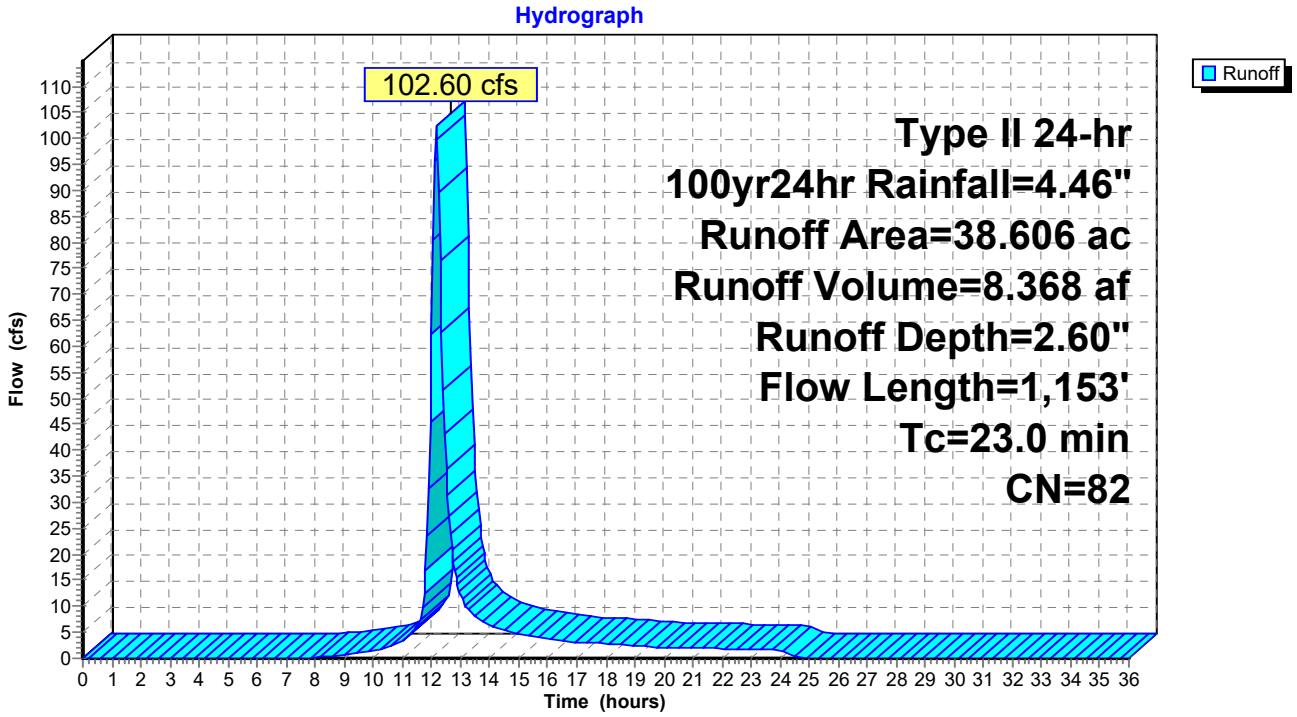
Runoff = 102.60 cfs @ 12.16 hrs, Volume= 8.368 af, Depth= 2.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.808 | 84 | Developed Open Space, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 93 | Developed Low Intensity, HSG D |
| * | 1.978 | 93 | Developed Low Intensity, HSG D |
| * | 0.220 | 94 | Developed Medium Intensity, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.187 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 81 | Cultivated Crops, HSG D |
| * | 23.476 | 81 | Cultivated Crops, HSG D |
| * | 4.971 | 81 | Cultivated Crops, HSG D |
| * | 6.092 | 81 | Cultivated Crops, HSG D |
| | 38.606 | 82 | Weighted Average |
| | 38.606 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.6 | 100 | 0.0072 | 0.19 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.6 | 44 | 0.0194 | 1.25 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 173 | 0.0382 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.9 | 195 | 0.0356 | 1.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.1 | 163 | 0.0216 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.6 | 228 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.6 | 250 | 0.0100 | 0.90 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 23.0 | 1,153 | Total | | | |

## Subcatchment 65: WS65



## Summary for Subcatchment 66: WS66

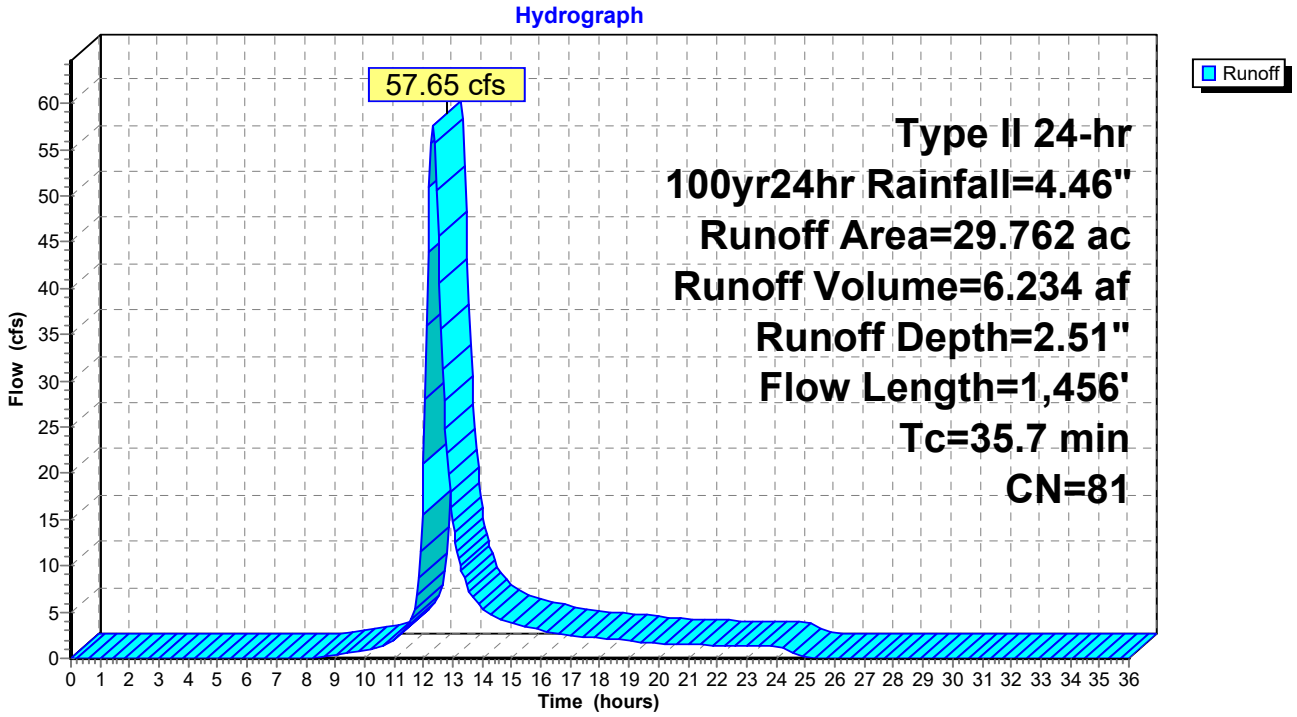
Runoff = 57.65 cfs @ 12.31 hrs, Volume= 6.234 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.002 | 94 | Developed Medium Intensity, HSG D |
| * | 19.133 | 81 | Cultivated Crops, HSG D |
| * | 1.365 | 81 | Cultivated Crops, HSG D |
| * | 9.261 | 81 | Cultivated Crops, HSG D |
| | 29.762 | 81 | Weighted Average |
| | 29.762 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.6 | 100 | 0.0218 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.5 | 152 | 0.0124 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.2 | 150 | 0.0074 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.1 | 291 | 0.0302 | 1.56 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.8 | 111 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 54 | 0.0098 | 0.89 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 5 | 0.0053 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 109 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 26 | 0.0214 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 91 | 0.0125 | 1.00 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.1 | 366 | 0.0020 | 0.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.7 | 1,456 | Total | | | |

## Subcatchment 66: WS66



## Summary for Subcatchment 67: WS67

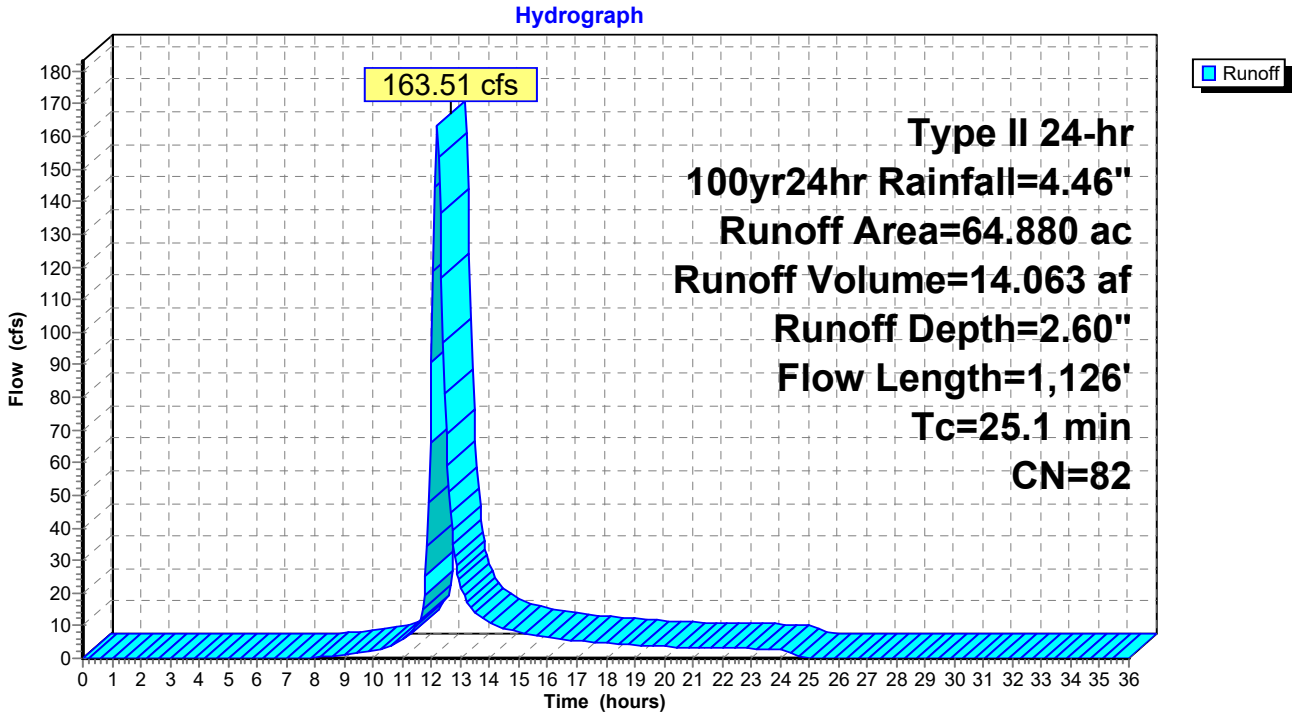
Runoff = 163.51 cfs @ 12.19 hrs, Volume= 14.063 af, Depth= 2.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.065 | 93 | Developed Low Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.110 | 94 | Developed Medium Intensity, HSG D |
| * | 0.317 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.210 | 93 | Developed Low Intensity, HSG D |
| * | 0.490 | 93 | Developed Low Intensity, HSG D |
| * | 0.053 | 84 | Developed Open Space, HSG D |
| * | 0.070 | 84 | Developed Open Space, HSG D |
| * | 0.234 | 86 | Woody Wetlands, HSG D |
| * | 0.117 | 93 | Developed Low Intensity, HSG D |
| * | 0.583 | 93 | Developed Low Intensity, HSG D |
| * | 0.347 | 93 | Developed Low Intensity, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 0.257 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.850 | 93 | Developed Low Intensity, HSG D |
| * | 0.173 | 84 | Developed Open Space, HSG D |
| * | 0.904 | 86 | Woody Wetlands, HSG D |
| * | 0.000 | 93 | Developed Low Intensity, HSG D |
| * | 0.585 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 84 | Developed Open Space, HSG D |
| * | 23.511 | 81 | Cultivated Crops, HSG D |
| * | 19.988 | 81 | Cultivated Crops, HSG D |
| * | 15.002 | 81 | Cultivated Crops, HSG D |
| | 64.880 | 82 | Weighted Average |
| | 64.880 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.4 | 100 | 0.0059 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 5.8 | 257 | 0.0068 | 0.74 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 375 | 0.0197 | 1.26 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.0 | 394 | 0.0215 | 1.32 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.1 | 1,126 | Total | | | |

## Subcatchment 67: WS67



# Gustin Solar

Gustin Township

**Exhibit H-3**

Stormwater Calculations

Post-Construction

May 15, 2026

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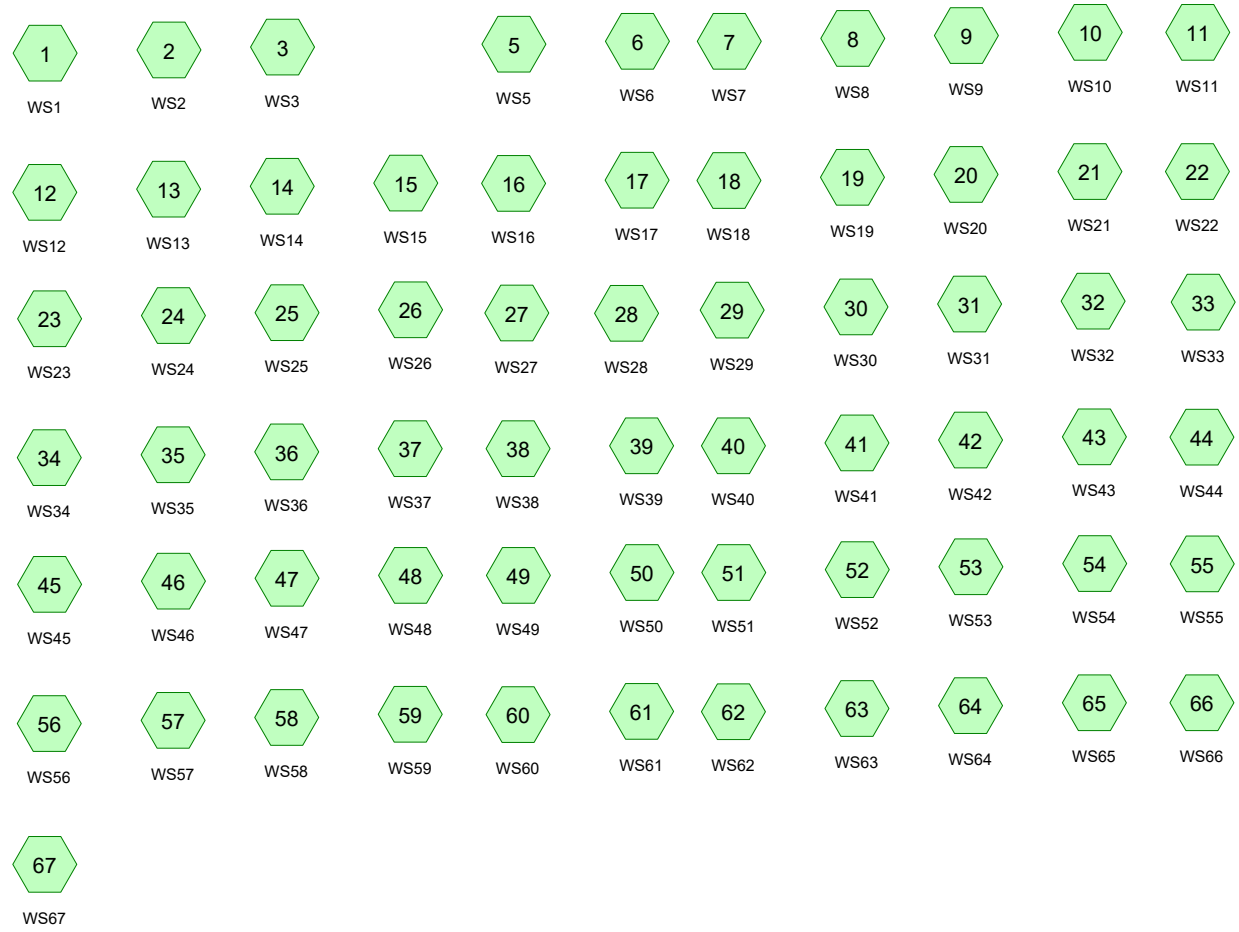



Subcat Reach Pond Link

**Routing Diagram for 187901_GustinSolar_PostCon-HydroCAD**
Prepared by Burns & McDonnell, Printed 5/13/2026
HydroCAD® 10.20-8a s/n 08510 © 2025 HydroCAD Software Solutions LLC

## Rainfall Events Listing (selected events)

| Event# | Event Name | Storm Type | Curve | Mode | Duration (hours) | B/B | Depth (inches) | AMC |
|---|---|---|---|---|---|---|---|---|
| 1 | 10yr24hr | Type II 24-hr | | Default | 24.00 | 1 | 2.99 | 2 |
| 2 | 25yr24hr | Type II 24-hr | | Default | 24.00 | 1 | 3.55 | 2 |
| 3 | 100yr24hr | Type II 24-hr | | Default | 24.00 | 1 | 4.46 | 2 |

## Area Listing (selected nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 18.099 | 62 | Cultivated Crops, HSG A (40, 43, 44, 45) |
| 133.461 | 71 | Cultivated Crops, HSG B (1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 21, 22, 25, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 41, 42, 43, 52, 53, 54, 55, 56, 60, 61) |
| 399.541 | 81 | Cultivated Crops, HSG D (1, 2, 5, 6, 7, 8, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67) |
| 3.054 | 36 | Deciduous Forest, HSG A (43, 44) |
| 22.808 | 60 | Deciduous Forest, HSG B (1, 3, 5, 6, 10, 12, 13, 14, 34, 37, 39, 42, 54, 56) |
| 35.928 | 79 | Deciduous Forest, HSG D (5, 6, 8, 14, 15, 26, 27, 28, 39, 40, 43, 44, 45, 52, 53, 54, 57, 61) |
| 0.046 | 81 | Developed Low Intensity, HSG A (44) |
| 6.173 | 88 | Developed Low Intensity, HSG B (2, 5, 6, 8, 9, 11, 21, 26, 32, 34, 35, 37, 38, 41, 43) |
| 37.388 | 93 | Developed Low Intensity, HSG D (1, 2, 6, 8, 16, 17, 20, 21, 26, 31, 32, 33, 34, 35, 38, 41, 43, 44, 47, 48, 49, 50, 54, 55, 57, 58, 59, 63, 64, 65, 67) |
| 0.791 | 89 | Developed Medium Intensity, HSG B (8, 21, 34, 35, 41) |
| 3.437 | 94 | Developed Medium Intensity, HSG D (20, 21, 34, 35, 47, 49, 50, 57, 58, 63, 64, 65, 66, 67) |
| 4.427 | 68 | Developed Open Space, HSG B (2, 7, 8, 9, 13, 14, 34, 35, 37, 38, 39, 41) |
| 14.391 | 84 | Developed Open Space, HSG D (1, 2, 6, 8, 16, 23, 24, 26, 34, 35, 38, 41, 43, 47, 48, 49, 50, 54, 55, 57, 58, 59, 63, 64, 65, 67) |
| 3.618 | 80 | Emergent Herbaceous Wetlands, HSG D (24, 41, 47, 48) |
| 0.328 | 36 | Evergreen Forest, HSG A (44) |
| 2.849 | 60 | Evergreen Forest, HSG B (5, 6, 26) |
| 2.786 | 79 | Evergreen Forest, HSG D (7, 8, 34, 43, 44) |
| 13.649 | 63 | Grassland/Herbaceous, HSG B (3, 12, 13, 14, 15, 34) |
| 2.694 | 85 | Grassland/Herbaceous, HSG D (14, 15, 16, 34, 35, 43, 44) |
| 7.121 | 98 | IMPERVIOUS, HSG B (2, 5, 6, 8, 9, 10, 12, 13, 15, 18, 22, 24, 25, 27, 28, 29, 30, 31, 33, 34, 35, 36, 38, 39, 40, 42, 60) |
| 17.524 | 98 | IMPERVIOUS, HSG D (1, 2, 5, 6, 8, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 36, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67) |
| 5.560 | 30 | MEADOW, HSG A (44, 45) |
| 354.358 | 58 | MEADOW, HSG B (1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 52, 53, 54, 55, 56, 59, 60, 61) |
| 887.501 | 78 | MEADOW, HSG D (1, 2, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67) |
| 0.008 | 36 | Mixed Forest, HSG A (43, 44) |
| 5.314 | 60 | Mixed Forest, HSG B (3, 5, 6, 10, 13, 37, 39, 43, 53) |

## Area Listing (selected nodes) (continued)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 6.866 | 79 | Mixed Forest, HSG D (1, 5, 6, 15, 37, 39, 41, 43, 44, 53) |
| 1.112 | 39 | Pasture/Hay, HSG A (44) |
| 15.195 | 61 | Pasture/Hay, HSG B (1, 2, 3, 5, 8, 9, 10, 12, 14, 26, 28, 34, 35, 36, 38, 39, 42, 52, 54, 61) |
| 35.740 | 80 | Pasture/Hay, HSG D (1, 2, 5, 6, 7, 8, 19, 23, 24, 26, 27, 28, 34, 35, 36, 38, 39, 40, 41, 43, 44, 46, 47, 52, 62) |
| 0.024 | 67 | Shrub/Scrub, HSG B (42) |
| 0.500 | 80 | Shrub/Scrub, HSG D (15) |
| 1.045 | 86 | Woody Wetlands, HSG B (5, 6, 8, 26, 32, 60, 61) |
| 43.527 | 86 | Woody Wetlands, HSG D (5, 6, 7, 8, 19, 23, 24, 26, 32, 42, 47, 48, 52, 62, 67) |
| **2,086.862** | **75** | **TOTAL AREA** |

## Soil Listing (selected nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|---|---|---|
| 28.206 | HSG A | 40, 43, 44, 45 |
| 567.215 | HSG B | 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 52, 53, 54, 55, 56, 59, 60, 61 |
| 0.000 | HSG C | |
| 1,491.441 | HSG D | 1, 2, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67 |
| 0.000 | Other | |
| **2,086.862** | | **TOTAL AREA** |

## Ground Covers (selected nodes)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 18.099 | 133.461 | 0.000 | 399.541 | 0.000 | 551.100 | Cultivated Crops | 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 3.054 | 22.808 | 0.000 | 35.928 | 0.000 | 61.790 | Deciduous Forest | 1, 3, 5, 6, 8, 10, 12, 13, 14, 15, 26, 27, 28, 34, 37, 39, 40, |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.046 | 6.173 | 0.000 | 37.388 | 0.000 | 43.607 | Developed Low Intensity | 1, 2, 5, 6, 8, 9, 11, 16, 17, 20, 21, 26, 31, 32, 33, 34, 35, 3 |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.000 | 0.791 | 0.000 | 3.437 | 0.000 | 4.228 | Developed Medium Intensity | 8, 20, 21, 34, 35, 41, 47, 49, 50, 57, 58, 63, 64, 65, 66, 67 |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.000 | 4.427 | 0.000 | 14.391 | 0.000 | 18.818 | Developed Open Space | 1, 2, 6, 7, 8, 9, 13, 14, 16, 23, 24, 26, 34, 35, 37, 38, 39, 4 |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.000 | 0.000 | 0.000 | 3.618 | 0.000 | 3.618 | Emergent Herbaceous Wetlands | 24, 41, 47, 48 |
| 0.328 | 2.849 | 0.000 | 2.786 | 0.000 | 5.964 | Evergreen Forest | 5, 6, 7, 8, 26, 34, 43, 44 |
| 0.000 | 13.649 | 0.000 | 2.694 | 0.000 | 16.343 | Grassland/Herbaceous | 3, 12, 13, 14, 15, 16 |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.000 | 7.121 | 0.000 | 17.524 | 0.000 | 24.645 | IMPERVIOUS | 1, 2, 5, 6, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 2 |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 5.560 | 354.358 | 0.000 | 887.501 | 0.000 | 1,247.419 | MEADOW | 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.008 | 5.314 | 0.000 | 6.866 | 0.000 | 12.188 | Mixed Forest | 1, 3, 5, 6, 10, 13, 15, 37, 39, 41, 43, 44, 53 |
| 1.112 | 15.195 | 0.000 | 35.740 | 0.000 | 52.047 | Pasture/Hay | 1, 2, 3, 5, 6, 7, |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.000 | 0.024 | 0.000 | 0.500 | 0.000 | 0.524 | Shrub/Scrub | 15, 42 |
| 0.000 | 1.045 | 0.000 | 43.527 | 0.000 | 44.572 | Woody Wetlands | 25, 6, 7, 8, 19, 23, 24, 26, 32, 42, 47, 48, 52, 60, 61, |

## Ground Covers (selected nodes) (continued)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| **28.206** | **567.215** | **0.000** | **1,491.441** | **0.000** | **2,086.862** | **TOTAL AREA** | |

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment1: WS1** Runoff Area=13.742 ac 0.36% Impervious Runoff Depth=0.66"
Flow Length=1,870' Tc=28.4 min CN=69 Runoff=6.77 cfs 0.761 af

**Subcatchment2: WS2** Runoff Area=28.882 ac 1.98% Impervious Runoff Depth=0.46"
Flow Length=1,955' Tc=32.4 min CN=64 Runoff=7.52 cfs 1.118 af

**Subcatchment3: WS3** Runoff Area=10.451 ac 0.00% Impervious Runoff Depth=0.33"
Flow Length=1,032' Tc=16.1 min CN=60 Runoff=2.42 cfs 0.287 af

**Subcatchment5: WS5** Runoff Area=56.549 ac 1.61% Impervious Runoff Depth=0.62"
Flow Length=1,143' Tc=74.9 min CN=68 Runoff=12.54 cfs 2.928 af

**Subcatchment6: WS6** Runoff Area=44.409 ac 1.07% Impervious Runoff Depth=0.71"
Flow Length=2,272' Tc=100.4 min CN=70 Runoff=9.54 cfs 2.623 af

**Subcatchment7: WS7** Runoff Area=11.383 ac 0.00% Impervious Runoff Depth=1.12"
Flow Length=436' Tc=53.3 min CN=78 Runoff=7.04 cfs 1.064 af

**Subcatchment8: WS8** Runoff Area=159.778 ac 0.88% Impervious Runoff Depth=1.06"
Flow Length=3,027' Tc=68.2 min CN=77 Runoff=77.45 cfs 14.168 af

**Subcatchment9: WS9** Runoff Area=11.132 ac 2.50% Impervious Runoff Depth=0.36"
Flow Length=888' Tc=27.0 min CN=61 Runoff=2.15 cfs 0.335 af

**Subcatchment10: WS10** Runoff Area=10.435 ac 1.24% Impervious Runoff Depth=0.33"
Flow Length=988' Tc=29.7 min CN=60 Runoff=1.60 cfs 0.287 af

**Subcatchment11: WS11** Runoff Area=16.148 ac 0.00% Impervious Runoff Depth=0.27"
Flow Length=896' Tc=28.2 min CN=58 Runoff=1.75 cfs 0.364 af

**Subcatchment12: WS12** Runoff Area=23.932 ac 1.15% Impervious Runoff Depth=0.43"
Flow Length=2,043' Tc=57.4 min CN=63 Runoff=3.69 cfs 0.855 af

**Subcatchment13: WS13** Runoff Area=19.692 ac 1.11% Impervious Runoff Depth=0.36"
Flow Length=1,865' Tc=43.7 min CN=61 Runoff=2.75 cfs 0.593 af

**Subcatchment14: WS14** Runoff Area=69.773 ac 0.48% Impervious Runoff Depth=0.85"
Flow Length=3,906' Tc=100.2 min CN=73 Runoff=19.13 cfs 4.949 af

**Subcatchment15: WS15** Runoff Area=15.438 ac 1.15% Impervious Runoff Depth=1.06"
Flow Length=1,445' Tc=48.0 min CN=77 Runoff=9.67 cfs 1.369 af

**Subcatchment16: WS16** Runoff Area=47.898 ac 0.83% Impervious Runoff Depth=1.12"
Flow Length=2,796' Tc=47.2 min CN=78 Runoff=32.39 cfs 4.477 af

**Subcatchment17: WS17** Runoff Area=13.311 ac 1.18% Impervious Runoff Depth=1.12"
Flow Length=761' Tc=43.5 min CN=78 Runoff=9.56 cfs 1.244 af

**Subcatchment18: WS18** Runoff Area=5.363 ac 1.83% Impervious Runoff Depth=0.75"
Flow Length=263' Tc=13.1 min CN=71 Runoff=5.09 cfs 0.337 af

**Subcatchment19: WS19** Runoff Area=28.615 ac 2.65% Impervious Runoff Depth=1.18"
Flow Length=1,566' Tc=49.7 min CN=79 Runoff=19.81 cfs 2.817 af

**Subcatchment20: WS20** Runoff Area=13.311 ac 1.77% Impervious Runoff Depth=1.18"
Flow Length=1,400' Tc=32.1 min CN=79 Runoff=12.58 cfs 1.310 af

**Subcatchment21: WS21** Runoff Area=16.482 ac 1.47% Impervious Runoff Depth=1.18"
Flow Length=1,616' Tc=44.6 min CN=79 Runoff=12.37 cfs 1.622 af

**Subcatchment22: WS22** Runoff Area=38.847 ac 0.90% Impervious Runoff Depth=1.06"
Flow Length=2,651' Tc=65.0 min CN=77 Runoff=19.48 cfs 3.445 af

**Subcatchment23: WS23** Runoff Area=7.796 ac 0.00% Impervious Runoff Depth=1.51"
Flow Length=658' Tc=100.8 min CN=84 Runoff=4.19 cfs 0.980 af

**Subcatchment24: WS24** Runoff Area=27.435 ac 2.39% Impervious Runoff Depth=1.12"
Flow Length=921' Tc=82.5 min CN=78 Runoff=12.22 cfs 2.564 af

**Subcatchment25: WS25** Runoff Area=15.083 ac 3.53% Impervious Runoff Depth=0.75"
Flow Length=1,028' Tc=40.8 min CN=71 Runoff=6.84 cfs 0.949 af

**Subcatchment26: WS26** Runoff Area=24.142 ac 0.57% Impervious Runoff Depth=1.31"
Flow Length=1,225' Tc=62.8 min CN=81 Runoff=15.84 cfs 2.627 af

**Subcatchment27: WS27** Runoff Area=22.172 ac 0.75% Impervious Runoff Depth=0.95"
Flow Length=1,163' Tc=35.5 min CN=75 Runoff=15.11 cfs 1.763 af

**Subcatchment28: WS28** Runoff Area=91.586 ac 0.48% Impervious Runoff Depth=1.12"
Flow Length=1,033' Tc=24.0 min CN=78 Runoff=98.66 cfs 8.561 af

**Subcatchment29: WS29** Runoff Area=25.894 ac 1.34% Impervious Runoff Depth=0.80"
Flow Length=808' Tc=33.8 min CN=72 Runoff=14.58 cfs 1.731 af

**Subcatchment30: WS30** Runoff Area=14.220 ac 2.95% Impervious Runoff Depth=0.50"
Flow Length=682' Tc=20.9 min CN=65 Runoff=5.69 cfs 0.594 af

**Subcatchment31: WS31** Runoff Area=5.243 ac 1.12% Impervious Runoff Depth=0.54"
Flow Length=569' Tc=17.4 min CN=66 Runoff=2.65 cfs 0.236 af

**Subcatchment32: WS32** Runoff Area=10.108 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=678' Tc=23.9 min CN=73 Runoff=7.81 cfs 0.717 af

**Subcatchment33: WS33** Runoff Area=15.180 ac 1.72% Impervious Runoff Depth=0.62"
Flow Length=1,326' Tc=29.5 min CN=68 Runoff=6.61 cfs 0.786 af

**Subcatchment34: WS34** Runoff Area=58.029 ac 1.29% Impervious Runoff Depth=0.62"
Flow Length=1,963' Tc=40.5 min CN=68 Runoff=20.11 cfs 3.005 af

**Subcatchment35: WS35** Runoff Area=63.197 ac 0.55% Impervious Runoff Depth=0.71"
Flow Length=1,782' Tc=32.0 min CN=70 Runoff=31.25 cfs 3.733 af

**Subcatchment36: WS36** Runoff Area=28.631 ac 2.05% Impervious Runoff Depth=0.50"
Flow Length=1,196' Tc=73.0 min CN=65 Runoff=4.75 cfs 1.197 af

**Subcatchment37: WS37** Runoff Area=10.402 ac 0.00% Impervious Runoff Depth=0.43"
Flow Length=661' Tc=20.1 min CN=63 Runoff=3.31 cfs 0.372 af

**Subcatchment38: WS38** Runoff Area=14.434 ac 1.11% Impervious Runoff Depth=1.01"
Flow Length=629' Tc=14.4 min CN=76 Runoff=18.45 cfs 1.213 af

**Subcatchment39: WS39** Runoff Area=30.742 ac 1.75% Impervious Runoff Depth=0.50"
Flow Length=707' Tc=21.5 min CN=65 Runoff=12.08 cfs 1.285 af

**Subcatchment40: WS40** Runoff Area=31.131 ac 1.02% Impervious Runoff Depth=1.12"
Flow Length=1,419' Tc=31.5 min CN=78 Runoff=28.02 cfs 2.910 af

**Subcatchment41: WS41** Runoff Area=34.979 ac 1.08% Impervious Runoff Depth=1.18"
Flow Length=1,292' Tc=37.9 min CN=79 Runoff=29.46 cfs 3.443 af

**Subcatchment42: WS42** Runoff Area=48.465 ac 1.42% Impervious Runoff Depth=0.46"
Flow Length=912' Tc=29.7 min CN=64 Runoff=13.43 cfs 1.876 af

**Subcatchment43: WS43** Runoff Area=33.038 ac 1.53% Impervious Runoff Depth=1.18"
Flow Length=1,479' Tc=35.6 min CN=79 Runoff=29.01 cfs 3.252 af

**Subcatchment44: WS44** Runoff Area=80.873 ac 1.03% Impervious Runoff Depth=0.85"
Flow Length=3,050' Tc=116.6 min CN=73 Runoff=19.47 cfs 5.737 af

**Subcatchment45: WS45** Runoff Area=28.790 ac 2.28% Impervious Runoff Depth=0.75"
Flow Length=1,322' Tc=32.8 min CN=71 Runoff=15.27 cfs 1.811 af

**Subcatchment46: WS46** Runoff Area=27.896 ac 1.76% Impervious Runoff Depth=1.18"
Flow Length=1,507' Tc=43.0 min CN=79 Runoff=21.45 cfs 2.746 af

**Subcatchment47: WS47** Runoff Area=45.903 ac 1.29% Impervious Runoff Depth=1.24"
Flow Length=1,645' Tc=46.2 min CN=80 Runoff=35.58 cfs 4.753 af

**Subcatchment48: WS48** Runoff Area=43.068 ac 0.85% Impervious Runoff Depth=1.31"
Flow Length=1,506' Tc=76.0 min CN=81 Runoff=24.49 cfs 4.687 af

**Subcatchment49: WS49** Runoff Area=30.898 ac 0.91% Impervious Runoff Depth=1.24"
Flow Length=1,464' Tc=61.6 min CN=80 Runoff=19.40 cfs 3.199 af

**Subcatchment50: WS50** Runoff Area=54.384 ac 1.45% Impervious Runoff Depth=1.24"
Flow Length=2,572' Tc=90.8 min CN=80 Runoff=25.40 cfs 5.631 af

**Subcatchment51: WS51** Runoff Area=22.968 ac 1.89% Impervious Runoff Depth=1.18"
Flow Length=1,683' Tc=54.2 min CN=79 Runoff=14.94 cfs 2.261 af

**Subcatchment52: WS52** Runoff Area=46.992 ac 1.34% Impervious Runoff Depth=1.18"
Flow Length=692' Tc=23.3 min CN=79 Runoff=54.80 cfs 4.625 af

**Subcatchment53: WS53** Runoff Area=17.871 ac 1.15% Impervious Runoff Depth=0.90"
Flow Length=2,011' Tc=106.4 min CN=74 Runoff=5.04 cfs 1.343 af

**Subcatchment54: WS54** Runoff Area=27.065 ac 1.70% Impervious Runoff Depth=0.95"
Flow Length=919' Tc=18.7 min CN=75 Runoff=28.04 cfs 2.152 af

**Subcatchment55: WS55** Runoff Area=14.587 ac 0.00% Impervious Runoff Depth=1.01"
Flow Length=907' Tc=22.6 min CN=76 Runoff=14.43 cfs 1.226 af

**Subcatchment56: WS56** Runoff Area=15.054 ac 2.13% Impervious Runoff Depth=0.95"
Flow Length=1,202' Tc=66.0 min CN=75 Runoff=6.50 cfs 1.197 af

**Subcatchment57: WS57** Runoff Area=28.144 ac 0.88% Impervious Runoff Depth=1.37"
Flow Length=1,151' Tc=25.7 min CN=82 Runoff=36.46 cfs 3.216 af

**Subcatchment58: WS58** Runoff Area=14.565 ac 1.10% Impervious Runoff Depth=1.44"
Flow Length=1,070' Tc=33.0 min CN=83 Runoff=16.84 cfs 1.746 af

**Subcatchment59: WS59** Runoff Area=24.806 ac 0.99% Impervious Runoff Depth=1.12"
Flow Length=1,201' Tc=45.3 min CN=78 Runoff=17.32 cfs 2.319 af

**Subcatchment60: WS60** Runoff Area=21.140 ac 1.89% Impervious Runoff Depth=0.54"
Flow Length=1,076' Tc=30.0 min CN=66 Runoff=7.38 cfs 0.951 af

**Subcatchment61: WS61** Runoff Area=11.152 ac 0.06% Impervious Runoff Depth=0.90"
Flow Length=882' Tc=19.0 min CN=74 Runoff=10.70 cfs 0.838 af

**Subcatchment62: WS62** Runoff Area=30.546 ac 1.46% Impervious Runoff Depth=1.18"
Flow Length=816' Tc=25.6 min CN=79 Runoff=33.55 cfs 3.007 af

**Subcatchment63: WS63** Runoff Area=64.029 ac 1.25% Impervious Runoff Depth=1.24"
Flow Length=1,040' Tc=27.1 min CN=80 Runoff=71.90 cfs 6.630 af

**Subcatchment64: WS64** Runoff Area=34.707 ac 1.17% Impervious Runoff Depth=1.18"
Flow Length=1,314' Tc=39.1 min CN=79 Runoff=28.59 cfs 3.416 af

**Subcatchment65: WS65** Runoff Area=38.964 ac 1.03% Impervious Runoff Depth=1.24"
Flow Length=1,153' Tc=35.8 min CN=80 Runoff=36.17 cfs 4.034 af

**Subcatchment66: WS66** Runoff Area=30.102 ac 1.27% Impervious Runoff Depth=1.18"
Flow Length=1,456' Tc=51.5 min CN=79 Runoff=20.33 cfs 2.963 af

**Subcatchment67: WS67** Runoff Area=64.880 ac 1.12% Impervious Runoff Depth=1.31"
Flow Length=1,198' Tc=101.2 min CN=81 Runoff=29.59 cfs 7.060 af

**Total Runoff Area = 2,086.862 ac Runoff Volume = 168.294 af Average Runoff Depth = 0.97"**
**98.82% Pervious = 2,062.216 ac 1.18% Impervious = 24.645 ac**

## Summary for Subcatchment 1: WS1

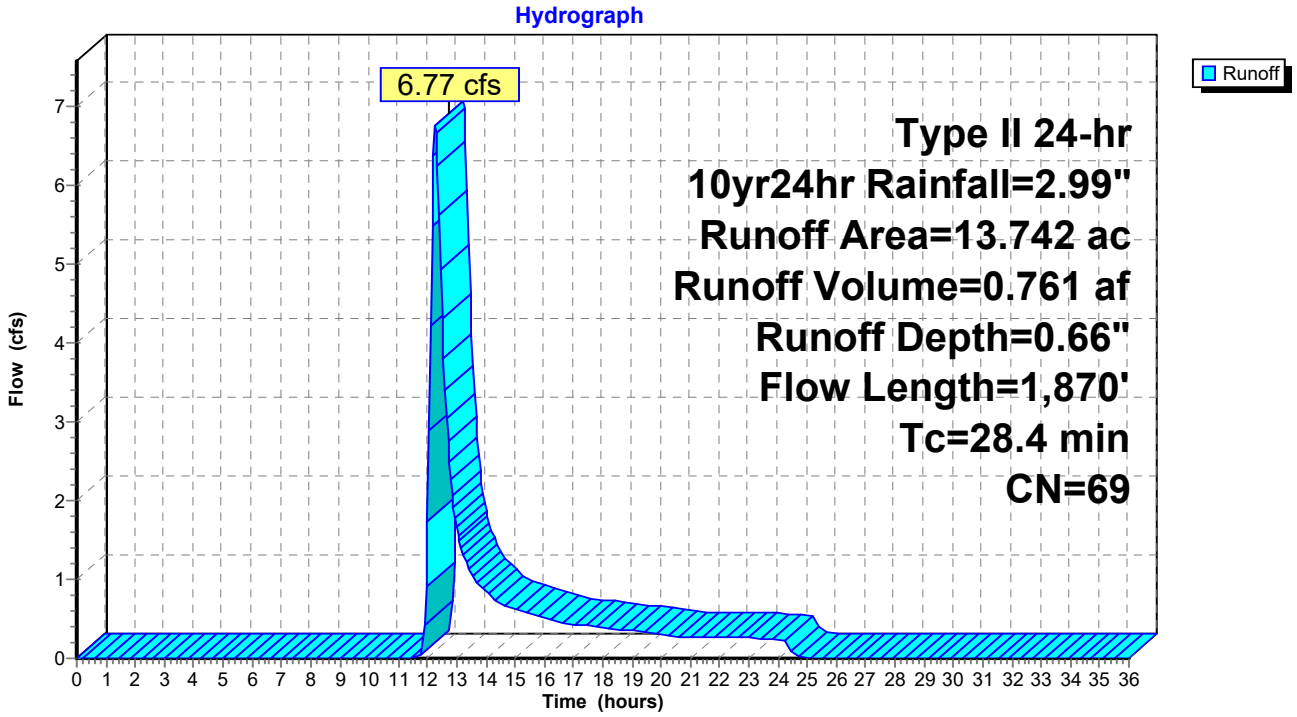
Runoff = 6.77 cfs @ 12.27 hrs, Volume= 0.761 af, Depth= 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.033 | 93 | Developed Low Intensity, HSG D |
| * | 0.085 | 84 | Developed Open Space, HSG D |
| * | 0.075 | 81 | Cultivated Crops, HSG D |
| * | 0.094 | 84 | Developed Open Space, HSG D |
| * | 0.065 | 84 | Developed Open Space, HSG D |
| * | 0.313 | 79 | Mixed Forest, HSG D |
| * | 0.065 | 81 | Cultivated Crops, HSG D |
| * | 0.065 | 80 | Pasture/Hay, HSG D |
| * | 0.011 | 81 | Cultivated Crops, HSG D |
| * | 0.424 | 80 | Pasture/Hay, HSG D |
| * | 0.342 | 81 | Cultivated Crops, HSG D |
| * | 0.001 | 60 | Deciduous Forest, HSG B |
| * | 0.000 | 60 | Deciduous Forest, HSG B |
| * | 0.045 | 61 | Pasture/Hay, HSG B |
| * | 0.582 | 80 | Pasture/Hay, HSG D |
| * | 1.466 | 61 | Pasture/Hay, HSG B |
| * | 0.322 | 71 | Cultivated Crops, HSG B |
| * | 0.113 | 78 | MEADOW, HSG D |
| * | 0.038 | 78 | MEADOW, HSG D |
| * | 0.163 | 78 | MEADOW, HSG D |
| * | 0.217 | 78 | MEADOW, HSG D |
| * | 0.056 | 78 | MEADOW, HSG D |
| * | 0.152 | 78 | MEADOW, HSG D |
| * | 0.194 | 78 | MEADOW, HSG D |
| * | 0.408 | 78 | MEADOW, HSG D |
| * | 0.116 | 78 | MEADOW, HSG D |
| * | 0.041 | 78 | MEADOW, HSG D |
| * | 0.215 | 78 | MEADOW, HSG D |
| * | 0.007 | 58 | MEADOW, HSG B |
| * | 0.162 | 78 | MEADOW, HSG D |
| * | 0.042 | 78 | MEADOW, HSG D |
| * | 0.008 | 98 | IMPERVIOUS, HSG D |
| * | 0.026 | 58 | MEADOW, HSG B |
| * | 0.013 | 58 | MEADOW, HSG B |
| * | 0.424 | 58 | MEADOW, HSG B |
| * | 0.705 | 78 | MEADOW, HSG D |
| * | 2.018 | 78 | MEADOW, HSG D |
| * | 0.042 | 98 | IMPERVIOUS, HSG D |
| * | 0.064 | 58 | MEADOW, HSG B |
| * | 0.112 | 58 | MEADOW, HSG B |
| * | 1.086 | 58 | MEADOW, HSG B |
| * | 3.328 | 58 | MEADOW, HSG B |
| | 13.742 | 69 | Weighted Average |
| | 13.692 | | 99.64% Pervious Area |
| | 0.050 | | 0.36% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.3 | 100 | 0.0247 | 0.32 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.2 | 110 | 0.0293 | 1.54 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 252 | 0.0466 | 1.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 162 | 0.0436 | 1.46 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 80 | 0.0861 | 2.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 212 | 0.0423 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 189 | 0.0460 | 1.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 14 | 0.0062 | 0.55 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 176 | 0.0303 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 51 | 0.0252 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 155 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 27 | 0.0137 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 125 | 0.0254 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 98 | 0.0108 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 77 | 0.0899 | 2.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 32 | 0.1660 | 2.04 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 28.4 | 1,870 | Total | | | |

## Subcatchment 1: WS1



## Summary for Subcatchment 2: WS2

Runoff = 7.52 cfs @ 12.35 hrs, Volume= 1.118 af, Depth= 0.46"

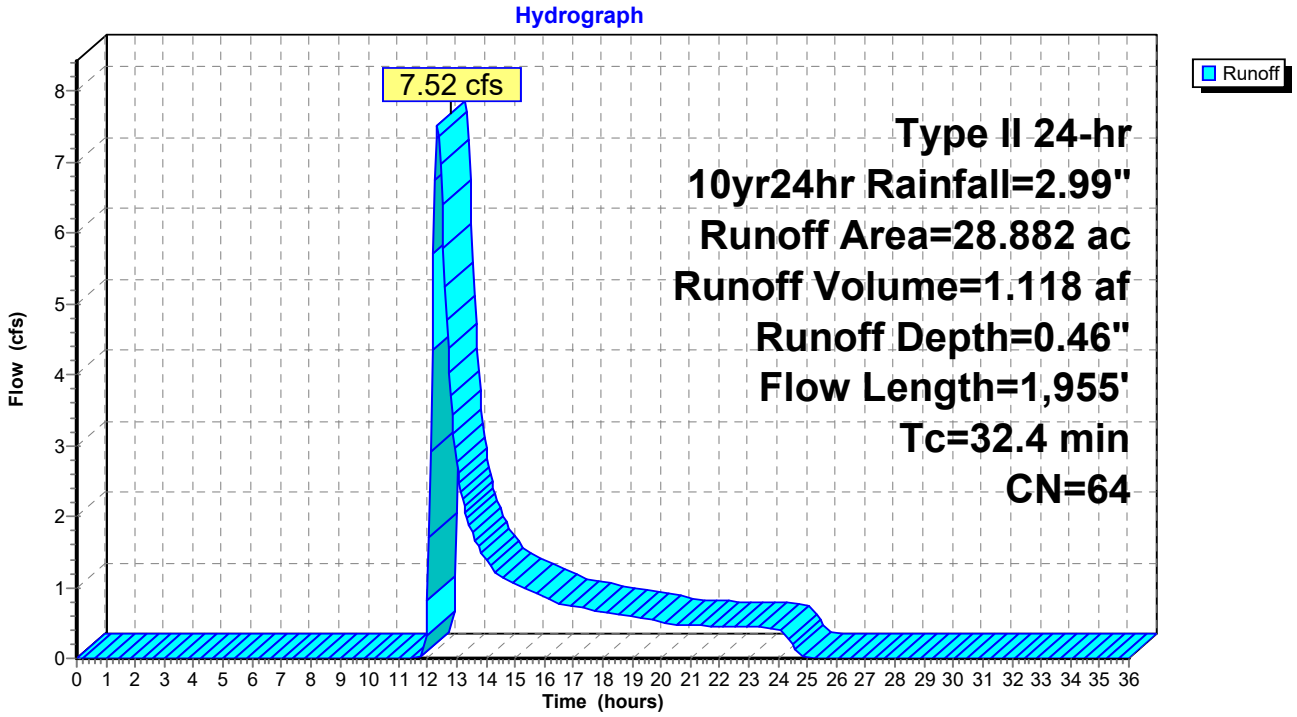
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.021 | 84 | Developed Open Space, HSG D |
| * | 0.697 | 80 | Pasture/Hay, HSG D |
| * | 0.356 | 80 | Pasture/Hay, HSG D |
| * | 0.101 | 93 | Developed Low Intensity, HSG D |
| * | 0.119 | 84 | Developed Open Space, HSG D |
| * | 1.463 | 81 | Cultivated Crops, HSG D |
| * | 0.210 | 71 | Cultivated Crops, HSG B |
| * | 0.111 | 81 | Cultivated Crops, HSG D |
| * | 0.069 | 88 | Developed Low Intensity, HSG B |
| * | 0.210 | 88 | Developed Low Intensity, HSG B |
| * | 0.000 | 68 | Developed Open Space, HSG B |
| * | 0.038 | 68 | Developed Open Space, HSG B |
| * | 0.371 | 61 | Pasture/Hay, HSG B |
| * | 0.036 | 80 | Pasture/Hay, HSG D |
| * | 0.096 | 61 | Pasture/Hay, HSG B |
| * | 0.585 | 61 | Pasture/Hay, HSG B |
| * | 0.125 | 61 | Pasture/Hay, HSG B |
| * | 0.405 | 71 | Cultivated Crops, HSG B |
| * | 0.132 | 58 | MEADOW, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.027 | 98 | IMPERVIOUS, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.002 | 58 | MEADOW, HSG B |
| * | 0.039 | 58 | MEADOW, HSG B |
| * | 0.183 | 58 | MEADOW, HSG B |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.119 | 78 | MEADOW, HSG D |
| * | 0.055 | 58 | MEADOW, HSG B |
| * | 1.377 | 58 | MEADOW, HSG B |
| * | 0.866 | 78 | MEADOW, HSG D |
| * | 1.080 | 78 | MEADOW, HSG D |
| * | 0.645 | 58 | MEADOW, HSG B |
| * | 1.527 | 58 | MEADOW, HSG B |
| * | 0.108 | 78 | MEADOW, HSG D |
| * | 0.001 | 98 | IMPERVIOUS, HSG B |
| * | 0.130 | 58 | MEADOW, HSG B |
| * | 0.157 | 58 | MEADOW, HSG B |
| * | 0.195 | 78 | MEADOW, HSG D |
| * | 0.046 | 78 | MEADOW, HSG D |
| * | 0.034 | 98 | IMPERVIOUS, HSG D |
| * | 0.522 | 58 | MEADOW, HSG B |
| * | 3.886 | 58 | MEADOW, HSG B |
| * | 0.098 | 98 | IMPERVIOUS, HSG B |
| * | 1.672 | 58 | MEADOW, HSG B |
| * | 1.698 | 58 | MEADOW, HSG B |
| * | 0.137 | 98 | IMPERVIOUS, HSG B |
| * | 1.320 | 58 | MEADOW, HSG B |
| * | 7.529 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.191 | 98 | IMPERVIOUS, HSG B |

| | | |
|---|---|---|
| 28.882 | 64 | Weighted Average |
| 28.310 | | 98.02% Pervious Area |
| 0.573 | | 1.98% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.8 | 100 | 0.0320 | 0.35 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 71 | 0.0204 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 125 | 0.0323 | 1.26 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 36 | 0.0379 | 1.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 202 | 0.0356 | 1.32 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.4 | 361 | 0.0648 | 1.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 44 | 0.0269 | 1.15 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 18 | 0.0078 | 1.80 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 49 | 0.0408 | 1.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 74 | 0.0276 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 150 | 0.0290 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 116 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 153 | 0.0317 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 37 | 0.0174 | 0.92 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 130 | 0.0139 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 64 | 0.0182 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 60 | 0.0262 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 164 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 32.4 | 1,955 | Total | | | |

## Subcatchment 2: WS2



## Summary for Subcatchment 3: WS3

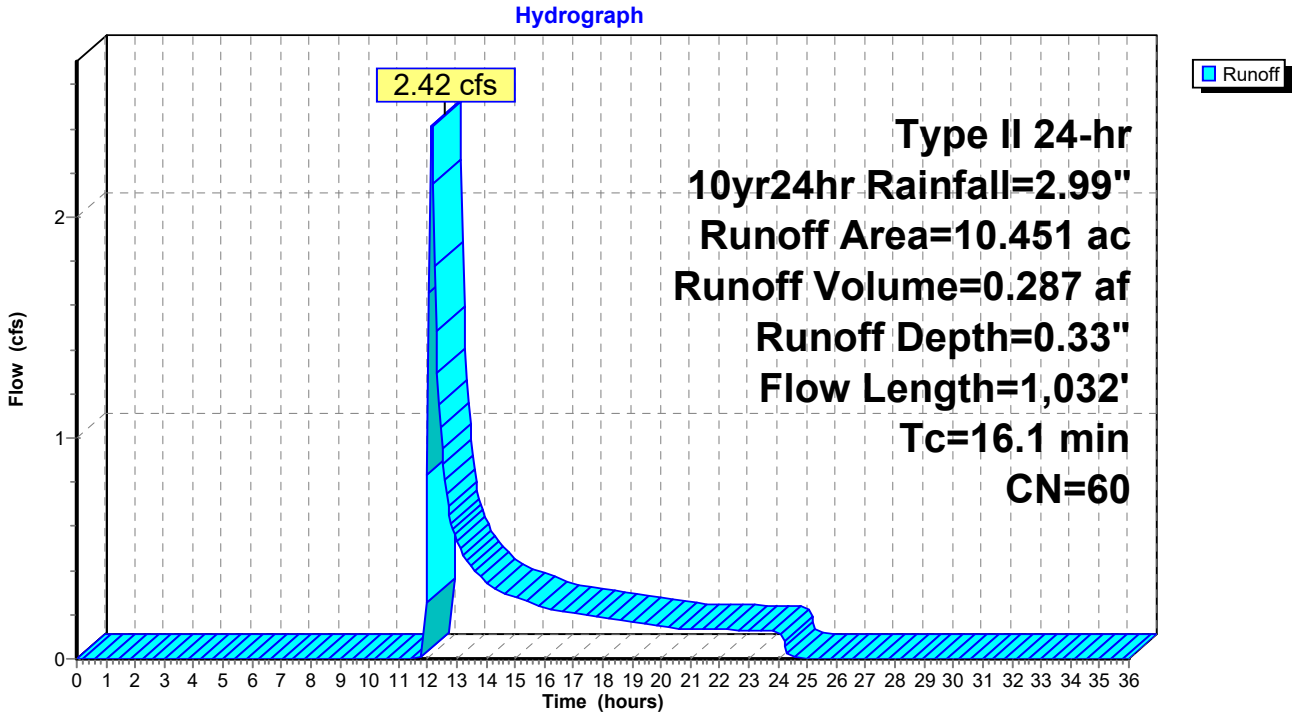
Runoff = 2.42 cfs @ 12.14 hrs, Volume= 0.287 af, Depth= 0.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.079 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.129 | 61 | Pasture/Hay, HSG B |
| * | 0.081 | 61 | Pasture/Hay, HSG B |
| * | 0.731 | 71 | Cultivated Crops, HSG B |
| * | 0.126 | 71 | Cultivated Crops, HSG B |
| * | 0.126 | 71 | Cultivated Crops, HSG B |
| * | 0.003 | 60 | Mixed Forest, HSG B |
| * | 0.020 | 60 | Deciduous Forest, HSG B |
| * | 0.038 | 60 | Deciduous Forest, HSG B |
| * | 0.425 | 60 | Deciduous Forest, HSG B |
| * | 1.655 | 60 | Deciduous Forest, HSG B |
| * | 0.115 | 60 | Mixed Forest, HSG B |
| * | 0.040 | 58 | MEADOW, HSG B |
| * | 0.050 | 58 | MEADOW, HSG B |
| * | 0.046 | 58 | MEADOW, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 0.147 | 58 | MEADOW, HSG B |
| * | 1.974 | 58 | MEADOW, HSG B |
| * | 0.001 | 58 | MEADOW, HSG B |
| * | 0.055 | 58 | MEADOW, HSG B |
| * | 0.620 | 58 | MEADOW, HSG B |
| * | 0.309 | 58 | MEADOW, HSG B |
| * | 0.683 | 58 | MEADOW, HSG B |
| * | 2.832 | 58 | MEADOW, HSG B |
| | 10.451 | 60 | Weighted Average |
| | 10.451 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 100 | 0.0365 | 0.37 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.8 | 170 | 0.0297 | 1.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 28 | 0.0325 | 1.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 24 | 0.0915 | 1.51 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.4 | 31 | 0.0385 | 1.37 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.4 | 386 | 0.0437 | 1.46 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 95 | 0.0480 | 1.53 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 86 | 0.0509 | 1.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 112 | 0.0228 | 0.76 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 16.1 | 1,032 | Total | | | |

## Subcatchment 3: WS3



## Summary for Subcatchment 5: WS5

Runoff = 12.54 cfs @ 12.92 hrs, Volume= 2.928 af, Depth= 0.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

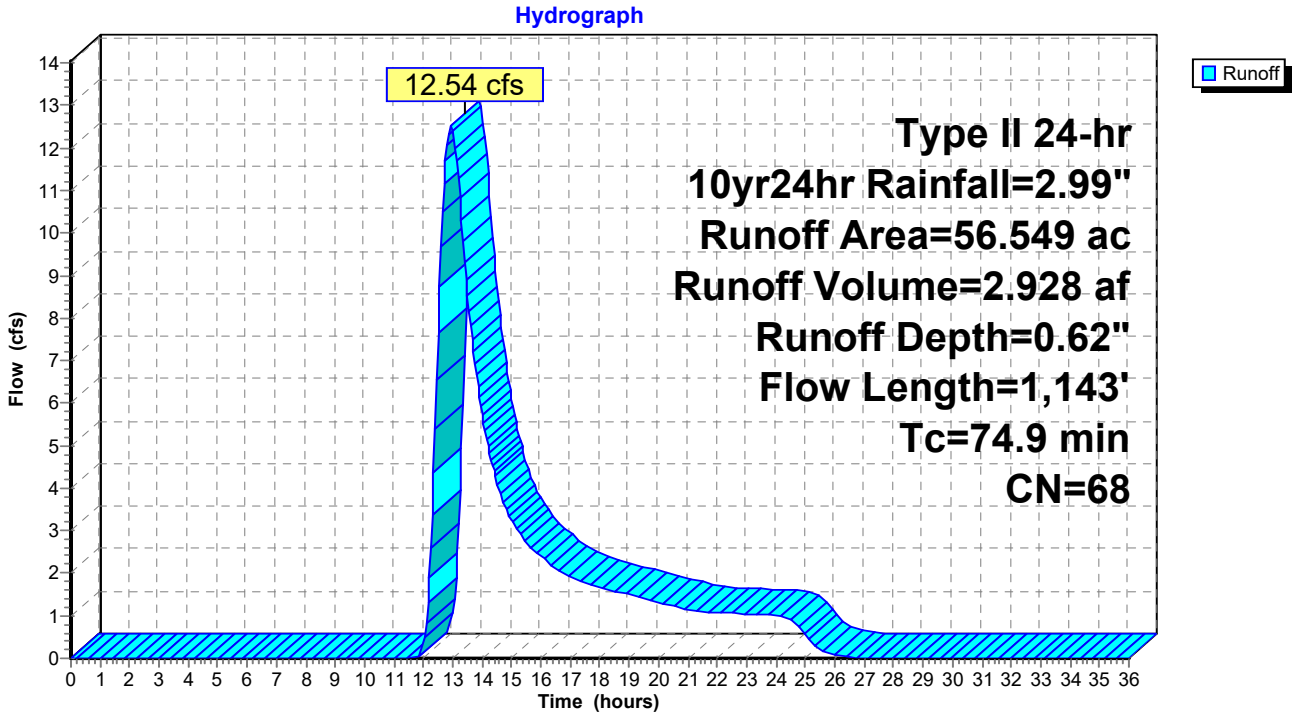
| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.170 | 80 | Pasture/Hay, HSG D |
| * | 0.088 | 79 | Deciduous Forest, HSG D |
| * | 0.088 | 80 | Pasture/Hay, HSG D |
| * | 0.207 | 79 | Deciduous Forest, HSG D |
| * | 0.320 | 80 | Pasture/Hay, HSG D |
| * | 0.065 | 60 | Mixed Forest, HSG B |
| * | 0.041 | 79 | Mixed Forest, HSG D |
| * | 1.140 | 60 | Deciduous Forest, HSG B |
| * | 0.196 | 79 | Deciduous Forest, HSG D |
| * | 0.265 | 60 | Evergreen Forest, HSG B |
| * | 1.468 | 81 | Cultivated Crops, HSG D |
| * | 0.037 | 71 | Cultivated Crops, HSG B |
| * | 1.426 | 81 | Cultivated Crops, HSG D |
| * | 0.203 | 60 | Deciduous Forest, HSG B |
| * | 0.221 | 61 | Pasture/Hay, HSG B |
| * | 0.710 | 61 | Pasture/Hay, HSG B |
| * | 0.005 | 60 | Deciduous Forest, HSG B |
| * | 0.133 | 60 | Mixed Forest, HSG B |
| * | 0.133 | 86 | Woody Wetlands, HSG B |
| * | 0.030 | 86 | Woody Wetlands, HSG B |
| * | 0.012 | 86 | Woody Wetlands, HSG D |
| * | 1.774 | 60 | Evergreen Forest, HSG B |
| * | 0.508 | 60 | Evergreen Forest, HSG B |
| * | 0.168 | 60 | Deciduous Forest, HSG B |
| * | 0.097 | 79 | Deciduous Forest, HSG D |
| * | 0.300 | 60 | Mixed Forest, HSG B |
| * | 0.125 | 79 | Mixed Forest, HSG D |
| * | 1.040 | 61 | Pasture/Hay, HSG B |
| * | 0.304 | 80 | Pasture/Hay, HSG D |
| * | 0.033 | 88 | Developed Low Intensity, HSG B |
| * | 1.346 | 71 | Cultivated Crops, HSG B |
| * | 0.822 | 81 | Cultivated Crops, HSG D |
| * | 0.113 | 78 | MEADOW, HSG D |
| * | 0.244 | 78 | MEADOW, HSG D |
| * | 0.113 | 78 | MEADOW, HSG D |
| * | 0.021 | 78 | MEADOW, HSG D |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.113 | 58 | MEADOW, HSG B |
| * | 0.021 | 58 | MEADOW, HSG B |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.339 | 58 | MEADOW, HSG B |
| * | 0.953 | 58 | MEADOW, HSG B |
| * | 0.094 | 58 | MEADOW, HSG B |
| * | 0.024 | 98 | IMPERVIOUS, HSG B |
| * | 0.937 | 58 | MEADOW, HSG B |
| * | 1.229 | 78 | MEADOW, HSG D |
| * | 0.060 | 98 | IMPERVIOUS, HSG D |
| * | 2.898 | 78 | MEADOW, HSG D |
| * | 0.899 | 58 | MEADOW, HSG B |
| * | 0.212 | 98 | IMPERVIOUS, HSG B |
| * | 2.305 | 58 | MEADOW, HSG B |

| | | | |
|---|---|---|---|
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.820 | 78 | MEADOW, HSG D |
| * | 0.063 | 98 | IMPERVIOUS, HSG D |
| * | 5.440 | 78 | MEADOW, HSG D |
| * | 0.134 | 58 | MEADOW, HSG B |
| * | 0.339 | 58 | MEADOW, HSG B |
| * | 0.508 | 58 | MEADOW, HSG B |
| * | 2.669 | 58 | MEADOW, HSG B |
| * | 0.065 | 58 | MEADOW, HSG B |
| * | 0.136 | 58 | MEADOW, HSG B |
| * | 0.022 | 98 | IMPERVIOUS, HSG B |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.241 | 58 | MEADOW, HSG B |
| * | 0.421 | 58 | MEADOW, HSG B |
| * | 0.031 | 58 | MEADOW, HSG B |
| * | 0.011 | 98 | IMPERVIOUS, HSG B |
| * | 0.018 | 58 | MEADOW, HSG B |
| * | 0.089 | 58 | MEADOW, HSG B |
| * | 0.330 | 58 | MEADOW, HSG B |
| * | 0.033 | 98 | IMPERVIOUS, HSG B |
| * | 0.171 | 58 | MEADOW, HSG B |
| * | 0.080 | 58 | MEADOW, HSG B |
| * | 0.029 | 58 | MEADOW, HSG B |
| * | 0.030 | 78 | MEADOW, HSG D |
| * | 0.042 | 78 | MEADOW, HSG D |
| * | 2.250 | 58 | MEADOW, HSG B |
| * | 0.352 | 98 | IMPERVIOUS, HSG B |
| * | 8.045 | 58 | MEADOW, HSG B |
| * | 0.064 | 98 | IMPERVIOUS, HSG B |
| * | 0.018 | 58 | MEADOW, HSG B |
| * | 0.028 | 78 | MEADOW, HSG D |
| * | 0.143 | 78 | MEADOW, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.061 | 58 | MEADOW, HSG B |
| * | 0.024 | 58 | MEADOW, HSG B |
| * | 0.037 | 78 | MEADOW, HSG D |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.095 | 58 | MEADOW, HSG B |
| * | 0.155 | 78 | MEADOW, HSG D |
| * | 0.623 | 78 | MEADOW, HSG D |
| * | 0.175 | 58 | MEADOW, HSG B |
| * | 0.027 | 98 | IMPERVIOUS, HSG B |
| * | 0.221 | 58 | MEADOW, HSG B |
| * | 0.070 | 58 | MEADOW, HSG B |
| * | 0.079 | 78 | MEADOW, HSG D |
| * | 0.685 | 78 | MEADOW, HSG D |
| * | 0.152 | 58 | MEADOW, HSG B |
| * | 0.316 | 78 | MEADOW, HSG D |
| * | 0.297 | 78 | MEADOW, HSG D |
| * | 0.394 | 58 | MEADOW, HSG B |
| * | 0.504 | 78 | MEADOW, HSG D |
| * | 5.464 | 78 | MEADOW, HSG D |

| | | | |
|---|---|---|---|
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 56.549 | 68 | Weighted Average |
| | 55.639 | | 98.39% Pervious Area |
| | 0.910 | | 1.61% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 45.3 | 100 | 0.0051 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 2.5 | 52 | 0.0050 | 0.35 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.1 | 67 | 0.0051 | 0.36 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.9 | 101 | 0.0311 | 0.88 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 33 | 0.0208 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 133 | 0.0158 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 25 | 0.0397 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 67 | 0.0254 | 1.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.0 | 1 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 12 | 0.0330 | 1.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 78 | 0.0298 | 1.21 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 64 | 0.0275 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.9 | 106 | 0.0020 | 0.22 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.1 | 124 | 0.0178 | 0.67 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 68 | 0.0259 | 0.80 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.2 | 111 | 0.0133 | 0.58 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 74.9 | 1,143 | Total | | | |

## Subcatchment 5: WS5



## Summary for Subcatchment 6: WS6

Runoff = 9.54 cfs @ 13.29 hrs, Volume= 2.623 af, Depth= 0.71"

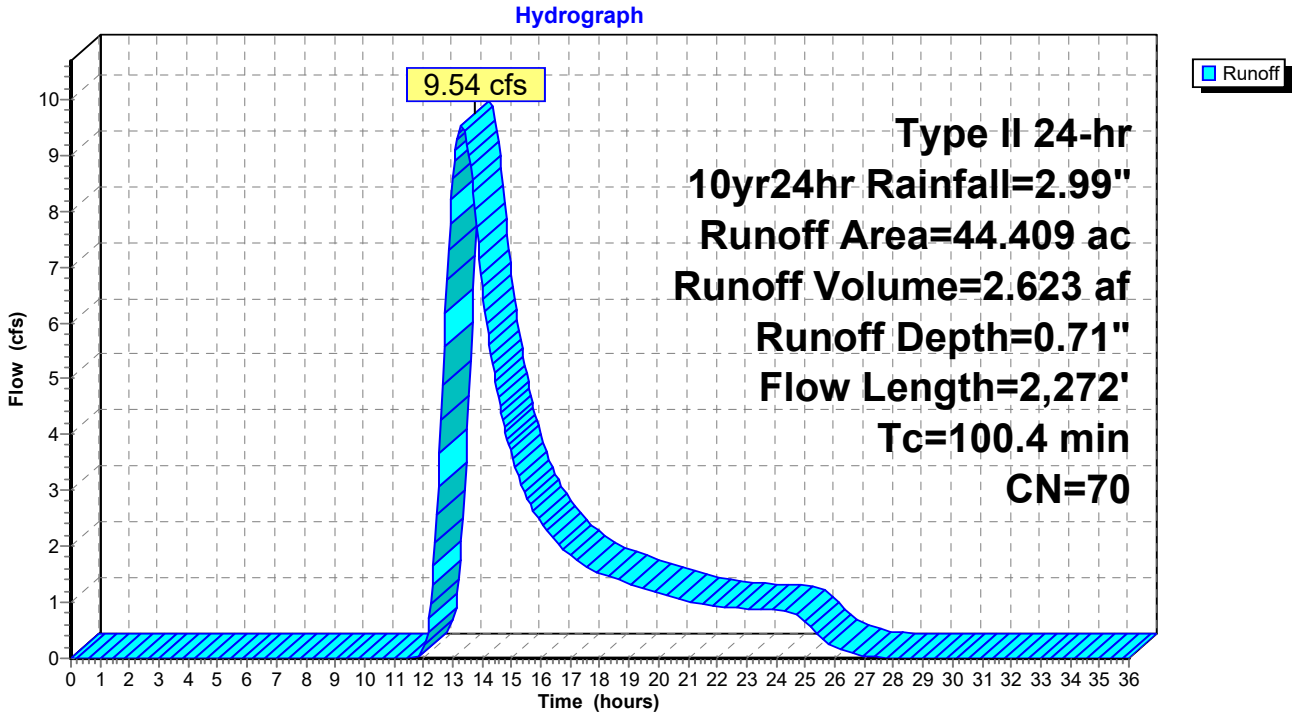
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 0.192 | 80 | Pasture/Hay, HSG D |
| * | 0.540 | 71 | Cultivated Crops, HSG B |
| * | 0.310 | 71 | Cultivated Crops, HSG B |
| * | 2.703 | 81 | Cultivated Crops, HSG D |
| * | 0.092 | 60 | Mixed Forest, HSG B |
| * | 0.096 | 60 | Evergreen Forest, HSG B |
| * | 0.119 | 60 | Evergreen Forest, HSG B |
| * | 0.047 | 60 | Deciduous Forest, HSG B |
| * | 0.083 | 79 | Deciduous Forest, HSG D |
| * | 0.264 | 60 | Mixed Forest, HSG B |
| * | 0.197 | 79 | Mixed Forest, HSG D |
| * | 0.638 | 86 | Woody Wetlands, HSG B |
| * | 0.619 | 86 | Woody Wetlands, HSG D |
| * | 0.225 | 84 | Developed Open Space, HSG D |
| * | 0.047 | 93 | Developed Low Intensity, HSG D |
| * | 0.128 | 84 | Developed Open Space, HSG D |
| * | 0.049 | 93 | Developed Low Intensity, HSG D |
| * | 0.198 | 88 | Developed Low Intensity, HSG B |
| * | 0.345 | 93 | Developed Low Intensity, HSG D |
| * | 0.097 | 71 | Cultivated Crops, HSG B |
| * | 4.683 | 81 | Cultivated Crops, HSG D |
| * | 0.021 | 78 | MEADOW, HSG D |
| * | 0.026 | 58 | MEADOW, HSG B |
| * | 1.031 | 58 | MEADOW, HSG B |
| * | 0.654 | 58 | MEADOW, HSG B |
| * | 0.546 | 58 | MEADOW, HSG B |
| * | 0.579 | 58 | MEADOW, HSG B |
| * | 5.861 | 58 | MEADOW, HSG B |
| * | 1.542 | 78 | MEADOW, HSG D |
| * | 3.667 | 78 | MEADOW, HSG D |
| * | 0.978 | 58 | MEADOW, HSG B |
| * | 0.803 | 58 | MEADOW, HSG B |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 0.062 | 58 | MEADOW, HSG B |
| * | 0.075 | 58 | MEADOW, HSG B |
| * | 0.040 | 58 | MEADOW, HSG B |
| * | 0.108 | 58 | MEADOW, HSG B |
| * | 0.033 | 58 | MEADOW, HSG B |
| * | 0.033 | 58 | MEADOW, HSG B |
| * | 0.035 | 58 | MEADOW, HSG B |
| * | 0.012 | 98 | IMPERVIOUS, HSG B |
| * | 0.128 | 58 | MEADOW, HSG B |
| * | 0.591 | 58 | MEADOW, HSG B |
| * | 0.020 | 98 | IMPERVIOUS, HSG B |
| * | 0.042 | 58 | MEADOW, HSG B |
| * | 0.078 | 58 | MEADOW, HSG B |
| * | 3.182 | 58 | MEADOW, HSG B |
| * | 0.353 | 58 | MEADOW, HSG B |
| * | 0.009 | 58 | MEADOW, HSG B |
| * | 0.062 | 58 | MEADOW, HSG B |

| | | | |
|---|---|---|---|
| * | 0.001 | 58 | MEADOW, HSG B |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.374 | 58 | MEADOW, HSG B |
| * | 0.028 | 98 | IMPERVIOUS, HSG B |
| * | 0.168 | 58 | MEADOW, HSG B |
| * | 0.695 | 58 | MEADOW, HSG B |
| * | 0.054 | 98 | IMPERVIOUS, HSG B |
| * | 0.264 | 58 | MEADOW, HSG B |
| * | 0.067 | 78 | MEADOW, HSG D |
| * | 0.409 | 58 | MEADOW, HSG B |
| * | 0.027 | 98 | IMPERVIOUS, HSG B |
| * | 0.180 | 58 | MEADOW, HSG B |
| * | 0.165 | 78 | MEADOW, HSG D |
| * | 0.036 | 58 | MEADOW, HSG B |
| * | 0.152 | 58 | MEADOW, HSG B |
| * | 0.678 | 58 | MEADOW, HSG B |
| * | 0.034 | 58 | MEADOW, HSG B |
| * | 0.014 | 78 | MEADOW, HSG D |
| * | 0.183 | 58 | MEADOW, HSG B |
| * | 0.045 | 98 | IMPERVIOUS, HSG B |
| * | 0.561 | 58 | MEADOW, HSG B |
| * | 3.281 | 78 | MEADOW, HSG D |
| * | 0.248 | 98 | IMPERVIOUS, HSG D |
| * | 4.316 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 44.409 | 70 | Weighted Average |
| | 43.932 | | 98.93% Pervious Area |
| | 0.477 | | 1.07% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.1 | 40 | 0.0176 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.5 | 20 | 0.0418 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.2 | 12 | 0.0432 | 1.00 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.5 | 19 | 0.0337 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.5 | 9 | 0.0267 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.2 | 86 | 0.0286 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.0 | 252 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 168 | 0.0374 | 1.35 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 15.3 | 107 | 0.0003 | 0.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 30.3 | 663 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 31.4 | 745 | 0.0032 | 0.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 93 | 0.0210 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 57 | 0.0295 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 100.4 | 2,272 | Total | | | |

## Subcatchment 6: WS6



## Summary for Subcatchment 7: WS7

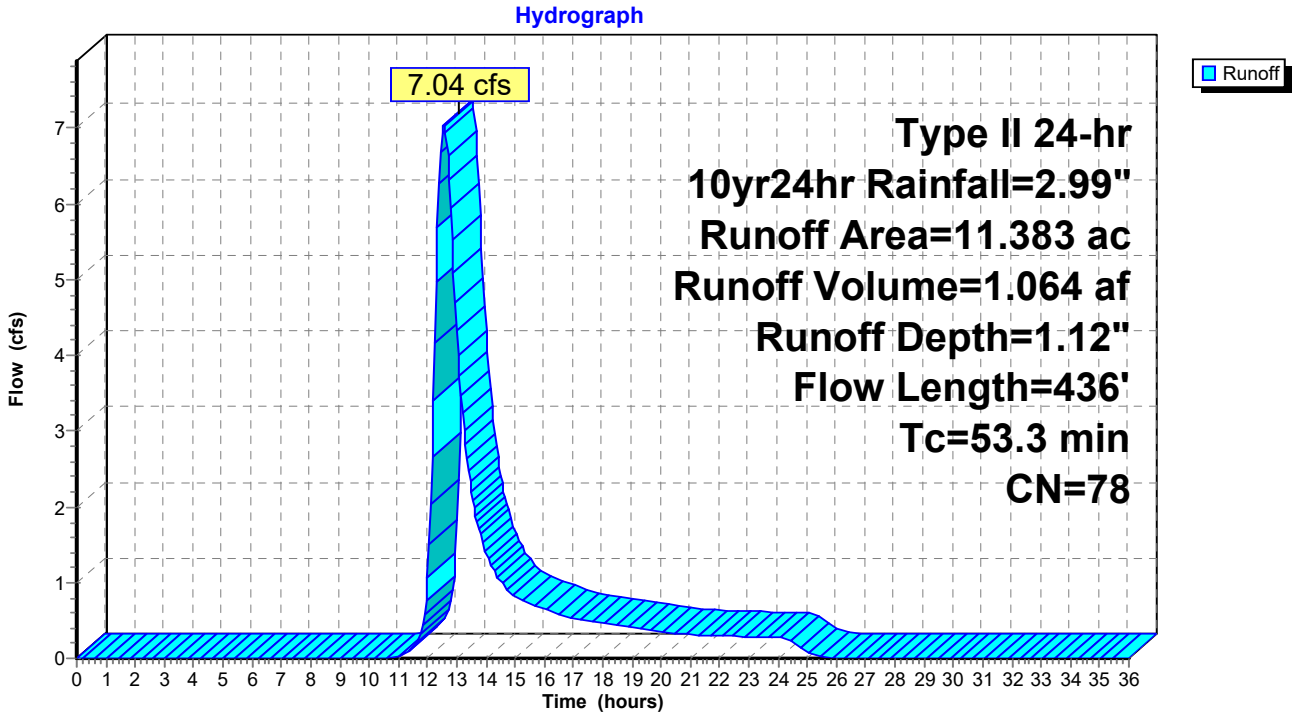
Runoff = 7.04 cfs @ 12.57 hrs, Volume= 1.064 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.227 | 79 | Evergreen Forest, HSG D |
| * | 2.915 | 80 | Pasture/Hay, HSG D |
| * | 0.065 | 80 | Pasture/Hay, HSG D |
| * | 0.034 | 68 | Developed Open Space, HSG B |
| * | 0.019 | 86 | Woody Wetlands, HSG D |
| * | 0.173 | 81 | Cultivated Crops, HSG D |
| * | 3.134 | 81 | Cultivated Crops, HSG D |
| * | 0.780 | 71 | Cultivated Crops, HSG B |
| * | 0.197 | 78 | MEADOW, HSG D |
| * | 0.052 | 78 | MEADOW, HSG D |
| * | 3.077 | 78 | MEADOW, HSG D |
| * | 0.206 | 78 | MEADOW, HSG D |
| * | 0.173 | 58 | MEADOW, HSG B |
| * | 0.330 | 58 | MEADOW, HSG B |
| | 11.383 | 78 | Weighted Average |
| | 11.383 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 45.7 | 100 | 0.0007 | 0.04 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 20 | 0.0137 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 104 | 0.0154 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 69 | 0.0075 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 144 | 0.0108 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 53.3 | 436 | Total | | | |

## Subcatchment 7: WS7



## Summary for Subcatchment 8: WS8

Runoff = 77.45 cfs @ 12.78 hrs, Volume= 14.168 af, Depth= 1.06"

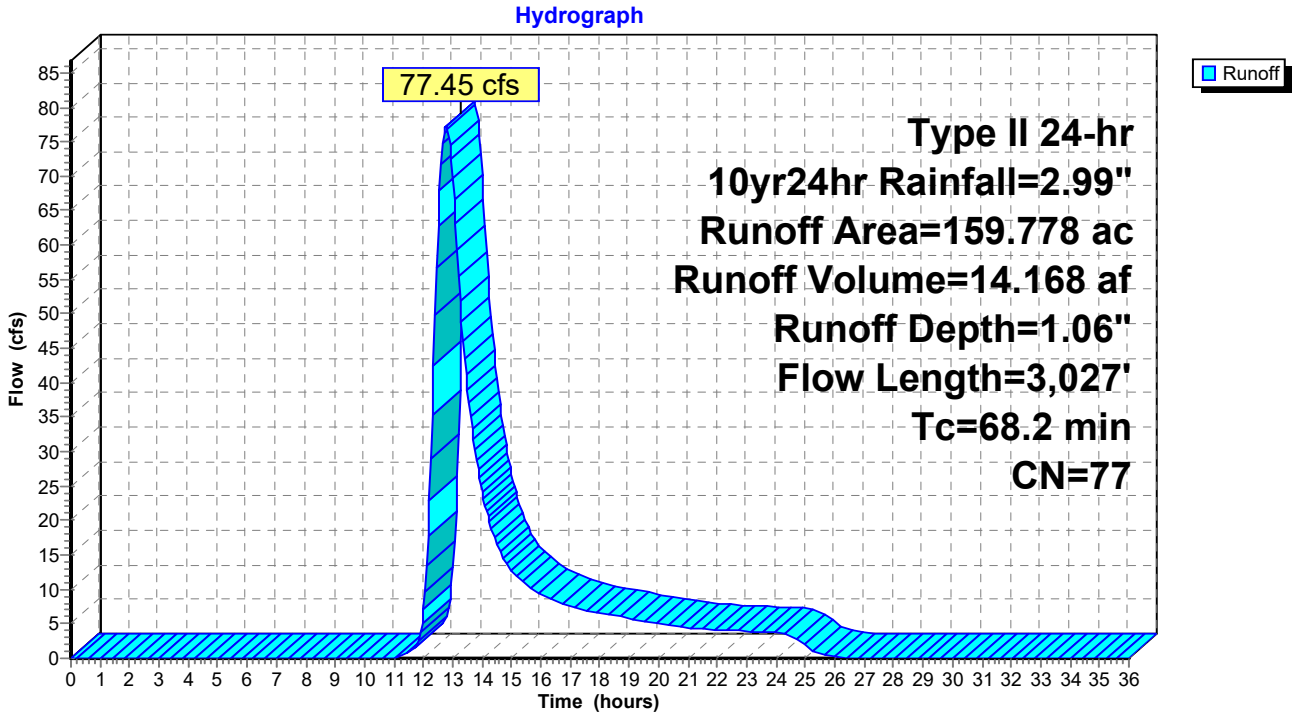
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.381 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.890 | 79 | Deciduous Forest, HSG D |
| * | 1.775 | 80 | Pasture/Hay, HSG D |
| * | 0.468 | 61 | Pasture/Hay, HSG B |
| * | 1.467 | 80 | Pasture/Hay, HSG D |
| * | 0.034 | 80 | Pasture/Hay, HSG D |
| * | 0.662 | 79 | Evergreen Forest, HSG D |
| * | 4.441 | 80 | Pasture/Hay, HSG D |
| * | 1.655 | 61 | Pasture/Hay, HSG B |
| * | 0.391 | 68 | Developed Open Space, HSG B |
| * | 0.047 | 68 | Developed Open Space, HSG B |
| * | 0.667 | 68 | Developed Open Space, HSG B |
| * | 2.294 | 61 | Pasture/Hay, HSG B |
| * | 0.010 | 80 | Pasture/Hay, HSG D |
| * | 0.121 | 68 | Developed Open Space, HSG B |
| * | 0.097 | 68 | Developed Open Space, HSG B |
| * | 0.074 | 68 | Developed Open Space, HSG B |
| * | 0.531 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 89 | Developed Medium Intensity, HSG B |
| * | 0.021 | 68 | Developed Open Space, HSG B |
| * | 0.235 | 93 | Developed Low Intensity, HSG D |
| * | 0.045 | 88 | Developed Low Intensity, HSG B |
| * | 1.339 | 88 | Developed Low Intensity, HSG B |
| * | 0.065 | 86 | Woody Wetlands, HSG D |
| * | 0.040 | 86 | Woody Wetlands, HSG D |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| * | 0.079 | 86 | Woody Wetlands, HSG D |
| * | 3.011 | 86 | Woody Wetlands, HSG D |
| * | 0.229 | 86 | Woody Wetlands, HSG D |
| * | 10.236 | 86 | Woody Wetlands, HSG D |
| * | 1.891 | 86 | Woody Wetlands, HSG D |
| * | 8.074 | 71 | Cultivated Crops, HSG B |
| * | 6.526 | 81 | Cultivated Crops, HSG D |
| * | 1.500 | 71 | Cultivated Crops, HSG B |
| * | 0.962 | 81 | Cultivated Crops, HSG D |
| * | 0.024 | 81 | Cultivated Crops, HSG D |
| * | 0.912 | 71 | Cultivated Crops, HSG B |
| * | 13.271 | 81 | Cultivated Crops, HSG D |
| * | 8.380 | 81 | Cultivated Crops, HSG D |
| * | 2.824 | 71 | Cultivated Crops, HSG B |
| * | 0.055 | 61 | Pasture/Hay, HSG B |
| * | 0.025 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 58 | MEADOW, HSG B |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.445 | 78 | MEADOW, HSG D |
| * | 0.017 | 78 | MEADOW, HSG D |
| * | 0.428 | 78 | MEADOW, HSG D |

| | | | |
|---|---|---|---|
| * | 0.154 | 78 | MEADOW, HSG D |
| * | 1.180 | 78 | MEADOW, HSG D |
| * | 0.262 | 78 | MEADOW, HSG D |
| * | 0.108 | 78 | MEADOW, HSG D |
| * | 0.004 | 78 | MEADOW, HSG D |
| * | 0.098 | 58 | MEADOW, HSG B |
| * | 0.062 | 98 | IMPERVIOUS, HSG D |
| * | 0.012 | 78 | MEADOW, HSG D |
| * | 0.396 | 58 | MEADOW, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.050 | 98 | IMPERVIOUS, HSG B |
| * | 0.309 | 78 | MEADOW, HSG D |
| * | 0.076 | 78 | MEADOW, HSG D |
| * | 1.579 | 58 | MEADOW, HSG B |
| * | 4.554 | 58 | MEADOW, HSG B |
| * | 0.021 | 98 | IMPERVIOUS, HSG B |
| * | 0.542 | 78 | MEADOW, HSG D |
| * | 2.689 | 78 | MEADOW, HSG D |
| * | 0.761 | 58 | MEADOW, HSG B |
| * | 0.438 | 58 | MEADOW, HSG B |
| * | 0.008 | 98 | IMPERVIOUS, HSG B |
| * | 16.186 | 78 | MEADOW, HSG D |
| * | 43.561 | 78 | MEADOW, HSG D |
| * | 0.128 | 98 | IMPERVIOUS, HSG D |
| * | 0.965 | 98 | IMPERVIOUS, HSG D |
| * | 1.241 | 78 | MEADOW, HSG D |
| * | 1.933 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.134 | 98 | IMPERVIOUS, HSG D |
| * | 1.699 | 58 | MEADOW, HSG B |
| * | 2.580 | 58 | MEADOW, HSG B |
| | 159.778 | 77 | Weighted Average |
| | 158.366 | | 99.12% Pervious Area |
| | 1.412 | | 0.88% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.8 | 100 | 0.0053 | 0.17 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.5 | 185 | 0.0096 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 433 | 0.0381 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 29 | 0.0317 | 1.60 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 221 | 0.0348 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 138 | 0.0279 | 1.17 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 264 | 0.0171 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 146 | 0.0040 | 0.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 34 | 0.0113 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 66 | 0.0124 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 110 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 68 | 0.0105 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.4 | 180 | 0.0064 | 0.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.7 | 232 | 0.0069 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 29 | 0.0081 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 69 | 0.0023 | 0.98 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.9 | 162 | 0.0061 | 0.55 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 160 | 0.0226 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.7 | 258 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 37 | 0.0243 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 53 | 0.0504 | 1.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 54 | 0.0168 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 68.2 | 3,027 | Total | | | |

## Subcatchment 8: WS8



## Summary for Subcatchment 9: WS9

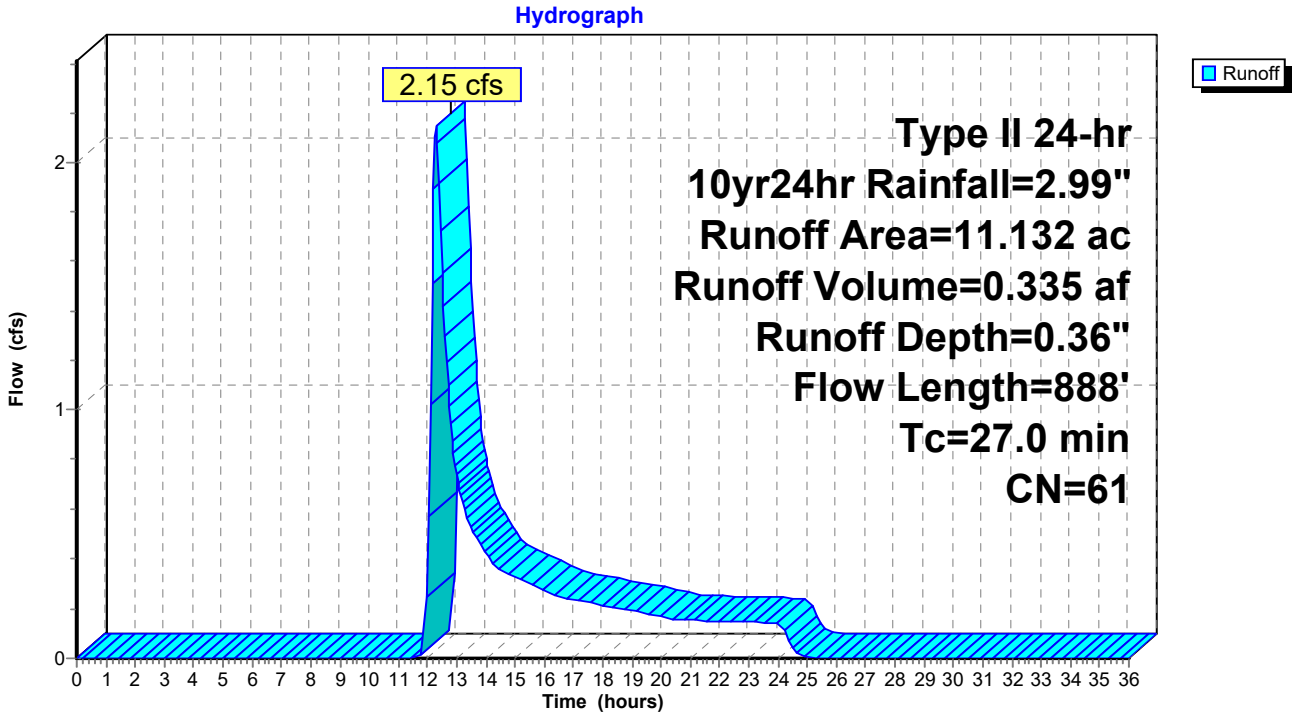
Runoff = 2.15 cfs @ 12.29 hrs, Volume= 0.335 af, Depth= 0.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.016 | 68 | Developed Open Space, HSG B |
| * | 0.042 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.080 | 88 | Developed Low Intensity, HSG B |
| * | 0.123 | 88 | Developed Low Intensity, HSG B |
| * | 0.107 | 61 | Pasture/Hay, HSG B |
| * | 1.266 | 71 | Cultivated Crops, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 0.014 | 98 | IMPERVIOUS, HSG B |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 4.269 | 58 | MEADOW, HSG B |
| * | 0.222 | 98 | IMPERVIOUS, HSG B |
| * | 4.759 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 11.132 | 61 | Weighted Average |
| | 10.854 | | 97.50% Pervious Area |
| | 0.278 | | 2.50% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.0 | 65 | 0.0083 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.8 | 35 | 0.0234 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.6 | 44 | 0.0321 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0236 | 3.12 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 22 | 0.0289 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 157 | 0.0424 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.1 | 247 | 0.0350 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 38 | 0.0301 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 85 | 0.0252 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 180 | 0.0176 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.0 | 888 | Total | | | |

## Subcatchment 9: WS9



## Summary for Subcatchment 10: WS10

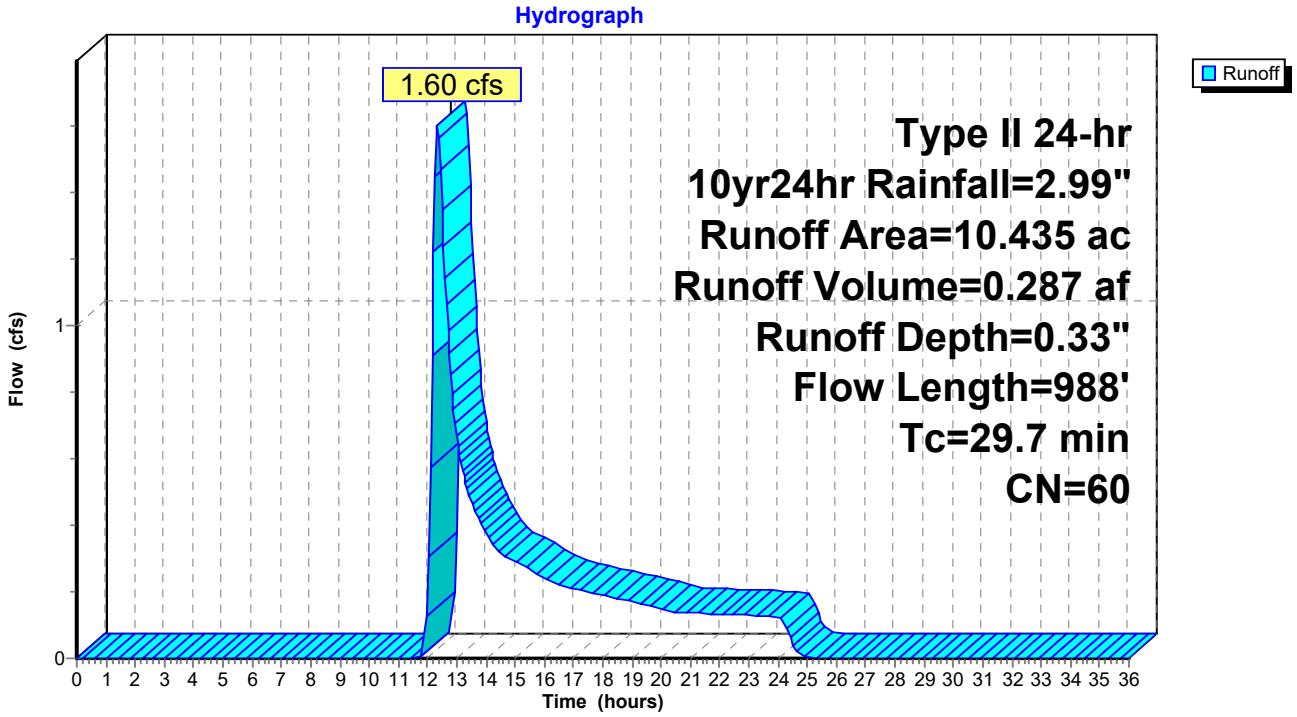
Runoff = 1.60 cfs @ 12.35 hrs, Volume= 0.287 af, Depth= 0.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.136 | 61 | Pasture/Hay, HSG B |
| * | 0.101 | 60 | Deciduous Forest, HSG B |
| * | 0.140 | 60 | Mixed Forest, HSG B |
| * | 0.992 | 60 | Deciduous Forest, HSG B |
| * | 0.867 | 71 | Cultivated Crops, HSG B |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.053 | 58 | MEADOW, HSG B |
| * | 2.475 | 58 | MEADOW, HSG B |
| * | 0.129 | 98 | IMPERVIOUS, HSG B |
| * | 5.538 | 58 | MEADOW, HSG B |
| | 10.435 | 60 | Weighted Average |
| | 10.306 | | 98.76% Pervious Area |
| | 0.129 | | 1.24% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.6 | 65 | 0.0271 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.7 | 7 | 0.0147 | 0.07 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.3 | 9 | 0.0109 | 0.07 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 5.8 | 19 | 0.0042 | 0.05 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.9 | 239 | 0.0132 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.2 | 272 | 0.0155 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 107 | 0.0241 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 119 | 0.0226 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 14 | 0.0183 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 137 | 0.0188 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.7 | 988 | Total | | | |

## Subcatchment 10: WS10



## Summary for Subcatchment 11: WS11

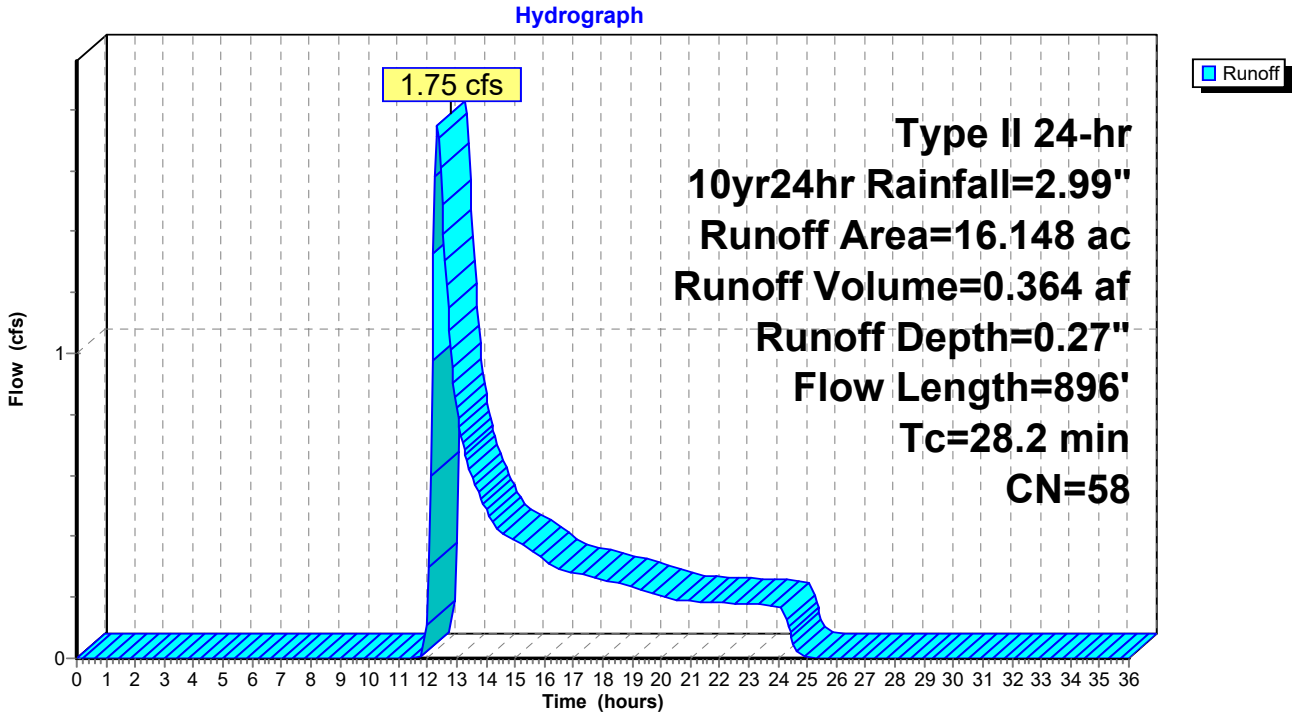
Runoff = 1.75 cfs @ 12.35 hrs, Volume= 0.364 af, Depth= 0.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.069 | 88 | Developed Low Intensity, HSG B |
| * | 0.146 | 71 | Cultivated Crops, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 0.445 | 58 | MEADOW, HSG B |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.029 | 78 | MEADOW, HSG D |
| * | 0.022 | 78 | MEADOW, HSG D |
| * | 0.048 | 58 | MEADOW, HSG B |
| * | 3.840 | 58 | MEADOW, HSG B |
| * | 11.266 | 58 | MEADOW, HSG B |
| * | 0.132 | 78 | MEADOW, HSG D |
| * | 0.005 | 78 | MEADOW, HSG D |
| | 16.148 | 58 | Weighted Average |
| | 16.148 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.1 | 100 | 0.0112 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.3 | 488 | 0.0250 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 208 | 0.0227 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 100 | 0.0091 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 28.2 | 896 | Total | | | |

## Subcatchment 11: WS11



## Summary for Subcatchment 12: WS12

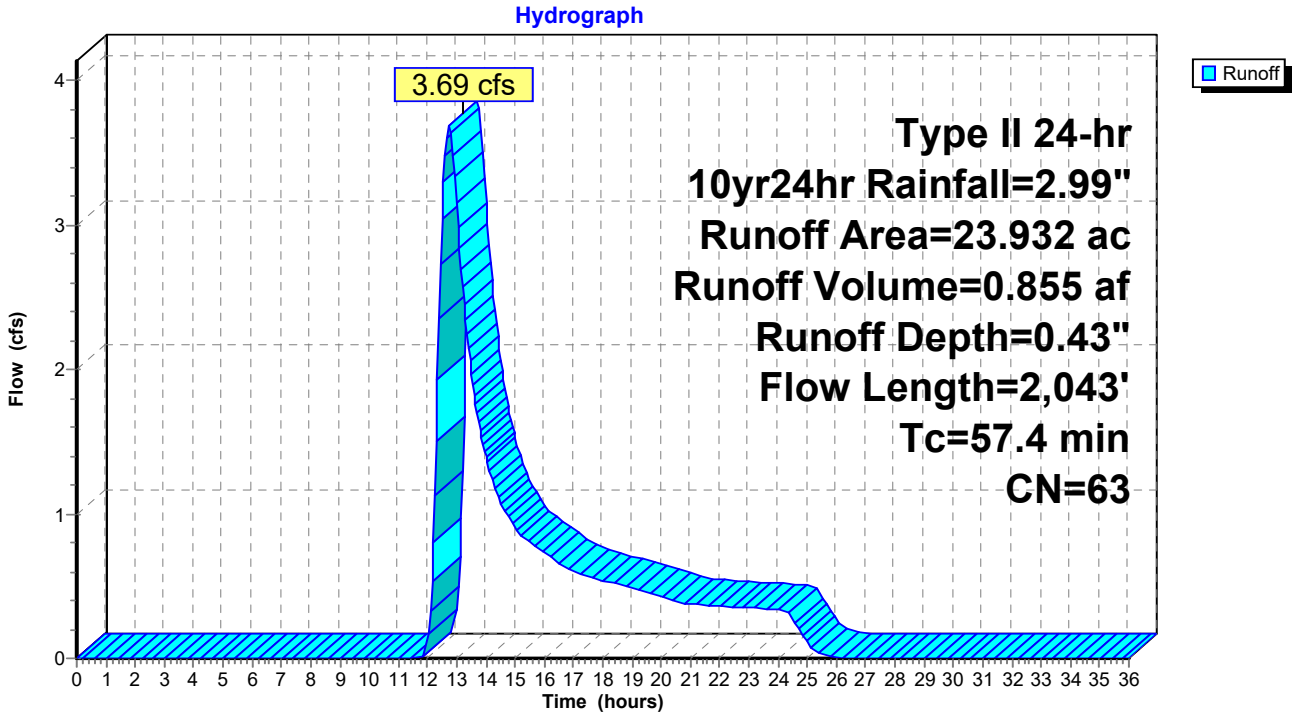
Runoff = 3.69 cfs @ 12.73 hrs, Volume= 0.855 af, Depth= 0.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.054 | 60 | Deciduous Forest, HSG B |
| * | 0.004 | 71 | Cultivated Crops, HSG B |
| * | 0.417 | 61 | Pasture/Hay, HSG B |
| * | 0.246 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.820 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.417 | 60 | Deciduous Forest, HSG B |
| * | 0.000 | 71 | Cultivated Crops, HSG B |
| * | 0.384 | 71 | Cultivated Crops, HSG B |
| * | 0.004 | 58 | MEADOW, HSG B |
| * | 0.093 | 78 | MEADOW, HSG D |
| * | 0.073 | 78 | MEADOW, HSG D |
| * | 0.028 | 58 | MEADOW, HSG B |
| * | 0.415 | 58 | MEADOW, HSG B |
| * | 0.030 | 78 | MEADOW, HSG D |
| * | 0.222 | 78 | MEADOW, HSG D |
| * | 0.301 | 58 | MEADOW, HSG B |
| * | 0.144 | 58 | MEADOW, HSG B |
| * | 0.620 | 58 | MEADOW, HSG B |
| * | 0.118 | 98 | IMPERVIOUS, HSG B |
| * | 3.537 | 58 | MEADOW, HSG B |
| * | 0.527 | 78 | MEADOW, HSG D |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 1.423 | 58 | MEADOW, HSG B |
| * | 0.054 | 98 | IMPERVIOUS, HSG B |
| * | 3.761 | 58 | MEADOW, HSG B |
| * | 0.909 | 58 | MEADOW, HSG B |
| * | 0.060 | 98 | IMPERVIOUS, HSG B |
| * | 1.302 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 1.295 | 78 | MEADOW, HSG D |
| * | 1.605 | 78 | MEADOW, HSG D |
| | 23.932 | 63 | Weighted Average |
| | 23.657 | | 98.85% Pervious Area |
| | 0.275 | | 1.15% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.2 | 100 | 0.0190 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 18.9 | 569 | 0.0051 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 59 | 0.1044 | 2.26 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 105 | 0.0413 | 1.42 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 90 | 0.0070 | 0.59 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.5 | 260 | 0.0069 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 50 | 0.0481 | 1.53 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 60 | 0.0350 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 24 | 0.0426 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0309 | 3.57 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.1 | 81 | 0.0308 | 1.23 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 161 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 143 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 25 | 0.0183 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 168 | 0.0120 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 135 | 0.0140 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 57.4 | 2,043 | Total | | | |

## Subcatchment 12: WS12



## Summary for Subcatchment 13: WS13

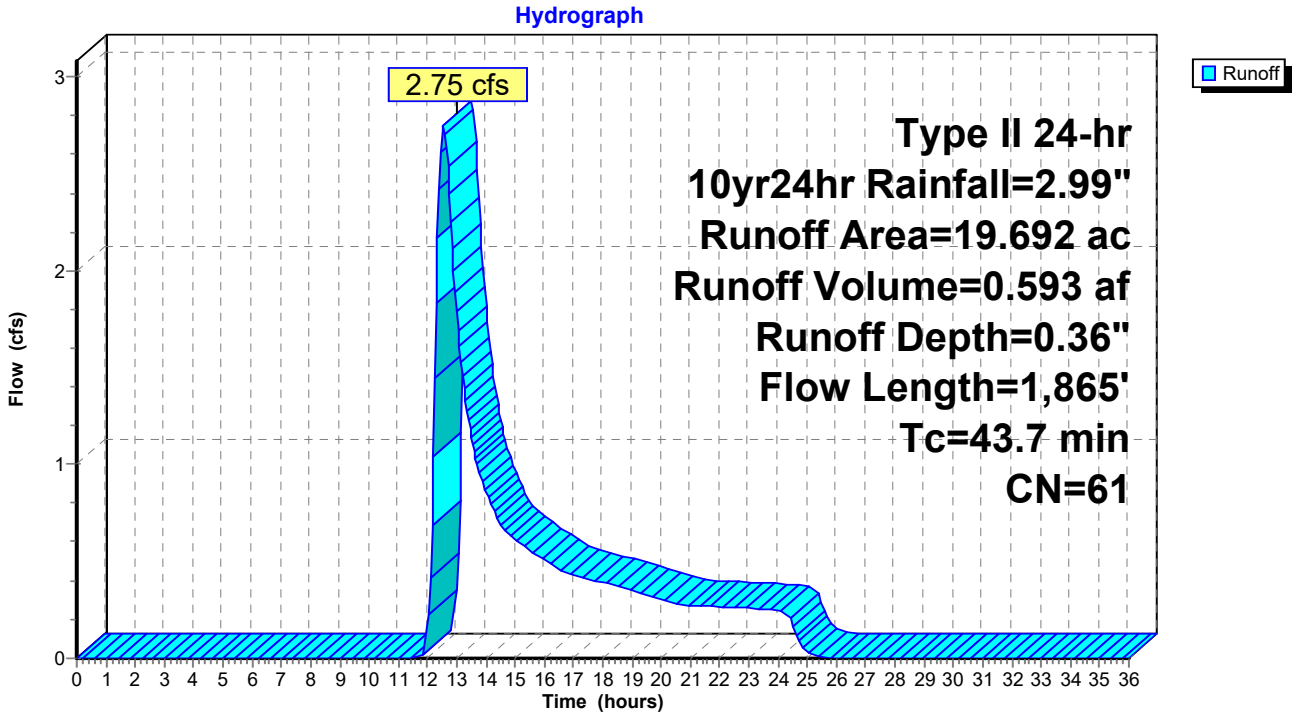
Runoff = 2.75 cfs @ 12.56 hrs, Volume= 0.593 af, Depth= 0.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.217 | 68 | Developed Open Space, HSG B |
| * | 0.645 | 60 | Mixed Forest, HSG B |
| * | 0.000 | 60 | Deciduous Forest, HSG B |
| * | 3.542 | 63 | Grassland/Herbaceous, HSG B |
| * | 1.445 | 60 | Deciduous Forest, HSG B |
| * | 1.406 | 71 | Cultivated Crops, HSG B |
| * | 0.184 | 58 | MEADOW, HSG B |
| * | 0.017 | 98 | IMPERVIOUS, HSG B |
| * | 0.484 | 58 | MEADOW, HSG B |
| * | 0.025 | 98 | IMPERVIOUS, HSG B |
| * | 0.445 | 58 | MEADOW, HSG B |
| * | 0.901 | 58 | MEADOW, HSG B |
| * | 0.159 | 98 | IMPERVIOUS, HSG B |
| * | 0.705 | 58 | MEADOW, HSG B |
| * | 0.018 | 98 | IMPERVIOUS, HSG B |
| * | 0.357 | 58 | MEADOW, HSG B |
| * | 0.031 | 58 | MEADOW, HSG B |
| * | 1.598 | 58 | MEADOW, HSG B |
| * | 2.725 | 58 | MEADOW, HSG B |
| * | 1.576 | 58 | MEADOW, HSG B |
| * | 3.092 | 58 | MEADOW, HSG B |
| * | 0.017 | 78 | MEADOW, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| | 19.692 | 61 | Weighted Average |
| | 19.472 | | 98.89% Pervious Area |
| | 0.219 | | 1.11% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.1 | 100 | 0.0195 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.5 | 283 | 0.0109 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 211 | 0.0120 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.7 | 100 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 143 | 0.0294 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 174 | 0.0385 | 1.37 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 59 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 19 | 0.0247 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0266 | 3.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.4 | 94 | 0.0264 | 1.14 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 68 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.5 | 434 | 0.0189 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 104 | 0.0163 | 0.89 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 62 | 0.0055 | 0.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 43.7 | 1,865 | Total | | | |

## Subcatchment 13: WS13



## Summary for Subcatchment 14: WS14

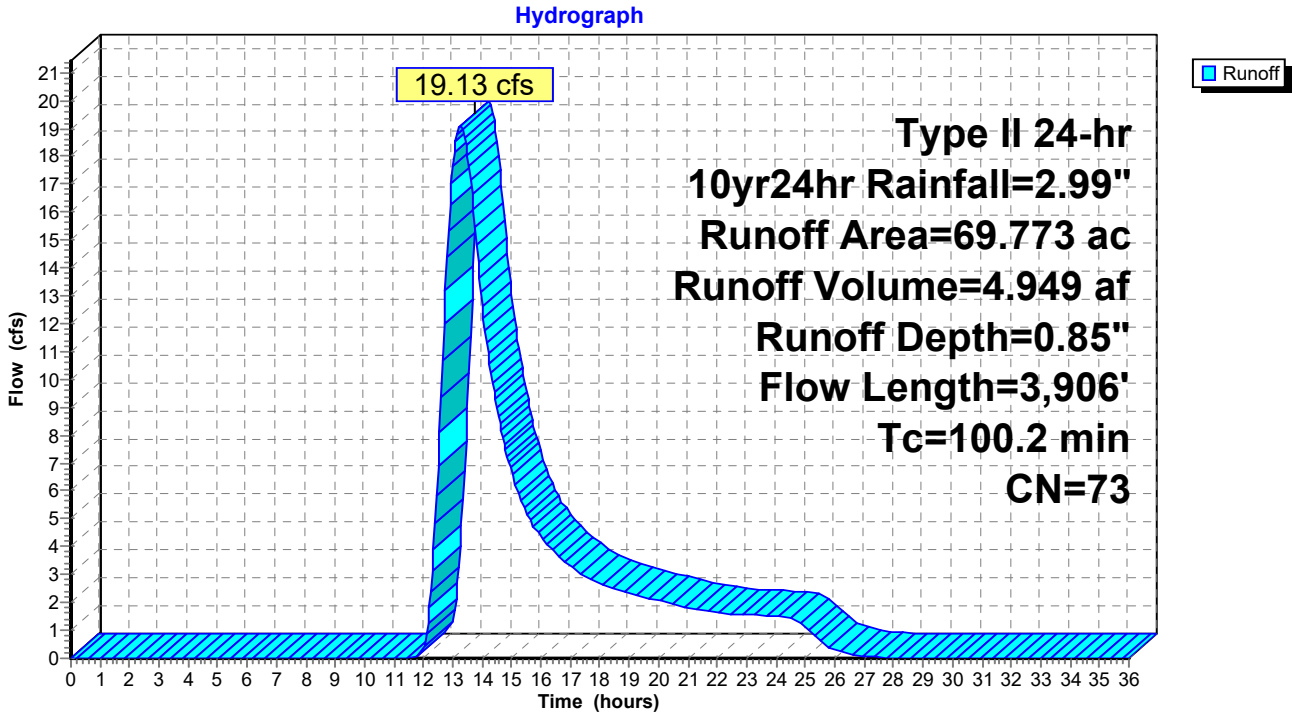
Runoff = 19.13 cfs @ 13.25 hrs, Volume= 4.949 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.295 | 60 | Deciduous Forest, HSG B |
| * | 0.007 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.017 | 61 | Pasture/Hay, HSG B |
| * | 0.472 | 61 | Pasture/Hay, HSG B |
| * | 0.003 | 85 | Grassland/Herbaceous, HSG D |
| * | 3.784 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.055 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.025 | 79 | Deciduous Forest, HSG D |
| * | 3.895 | 60 | Deciduous Forest, HSG B |
| * | 1.726 | 60 | Deciduous Forest, HSG B |
| * | 21.139 | 71 | Cultivated Crops, HSG B |
| * | 13.877 | 81 | Cultivated Crops, HSG D |
| * | 4.280 | 71 | Cultivated Crops, HSG B |
| * | 0.532 | 58 | MEADOW, HSG B |
| * | 0.060 | 58 | MEADOW, HSG B |
| * | 3.344 | 78 | MEADOW, HSG D |
| * | 0.248 | 98 | IMPERVIOUS, HSG D |
| * | 15.706 | 78 | MEADOW, HSG D |
| * | 0.085 | 98 | IMPERVIOUS, HSG D |
| | 69.773 | 73 | Weighted Average |
| | 69.440 | | 99.52% Pervious Area |
| | 0.334 | | 0.48% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.2 | 100 | 0.0070 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 94 | 0.0038 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 74 | 0.0056 | 1.51 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.8 | 91 | 0.0144 | 0.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 165 | 0.0074 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.9 | 450 | 0.0188 | 0.69 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.0 | 192 | 0.0258 | 0.80 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.2 | 746 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 571 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 194 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 80 | 0.0146 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 63 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 19.0 | 377 | 0.0022 | 0.33 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 23 | 0.0069 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0206 | 2.92 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 20 | 0.0223 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 229 | 0.0188 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 234 | 0.0232 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 63 | 0.0113 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 24 | 0.0160 | 0.89 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 103 | 0.0056 | 0.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 100.2 | 3,906 | Total | | | |

## Subcatchment 14: WS14



## Summary for Subcatchment 15: WS15

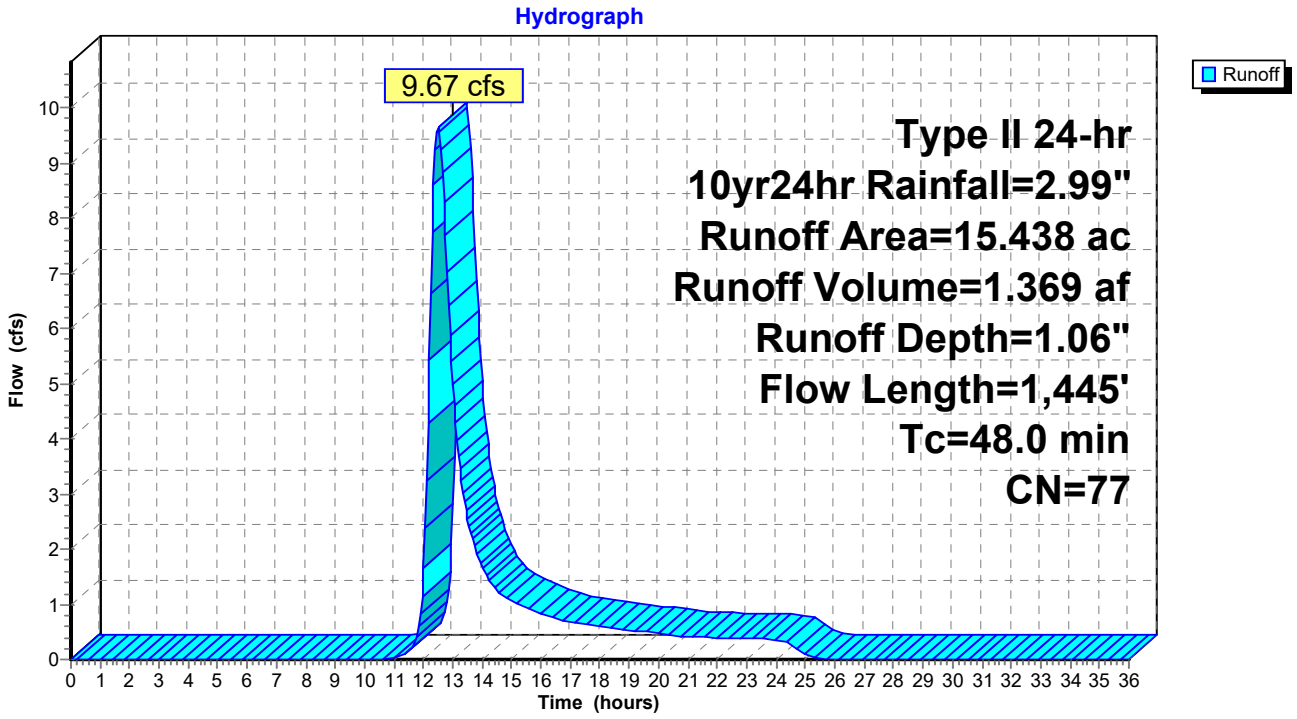
Runoff = 9.67 cfs @ 12.50 hrs, Volume= 1.369 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.042 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.028 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.112 | 79 | Deciduous Forest, HSG D |
| * | 1.067 | 79 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Shrub/Scrub, HSG D |
| * | 0.432 | 80 | Shrub/Scrub, HSG D |
| * | 0.516 | 79 | Mixed Forest, HSG D |
| * | 0.000 | 79 | Mixed Forest, HSG D |
| * | 0.413 | 71 | Cultivated Crops, HSG B |
| * | 1.507 | 81 | Cultivated Crops, HSG D |
| * | 0.032 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.016 | 58 | MEADOW, HSG B |
| * | 0.100 | 78 | MEADOW, HSG D |
| * | 0.041 | 78 | MEADOW, HSG D |
| * | 0.126 | 58 | MEADOW, HSG B |
| * | 0.167 | 78 | MEADOW, HSG D |
| * | 0.266 | 78 | MEADOW, HSG D |
| * | 0.456 | 78 | MEADOW, HSG D |
| * | 0.696 | 78 | MEADOW, HSG D |
| * | 0.307 | 78 | MEADOW, HSG D |
| * | 0.289 | 78 | MEADOW, HSG D |
| * | 0.417 | 58 | MEADOW, HSG B |
| * | 0.098 | 98 | IMPERVIOUS, HSG B |
| * | 0.967 | 58 | MEADOW, HSG B |
| * | 0.896 | 78 | MEADOW, HSG D |
| * | 0.079 | 98 | IMPERVIOUS, HSG D |
| * | 6.256 | 78 | MEADOW, HSG D |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.031 | 78 | MEADOW, HSG D |
| | 15.438 | 77 | Weighted Average |
| | 15.261 | | 98.85% Pervious Area |
| | 0.177 | | 1.15% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 17.8 | 38 | 0.0011 | 0.04 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.2 | 62 | 0.0403 | 0.17 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.9 | 108 | 0.0179 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 38 | 0.0214 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 17 | 0.0129 | 2.30 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 43 | 0.0285 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.9 | 432 | 0.0133 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 245 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 25 | 0.0178 | 0.93 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 14 | 0.0419 | 1.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 113 | 0.0313 | 1.24 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.9 | 311 | 0.0095 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 48.0 | 1,445 | Total | | | |

## Subcatchment 15: WS15



## Summary for Subcatchment 16: WS16

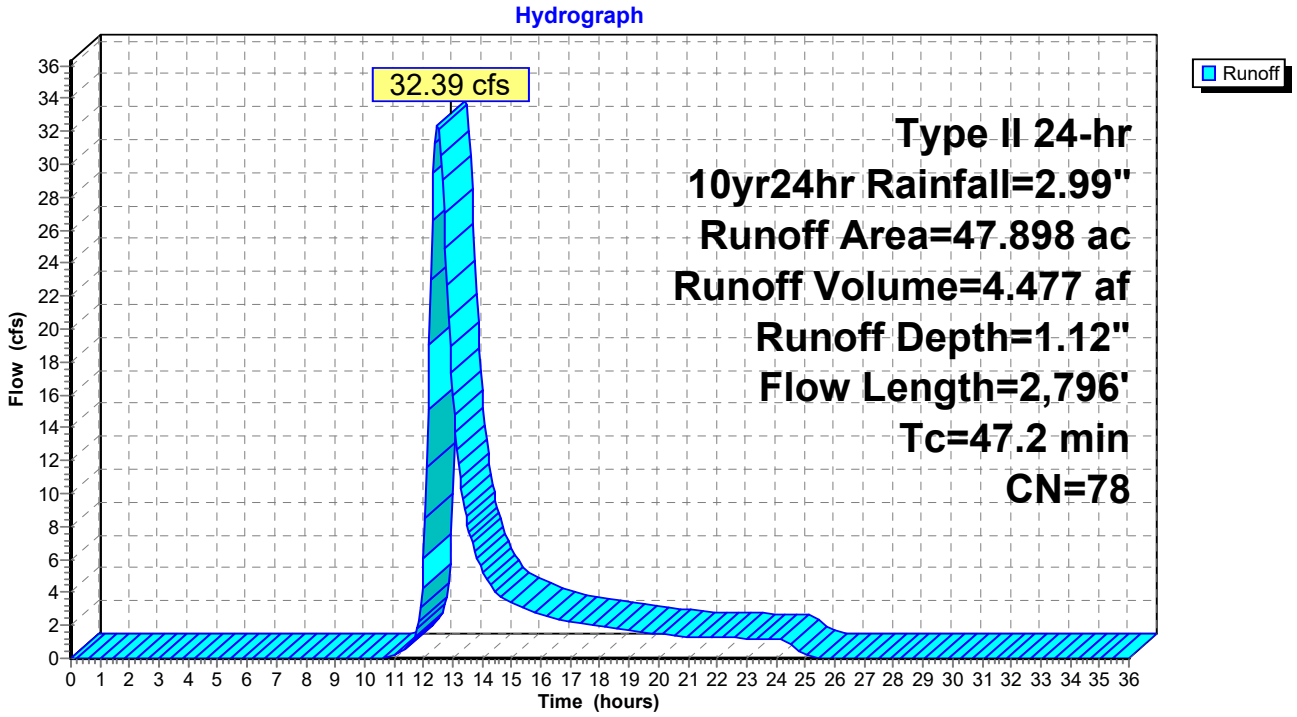
Runoff = 32.39 cfs @ 12.48 hrs, Volume= 4.477 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.205 | 84 | Developed Open Space, HSG D |
| * | 0.128 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.127 | 93 | Developed Low Intensity, HSG D |
| * | 0.242 | 84 | Developed Open Space, HSG D |
| * | 0.713 | 93 | Developed Low Intensity, HSG D |
| * | 0.372 | 84 | Developed Open Space, HSG D |
| * | 6.393 | 71 | Cultivated Crops, HSG B |
| * | 12.903 | 81 | Cultivated Crops, HSG D |
| * | 3.221 | 71 | Cultivated Crops, HSG B |
| * | 0.101 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.094 | 78 | MEADOW, HSG D |
| * | 0.045 | 98 | IMPERVIOUS, HSG D |
| * | 5.837 | 78 | MEADOW, HSG D |
| * | 0.284 | 98 | IMPERVIOUS, HSG D |
| * | 16.718 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 47.898 | 78 | Weighted Average |
| | 47.499 | | 99.17% Pervious Area |
| | 0.399 | | 0.83% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.4 | 100 | 0.0384 | 0.38 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.2 | 250 | 0.0450 | 1.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 408 | 0.0364 | 1.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.0 | 574 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 223 | 0.0109 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.1 | 454 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 23 | 0.0167 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 12 | 0.0189 | 2.79 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 21 | 0.0105 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 113 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.3 | 374 | 0.0197 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 76 | 0.0210 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 167 | 0.0086 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 47.2 | 2,796 | Total | | | |

## Subcatchment 16: WS16



## Summary for Subcatchment 17: WS17

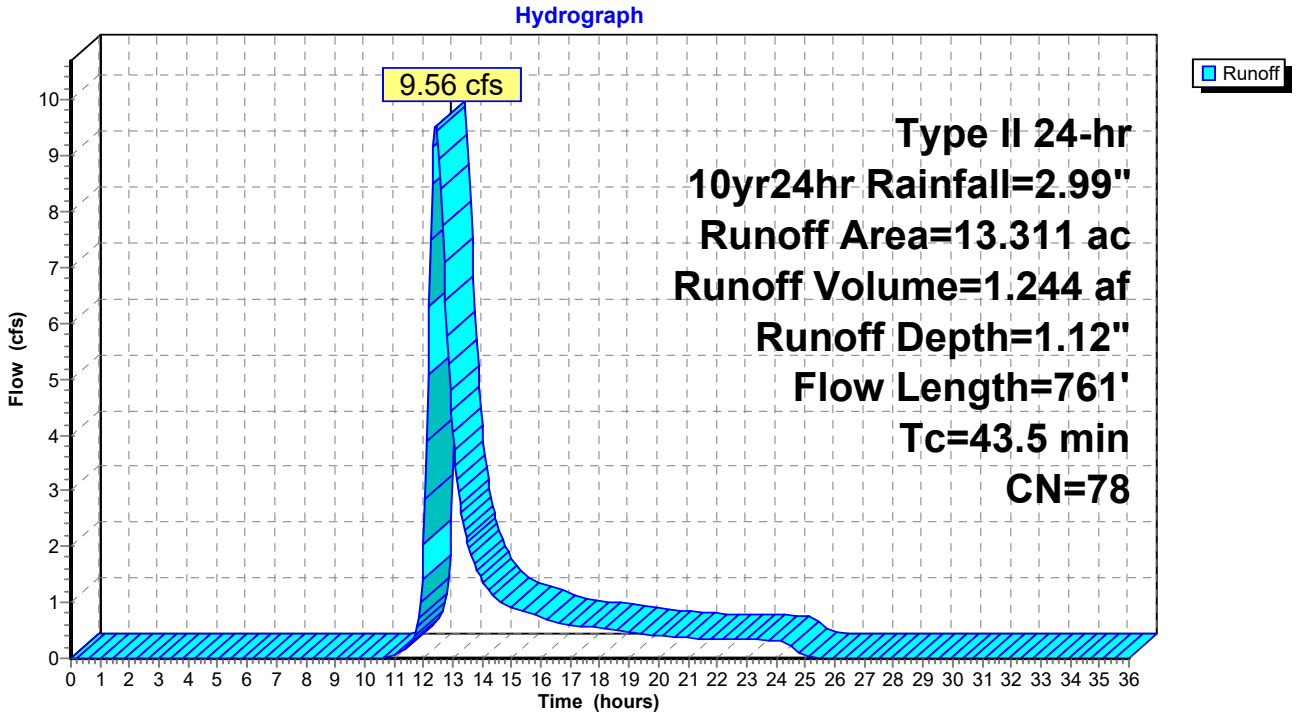
Runoff = 9.56 cfs @ 12.43 hrs, Volume= 1.244 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.015 | 93 | Developed Low Intensity, HSG D |
| * | 0.247 | 81 | Cultivated Crops, HSG D |
| * | 0.046 | 78 | MEADOW, HSG D |
| * | 0.179 | 78 | MEADOW, HSG D |
| * | 0.059 | 78 | MEADOW, HSG D |
| * | 0.072 | 78 | MEADOW, HSG D |
| * | 0.107 | 58 | MEADOW, HSG B |
| * | 0.114 | 98 | IMPERVIOUS, HSG D |
| * | 8.638 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 3.791 | 78 | MEADOW, HSG D |
| | 13.311 | 78 | Weighted Average |
| | 13.155 | | 98.82% Pervious Area |
| | 0.156 | | 1.18% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.9 | 48 | 0.0058 | 0.07 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.3 | 35 | 0.0083 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.5 | 17 | 0.0094 | 0.58 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.6 | 18 | 0.0061 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 13 | 0.0055 | 0.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 177 | 0.0059 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.5 | 97 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 40 | 0.0073 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.4 | 145 | 0.0060 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 44 | 0.0099 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.2 | 126 | 0.0017 | 0.29 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 43.5 | 761 | Total | | | |

## Subcatchment 17: WS17



## Summary for Subcatchment 18: WS18

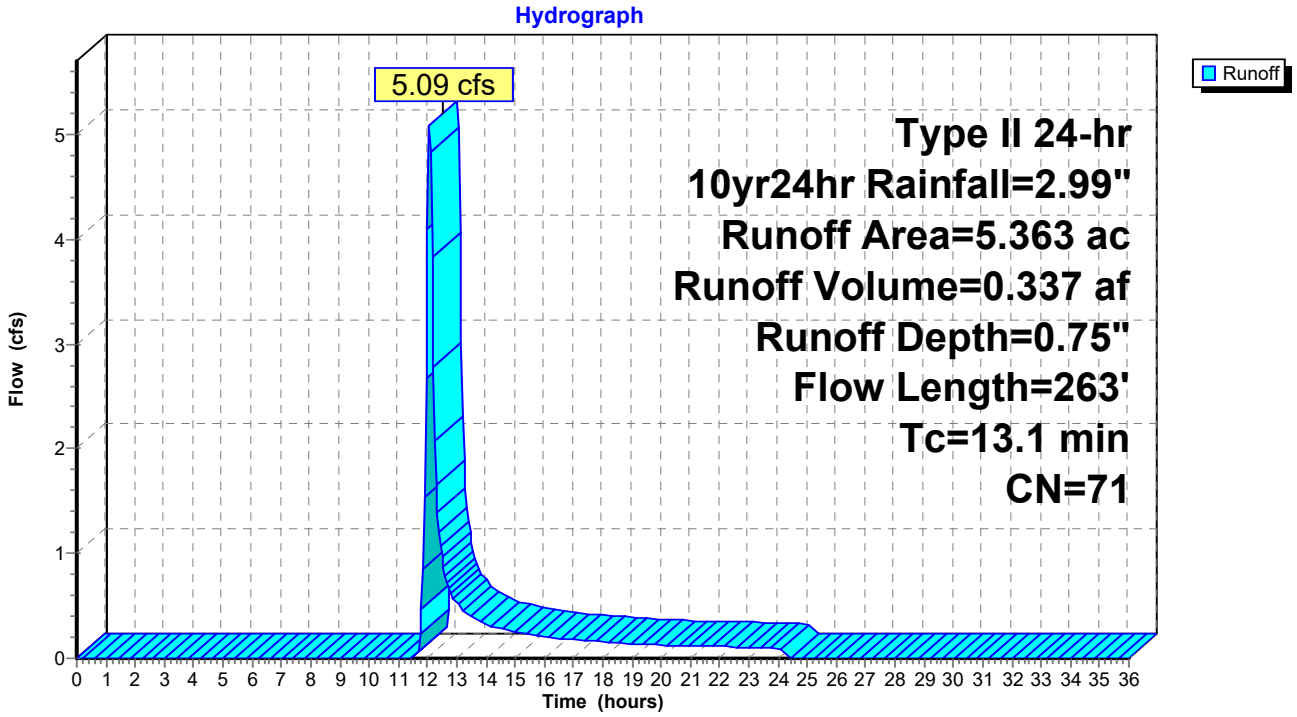
Runoff = 5.09 cfs @ 12.07 hrs, Volume= 0.337 af, Depth= 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.143 | 71 | Cultivated Crops, HSG B |
| * | 0.481 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG B |
| * | 1.757 | 58 | MEADOW, HSG B |
| * | 0.211 | 58 | MEADOW, HSG B |
| * | 0.093 | 98 | IMPERVIOUS, HSG D |
| * | 1.767 | 78 | MEADOW, HSG D |
| * | 0.906 | 78 | MEADOW, HSG D |
| | 5.363 | 71 | Weighted Average |
| | 5.265 | | 98.17% Pervious Area |
| | 0.098 | | 1.83% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.5 | 100 | 0.0357 | 0.18 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.3 | 29 | 0.0407 | 1.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 83 | 0.0079 | 0.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 51 | 0.0080 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.1 | 263 | Total | | | |

## Subcatchment 18: WS18



## Summary for Subcatchment 19: WS19

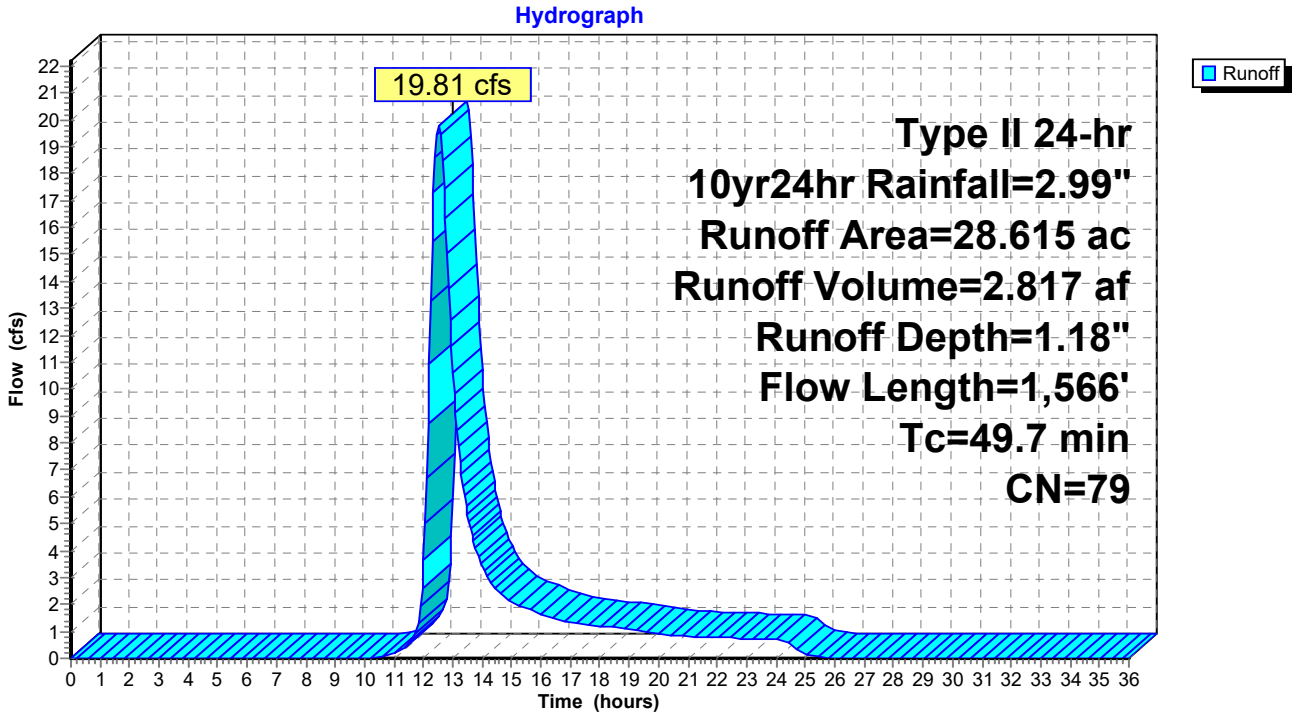
Runoff = 19.81 cfs @ 12.52 hrs, Volume= 2.817 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.077 | 80 | Pasture/Hay, HSG D |
| * | 0.030 | 86 | Woody Wetlands, HSG D |
| * | 1.654 | 81 | Cultivated Crops, HSG D |
| * | 0.043 | 78 | MEADOW, HSG D |
| * | 0.501 | 78 | MEADOW, HSG D |
| * | 0.094 | 78 | MEADOW, HSG D |
| * | 0.714 | 98 | IMPERVIOUS, HSG D |
| * | 19.120 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 6.338 | 78 | MEADOW, HSG D |
| | 28.615 | 79 | Weighted Average |
| | 27.858 | | 97.35% Pervious Area |
| | 0.757 | | 2.65% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.2 | 100 | 0.0093 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.6 | 158 | 0.0201 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 15.4 | 693 | 0.0115 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 64 | 0.0059 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 28 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 19 | 0.0081 | 1.82 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 25 | 0.0126 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 135 | 0.0076 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 35 | 0.0106 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.7 | 251 | 0.0079 | 0.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 59 | 0.0029 | 1.09 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 49.7 | 1,566 | Total | | | |

## Subcatchment 19: WS19



## Summary for Subcatchment 20: WS20

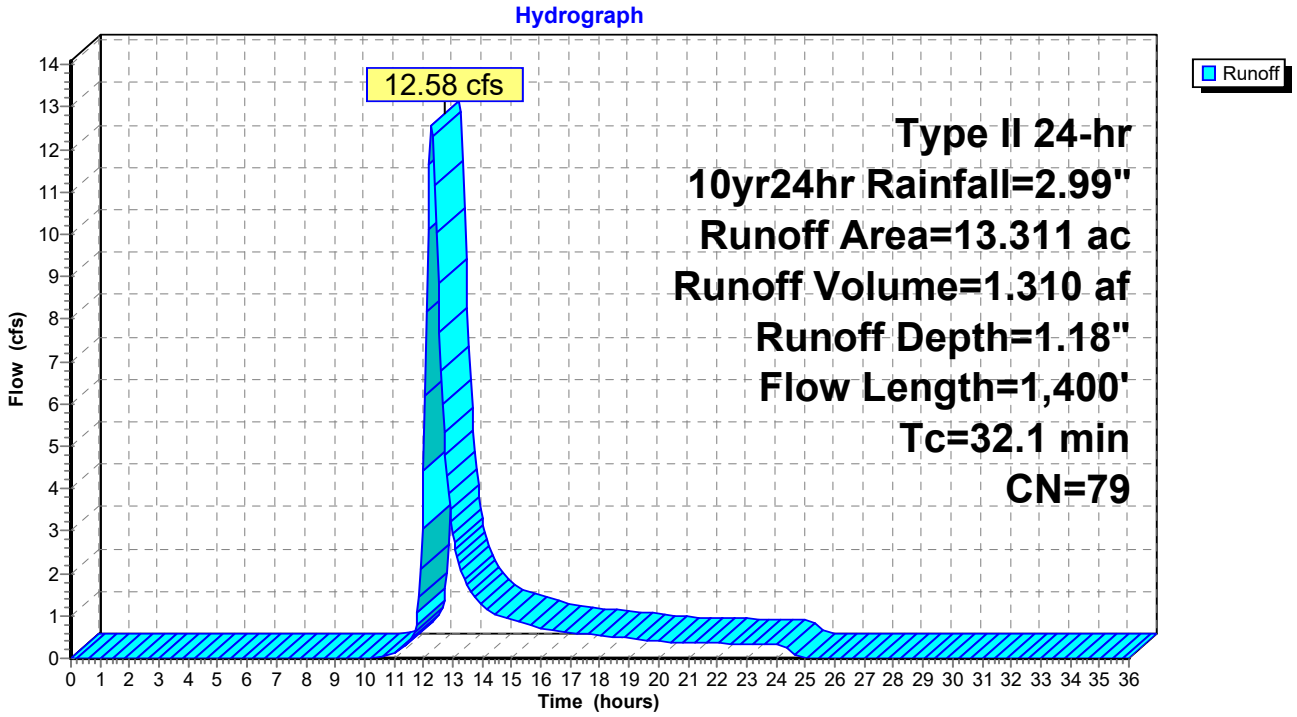
Runoff = 12.58 cfs @ 12.28 hrs, Volume= 1.310 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.283 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 94 | Developed Medium Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 0.723 | 81 | Cultivated Crops, HSG D |
| * | 0.193 | 98 | IMPERVIOUS, HSG D |
| * | 9.668 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.887 | 78 | MEADOW, HSG D |
| | 13.311 | 79 | Weighted Average |
| | 13.075 | | 98.23% Pervious Area |
| | 0.236 | | 1.77% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.3 | 287 | 0.0087 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.2 | 223 | 0.0042 | 0.45 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 24 | 0.0183 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 16 | 0.0275 | 3.37 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 23 | 0.0291 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 205 | 0.0331 | 1.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 131 | 0.0093 | 0.68 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.1 | 129 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 58 | 0.0091 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 80 | 0.0144 | 0.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.8 | 97 | 0.0042 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 128 | 0.0126 | 2.28 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 32.1 | 1,400 | Total | | | |

## Subcatchment 20: WS20



## Summary for Subcatchment 21: WS21

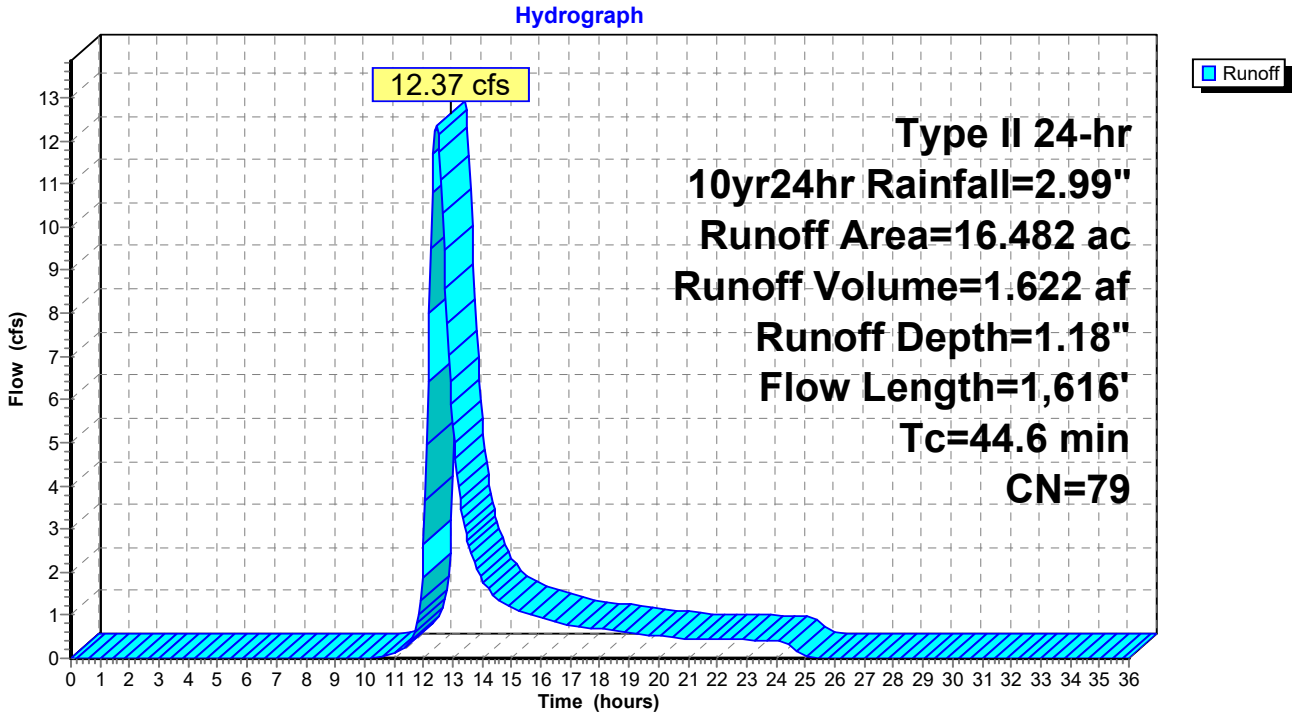
Runoff = 12.37 cfs @ 12.45 hrs, Volume= 1.622 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.154 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 89 | Developed Medium Intensity, HSG B |
| * | 0.162 | 94 | Developed Medium Intensity, HSG D |
| * | 0.159 | 88 | Developed Low Intensity, HSG B |
| * | 1.790 | 93 | Developed Low Intensity, HSG D |
| * | 0.153 | 88 | Developed Low Intensity, HSG B |
| * | 0.136 | 93 | Developed Low Intensity, HSG D |
| * | 0.269 | 71 | Cultivated Crops, HSG B |
| * | 0.243 | 81 | Cultivated Crops, HSG D |
| * | 0.373 | 81 | Cultivated Crops, HSG D |
| * | 0.001 | 58 | MEADOW, HSG B |
| * | 0.273 | 78 | MEADOW, HSG D |
| * | 0.137 | 58 | MEADOW, HSG B |
| * | 0.342 | 78 | MEADOW, HSG D |
| * | 0.702 | 78 | MEADOW, HSG D |
| * | 0.490 | 58 | MEADOW, HSG B |
| * | 0.344 | 58 | MEADOW, HSG B |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.199 | 98 | IMPERVIOUS, HSG D |
| * | 8.973 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.529 | 78 | MEADOW, HSG D |
| | 16.482 | 79 | Weighted Average |
| | 16.240 | | 98.53% Pervious Area |
| | 0.242 | | 1.47% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.5 | 56 | 0.0111 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.6 | 36 | 0.0281 | 0.13 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.2 | 8 | 0.0205 | 0.69 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.1 | 13 | 0.0208 | 2.93 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 37 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 205 | 0.0146 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.9 | 355 | 0.0149 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.8 | 340 | 0.0109 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.3 | 239 | 0.0081 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 52 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 33 | 0.0313 | 1.24 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 26 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 116 | 0.0216 | 1.03 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 27 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 73 | 0.0137 | 2.37 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 44.6 | 1,616 | Total | | | |

## Subcatchment 21: WS21



## Summary for Subcatchment 22: WS22

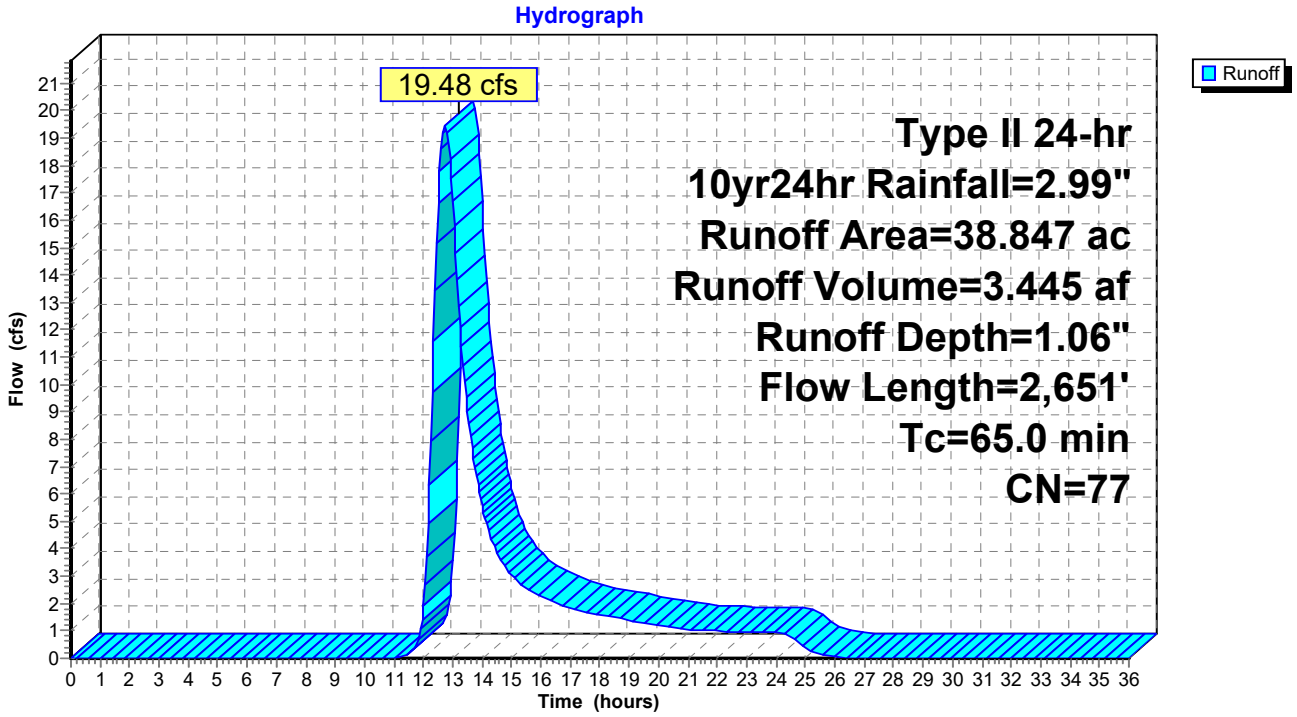
Runoff = 19.48 cfs @ 12.73 hrs, Volume= 3.445 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.574 | 71 | Cultivated Crops, HSG B |
| * | 1.670 | 81 | Cultivated Crops, HSG D |
| * | 1.539 | 81 | Cultivated Crops, HSG D |
| * | 7.511 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 78 | MEADOW, HSG D |
| * | 0.106 | 98 | IMPERVIOUS, HSG B |
| * | 3.145 | 58 | MEADOW, HSG B |
| * | 1.137 | 58 | MEADOW, HSG B |
| * | 0.769 | 78 | MEADOW, HSG D |
| * | 0.320 | 78 | MEADOW, HSG D |
| * | 0.006 | 98 | IMPERVIOUS, HSG D |
| * | 0.043 | 78 | MEADOW, HSG D |
| * | 0.194 | 98 | IMPERVIOUS, HSG D |
| * | 17.835 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 2.949 | 78 | MEADOW, HSG D |
| | 38.847 | 77 | Weighted Average |
| | 38.498 | | 99.10% Pervious Area |
| | 0.349 | | 0.90% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.9 | 51 | 0.0109 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.4 | 26 | 0.0164 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.3 | 16 | 0.0263 | 0.88 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.9 | 6 | 0.0486 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.2 | 125 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 9.6 | 535 | 0.0106 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 37 | 0.0080 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 147 | 0.0086 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.6 | 396 | 0.0121 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.4 | 560 | 0.0165 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 11.7 | 536 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 47 | 0.0158 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 81 | 0.0152 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 87 | 0.0145 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 65.0 | 2,651 | Total | | | |

## Subcatchment 22: WS22



## Summary for Subcatchment 23: WS23

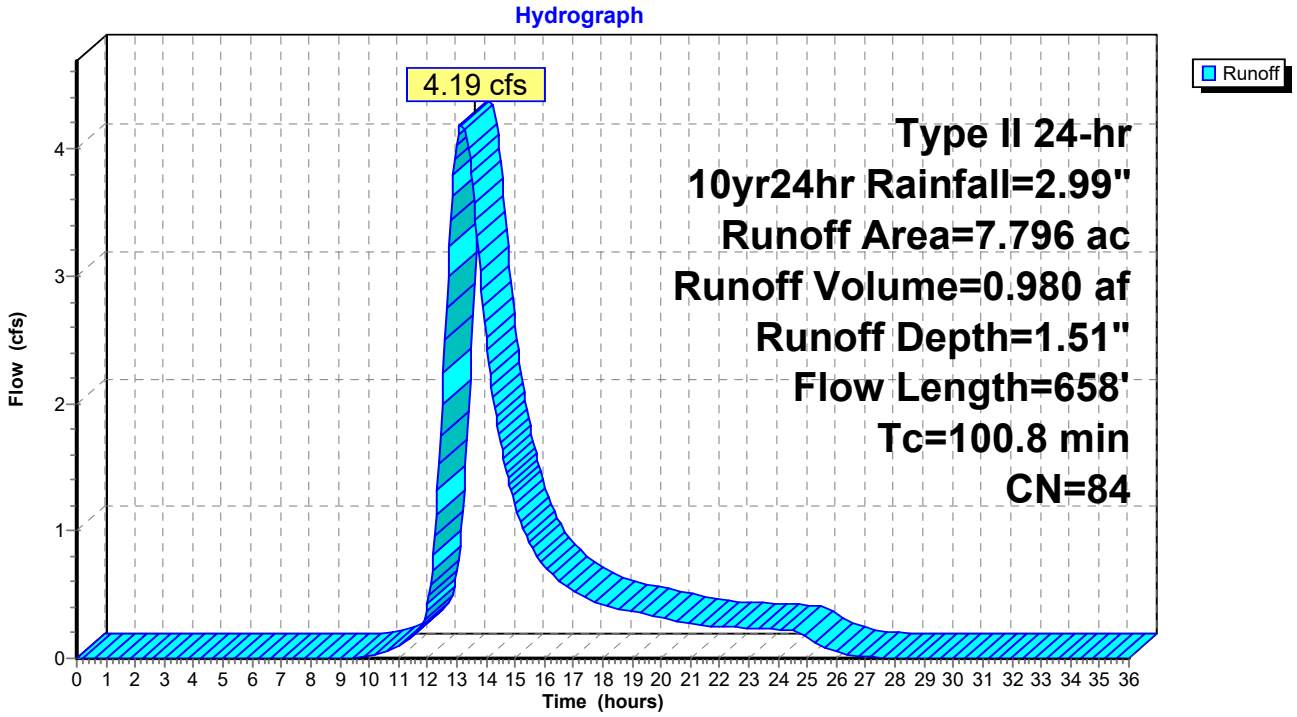
Runoff = 4.19 cfs @ 13.17 hrs, Volume= 0.980 af, Depth= 1.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.781 | 80 | Pasture/Hay, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.192 | 86 | Woody Wetlands, HSG D |
| * | 0.415 | 84 | Developed Open Space, HSG D |
| * | 4.720 | 86 | Woody Wetlands, HSG D |
| * | 1.466 | 81 | Cultivated Crops, HSG D |
| | 7.796 | 84 | Weighted Average |
| | 7.796 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 56.0 | 100 | 0.0030 | 0.03 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.2 | 36 | 0.0104 | 0.51 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 26.7 | 259 | 0.0010 | 0.16 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 15.1 | 163 | 0.0013 | 0.18 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.8 | 100 | 0.0020 | 0.91 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 100.8 | 658 | Total | | | |

## Subcatchment 23: WS23



## Summary for Subcatchment 24: WS24

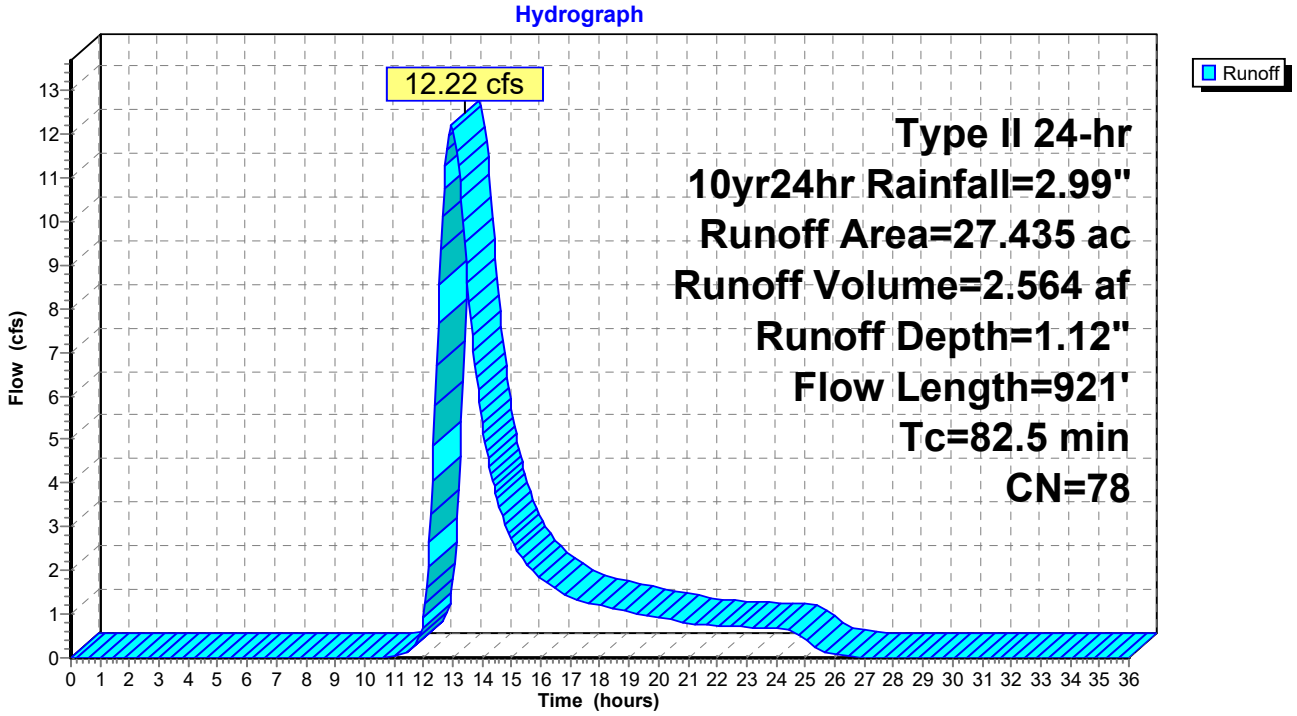
Runoff = 12.22 cfs @ 12.95 hrs, Volume= 2.564 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.266 | 80 | Pasture/Hay, HSG D |
| * | 0.369 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 84 | Developed Open Space, HSG D |
| * | 0.106 | 86 | Woody Wetlands, HSG D |
| * | 0.861 | 86 | Woody Wetlands, HSG D |
| * | 0.149 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.036 | 86 | Woody Wetlands, HSG D |
| * | 2.354 | 81 | Cultivated Crops, HSG D |
| * | 0.012 | 78 | MEADOW, HSG D |
| * | 0.105 | 78 | MEADOW, HSG D |
| * | 0.050 | 78 | MEADOW, HSG D |
| * | 0.248 | 78 | MEADOW, HSG D |
| * | 0.445 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG D |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.111 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.777 | 78 | MEADOW, HSG D |
| * | 0.086 | 78 | MEADOW, HSG D |
| * | 0.250 | 78 | MEADOW, HSG D |
| * | 0.339 | 78 | MEADOW, HSG D |
| * | 0.196 | 78 | MEADOW, HSG D |
| * | 0.222 | 78 | MEADOW, HSG D |
| * | 0.123 | 78 | MEADOW, HSG D |
| * | 0.094 | 78 | MEADOW, HSG D |
| * | 2.575 | 78 | MEADOW, HSG D |
| * | 0.167 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.195 | 78 | MEADOW, HSG D |
| * | 0.081 | 98 | IMPERVIOUS, HSG D |
| * | 0.757 | 78 | MEADOW, HSG D |
| * | 0.900 | 78 | MEADOW, HSG D |
| * | 0.126 | 98 | IMPERVIOUS, HSG B |
| * | 0.929 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.816 | 58 | MEADOW, HSG B |
| * | 0.305 | 98 | IMPERVIOUS, HSG D |
| * | 8.320 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 4.901 | 78 | MEADOW, HSG D |
| | 27.435 | 78 | Weighted Average |
| | 26.778 | | 97.61% Pervious Area |
| | 0.657 | | 2.39% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 47.1 | 82 | 0.0031 | 0.03 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 3.3 | 18 | 0.0173 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 15.5 | 65 | 0.0001 | 0.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 25 | 0.0112 | 2.15 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 38 | 0.0304 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 195 | 0.0164 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 141 | 0.0149 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 21 | 0.0061 | 0.55 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.2 | 236 | 0.0060 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 100 | 0.0101 | 0.90 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 82.5 | 921 | Total | | | |

## Subcatchment 24: WS24



## Summary for Subcatchment 25: WS25

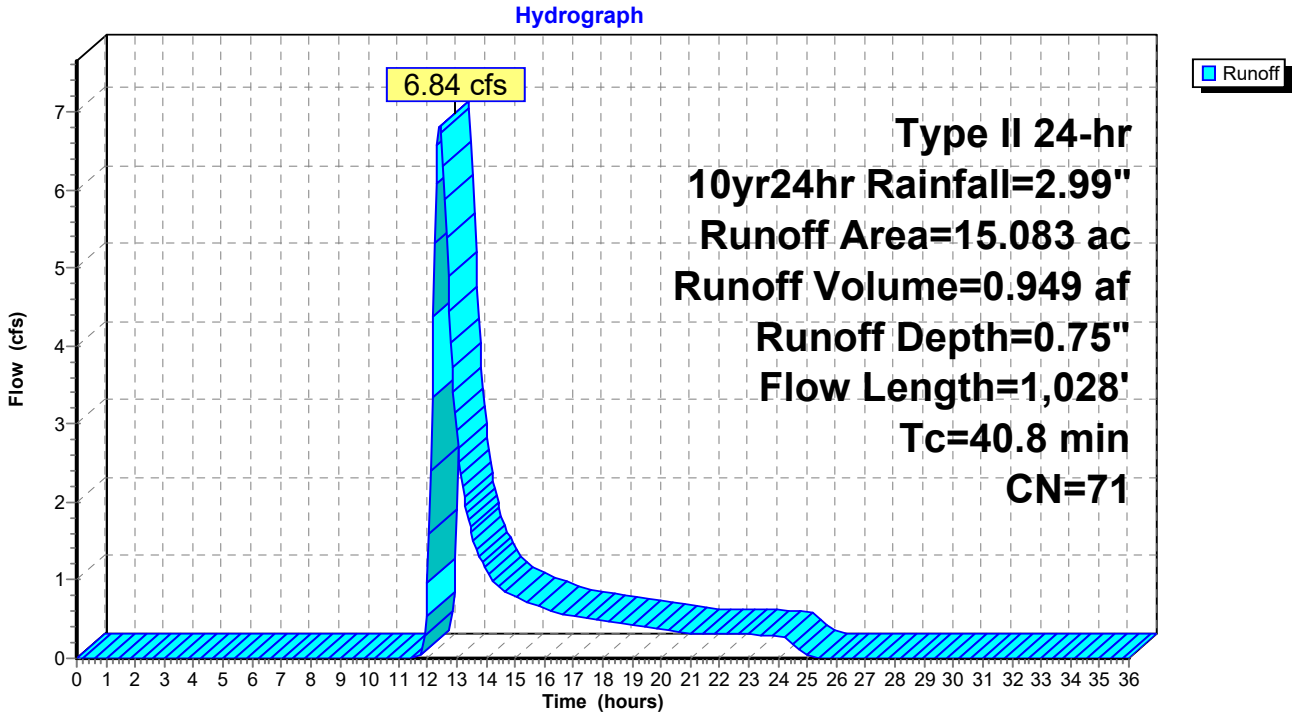
Runoff = 6.84 cfs @ 12.43 hrs, Volume= 0.949 af, Depth= 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.336 | 71 | Cultivated Crops, HSG B |
| * | 3.913 | 81 | Cultivated Crops, HSG D |
| * | 0.301 | 98 | IMPERVIOUS, HSG B |
| * | 4.190 | 58 | MEADOW, HSG B |
| * | 2.181 | 58 | MEADOW, HSG B |
| * | 0.232 | 98 | IMPERVIOUS, HSG D |
| * | 1.515 | 78 | MEADOW, HSG D |
| * | 2.417 | 78 | MEADOW, HSG D |
| | 15.083 | 71 | Weighted Average |
| | 14.551 | | 96.47% Pervious Area |
| | 0.533 | | 3.53% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 17.7 | 100 | 0.0075 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.7 | 103 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.9 | 181 | 0.0076 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.4 | 59 | 0.0010 | 0.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 23 | 0.0221 | 1.04 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 21 | 0.0329 | 3.68 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.9 | 150 | 0.0352 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 76 | 0.0259 | 1.45 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.8 | 315 | 0.0102 | 0.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 40.8 | 1,028 | Total | | | |

## Subcatchment 25: WS25



## Summary for Subcatchment 26: WS26

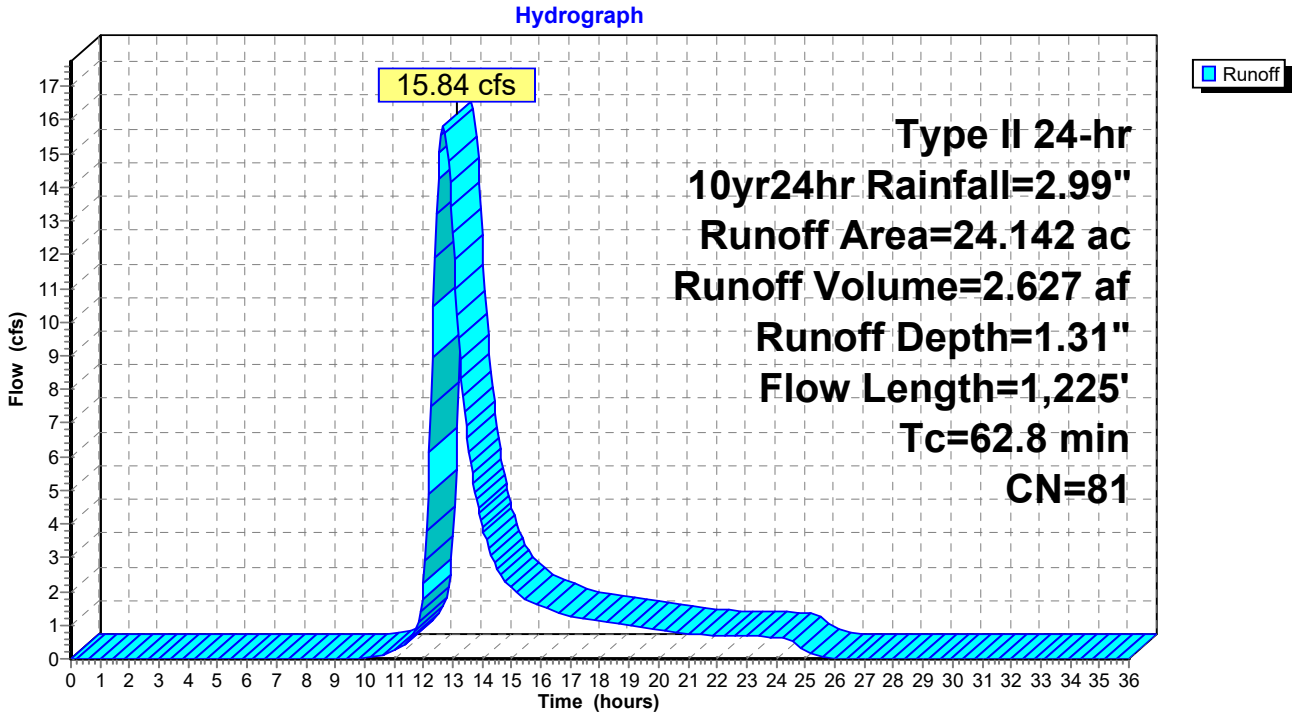
Runoff = 15.84 cfs @ 12.67 hrs, Volume= 2.627 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.020 | 84 | Developed Open Space, HSG D |
| * | 0.777 | 88 | Developed Low Intensity, HSG B |
| * | 0.216 | 93 | Developed Low Intensity, HSG D |
| * | 1.284 | 86 | Woody Wetlands, HSG D |
| * | 1.334 | 79 | Deciduous Forest, HSG D |
| * | 0.088 | 60 | Evergreen Forest, HSG B |
| * | 0.062 | 86 | Woody Wetlands, HSG B |
| * | 0.002 | 86 | Woody Wetlands, HSG B |
| * | 6.342 | 86 | Woody Wetlands, HSG D |
| * | 1.083 | 61 | Pasture/Hay, HSG B |
| * | 0.052 | 61 | Pasture/Hay, HSG B |
| * | 3.489 | 80 | Pasture/Hay, HSG D |
| * | 1.468 | 81 | Cultivated Crops, HSG D |
| * | 0.104 | 78 | MEADOW, HSG D |
| * | 0.520 | 78 | MEADOW, HSG D |
| * | 0.020 | 98 | IMPERVIOUS, HSG D |
| * | 0.137 | 78 | MEADOW, HSG D |
| * | 0.273 | 78 | MEADOW, HSG D |
| * | 0.206 | 58 | MEADOW, HSG B |
| * | 0.118 | 98 | IMPERVIOUS, HSG D |
| * | 5.372 | 78 | MEADOW, HSG D |
| * | 1.174 | 78 | MEADOW, HSG D |
| | 24.142 | 81 | Weighted Average |
| | 24.004 | | 99.43% Pervious Area |
| | 0.138 | | 0.57% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 100 | 0.0275 | 1.28 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 45 | 0.0189 | 2.79 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.5 | 140 | 0.0499 | 1.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 77 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 112 | 0.0311 | 0.88 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.8 | 150 | 0.0026 | 0.26 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 11.5 | 194 | 0.0031 | 0.28 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 16.2 | 197 | 0.0016 | 0.20 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 18.8 | 211 | 0.0007 | 0.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 62.8 | 1,225 | Total | | | |

## Subcatchment 26: WS26



## Summary for Subcatchment 27: WS27

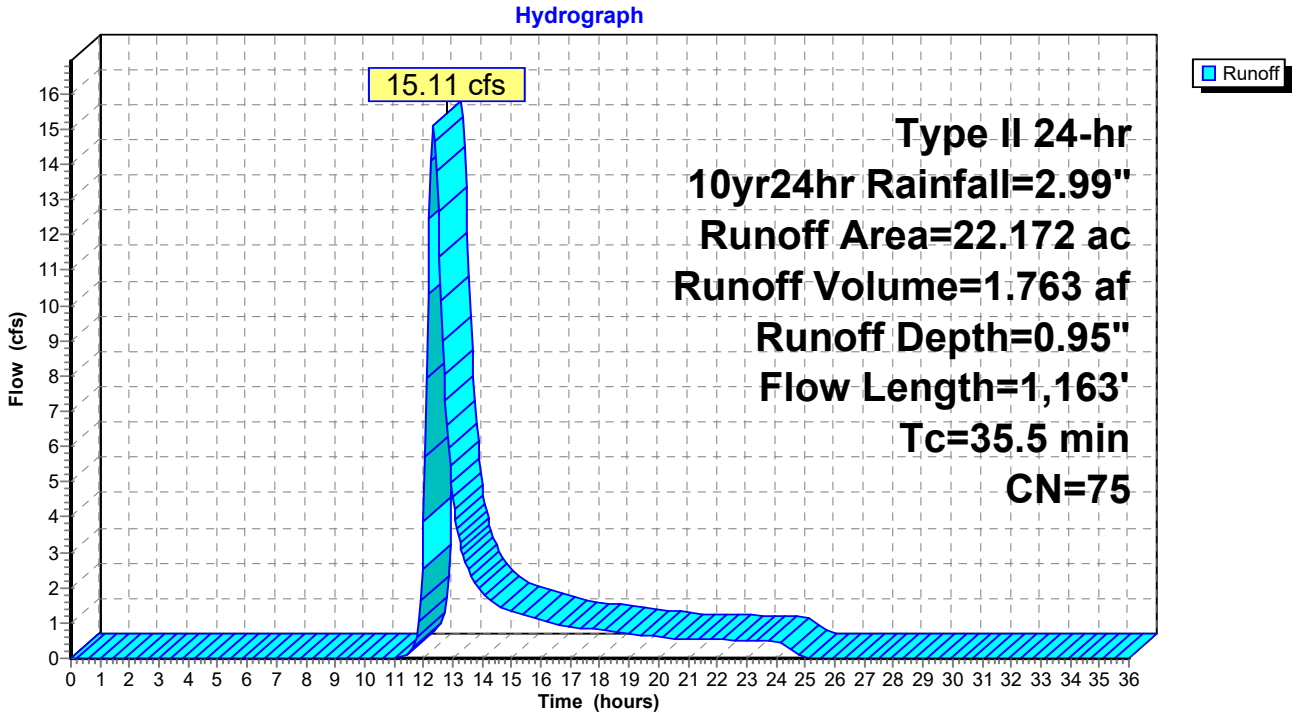
Runoff = 15.11 cfs @ 12.34 hrs, Volume= 1.763 af, Depth= 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.039 | 80 | Pasture/Hay, HSG D |
| * | 0.457 | 79 | Deciduous Forest, HSG D |
| * | 0.286 | 79 | Deciduous Forest, HSG D |
| * | 3.997 | 81 | Cultivated Crops, HSG D |
| * | 0.445 | 78 | MEADOW, HSG D |
| * | 0.104 | 58 | MEADOW, HSG B |
| * | 3.512 | 78 | MEADOW, HSG D |
| * | 1.264 | 78 | MEADOW, HSG D |
| * | 0.026 | 78 | MEADOW, HSG D |
| * | 0.773 | 78 | MEADOW, HSG D |
| * | 0.603 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG B |
| * | 3.250 | 58 | MEADOW, HSG B |
| * | 0.690 | 58 | MEADOW, HSG B |
| * | 0.119 | 98 | IMPERVIOUS, HSG D |
| * | 3.285 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 3.273 | 78 | MEADOW, HSG D |
| | 22.172 | 75 | Weighted Average |
| | 22.005 | | 99.25% Pervious Area |
| | 0.167 | | 0.75% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.5 | 100 | 0.0148 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.0 | 216 | 0.0288 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.2 | 352 | 0.0137 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 62 | 0.0040 | 0.45 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 172 | 0.0112 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 173 | 0.0123 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 88 | 0.0071 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.5 | 1,163 | Total | | | |

## Subcatchment 27: WS27



## Summary for Subcatchment 28: WS28

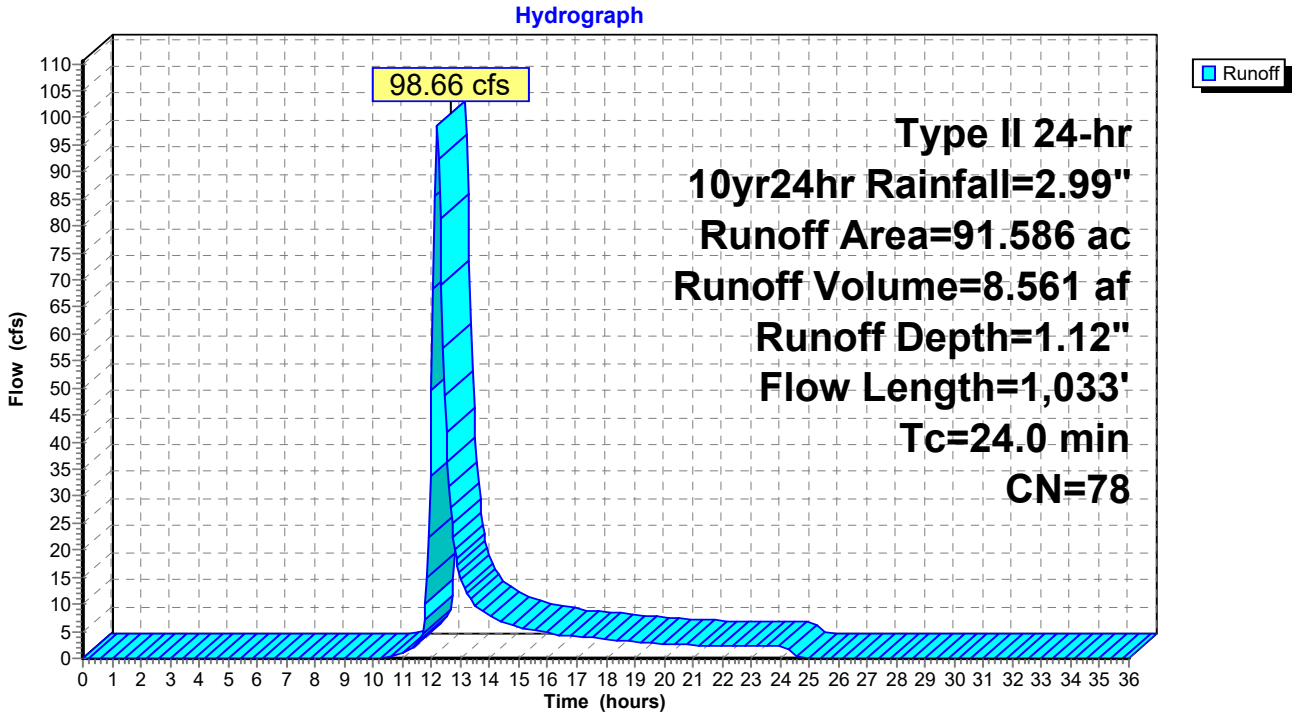
Runoff = 98.66 cfs @ 12.19 hrs, Volume= 8.561 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.197 | 61 | Pasture/Hay, HSG B |
| * | 0.793 | 80 | Pasture/Hay, HSG D |
| * | 0.117 | 79 | Deciduous Forest, HSG D |
| * | 0.589 | 71 | Cultivated Crops, HSG B |
| * | 4.338 | 71 | Cultivated Crops, HSG B |
| * | 1.150 | 71 | Cultivated Crops, HSG B |
| * | 0.357 | 71 | Cultivated Crops, HSG B |
| * | 0.102 | 71 | Cultivated Crops, HSG B |
| * | 62.673 | 81 | Cultivated Crops, HSG D |
| * | 0.989 | 58 | MEADOW, HSG B |
| * | 0.137 | 98 | IMPERVIOUS, HSG B |
| * | 3.445 | 58 | MEADOW, HSG B |
| * | 1.793 | 58 | MEADOW, HSG B |
| * | 0.058 | 98 | IMPERVIOUS, HSG B |
| * | 1.642 | 58 | MEADOW, HSG B |
| * | 0.481 | 58 | MEADOW, HSG B |
| * | 0.088 | 98 | IMPERVIOUS, HSG B |
| * | 0.348 | 58 | MEADOW, HSG B |
| * | 2.648 | 78 | MEADOW, HSG D |
| * | 0.136 | 98 | IMPERVIOUS, HSG D |
| * | 9.335 | 78 | MEADOW, HSG D |
| * | 0.024 | 98 | IMPERVIOUS, HSG D |
| * | 0.146 | 78 | MEADOW, HSG D |
| | 91.586 | 78 | Weighted Average |
| | 91.143 | | 99.52% Pervious Area |
| | 0.443 | | 0.48% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.8 | 100 | 0.0133 | 0.25 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.7 | 231 | 0.0134 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.1 | 313 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 228 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.3 | 161 | 0.0047 | 0.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.0 | 1,033 | Total | | | |

## Subcatchment 28: WS28



## Summary for Subcatchment 29: WS29

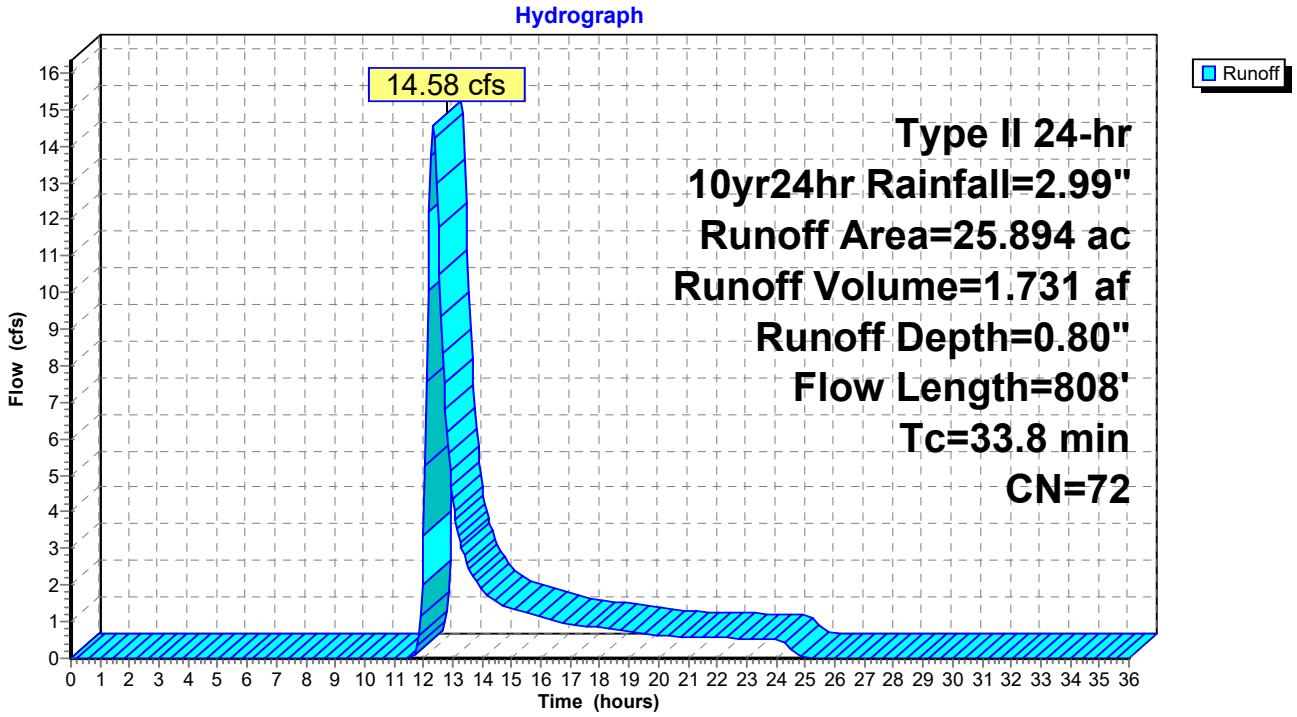
Runoff = 14.58 cfs @ 12.33 hrs, Volume= 1.731 af, Depth= 0.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 3.057 | 71 | Cultivated Crops, HSG B |
| * | 0.219 | 71 | Cultivated Crops, HSG B |
| * | 0.241 | 71 | Cultivated Crops, HSG B |
| * | 2.951 | 81 | Cultivated Crops, HSG D |
| * | 1.544 | 58 | MEADOW, HSG B |
| * | 0.042 | 98 | IMPERVIOUS, HSG B |
| * | 3.480 | 58 | MEADOW, HSG B |
| * | 0.404 | 58 | MEADOW, HSG B |
| * | 0.060 | 98 | IMPERVIOUS, HSG B |
| * | 1.633 | 58 | MEADOW, HSG B |
| * | 0.042 | 98 | IMPERVIOUS, HSG B |
| * | 2.821 | 78 | MEADOW, HSG D |
| * | 0.203 | 98 | IMPERVIOUS, HSG D |
| * | 9.194 | 78 | MEADOW, HSG D |
| * | 0.001 | 98 | IMPERVIOUS, HSG D |
| | 25.894 | 72 | Weighted Average |
| | 25.545 | | 98.66% Pervious Area |
| | 0.348 | | 1.34% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 17.9 | 100 | 0.0073 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 5.5 | 198 | 0.0072 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 20 | 0.0117 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 13 | 0.0061 | 1.59 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 21 | 0.0089 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 61 | 0.0088 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.8 | 299 | 0.0150 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 60 | 0.0084 | 0.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 35 | 0.0228 | 1.36 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 33.8 | 808 | Total | | | |

## Subcatchment 29: WS29



## Summary for Subcatchment 30: WS30

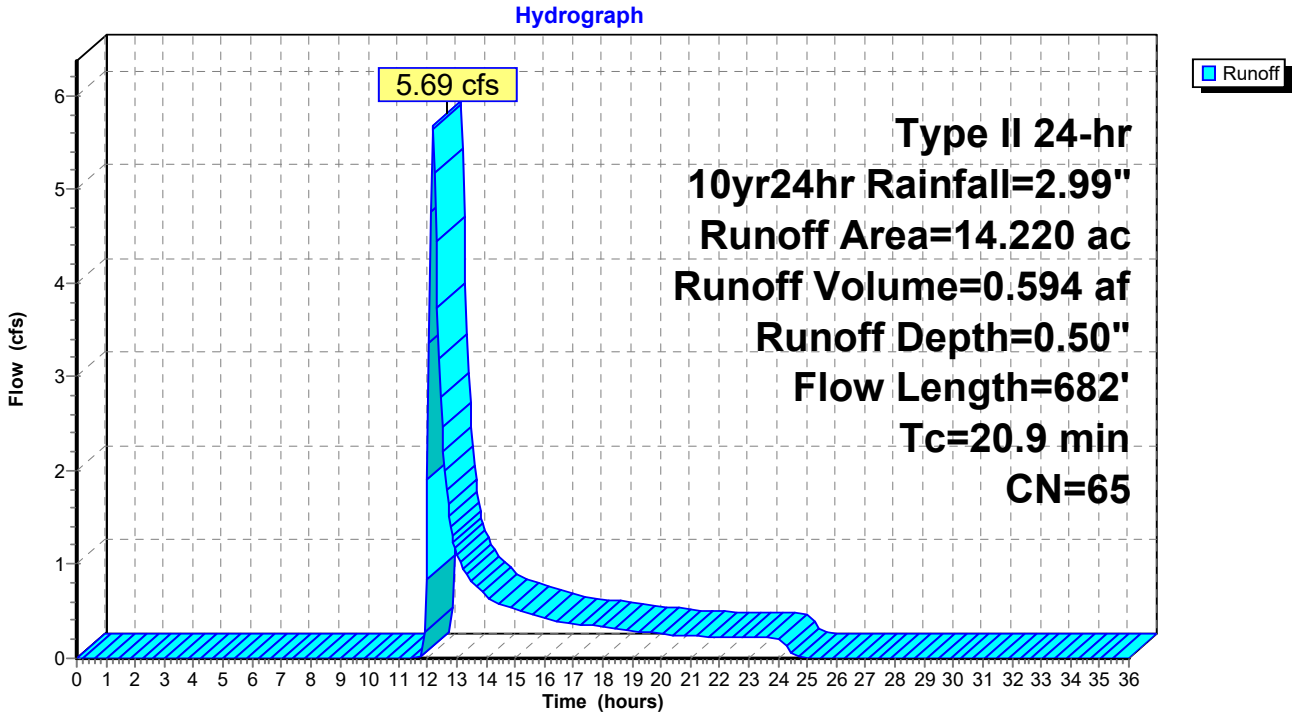
Runoff = 5.69 cfs @ 12.18 hrs, Volume= 0.594 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.159 | 71 | Cultivated Crops, HSG B |
| * | 0.668 | 71 | Cultivated Crops, HSG B |
| * | 0.583 | 81 | Cultivated Crops, HSG D |
| * | 0.473 | 58 | MEADOW, HSG B |
| * | 0.579 | 58 | MEADOW, HSG B |
| * | 0.257 | 58 | MEADOW, HSG B |
| * | 1.600 | 58 | MEADOW, HSG B |
| * | 0.358 | 98 | IMPERVIOUS, HSG B |
| * | 6.601 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 1.111 | 78 | MEADOW, HSG D |
| * | 1.770 | 78 | MEADOW, HSG D |
| * | 0.018 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 14.220 | 65 | Weighted Average |
| | 13.801 | | 97.05% Pervious Area |
| | 0.419 | | 2.95% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.6 | 66 | 0.0154 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.6 | 34 | 0.0184 | 0.88 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.8 | 60 | 0.0025 | 0.35 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.9 | 169 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 234 | 0.0306 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 119 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 20.9 | 682 | Total | | | |

## Subcatchment 30: WS30



## Summary for Subcatchment 31: WS31

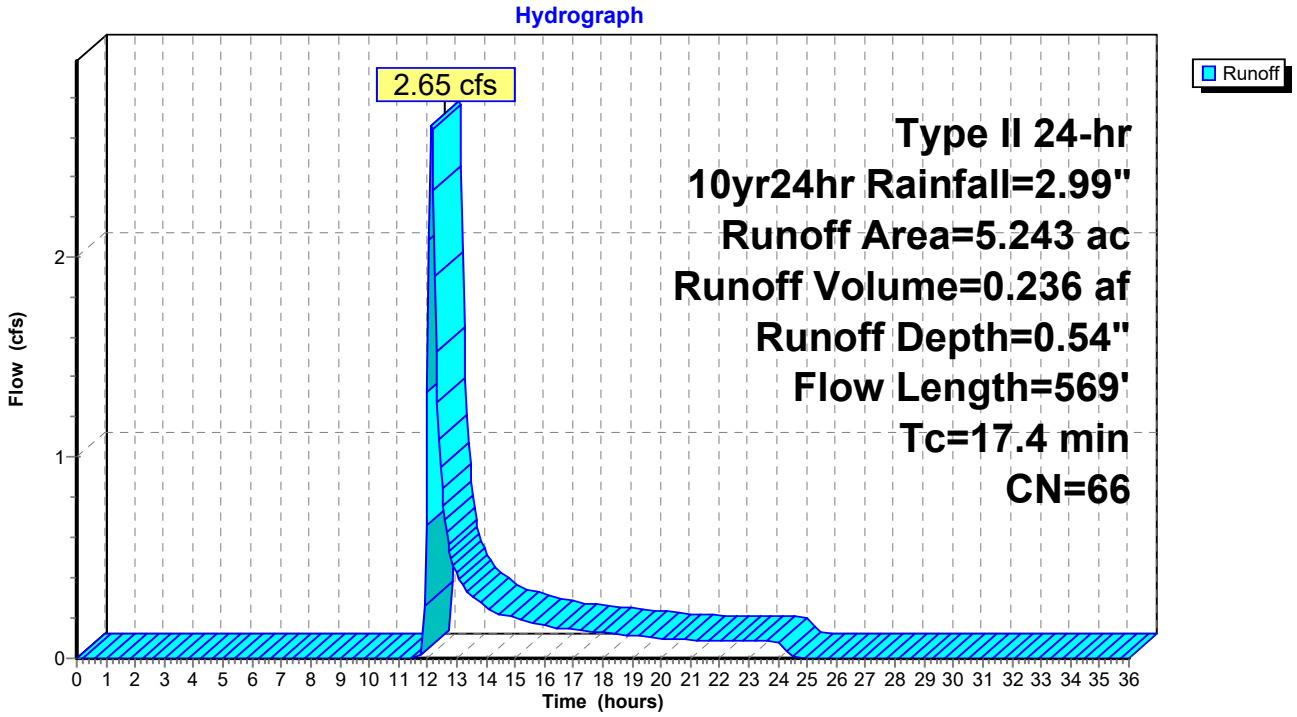
Runoff = 2.65 cfs @ 12.13 hrs, Volume= 0.236 af, Depth= 0.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.184 | 93 | Developed Low Intensity, HSG D |
| * | 1.726 | 71 | Cultivated Crops, HSG B |
| * | 0.504 | 81 | Cultivated Crops, HSG D |
| * | 1.761 | 58 | MEADOW, HSG B |
| * | 0.059 | 98 | IMPERVIOUS, HSG B |
| * | 1.009 | 58 | MEADOW, HSG B |
| | 5.243 | 66 | Weighted Average |
| | 5.184 | | 98.88% Pervious Area |
| | 0.059 | | 1.12% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.3 | 81 | 0.0247 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.7 | 19 | 0.0295 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.8 | 98 | 0.0173 | 0.92 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 40 | 0.0512 | 1.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 38 | 0.0534 | 1.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 97 | 0.0588 | 1.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 52 | 0.0562 | 2.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 78 | 0.0405 | 1.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 65 | 0.0265 | 1.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 17.4 | 569 | Total | | | |

## Subcatchment 31: WS31



## Summary for Subcatchment 32: WS32

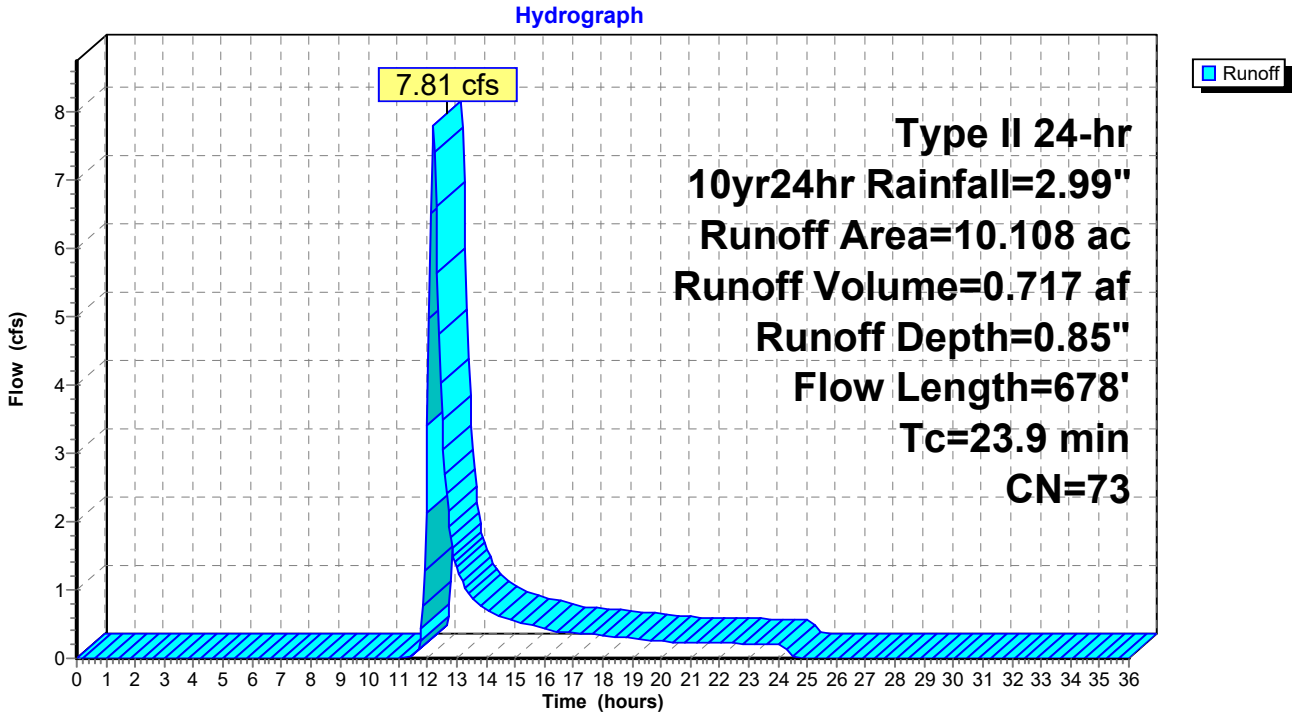
Runoff = 7.81 cfs @ 12.20 hrs, Volume= 0.717 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.078 | 88 | Developed Low Intensity, HSG B |
| * | 0.021 | 93 | Developed Low Intensity, HSG D |
| * | 0.125 | 71 | Cultivated Crops, HSG B |
| * | 0.177 | 81 | Cultivated Crops, HSG D |
| * | 0.443 | 71 | Cultivated Crops, HSG B |
| * | 1.562 | 81 | Cultivated Crops, HSG D |
| * | 0.154 | 86 | Woody Wetlands, HSG D |
| * | 0.085 | 86 | Woody Wetlands, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG D |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.276 | 58 | MEADOW, HSG B |
| * | 0.326 | 58 | MEADOW, HSG B |
| * | 0.013 | 78 | MEADOW, HSG D |
| * | 0.321 | 58 | MEADOW, HSG B |
| * | 2.039 | 58 | MEADOW, HSG B |
| * | 0.910 | 78 | MEADOW, HSG D |
| * | 3.575 | 78 | MEADOW, HSG D |
| | 10.108 | 73 | Weighted Average |
| | 10.108 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.0 | 100 | 0.0123 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.5 | 86 | 0.0108 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 92 | 0.0053 | 0.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 60 | 0.0132 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 205 | 0.0078 | 0.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.7 | 133 | 0.0031 | 0.39 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.9 | 678 | Total | | | |

## Subcatchment 32: WS32



## Summary for Subcatchment 33: WS33

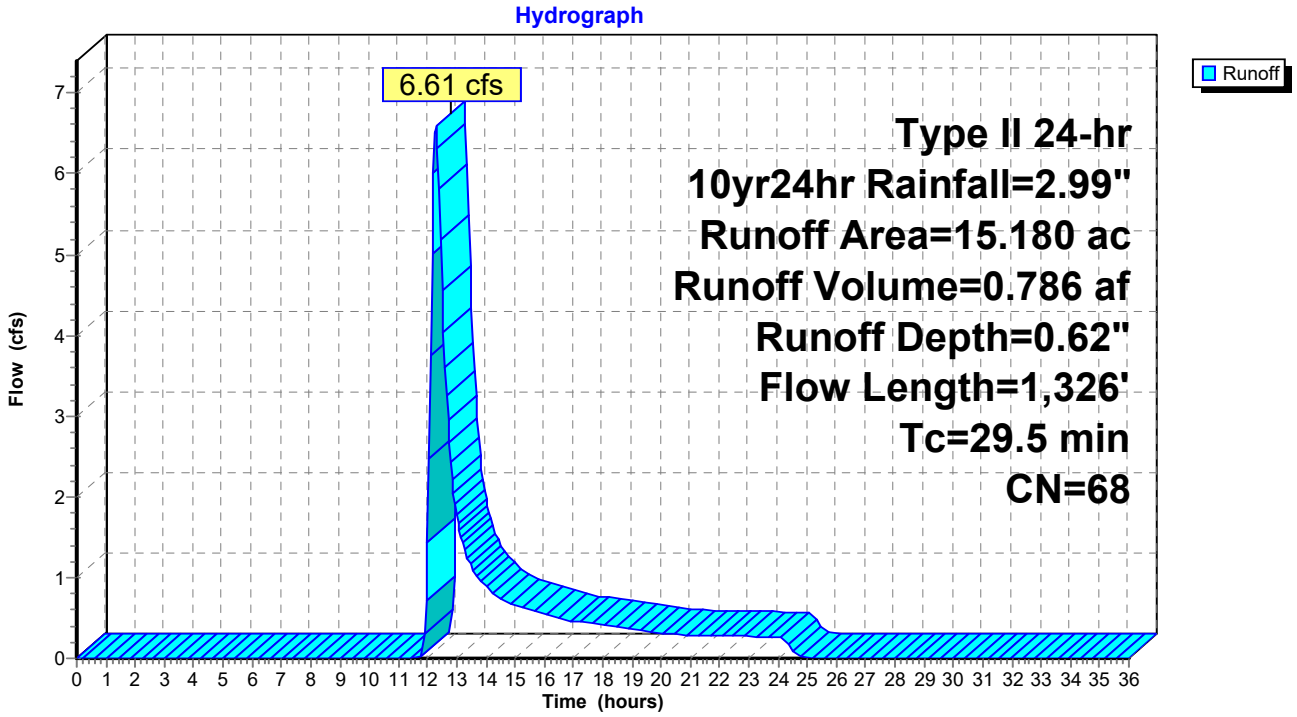
Runoff = 6.61 cfs @ 12.29 hrs, Volume= 0.786 af, Depth= 0.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.023 | 93 | Developed Low Intensity, HSG D |
| * | 0.044 | 71 | Cultivated Crops, HSG B |
| * | 0.500 | 81 | Cultivated Crops, HSG D |
| * | 1.263 | 71 | Cultivated Crops, HSG B |
| * | 0.959 | 58 | MEADOW, HSG B |
| * | 0.054 | 98 | IMPERVIOUS, HSG B |
| * | 0.009 | 58 | MEADOW, HSG B |
| * | 1.519 | 78 | MEADOW, HSG D |
| * | 1.567 | 78 | MEADOW, HSG D |
| * | 1.497 | 78 | MEADOW, HSG D |
| * | 0.970 | 78 | MEADOW, HSG D |
| * | 1.452 | 58 | MEADOW, HSG B |
| * | 0.165 | 98 | IMPERVIOUS, HSG B |
| * | 5.115 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| | 15.180 | 68 | Weighted Average |
| | 14.919 | | 98.28% Pervious Area |
| | 0.261 | | 1.72% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.4 | 11 | 0.0054 | 0.43 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.4 | 60 | 0.0022 | 0.42 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 4.3 | 20 | 0.0101 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.0 | 5 | 0.0258 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.0 | 3 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 69 | 0.0237 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 211 | 0.0190 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 43 | 0.0148 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 27 | 0.0151 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 143 | 0.0188 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 205 | 0.0234 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 120 | 0.0203 | 1.00 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.5 | 194 | 0.0169 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.8 | 133 | 0.0127 | 0.79 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0167 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 19 | 0.0224 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 52 | 0.0122 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 29.5 | 1,326 | Total | | | |

## Subcatchment 33: WS33



## Summary for Subcatchment 34: WS34

Runoff = 20.11 cfs @ 12.44 hrs, Volume= 3.005 af, Depth= 0.62"

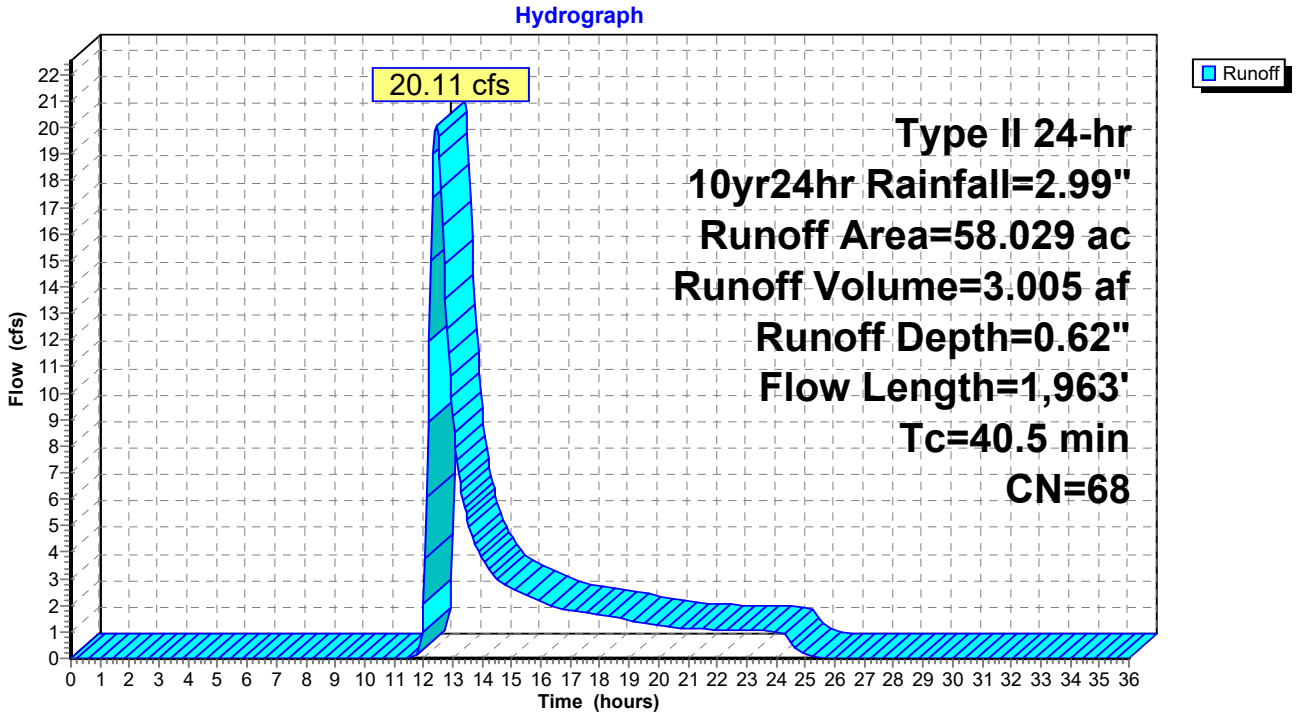
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.223 | 79 | Evergreen Forest, HSG D |
| * | 0.016 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.023 | 60 | Deciduous Forest, HSG B |
| * | 0.092 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.057 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.003 | 80 | Pasture/Hay, HSG D |
| * | 0.055 | 61 | Pasture/Hay, HSG B |
| * | 0.024 | 61 | Pasture/Hay, HSG B |
| * | 0.139 | 89 | Developed Medium Intensity, HSG B |
| * | 0.766 | 88 | Developed Low Intensity, HSG B |
| * | 0.179 | 88 | Developed Low Intensity, HSG B |
| * | 0.222 | 89 | Developed Medium Intensity, HSG B |
| * | 0.174 | 89 | Developed Medium Intensity, HSG B |
| * | 0.133 | 88 | Developed Low Intensity, HSG B |
| * | 0.353 | 93 | Developed Low Intensity, HSG D |
| * | 0.150 | 84 | Developed Open Space, HSG D |
| * | 0.584 | 93 | Developed Low Intensity, HSG D |
| * | 0.363 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.389 | 84 | Developed Open Space, HSG D |
| * | 0.194 | 88 | Developed Low Intensity, HSG B |
| * | 0.109 | 68 | Developed Open Space, HSG B |
| * | 0.452 | 68 | Developed Open Space, HSG B |
| * | 0.148 | 84 | Developed Open Space, HSG D |
| * | 0.212 | 88 | Developed Low Intensity, HSG B |
| * | 1.124 | 93 | Developed Low Intensity, HSG D |
| * | 0.169 | 84 | Developed Open Space, HSG D |
| * | 0.018 | 94 | Developed Medium Intensity, HSG D |
| * | 0.051 | 71 | Cultivated Crops, HSG B |
| * | 0.393 | 81 | Cultivated Crops, HSG D |
| * | 0.529 | 81 | Cultivated Crops, HSG D |
| * | 0.463 | 81 | Cultivated Crops, HSG D |
| * | 1.719 | 71 | Cultivated Crops, HSG B |
| * | 7.463 | 71 | Cultivated Crops, HSG B |
| * | 0.978 | 81 | Cultivated Crops, HSG D |
| * | 0.115 | 58 | MEADOW, HSG B |
| * | 0.020 | 58 | MEADOW, HSG B |
| * | 0.067 | 98 | IMPERVIOUS, HSG B |
| * | 0.497 | 58 | MEADOW, HSG B |
| * | 0.765 | 58 | MEADOW, HSG B |
| * | 0.083 | 98 | IMPERVIOUS, HSG B |
| * | 0.107 | 58 | MEADOW, HSG B |
| * | 0.955 | 58 | MEADOW, HSG B |
| * | 0.305 | 78 | MEADOW, HSG D |
| * | 0.056 | 78 | MEADOW, HSG D |
| * | 0.114 | 58 | MEADOW, HSG B |
| * | 0.061 | 98 | IMPERVIOUS, HSG B |
| * | 0.016 | 78 | MEADOW, HSG D |
| * | 0.133 | 78 | MEADOW, HSG D |
| * | 1.405 | 58 | MEADOW, HSG B |
| * | 3.608 | 58 | MEADOW, HSG B |

| | | | |
|---|---|---|---|
| * | 0.029 | 98 | IMPERVIOUS, HSG B |
| * | 5.146 | 58 | MEADOW, HSG B |
| * | 16.585 | 58 | MEADOW, HSG B |
| * | 0.085 | 98 | IMPERVIOUS, HSG B |
| * | 0.422 | 98 | IMPERVIOUS, HSG B |
| * | 1.119 | 78 | MEADOW, HSG D |
| * | 8.143 | 78 | MEADOW, HSG D |
| | 58.029 | 68 | Weighted Average |
| | 57.283 | | 98.71% Pervious Area |
| | 0.746 | | 1.29% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.3 | 95 | 0.0264 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.8 | 5 | 0.0019 | 0.03 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.5 | 220 | 0.0230 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 30 | 0.0645 | 1.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 20 | 0.0786 | 5.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 32 | 0.0526 | 1.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 438 | 0.0504 | 1.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 162 | 0.0233 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 76 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 235 | 0.0192 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 143 | 0.0115 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 117 | 0.0141 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 99 | 0.0130 | 2.32 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.7 | 291 | 0.0026 | 1.04 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 40.5 | 1,963 | Total | | | |

## Subcatchment 34: WS34



## Summary for Subcatchment 35: WS35

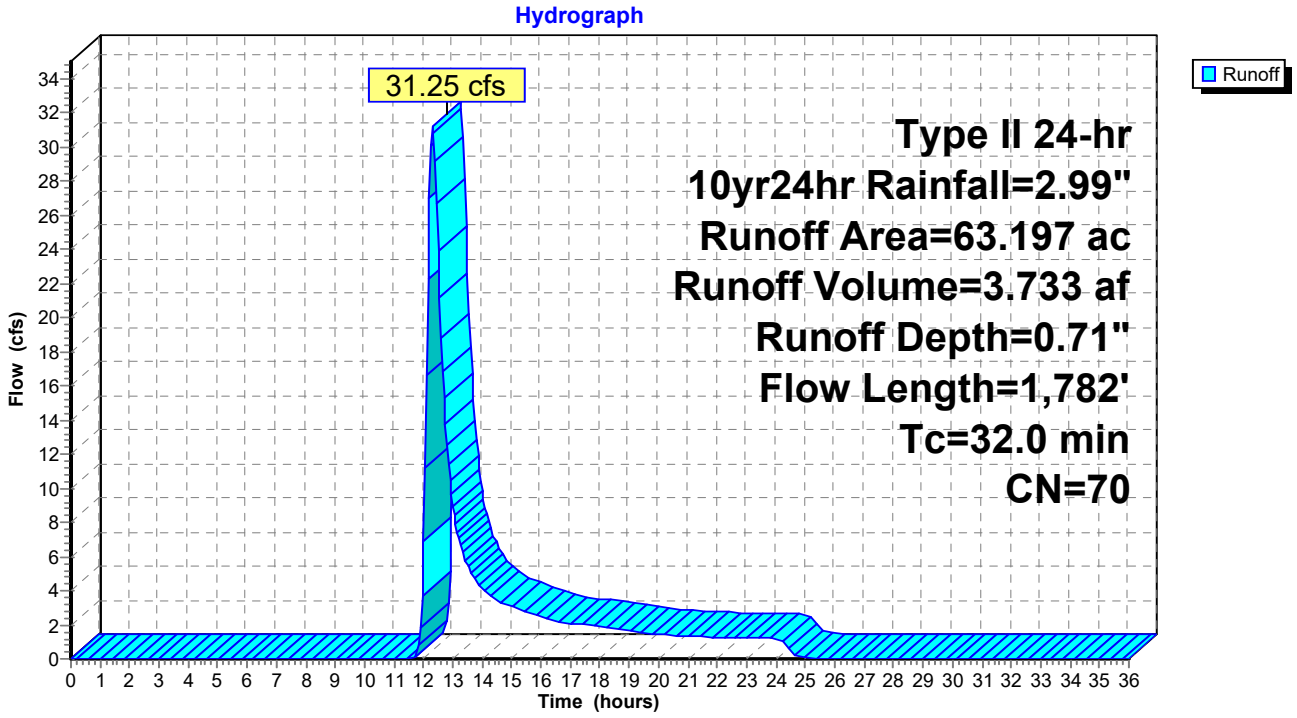
Runoff = 31.25 cfs @ 12.31 hrs, Volume= 3.733 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.060 | 93 | Developed Low Intensity, HSG D |
| * | 0.072 | 84 | Developed Open Space, HSG D |
| * | 0.305 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.194 | 93 | Developed Low Intensity, HSG D |
| * | 1.190 | 80 | Pasture/Hay, HSG D |
| * | 0.558 | 61 | Pasture/Hay, HSG B |
| * | 0.164 | 89 | Developed Medium Intensity, HSG B |
| * | 0.485 | 94 | Developed Medium Intensity, HSG D |
| * | 0.096 | 68 | Developed Open Space, HSG B |
| * | 0.866 | 88 | Developed Low Intensity, HSG B |
| * | 0.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.002 | 71 | Cultivated Crops, HSG B |
| * | 0.049 | 81 | Cultivated Crops, HSG D |
| * | 1.288 | 71 | Cultivated Crops, HSG B |
| * | 10.960 | 81 | Cultivated Crops, HSG D |
| * | 1.419 | 71 | Cultivated Crops, HSG B |
| * | 3.398 | 71 | Cultivated Crops, HSG B |
| * | 9.815 | 71 | Cultivated Crops, HSG B |
| * | 6.074 | 81 | Cultivated Crops, HSG D |
| * | 0.125 | 58 | MEADOW, HSG B |
| * | 0.120 | 58 | MEADOW, HSG B |
| * | 1.241 | 58 | MEADOW, HSG B |
| * | 4.762 | 58 | MEADOW, HSG B |
| * | 0.600 | 78 | MEADOW, HSG D |
| * | 1.888 | 78 | MEADOW, HSG D |
| * | 0.471 | 58 | MEADOW, HSG B |
| * | 0.387 | 58 | MEADOW, HSG B |
| * | 0.336 | 58 | MEADOW, HSG B |
| * | 3.508 | 58 | MEADOW, HSG B |
| * | 0.053 | 98 | IMPERVIOUS, HSG B |
| * | 2.924 | 58 | MEADOW, HSG B |
| * | 9.040 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.250 | 98 | IMPERVIOUS, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 63.197 | 70 | Weighted Average |
| | 62.851 | | 99.45% Pervious Area |
| | 0.346 | | 0.55% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 79 | 0.0156 | 0.97 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 21 | 0.0605 | 1.29 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.4 | 83 | 0.0264 | 3.30 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 3.4 | 291 | 0.0251 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.3 | 303 | 0.0111 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 210 | 0.0088 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.3 | 582 | 0.0066 | 0.73 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 213 | 0.0167 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 32.0 | 1,782 | Total | | | |

## Subcatchment 35: WS35



## Summary for Subcatchment 36: WS36

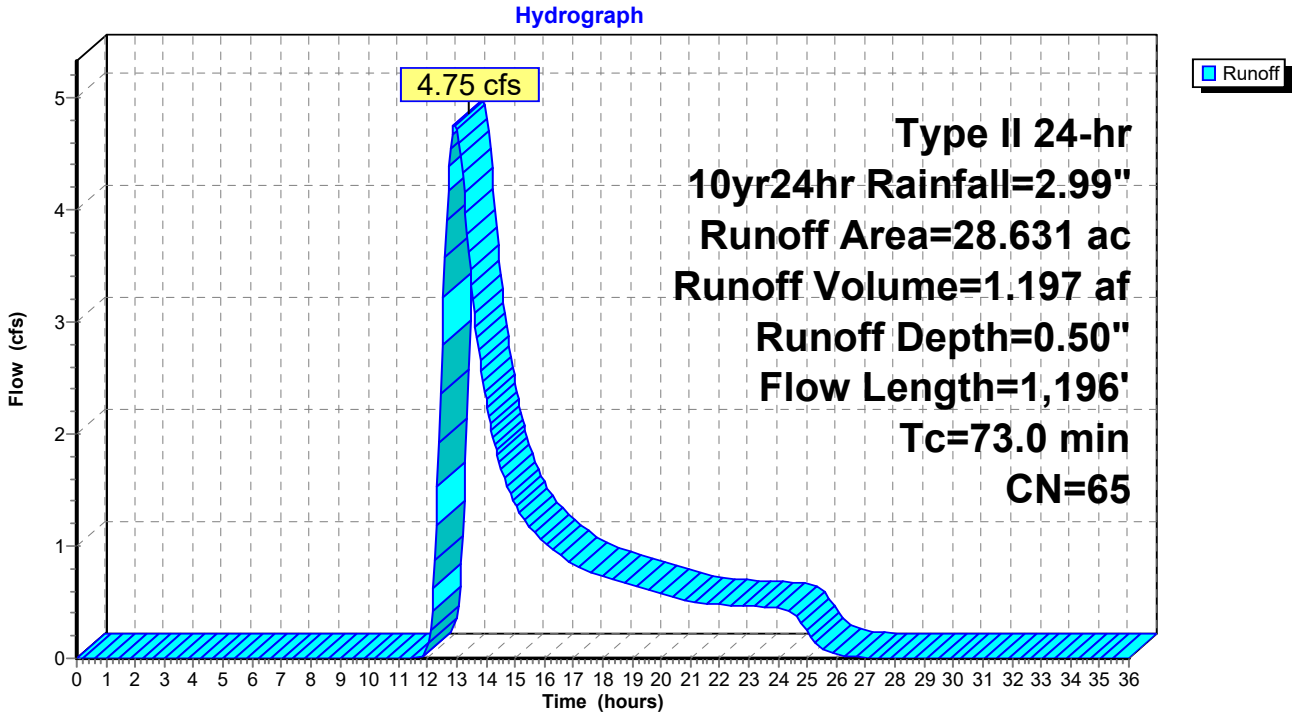
Runoff = 4.75 cfs @ 12.93 hrs, Volume= 1.197 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.192 | 61 | Pasture/Hay, HSG B |
| * | 0.386 | 80 | Pasture/Hay, HSG D |
| * | 0.342 | 61 | Pasture/Hay, HSG B |
| * | 1.804 | 71 | Cultivated Crops, HSG B |
| * | 0.670 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.069 | 78 | MEADOW, HSG D |
| * | 0.173 | 78 | MEADOW, HSG D |
| * | 3.854 | 58 | MEADOW, HSG B |
| * | 10.170 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.327 | 98 | IMPERVIOUS, HSG B |
| * | 0.998 | 78 | MEADOW, HSG D |
| * | 5.499 | 78 | MEADOW, HSG D |
| * | 0.091 | 98 | IMPERVIOUS, HSG D |
| * | 0.809 | 58 | MEADOW, HSG B |
| * | 3.072 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.085 | 98 | IMPERVIOUS, HSG B |
| | 28.631 | 65 | Weighted Average |
| | 28.043 | | 97.95% Pervious Area |
| | 0.588 | | 2.05% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 2.8 | 100 | 0.0040 | 0.59 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 49.6 | 205 | 0.0001 | 0.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 123 | 0.0415 | 1.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.4 | 328 | 0.0149 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.8 | 440 | 0.0067 | 0.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 73.0 | 1,196 | Total | | | |

## Subcatchment 36: WS36



## Summary for Subcatchment 37: WS37

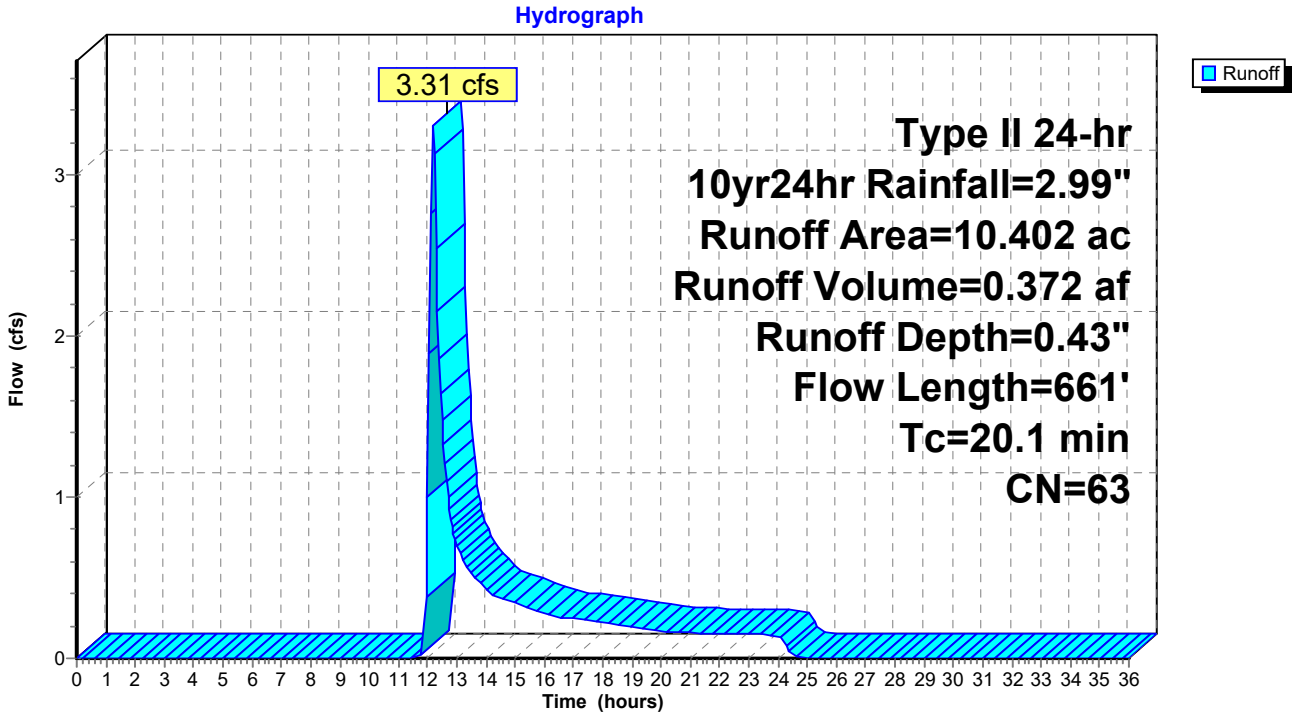
Runoff = 3.31 cfs @ 12.18 hrs, Volume= 0.372 af, Depth= 0.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.009 | 88 | Developed Low Intensity, HSG B |
| * | 0.007 | 68 | Developed Open Space, HSG B |
| * | 0.044 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 79 | Mixed Forest, HSG D |
| * | 0.127 | 60 | Mixed Forest, HSG B |
| * | 0.546 | 60 | Mixed Forest, HSG B |
| * | 0.476 | 60 | Deciduous Forest, HSG B |
| * | 0.079 | 88 | Developed Low Intensity, HSG B |
| * | 0.019 | 68 | Developed Open Space, HSG B |
| * | 0.318 | 81 | Cultivated Crops, HSG D |
| * | 2.556 | 71 | Cultivated Crops, HSG B |
| * | 0.120 | 71 | Cultivated Crops, HSG B |
| * | 0.138 | 58 | MEADOW, HSG B |
| * | 0.061 | 58 | MEADOW, HSG B |
| * | 0.207 | 58 | MEADOW, HSG B |
| * | 0.313 | 58 | MEADOW, HSG B |
| * | 0.022 | 78 | MEADOW, HSG D |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.574 | 58 | MEADOW, HSG B |
| * | 2.870 | 58 | MEADOW, HSG B |
| * | 0.294 | 58 | MEADOW, HSG B |
| * | 1.622 | 58 | MEADOW, HSG B |
| | 10.402 | 63 | Weighted Average |
| | 10.402 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.1 | 100 | 0.0240 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.2 | 70 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 130 | 0.0263 | 1.14 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 23 | 0.0098 | 0.69 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 64 | 0.0416 | 1.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 52 | 0.0226 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 222 | 0.0108 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 20.1 | 661 | Total | | | |

## Subcatchment 37: WS37



## Summary for Subcatchment 38: WS38

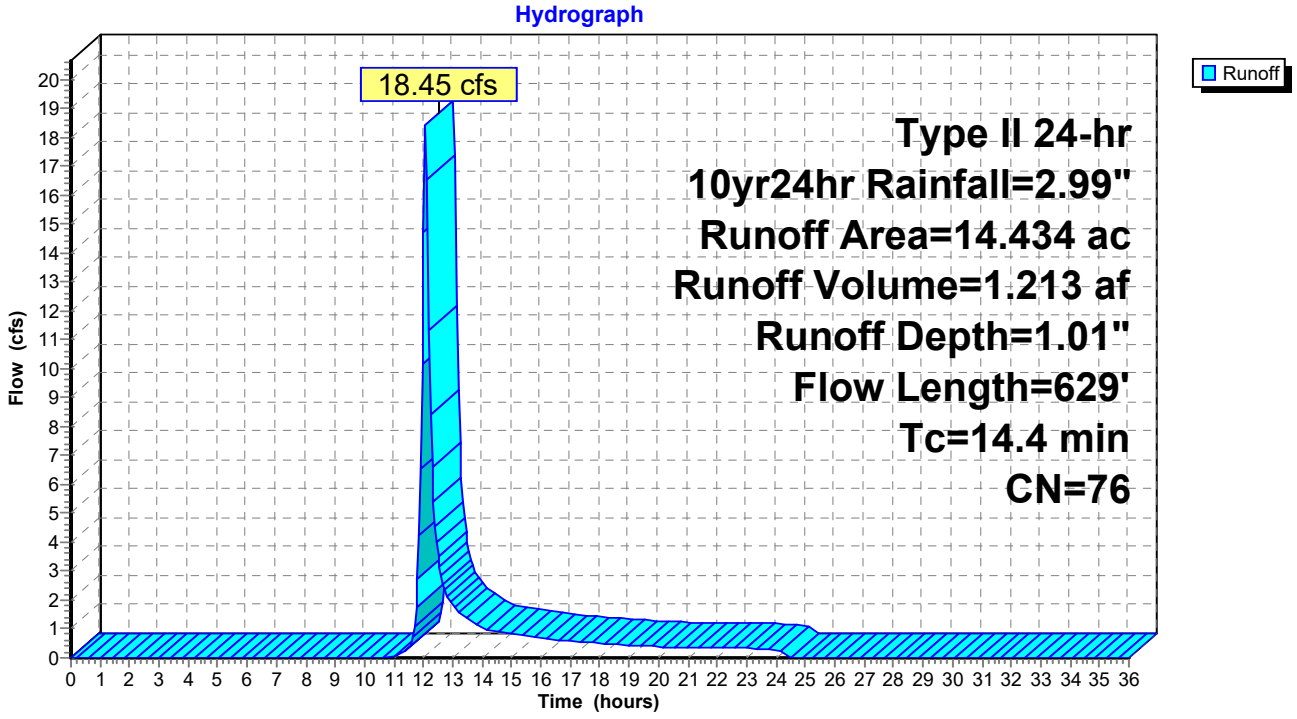
Runoff = 18.45 cfs @ 12.07 hrs, Volume= 1.213 af, Depth= 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.049 | 88 | Developed Low Intensity, HSG B |
| * | 0.006 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.018 | 88 | Developed Low Intensity, HSG B |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 0.191 | 84 | Developed Open Space, HSG D |
| * | 0.082 | 93 | Developed Low Intensity, HSG D |
| * | 0.200 | 84 | Developed Open Space, HSG D |
| * | 0.118 | 93 | Developed Low Intensity, HSG D |
| * | 0.043 | 84 | Developed Open Space, HSG D |
| * | 0.046 | 68 | Developed Open Space, HSG B |
| * | 0.509 | 61 | Pasture/Hay, HSG B |
| * | 1.654 | 80 | Pasture/Hay, HSG D |
| * | 3.128 | 71 | Cultivated Crops, HSG B |
| * | 0.039 | 81 | Cultivated Crops, HSG D |
| * | 0.073 | 71 | Cultivated Crops, HSG B |
| * | 3.794 | 81 | Cultivated Crops, HSG D |
| * | 0.021 | 98 | IMPERVIOUS, HSG D |
| * | 0.495 | 58 | MEADOW, HSG B |
| * | 0.040 | 58 | MEADOW, HSG B |
| * | 0.081 | 58 | MEADOW, HSG B |
| * | 0.034 | 98 | IMPERVIOUS, HSG B |
| * | 1.134 | 78 | MEADOW, HSG D |
| * | 0.151 | 78 | MEADOW, HSG D |
| * | 0.051 | 98 | IMPERVIOUS, HSG D |
| * | 0.002 | 58 | MEADOW, HSG B |
| * | 0.006 | 58 | MEADOW, HSG B |
| * | 0.039 | 98 | IMPERVIOUS, HSG B |
| * | 0.016 | 98 | IMPERVIOUS, HSG D |
| * | 0.123 | 58 | MEADOW, HSG B |
| * | 0.070 | 58 | MEADOW, HSG B |
| * | 0.754 | 78 | MEADOW, HSG D |
| * | 1.435 | 78 | MEADOW, HSG D |
| | 14.434 | 76 | Weighted Average |
| | 14.275 | | 98.89% Pervious Area |
| | 0.160 | | 1.11% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.9 | 100 | 0.0301 | 0.34 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.7 | 136 | 0.0086 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 220 | 0.0134 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 43 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 7 | 0.0073 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 124 | 0.0097 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.4 | 629 | Total | | | |

## Subcatchment 38: WS38



## Summary for Subcatchment 39: WS39

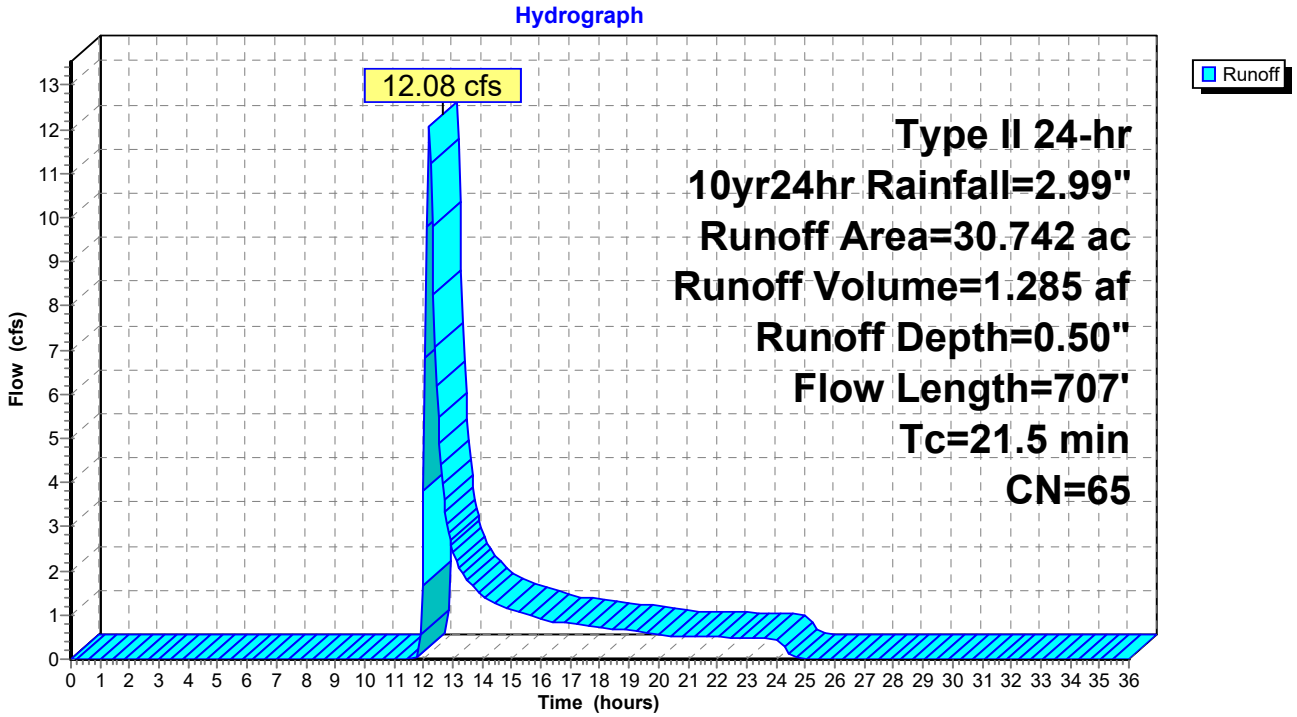
Runoff = 12.08 cfs @ 12.19 hrs, Volume= 1.285 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.176 | 68 | Developed Open Space, HSG B |
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.359 | 68 | Developed Open Space, HSG B |
| * | 0.307 | 68 | Developed Open Space, HSG B |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.739 | 61 | Pasture/Hay, HSG B |
| * | 0.037 | 60 | Deciduous Forest, HSG B |
| * | 0.185 | 60 | Deciduous Forest, HSG B |
| * | 4.448 | 60 | Deciduous Forest, HSG B |
| * | 0.303 | 79 | Deciduous Forest, HSG D |
| * | 0.782 | 60 | Mixed Forest, HSG B |
| * | 0.775 | 60 | Mixed Forest, HSG B |
| * | 0.747 | 60 | Mixed Forest, HSG B |
| * | 0.142 | 79 | Mixed Forest, HSG D |
| * | 2.604 | 71 | Cultivated Crops, HSG B |
| * | 0.038 | 81 | Cultivated Crops, HSG D |
| * | 2.284 | 71 | Cultivated Crops, HSG B |
| * | 2.039 | 60 | Deciduous Forest, HSG B |
| * | 1.421 | 79 | Deciduous Forest, HSG D |
| * | 0.011 | 60 | Deciduous Forest, HSG B |
| * | 0.086 | 61 | Pasture/Hay, HSG B |
| * | 0.277 | 80 | Pasture/Hay, HSG D |
| * | 1.061 | 71 | Cultivated Crops, HSG B |
| * | 0.625 | 81 | Cultivated Crops, HSG D |
| * | 0.244 | 58 | MEADOW, HSG B |
| * | 0.066 | 58 | MEADOW, HSG B |
| * | 0.092 | 58 | MEADOW, HSG B |
| * | 0.048 | 98 | IMPERVIOUS, HSG B |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.099 | 58 | MEADOW, HSG B |
| * | 0.023 | 58 | MEADOW, HSG B |
| * | 0.071 | 58 | MEADOW, HSG B |
| * | 0.095 | 58 | MEADOW, HSG B |
| * | 0.077 | 58 | MEADOW, HSG B |
| * | 0.045 | 98 | IMPERVIOUS, HSG B |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.415 | 58 | MEADOW, HSG B |
| * | 0.565 | 58 | MEADOW, HSG B |
| * | 0.004 | 98 | IMPERVIOUS, HSG B |
| * | 0.027 | 78 | MEADOW, HSG D |
| * | 1.973 | 58 | MEADOW, HSG B |
| * | 0.285 | 58 | MEADOW, HSG B |
| * | 4.793 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.379 | 98 | IMPERVIOUS, HSG B |
| * | 0.716 | 78 | MEADOW, HSG D |
| * | 0.772 | 78 | MEADOW, HSG D |
| * | 0.019 | 98 | IMPERVIOUS, HSG D |
| | 30.742 | 65 | Weighted Average |
| | 30.204 | | 98.25% Pervious Area |
| | 0.537 | | 1.75% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.3 | 89 | 0.0541 | 0.20 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.7 | 11 | 0.0329 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.9 | 63 | 0.0257 | 1.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 69 | 0.0279 | 1.17 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 25 | 0.0360 | 1.33 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 21 | 0.0206 | 2.91 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 34 | 0.0220 | 1.04 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 19 | 0.0145 | 0.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 137 | 0.0170 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 144 | 0.0051 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 95 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 21.5 | 707 | Total | | | |

## Subcatchment 39: WS39



## Summary for Subcatchment 40: WS40

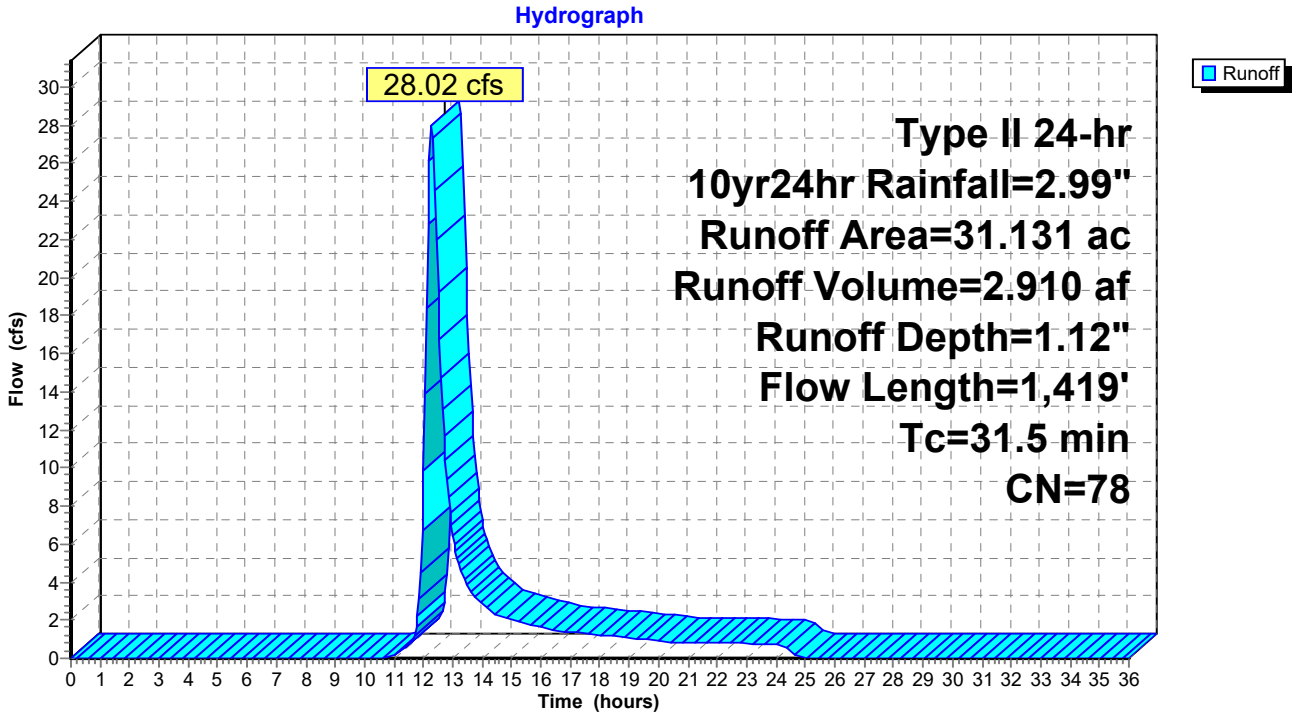
Runoff = 28.02 cfs @ 12.28 hrs, Volume= 2.910 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 81 | Cultivated Crops, HSG D |
| * | 6.748 | 79 | Deciduous Forest, HSG D |
| * | 0.190 | 79 | Deciduous Forest, HSG D |
| * | 1.168 | 80 | Pasture/Hay, HSG D |
| * | 0.518 | 80 | Pasture/Hay, HSG D |
| * | 0.057 | 62 | Cultivated Crops, HSG A |
| * | 0.873 | 81 | Cultivated Crops, HSG D |
| * | 3.427 | 81 | Cultivated Crops, HSG D |
| * | 0.123 | 58 | MEADOW, HSG B |
| * | 0.309 | 58 | MEADOW, HSG B |
| * | 0.780 | 78 | MEADOW, HSG D |
| * | 0.031 | 58 | MEADOW, HSG B |
| * | 0.002 | 58 | MEADOW, HSG B |
| * | 0.119 | 58 | MEADOW, HSG B |
| * | 0.004 | 98 | IMPERVIOUS, HSG B |
| * | 0.140 | 78 | MEADOW, HSG D |
| * | 0.200 | 78 | MEADOW, HSG D |
| * | 0.286 | 78 | MEADOW, HSG D |
| * | 0.078 | 78 | MEADOW, HSG D |
| * | 0.114 | 98 | IMPERVIOUS, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.077 | 58 | MEADOW, HSG B |
| * | 0.924 | 78 | MEADOW, HSG D |
| * | 0.625 | 78 | MEADOW, HSG D |
| * | 0.302 | 58 | MEADOW, HSG B |
| * | 0.712 | 78 | MEADOW, HSG D |
| * | 2.226 | 78 | MEADOW, HSG D |
| * | 1.099 | 78 | MEADOW, HSG D |
| * | 0.991 | 78 | MEADOW, HSG D |
| * | 8.744 | 78 | MEADOW, HSG D |
| * | 0.200 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| | 31.131 | 78 | Weighted Average |
| | 30.814 | | 98.98% Pervious Area |
| | 0.317 | | 1.02% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.4 | 50 | 0.0177 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 6.2 | 50 | 0.0266 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.1 | 7 | 0.0220 | 1.04 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 72 | 0.0159 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.7 | 145 | 0.0412 | 1.42 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 129 | 0.0241 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 57 | 0.0343 | 1.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 18 | 0.0232 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 20 | 0.0223 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 13 | 0.0173 | 2.67 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 21 | 0.0211 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.1 | 227 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.9 | 243 | 0.0142 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 51 | 0.0179 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 9 | 0.0066 | 0.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 210 | 0.0311 | 1.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 13 | 0.0151 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 83 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 31.5 | 1,419 | Total | | | |

## Subcatchment 40: WS40



## Summary for Subcatchment 41: WS41

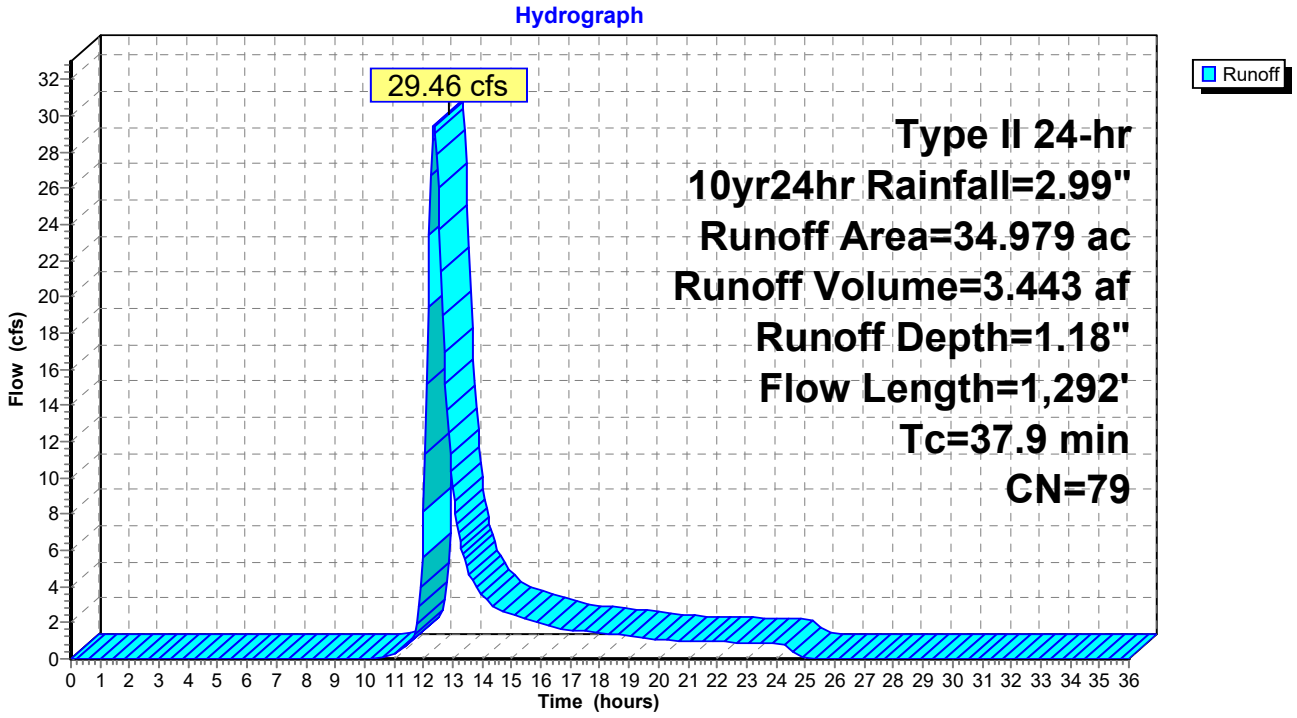
Runoff = 29.46 cfs @ 12.36 hrs, Volume= 3.443 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.146 | 68 | Developed Open Space, HSG B |
| * | 0.081 | 89 | Developed Medium Intensity, HSG B |
| * | 0.083 | 88 | Developed Low Intensity, HSG B |
| * | 0.299 | 93 | Developed Low Intensity, HSG D |
| * | 0.413 | 80 | Pasture/Hay, HSG D |
| * | 2.029 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.882 | 84 | Developed Open Space, HSG D |
| * | 0.146 | 93 | Developed Low Intensity, HSG D |
| * | 0.647 | 79 | Mixed Forest, HSG D |
| * | 0.101 | 80 | Pasture/Hay, HSG D |
| * | 0.333 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 80 | Pasture/Hay, HSG D |
| * | 0.021 | 79 | Mixed Forest, HSG D |
| * | 0.711 | 84 | Developed Open Space, HSG D |
| * | 1.187 | 71 | Cultivated Crops, HSG B |
| * | 4.801 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 80 | Pasture/Hay, HSG D |
| * | 0.113 | 81 | Cultivated Crops, HSG D |
| * | 0.470 | 78 | MEADOW, HSG D |
| * | 0.529 | 78 | MEADOW, HSG D |
| * | 0.753 | 78 | MEADOW, HSG D |
| * | 0.187 | 78 | MEADOW, HSG D |
| * | 0.083 | 98 | IMPERVIOUS, HSG D |
| * | 0.122 | 78 | MEADOW, HSG D |
| * | 0.049 | 98 | IMPERVIOUS, HSG D |
| * | 0.369 | 78 | MEADOW, HSG D |
| * | 0.087 | 78 | MEADOW, HSG D |
| * | 0.069 | 78 | MEADOW, HSG D |
| * | 0.042 | 78 | MEADOW, HSG D |
| * | 0.130 | 78 | MEADOW, HSG D |
| * | 0.104 | 78 | MEADOW, HSG D |
| * | 0.210 | 78 | MEADOW, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 5.749 | 78 | MEADOW, HSG D |
| * | 13.771 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.204 | 98 | IMPERVIOUS, HSG D |
| | 34.979 | 79 | Weighted Average |
| | 34.599 | | 98.92% Pervious Area |
| | 0.379 | | 1.08% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.5 | 100 | 0.0466 | 0.20 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.1 | 63 | 0.0054 | 0.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.4 | 330 | 0.0152 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 66 | 0.0401 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.2 | 253 | 0.0093 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.6 | 424 | 0.0064 | 0.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 36 | 0.0056 | 0.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 21 | 0.0240 | 1.40 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 37.9 | 1,292 | Total | | | |

## Subcatchment 41: WS41



## Summary for Subcatchment 42: WS42

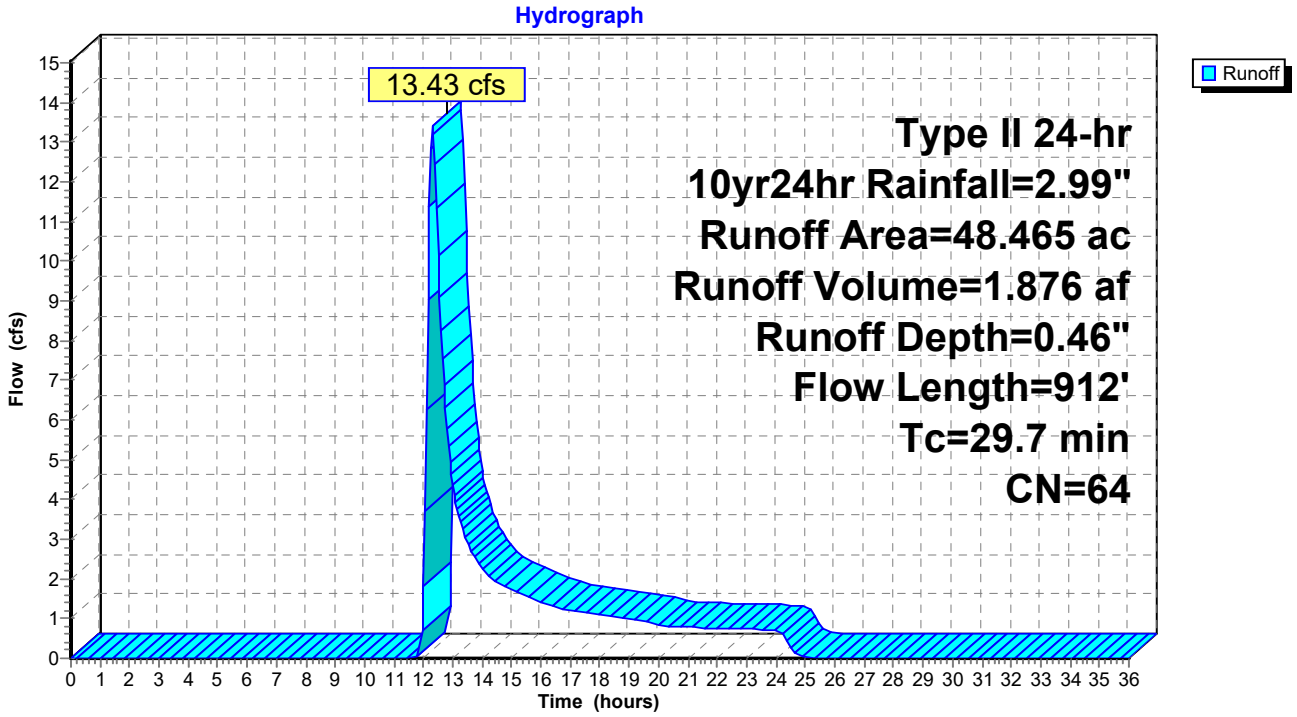
Runoff = 13.43 cfs @ 12.31 hrs, Volume= 1.876 af, Depth= 0.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.086 | 61 | Pasture/Hay, HSG B |
| * | 0.094 | 61 | Pasture/Hay, HSG B |
| * | 0.024 | 67 | Shrub/Scrub, HSG B |
| * | 0.182 | 60 | Deciduous Forest, HSG B |
| * | 1.268 | 81 | Cultivated Crops, HSG D |
| * | 0.576 | 81 | Cultivated Crops, HSG D |
| * | 0.014 | 71 | Cultivated Crops, HSG B |
| * | 0.064 | 81 | Cultivated Crops, HSG D |
| * | 7.666 | 71 | Cultivated Crops, HSG B |
| * | 0.108 | 86 | Woody Wetlands, HSG D |
| * | 0.006 | 86 | Woody Wetlands, HSG D |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.071 | 58 | MEADOW, HSG B |
| * | 0.089 | 58 | MEADOW, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 1.068 | 58 | MEADOW, HSG B |
| * | 1.587 | 78 | MEADOW, HSG D |
| * | 4.131 | 78 | MEADOW, HSG D |
| * | 0.139 | 98 | IMPERVIOUS, HSG D |
| * | 0.381 | 78 | MEADOW, HSG D |
| * | 5.324 | 58 | MEADOW, HSG B |
| * | 24.551 | 58 | MEADOW, HSG B |
| * | 0.085 | 98 | IMPERVIOUS, HSG B |
| * | 0.464 | 98 | IMPERVIOUS, HSG B |
| * | 0.117 | 78 | MEADOW, HSG D |
| | 48.465 | 64 | Weighted Average |
| | 47.776 | | 98.58% Pervious Area |
| | 0.688 | | 1.42% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 14.8 | 100 | 0.0117 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 11.7 | 638 | 0.0169 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 175 | 0.0166 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.7 | 912 | Total | | | |

## Subcatchment 42: WS42



## Summary for Subcatchment 43: WS43

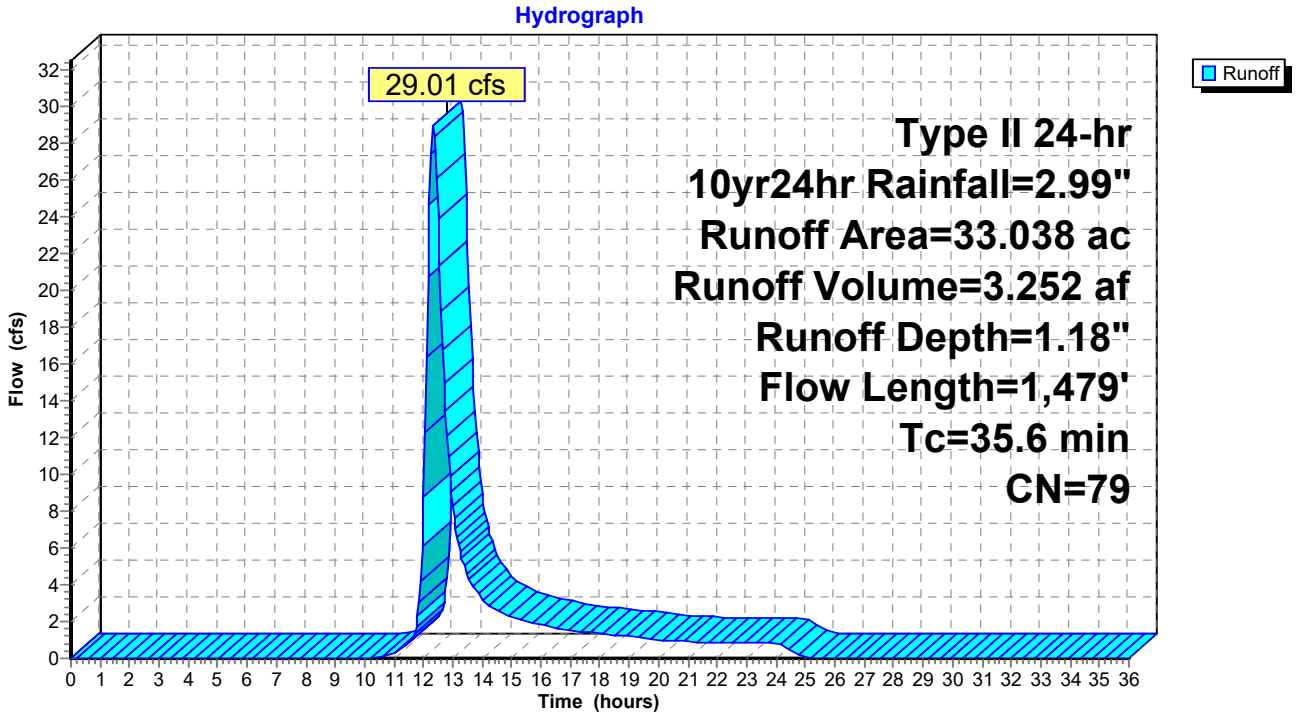
Runoff = 29.01 cfs @ 12.33 hrs, Volume= 3.252 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 79 | Deciduous Forest, HSG D |
| * | 0.032 | 36 | Deciduous Forest, HSG A |
| * | 0.169 | 79 | Mixed Forest, HSG D |
| * | 0.006 | 36 | Mixed Forest, HSG A |
| * | 0.081 | 79 | Evergreen Forest, HSG D |
| * | 0.103 | 79 | Mixed Forest, HSG D |
| * | 1.268 | 79 | Mixed Forest, HSG D |
| * | 0.155 | 79 | Mixed Forest, HSG D |
| * | 0.014 | 60 | Mixed Forest, HSG B |
| * | 0.222 | 79 | Mixed Forest, HSG D |
| * | 0.370 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.029 | 60 | Mixed Forest, HSG B |
| * | 3.432 | 79 | Deciduous Forest, HSG D |
| * | 0.890 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.202 | 93 | Developed Low Intensity, HSG D |
| * | 0.021 | 88 | Developed Low Intensity, HSG B |
| * | 0.183 | 88 | Developed Low Intensity, HSG B |
| * | 0.604 | 84 | Developed Open Space, HSG D |
| * | 0.166 | 84 | Developed Open Space, HSG D |
| * | 0.252 | 93 | Developed Low Intensity, HSG D |
| * | 0.012 | 80 | Pasture/Hay, HSG D |
| * | 0.023 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.030 | 80 | Pasture/Hay, HSG D |
| * | 0.013 | 93 | Developed Low Intensity, HSG D |
| * | 5.016 | 81 | Cultivated Crops, HSG D |
| * | 1.470 | 71 | Cultivated Crops, HSG B |
| * | 0.007 | 62 | Cultivated Crops, HSG A |
| * | 0.226 | 78 | MEADOW, HSG D |
| * | 0.039 | 98 | IMPERVIOUS, HSG D |
| * | 0.040 | 78 | MEADOW, HSG D |
| * | 0.055 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG D |
| * | 5.861 | 78 | MEADOW, HSG D |
| * | 11.012 | 78 | MEADOW, HSG D |
| * | 0.042 | 98 | IMPERVIOUS, HSG D |
| * | 0.417 | 98 | IMPERVIOUS, HSG D |
| * | 0.475 | 58 | MEADOW, HSG B |
| * | 0.037 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| | 33.038 | 79 | Weighted Average |
| | 32.533 | | 98.47% Pervious Area |
| | 0.504 | | 1.53% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.5 | 100 | 0.0221 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.5 | 40 | 0.0244 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 254 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.2 | 183 | 0.0244 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.6 | 117 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 113 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 118 | 0.0191 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 14.0 | 285 | 0.0024 | 0.34 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 120 | 0.0073 | 1.73 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 11 | 0.0035 | 0.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 23 | 0.0106 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 18 | 0.0056 | 1.52 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 33 | 0.0039 | 1.27 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 65 | 0.0070 | 1.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 35.6 | 1,479 | Total | | | |

## Subcatchment 43: WS43



## Summary for Subcatchment 44: WS44

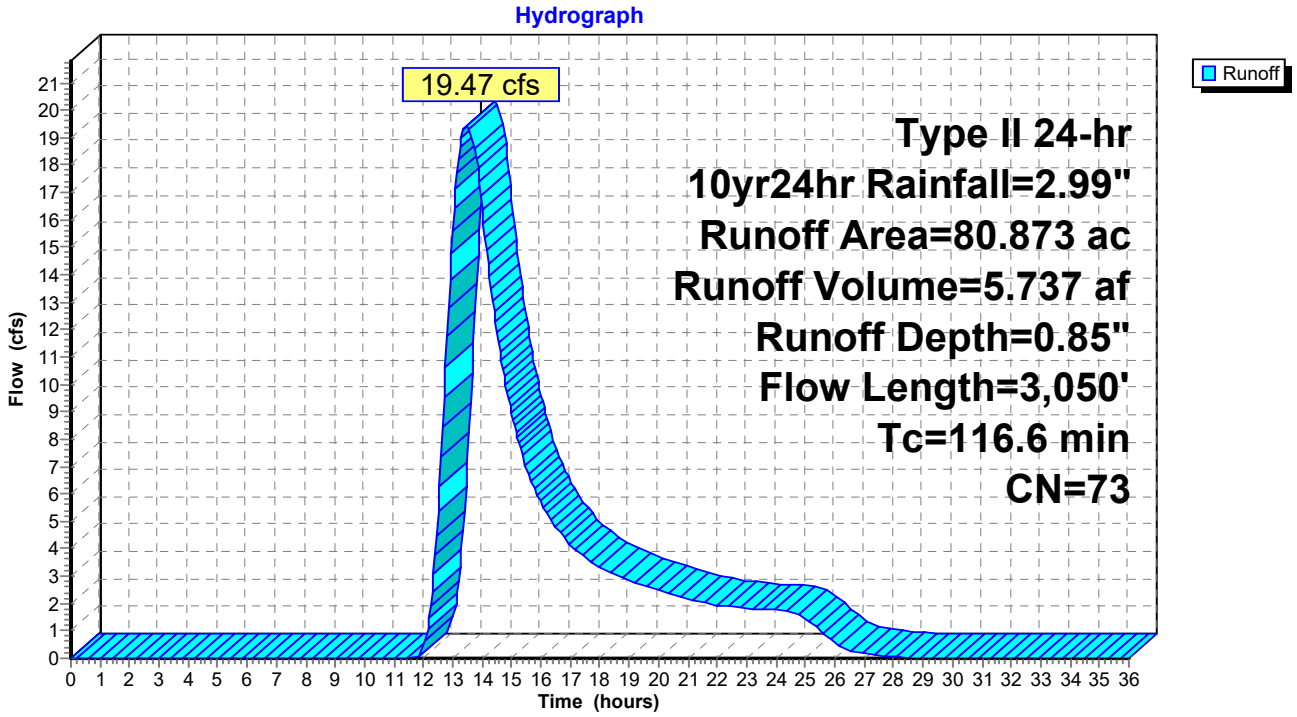
Runoff = 19.47 cfs @ 13.48 hrs, Volume= 5.737 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 0.222 | 39 | Pasture/Hay, HSG A |
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 1.019 | 36 | Deciduous Forest, HSG A |
| * | 0.780 | 36 | Deciduous Forest, HSG A |
| * | 0.046 | 81 | Developed Low Intensity, HSG A |
| * | 0.445 | 36 | Deciduous Forest, HSG A |
| * | 1.557 | 80 | Pasture/Hay, HSG D |
| * | 0.045 | 79 | Mixed Forest, HSG D |
| * | 0.002 | 36 | Mixed Forest, HSG A |
| * | 1.592 | 79 | Evergreen Forest, HSG D |
| * | 0.328 | 36 | Evergreen Forest, HSG A |
| * | 0.720 | 36 | Deciduous Forest, HSG A |
| * | 5.226 | 79 | Deciduous Forest, HSG D |
| * | 6.461 | 79 | Deciduous Forest, HSG D |
| * | 0.057 | 36 | Deciduous Forest, HSG A |
| * | 2.735 | 79 | Mixed Forest, HSG D |
| * | 0.243 | 93 | Developed Low Intensity, HSG D |
| * | 0.965 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.137 | 93 | Developed Low Intensity, HSG D |
| * | 0.648 | 93 | Developed Low Intensity, HSG D |
| * | 0.687 | 93 | Developed Low Intensity, HSG D |
| * | 0.013 | 93 | Developed Low Intensity, HSG D |
| * | 0.401 | 62 | Cultivated Crops, HSG A |
| * | 16.357 | 62 | Cultivated Crops, HSG A |
| * | 3.033 | 81 | Cultivated Crops, HSG D |
| * | 7.467 | 81 | Cultivated Crops, HSG D |
| * | 0.778 | 62 | Cultivated Crops, HSG A |
| * | 0.299 | 78 | MEADOW, HSG D |
| * | 0.146 | 78 | MEADOW, HSG D |
| * | 0.095 | 78 | MEADOW, HSG D |
| * | 0.157 | 78 | MEADOW, HSG D |
| * | 0.044 | 78 | MEADOW, HSG D |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.694 | 30 | MEADOW, HSG A |
| * | 0.340 | 30 | MEADOW, HSG A |
| * | 5.500 | 78 | MEADOW, HSG D |
| * | 16.262 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.793 | 98 | IMPERVIOUS, HSG D |
| * | 0.906 | 78 | MEADOW, HSG D |
| * | 2.741 | 78 | MEADOW, HSG D |
| | 80.873 | 73 | Weighted Average |
| | 80.038 | | 98.97% Pervious Area |
| | 0.836 | | 1.03% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.7 | 100 | 0.0610 | 0.45 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 41 | 0.0505 | 2.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 216 | 0.0304 | 1.57 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.1 | 517 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 186 | 0.0144 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 32.0 | 677 | 0.0050 | 0.35 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.6 | 98 | 0.0132 | 1.03 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.1 | 45 | 0.0089 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 141 | 0.0075 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 28 | 0.0018 | 0.86 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.6 | 66 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 27.9 | 733 | 0.0039 | 0.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 26 | 0.0089 | 1.92 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.3 | 33 | 0.0034 | 0.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.2 | 145 | 0.0001 | 0.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 116.6 | 3,050 | Total | | | |

## Subcatchment 44: WS44



## Summary for Subcatchment 45: WS45

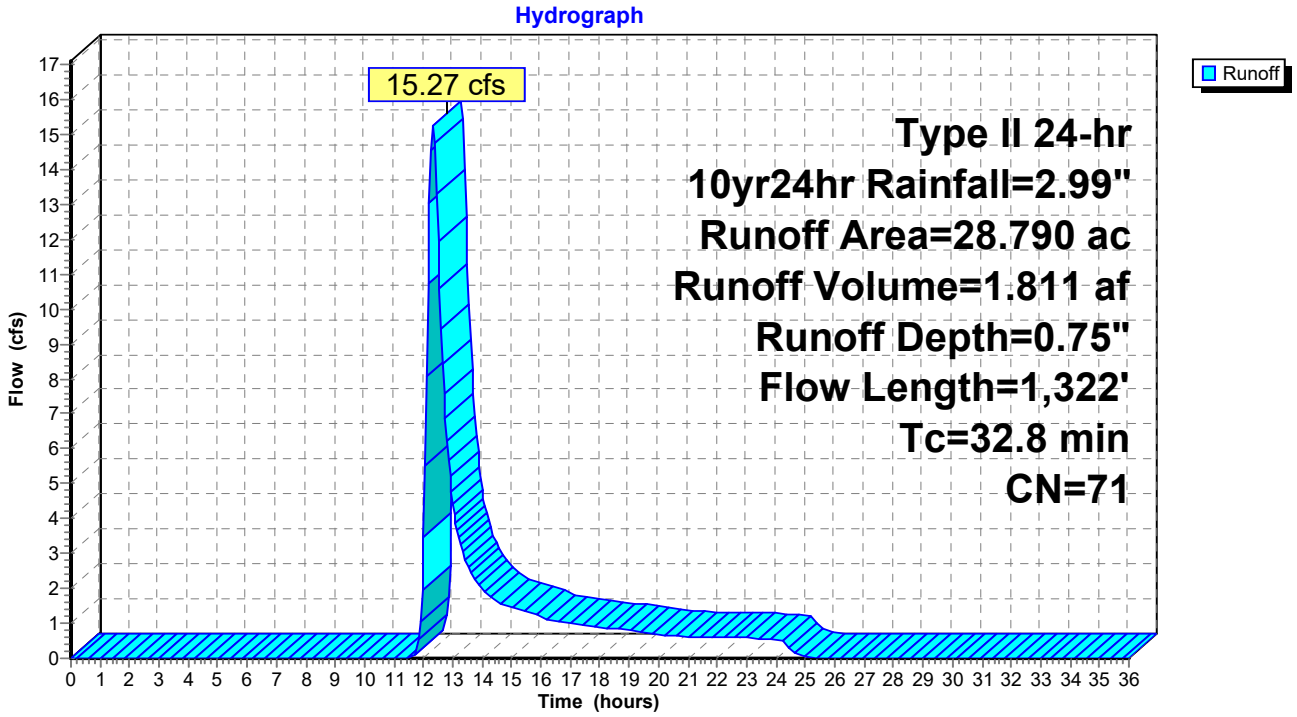
Runoff = 15.27 cfs @ 12.32 hrs, Volume= 1.811 af, Depth= 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.280 | 79 | Deciduous Forest, HSG D |
| * | 0.498 | 62 | Cultivated Crops, HSG A |
| * | 0.591 | 81 | Cultivated Crops, HSG D |
| * | 0.275 | 78 | MEADOW, HSG D |
| * | 0.036 | 78 | MEADOW, HSG D |
| * | 0.068 | 98 | IMPERVIOUS, HSG D |
| * | 1.729 | 30 | MEADOW, HSG A |
| * | 2.797 | 30 | MEADOW, HSG A |
| * | 0.888 | 78 | MEADOW, HSG D |
| * | 3.123 | 78 | MEADOW, HSG D |
| * | 17.916 | 78 | MEADOW, HSG D |
| * | 0.085 | 98 | IMPERVIOUS, HSG D |
| * | 0.504 | 98 | IMPERVIOUS, HSG D |
| | 28.790 | 71 | Weighted Average |
| | 28.132 | | 97.72% Pervious Area |
| | 0.657 | | 2.28% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.5 | 61 | 0.0261 | 0.29 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 5.0 | 39 | 0.0274 | 0.13 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.2 | 87 | 0.0295 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 200 | 0.0157 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 277 | 0.0280 | 1.17 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 63 | 0.0099 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 81 | 0.0226 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 29 | 0.0104 | 0.71 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 20 | 0.0101 | 2.04 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 30 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 11.2 | 435 | 0.0085 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 32.8 | 1,322 | Total | | | |

## Subcatchment 45: WS45



## Summary for Subcatchment 46: WS46

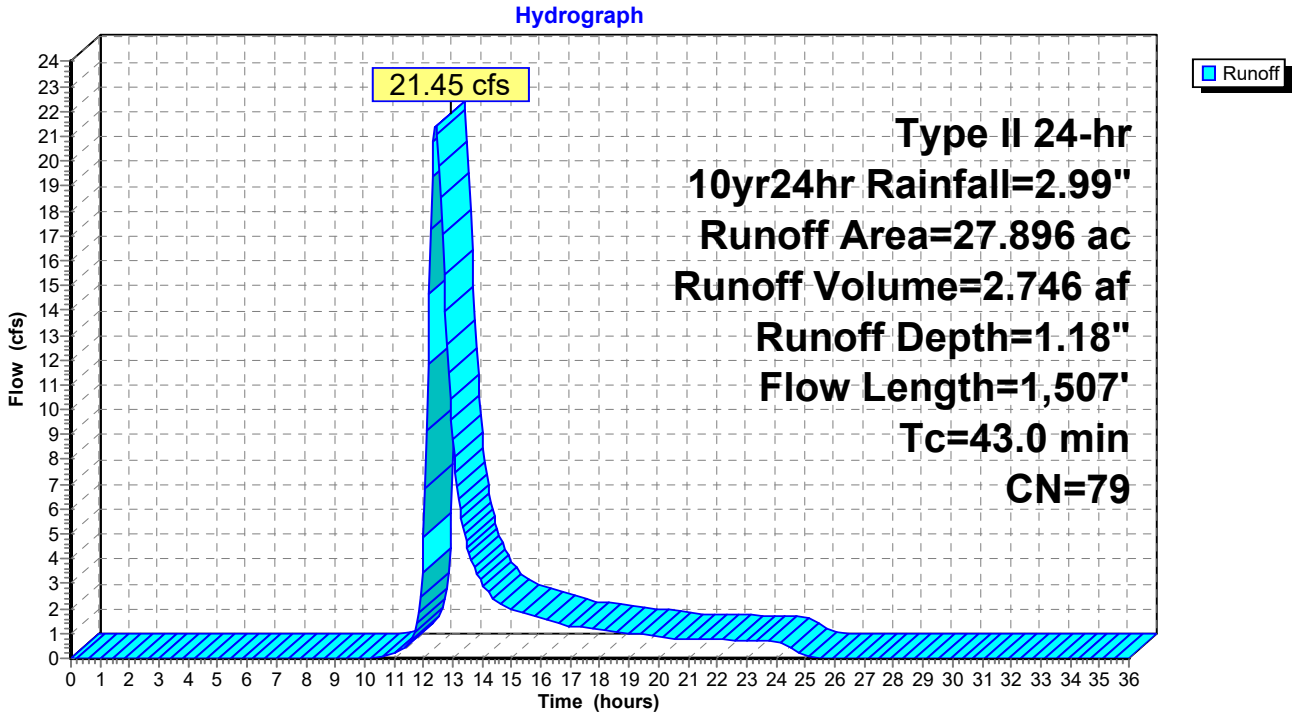
Runoff = 21.45 cfs @ 12.43 hrs, Volume= 2.746 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.235 | 80 | Pasture/Hay, HSG D |
| * | 1.025 | 81 | Cultivated Crops, HSG D |
| * | 4.740 | 81 | Cultivated Crops, HSG D |
| * | 0.522 | 78 | MEADOW, HSG D |
| * | 0.686 | 78 | MEADOW, HSG D |
| * | 1.727 | 78 | MEADOW, HSG D |
| * | 0.462 | 78 | MEADOW, HSG D |
| * | 3.448 | 78 | MEADOW, HSG D |
| * | 0.185 | 98 | IMPERVIOUS, HSG D |
| * | 0.830 | 78 | MEADOW, HSG D |
| * | 2.056 | 78 | MEADOW, HSG D |
| * | 11.673 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.263 | 98 | IMPERVIOUS, HSG D |
| | 27.896 | 79 | Weighted Average |
| | 27.405 | | 98.24% Pervious Area |
| | 0.491 | | 1.76% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.5 | 100 | 0.0180 | 0.13 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.5 | 91 | 0.0207 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.7 | 223 | 0.0037 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.9 | 383 | 0.0343 | 1.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 99 | 0.0327 | 1.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 65 | 0.0242 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 15 | 0.0110 | 2.13 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.2 | 11 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 11 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.3 | 207 | 0.0128 | 0.79 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 81 | 0.0122 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.5 | 142 | 0.0056 | 0.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 33 | 0.0070 | 0.59 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 46 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 43.0 | 1,507 | Total | | | |

## Subcatchment 46: WS46



## Summary for Subcatchment 47: WS47

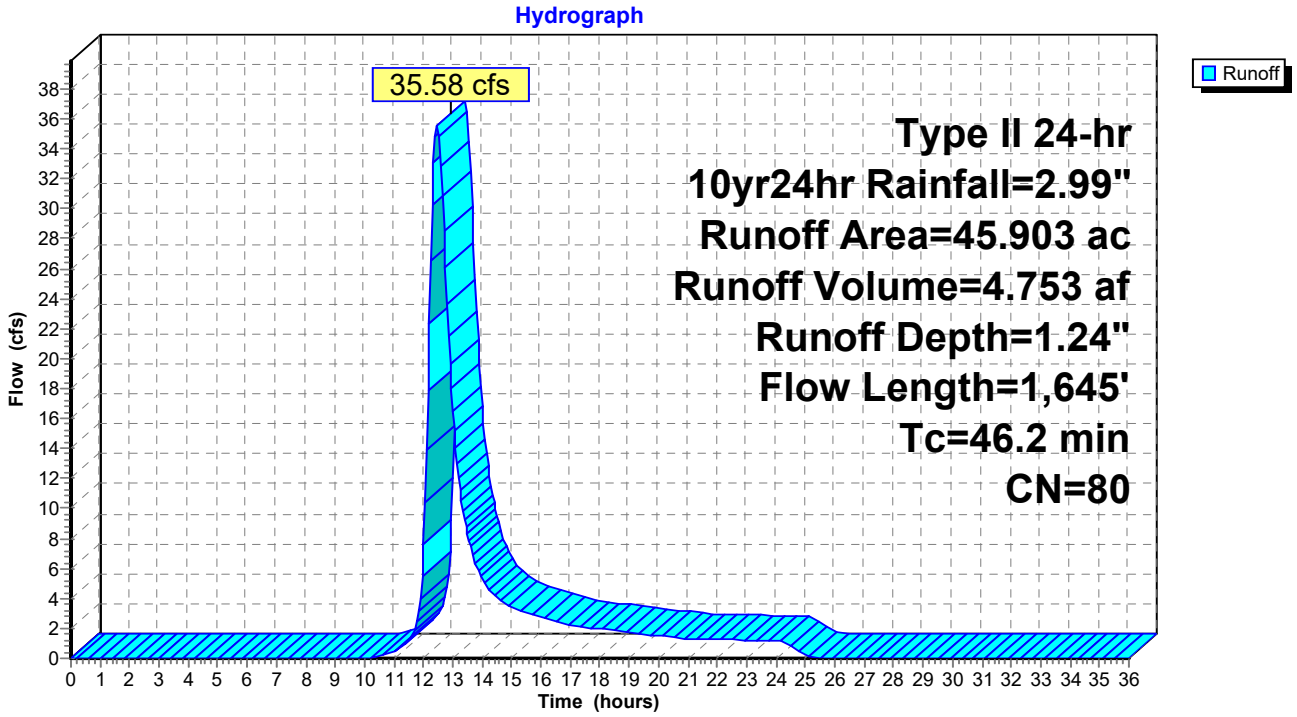
Runoff = 35.58 cfs @ 12.46 hrs, Volume= 4.753 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.146 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.171 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.424 | 93 | Developed Low Intensity, HSG D |
| * | 0.086 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 0.015 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.119 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.030 | 80 | Pasture/Hay, HSG D |
| * | 0.037 | 80 | Pasture/Hay, HSG D |
| * | 0.039 | 86 | Woody Wetlands, HSG D |
| * | 0.118 | 86 | Woody Wetlands, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.007 | 93 | Developed Low Intensity, HSG D |
| * | 0.438 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 86 | Woody Wetlands, HSG D |
| * | 0.185 | 94 | Developed Medium Intensity, HSG D |
| * | 0.037 | 94 | Developed Medium Intensity, HSG D |
| * | 0.401 | 84 | Developed Open Space, HSG D |
| * | 0.269 | 93 | Developed Low Intensity, HSG D |
| * | 0.259 | 84 | Developed Open Space, HSG D |
| * | 0.522 | 93 | Developed Low Intensity, HSG D |
| * | 0.452 | 81 | Cultivated Crops, HSG D |
| * | 3.861 | 81 | Cultivated Crops, HSG D |
| * | 4.339 | 81 | Cultivated Crops, HSG D |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.010 | 78 | MEADOW, HSG D |
| * | 0.060 | 98 | IMPERVIOUS, HSG D |
| * | 4.951 | 78 | MEADOW, HSG D |
| * | 0.903 | 78 | MEADOW, HSG D |
| * | 14.024 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.275 | 98 | IMPERVIOUS, HSG D |
| * | 0.259 | 78 | MEADOW, HSG D |
| * | 1.284 | 78 | MEADOW, HSG D |
| * | 7.785 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.139 | 98 | IMPERVIOUS, HSG D |
| * | 0.027 | 78 | MEADOW, HSG D |
| * | 0.098 | 78 | MEADOW, HSG D |
| * | 2.885 | 78 | MEADOW, HSG D |
| * | 0.035 | 98 | IMPERVIOUS, HSG D |
| | 45.903 | 80 | Weighted Average |
| | 45.310 | | 98.71% Pervious Area |
| | 0.593 | | 1.29% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.2 | 100 | 0.0025 | 0.13 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.4 | 145 | 0.0396 | 1.79 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.2 | 236 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 28 | 0.0212 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 99 | 0.0241 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.0 | 293 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 40 | 0.0198 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 22 | 0.0236 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 13 | 0.0238 | 3.13 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 23 | 0.0210 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 274 | 0.0141 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.1 | 217 | 0.0018 | 0.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 44 | 0.0284 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 59 | 0.0188 | 1.24 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 42 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 46.2 | 1,645 | Total | | | |

## Subcatchment 47: WS47



## Summary for Subcatchment 48: WS48

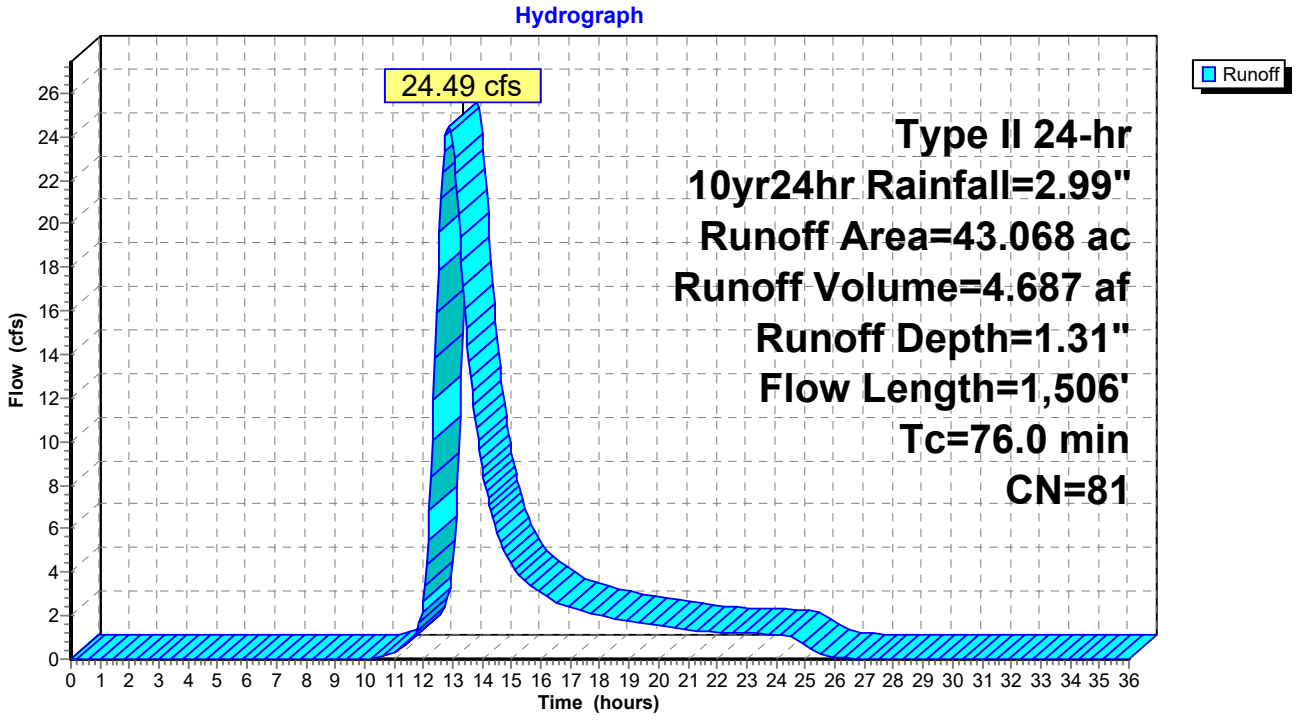
Runoff = 24.49 cfs @ 12.87 hrs, Volume= 4.687 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.059 | 86 | Woody Wetlands, HSG D |
| * | 0.481 | 93 | Developed Low Intensity, HSG D |
| * | 0.214 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.442 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.114 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.280 | 93 | Developed Low Intensity, HSG D |
| * | 0.737 | 93 | Developed Low Intensity, HSG D |
| * | 0.744 | 93 | Developed Low Intensity, HSG D |
| * | 0.144 | 84 | Developed Open Space, HSG D |
| * | 0.217 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 9.970 | 86 | Woody Wetlands, HSG D |
| * | 0.035 | 86 | Woody Wetlands, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 1.916 | 81 | Cultivated Crops, HSG D |
| * | 2.143 | 81 | Cultivated Crops, HSG D |
| * | 2.228 | 81 | Cultivated Crops, HSG D |
| * | 0.008 | 78 | MEADOW, HSG D |
| * | 0.003 | 78 | MEADOW, HSG D |
| * | 0.355 | 78 | MEADOW, HSG D |
| * | 0.454 | 78 | MEADOW, HSG D |
| * | 0.189 | 78 | MEADOW, HSG D |
| * | 0.016 | 78 | MEADOW, HSG D |
| * | 0.033 | 98 | IMPERVIOUS, HSG D |
| * | 0.033 | 78 | MEADOW, HSG D |
| * | 0.005 | 78 | MEADOW, HSG D |
| * | 0.780 | 78 | MEADOW, HSG D |
| * | 0.319 | 78 | MEADOW, HSG D |
| * | 0.011 | 78 | MEADOW, HSG D |
| * | 0.036 | 78 | MEADOW, HSG D |
| * | 1.013 | 78 | MEADOW, HSG D |
| * | 0.999 | 78 | MEADOW, HSG D |
| * | 0.781 | 78 | MEADOW, HSG D |
| * | 0.181 | 78 | MEADOW, HSG D |
| * | 0.086 | 98 | IMPERVIOUS, HSG D |
| * | 4.730 | 78 | MEADOW, HSG D |
| * | 12.469 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.204 | 98 | IMPERVIOUS, HSG D |
| | 43.068 | 81 | Weighted Average |
| | 42.702 | | 99.15% Pervious Area |
| | 0.366 | | 0.85% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.1 | 63 | 0.0685 | 0.21 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.1 | 37 | 0.0122 | 0.20 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.9 | 106 | 0.0110 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.2 | 283 | 0.0038 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.1 | 430 | 0.0056 | 0.38 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 31.6 | 588 | 0.0038 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 76.0 | 1,506 | Total | | | |

## Subcatchment 48: WS48



## Summary for Subcatchment 49: WS49

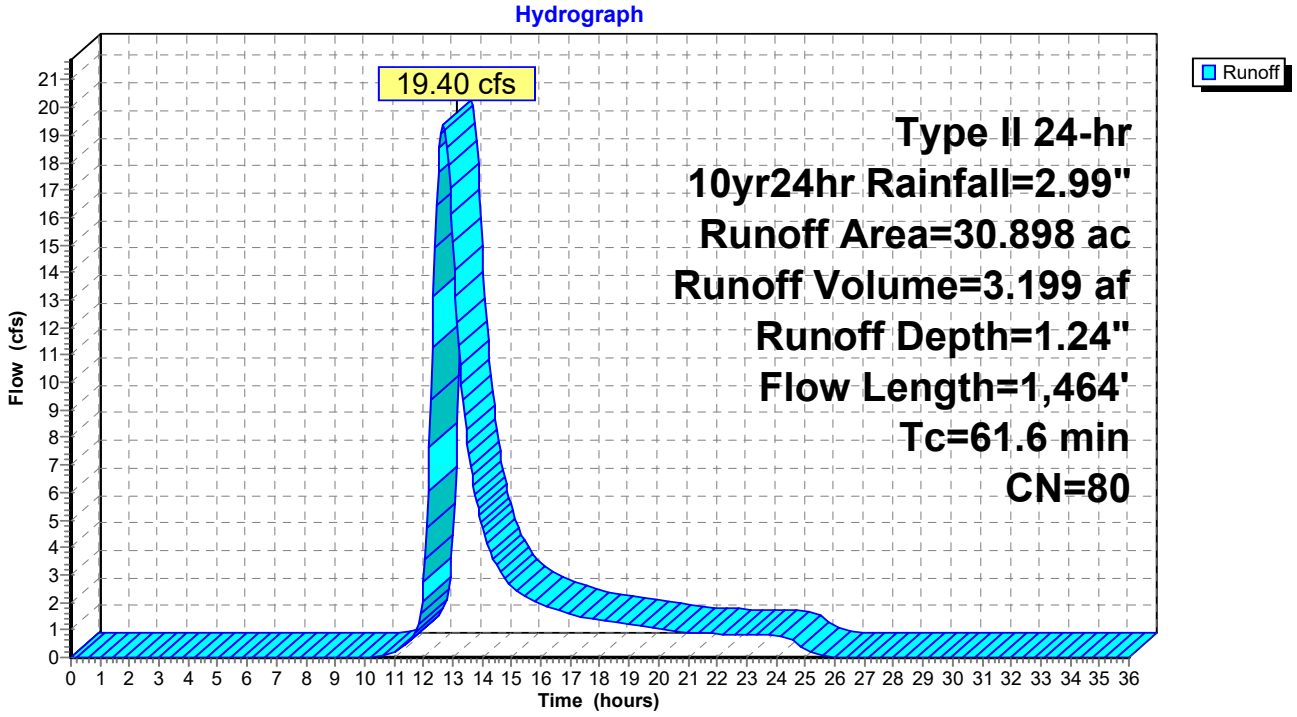
Runoff = 19.40 cfs @ 12.67 hrs, Volume= 3.199 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.784 | 93 | Developed Low Intensity, HSG D |
| * | 0.080 | 93 | Developed Low Intensity, HSG D |
| * | 0.076 | 94 | Developed Medium Intensity, HSG D |
| * | 0.005 | 84 | Developed Open Space, HSG D |
| * | 0.011 | 84 | Developed Open Space, HSG D |
| * | 0.333 | 93 | Developed Low Intensity, HSG D |
| * | 0.761 | 93 | Developed Low Intensity, HSG D |
| * | 0.328 | 93 | Developed Low Intensity, HSG D |
| * | 0.998 | 81 | Cultivated Crops, HSG D |
| * | 4.032 | 81 | Cultivated Crops, HSG D |
| * | 3.374 | 81 | Cultivated Crops, HSG D |
| * | 0.667 | 78 | MEADOW, HSG D |
| * | 0.222 | 78 | MEADOW, HSG D |
| * | 0.088 | 78 | MEADOW, HSG D |
| * | 0.135 | 78 | MEADOW, HSG D |
| * | 0.180 | 78 | MEADOW, HSG D |
| * | 0.124 | 78 | MEADOW, HSG D |
| * | 0.013 | 98 | IMPERVIOUS, HSG D |
| * | 1.239 | 78 | MEADOW, HSG D |
| * | 0.137 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| * | 0.045 | 78 | MEADOW, HSG D |
| * | 0.058 | 78 | MEADOW, HSG D |
| * | 0.051 | 98 | IMPERVIOUS, HSG D |
| * | 0.315 | 78 | MEADOW, HSG D |
| * | 0.210 | 78 | MEADOW, HSG D |
| * | 2.880 | 78 | MEADOW, HSG D |
| * | 0.162 | 98 | IMPERVIOUS, HSG D |
| * | 4.187 | 78 | MEADOW, HSG D |
| * | 0.030 | 98 | IMPERVIOUS, HSG D |
| * | 1.681 | 78 | MEADOW, HSG D |
| * | 7.562 | 78 | MEADOW, HSG D |
| | 30.898 | 80 | Weighted Average |
| | 30.615 | | 99.09% Pervious Area |
| | 0.283 | | 0.91% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.6 | 55 | 0.0064 | 0.16 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 9.8 | 45 | 0.0068 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 28 | 0.0239 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 221 | 0.0217 | 1.03 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 90 | 0.0207 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 55 | 0.0090 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 84 | 0.0065 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 90 | 0.0185 | 1.22 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.0 | 191 | 0.0010 | 0.23 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 19.1 | 449 | 0.0031 | 0.39 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 58 | 0.0239 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 99 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 61.6 | 1,464 | Total | | | |

## Subcatchment 49: WS49



## Summary for Subcatchment 50: WS50

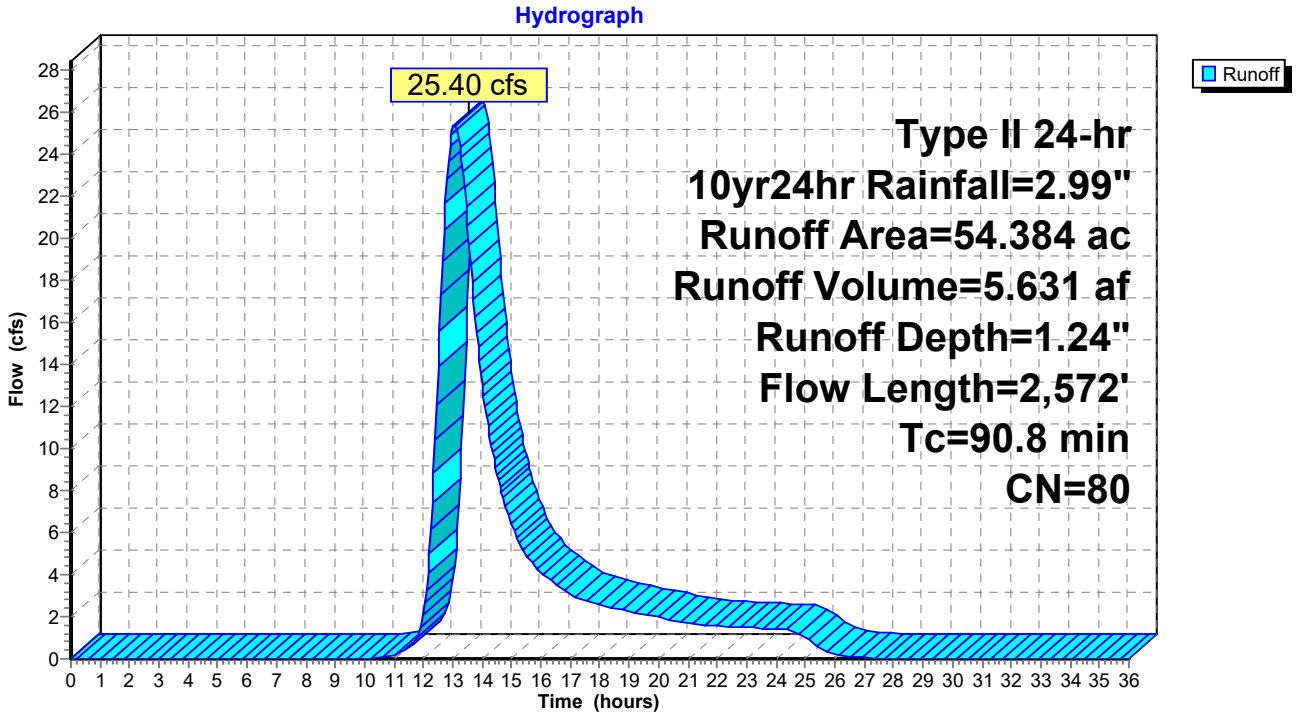
Runoff = 25.40 cfs @ 13.05 hrs, Volume= 5.631 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.217 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.200 | 84 | Developed Open Space, HSG D |
| * | 0.211 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.633 | 93 | Developed Low Intensity, HSG D |
| * | 0.271 | 93 | Developed Low Intensity, HSG D |
| * | 0.107 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.013 | 94 | Developed Medium Intensity, HSG D |
| * | 0.732 | 93 | Developed Low Intensity, HSG D |
| * | 0.279 | 93 | Developed Low Intensity, HSG D |
| * | 0.079 | 84 | Developed Open Space, HSG D |
| * | 0.028 | 93 | Developed Low Intensity, HSG D |
| * | 5.131 | 81 | Cultivated Crops, HSG D |
| * | 8.761 | 81 | Cultivated Crops, HSG D |
| * | 2.028 | 81 | Cultivated Crops, HSG D |
| * | 0.022 | 78 | MEADOW, HSG D |
| * | 0.010 | 98 | IMPERVIOUS, HSG D |
| * | 4.396 | 78 | MEADOW, HSG D |
| * | 0.183 | 98 | IMPERVIOUS, HSG D |
| * | 8.785 | 78 | MEADOW, HSG D |
| * | 0.015 | 98 | IMPERVIOUS, HSG D |
| * | 5.583 | 78 | MEADOW, HSG D |
| * | 0.399 | 98 | IMPERVIOUS, HSG D |
| * | 10.720 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 2.649 | 78 | MEADOW, HSG D |
| * | 0.136 | 98 | IMPERVIOUS, HSG D |
| * | 2.088 | 78 | MEADOW, HSG D |
| | 54.384 | 80 | Weighted Average |
| | 53.598 | | 98.55% Pervious Area |
| | 0.786 | | 1.45% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 19.5 | 100 | 0.0059 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.1 | 233 | 0.0082 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 13.4 | 518 | 0.0085 | 0.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.5 | 154 | 0.0112 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.6 | 345 | 0.0115 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 13.4 | 214 | 0.0015 | 0.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 16.6 | 309 | 0.0020 | 0.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 42 | 0.0401 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.2 | 657 | 0.0143 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 90.8 | 2,572 | Total | | | |

## Subcatchment 50: WS50



## Summary for Subcatchment 51: WS51

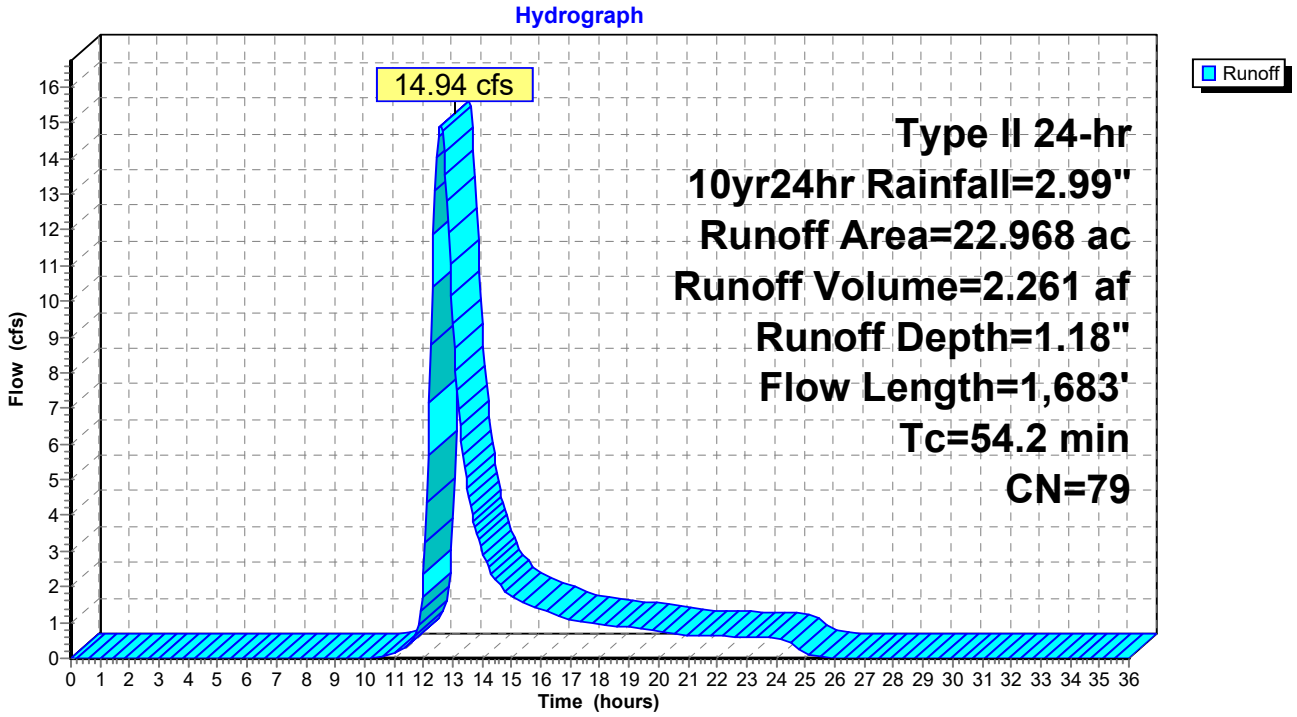
Runoff = 14.94 cfs @ 12.58 hrs, Volume= 2.261 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 4.817 | 81 | Cultivated Crops, HSG D |
| * | 0.028 | 78 | MEADOW, HSG D |
| * | 1.205 | 78 | MEADOW, HSG D |
| * | 4.410 | 78 | MEADOW, HSG D |
| * | 0.392 | 98 | IMPERVIOUS, HSG D |
| * | 12.074 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 22.968 | 79 | Weighted Average |
| | 22.533 | | 98.11% Pervious Area |
| | 0.435 | | 1.89% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.3 | 100 | 0.0092 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.0 | 113 | 0.0189 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 195 | 0.0148 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 123 | 0.0080 | 1.81 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.4 | 159 | 0.0074 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 13.1 | 471 | 0.0073 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 12 | 0.0050 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 203 | 0.0130 | 2.32 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 11.6 | 307 | 0.0040 | 0.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 54.2 | 1,683 | Total | | | |

## Subcatchment 51: WS51



## Summary for Subcatchment 52: WS52

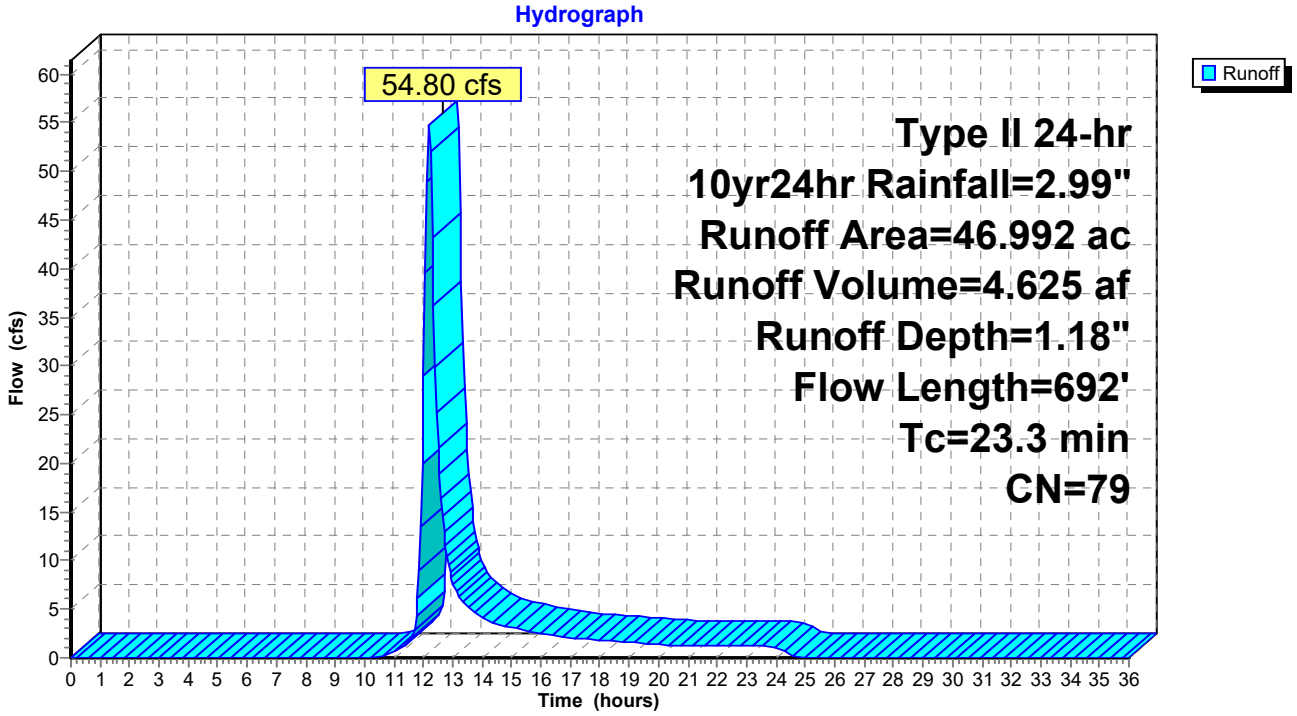
Runoff = 54.80 cfs @ 12.17 hrs, Volume= 4.625 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.465 | 86 | Woody Wetlands, HSG D |
| * | 0.198 | 80 | Pasture/Hay, HSG D |
| * | 0.025 | 80 | Pasture/Hay, HSG D |
| * | 0.415 | 79 | Deciduous Forest, HSG D |
| * | 0.694 | 79 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Pasture/Hay, HSG D |
| * | 0.155 | 80 | Pasture/Hay, HSG D |
| * | 1.958 | 79 | Deciduous Forest, HSG D |
| * | 0.570 | 79 | Deciduous Forest, HSG D |
| * | 0.490 | 79 | Deciduous Forest, HSG D |
| * | 0.003 | 61 | Pasture/Hay, HSG B |
| * | 2.802 | 80 | Pasture/Hay, HSG D |
| * | 0.601 | 80 | Pasture/Hay, HSG D |
| * | 1.445 | 71 | Cultivated Crops, HSG B |
| * | 4.711 | 81 | Cultivated Crops, HSG D |
| * | 8.408 | 81 | Cultivated Crops, HSG D |
| * | 0.659 | 81 | Cultivated Crops, HSG D |
| * | 0.193 | 78 | MEADOW, HSG D |
| * | 0.119 | 78 | MEADOW, HSG D |
| * | 0.199 | 78 | MEADOW, HSG D |
| * | 0.054 | 98 | IMPERVIOUS, HSG D |
| * | 1.806 | 78 | MEADOW, HSG D |
| * | 0.332 | 78 | MEADOW, HSG D |
| * | 0.791 | 78 | MEADOW, HSG D |
| * | 0.375 | 58 | MEADOW, HSG B |
| * | 1.367 | 58 | MEADOW, HSG B |
| * | 0.959 | 78 | MEADOW, HSG D |
| * | 2.266 | 78 | MEADOW, HSG D |
| * | 0.506 | 98 | IMPERVIOUS, HSG D |
| * | 11.617 | 78 | MEADOW, HSG D |
| * | 0.070 | 98 | IMPERVIOUS, HSG D |
| * | 1.213 | 78 | MEADOW, HSG D |
| * | 1.295 | 78 | MEADOW, HSG D |
| * | 0.105 | 78 | MEADOW, HSG D |
| * | 0.058 | 78 | MEADOW, HSG D |
| | 46.992 | 79 | Weighted Average |
| | 46.362 | | 98.66% Pervious Area |
| | 0.630 | | 1.34% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.3 | 77 | 0.0096 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.1 | 23 | 0.0146 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.4 | 138 | 0.0184 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.2 | 249 | 0.0092 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.3 | 206 | 0.0132 | 0.80 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.3 | 692 | Total | | | |

## Subcatchment 52: WS52



## Summary for Subcatchment 53: WS53

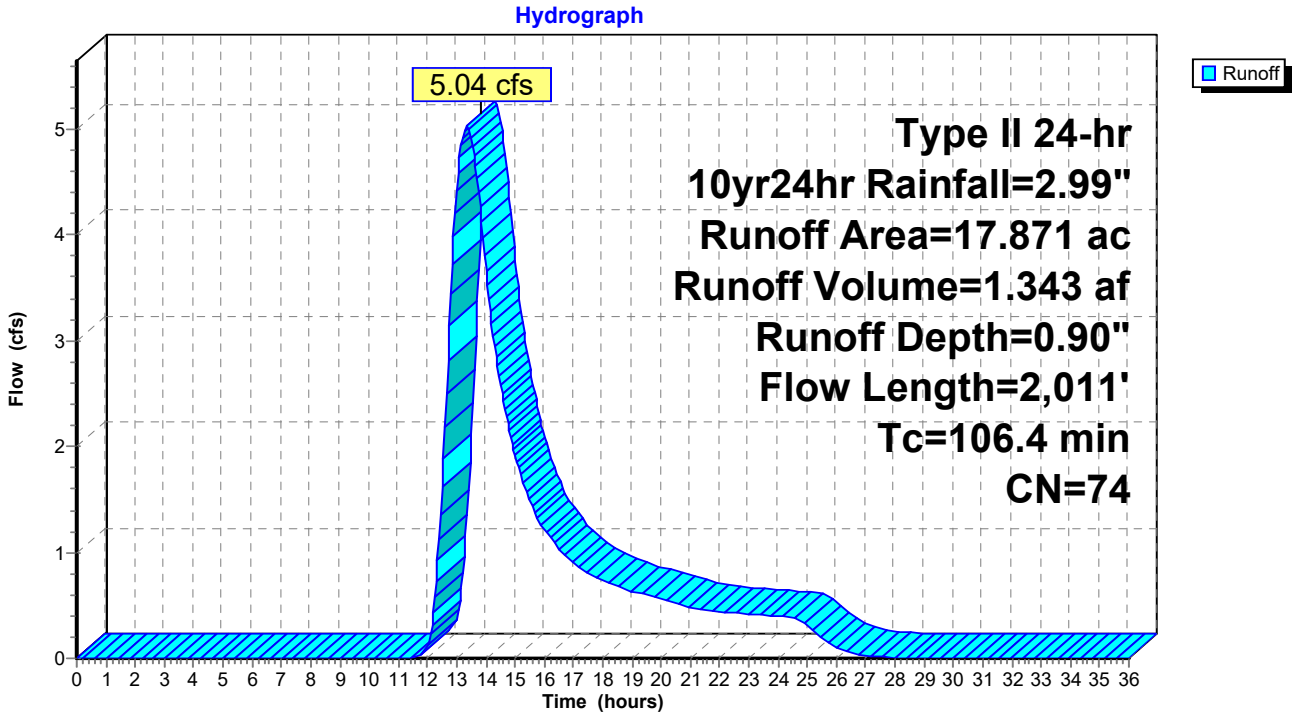
Runoff = 5.04 cfs @ 13.35 hrs, Volume= 1.343 af, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.579 | 79 | Deciduous Forest, HSG D |
| * | 0.013 | 79 | Deciduous Forest, HSG D |
| * | 0.538 | 60 | Mixed Forest, HSG B |
| * | 0.164 | 79 | Mixed Forest, HSG D |
| * | 1.312 | 71 | Cultivated Crops, HSG B |
| * | 5.753 | 81 | Cultivated Crops, HSG D |
| * | 1.830 | 58 | MEADOW, HSG B |
| * | 1.871 | 58 | MEADOW, HSG B |
| * | 3.080 | 78 | MEADOW, HSG D |
| * | 0.205 | 98 | IMPERVIOUS, HSG D |
| * | 2.526 | 78 | MEADOW, HSG D |
| | 17.871 | 74 | Weighted Average |
| | 17.665 | | 98.85% Pervious Area |
| | 0.205 | | 1.15% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 46.4 | 100 | 0.0048 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.5 | 83 | 0.0338 | 0.92 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 34 | 0.0139 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.2 | 402 | 0.0107 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 54 | 0.0238 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 18 | 0.0128 | 2.30 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 8.8 | 280 | 0.0058 | 0.53 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 11.4 | 245 | 0.0026 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.2 | 298 | 0.0034 | 0.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 167 | 0.0068 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.7 | 330 | 0.0038 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 106.4 | 2,011 | Total | | | |

## Subcatchment 53: WS53



## Summary for Subcatchment 54: WS54

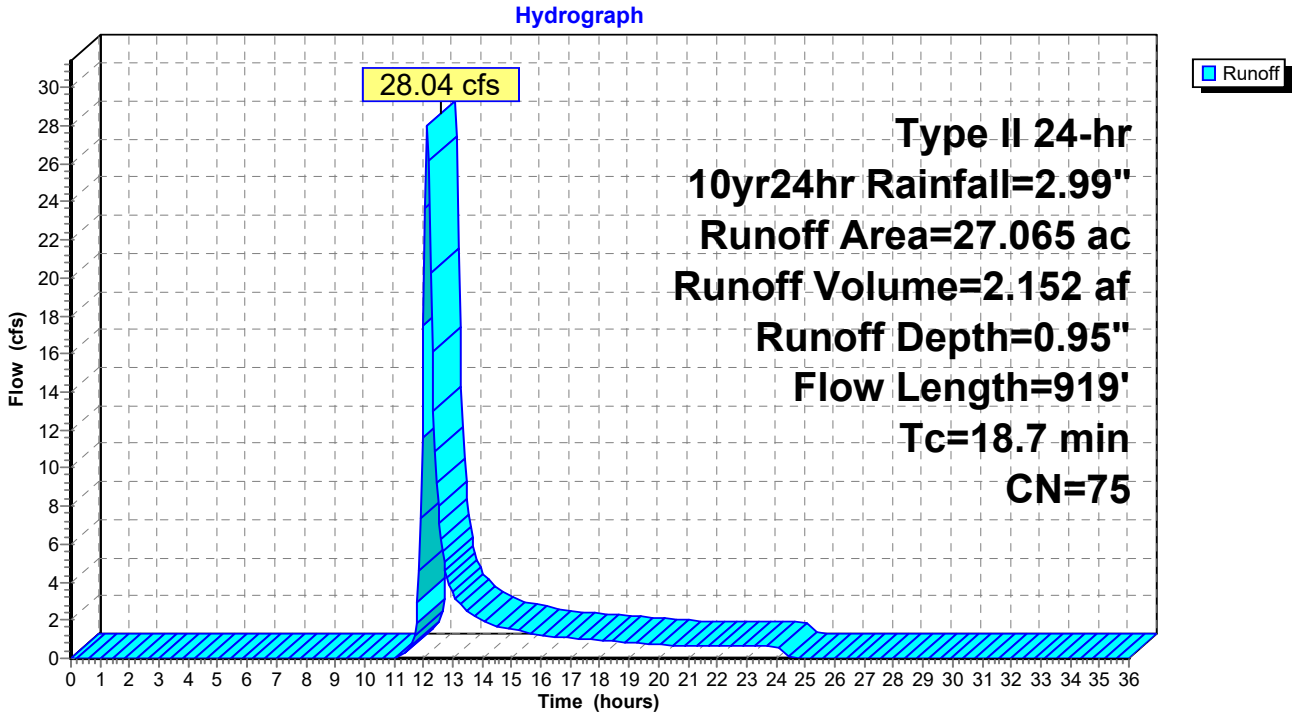
Runoff = 28.04 cfs @ 12.13 hrs, Volume= 2.152 af, Depth= 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.008 | 79 | Deciduous Forest, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.417 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.680 | 61 | Pasture/Hay, HSG B |
| * | 2.775 | 60 | Deciduous Forest, HSG B |
| * | 0.844 | 79 | Deciduous Forest, HSG D |
| * | 0.059 | 93 | Developed Low Intensity, HSG D |
| * | 3.457 | 81 | Cultivated Crops, HSG D |
| * | 1.532 | 71 | Cultivated Crops, HSG B |
| * | 7.107 | 81 | Cultivated Crops, HSG D |
| * | 0.165 | 78 | MEADOW, HSG D |
| * | 0.050 | 98 | IMPERVIOUS, HSG D |
| * | 0.149 | 78 | MEADOW, HSG D |
| * | 0.037 | 98 | IMPERVIOUS, HSG D |
| * | 0.025 | 78 | MEADOW, HSG D |
| * | 0.864 | 58 | MEADOW, HSG B |
| * | 2.192 | 58 | MEADOW, HSG B |
| * | 1.913 | 78 | MEADOW, HSG D |
| * | 0.331 | 98 | IMPERVIOUS, HSG D |
| * | 3.726 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 27.065 | 75 | Weighted Average |
| | 26.604 | | 98.30% Pervious Area |
| | 0.461 | | 1.70% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.8 | 100 | 0.0195 | 0.29 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.0 | 312 | 0.0207 | 1.30 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 126 | 0.0206 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 12 | 0.0127 | 2.29 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 7.2 | 369 | 0.0091 | 0.86 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.7 | 919 | Total | | | |

## Subcatchment 54: WS54



## Summary for Subcatchment 55: WS55

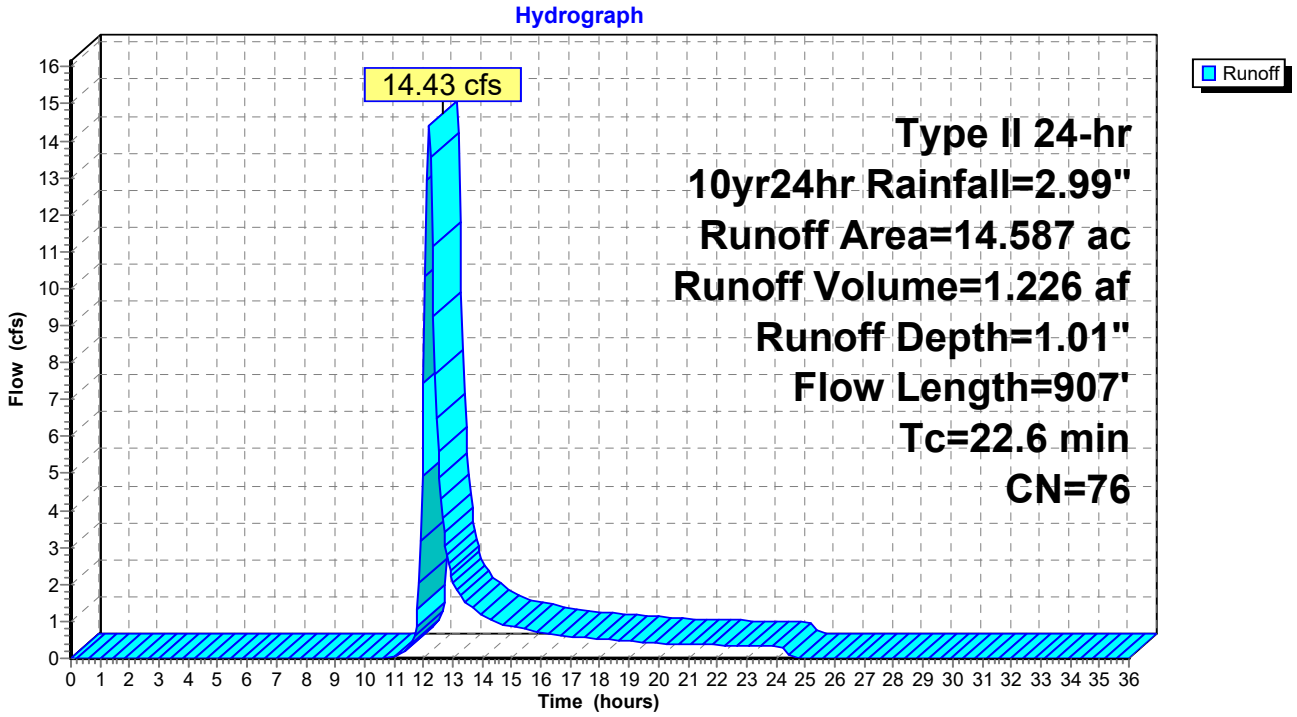
Runoff = 14.43 cfs @ 12.17 hrs, Volume= 1.226 af, Depth= 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.010 | 84 | Developed Open Space, HSG D |
| * | 0.225 | 93 | Developed Low Intensity, HSG D |
| * | 0.094 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 81 | Cultivated Crops, HSG D |
| * | 2.811 | 71 | Cultivated Crops, HSG B |
| * | 7.104 | 81 | Cultivated Crops, HSG D |
| * | 0.469 | 58 | MEADOW, HSG B |
| * | 0.178 | 58 | MEADOW, HSG B |
| * | 1.371 | 58 | MEADOW, HSG B |
| * | 0.859 | 78 | MEADOW, HSG D |
| * | 1.466 | 78 | MEADOW, HSG D |
| | 14.587 | 76 | Weighted Average |
| | 14.587 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 2.9 | 26 | 0.0074 | 0.15 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 6.8 | 74 | 0.0071 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.2 | 191 | 0.0072 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 282 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 334 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 22.6 | 907 | Total | | | |

## Subcatchment 55: WS55



## Summary for Subcatchment 56: WS56

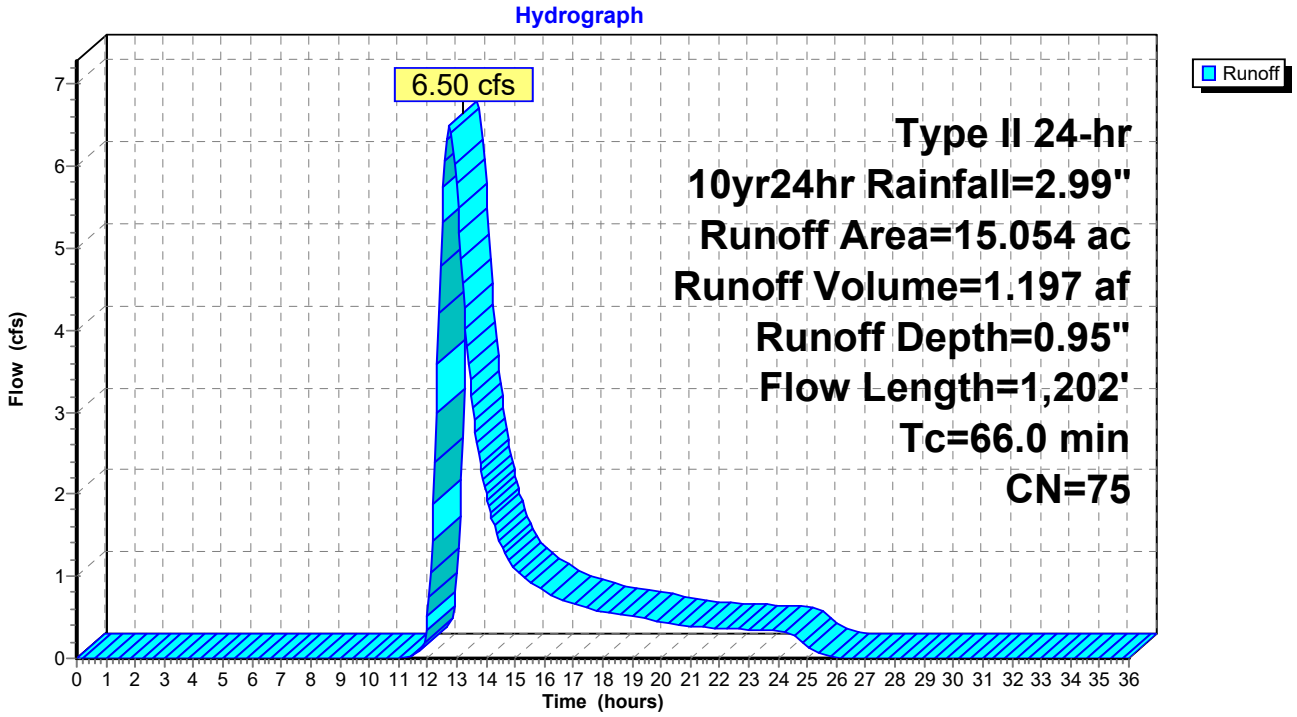
Runoff = 6.50 cfs @ 12.76 hrs, Volume= 1.197 af, Depth= 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.006 | 60 | Deciduous Forest, HSG B |
| * | 0.838 | 71 | Cultivated Crops, HSG B |
| * | 1.191 | 81 | Cultivated Crops, HSG D |
| * | 0.607 | 58 | MEADOW, HSG B |
| * | 2.166 | 58 | MEADOW, HSG B |
| * | 2.888 | 78 | MEADOW, HSG D |
| * | 0.278 | 98 | IMPERVIOUS, HSG D |
| * | 7.037 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 15.054 | 75 | Weighted Average |
| | 14.734 | | 97.87% Pervious Area |
| | 0.321 | | 2.13% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.8 | 36 | 0.0120 | 0.75 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 13.1 | 64 | 0.0065 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.3 | 50 | 0.0026 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 73 | 0.0130 | 2.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 30 | 0.0289 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 142 | 0.0250 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 184 | 0.0140 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 37.7 | 368 | 0.0005 | 0.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.2 | 141 | 0.0064 | 0.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 36 | 0.0688 | 1.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 78 | 0.0254 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 66.0 | 1,202 | Total | | | |

## Subcatchment 56: WS56



## Summary for Subcatchment 57: WS57

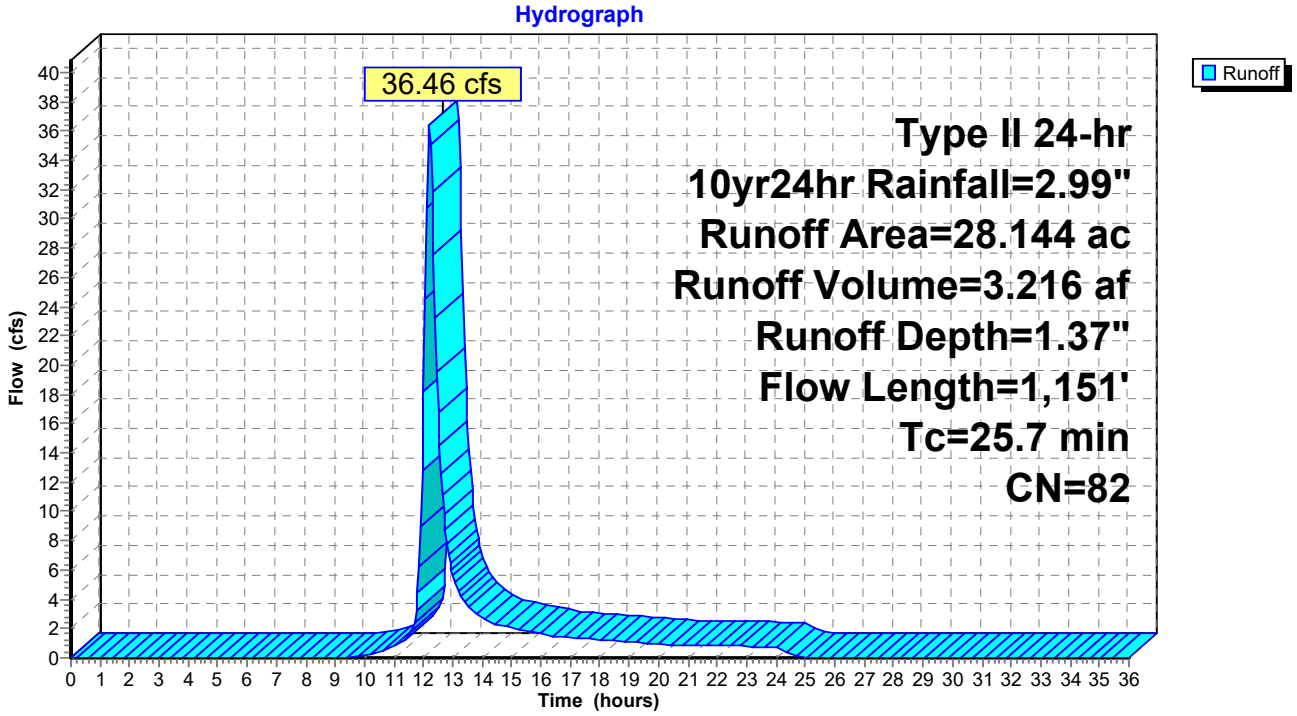
Runoff = 36.46 cfs @ 12.20 hrs, Volume= 3.216 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.213 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.799 | 79 | Deciduous Forest, HSG D |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 1.219 | 81 | Cultivated Crops, HSG D |
| * | 0.119 | 94 | Developed Medium Intensity, HSG D |
| * | 0.116 | 93 | Developed Low Intensity, HSG D |
| * | 0.620 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 94 | Developed Medium Intensity, HSG D |
| * | 0.091 | 93 | Developed Low Intensity, HSG D |
| * | 0.093 | 94 | Developed Medium Intensity, HSG D |
| * | 0.092 | 93 | Developed Low Intensity, HSG D |
| * | 0.562 | 84 | Developed Open Space, HSG D |
| * | 0.626 | 93 | Developed Low Intensity, HSG D |
| * | 9.353 | 81 | Cultivated Crops, HSG D |
| * | 0.285 | 81 | Cultivated Crops, HSG D |
| * | 0.201 | 78 | MEADOW, HSG D |
| * | 0.080 | 98 | IMPERVIOUS, HSG D |
| * | 3.270 | 78 | MEADOW, HSG D |
| * | 0.168 | 98 | IMPERVIOUS, HSG D |
| * | 8.034 | 78 | MEADOW, HSG D |
| | 28.144 | 82 | Weighted Average |
| | 27.895 | | 99.12% Pervious Area |
| | 0.248 | | 0.88% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.9 | 38 | 0.0016 | 0.34 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 4.4 | 62 | 0.0147 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 11 | 0.0221 | 1.34 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 121 | 0.0290 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 153 | 0.0151 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 96 | 0.0281 | 3.40 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.0 | 13 | 0.2093 | 9.29 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 12.5 | 475 | 0.0049 | 0.63 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 73 | 0.0225 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 109 | 0.0309 | 1.23 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 25.7 | 1,151 | Total | | | |

## Subcatchment 57: WS57



## Summary for Subcatchment 58: WS58

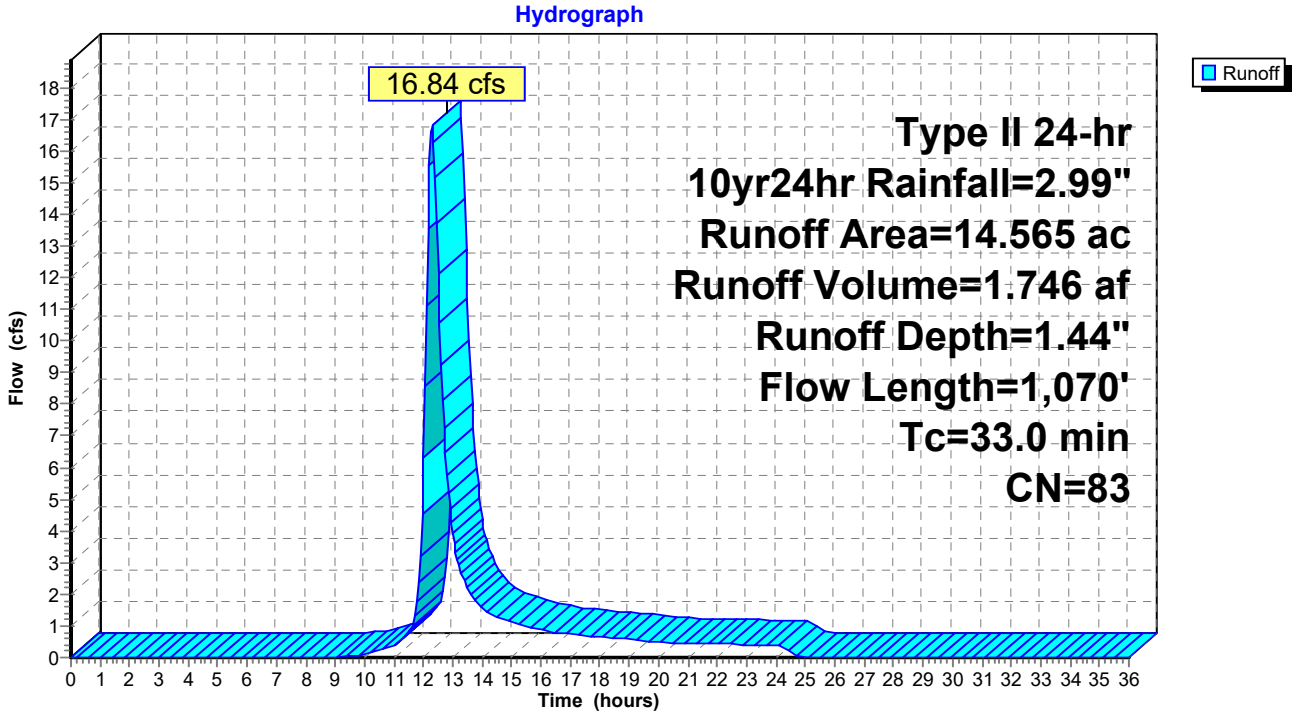
Runoff = 16.84 cfs @ 12.29 hrs, Volume= 1.746 af, Depth= 1.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.103 | 94 | Developed Medium Intensity, HSG D |
| * | 0.106 | 93 | Developed Low Intensity, HSG D |
| * | 0.672 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 94 | Developed Medium Intensity, HSG D |
| * | 0.131 | 93 | Developed Low Intensity, HSG D |
| * | 0.076 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.188 | 81 | Cultivated Crops, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.343 | 93 | Developed Low Intensity, HSG D |
| * | 2.260 | 93 | Developed Low Intensity, HSG D |
| * | 2.650 | 81 | Cultivated Crops, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.069 | 78 | MEADOW, HSG D |
| * | 3.596 | 78 | MEADOW, HSG D |
| * | 0.118 | 98 | IMPERVIOUS, HSG D |
| * | 3.839 | 78 | MEADOW, HSG D |
| | 14.565 | 83 | Weighted Average |
| | 14.404 | | 98.90% Pervious Area |
| | 0.161 | | 1.10% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.4 | 100 | 0.0107 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.1 | 266 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 22 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0243 | 3.16 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 23 | 0.0213 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 152 | 0.0088 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 47 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 68 | 0.0210 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.8 | 215 | 0.0077 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 153 | 0.0285 | 3.43 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 33.0 | 1,070 | Total | | | |

## Subcatchment 58: WS58



## Summary for Subcatchment 59: WS59

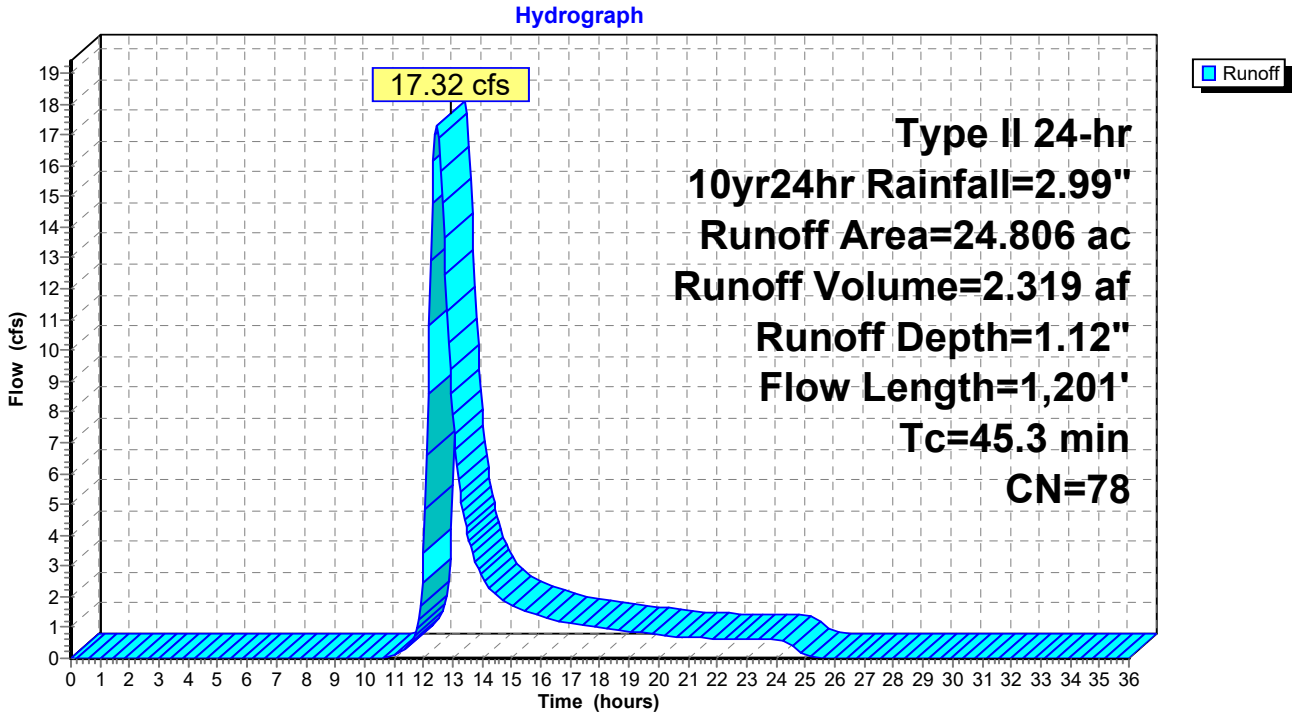
Runoff = 17.32 cfs @ 12.46 hrs, Volume= 2.319 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.484 | 84 | Developed Open Space, HSG D |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 0.036 | 81 | Cultivated Crops, HSG D |
| * | 4.832 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.165 | 78 | MEADOW, HSG D |
| * | 2.797 | 78 | MEADOW, HSG D |
| * | 1.587 | 58 | MEADOW, HSG B |
| * | 2.407 | 78 | MEADOW, HSG D |
| * | 0.202 | 98 | IMPERVIOUS, HSG D |
| * | 10.986 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 24.806 | 78 | Weighted Average |
| | 24.561 | | 99.01% Pervious Area |
| | 0.245 | | 0.99% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.6 | 100 | 0.0088 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 209 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 76 | 0.0175 | 0.93 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 23 | 0.0069 | 1.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 17 | 0.0205 | 1.00 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 74 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 9.6 | 353 | 0.0076 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.5 | 63 | 0.0003 | 0.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.0 | 134 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 151 | 0.0147 | 2.46 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 45.3 | 1,201 | Total | | | |

## Subcatchment 59: WS59



## Summary for Subcatchment 60: WS60

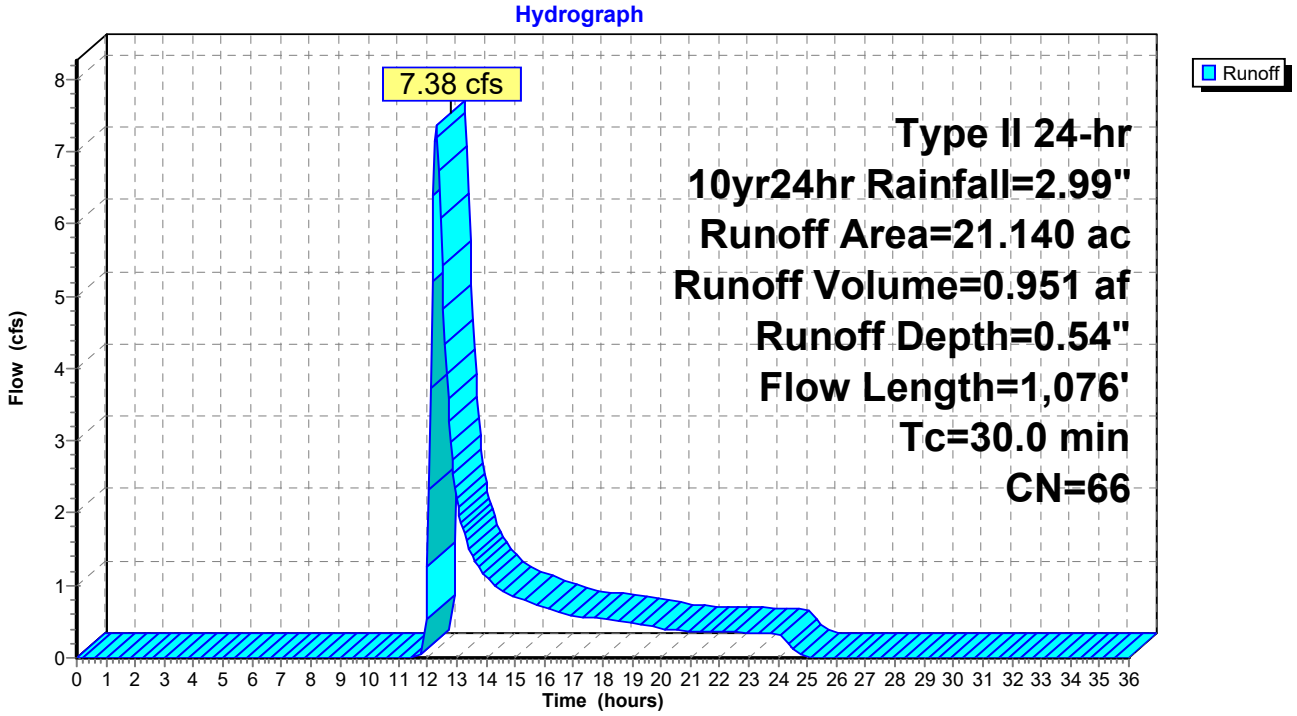
Runoff = 7.38 cfs @ 12.30 hrs, Volume= 0.951 af, Depth= 0.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.096 | 71 | Cultivated Crops, HSG B |
| * | 0.040 | 81 | Cultivated Crops, HSG D |
| * | 0.499 | 81 | Cultivated Crops, HSG D |
| * | 0.701 | 71 | Cultivated Crops, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| * | 0.348 | 78 | MEADOW, HSG D |
| * | 0.075 | 98 | IMPERVIOUS, HSG D |
| * | 0.397 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.694 | 58 | MEADOW, HSG B |
| * | 0.065 | 98 | IMPERVIOUS, HSG B |
| * | 10.636 | 58 | MEADOW, HSG B |
| * | 0.323 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG D |
| * | 0.595 | 78 | MEADOW, HSG D |
| * | 1.544 | 78 | MEADOW, HSG D |
| * | 0.174 | 98 | IMPERVIOUS, HSG D |
| * | 3.623 | 78 | MEADOW, HSG D |
| * | 0.037 | 98 | IMPERVIOUS, HSG D |
| * | 0.219 | 58 | MEADOW, HSG B |
| * | 0.027 | 58 | MEADOW, HSG B |
| | 21.140 | 66 | Weighted Average |
| | 20.742 | | 98.11% Pervious Area |
| | 0.399 | | 1.89% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.0 | 100 | 0.0072 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 30 | 0.0302 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 31 | 0.0472 | 1.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 23 | 0.0448 | 4.29 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 31 | 0.0543 | 1.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.7 | 144 | 0.0425 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 190 | 0.0319 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 294 | 0.0358 | 1.33 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 192 | 0.0485 | 1.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 40 | 0.0123 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 30.0 | 1,076 | Total | | | |

## Subcatchment 60: WS60



## Summary for Subcatchment 61: WS61

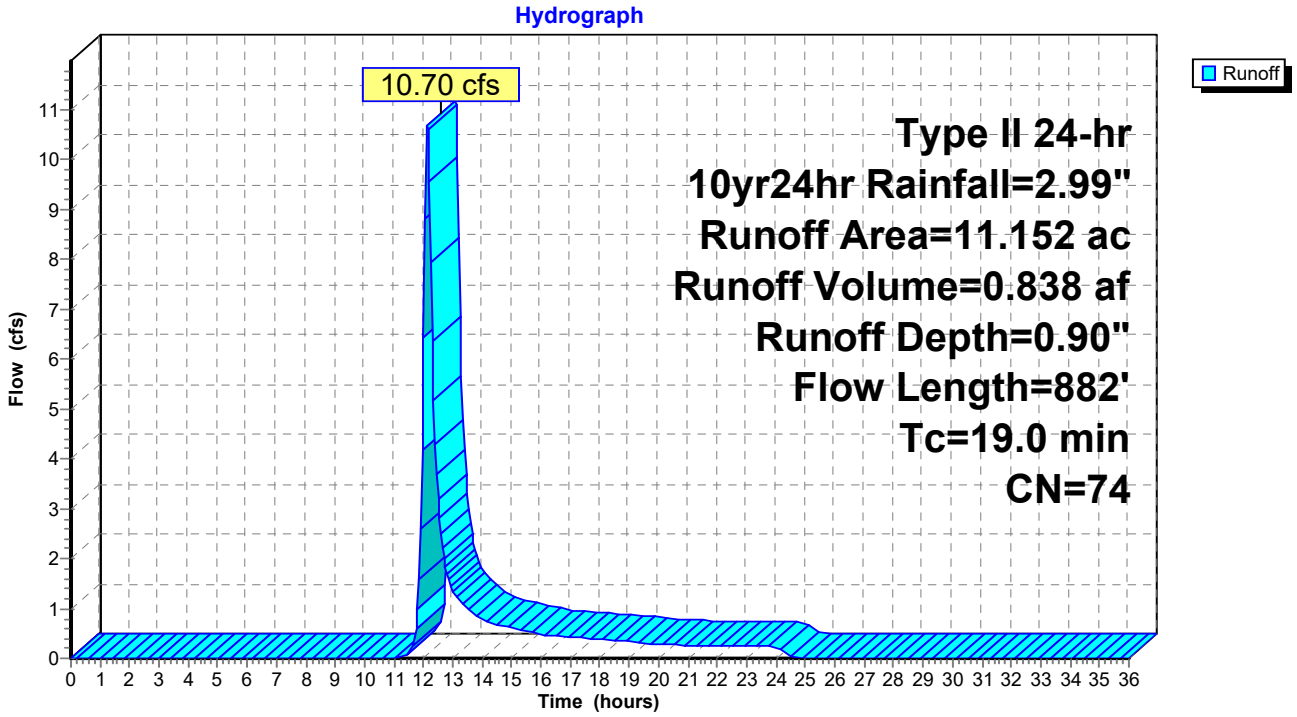
Runoff = 10.70 cfs @ 12.13 hrs, Volume= 0.838 af, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.005 | 61 | Pasture/Hay, HSG B |
| * | 0.480 | 79 | Deciduous Forest, HSG D |
| * | 0.892 | 81 | Cultivated Crops, HSG D |
| * | 0.327 | 81 | Cultivated Crops, HSG D |
| * | 0.940 | 71 | Cultivated Crops, HSG B |
| * | 0.095 | 86 | Woody Wetlands, HSG B |
| * | 0.015 | 78 | MEADOW, HSG D |
| * | 0.971 | 78 | MEADOW, HSG D |
| * | 1.432 | 58 | MEADOW, HSG B |
| * | 0.607 | 78 | MEADOW, HSG D |
| * | 0.098 | 78 | MEADOW, HSG D |
| * | 0.602 | 78 | MEADOW, HSG D |
| * | 0.001 | 98 | IMPERVIOUS, HSG D |
| * | 4.242 | 78 | MEADOW, HSG D |
| * | 0.006 | 98 | IMPERVIOUS, HSG D |
| * | 0.239 | 58 | MEADOW, HSG B |
| * | 0.202 | 58 | MEADOW, HSG B |
| | 11.152 | 74 | Weighted Average |
| | 11.145 | | 99.94% Pervious Area |
| | 0.007 | | 0.06% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.7 | 58 | 0.0697 | 0.21 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.3 | 42 | 0.0850 | 0.21 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.0 | 125 | 0.0825 | 2.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 236 | 0.0554 | 1.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 72 | 0.0380 | 1.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 63 | 0.0032 | 0.39 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 273 | 0.0182 | 1.22 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 12 | 0.0128 | 0.57 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.0 | 882 | Total | | | |

## Subcatchment 61: WS61



## Summary for Subcatchment 62: WS62

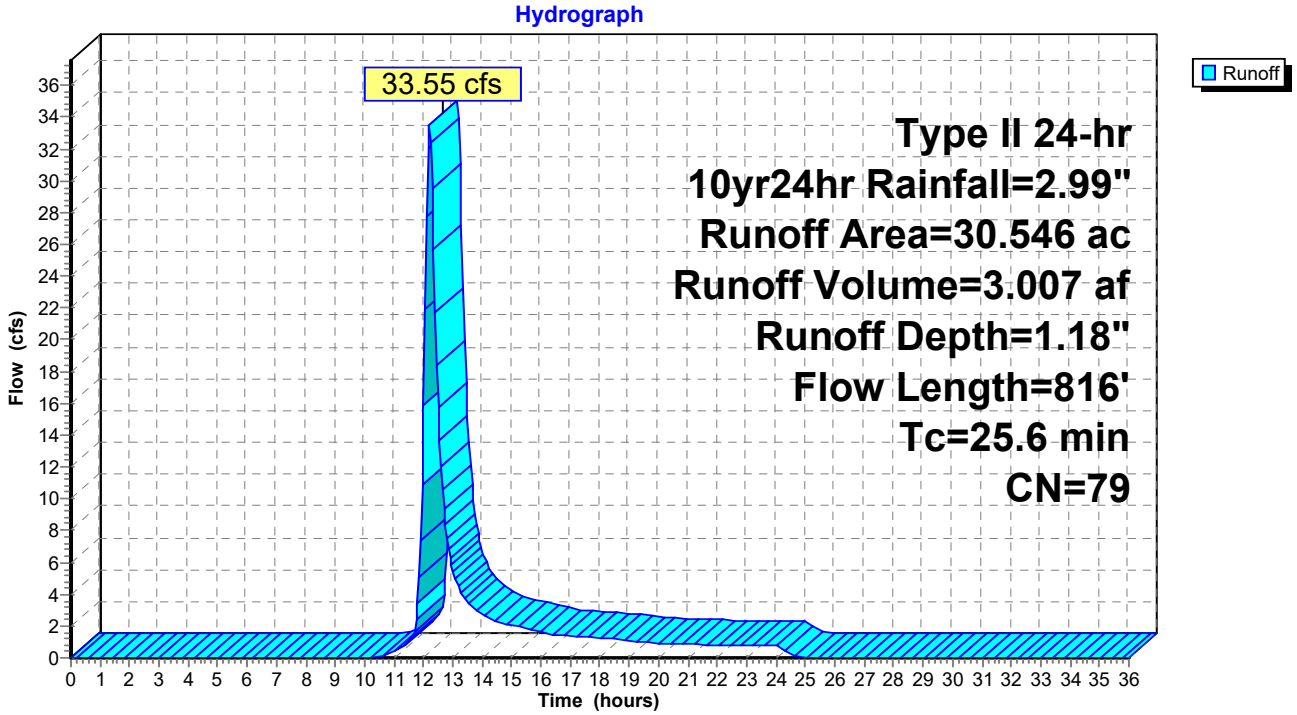
Runoff = 33.55 cfs @ 12.20 hrs, Volume= 3.007 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.426 | 86 | Woody Wetlands, HSG D |
| * | 3.925 | 80 | Pasture/Hay, HSG D |
| * | 1.263 | 81 | Cultivated Crops, HSG D |
| * | 3.524 | 81 | Cultivated Crops, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| * | 0.109 | 78 | MEADOW, HSG D |
| * | 0.011 | 98 | IMPERVIOUS, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| * | 0.093 | 78 | MEADOW, HSG D |
| * | 1.348 | 78 | MEADOW, HSG D |
| * | 6.853 | 78 | MEADOW, HSG D |
| * | 0.032 | 98 | IMPERVIOUS, HSG D |
| * | 0.139 | 98 | IMPERVIOUS, HSG D |
| * | 0.447 | 78 | MEADOW, HSG D |
| * | 0.366 | 78 | MEADOW, HSG D |
| * | 3.160 | 78 | MEADOW, HSG D |
| * | 7.384 | 78 | MEADOW, HSG D |
| * | 0.263 | 98 | IMPERVIOUS, HSG D |
| | 30.546 | 79 | Weighted Average |
| | 30.101 | | 98.54% Pervious Area |
| | 0.445 | | 1.46% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.7 | 32 | 0.0222 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.9 | 10 | 0.0202 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 22 | 0.0346 | 1.04 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 5.0 | 35 | 0.0216 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 23 | 0.0229 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 158 | 0.0094 | 0.68 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 231 | 0.0186 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 53 | 0.0155 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 38 | 0.0106 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.4 | 214 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.6 | 816 | Total | | | |

## Subcatchment 62: WS62



## Summary for Subcatchment 63: WS63

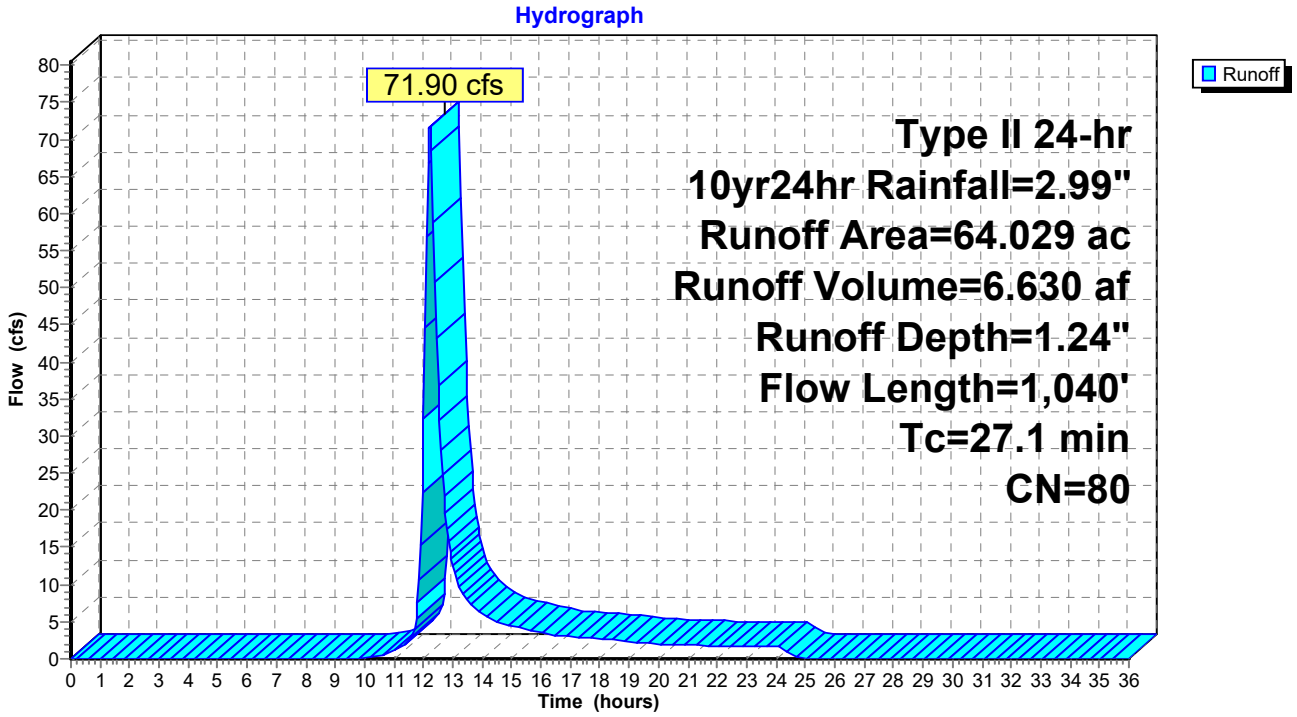
Runoff = 71.90 cfs @ 12.22 hrs, Volume= 6.630 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.064 | 84 | Developed Open Space, HSG D |
| * | 0.204 | 93 | Developed Low Intensity, HSG D |
| * | 0.191 | 84 | Developed Open Space, HSG D |
| * | 0.261 | 93 | Developed Low Intensity, HSG D |
| * | 0.592 | 93 | Developed Low Intensity, HSG D |
| * | 0.522 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 93 | Developed Low Intensity, HSG D |
| * | 0.068 | 84 | Developed Open Space, HSG D |
| * | 4.348 | 81 | Cultivated Crops, HSG D |
| * | 17.034 | 81 | Cultivated Crops, HSG D |
| * | 0.249 | 78 | MEADOW, HSG D |
| * | 0.351 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.495 | 78 | MEADOW, HSG D |
| * | 3.588 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.883 | 78 | MEADOW, HSG D |
| * | 0.437 | 78 | MEADOW, HSG D |
| * | 6.397 | 78 | MEADOW, HSG D |
| * | 25.818 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.007 | 98 | IMPERVIOUS, HSG D |
| * | 0.054 | 78 | MEADOW, HSG D |
| * | 0.054 | 98 | IMPERVIOUS, HSG D |
| * | 0.083 | 78 | MEADOW, HSG D |
| * | 0.083 | 98 | IMPERVIOUS, HSG D |
| * | 0.572 | 78 | MEADOW, HSG D |
| * | 0.572 | 98 | IMPERVIOUS, HSG D |
| | 64.029 | 80 | Weighted Average |
| | 63.227 | | 98.75% Pervious Area |
| | 0.801 | | 1.25% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.2 | 14 | 0.0698 | 1.25 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.6 | 22 | 0.0422 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.0 | 65 | 0.0314 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 255 | 0.0291 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 115 | 0.0119 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 41 | 0.0171 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 89 | 0.0102 | 0.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 211 | 0.0063 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 228 | 0.0111 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.1 | 1,040 | Total | | | |

## Subcatchment 63: WS63



## Summary for Subcatchment 64: WS64

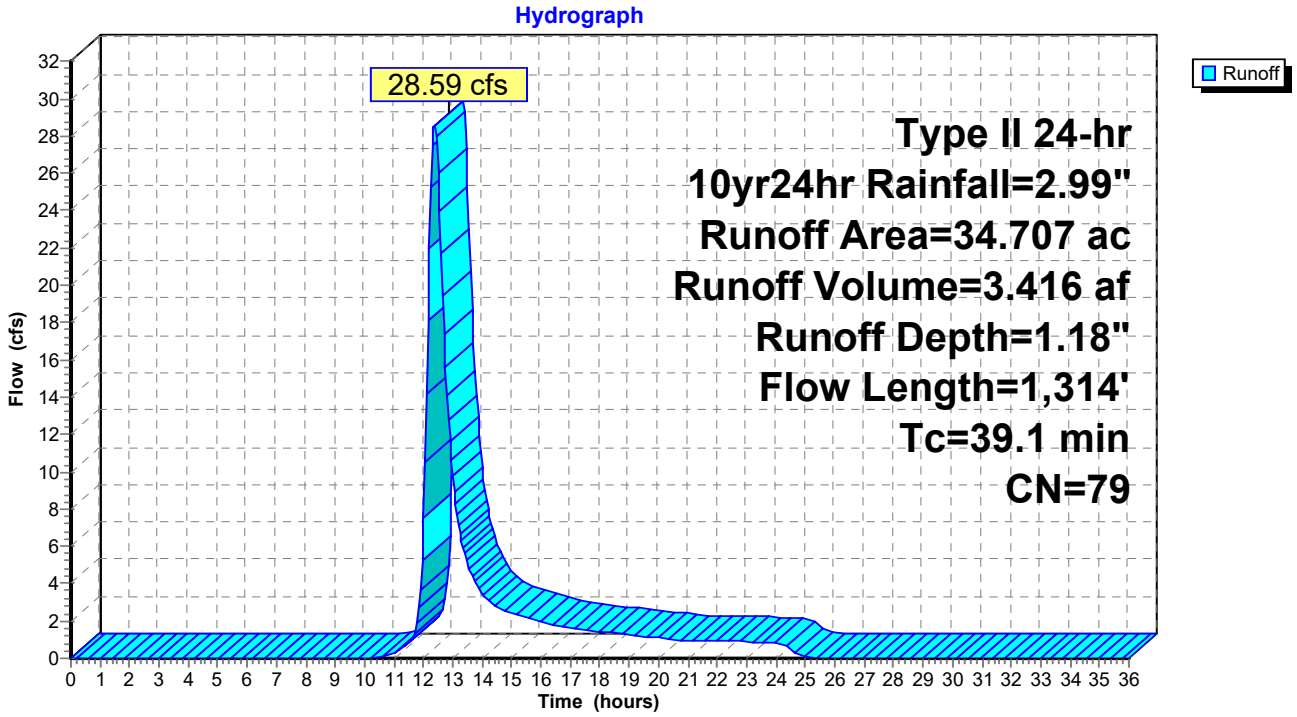
Runoff = 28.59 cfs @ 12.37 hrs, Volume= 3.416 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.070 | 94 | Developed Medium Intensity, HSG D |
| * | 0.213 | 81 | Cultivated Crops, HSG D |
| * | 0.051 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.004 | 84 | Developed Open Space, HSG D |
| * | 0.241 | 93 | Developed Low Intensity, HSG D |
| * | 0.120 | 84 | Developed Open Space, HSG D |
| * | 0.388 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 84 | Developed Open Space, HSG D |
| * | 0.707 | 81 | Cultivated Crops, HSG D |
| * | 2.771 | 81 | Cultivated Crops, HSG D |
| * | 1.011 | 78 | MEADOW, HSG D |
| * | 10.466 | 78 | MEADOW, HSG D |
| * | 0.040 | 98 | IMPERVIOUS, HSG D |
| * | 0.083 | 78 | MEADOW, HSG D |
| * | 0.121 | 78 | MEADOW, HSG D |
| * | 2.314 | 78 | MEADOW, HSG D |
| * | 15.070 | 78 | MEADOW, HSG D |
| * | 0.045 | 98 | IMPERVIOUS, HSG D |
| * | 0.149 | 78 | MEADOW, HSG D |
| * | 0.149 | 98 | IMPERVIOUS, HSG D |
| * | 0.171 | 78 | MEADOW, HSG D |
| * | 0.171 | 98 | IMPERVIOUS, HSG D |
| | 34.707 | 79 | Weighted Average |
| | 34.302 | | 98.83% Pervious Area |
| | 0.405 | | 1.17% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 14.9 | 100 | 0.0115 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.3 | 80 | 0.0230 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 223 | 0.0189 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 170 | 0.0105 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 85 | 0.0270 | 1.15 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 21 | 0.0127 | 0.79 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 11 | 0.0132 | 2.33 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 23 | 0.0180 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 138 | 0.0157 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.5 | 329 | 0.0110 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 26 | 0.0086 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 31 | 0.0084 | 0.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 41 | 0.0076 | 0.79 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 37 | 0.0100 | 2.03 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 39.1 | 1,314 | Total | | | |

## Subcatchment 64: WS64



## Summary for Subcatchment 65: WS65

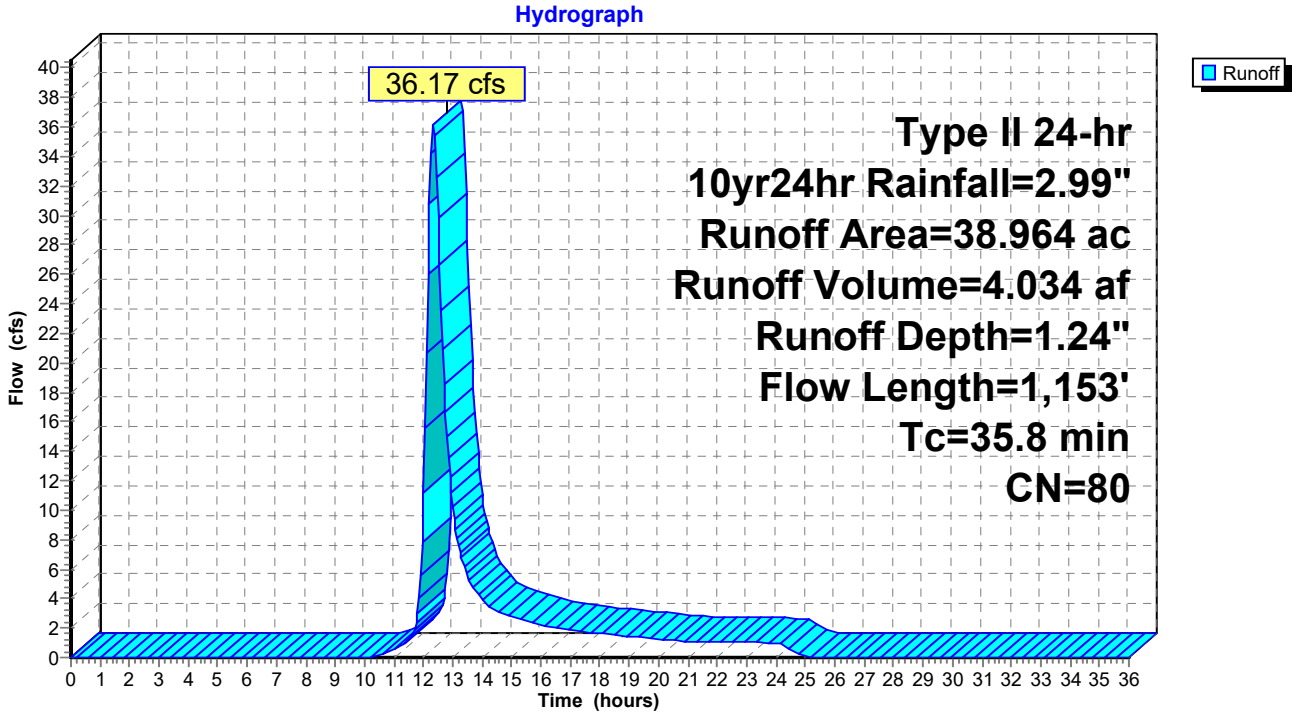
Runoff = 36.17 cfs @ 12.33 hrs, Volume= 4.034 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.808 | 84 | Developed Open Space, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 93 | Developed Low Intensity, HSG D |
| * | 1.799 | 93 | Developed Low Intensity, HSG D |
| * | 0.220 | 94 | Developed Medium Intensity, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.187 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 81 | Cultivated Crops, HSG D |
| * | 3.888 | 81 | Cultivated Crops, HSG D |
| * | 0.620 | 81 | Cultivated Crops, HSG D |
| * | 2.076 | 81 | Cultivated Crops, HSG D |
| * | 0.180 | 78 | MEADOW, HSG D |
| * | 4.641 | 78 | MEADOW, HSG D |
| * | 14.598 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.341 | 78 | MEADOW, HSG D |
| * | 3.010 | 78 | MEADOW, HSG D |
| * | 1.721 | 78 | MEADOW, HSG D |
| * | 2.243 | 78 | MEADOW, HSG D |
| * | 0.306 | 78 | MEADOW, HSG D |
| * | 0.306 | 98 | IMPERVIOUS, HSG D |
| * | 0.052 | 78 | MEADOW, HSG D |
| * | 0.052 | 98 | IMPERVIOUS, HSG D |
| | 38.964 | 80 | Weighted Average |
| | 38.564 | | 98.97% Pervious Area |
| | 0.401 | | 1.03% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.0 | 100 | 0.0072 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.8 | 44 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 173 | 0.0382 | 1.37 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 122 | 0.0401 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 72 | 0.0156 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 25 | 0.0292 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 36 | 0.0017 | 0.83 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 2.0 | 103 | 0.0151 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 228 | 0.0232 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.9 | 129 | 0.0117 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 121 | 0.0081 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.8 | 1,153 | Total | | | |

## Subcatchment 65: WS65



## Summary for Subcatchment 66: WS66

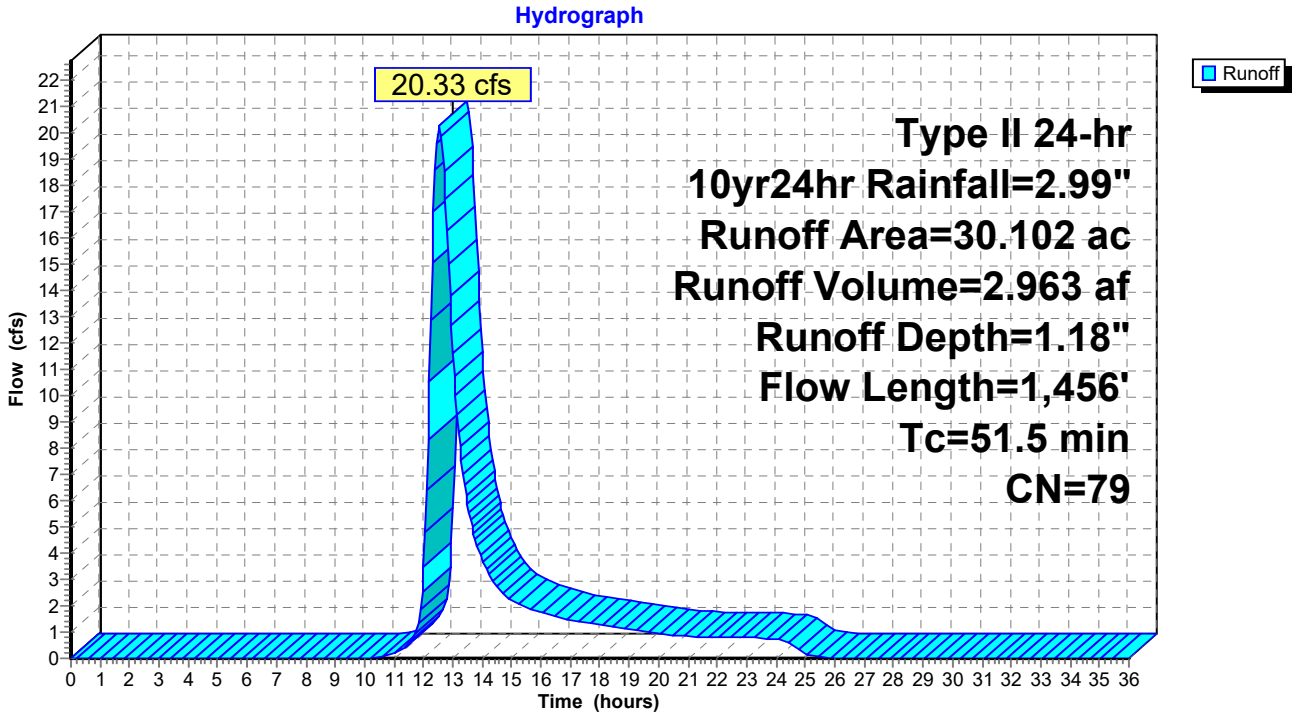
Runoff = 20.33 cfs @ 12.54 hrs, Volume= 2.963 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.002 | 94 | Developed Medium Intensity, HSG D |
| * | 4.099 | 81 | Cultivated Crops, HSG D |
| * | 2.336 | 81 | Cultivated Crops, HSG D |
| * | 2.321 | 78 | MEADOW, HSG D |
| * | 0.469 | 78 | MEADOW, HSG D |
| * | 12.104 | 78 | MEADOW, HSG D |
| * | 1.365 | 78 | MEADOW, HSG D |
| * | 2.497 | 78 | MEADOW, HSG D |
| * | 4.186 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.140 | 78 | MEADOW, HSG D |
| * | 0.140 | 98 | IMPERVIOUS, HSG D |
| * | 0.201 | 78 | MEADOW, HSG D |
| * | 0.201 | 98 | IMPERVIOUS, HSG D |
| | 30.102 | 79 | Weighted Average |
| | 29.719 | | 98.73% Pervious Area |
| | 0.383 | | 1.27% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.5 | 100 | 0.0218 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.3 | 152 | 0.0124 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.8 | 150 | 0.0039 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 291 | 0.0320 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 111 | 0.0135 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 54 | 0.0097 | 0.69 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 5 | 0.0059 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 109 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 26 | 0.0214 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 91 | 0.0125 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 19.4 | 366 | 0.0020 | 0.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 51.5 | 1,456 | Total | | | |

## Subcatchment 66: WS66



## Summary for Subcatchment 67: WS67

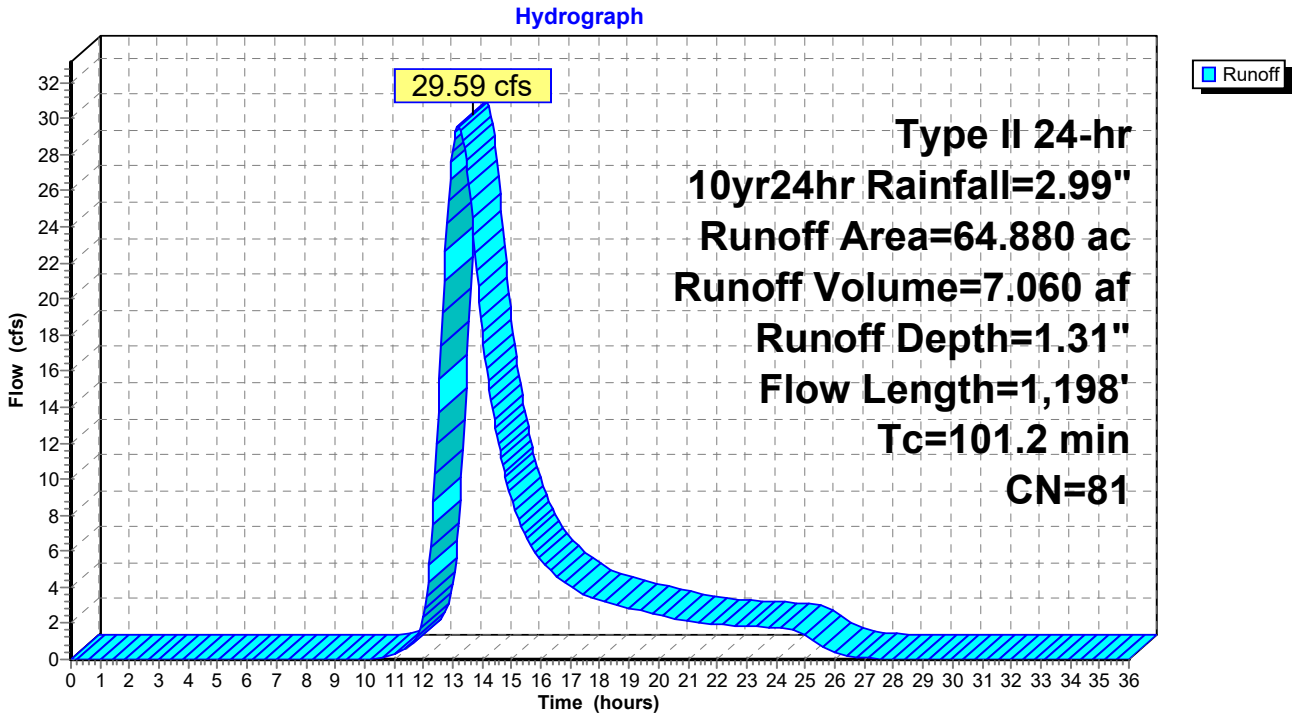
Runoff = 29.59 cfs @ 13.17 hrs, Volume= 7.060 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10yr24hr Rainfall=2.99"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.065 | 93 | Developed Low Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.110 | 94 | Developed Medium Intensity, HSG D |
| * | 0.317 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.210 | 93 | Developed Low Intensity, HSG D |
| * | 0.490 | 93 | Developed Low Intensity, HSG D |
| * | 0.053 | 84 | Developed Open Space, HSG D |
| * | 0.070 | 84 | Developed Open Space, HSG D |
| * | 0.234 | 86 | Woody Wetlands, HSG D |
| * | 0.117 | 93 | Developed Low Intensity, HSG D |
| * | 0.583 | 93 | Developed Low Intensity, HSG D |
| * | 0.347 | 93 | Developed Low Intensity, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 0.257 | 94 | Developed Medium Intensity, HSG D |
| * | 0.154 | 84 | Developed Open Space, HSG D |
| * | 0.751 | 93 | Developed Low Intensity, HSG D |
| * | 0.173 | 84 | Developed Open Space, HSG D |
| * | 0.904 | 86 | Woody Wetlands, HSG D |
| * | 0.455 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 84 | Developed Open Space, HSG D |
| * | 7.923 | 81 | Cultivated Crops, HSG D |
| * | 7.076 | 81 | Cultivated Crops, HSG D |
| * | 9.818 | 81 | Cultivated Crops, HSG D |
| * | 0.061 | 78 | MEADOW, HSG D |
| * | 0.007 | 98 | IMPERVIOUS, HSG D |
| * | 0.048 | 78 | MEADOW, HSG D |
| * | 0.051 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.130 | 78 | MEADOW, HSG D |
| * | 0.050 | 78 | MEADOW, HSG D |
| * | 2.324 | 78 | MEADOW, HSG D |
| * | 12.998 | 78 | MEADOW, HSG D |
| * | 0.038 | 98 | IMPERVIOUS, HSG D |
| * | 0.179 | 98 | IMPERVIOUS, HSG D |
| * | 4.671 | 78 | MEADOW, HSG D |
| * | 7.788 | 78 | MEADOW, HSG D |
| * | 0.048 | 98 | IMPERVIOUS, HSG D |
| * | 0.404 | 98 | IMPERVIOUS, HSG D |
| * | 1.538 | 78 | MEADOW, HSG D |
| * | 3.645 | 78 | MEADOW, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| | 64.880 | 81 | Weighted Average |
| | 64.153 | | 98.88% Pervious Area |
| | 0.727 | | 1.12% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.3 | 100 | 0.0080 | 0.20 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.5 | 105 | 0.0169 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 55 | 0.0194 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 78.5 | 222 | 0.0000 | 0.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 211 | 0.0156 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 51 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 34 | 0.0685 | 5.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 27 | 0.0549 | 1.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 232 | 0.0273 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 30 | 0.0020 | 0.91 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 12 | 0.0075 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 121 | 0.0148 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 101.2 | 1,198 | Total | | | |

## Subcatchment 67: WS67



Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment1: WS1** Runoff Area=13.742 ac 0.36% Impervious Runoff Depth=0.98"
Flow Length=1,870' Tc=28.4 min CN=69 Runoff=10.86 cfs 1.127 af

**Subcatchment2: WS2** Runoff Area=28.882 ac 1.98% Impervious Runoff Depth=0.73"
Flow Length=1,955' Tc=32.4 min CN=64 Runoff=13.74 cfs 1.758 af

**Subcatchment3: WS3** Runoff Area=10.451 ac 0.00% Impervious Runoff Depth=0.55"
Flow Length=1,032' Tc=16.1 min CN=60 Runoff=5.28 cfs 0.482 af

**Subcatchment5: WS5** Runoff Area=56.549 ac 1.61% Impervious Runoff Depth=0.93"
Flow Length=1,143' Tc=74.9 min CN=68 Runoff=20.51 cfs 4.385 af

**Subcatchment6: WS6** Runoff Area=44.409 ac 1.07% Impervious Runoff Depth=1.04"
Flow Length=2,272' Tc=100.4 min CN=70 Runoff=14.94 cfs 3.845 af

**Subcatchment7: WS7** Runoff Area=11.383 ac 0.00% Impervious Runoff Depth=1.54"
Flow Length=436' Tc=53.3 min CN=78 Runoff=9.88 cfs 1.457 af

**Subcatchment8: WS8** Runoff Area=159.778 ac 0.88% Impervious Runoff Depth=1.47"
Flow Length=3,027' Tc=68.2 min CN=77 Runoff=109.82 cfs 19.543 af

**Subcatchment9: WS9** Runoff Area=11.132 ac 2.50% Impervious Runoff Depth=0.60"
Flow Length=888' Tc=27.0 min CN=61 Runoff=4.43 cfs 0.552 af

**Subcatchment10: WS10** Runoff Area=10.435 ac 1.24% Impervious Runoff Depth=0.55"
Flow Length=988' Tc=29.7 min CN=60 Runoff=3.45 cfs 0.481 af

**Subcatchment11: WS11** Runoff Area=16.148 ac 0.00% Impervious Runoff Depth=0.47"
Flow Length=896' Tc=28.2 min CN=58 Runoff=4.26 cfs 0.636 af

**Subcatchment12: WS12** Runoff Area=23.932 ac 1.15% Impervious Runoff Depth=0.68"
Flow Length=2,043' Tc=57.4 min CN=63 Runoff=6.87 cfs 1.364 af

**Subcatchment13: WS13** Runoff Area=19.692 ac 1.11% Impervious Runoff Depth=0.60"
Flow Length=1,865' Tc=43.7 min CN=61 Runoff=5.56 cfs 0.977 af

**Subcatchment14: WS14** Runoff Area=69.773 ac 0.48% Impervious Runoff Depth=1.21"
Flow Length=3,906' Tc=100.2 min CN=73 Runoff=28.60 cfs 7.055 af

**Subcatchment15: WS15** Runoff Area=15.438 ac 1.15% Impervious Runoff Depth=1.47"
Flow Length=1,445' Tc=48.0 min CN=77 Runoff=13.73 cfs 1.888 af

**Subcatchment16: WS16** Runoff Area=47.898 ac 0.83% Impervious Runoff Depth=1.54"
Flow Length=2,796' Tc=47.2 min CN=78 Runoff=45.48 cfs 6.129 af

**Subcatchment17: WS17** Runoff Area=13.311 ac 1.18% Impervious Runoff Depth=1.54"
Flow Length=761' Tc=43.5 min CN=78 Runoff=13.41 cfs 1.703 af

**Subcatchment18: WS18** Runoff Area=5.363 ac 1.83% Impervious Runoff Depth=1.10"
Flow Length=263' Tc=13.1 min CN=71 Runoff=7.72 cfs 0.490 af

**Subcatchment19: WS19** Runoff Area=28.615 ac 2.65% Impervious Runoff Depth=1.60"
Flow Length=1,566' Tc=49.7 min CN=79 Runoff=27.47 cfs 3.827 af

**Subcatchment20: WS20** Runoff Area=13.311 ac 1.77% Impervious Runoff Depth=1.60"
Flow Length=1,400' Tc=32.1 min CN=79 Runoff=17.41 cfs 1.780 af

**Subcatchment21: WS21** Runoff Area=16.482 ac 1.47% Impervious Runoff Depth=1.60"
Flow Length=1,616' Tc=44.6 min CN=79 Runoff=17.15 cfs 2.204 af

**Subcatchment22: WS22** Runoff Area=38.847 ac 0.90% Impervious Runoff Depth=1.47"
Flow Length=2,651' Tc=65.0 min CN=77 Runoff=27.66 cfs 4.751 af

**Subcatchment23: WS23** Runoff Area=7.796 ac 0.00% Impervious Runoff Depth=1.98"
Flow Length=658' Tc=100.8 min CN=84 Runoff=5.55 cfs 1.286 af

**Subcatchment24: WS24** Runoff Area=27.435 ac 2.39% Impervious Runoff Depth=1.54"
Flow Length=921' Tc=82.5 min CN=78 Runoff=17.18 cfs 3.510 af

**Subcatchment25: WS25** Runoff Area=15.083 ac 3.53% Impervious Runoff Depth=1.10"
Flow Length=1,028' Tc=40.8 min CN=71 Runoff=10.59 cfs 1.377 af

**Subcatchment26: WS26** Runoff Area=24.142 ac 0.57% Impervious Runoff Depth=1.75"
Flow Length=1,225' Tc=62.8 min CN=81 Runoff=21.55 cfs 3.519 af

**Subcatchment27: WS27** Runoff Area=22.172 ac 0.75% Impervious Runoff Depth=1.34"
Flow Length=1,163' Tc=35.5 min CN=75 Runoff=21.95 cfs 2.471 af

**Subcatchment28: WS28** Runoff Area=91.586 ac 0.48% Impervious Runoff Depth=1.54"
Flow Length=1,033' Tc=24.0 min CN=78 Runoff=137.59 cfs 11.719 af

**Subcatchment29: WS29** Runoff Area=25.894 ac 1.34% Impervious Runoff Depth=1.15"
Flow Length=808' Tc=33.8 min CN=72 Runoff=22.18 cfs 2.490 af

**Subcatchment30: WS30** Runoff Area=14.220 ac 2.95% Impervious Runoff Depth=0.78"
Flow Length=682' Tc=20.9 min CN=65 Runoff=10.09 cfs 0.922 af

**Subcatchment31: WS31** Runoff Area=5.243 ac 1.12% Impervious Runoff Depth=0.83"
Flow Length=569' Tc=17.4 min CN=66 Runoff=4.55 cfs 0.362 af

**Subcatchment32: WS32** Runoff Area=10.108 ac 0.00% Impervious Runoff Depth=1.21"
Flow Length=678' Tc=23.9 min CN=73 Runoff=11.62 cfs 1.022 af

**Subcatchment33: WS33** Runoff Area=15.180 ac 1.72% Impervious Runoff Depth=0.93"
Flow Length=1,326' Tc=29.5 min CN=68 Runoff=10.86 cfs 1.177 af

**Subcatchment34: WS34** Runoff Area=58.029 ac 1.29% Impervious Runoff Depth=0.93"
Flow Length=1,963' Tc=40.5 min CN=68 Runoff=33.05 cfs 4.499 af

**Subcatchment35: WS35** Runoff Area=63.197 ac 0.55% Impervious Runoff Depth=1.04"
Flow Length=1,782' Tc=32.0 min CN=70 Runoff=49.19 cfs 5.472 af

**Subcatchment36: WS36** Runoff Area=28.631 ac 2.05% Impervious Runoff Depth=0.78"
Flow Length=1,196' Tc=73.0 min CN=65 Runoff=8.30 cfs 1.857 af

**Subcatchment37: WS37** Runoff Area=10.402 ac 0.00% Impervious Runoff Depth=0.68"
Flow Length=661' Tc=20.1 min CN=63 Runoff=6.29 cfs 0.593 af

**Subcatchment38: WS38** Runoff Area=14.434 ac 1.11% Impervious Runoff Depth=1.40"
Flow Length=629' Tc=14.4 min CN=76 Runoff=26.14 cfs 1.686 af

**Subcatchment39: WS39** Runoff Area=30.742 ac 1.75% Impervious Runoff Depth=0.78"
Flow Length=707' Tc=21.5 min CN=65 Runoff=21.41 cfs 1.994 af

**Subcatchment40: WS40** Runoff Area=31.131 ac 1.02% Impervious Runoff Depth=1.54"
Flow Length=1,419' Tc=31.5 min CN=78 Runoff=39.22 cfs 3.983 af

**Subcatchment41: WS41** Runoff Area=34.979 ac 1.08% Impervious Runoff Depth=1.60"
Flow Length=1,292' Tc=37.9 min CN=79 Runoff=40.81 cfs 4.678 af

**Subcatchment42: WS42** Runoff Area=48.465 ac 1.42% Impervious Runoff Depth=0.73"
Flow Length=912' Tc=29.7 min CN=64 Runoff=24.55 cfs 2.950 af

**Subcatchment43: WS43** Runoff Area=33.038 ac 1.53% Impervious Runoff Depth=1.60"
Flow Length=1,479' Tc=35.6 min CN=79 Runoff=40.25 cfs 4.419 af

**Subcatchment44: WS44** Runoff Area=80.873 ac 1.03% Impervious Runoff Depth=1.21"
Flow Length=3,050' Tc=116.6 min CN=73 Runoff=29.14 cfs 8.177 af

**Subcatchment45: WS45** Runoff Area=28.790 ac 2.28% Impervious Runoff Depth=1.10"
Flow Length=1,322' Tc=32.8 min CN=71 Runoff=23.60 cfs 2.629 af

**Subcatchment46: WS46** Runoff Area=27.896 ac 1.76% Impervious Runoff Depth=1.60"
Flow Length=1,507' Tc=43.0 min CN=79 Runoff=29.75 cfs 3.731 af

**Subcatchment47: WS47** Runoff Area=45.903 ac 1.29% Impervious Runoff Depth=1.68"
Flow Length=1,645' Tc=46.2 min CN=80 Runoff=48.83 cfs 6.412 af

**Subcatchment48: WS48** Runoff Area=43.068 ac 0.85% Impervious Runoff Depth=1.75"
Flow Length=1,506' Tc=76.0 min CN=81 Runoff=33.31 cfs 6.278 af

**Subcatchment49: WS49** Runoff Area=30.898 ac 0.91% Impervious Runoff Depth=1.68"
Flow Length=1,464' Tc=61.6 min CN=80 Runoff=26.66 cfs 4.316 af

**Subcatchment50: WS50** Runoff Area=54.384 ac 1.45% Impervious Runoff Depth=1.68"
Flow Length=2,572' Tc=90.8 min CN=80 Runoff=34.95 cfs 7.596 af

**Subcatchment51: WS51** Runoff Area=22.968 ac 1.89% Impervious Runoff Depth=1.60"
Flow Length=1,683' Tc=54.2 min CN=79 Runoff=20.71 cfs 3.072 af

**Subcatchment52: WS52** Runoff Area=46.992 ac 1.34% Impervious Runoff Depth=1.60"
Flow Length=692' Tc=23.3 min CN=79 Runoff=75.62 cfs 6.285 af

**Subcatchment53: WS53** Runoff Area=17.871 ac 1.15% Impervious Runoff Depth=1.27"
Flow Length=2,011' Tc=106.4 min CN=74 Runoff=7.42 cfs 1.898 af

**Subcatchment54: WS54** Runoff Area=27.065 ac 1.70% Impervious Runoff Depth=1.34"
Flow Length=919' Tc=18.7 min CN=75 Runoff=40.52 cfs 3.016 af

**Subcatchment55: WS55** Runoff Area=14.587 ac 0.00% Impervious Runoff Depth=1.40"
Flow Length=907' Tc=22.6 min CN=76 Runoff=20.58 cfs 1.704 af

**Subcatchment56: WS56** Runoff Area=15.054 ac 2.13% Impervious Runoff Depth=1.34"
Flow Length=1,202' Tc=66.0 min CN=75 Runoff=9.47 cfs 1.678 af

**Subcatchment57: WS57** Runoff Area=28.144 ac 0.88% Impervious Runoff Depth=1.82"
Flow Length=1,151' Tc=25.7 min CN=82 Runoff=48.89 cfs 4.278 af

**Subcatchment58: WS58** Runoff Area=14.565 ac 1.10% Impervious Runoff Depth=1.90"
Flow Length=1,070' Tc=33.0 min CN=83 Runoff=22.42 cfs 2.307 af

**Subcatchment59: WS59** Runoff Area=24.806 ac 0.99% Impervious Runoff Depth=1.54"
Flow Length=1,201' Tc=45.3 min CN=78 Runoff=24.28 cfs 3.174 af

**Subcatchment60: WS60** Runoff Area=21.140 ac 1.89% Impervious Runoff Depth=0.83"
Flow Length=1,076' Tc=30.0 min CN=66 Runoff=12.71 cfs 1.458 af

**Subcatchment61: WS61** Runoff Area=11.152 ac 0.06% Impervious Runoff Depth=1.27"
Flow Length=882' Tc=19.0 min CN=74 Runoff=15.62 cfs 1.184 af

**Subcatchment62: WS62** Runoff Area=30.546 ac 1.46% Impervious Runoff Depth=1.60"
Flow Length=816' Tc=25.6 min CN=79 Runoff=46.32 cfs 4.085 af

**Subcatchment63: WS63** Runoff Area=64.029 ac 1.25% Impervious Runoff Depth=1.68"
Flow Length=1,040' Tc=27.1 min CN=80 Runoff=98.34 cfs 8.943 af

**Subcatchment64: WS64** Runoff Area=34.707 ac 1.17% Impervious Runoff Depth=1.60"
Flow Length=1,314' Tc=39.1 min CN=79 Runoff=39.62 cfs 4.642 af

**Subcatchment65: WS65** Runoff Area=38.964 ac 1.03% Impervious Runoff Depth=1.68"
Flow Length=1,153' Tc=35.8 min CN=80 Runoff=49.65 cfs 5.442 af

**Subcatchment66: WS66** Runoff Area=30.102 ac 1.27% Impervious Runoff Depth=1.60"
Flow Length=1,456' Tc=51.5 min CN=79 Runoff=28.20 cfs 4.026 af

**Subcatchment67: WS67** Runoff Area=64.880 ac 1.12% Impervious Runoff Depth=1.75"
Flow Length=1,198' Tc=101.2 min CN=81 Runoff=40.33 cfs 9.457 af

**Total Runoff Area = 2,086.862 ac Runoff Volume = 234.210 af Average Runoff Depth = 1.35"**
**98.82% Pervious = 2,062.216 ac 1.18% Impervious = 24.645 ac**

## Summary for Subcatchment 1: WS1

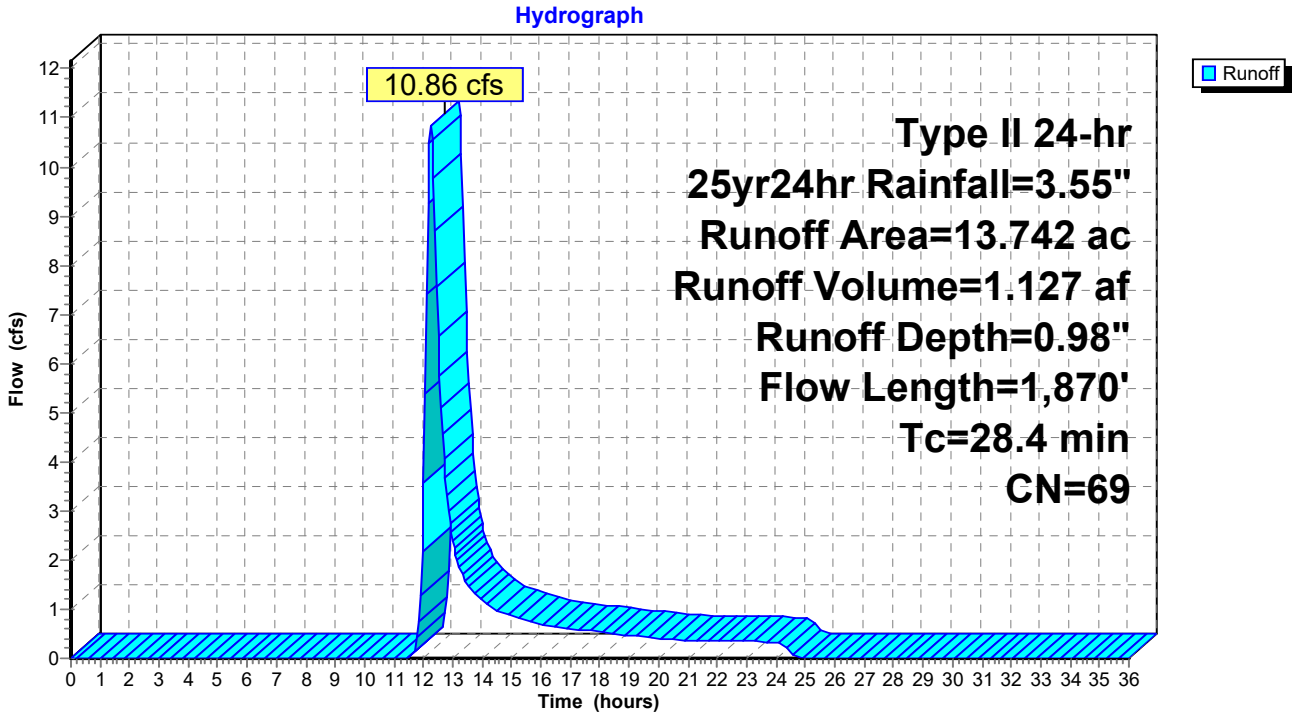
Runoff = 10.86 cfs @ 12.25 hrs, Volume= 1.127 af, Depth= 0.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.033 | 93 | Developed Low Intensity, HSG D |
| * | 0.085 | 84 | Developed Open Space, HSG D |
| * | 0.075 | 81 | Cultivated Crops, HSG D |
| * | 0.094 | 84 | Developed Open Space, HSG D |
| * | 0.065 | 84 | Developed Open Space, HSG D |
| * | 0.313 | 79 | Mixed Forest, HSG D |
| * | 0.065 | 81 | Cultivated Crops, HSG D |
| * | 0.065 | 80 | Pasture/Hay, HSG D |
| * | 0.011 | 81 | Cultivated Crops, HSG D |
| * | 0.424 | 80 | Pasture/Hay, HSG D |
| * | 0.342 | 81 | Cultivated Crops, HSG D |
| * | 0.001 | 60 | Deciduous Forest, HSG B |
| * | 0.000 | 60 | Deciduous Forest, HSG B |
| * | 0.045 | 61 | Pasture/Hay, HSG B |
| * | 0.582 | 80 | Pasture/Hay, HSG D |
| * | 1.466 | 61 | Pasture/Hay, HSG B |
| * | 0.322 | 71 | Cultivated Crops, HSG B |
| * | 0.113 | 78 | MEADOW, HSG D |
| * | 0.038 | 78 | MEADOW, HSG D |
| * | 0.163 | 78 | MEADOW, HSG D |
| * | 0.217 | 78 | MEADOW, HSG D |
| * | 0.056 | 78 | MEADOW, HSG D |
| * | 0.152 | 78 | MEADOW, HSG D |
| * | 0.194 | 78 | MEADOW, HSG D |
| * | 0.408 | 78 | MEADOW, HSG D |
| * | 0.116 | 78 | MEADOW, HSG D |
| * | 0.041 | 78 | MEADOW, HSG D |
| * | 0.215 | 78 | MEADOW, HSG D |
| * | 0.007 | 58 | MEADOW, HSG B |
| * | 0.162 | 78 | MEADOW, HSG D |
| * | 0.042 | 78 | MEADOW, HSG D |
| * | 0.008 | 98 | IMPERVIOUS, HSG D |
| * | 0.026 | 58 | MEADOW, HSG B |
| * | 0.013 | 58 | MEADOW, HSG B |
| * | 0.424 | 58 | MEADOW, HSG B |
| * | 0.705 | 78 | MEADOW, HSG D |
| * | 2.018 | 78 | MEADOW, HSG D |
| * | 0.042 | 98 | IMPERVIOUS, HSG D |
| * | 0.064 | 58 | MEADOW, HSG B |
| * | 0.112 | 58 | MEADOW, HSG B |
| * | 1.086 | 58 | MEADOW, HSG B |
| * | 3.328 | 58 | MEADOW, HSG B |
| | 13.742 | 69 | Weighted Average |
| | 13.692 | | 99.64% Pervious Area |
| | 0.050 | | 0.36% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.3 | 100 | 0.0247 | 0.32 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.2 | 110 | 0.0293 | 1.54 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 252 | 0.0466 | 1.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 162 | 0.0436 | 1.46 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 80 | 0.0861 | 2.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 212 | 0.0423 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 189 | 0.0460 | 1.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 14 | 0.0062 | 0.55 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 176 | 0.0303 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 51 | 0.0252 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 155 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 27 | 0.0137 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 125 | 0.0254 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 98 | 0.0108 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 77 | 0.0899 | 2.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 32 | 0.1660 | 2.04 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 28.4 | 1,870 | Total | | | |

## Subcatchment 1: WS1



## Summary for Subcatchment 2: WS2

Runoff = 13.74 cfs @ 12.33 hrs, Volume= 1.758 af, Depth= 0.73"

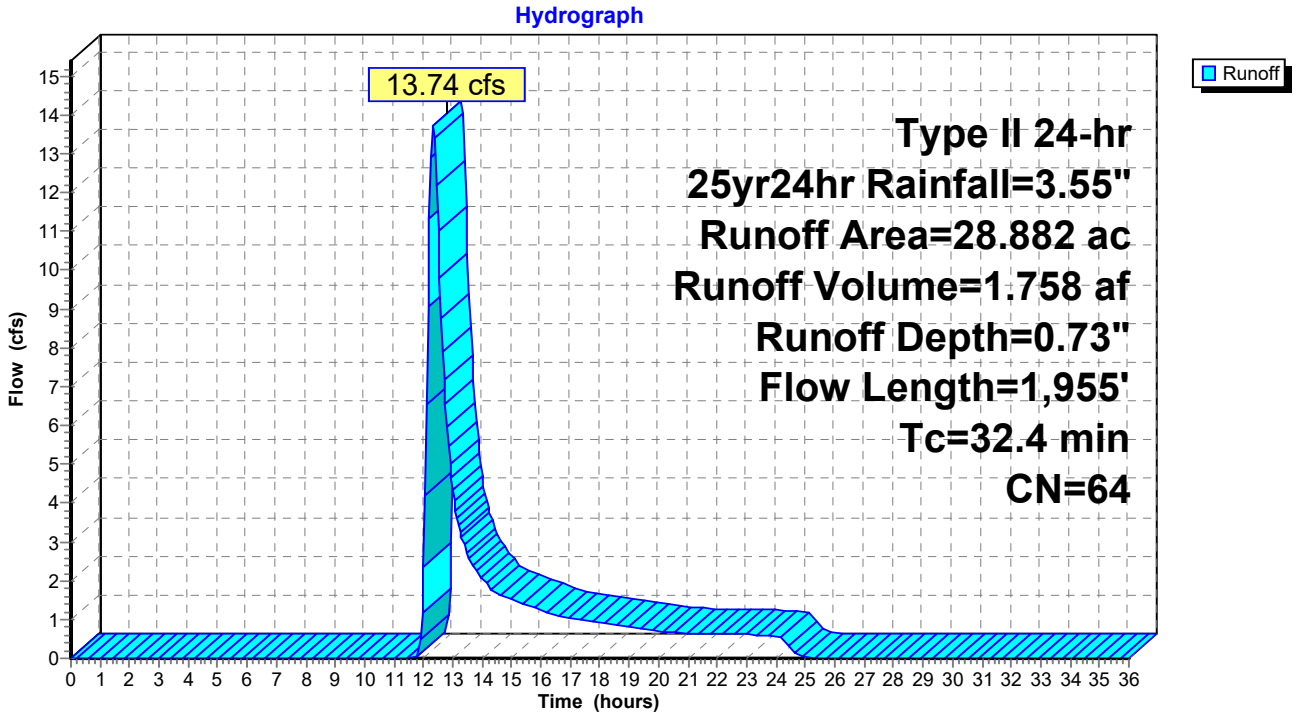
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.021 | 84 | Developed Open Space, HSG D |
| * | 0.697 | 80 | Pasture/Hay, HSG D |
| * | 0.356 | 80 | Pasture/Hay, HSG D |
| * | 0.101 | 93 | Developed Low Intensity, HSG D |
| * | 0.119 | 84 | Developed Open Space, HSG D |
| * | 1.463 | 81 | Cultivated Crops, HSG D |
| * | 0.210 | 71 | Cultivated Crops, HSG B |
| * | 0.111 | 81 | Cultivated Crops, HSG D |
| * | 0.069 | 88 | Developed Low Intensity, HSG B |
| * | 0.210 | 88 | Developed Low Intensity, HSG B |
| * | 0.000 | 68 | Developed Open Space, HSG B |
| * | 0.038 | 68 | Developed Open Space, HSG B |
| * | 0.371 | 61 | Pasture/Hay, HSG B |
| * | 0.036 | 80 | Pasture/Hay, HSG D |
| * | 0.096 | 61 | Pasture/Hay, HSG B |
| * | 0.585 | 61 | Pasture/Hay, HSG B |
| * | 0.125 | 61 | Pasture/Hay, HSG B |
| * | 0.405 | 71 | Cultivated Crops, HSG B |
| * | 0.132 | 58 | MEADOW, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.027 | 98 | IMPERVIOUS, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.002 | 58 | MEADOW, HSG B |
| * | 0.039 | 58 | MEADOW, HSG B |
| * | 0.183 | 58 | MEADOW, HSG B |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.119 | 78 | MEADOW, HSG D |
| * | 0.055 | 58 | MEADOW, HSG B |
| * | 1.377 | 58 | MEADOW, HSG B |
| * | 0.866 | 78 | MEADOW, HSG D |
| * | 1.080 | 78 | MEADOW, HSG D |
| * | 0.645 | 58 | MEADOW, HSG B |
| * | 1.527 | 58 | MEADOW, HSG B |
| * | 0.108 | 78 | MEADOW, HSG D |
| * | 0.001 | 98 | IMPERVIOUS, HSG B |
| * | 0.130 | 58 | MEADOW, HSG B |
| * | 0.157 | 58 | MEADOW, HSG B |
| * | 0.195 | 78 | MEADOW, HSG D |
| * | 0.046 | 78 | MEADOW, HSG D |
| * | 0.034 | 98 | IMPERVIOUS, HSG D |
| * | 0.522 | 58 | MEADOW, HSG B |
| * | 3.886 | 58 | MEADOW, HSG B |
| * | 0.098 | 98 | IMPERVIOUS, HSG B |
| * | 1.672 | 58 | MEADOW, HSG B |
| * | 1.698 | 58 | MEADOW, HSG B |
| * | 0.137 | 98 | IMPERVIOUS, HSG B |
| * | 1.320 | 58 | MEADOW, HSG B |
| * | 7.529 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.191 | 98 | IMPERVIOUS, HSG B |

| | | |
|---|---|---|
| 28.882 | 64 | Weighted Average |
| 28.310 | | 98.02% Pervious Area |
| 0.573 | | 1.98% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.8 | 100 | 0.0320 | 0.35 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 71 | 0.0204 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 125 | 0.0323 | 1.26 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 36 | 0.0379 | 1.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 202 | 0.0356 | 1.32 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.4 | 361 | 0.0648 | 1.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 44 | 0.0269 | 1.15 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 18 | 0.0078 | 1.80 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 49 | 0.0408 | 1.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 74 | 0.0276 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 150 | 0.0290 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 116 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 153 | 0.0317 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 37 | 0.0174 | 0.92 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 130 | 0.0139 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 64 | 0.0182 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 60 | 0.0262 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 164 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 32.4 | 1,955 | Total | | | |

## Subcatchment 2: WS2



## Summary for Subcatchment 3: WS3

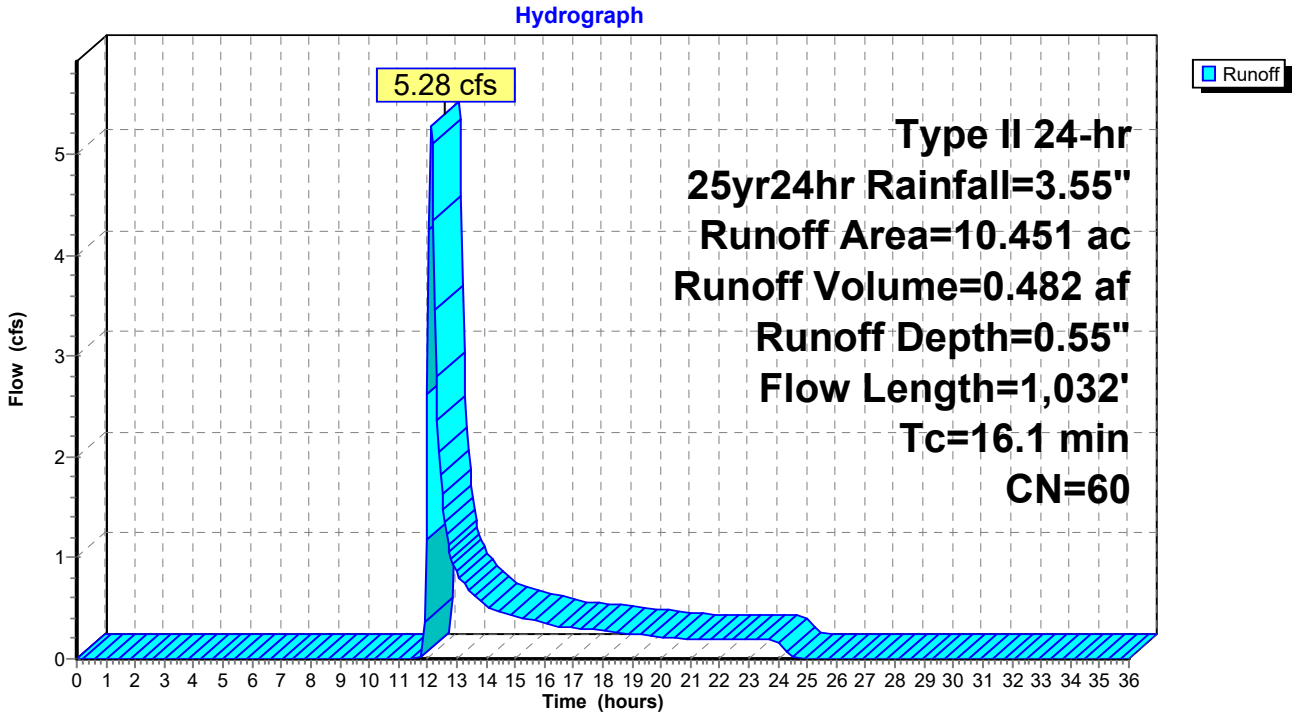
Runoff = 5.28 cfs @ 12.12 hrs, Volume= 0.482 af, Depth= 0.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.079 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.129 | 61 | Pasture/Hay, HSG B |
| * | 0.081 | 61 | Pasture/Hay, HSG B |
| * | 0.731 | 71 | Cultivated Crops, HSG B |
| * | 0.126 | 71 | Cultivated Crops, HSG B |
| * | 0.126 | 71 | Cultivated Crops, HSG B |
| * | 0.003 | 60 | Mixed Forest, HSG B |
| * | 0.020 | 60 | Deciduous Forest, HSG B |
| * | 0.038 | 60 | Deciduous Forest, HSG B |
| * | 0.425 | 60 | Deciduous Forest, HSG B |
| * | 1.655 | 60 | Deciduous Forest, HSG B |
| * | 0.115 | 60 | Mixed Forest, HSG B |
| * | 0.040 | 58 | MEADOW, HSG B |
| * | 0.050 | 58 | MEADOW, HSG B |
| * | 0.046 | 58 | MEADOW, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 0.147 | 58 | MEADOW, HSG B |
| * | 1.974 | 58 | MEADOW, HSG B |
| * | 0.001 | 58 | MEADOW, HSG B |
| * | 0.055 | 58 | MEADOW, HSG B |
| * | 0.620 | 58 | MEADOW, HSG B |
| * | 0.309 | 58 | MEADOW, HSG B |
| * | 0.683 | 58 | MEADOW, HSG B |
| * | 2.832 | 58 | MEADOW, HSG B |
| | 10.451 | 60 | Weighted Average |
| | 10.451 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 100 | 0.0365 | 0.37 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.8 | 170 | 0.0297 | 1.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 28 | 0.0325 | 1.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 24 | 0.0915 | 1.51 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.4 | 31 | 0.0385 | 1.37 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.4 | 386 | 0.0437 | 1.46 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 95 | 0.0480 | 1.53 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 86 | 0.0509 | 1.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 112 | 0.0228 | 0.76 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 16.1 | 1,032 | Total | | | |

## Subcatchment 3: WS3



## Summary for Subcatchment 5: WS5

Runoff = 20.51 cfs @ 12.90 hrs, Volume= 4.385 af, Depth= 0.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

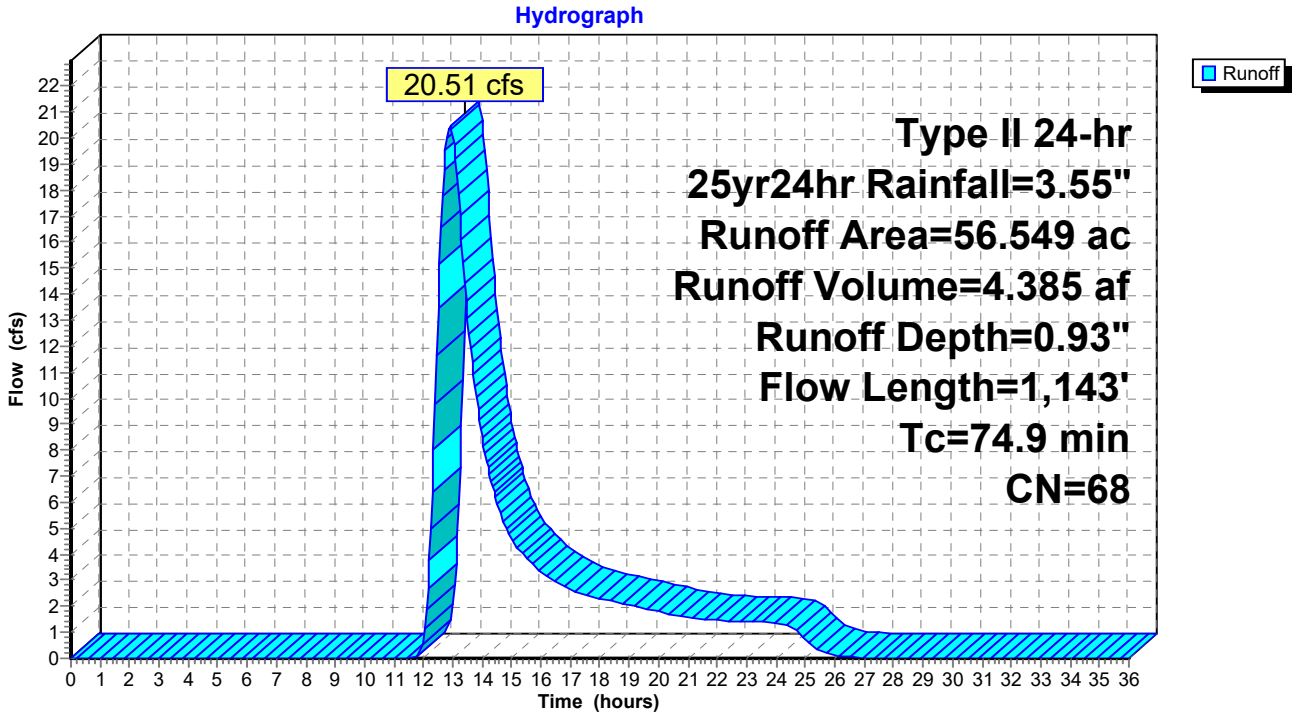
| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.170 | 80 | Pasture/Hay, HSG D |
| * | 0.088 | 79 | Deciduous Forest, HSG D |
| * | 0.088 | 80 | Pasture/Hay, HSG D |
| * | 0.207 | 79 | Deciduous Forest, HSG D |
| * | 0.320 | 80 | Pasture/Hay, HSG D |
| * | 0.065 | 60 | Mixed Forest, HSG B |
| * | 0.041 | 79 | Mixed Forest, HSG D |
| * | 1.140 | 60 | Deciduous Forest, HSG B |
| * | 0.196 | 79 | Deciduous Forest, HSG D |
| * | 0.265 | 60 | Evergreen Forest, HSG B |
| * | 1.468 | 81 | Cultivated Crops, HSG D |
| * | 0.037 | 71 | Cultivated Crops, HSG B |
| * | 1.426 | 81 | Cultivated Crops, HSG D |
| * | 0.203 | 60 | Deciduous Forest, HSG B |
| * | 0.221 | 61 | Pasture/Hay, HSG B |
| * | 0.710 | 61 | Pasture/Hay, HSG B |
| * | 0.005 | 60 | Deciduous Forest, HSG B |
| * | 0.133 | 60 | Mixed Forest, HSG B |
| * | 0.133 | 86 | Woody Wetlands, HSG B |
| * | 0.030 | 86 | Woody Wetlands, HSG B |
| * | 0.012 | 86 | Woody Wetlands, HSG D |
| * | 1.774 | 60 | Evergreen Forest, HSG B |
| * | 0.508 | 60 | Evergreen Forest, HSG B |
| * | 0.168 | 60 | Deciduous Forest, HSG B |
| * | 0.097 | 79 | Deciduous Forest, HSG D |
| * | 0.300 | 60 | Mixed Forest, HSG B |
| * | 0.125 | 79 | Mixed Forest, HSG D |
| * | 1.040 | 61 | Pasture/Hay, HSG B |
| * | 0.304 | 80 | Pasture/Hay, HSG D |
| * | 0.033 | 88 | Developed Low Intensity, HSG B |
| * | 1.346 | 71 | Cultivated Crops, HSG B |
| * | 0.822 | 81 | Cultivated Crops, HSG D |
| * | 0.113 | 78 | MEADOW, HSG D |
| * | 0.244 | 78 | MEADOW, HSG D |
| * | 0.113 | 78 | MEADOW, HSG D |
| * | 0.021 | 78 | MEADOW, HSG D |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.113 | 58 | MEADOW, HSG B |
| * | 0.021 | 58 | MEADOW, HSG B |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.339 | 58 | MEADOW, HSG B |
| * | 0.953 | 58 | MEADOW, HSG B |
| * | 0.094 | 58 | MEADOW, HSG B |
| * | 0.024 | 98 | IMPERVIOUS, HSG B |
| * | 0.937 | 58 | MEADOW, HSG B |
| * | 1.229 | 78 | MEADOW, HSG D |
| * | 0.060 | 98 | IMPERVIOUS, HSG D |
| * | 2.898 | 78 | MEADOW, HSG D |
| * | 0.899 | 58 | MEADOW, HSG B |
| * | 0.212 | 98 | IMPERVIOUS, HSG B |
| * | 2.305 | 58 | MEADOW, HSG B |

| | | | |
|---|---|---|---|
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.820 | 78 | MEADOW, HSG D |
| * | 0.063 | 98 | IMPERVIOUS, HSG D |
| * | 5.440 | 78 | MEADOW, HSG D |
| * | 0.134 | 58 | MEADOW, HSG B |
| * | 0.339 | 58 | MEADOW, HSG B |
| * | 0.508 | 58 | MEADOW, HSG B |
| * | 2.669 | 58 | MEADOW, HSG B |
| * | 0.065 | 58 | MEADOW, HSG B |
| * | 0.136 | 58 | MEADOW, HSG B |
| * | 0.022 | 98 | IMPERVIOUS, HSG B |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.241 | 58 | MEADOW, HSG B |
| * | 0.421 | 58 | MEADOW, HSG B |
| * | 0.031 | 58 | MEADOW, HSG B |
| * | 0.011 | 98 | IMPERVIOUS, HSG B |
| * | 0.018 | 58 | MEADOW, HSG B |
| * | 0.089 | 58 | MEADOW, HSG B |
| * | 0.330 | 58 | MEADOW, HSG B |
| * | 0.033 | 98 | IMPERVIOUS, HSG B |
| * | 0.171 | 58 | MEADOW, HSG B |
| * | 0.080 | 58 | MEADOW, HSG B |
| * | 0.029 | 58 | MEADOW, HSG B |
| * | 0.030 | 78 | MEADOW, HSG D |
| * | 0.042 | 78 | MEADOW, HSG D |
| * | 2.250 | 58 | MEADOW, HSG B |
| * | 0.352 | 98 | IMPERVIOUS, HSG B |
| * | 8.045 | 58 | MEADOW, HSG B |
| * | 0.064 | 98 | IMPERVIOUS, HSG B |
| * | 0.018 | 58 | MEADOW, HSG B |
| * | 0.028 | 78 | MEADOW, HSG D |
| * | 0.143 | 78 | MEADOW, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.061 | 58 | MEADOW, HSG B |
| * | 0.024 | 58 | MEADOW, HSG B |
| * | 0.037 | 78 | MEADOW, HSG D |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.095 | 58 | MEADOW, HSG B |
| * | 0.155 | 78 | MEADOW, HSG D |
| * | 0.623 | 78 | MEADOW, HSG D |
| * | 0.175 | 58 | MEADOW, HSG B |
| * | 0.027 | 98 | IMPERVIOUS, HSG B |
| * | 0.221 | 58 | MEADOW, HSG B |
| * | 0.070 | 58 | MEADOW, HSG B |
| * | 0.079 | 78 | MEADOW, HSG D |
| * | 0.685 | 78 | MEADOW, HSG D |
| * | 0.152 | 58 | MEADOW, HSG B |
| * | 0.316 | 78 | MEADOW, HSG D |
| * | 0.297 | 78 | MEADOW, HSG D |
| * | 0.394 | 58 | MEADOW, HSG B |
| * | 0.504 | 78 | MEADOW, HSG D |
| * | 5.464 | 78 | MEADOW, HSG D |

| | | | |
|---|---|---|---|
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 56.549 | 68 | Weighted Average |
| | 55.639 | | 98.39% Pervious Area |
| | 0.910 | | 1.61% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 45.3 | 100 | 0.0051 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 2.5 | 52 | 0.0050 | 0.35 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.1 | 67 | 0.0051 | 0.36 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.9 | 101 | 0.0311 | 0.88 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 33 | 0.0208 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 133 | 0.0158 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 25 | 0.0397 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 67 | 0.0254 | 1.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.0 | 1 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 12 | 0.0330 | 1.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 78 | 0.0298 | 1.21 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 64 | 0.0275 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.9 | 106 | 0.0020 | 0.22 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.1 | 124 | 0.0178 | 0.67 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 68 | 0.0259 | 0.80 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.2 | 111 | 0.0133 | 0.58 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 74.9 | 1,143 | Total | | | |

## Subcatchment 5: WS5



## Summary for Subcatchment 6: WS6

Runoff = 14.94 cfs @ 13.27 hrs, Volume= 3.845 af, Depth= 1.04"

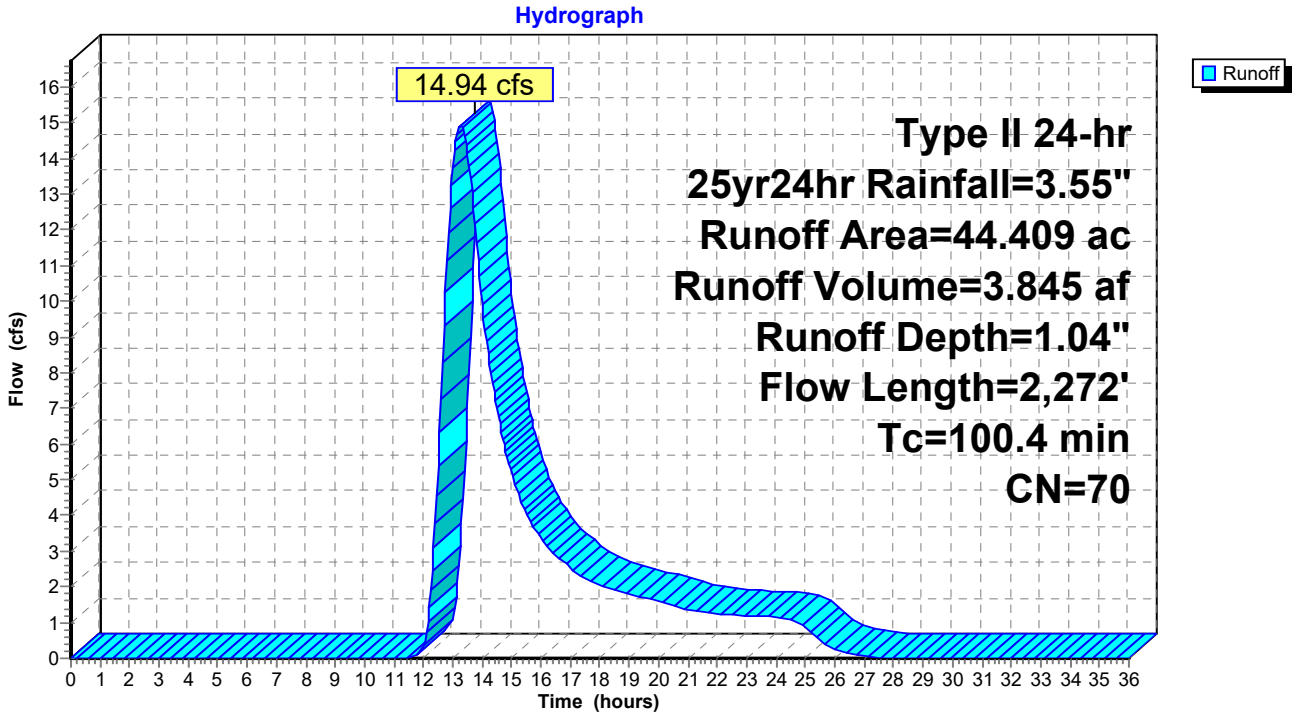
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 0.192 | 80 | Pasture/Hay, HSG D |
| * | 0.540 | 71 | Cultivated Crops, HSG B |
| * | 0.310 | 71 | Cultivated Crops, HSG B |
| * | 2.703 | 81 | Cultivated Crops, HSG D |
| * | 0.092 | 60 | Mixed Forest, HSG B |
| * | 0.096 | 60 | Evergreen Forest, HSG B |
| * | 0.119 | 60 | Evergreen Forest, HSG B |
| * | 0.047 | 60 | Deciduous Forest, HSG B |
| * | 0.083 | 79 | Deciduous Forest, HSG D |
| * | 0.264 | 60 | Mixed Forest, HSG B |
| * | 0.197 | 79 | Mixed Forest, HSG D |
| * | 0.638 | 86 | Woody Wetlands, HSG B |
| * | 0.619 | 86 | Woody Wetlands, HSG D |
| * | 0.225 | 84 | Developed Open Space, HSG D |
| * | 0.047 | 93 | Developed Low Intensity, HSG D |
| * | 0.128 | 84 | Developed Open Space, HSG D |
| * | 0.049 | 93 | Developed Low Intensity, HSG D |
| * | 0.198 | 88 | Developed Low Intensity, HSG B |
| * | 0.345 | 93 | Developed Low Intensity, HSG D |
| * | 0.097 | 71 | Cultivated Crops, HSG B |
| * | 4.683 | 81 | Cultivated Crops, HSG D |
| * | 0.021 | 78 | MEADOW, HSG D |
| * | 0.026 | 58 | MEADOW, HSG B |
| * | 1.031 | 58 | MEADOW, HSG B |
| * | 0.654 | 58 | MEADOW, HSG B |
| * | 0.546 | 58 | MEADOW, HSG B |
| * | 0.579 | 58 | MEADOW, HSG B |
| * | 5.861 | 58 | MEADOW, HSG B |
| * | 1.542 | 78 | MEADOW, HSG D |
| * | 3.667 | 78 | MEADOW, HSG D |
| * | 0.978 | 58 | MEADOW, HSG B |
| * | 0.803 | 58 | MEADOW, HSG B |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 0.062 | 58 | MEADOW, HSG B |
| * | 0.075 | 58 | MEADOW, HSG B |
| * | 0.040 | 58 | MEADOW, HSG B |
| * | 0.108 | 58 | MEADOW, HSG B |
| * | 0.033 | 58 | MEADOW, HSG B |
| * | 0.033 | 58 | MEADOW, HSG B |
| * | 0.035 | 58 | MEADOW, HSG B |
| * | 0.012 | 98 | IMPERVIOUS, HSG B |
| * | 0.128 | 58 | MEADOW, HSG B |
| * | 0.591 | 58 | MEADOW, HSG B |
| * | 0.020 | 98 | IMPERVIOUS, HSG B |
| * | 0.042 | 58 | MEADOW, HSG B |
| * | 0.078 | 58 | MEADOW, HSG B |
| * | 3.182 | 58 | MEADOW, HSG B |
| * | 0.353 | 58 | MEADOW, HSG B |
| * | 0.009 | 58 | MEADOW, HSG B |
| * | 0.062 | 58 | MEADOW, HSG B |

| | | | |
|---|---|---|---|
| * | 0.001 | 58 | MEADOW, HSG B |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.374 | 58 | MEADOW, HSG B |
| * | 0.028 | 98 | IMPERVIOUS, HSG B |
| * | 0.168 | 58 | MEADOW, HSG B |
| * | 0.695 | 58 | MEADOW, HSG B |
| * | 0.054 | 98 | IMPERVIOUS, HSG B |
| * | 0.264 | 58 | MEADOW, HSG B |
| * | 0.067 | 78 | MEADOW, HSG D |
| * | 0.409 | 58 | MEADOW, HSG B |
| * | 0.027 | 98 | IMPERVIOUS, HSG B |
| * | 0.180 | 58 | MEADOW, HSG B |
| * | 0.165 | 78 | MEADOW, HSG D |
| * | 0.036 | 58 | MEADOW, HSG B |
| * | 0.152 | 58 | MEADOW, HSG B |
| * | 0.678 | 58 | MEADOW, HSG B |
| * | 0.034 | 58 | MEADOW, HSG B |
| * | 0.014 | 78 | MEADOW, HSG D |
| * | 0.183 | 58 | MEADOW, HSG B |
| * | 0.045 | 98 | IMPERVIOUS, HSG B |
| * | 0.561 | 58 | MEADOW, HSG B |
| * | 3.281 | 78 | MEADOW, HSG D |
| * | 0.248 | 98 | IMPERVIOUS, HSG D |
| * | 4.316 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 44.409 | 70 | Weighted Average |
| | 43.932 | | 98.93% Pervious Area |
| | 0.477 | | 1.07% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.1 | 40 | 0.0176 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.5 | 20 | 0.0418 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.2 | 12 | 0.0432 | 1.00 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.5 | 19 | 0.0337 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.5 | 9 | 0.0267 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.2 | 86 | 0.0286 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.0 | 252 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 168 | 0.0374 | 1.35 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 15.3 | 107 | 0.0003 | 0.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 30.3 | 663 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 31.4 | 745 | 0.0032 | 0.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 93 | 0.0210 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 57 | 0.0295 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 100.4 | 2,272 | Total | | | |

## Subcatchment 6: WS6



## Summary for Subcatchment 7: WS7

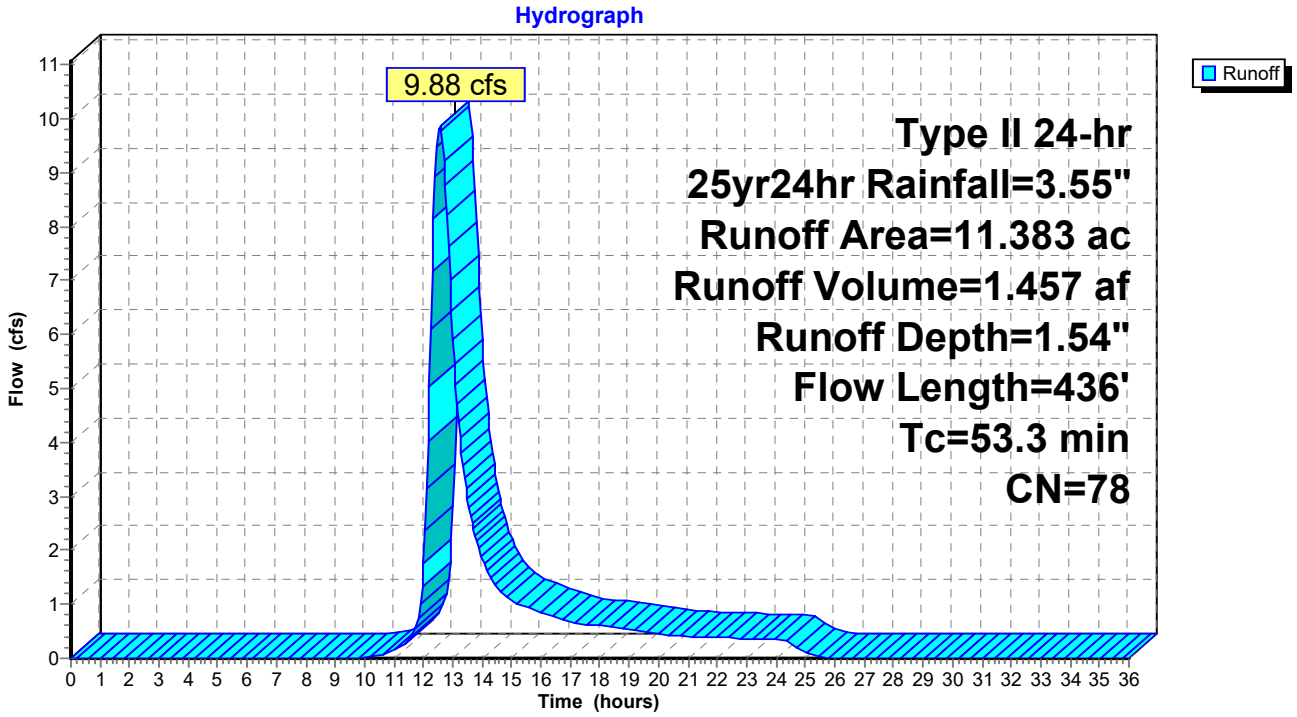
Runoff = 9.88 cfs @ 12.56 hrs, Volume= 1.457 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.227 | 79 | Evergreen Forest, HSG D |
| * | 2.915 | 80 | Pasture/Hay, HSG D |
| * | 0.065 | 80 | Pasture/Hay, HSG D |
| * | 0.034 | 68 | Developed Open Space, HSG B |
| * | 0.019 | 86 | Woody Wetlands, HSG D |
| * | 0.173 | 81 | Cultivated Crops, HSG D |
| * | 3.134 | 81 | Cultivated Crops, HSG D |
| * | 0.780 | 71 | Cultivated Crops, HSG B |
| * | 0.197 | 78 | MEADOW, HSG D |
| * | 0.052 | 78 | MEADOW, HSG D |
| * | 3.077 | 78 | MEADOW, HSG D |
| * | 0.206 | 78 | MEADOW, HSG D |
| * | 0.173 | 58 | MEADOW, HSG B |
| * | 0.330 | 58 | MEADOW, HSG B |
| | 11.383 | 78 | Weighted Average |
| | 11.383 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 45.7 | 100 | 0.0007 | 0.04 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 20 | 0.0137 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 104 | 0.0154 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 69 | 0.0075 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 144 | 0.0108 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 53.3 | 436 | Total | | | |

## Subcatchment 7: WS7



## Summary for Subcatchment 8: WS8

Runoff = 109.82 cfs @ 12.77 hrs, Volume= 19.543 af, Depth= 1.47"

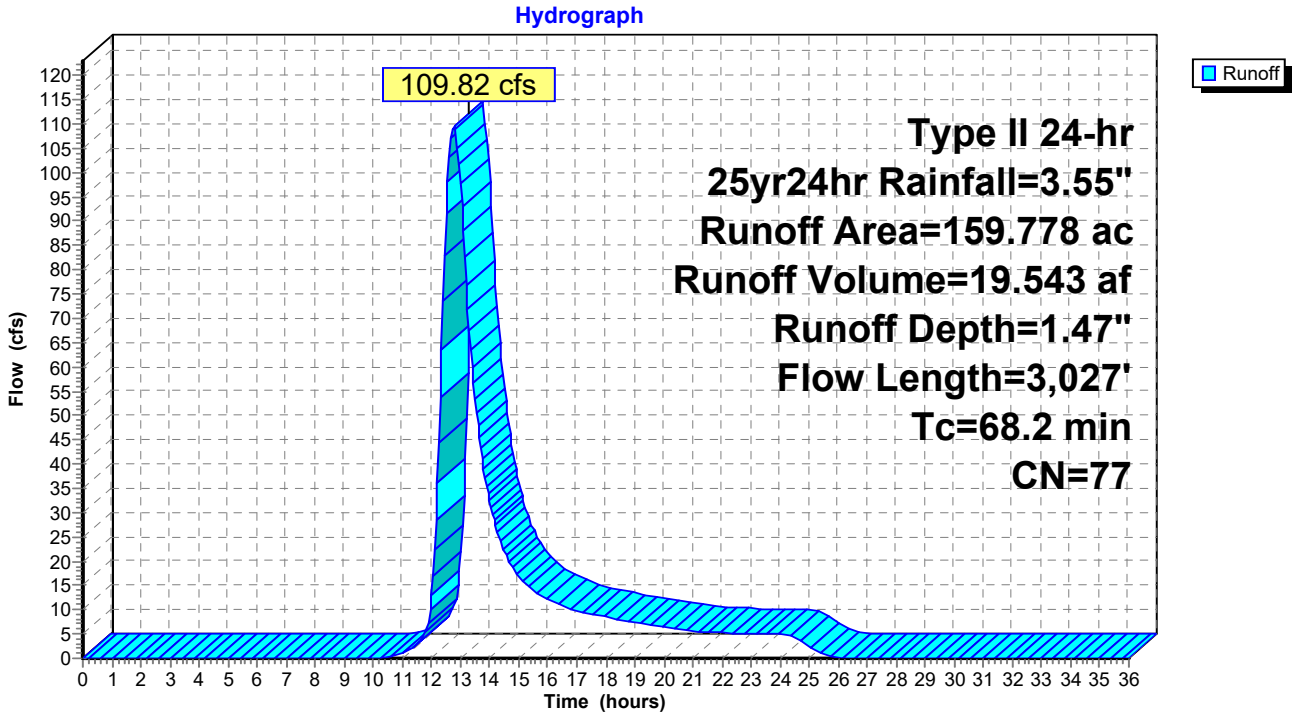
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.381 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.890 | 79 | Deciduous Forest, HSG D |
| * | 1.775 | 80 | Pasture/Hay, HSG D |
| * | 0.468 | 61 | Pasture/Hay, HSG B |
| * | 1.467 | 80 | Pasture/Hay, HSG D |
| * | 0.034 | 80 | Pasture/Hay, HSG D |
| * | 0.662 | 79 | Evergreen Forest, HSG D |
| * | 4.441 | 80 | Pasture/Hay, HSG D |
| * | 1.655 | 61 | Pasture/Hay, HSG B |
| * | 0.391 | 68 | Developed Open Space, HSG B |
| * | 0.047 | 68 | Developed Open Space, HSG B |
| * | 0.667 | 68 | Developed Open Space, HSG B |
| * | 2.294 | 61 | Pasture/Hay, HSG B |
| * | 0.010 | 80 | Pasture/Hay, HSG D |
| * | 0.121 | 68 | Developed Open Space, HSG B |
| * | 0.097 | 68 | Developed Open Space, HSG B |
| * | 0.074 | 68 | Developed Open Space, HSG B |
| * | 0.531 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 89 | Developed Medium Intensity, HSG B |
| * | 0.021 | 68 | Developed Open Space, HSG B |
| * | 0.235 | 93 | Developed Low Intensity, HSG D |
| * | 0.045 | 88 | Developed Low Intensity, HSG B |
| * | 1.339 | 88 | Developed Low Intensity, HSG B |
| * | 0.065 | 86 | Woody Wetlands, HSG D |
| * | 0.040 | 86 | Woody Wetlands, HSG D |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| * | 0.079 | 86 | Woody Wetlands, HSG D |
| * | 3.011 | 86 | Woody Wetlands, HSG D |
| * | 0.229 | 86 | Woody Wetlands, HSG D |
| * | 10.236 | 86 | Woody Wetlands, HSG D |
| * | 1.891 | 86 | Woody Wetlands, HSG D |
| * | 8.074 | 71 | Cultivated Crops, HSG B |
| * | 6.526 | 81 | Cultivated Crops, HSG D |
| * | 1.500 | 71 | Cultivated Crops, HSG B |
| * | 0.962 | 81 | Cultivated Crops, HSG D |
| * | 0.024 | 81 | Cultivated Crops, HSG D |
| * | 0.912 | 71 | Cultivated Crops, HSG B |
| * | 13.271 | 81 | Cultivated Crops, HSG D |
| * | 8.380 | 81 | Cultivated Crops, HSG D |
| * | 2.824 | 71 | Cultivated Crops, HSG B |
| * | 0.055 | 61 | Pasture/Hay, HSG B |
| * | 0.025 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 58 | MEADOW, HSG B |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.445 | 78 | MEADOW, HSG D |
| * | 0.017 | 78 | MEADOW, HSG D |
| * | 0.428 | 78 | MEADOW, HSG D |

| | | | |
|---|---|---|---|
| * | 0.154 | 78 | MEADOW, HSG D |
| * | 1.180 | 78 | MEADOW, HSG D |
| * | 0.262 | 78 | MEADOW, HSG D |
| * | 0.108 | 78 | MEADOW, HSG D |
| * | 0.004 | 78 | MEADOW, HSG D |
| * | 0.098 | 58 | MEADOW, HSG B |
| * | 0.062 | 98 | IMPERVIOUS, HSG D |
| * | 0.012 | 78 | MEADOW, HSG D |
| * | 0.396 | 58 | MEADOW, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.050 | 98 | IMPERVIOUS, HSG B |
| * | 0.309 | 78 | MEADOW, HSG D |
| * | 0.076 | 78 | MEADOW, HSG D |
| * | 1.579 | 58 | MEADOW, HSG B |
| * | 4.554 | 58 | MEADOW, HSG B |
| * | 0.021 | 98 | IMPERVIOUS, HSG B |
| * | 0.542 | 78 | MEADOW, HSG D |
| * | 2.689 | 78 | MEADOW, HSG D |
| * | 0.761 | 58 | MEADOW, HSG B |
| * | 0.438 | 58 | MEADOW, HSG B |
| * | 0.008 | 98 | IMPERVIOUS, HSG B |
| * | 16.186 | 78 | MEADOW, HSG D |
| * | 43.561 | 78 | MEADOW, HSG D |
| * | 0.128 | 98 | IMPERVIOUS, HSG D |
| * | 0.965 | 98 | IMPERVIOUS, HSG D |
| * | 1.241 | 78 | MEADOW, HSG D |
| * | 1.933 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.134 | 98 | IMPERVIOUS, HSG D |
| * | 1.699 | 58 | MEADOW, HSG B |
| * | 2.580 | 58 | MEADOW, HSG B |
| | 159.778 | 77 | Weighted Average |
| | 158.366 | | 99.12% Pervious Area |
| | 1.412 | | 0.88% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.8 | 100 | 0.0053 | 0.17 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.5 | 185 | 0.0096 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 433 | 0.0381 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 29 | 0.0317 | 1.60 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 221 | 0.0348 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 138 | 0.0279 | 1.17 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 264 | 0.0171 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 146 | 0.0040 | 0.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 34 | 0.0113 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 66 | 0.0124 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 110 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 68 | 0.0105 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.4 | 180 | 0.0064 | 0.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.7 | 232 | 0.0069 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 29 | 0.0081 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 69 | 0.0023 | 0.98 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.9 | 162 | 0.0061 | 0.55 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 160 | 0.0226 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.7 | 258 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 37 | 0.0243 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 53 | 0.0504 | 1.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 54 | 0.0168 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 68.2 | 3,027 | Total | | | |

## Subcatchment 8: WS8



## Summary for Subcatchment 9: WS9

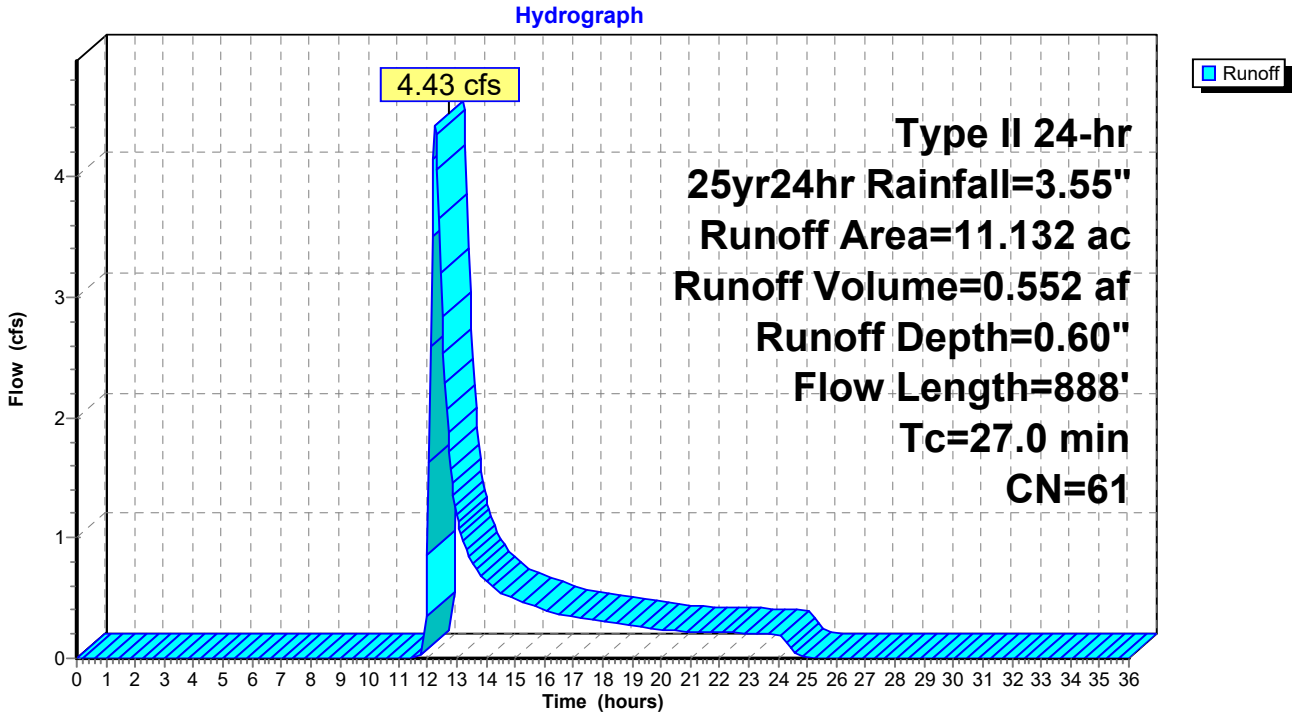
Runoff = 4.43 cfs @ 12.27 hrs, Volume= 0.552 af, Depth= 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.016 | 68 | Developed Open Space, HSG B |
| * | 0.042 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.080 | 88 | Developed Low Intensity, HSG B |
| * | 0.123 | 88 | Developed Low Intensity, HSG B |
| * | 0.107 | 61 | Pasture/Hay, HSG B |
| * | 1.266 | 71 | Cultivated Crops, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 0.014 | 98 | IMPERVIOUS, HSG B |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 4.269 | 58 | MEADOW, HSG B |
| * | 0.222 | 98 | IMPERVIOUS, HSG B |
| * | 4.759 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 11.132 | 61 | Weighted Average |
| | 10.854 | | 97.50% Pervious Area |
| | 0.278 | | 2.50% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.0 | 65 | 0.0083 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.8 | 35 | 0.0234 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.6 | 44 | 0.0321 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0236 | 3.12 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 22 | 0.0289 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 157 | 0.0424 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.1 | 247 | 0.0350 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 38 | 0.0301 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 85 | 0.0252 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 180 | 0.0176 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.0 | 888 | Total | | | |

## Subcatchment 9: WS9



## Summary for Subcatchment 10: WS10

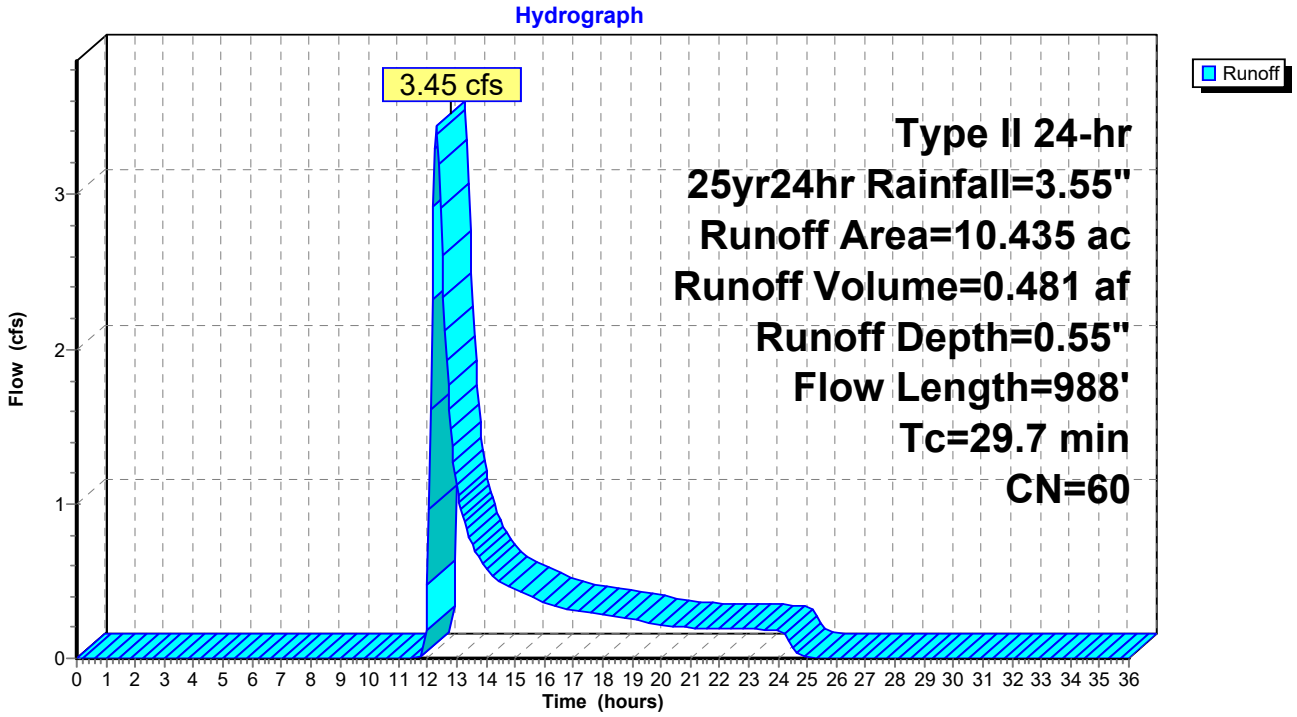
Runoff = 3.45 cfs @ 12.31 hrs, Volume= 0.481 af, Depth= 0.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.136 | 61 | Pasture/Hay, HSG B |
| * | 0.101 | 60 | Deciduous Forest, HSG B |
| * | 0.140 | 60 | Mixed Forest, HSG B |
| * | 0.992 | 60 | Deciduous Forest, HSG B |
| * | 0.867 | 71 | Cultivated Crops, HSG B |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.053 | 58 | MEADOW, HSG B |
| * | 2.475 | 58 | MEADOW, HSG B |
| * | 0.129 | 98 | IMPERVIOUS, HSG B |
| * | 5.538 | 58 | MEADOW, HSG B |
| | 10.435 | 60 | Weighted Average |
| | 10.306 | | 98.76% Pervious Area |
| | 0.129 | | 1.24% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.6 | 65 | 0.0271 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.7 | 7 | 0.0147 | 0.07 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.3 | 9 | 0.0109 | 0.07 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 5.8 | 19 | 0.0042 | 0.05 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.9 | 239 | 0.0132 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.2 | 272 | 0.0155 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 107 | 0.0241 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 119 | 0.0226 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 14 | 0.0183 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 137 | 0.0188 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.7 | 988 | Total | | | |

## Subcatchment 10: WS10



## Summary for Subcatchment 11: WS11

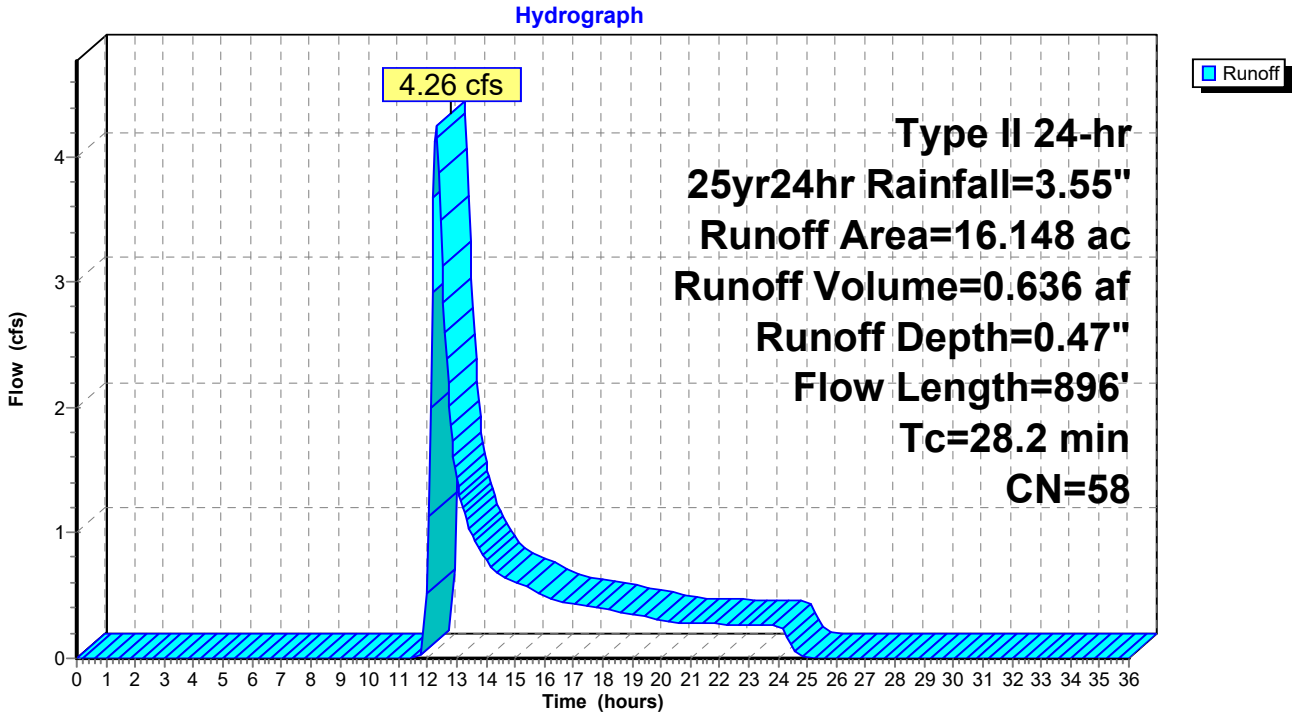
Runoff = 4.26 cfs @ 12.30 hrs, Volume= 0.636 af, Depth= 0.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.069 | 88 | Developed Low Intensity, HSG B |
| * | 0.146 | 71 | Cultivated Crops, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 0.445 | 58 | MEADOW, HSG B |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.029 | 78 | MEADOW, HSG D |
| * | 0.022 | 78 | MEADOW, HSG D |
| * | 0.048 | 58 | MEADOW, HSG B |
| * | 3.840 | 58 | MEADOW, HSG B |
| * | 11.266 | 58 | MEADOW, HSG B |
| * | 0.132 | 78 | MEADOW, HSG D |
| * | 0.005 | 78 | MEADOW, HSG D |
| | 16.148 | 58 | Weighted Average |
| | 16.148 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.1 | 100 | 0.0112 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.3 | 488 | 0.0250 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 208 | 0.0227 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 100 | 0.0091 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 28.2 | 896 | Total | | | |

## Subcatchment 11: WS11



## Summary for Subcatchment 12: WS12

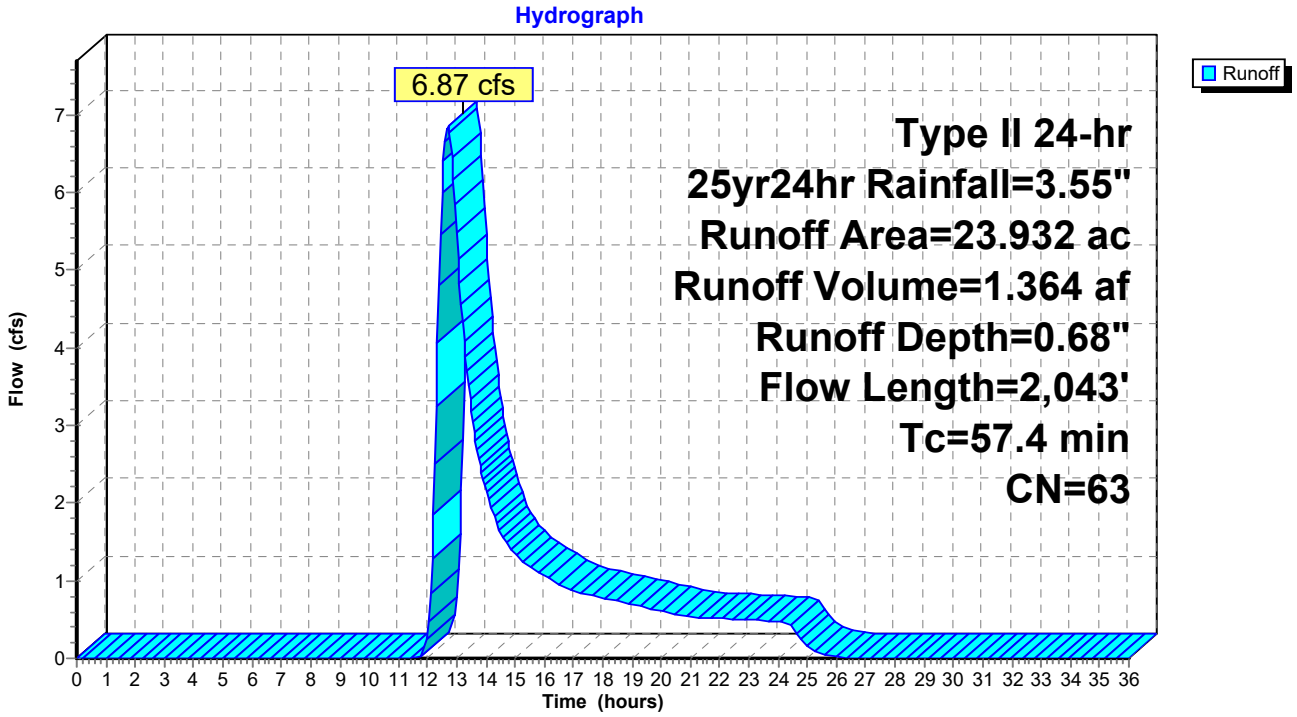
Runoff = 6.87 cfs @ 12.70 hrs, Volume= 1.364 af, Depth= 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.054 | 60 | Deciduous Forest, HSG B |
| * | 0.004 | 71 | Cultivated Crops, HSG B |
| * | 0.417 | 61 | Pasture/Hay, HSG B |
| * | 0.246 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.820 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.417 | 60 | Deciduous Forest, HSG B |
| * | 0.000 | 71 | Cultivated Crops, HSG B |
| * | 0.384 | 71 | Cultivated Crops, HSG B |
| * | 0.004 | 58 | MEADOW, HSG B |
| * | 0.093 | 78 | MEADOW, HSG D |
| * | 0.073 | 78 | MEADOW, HSG D |
| * | 0.028 | 58 | MEADOW, HSG B |
| * | 0.415 | 58 | MEADOW, HSG B |
| * | 0.030 | 78 | MEADOW, HSG D |
| * | 0.222 | 78 | MEADOW, HSG D |
| * | 0.301 | 58 | MEADOW, HSG B |
| * | 0.144 | 58 | MEADOW, HSG B |
| * | 0.620 | 58 | MEADOW, HSG B |
| * | 0.118 | 98 | IMPERVIOUS, HSG B |
| * | 3.537 | 58 | MEADOW, HSG B |
| * | 0.527 | 78 | MEADOW, HSG D |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 1.423 | 58 | MEADOW, HSG B |
| * | 0.054 | 98 | IMPERVIOUS, HSG B |
| * | 3.761 | 58 | MEADOW, HSG B |
| * | 0.909 | 58 | MEADOW, HSG B |
| * | 0.060 | 98 | IMPERVIOUS, HSG B |
| * | 1.302 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 1.295 | 78 | MEADOW, HSG D |
| * | 1.605 | 78 | MEADOW, HSG D |
| | 23.932 | 63 | Weighted Average |
| | 23.657 | | 98.85% Pervious Area |
| | 0.275 | | 1.15% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.2 | 100 | 0.0190 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 18.9 | 569 | 0.0051 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 59 | 0.1044 | 2.26 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 105 | 0.0413 | 1.42 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 90 | 0.0070 | 0.59 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.5 | 260 | 0.0069 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 50 | 0.0481 | 1.53 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 60 | 0.0350 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 24 | 0.0426 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0309 | 3.57 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.1 | 81 | 0.0308 | 1.23 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 161 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 143 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 25 | 0.0183 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 168 | 0.0120 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 135 | 0.0140 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 57.4 | 2,043 | Total | | | |

## Subcatchment 12: WS12



## Summary for Subcatchment 13: WS13

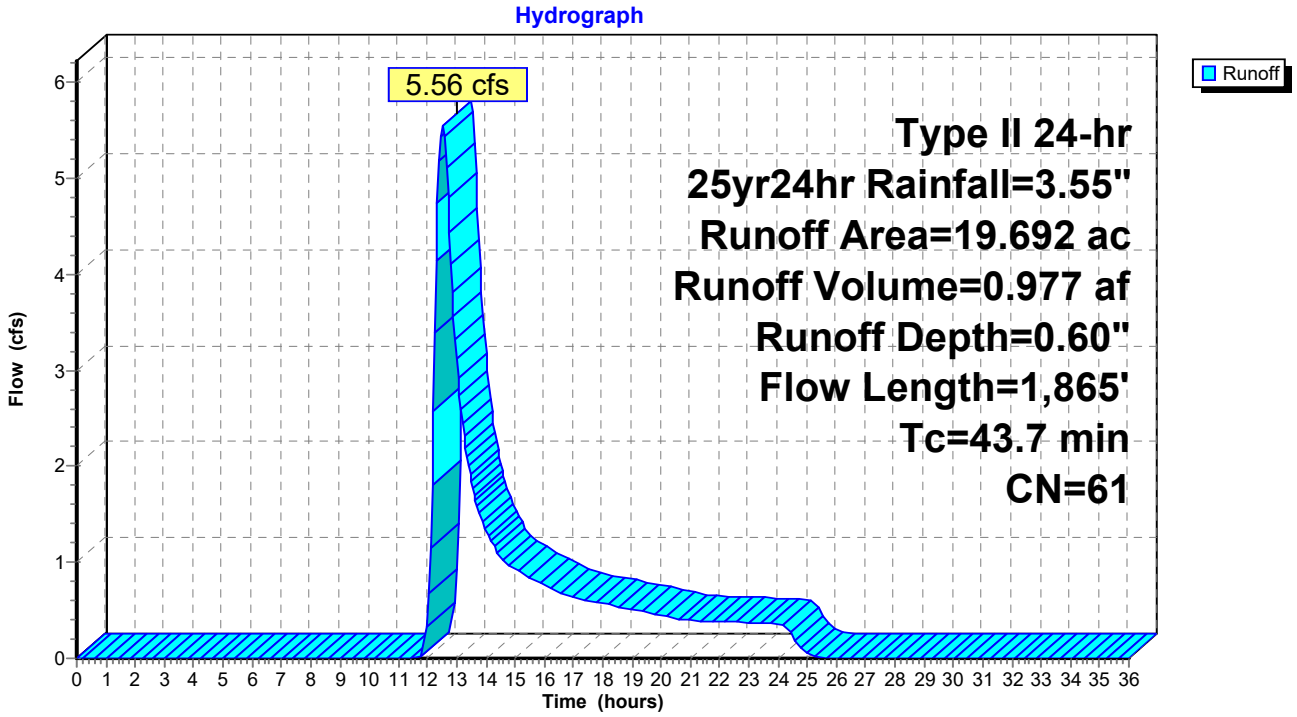
Runoff = 5.56 cfs @ 12.51 hrs, Volume= 0.977 af, Depth= 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.217 | 68 | Developed Open Space, HSG B |
| * | 0.645 | 60 | Mixed Forest, HSG B |
| * | 0.000 | 60 | Deciduous Forest, HSG B |
| * | 3.542 | 63 | Grassland/Herbaceous, HSG B |
| * | 1.445 | 60 | Deciduous Forest, HSG B |
| * | 1.406 | 71 | Cultivated Crops, HSG B |
| * | 0.184 | 58 | MEADOW, HSG B |
| * | 0.017 | 98 | IMPERVIOUS, HSG B |
| * | 0.484 | 58 | MEADOW, HSG B |
| * | 0.025 | 98 | IMPERVIOUS, HSG B |
| * | 0.445 | 58 | MEADOW, HSG B |
| * | 0.901 | 58 | MEADOW, HSG B |
| * | 0.159 | 98 | IMPERVIOUS, HSG B |
| * | 0.705 | 58 | MEADOW, HSG B |
| * | 0.018 | 98 | IMPERVIOUS, HSG B |
| * | 0.357 | 58 | MEADOW, HSG B |
| * | 0.031 | 58 | MEADOW, HSG B |
| * | 1.598 | 58 | MEADOW, HSG B |
| * | 2.725 | 58 | MEADOW, HSG B |
| * | 1.576 | 58 | MEADOW, HSG B |
| * | 3.092 | 58 | MEADOW, HSG B |
| * | 0.017 | 78 | MEADOW, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| | 19.692 | 61 | Weighted Average |
| | 19.472 | | 98.89% Pervious Area |
| | 0.219 | | 1.11% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.1 | 100 | 0.0195 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.5 | 283 | 0.0109 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 211 | 0.0120 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.7 | 100 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 143 | 0.0294 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 174 | 0.0385 | 1.37 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 59 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 19 | 0.0247 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0266 | 3.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.4 | 94 | 0.0264 | 1.14 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 68 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.5 | 434 | 0.0189 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 104 | 0.0163 | 0.89 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 62 | 0.0055 | 0.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 43.7 | 1,865 | Total | | | |

## Subcatchment 13: WS13



## Summary for Subcatchment 14: WS14

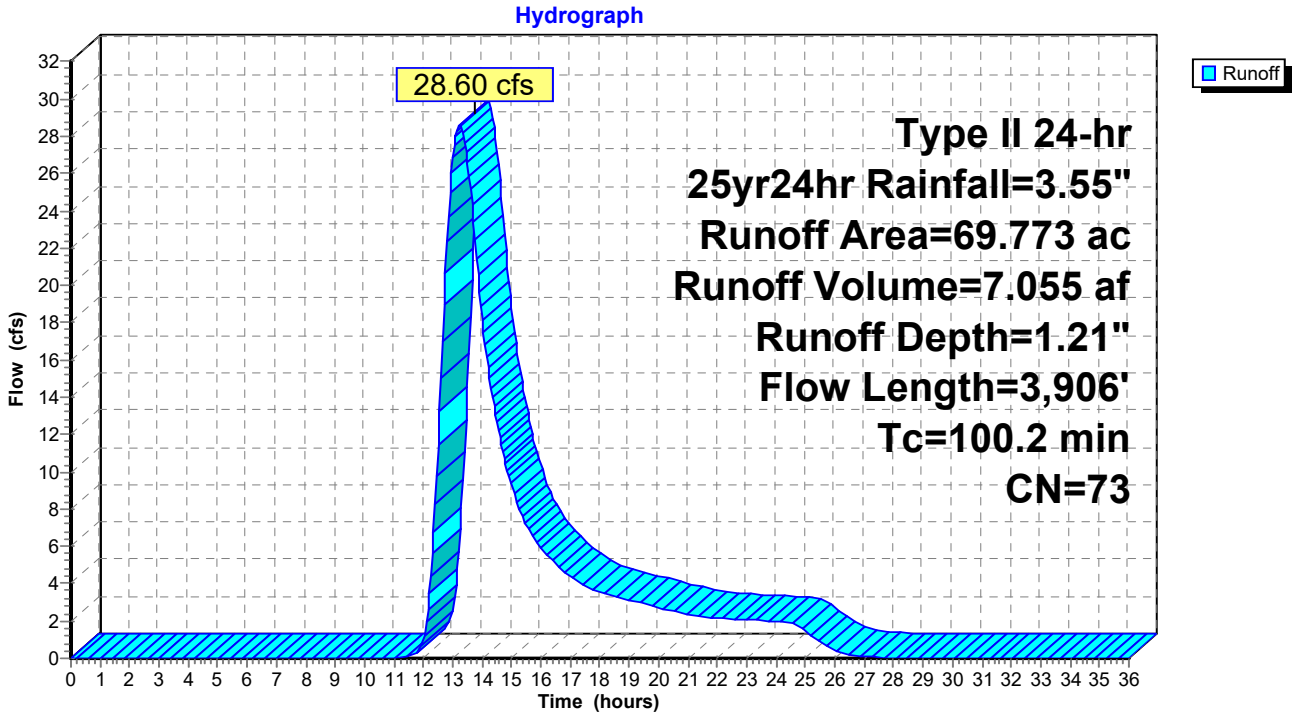
Runoff = 28.60 cfs @ 13.24 hrs, Volume= 7.055 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.295 | 60 | Deciduous Forest, HSG B |
| * | 0.007 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.017 | 61 | Pasture/Hay, HSG B |
| * | 0.472 | 61 | Pasture/Hay, HSG B |
| * | 0.003 | 85 | Grassland/Herbaceous, HSG D |
| * | 3.784 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.055 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.025 | 79 | Deciduous Forest, HSG D |
| * | 3.895 | 60 | Deciduous Forest, HSG B |
| * | 1.726 | 60 | Deciduous Forest, HSG B |
| * | 21.139 | 71 | Cultivated Crops, HSG B |
| * | 13.877 | 81 | Cultivated Crops, HSG D |
| * | 4.280 | 71 | Cultivated Crops, HSG B |
| * | 0.532 | 58 | MEADOW, HSG B |
| * | 0.060 | 58 | MEADOW, HSG B |
| * | 3.344 | 78 | MEADOW, HSG D |
| * | 0.248 | 98 | IMPERVIOUS, HSG D |
| * | 15.706 | 78 | MEADOW, HSG D |
| * | 0.085 | 98 | IMPERVIOUS, HSG D |
| | 69.773 | 73 | Weighted Average |
| | 69.440 | | 99.52% Pervious Area |
| | 0.334 | | 0.48% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.2 | 100 | 0.0070 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 94 | 0.0038 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 74 | 0.0056 | 1.51 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.8 | 91 | 0.0144 | 0.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 165 | 0.0074 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.9 | 450 | 0.0188 | 0.69 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.0 | 192 | 0.0258 | 0.80 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.2 | 746 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 571 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 194 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 80 | 0.0146 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 63 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 19.0 | 377 | 0.0022 | 0.33 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 23 | 0.0069 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0206 | 2.92 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 20 | 0.0223 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 229 | 0.0188 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 234 | 0.0232 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 63 | 0.0113 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 24 | 0.0160 | 0.89 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 103 | 0.0056 | 0.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 100.2 | 3,906 | Total | | | |

## Subcatchment 14: WS14



## Summary for Subcatchment 15: WS15

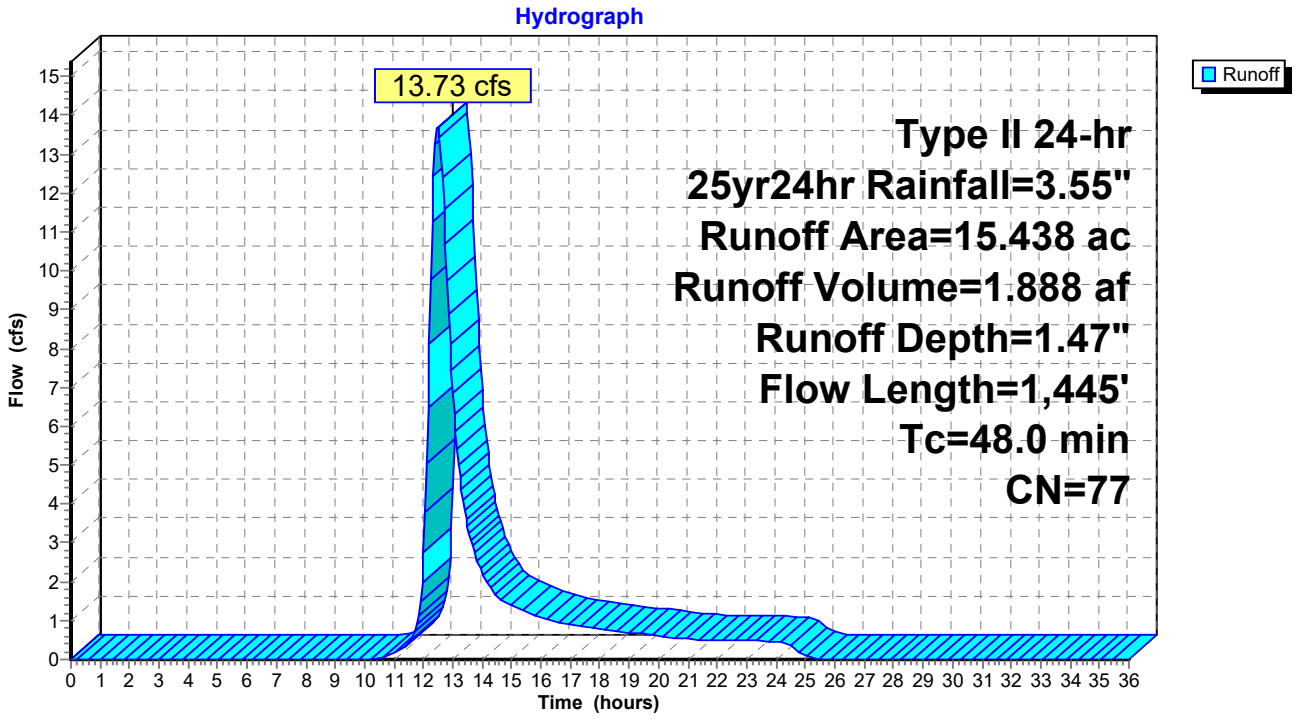
Runoff = 13.73 cfs @ 12.49 hrs, Volume= 1.888 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.042 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.028 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.112 | 79 | Deciduous Forest, HSG D |
| * | 1.067 | 79 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Shrub/Scrub, HSG D |
| * | 0.432 | 80 | Shrub/Scrub, HSG D |
| * | 0.516 | 79 | Mixed Forest, HSG D |
| * | 0.000 | 79 | Mixed Forest, HSG D |
| * | 0.413 | 71 | Cultivated Crops, HSG B |
| * | 1.507 | 81 | Cultivated Crops, HSG D |
| * | 0.032 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.016 | 58 | MEADOW, HSG B |
| * | 0.100 | 78 | MEADOW, HSG D |
| * | 0.041 | 78 | MEADOW, HSG D |
| * | 0.126 | 58 | MEADOW, HSG B |
| * | 0.167 | 78 | MEADOW, HSG D |
| * | 0.266 | 78 | MEADOW, HSG D |
| * | 0.456 | 78 | MEADOW, HSG D |
| * | 0.696 | 78 | MEADOW, HSG D |
| * | 0.307 | 78 | MEADOW, HSG D |
| * | 0.289 | 78 | MEADOW, HSG D |
| * | 0.417 | 58 | MEADOW, HSG B |
| * | 0.098 | 98 | IMPERVIOUS, HSG B |
| * | 0.967 | 58 | MEADOW, HSG B |
| * | 0.896 | 78 | MEADOW, HSG D |
| * | 0.079 | 98 | IMPERVIOUS, HSG D |
| * | 6.256 | 78 | MEADOW, HSG D |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.031 | 78 | MEADOW, HSG D |
| | 15.438 | 77 | Weighted Average |
| | 15.261 | | 98.85% Pervious Area |
| | 0.177 | | 1.15% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 17.8 | 38 | 0.0011 | 0.04 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.2 | 62 | 0.0403 | 0.17 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.9 | 108 | 0.0179 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 38 | 0.0214 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 17 | 0.0129 | 2.30 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 43 | 0.0285 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.9 | 432 | 0.0133 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 245 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 25 | 0.0178 | 0.93 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 14 | 0.0419 | 1.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 113 | 0.0313 | 1.24 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.9 | 311 | 0.0095 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 48.0 | 1,445 | Total | | | |

## Subcatchment 15: WS15



## Summary for Subcatchment 16: WS16

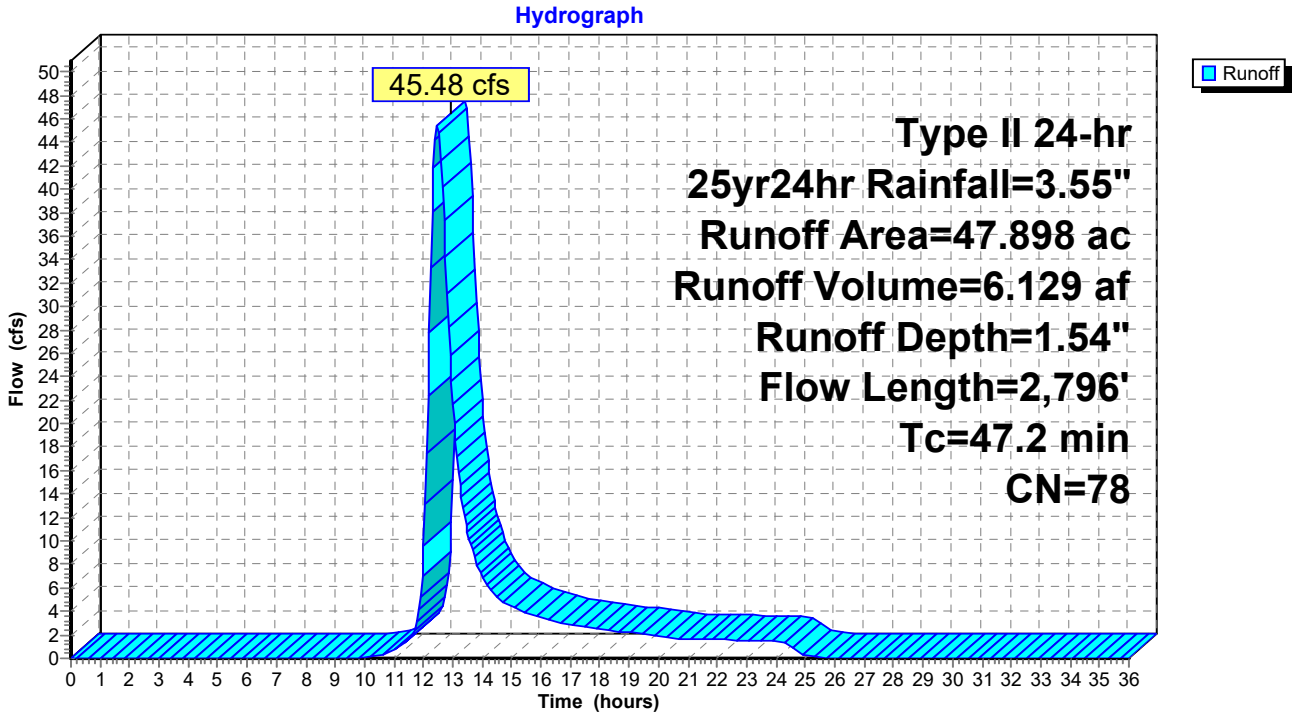
Runoff = 45.48 cfs @ 12.47 hrs, Volume= 6.129 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.205 | 84 | Developed Open Space, HSG D |
| * | 0.128 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.127 | 93 | Developed Low Intensity, HSG D |
| * | 0.242 | 84 | Developed Open Space, HSG D |
| * | 0.713 | 93 | Developed Low Intensity, HSG D |
| * | 0.372 | 84 | Developed Open Space, HSG D |
| * | 6.393 | 71 | Cultivated Crops, HSG B |
| * | 12.903 | 81 | Cultivated Crops, HSG D |
| * | 3.221 | 71 | Cultivated Crops, HSG B |
| * | 0.101 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.094 | 78 | MEADOW, HSG D |
| * | 0.045 | 98 | IMPERVIOUS, HSG D |
| * | 5.837 | 78 | MEADOW, HSG D |
| * | 0.284 | 98 | IMPERVIOUS, HSG D |
| * | 16.718 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 47.898 | 78 | Weighted Average |
| | 47.499 | | 99.17% Pervious Area |
| | 0.399 | | 0.83% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.4 | 100 | 0.0384 | 0.38 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.2 | 250 | 0.0450 | 1.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 408 | 0.0364 | 1.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.0 | 574 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 223 | 0.0109 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.1 | 454 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 23 | 0.0167 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 12 | 0.0189 | 2.79 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 21 | 0.0105 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 113 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.3 | 374 | 0.0197 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 76 | 0.0210 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 167 | 0.0086 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 47.2 | 2,796 | Total | | | |

## Subcatchment 16: WS16



## Summary for Subcatchment 17: WS17

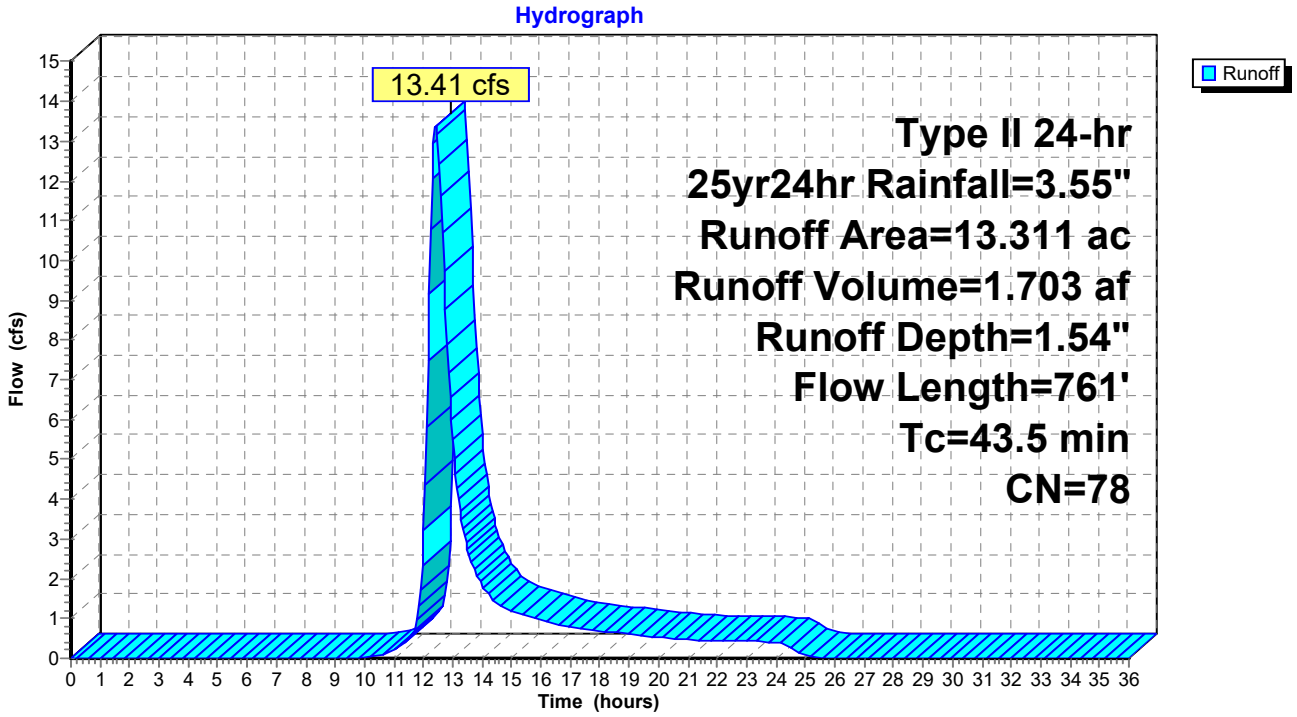
Runoff = 13.41 cfs @ 12.42 hrs, Volume= 1.703 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.015 | 93 | Developed Low Intensity, HSG D |
| * | 0.247 | 81 | Cultivated Crops, HSG D |
| * | 0.046 | 78 | MEADOW, HSG D |
| * | 0.179 | 78 | MEADOW, HSG D |
| * | 0.059 | 78 | MEADOW, HSG D |
| * | 0.072 | 78 | MEADOW, HSG D |
| * | 0.107 | 58 | MEADOW, HSG B |
| * | 0.114 | 98 | IMPERVIOUS, HSG D |
| * | 8.638 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 3.791 | 78 | MEADOW, HSG D |
| | 13.311 | 78 | Weighted Average |
| | 13.155 | | 98.82% Pervious Area |
| | 0.156 | | 1.18% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.9 | 48 | 0.0058 | 0.07 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.3 | 35 | 0.0083 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.5 | 17 | 0.0094 | 0.58 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.6 | 18 | 0.0061 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 13 | 0.0055 | 0.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 177 | 0.0059 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.5 | 97 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 40 | 0.0073 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.4 | 145 | 0.0060 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 44 | 0.0099 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.2 | 126 | 0.0017 | 0.29 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 43.5 | 761 | Total | | | |

## Subcatchment 17: WS17



## Summary for Subcatchment 18: WS18

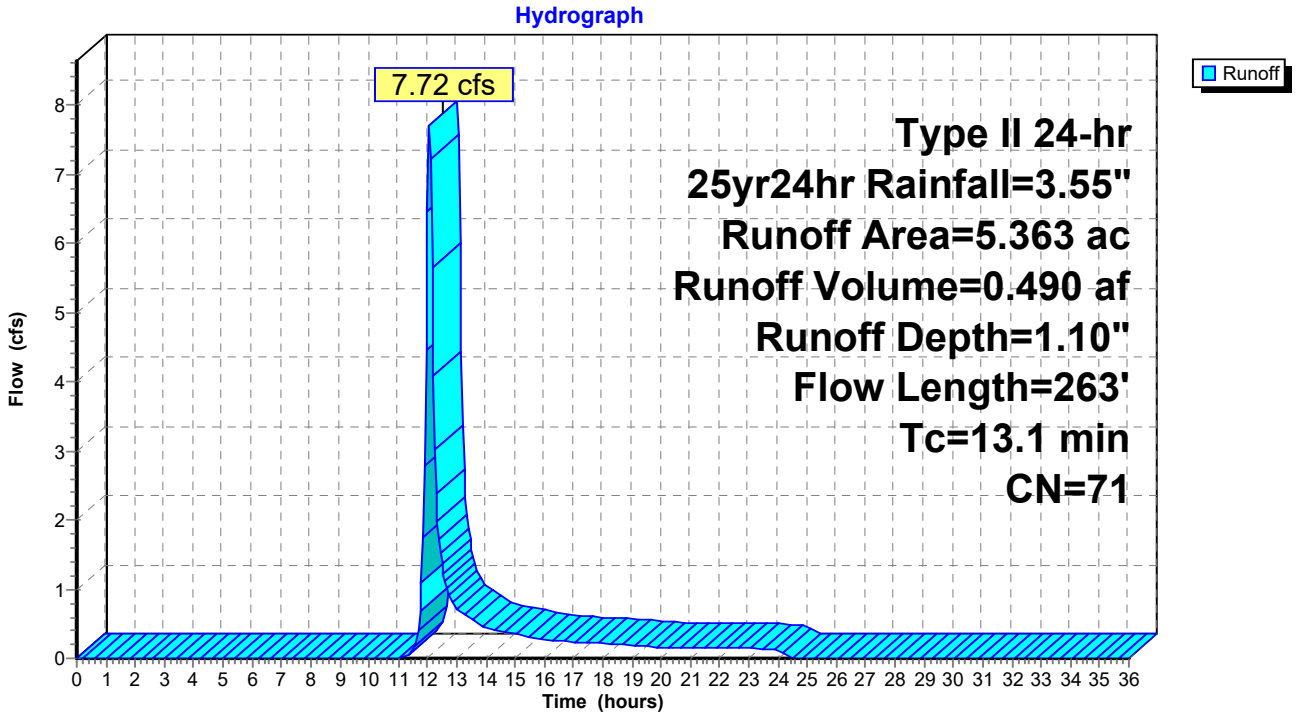
Runoff = 7.72 cfs @ 12.06 hrs, Volume= 0.490 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.143 | 71 | Cultivated Crops, HSG B |
| * | 0.481 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG B |
| * | 1.757 | 58 | MEADOW, HSG B |
| * | 0.211 | 58 | MEADOW, HSG B |
| * | 0.093 | 98 | IMPERVIOUS, HSG D |
| * | 1.767 | 78 | MEADOW, HSG D |
| * | 0.906 | 78 | MEADOW, HSG D |
| | 5.363 | 71 | Weighted Average |
| | 5.265 | | 98.17% Pervious Area |
| | 0.098 | | 1.83% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.5 | 100 | 0.0357 | 0.18 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.3 | 29 | 0.0407 | 1.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 83 | 0.0079 | 0.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 51 | 0.0080 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.1 | 263 | Total | | | |

## Subcatchment 18: WS18



## Summary for Subcatchment 19: WS19

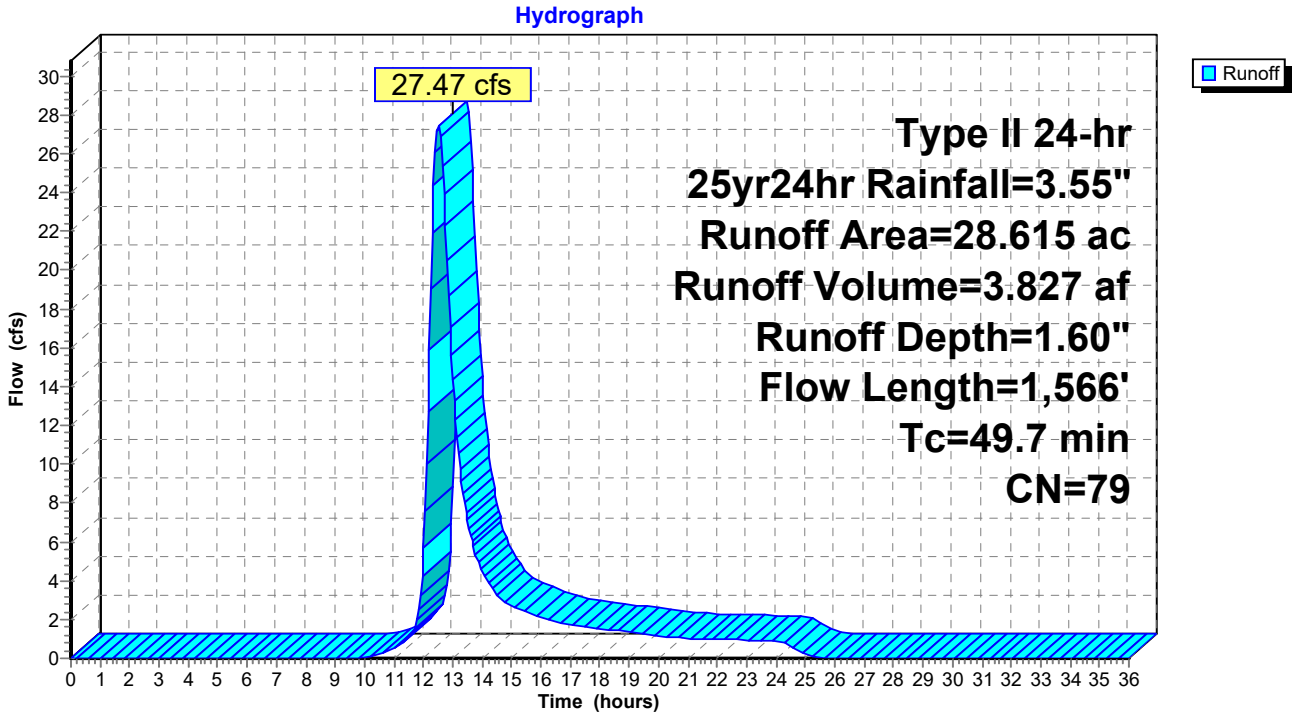
Runoff = 27.47 cfs @ 12.51 hrs, Volume= 3.827 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.077 | 80 | Pasture/Hay, HSG D |
| * | 0.030 | 86 | Woody Wetlands, HSG D |
| * | 1.654 | 81 | Cultivated Crops, HSG D |
| * | 0.043 | 78 | MEADOW, HSG D |
| * | 0.501 | 78 | MEADOW, HSG D |
| * | 0.094 | 78 | MEADOW, HSG D |
| * | 0.714 | 98 | IMPERVIOUS, HSG D |
| * | 19.120 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 6.338 | 78 | MEADOW, HSG D |
| | 28.615 | 79 | Weighted Average |
| | 27.858 | | 97.35% Pervious Area |
| | 0.757 | | 2.65% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.2 | 100 | 0.0093 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.6 | 158 | 0.0201 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 15.4 | 693 | 0.0115 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 64 | 0.0059 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 28 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 19 | 0.0081 | 1.82 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 25 | 0.0126 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 135 | 0.0076 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 35 | 0.0106 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.7 | 251 | 0.0079 | 0.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 59 | 0.0029 | 1.09 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 49.7 | 1,566 | Total | | | |

## Subcatchment 19: WS19



## Summary for Subcatchment 20: WS20

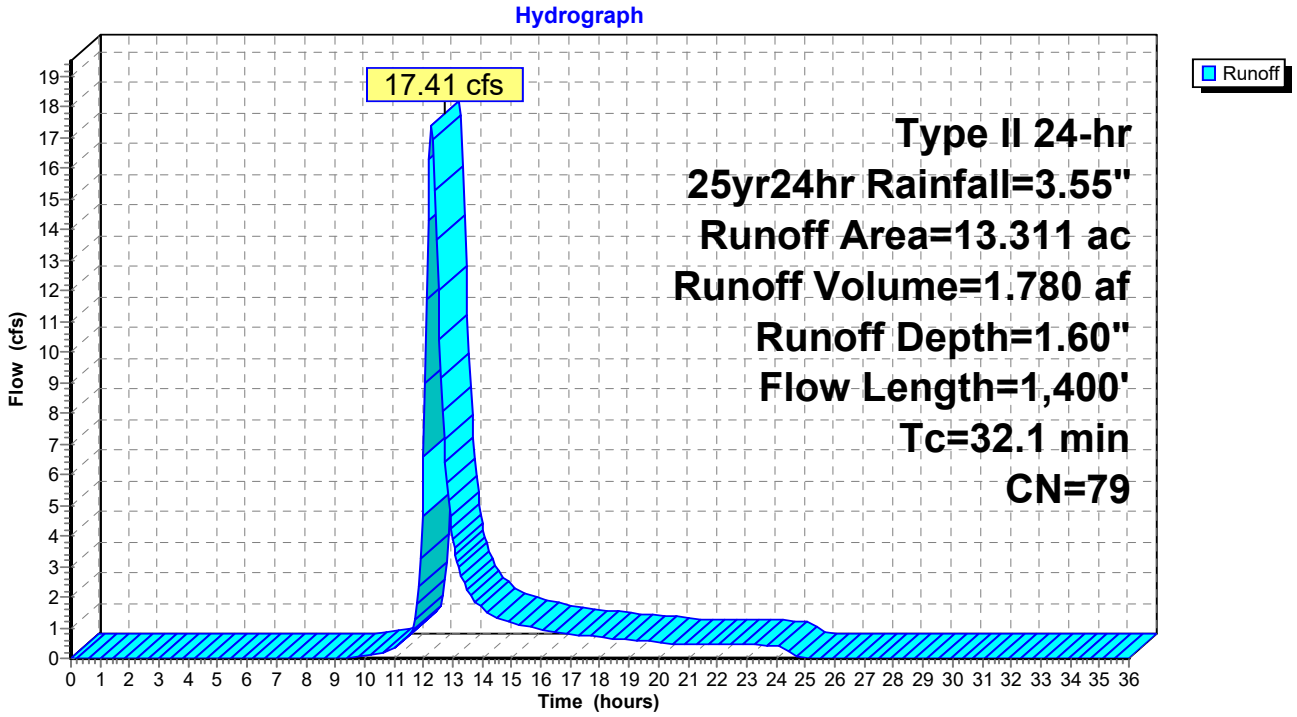
Runoff = 17.41 cfs @ 12.28 hrs, Volume= 1.780 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.283 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 94 | Developed Medium Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 0.723 | 81 | Cultivated Crops, HSG D |
| * | 0.193 | 98 | IMPERVIOUS, HSG D |
| * | 9.668 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.887 | 78 | MEADOW, HSG D |
| | 13.311 | 79 | Weighted Average |
| | 13.075 | | 98.23% Pervious Area |
| | 0.236 | | 1.77% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.3 | 287 | 0.0087 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.2 | 223 | 0.0042 | 0.45 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 24 | 0.0183 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 16 | 0.0275 | 3.37 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 23 | 0.0291 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 205 | 0.0331 | 1.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 131 | 0.0093 | 0.68 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.1 | 129 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 58 | 0.0091 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 80 | 0.0144 | 0.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.8 | 97 | 0.0042 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 128 | 0.0126 | 2.28 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 32.1 | 1,400 | Total | | | |

## Subcatchment 20: WS20



## Summary for Subcatchment 21: WS21

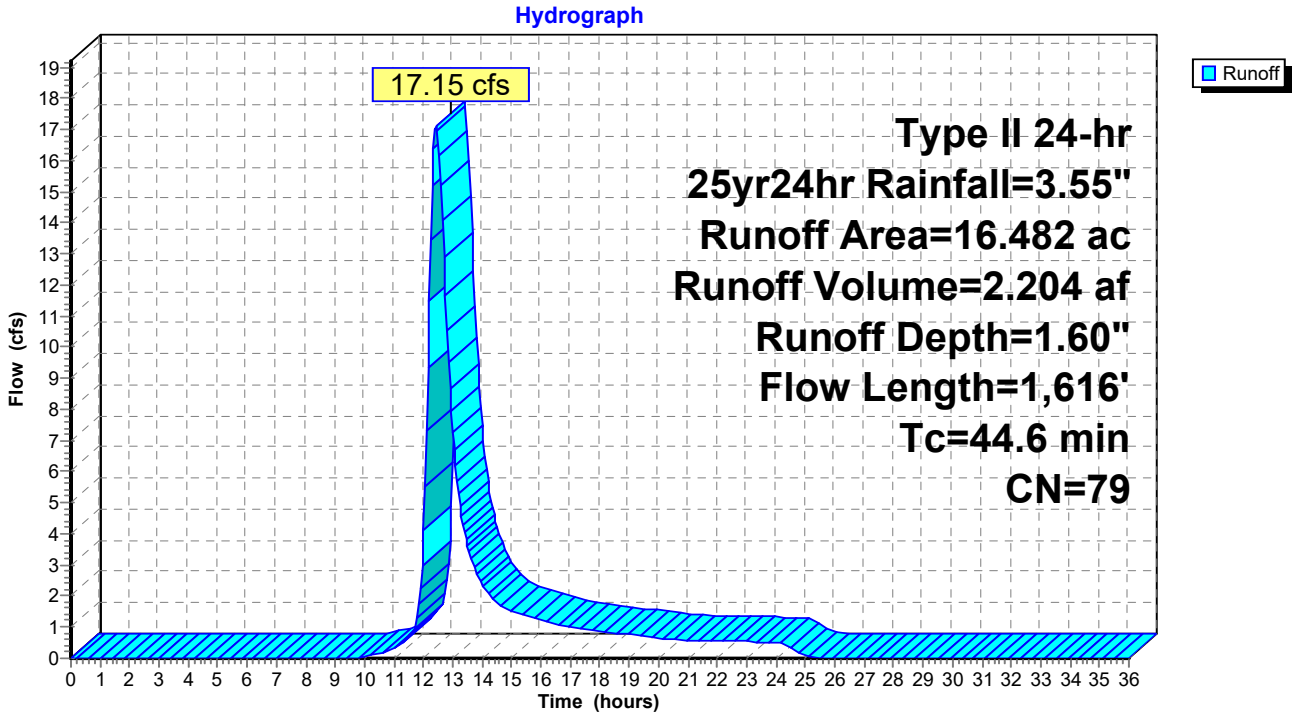
Runoff = 17.15 cfs @ 12.44 hrs, Volume= 2.204 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.154 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 89 | Developed Medium Intensity, HSG B |
| * | 0.162 | 94 | Developed Medium Intensity, HSG D |
| * | 0.159 | 88 | Developed Low Intensity, HSG B |
| * | 1.790 | 93 | Developed Low Intensity, HSG D |
| * | 0.153 | 88 | Developed Low Intensity, HSG B |
| * | 0.136 | 93 | Developed Low Intensity, HSG D |
| * | 0.269 | 71 | Cultivated Crops, HSG B |
| * | 0.243 | 81 | Cultivated Crops, HSG D |
| * | 0.373 | 81 | Cultivated Crops, HSG D |
| * | 0.001 | 58 | MEADOW, HSG B |
| * | 0.273 | 78 | MEADOW, HSG D |
| * | 0.137 | 58 | MEADOW, HSG B |
| * | 0.342 | 78 | MEADOW, HSG D |
| * | 0.702 | 78 | MEADOW, HSG D |
| * | 0.490 | 58 | MEADOW, HSG B |
| * | 0.344 | 58 | MEADOW, HSG B |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.199 | 98 | IMPERVIOUS, HSG D |
| * | 8.973 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.529 | 78 | MEADOW, HSG D |
| | 16.482 | 79 | Weighted Average |
| | 16.240 | | 98.53% Pervious Area |
| | 0.242 | | 1.47% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.5 | 56 | 0.0111 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.6 | 36 | 0.0281 | 0.13 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.2 | 8 | 0.0205 | 0.69 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.1 | 13 | 0.0208 | 2.93 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 37 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 205 | 0.0146 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.9 | 355 | 0.0149 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.8 | 340 | 0.0109 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.3 | 239 | 0.0081 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 52 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 33 | 0.0313 | 1.24 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 26 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 116 | 0.0216 | 1.03 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 27 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 73 | 0.0137 | 2.37 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 44.6 | 1,616 | Total | | | |

## Subcatchment 21: WS21



## Summary for Subcatchment 22: WS22

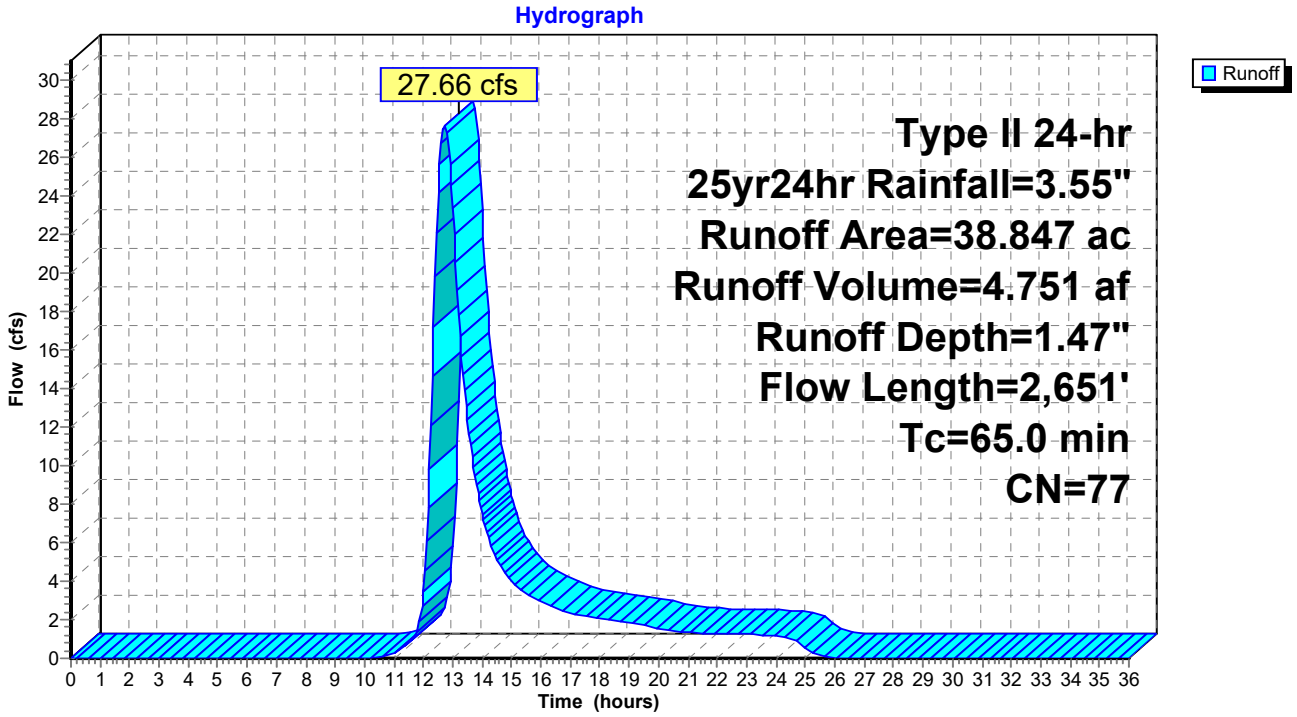
Runoff = 27.66 cfs @ 12.72 hrs, Volume= 4.751 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.574 | 71 | Cultivated Crops, HSG B |
| * | 1.670 | 81 | Cultivated Crops, HSG D |
| * | 1.539 | 81 | Cultivated Crops, HSG D |
| * | 7.511 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 78 | MEADOW, HSG D |
| * | 0.106 | 98 | IMPERVIOUS, HSG B |
| * | 3.145 | 58 | MEADOW, HSG B |
| * | 1.137 | 58 | MEADOW, HSG B |
| * | 0.769 | 78 | MEADOW, HSG D |
| * | 0.320 | 78 | MEADOW, HSG D |
| * | 0.006 | 98 | IMPERVIOUS, HSG D |
| * | 0.043 | 78 | MEADOW, HSG D |
| * | 0.194 | 98 | IMPERVIOUS, HSG D |
| * | 17.835 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 2.949 | 78 | MEADOW, HSG D |
| | 38.847 | 77 | Weighted Average |
| | 38.498 | | 99.10% Pervious Area |
| | 0.349 | | 0.90% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.9 | 51 | 0.0109 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.4 | 26 | 0.0164 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.3 | 16 | 0.0263 | 0.88 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.9 | 6 | 0.0486 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.2 | 125 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 9.6 | 535 | 0.0106 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 37 | 0.0080 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 147 | 0.0086 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.6 | 396 | 0.0121 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.4 | 560 | 0.0165 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 11.7 | 536 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 47 | 0.0158 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 81 | 0.0152 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 87 | 0.0145 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 65.0 | 2,651 | Total | | | |

## Subcatchment 22: WS22



## Summary for Subcatchment 23: WS23

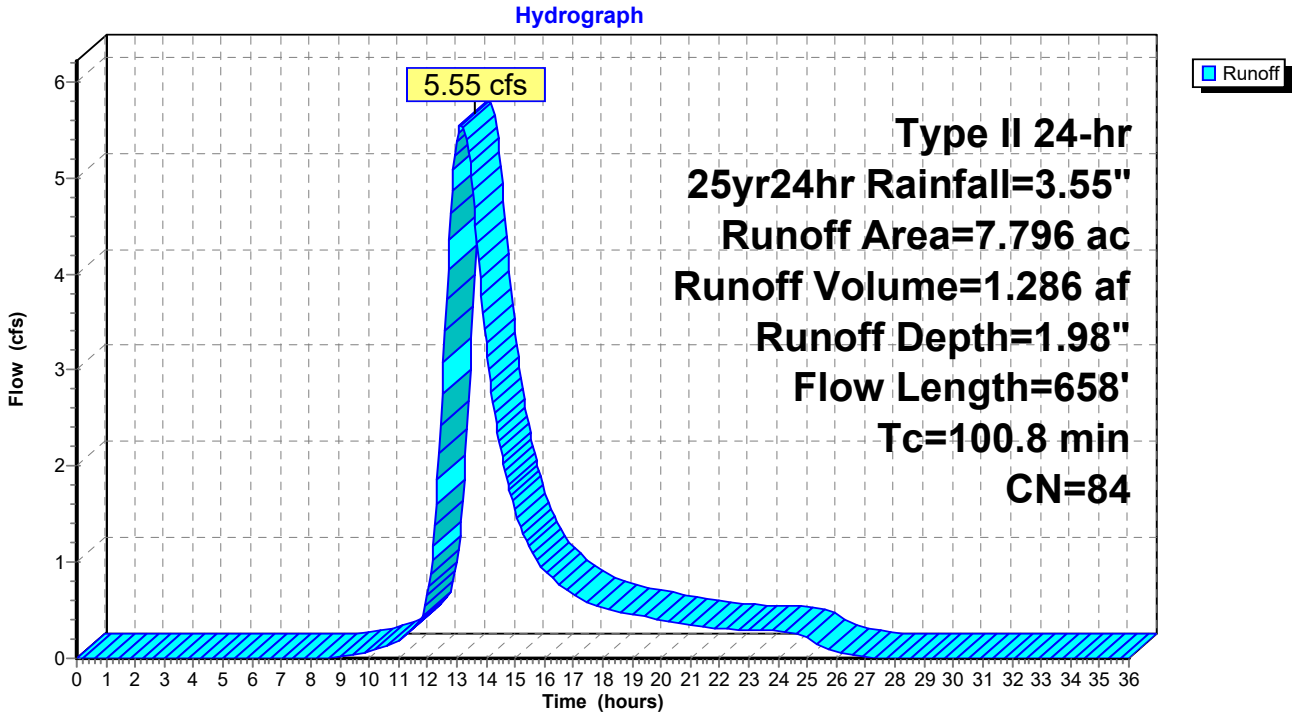
Runoff = 5.55 cfs @ 13.15 hrs, Volume= 1.286 af, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.781 | 80 | Pasture/Hay, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.192 | 86 | Woody Wetlands, HSG D |
| * | 0.415 | 84 | Developed Open Space, HSG D |
| * | 4.720 | 86 | Woody Wetlands, HSG D |
| * | 1.466 | 81 | Cultivated Crops, HSG D |
| | 7.796 | 84 | Weighted Average |
| | 7.796 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 56.0 | 100 | 0.0030 | 0.03 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.2 | 36 | 0.0104 | 0.51 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 26.7 | 259 | 0.0010 | 0.16 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 15.1 | 163 | 0.0013 | 0.18 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.8 | 100 | 0.0020 | 0.91 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 100.8 | 658 | Total | | | |

## Subcatchment 23: WS23



## Summary for Subcatchment 24: WS24

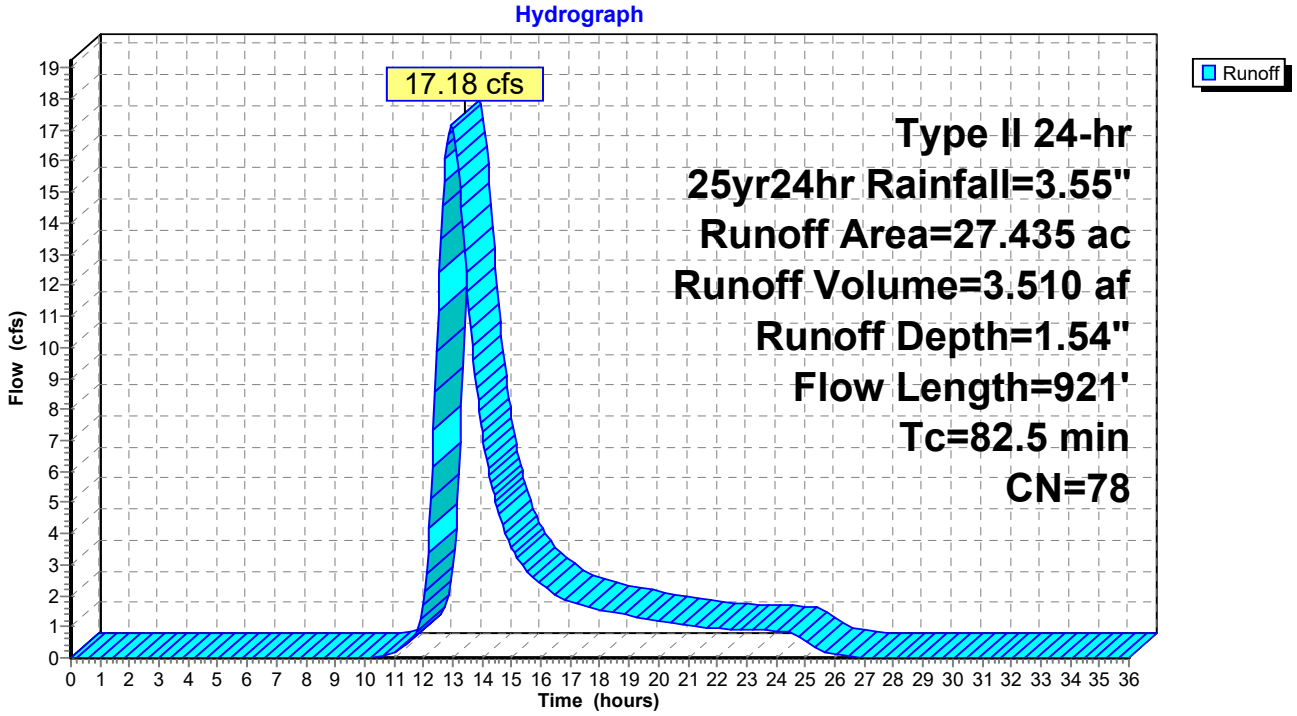
Runoff = 17.18 cfs @ 12.94 hrs, Volume= 3.510 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.266 | 80 | Pasture/Hay, HSG D |
| * | 0.369 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 84 | Developed Open Space, HSG D |
| * | 0.106 | 86 | Woody Wetlands, HSG D |
| * | 0.861 | 86 | Woody Wetlands, HSG D |
| * | 0.149 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.036 | 86 | Woody Wetlands, HSG D |
| * | 2.354 | 81 | Cultivated Crops, HSG D |
| * | 0.012 | 78 | MEADOW, HSG D |
| * | 0.105 | 78 | MEADOW, HSG D |
| * | 0.050 | 78 | MEADOW, HSG D |
| * | 0.248 | 78 | MEADOW, HSG D |
| * | 0.445 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG D |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.111 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.777 | 78 | MEADOW, HSG D |
| * | 0.086 | 78 | MEADOW, HSG D |
| * | 0.250 | 78 | MEADOW, HSG D |
| * | 0.339 | 78 | MEADOW, HSG D |
| * | 0.196 | 78 | MEADOW, HSG D |
| * | 0.222 | 78 | MEADOW, HSG D |
| * | 0.123 | 78 | MEADOW, HSG D |
| * | 0.094 | 78 | MEADOW, HSG D |
| * | 2.575 | 78 | MEADOW, HSG D |
| * | 0.167 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.195 | 78 | MEADOW, HSG D |
| * | 0.081 | 98 | IMPERVIOUS, HSG D |
| * | 0.757 | 78 | MEADOW, HSG D |
| * | 0.900 | 78 | MEADOW, HSG D |
| * | 0.126 | 98 | IMPERVIOUS, HSG B |
| * | 0.929 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.816 | 58 | MEADOW, HSG B |
| * | 0.305 | 98 | IMPERVIOUS, HSG D |
| * | 8.320 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 4.901 | 78 | MEADOW, HSG D |
| | 27.435 | 78 | Weighted Average |
| | 26.778 | | 97.61% Pervious Area |
| | 0.657 | | 2.39% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 47.1 | 82 | 0.0031 | 0.03 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 3.3 | 18 | 0.0173 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 15.5 | 65 | 0.0001 | 0.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 25 | 0.0112 | 2.15 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 38 | 0.0304 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 195 | 0.0164 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 141 | 0.0149 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 21 | 0.0061 | 0.55 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.2 | 236 | 0.0060 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 100 | 0.0101 | 0.90 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 82.5 | 921 | Total | | | |

## Subcatchment 24: WS24



## Summary for Subcatchment 25: WS25

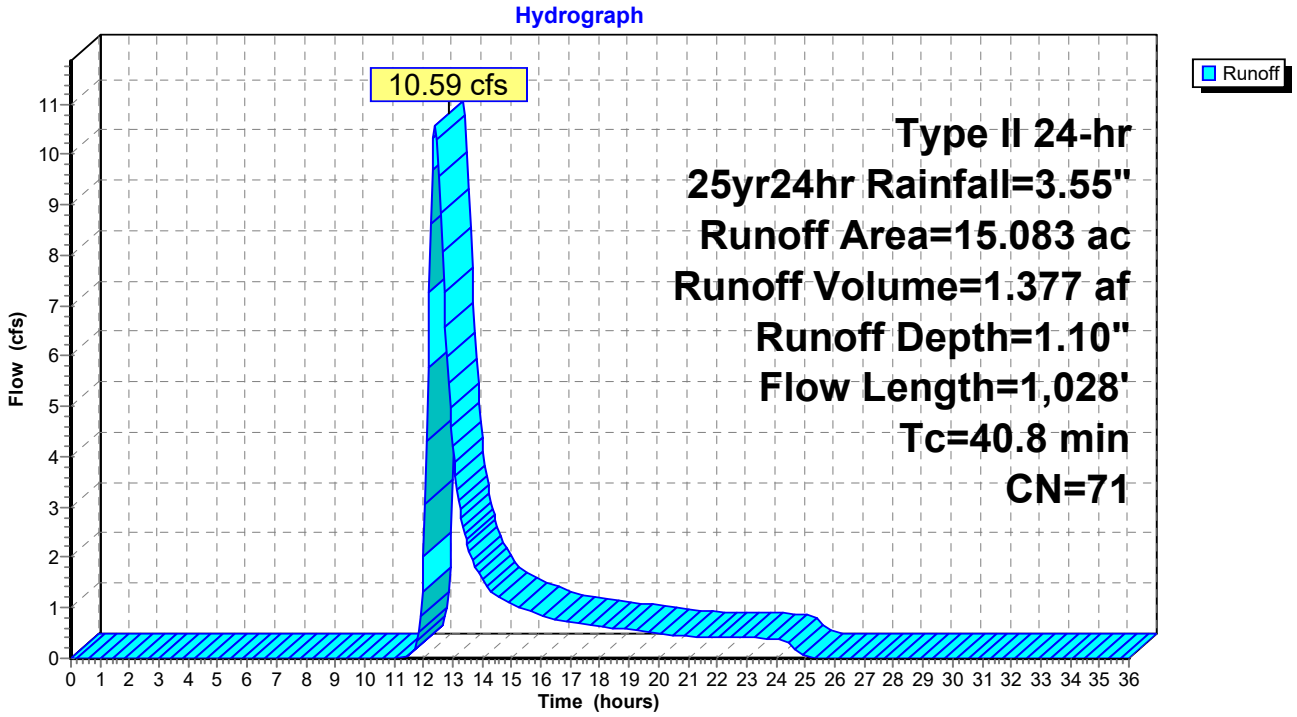
Runoff = 10.59 cfs @ 12.41 hrs, Volume= 1.377 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.336 | 71 | Cultivated Crops, HSG B |
| * | 3.913 | 81 | Cultivated Crops, HSG D |
| * | 0.301 | 98 | IMPERVIOUS, HSG B |
| * | 4.190 | 58 | MEADOW, HSG B |
| * | 2.181 | 58 | MEADOW, HSG B |
| * | 0.232 | 98 | IMPERVIOUS, HSG D |
| * | 1.515 | 78 | MEADOW, HSG D |
| * | 2.417 | 78 | MEADOW, HSG D |
| | 15.083 | 71 | Weighted Average |
| | 14.551 | | 96.47% Pervious Area |
| | 0.533 | | 3.53% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 17.7 | 100 | 0.0075 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.7 | 103 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.9 | 181 | 0.0076 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.4 | 59 | 0.0010 | 0.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 23 | 0.0221 | 1.04 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 21 | 0.0329 | 3.68 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.9 | 150 | 0.0352 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 76 | 0.0259 | 1.45 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.8 | 315 | 0.0102 | 0.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 40.8 | 1,028 | Total | | | |

## Subcatchment 25: WS25



## Summary for Subcatchment 26: WS26

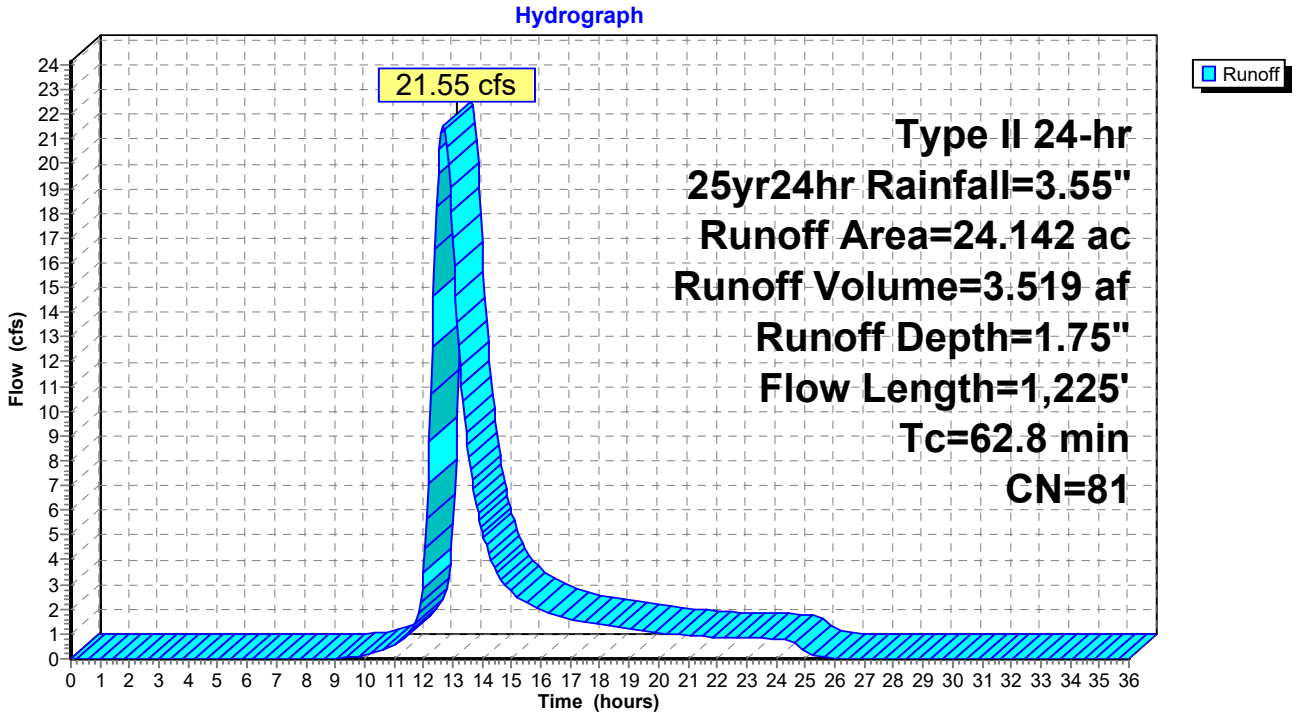
Runoff = 21.55 cfs @ 12.67 hrs, Volume= 3.519 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.020 | 84 | Developed Open Space, HSG D |
| * | 0.777 | 88 | Developed Low Intensity, HSG B |
| * | 0.216 | 93 | Developed Low Intensity, HSG D |
| * | 1.284 | 86 | Woody Wetlands, HSG D |
| * | 1.334 | 79 | Deciduous Forest, HSG D |
| * | 0.088 | 60 | Evergreen Forest, HSG B |
| * | 0.062 | 86 | Woody Wetlands, HSG B |
| * | 0.002 | 86 | Woody Wetlands, HSG B |
| * | 6.342 | 86 | Woody Wetlands, HSG D |
| * | 1.083 | 61 | Pasture/Hay, HSG B |
| * | 0.052 | 61 | Pasture/Hay, HSG B |
| * | 3.489 | 80 | Pasture/Hay, HSG D |
| * | 1.468 | 81 | Cultivated Crops, HSG D |
| * | 0.104 | 78 | MEADOW, HSG D |
| * | 0.520 | 78 | MEADOW, HSG D |
| * | 0.020 | 98 | IMPERVIOUS, HSG D |
| * | 0.137 | 78 | MEADOW, HSG D |
| * | 0.273 | 78 | MEADOW, HSG D |
| * | 0.206 | 58 | MEADOW, HSG B |
| * | 0.118 | 98 | IMPERVIOUS, HSG D |
| * | 5.372 | 78 | MEADOW, HSG D |
| * | 1.174 | 78 | MEADOW, HSG D |
| | 24.142 | 81 | Weighted Average |
| | 24.004 | | 99.43% Pervious Area |
| | 0.138 | | 0.57% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 100 | 0.0275 | 1.28 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 45 | 0.0189 | 2.79 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.5 | 140 | 0.0499 | 1.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 77 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 112 | 0.0311 | 0.88 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.8 | 150 | 0.0026 | 0.26 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 11.5 | 194 | 0.0031 | 0.28 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 16.2 | 197 | 0.0016 | 0.20 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 18.8 | 211 | 0.0007 | 0.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 62.8 | 1,225 | Total | | | |

## Subcatchment 26: WS26



## Summary for Subcatchment 27: WS27

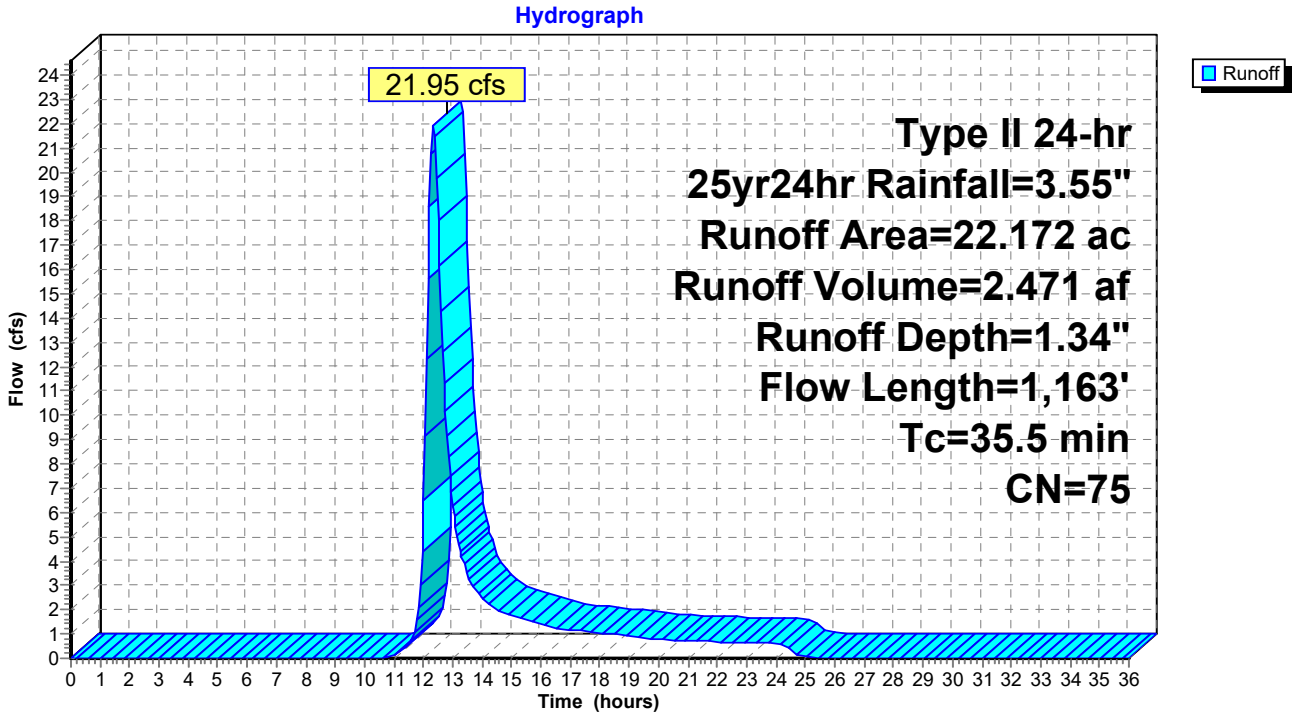
Runoff = 21.95 cfs @ 12.33 hrs, Volume= 2.471 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.039 | 80 | Pasture/Hay, HSG D |
| * | 0.457 | 79 | Deciduous Forest, HSG D |
| * | 0.286 | 79 | Deciduous Forest, HSG D |
| * | 3.997 | 81 | Cultivated Crops, HSG D |
| * | 0.445 | 78 | MEADOW, HSG D |
| * | 0.104 | 58 | MEADOW, HSG B |
| * | 3.512 | 78 | MEADOW, HSG D |
| * | 1.264 | 78 | MEADOW, HSG D |
| * | 0.026 | 78 | MEADOW, HSG D |
| * | 0.773 | 78 | MEADOW, HSG D |
| * | 0.603 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG B |
| * | 3.250 | 58 | MEADOW, HSG B |
| * | 0.690 | 58 | MEADOW, HSG B |
| * | 0.119 | 98 | IMPERVIOUS, HSG D |
| * | 3.285 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 3.273 | 78 | MEADOW, HSG D |
| | 22.172 | 75 | Weighted Average |
| | 22.005 | | 99.25% Pervious Area |
| | 0.167 | | 0.75% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.5 | 100 | 0.0148 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.0 | 216 | 0.0288 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.2 | 352 | 0.0137 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 62 | 0.0040 | 0.45 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 172 | 0.0112 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 173 | 0.0123 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 88 | 0.0071 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.5 | 1,163 | Total | | | |

## Subcatchment 27: WS27



## Summary for Subcatchment 28: WS28

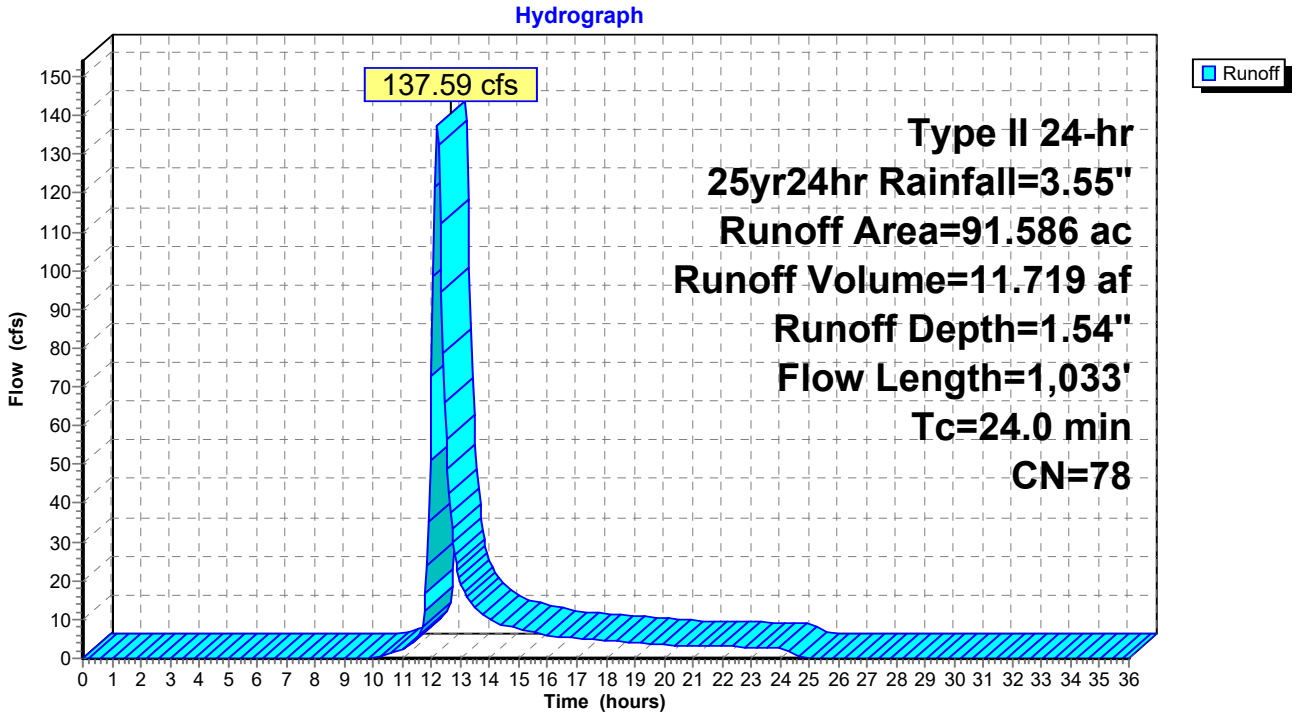
Runoff = 137.59 cfs @ 12.18 hrs, Volume= 11.719 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.197 | 61 | Pasture/Hay, HSG B |
| * | 0.793 | 80 | Pasture/Hay, HSG D |
| * | 0.117 | 79 | Deciduous Forest, HSG D |
| * | 0.589 | 71 | Cultivated Crops, HSG B |
| * | 4.338 | 71 | Cultivated Crops, HSG B |
| * | 1.150 | 71 | Cultivated Crops, HSG B |
| * | 0.357 | 71 | Cultivated Crops, HSG B |
| * | 0.102 | 71 | Cultivated Crops, HSG B |
| * | 62.673 | 81 | Cultivated Crops, HSG D |
| * | 0.989 | 58 | MEADOW, HSG B |
| * | 0.137 | 98 | IMPERVIOUS, HSG B |
| * | 3.445 | 58 | MEADOW, HSG B |
| * | 1.793 | 58 | MEADOW, HSG B |
| * | 0.058 | 98 | IMPERVIOUS, HSG B |
| * | 1.642 | 58 | MEADOW, HSG B |
| * | 0.481 | 58 | MEADOW, HSG B |
| * | 0.088 | 98 | IMPERVIOUS, HSG B |
| * | 0.348 | 58 | MEADOW, HSG B |
| * | 2.648 | 78 | MEADOW, HSG D |
| * | 0.136 | 98 | IMPERVIOUS, HSG D |
| * | 9.335 | 78 | MEADOW, HSG D |
| * | 0.024 | 98 | IMPERVIOUS, HSG D |
| * | 0.146 | 78 | MEADOW, HSG D |
| | 91.586 | 78 | Weighted Average |
| | 91.143 | | 99.52% Pervious Area |
| | 0.443 | | 0.48% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.8 | 100 | 0.0133 | 0.25 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.7 | 231 | 0.0134 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.1 | 313 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 228 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.3 | 161 | 0.0047 | 0.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.0 | 1,033 | Total | | | |

## Subcatchment 28: WS28



## Summary for Subcatchment 29: WS29

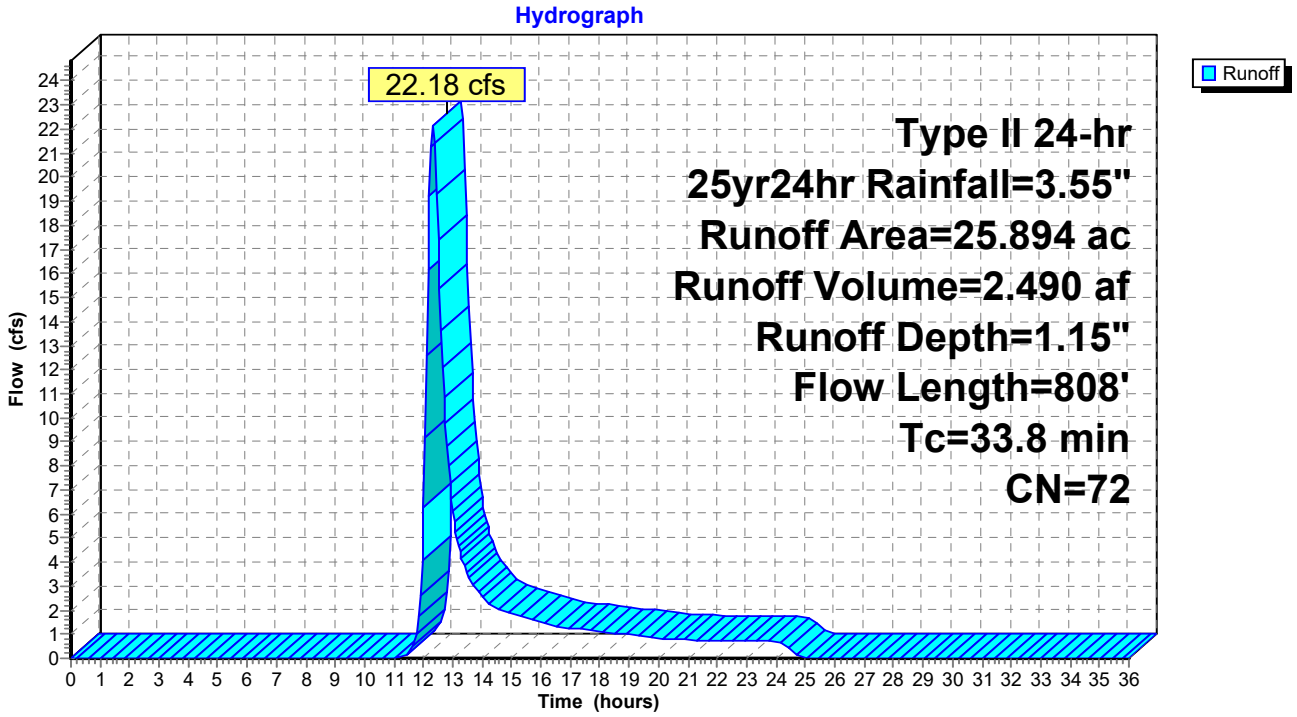
Runoff = 22.18 cfs @ 12.32 hrs, Volume= 2.490 af, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 3.057 | 71 | Cultivated Crops, HSG B |
| * | 0.219 | 71 | Cultivated Crops, HSG B |
| * | 0.241 | 71 | Cultivated Crops, HSG B |
| * | 2.951 | 81 | Cultivated Crops, HSG D |
| * | 1.544 | 58 | MEADOW, HSG B |
| * | 0.042 | 98 | IMPERVIOUS, HSG B |
| * | 3.480 | 58 | MEADOW, HSG B |
| * | 0.404 | 58 | MEADOW, HSG B |
| * | 0.060 | 98 | IMPERVIOUS, HSG B |
| * | 1.633 | 58 | MEADOW, HSG B |
| * | 0.042 | 98 | IMPERVIOUS, HSG B |
| * | 2.821 | 78 | MEADOW, HSG D |
| * | 0.203 | 98 | IMPERVIOUS, HSG D |
| * | 9.194 | 78 | MEADOW, HSG D |
| * | 0.001 | 98 | IMPERVIOUS, HSG D |
| | 25.894 | 72 | Weighted Average |
| | 25.545 | | 98.66% Pervious Area |
| | 0.348 | | 1.34% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 17.9 | 100 | 0.0073 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 5.5 | 198 | 0.0072 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 20 | 0.0117 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 13 | 0.0061 | 1.59 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 21 | 0.0089 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 61 | 0.0088 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.8 | 299 | 0.0150 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 60 | 0.0084 | 0.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 35 | 0.0228 | 1.36 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 33.8 | 808 | Total | | | |

## Subcatchment 29: WS29



## Summary for Subcatchment 30: WS30

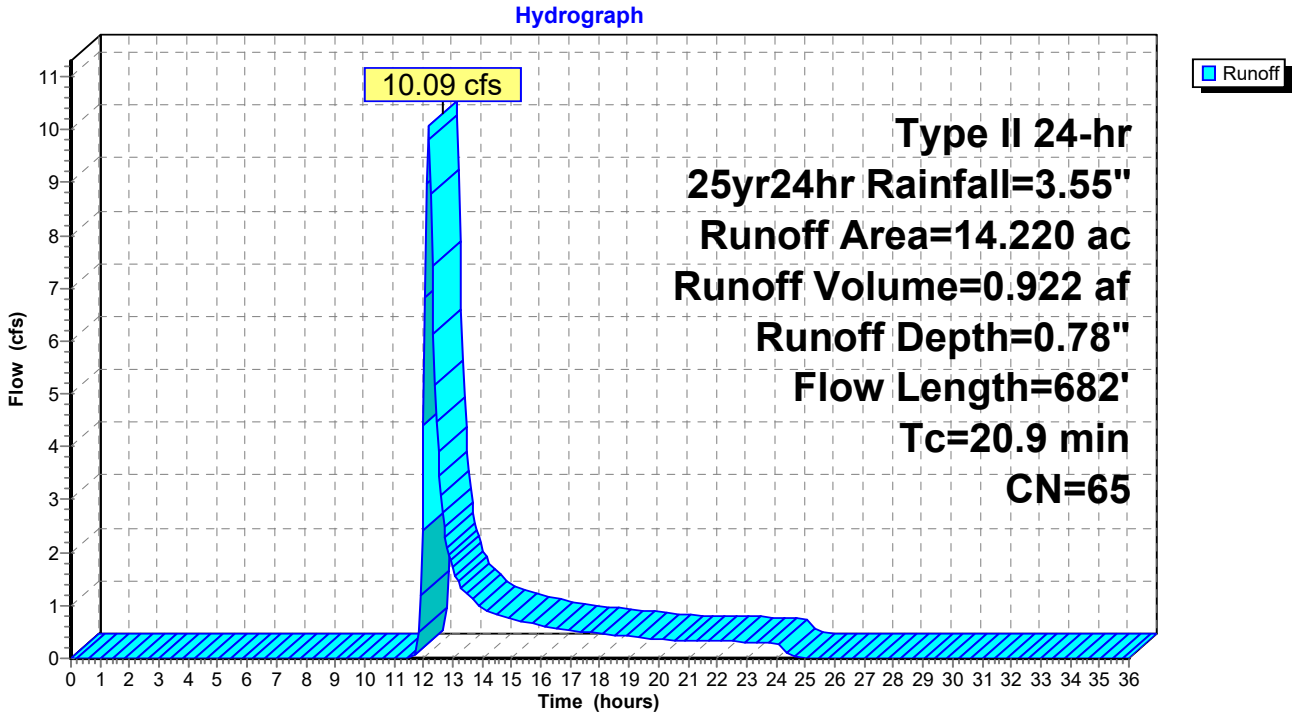
Runoff = 10.09 cfs @ 12.17 hrs, Volume= 0.922 af, Depth= 0.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.159 | 71 | Cultivated Crops, HSG B |
| * | 0.668 | 71 | Cultivated Crops, HSG B |
| * | 0.583 | 81 | Cultivated Crops, HSG D |
| * | 0.473 | 58 | MEADOW, HSG B |
| * | 0.579 | 58 | MEADOW, HSG B |
| * | 0.257 | 58 | MEADOW, HSG B |
| * | 1.600 | 58 | MEADOW, HSG B |
| * | 0.358 | 98 | IMPERVIOUS, HSG B |
| * | 6.601 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 1.111 | 78 | MEADOW, HSG D |
| * | 1.770 | 78 | MEADOW, HSG D |
| * | 0.018 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 14.220 | 65 | Weighted Average |
| | 13.801 | | 97.05% Pervious Area |
| | 0.419 | | 2.95% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.6 | 66 | 0.0154 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.6 | 34 | 0.0184 | 0.88 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.8 | 60 | 0.0025 | 0.35 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.9 | 169 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 234 | 0.0306 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 119 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 20.9 | 682 | Total | | | |

## Subcatchment 30: WS30



## Summary for Subcatchment 31: WS31

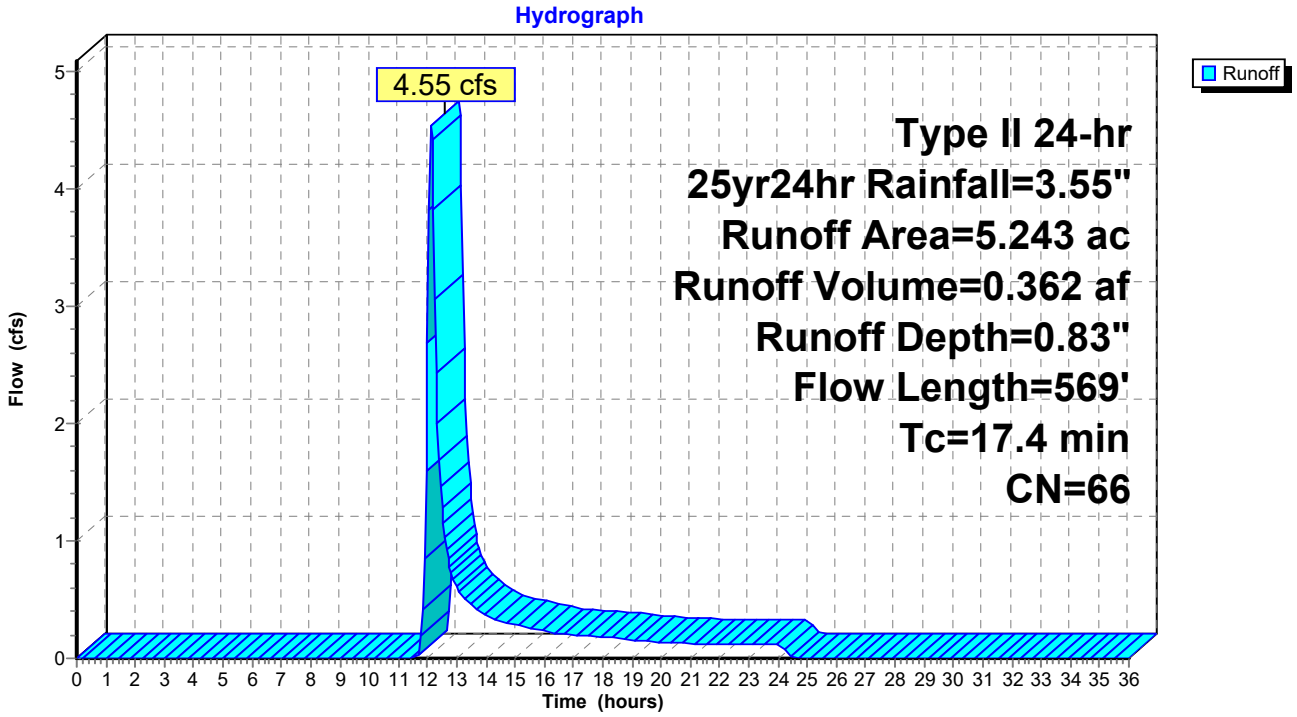
Runoff = 4.55 cfs @ 12.12 hrs, Volume= 0.362 af, Depth= 0.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.184 | 93 | Developed Low Intensity, HSG D |
| * | 1.726 | 71 | Cultivated Crops, HSG B |
| * | 0.504 | 81 | Cultivated Crops, HSG D |
| * | 1.761 | 58 | MEADOW, HSG B |
| * | 0.059 | 98 | IMPERVIOUS, HSG B |
| * | 1.009 | 58 | MEADOW, HSG B |
| | 5.243 | 66 | Weighted Average |
| | 5.184 | | 98.88% Pervious Area |
| | 0.059 | | 1.12% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.3 | 81 | 0.0247 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.7 | 19 | 0.0295 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.8 | 98 | 0.0173 | 0.92 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 40 | 0.0512 | 1.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 38 | 0.0534 | 1.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 97 | 0.0588 | 1.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 52 | 0.0562 | 2.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 78 | 0.0405 | 1.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 65 | 0.0265 | 1.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 17.4 | 569 | Total | | | |

## Subcatchment 31: WS31



## Summary for Subcatchment 32: WS32

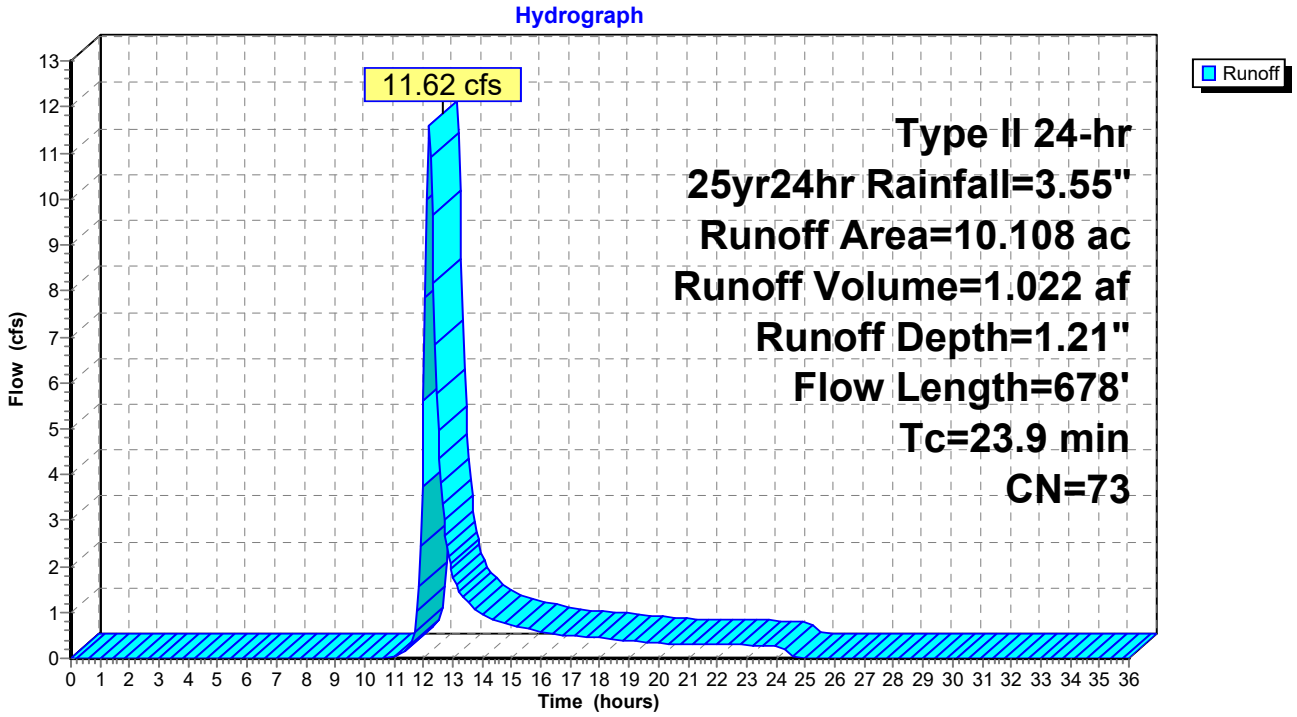
Runoff = 11.62 cfs @ 12.19 hrs, Volume= 1.022 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.078 | 88 | Developed Low Intensity, HSG B |
| * | 0.021 | 93 | Developed Low Intensity, HSG D |
| * | 0.125 | 71 | Cultivated Crops, HSG B |
| * | 0.177 | 81 | Cultivated Crops, HSG D |
| * | 0.443 | 71 | Cultivated Crops, HSG B |
| * | 1.562 | 81 | Cultivated Crops, HSG D |
| * | 0.154 | 86 | Woody Wetlands, HSG D |
| * | 0.085 | 86 | Woody Wetlands, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG D |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.276 | 58 | MEADOW, HSG B |
| * | 0.326 | 58 | MEADOW, HSG B |
| * | 0.013 | 78 | MEADOW, HSG D |
| * | 0.321 | 58 | MEADOW, HSG B |
| * | 2.039 | 58 | MEADOW, HSG B |
| * | 0.910 | 78 | MEADOW, HSG D |
| * | 3.575 | 78 | MEADOW, HSG D |
| | 10.108 | 73 | Weighted Average |
| | 10.108 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.0 | 100 | 0.0123 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.5 | 86 | 0.0108 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 92 | 0.0053 | 0.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 60 | 0.0132 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 205 | 0.0078 | 0.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.7 | 133 | 0.0031 | 0.39 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.9 | 678 | Total | | | |

## Subcatchment 32: WS32



## Summary for Subcatchment 33: WS33

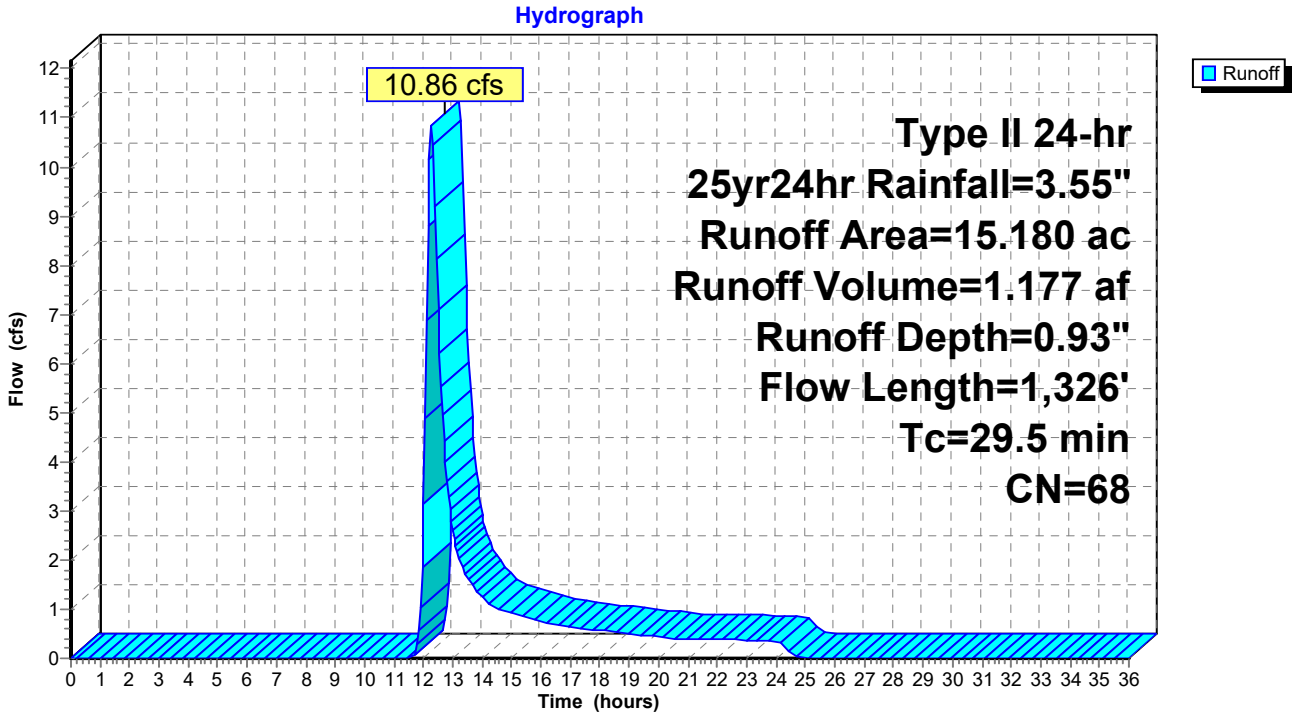
Runoff = 10.86 cfs @ 12.27 hrs, Volume= 1.177 af, Depth= 0.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.023 | 93 | Developed Low Intensity, HSG D |
| * | 0.044 | 71 | Cultivated Crops, HSG B |
| * | 0.500 | 81 | Cultivated Crops, HSG D |
| * | 1.263 | 71 | Cultivated Crops, HSG B |
| * | 0.959 | 58 | MEADOW, HSG B |
| * | 0.054 | 98 | IMPERVIOUS, HSG B |
| * | 0.009 | 58 | MEADOW, HSG B |
| * | 1.519 | 78 | MEADOW, HSG D |
| * | 1.567 | 78 | MEADOW, HSG D |
| * | 1.497 | 78 | MEADOW, HSG D |
| * | 0.970 | 78 | MEADOW, HSG D |
| * | 1.452 | 58 | MEADOW, HSG B |
| * | 0.165 | 98 | IMPERVIOUS, HSG B |
| * | 5.115 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| | 15.180 | 68 | Weighted Average |
| | 14.919 | | 98.28% Pervious Area |
| | 0.261 | | 1.72% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.4 | 11 | 0.0054 | 0.43 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.4 | 60 | 0.0022 | 0.42 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 4.3 | 20 | 0.0101 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.0 | 5 | 0.0258 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.0 | 3 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 69 | 0.0237 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 211 | 0.0190 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 43 | 0.0148 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 27 | 0.0151 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 143 | 0.0188 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 205 | 0.0234 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 120 | 0.0203 | 1.00 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.5 | 194 | 0.0169 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.8 | 133 | 0.0127 | 0.79 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0167 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 19 | 0.0224 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 52 | 0.0122 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 29.5 | 1,326 | Total | | | |

## Subcatchment 33: WS33



## Summary for Subcatchment 34: WS34

Runoff = 33.05 cfs @ 12.42 hrs, Volume= 4.499 af, Depth= 0.93"

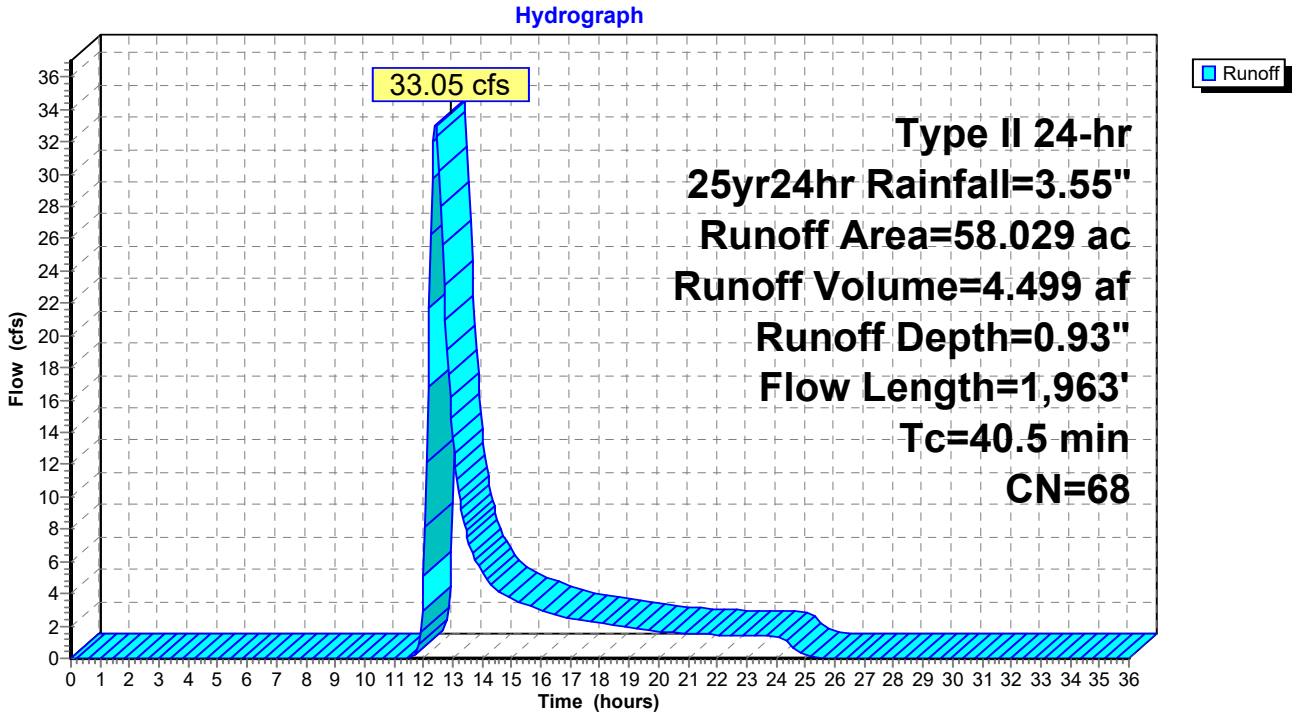
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.223 | 79 | Evergreen Forest, HSG D |
| * | 0.016 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.023 | 60 | Deciduous Forest, HSG B |
| * | 0.092 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.057 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.003 | 80 | Pasture/Hay, HSG D |
| * | 0.055 | 61 | Pasture/Hay, HSG B |
| * | 0.024 | 61 | Pasture/Hay, HSG B |
| * | 0.139 | 89 | Developed Medium Intensity, HSG B |
| * | 0.766 | 88 | Developed Low Intensity, HSG B |
| * | 0.179 | 88 | Developed Low Intensity, HSG B |
| * | 0.222 | 89 | Developed Medium Intensity, HSG B |
| * | 0.174 | 89 | Developed Medium Intensity, HSG B |
| * | 0.133 | 88 | Developed Low Intensity, HSG B |
| * | 0.353 | 93 | Developed Low Intensity, HSG D |
| * | 0.150 | 84 | Developed Open Space, HSG D |
| * | 0.584 | 93 | Developed Low Intensity, HSG D |
| * | 0.363 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.389 | 84 | Developed Open Space, HSG D |
| * | 0.194 | 88 | Developed Low Intensity, HSG B |
| * | 0.109 | 68 | Developed Open Space, HSG B |
| * | 0.452 | 68 | Developed Open Space, HSG B |
| * | 0.148 | 84 | Developed Open Space, HSG D |
| * | 0.212 | 88 | Developed Low Intensity, HSG B |
| * | 1.124 | 93 | Developed Low Intensity, HSG D |
| * | 0.169 | 84 | Developed Open Space, HSG D |
| * | 0.018 | 94 | Developed Medium Intensity, HSG D |
| * | 0.051 | 71 | Cultivated Crops, HSG B |
| * | 0.393 | 81 | Cultivated Crops, HSG D |
| * | 0.529 | 81 | Cultivated Crops, HSG D |
| * | 0.463 | 81 | Cultivated Crops, HSG D |
| * | 1.719 | 71 | Cultivated Crops, HSG B |
| * | 7.463 | 71 | Cultivated Crops, HSG B |
| * | 0.978 | 81 | Cultivated Crops, HSG D |
| * | 0.115 | 58 | MEADOW, HSG B |
| * | 0.020 | 58 | MEADOW, HSG B |
| * | 0.067 | 98 | IMPERVIOUS, HSG B |
| * | 0.497 | 58 | MEADOW, HSG B |
| * | 0.765 | 58 | MEADOW, HSG B |
| * | 0.083 | 98 | IMPERVIOUS, HSG B |
| * | 0.107 | 58 | MEADOW, HSG B |
| * | 0.955 | 58 | MEADOW, HSG B |
| * | 0.305 | 78 | MEADOW, HSG D |
| * | 0.056 | 78 | MEADOW, HSG D |
| * | 0.114 | 58 | MEADOW, HSG B |
| * | 0.061 | 98 | IMPERVIOUS, HSG B |
| * | 0.016 | 78 | MEADOW, HSG D |
| * | 0.133 | 78 | MEADOW, HSG D |
| * | 1.405 | 58 | MEADOW, HSG B |
| * | 3.608 | 58 | MEADOW, HSG B |

| | | | |
|---|---|---|---|
| * | 0.029 | 98 | IMPERVIOUS, HSG B |
| * | 5.146 | 58 | MEADOW, HSG B |
| * | 16.585 | 58 | MEADOW, HSG B |
| * | 0.085 | 98 | IMPERVIOUS, HSG B |
| * | 0.422 | 98 | IMPERVIOUS, HSG B |
| * | 1.119 | 78 | MEADOW, HSG D |
| * | 8.143 | 78 | MEADOW, HSG D |
| | 58.029 | 68 | Weighted Average |
| | 57.283 | | 98.71% Pervious Area |
| | 0.746 | | 1.29% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.3 | 95 | 0.0264 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.8 | 5 | 0.0019 | 0.03 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.5 | 220 | 0.0230 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 30 | 0.0645 | 1.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 20 | 0.0786 | 5.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 32 | 0.0526 | 1.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 438 | 0.0504 | 1.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 162 | 0.0233 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 76 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 235 | 0.0192 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 143 | 0.0115 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 117 | 0.0141 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 99 | 0.0130 | 2.32 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.7 | 291 | 0.0026 | 1.04 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 40.5 | 1,963 | Total | | | |

## Subcatchment 34: WS34



## Summary for Subcatchment 35: WS35

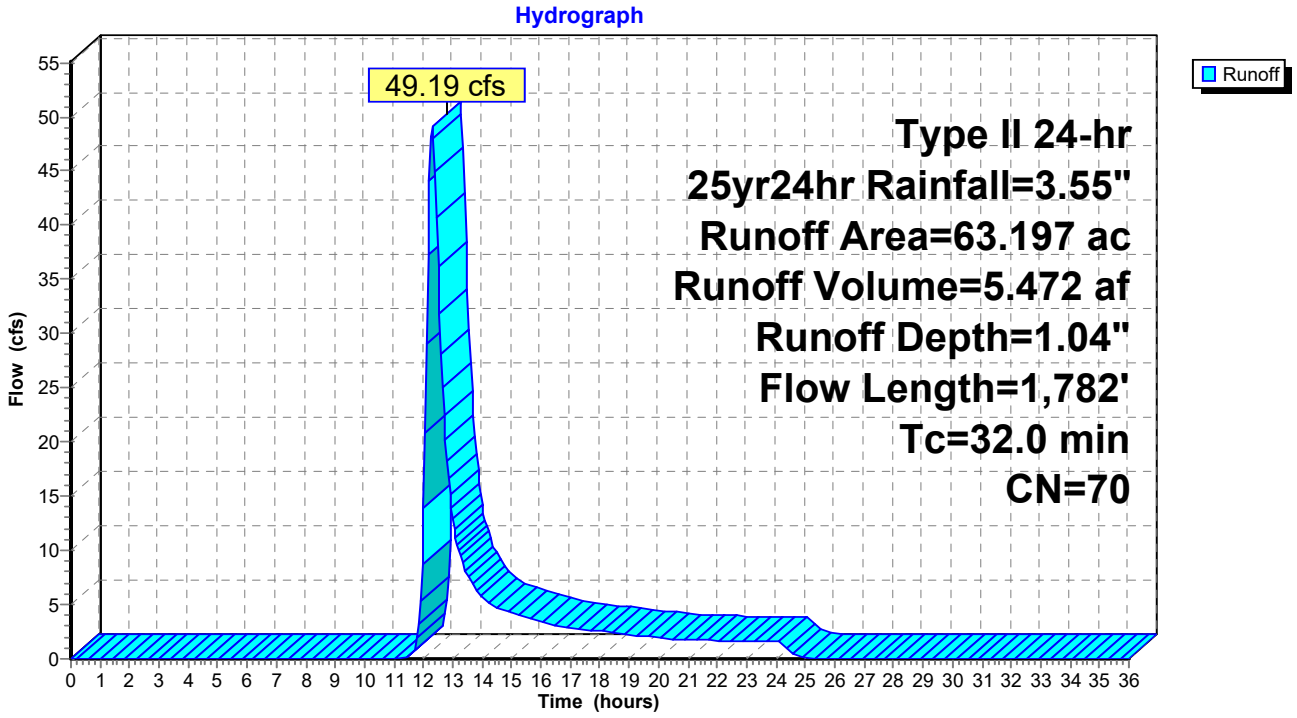
Runoff = 49.19 cfs @ 12.30 hrs, Volume= 5.472 af, Depth= 1.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.060 | 93 | Developed Low Intensity, HSG D |
| * | 0.072 | 84 | Developed Open Space, HSG D |
| * | 0.305 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.194 | 93 | Developed Low Intensity, HSG D |
| * | 1.190 | 80 | Pasture/Hay, HSG D |
| * | 0.558 | 61 | Pasture/Hay, HSG B |
| * | 0.164 | 89 | Developed Medium Intensity, HSG B |
| * | 0.485 | 94 | Developed Medium Intensity, HSG D |
| * | 0.096 | 68 | Developed Open Space, HSG B |
| * | 0.866 | 88 | Developed Low Intensity, HSG B |
| * | 0.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.002 | 71 | Cultivated Crops, HSG B |
| * | 0.049 | 81 | Cultivated Crops, HSG D |
| * | 1.288 | 71 | Cultivated Crops, HSG B |
| * | 10.960 | 81 | Cultivated Crops, HSG D |
| * | 1.419 | 71 | Cultivated Crops, HSG B |
| * | 3.398 | 71 | Cultivated Crops, HSG B |
| * | 9.815 | 71 | Cultivated Crops, HSG B |
| * | 6.074 | 81 | Cultivated Crops, HSG D |
| * | 0.125 | 58 | MEADOW, HSG B |
| * | 0.120 | 58 | MEADOW, HSG B |
| * | 1.241 | 58 | MEADOW, HSG B |
| * | 4.762 | 58 | MEADOW, HSG B |
| * | 0.600 | 78 | MEADOW, HSG D |
| * | 1.888 | 78 | MEADOW, HSG D |
| * | 0.471 | 58 | MEADOW, HSG B |
| * | 0.387 | 58 | MEADOW, HSG B |
| * | 0.336 | 58 | MEADOW, HSG B |
| * | 3.508 | 58 | MEADOW, HSG B |
| * | 0.053 | 98 | IMPERVIOUS, HSG B |
| * | 2.924 | 58 | MEADOW, HSG B |
| * | 9.040 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.250 | 98 | IMPERVIOUS, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 63.197 | 70 | Weighted Average |
| | 62.851 | | 99.45% Pervious Area |
| | 0.346 | | 0.55% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 79 | 0.0156 | 0.97 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 21 | 0.0605 | 1.29 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.4 | 83 | 0.0264 | 3.30 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 3.4 | 291 | 0.0251 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.3 | 303 | 0.0111 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 210 | 0.0088 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.3 | 582 | 0.0066 | 0.73 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 213 | 0.0167 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 32.0 | 1,782 | Total | | | |

## Subcatchment 35: WS35



## Summary for Subcatchment 36: WS36

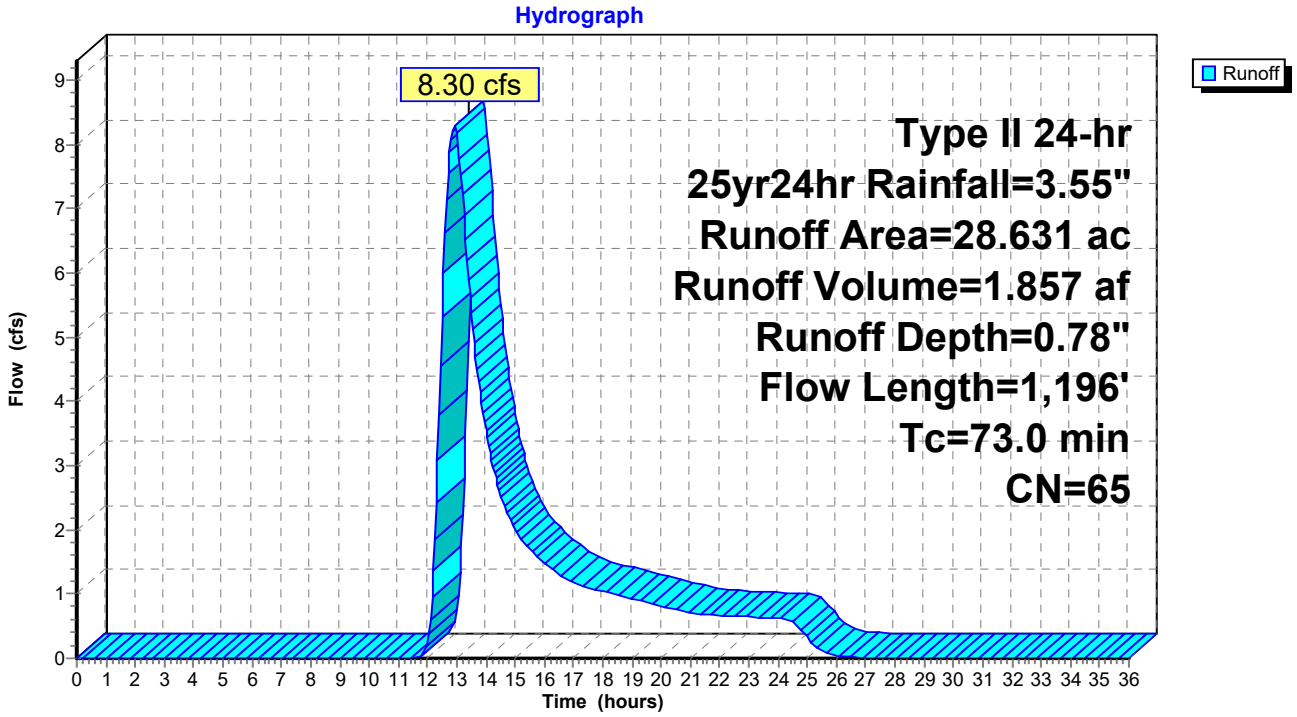
Runoff = 8.30 cfs @ 12.91 hrs, Volume= 1.857 af, Depth= 0.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.192 | 61 | Pasture/Hay, HSG B |
| * | 0.386 | 80 | Pasture/Hay, HSG D |
| * | 0.342 | 61 | Pasture/Hay, HSG B |
| * | 1.804 | 71 | Cultivated Crops, HSG B |
| * | 0.670 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.069 | 78 | MEADOW, HSG D |
| * | 0.173 | 78 | MEADOW, HSG D |
| * | 3.854 | 58 | MEADOW, HSG B |
| * | 10.170 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.327 | 98 | IMPERVIOUS, HSG B |
| * | 0.998 | 78 | MEADOW, HSG D |
| * | 5.499 | 78 | MEADOW, HSG D |
| * | 0.091 | 98 | IMPERVIOUS, HSG D |
| * | 0.809 | 58 | MEADOW, HSG B |
| * | 3.072 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.085 | 98 | IMPERVIOUS, HSG B |
| | 28.631 | 65 | Weighted Average |
| | 28.043 | | 97.95% Pervious Area |
| | 0.588 | | 2.05% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 2.8 | 100 | 0.0040 | 0.59 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 49.6 | 205 | 0.0001 | 0.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 123 | 0.0415 | 1.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.4 | 328 | 0.0149 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.8 | 440 | 0.0067 | 0.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 73.0 | 1,196 | Total | | | |

## Subcatchment 36: WS36



## Summary for Subcatchment 37: WS37

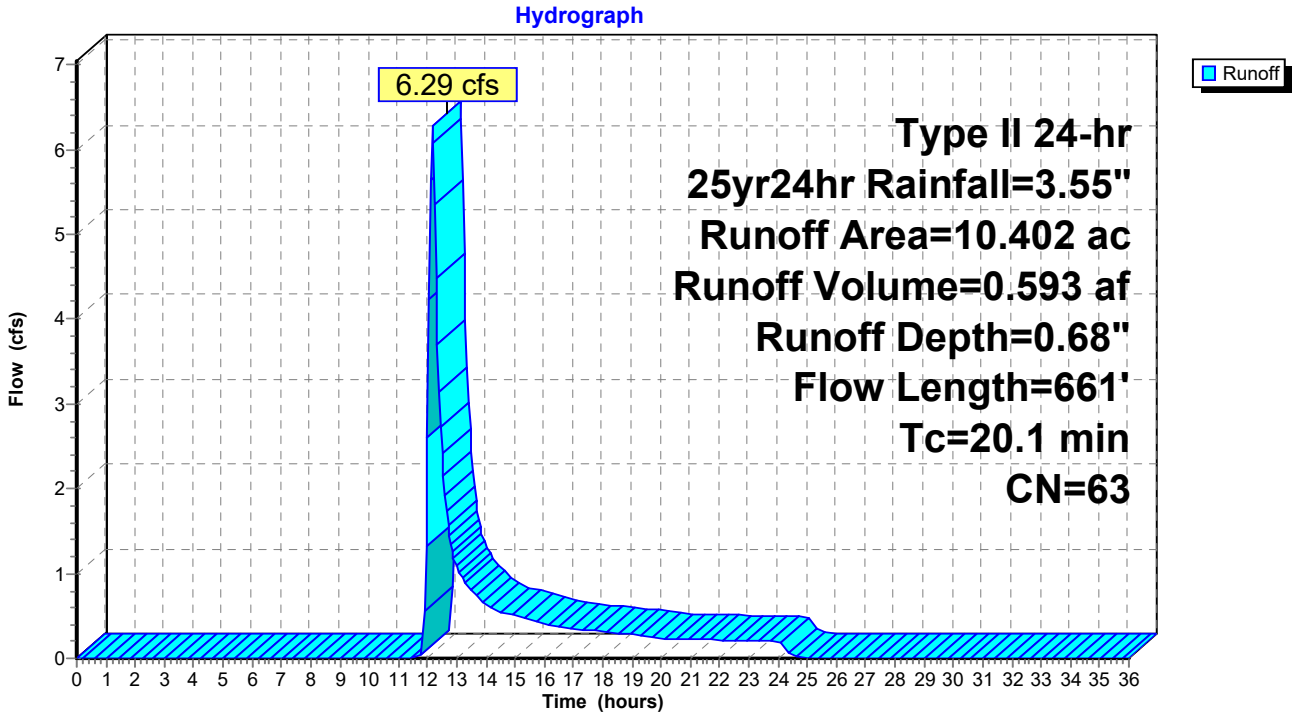
Runoff = 6.29 cfs @ 12.16 hrs, Volume= 0.593 af, Depth= 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.009 | 88 | Developed Low Intensity, HSG B |
| * | 0.007 | 68 | Developed Open Space, HSG B |
| * | 0.044 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 79 | Mixed Forest, HSG D |
| * | 0.127 | 60 | Mixed Forest, HSG B |
| * | 0.546 | 60 | Mixed Forest, HSG B |
| * | 0.476 | 60 | Deciduous Forest, HSG B |
| * | 0.079 | 88 | Developed Low Intensity, HSG B |
| * | 0.019 | 68 | Developed Open Space, HSG B |
| * | 0.318 | 81 | Cultivated Crops, HSG D |
| * | 2.556 | 71 | Cultivated Crops, HSG B |
| * | 0.120 | 71 | Cultivated Crops, HSG B |
| * | 0.138 | 58 | MEADOW, HSG B |
| * | 0.061 | 58 | MEADOW, HSG B |
| * | 0.207 | 58 | MEADOW, HSG B |
| * | 0.313 | 58 | MEADOW, HSG B |
| * | 0.022 | 78 | MEADOW, HSG D |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.574 | 58 | MEADOW, HSG B |
| * | 2.870 | 58 | MEADOW, HSG B |
| * | 0.294 | 58 | MEADOW, HSG B |
| * | 1.622 | 58 | MEADOW, HSG B |
| | 10.402 | 63 | Weighted Average |
| | 10.402 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.1 | 100 | 0.0240 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.2 | 70 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 130 | 0.0263 | 1.14 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 23 | 0.0098 | 0.69 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 64 | 0.0416 | 1.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 52 | 0.0226 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 222 | 0.0108 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 20.1 | 661 | Total | | | |

## Subcatchment 37: WS37



## Summary for Subcatchment 38: WS38

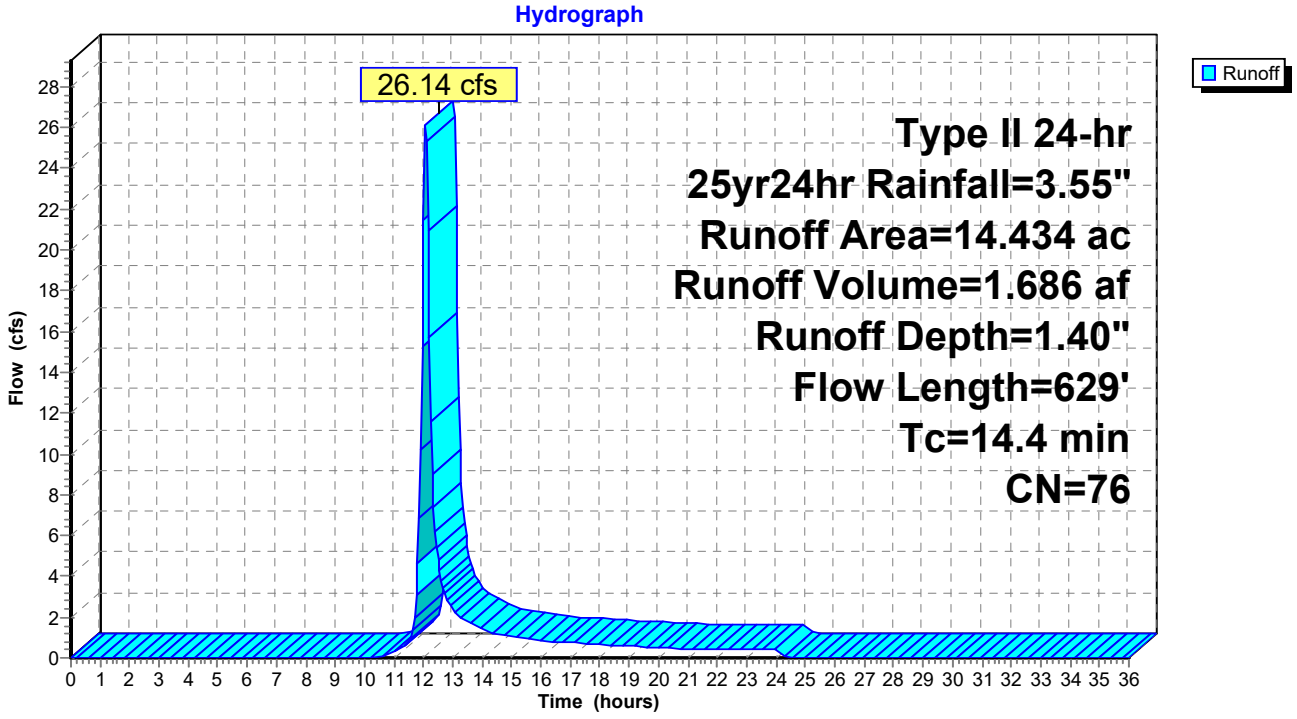
Runoff = 26.14 cfs @ 12.07 hrs, Volume= 1.686 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.049 | 88 | Developed Low Intensity, HSG B |
| * | 0.006 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.018 | 88 | Developed Low Intensity, HSG B |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 0.191 | 84 | Developed Open Space, HSG D |
| * | 0.082 | 93 | Developed Low Intensity, HSG D |
| * | 0.200 | 84 | Developed Open Space, HSG D |
| * | 0.118 | 93 | Developed Low Intensity, HSG D |
| * | 0.043 | 84 | Developed Open Space, HSG D |
| * | 0.046 | 68 | Developed Open Space, HSG B |
| * | 0.509 | 61 | Pasture/Hay, HSG B |
| * | 1.654 | 80 | Pasture/Hay, HSG D |
| * | 3.128 | 71 | Cultivated Crops, HSG B |
| * | 0.039 | 81 | Cultivated Crops, HSG D |
| * | 0.073 | 71 | Cultivated Crops, HSG B |
| * | 3.794 | 81 | Cultivated Crops, HSG D |
| * | 0.021 | 98 | IMPERVIOUS, HSG D |
| * | 0.495 | 58 | MEADOW, HSG B |
| * | 0.040 | 58 | MEADOW, HSG B |
| * | 0.081 | 58 | MEADOW, HSG B |
| * | 0.034 | 98 | IMPERVIOUS, HSG B |
| * | 1.134 | 78 | MEADOW, HSG D |
| * | 0.151 | 78 | MEADOW, HSG D |
| * | 0.051 | 98 | IMPERVIOUS, HSG D |
| * | 0.002 | 58 | MEADOW, HSG B |
| * | 0.006 | 58 | MEADOW, HSG B |
| * | 0.039 | 98 | IMPERVIOUS, HSG B |
| * | 0.016 | 98 | IMPERVIOUS, HSG D |
| * | 0.123 | 58 | MEADOW, HSG B |
| * | 0.070 | 58 | MEADOW, HSG B |
| * | 0.754 | 78 | MEADOW, HSG D |
| * | 1.435 | 78 | MEADOW, HSG D |
| | 14.434 | 76 | Weighted Average |
| | 14.275 | | 98.89% Pervious Area |
| | 0.160 | | 1.11% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.9 | 100 | 0.0301 | 0.34 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.7 | 136 | 0.0086 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 220 | 0.0134 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 43 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 7 | 0.0073 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 124 | 0.0097 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.4 | 629 | Total | | | |

## Subcatchment 38: WS38



## Summary for Subcatchment 39: WS39

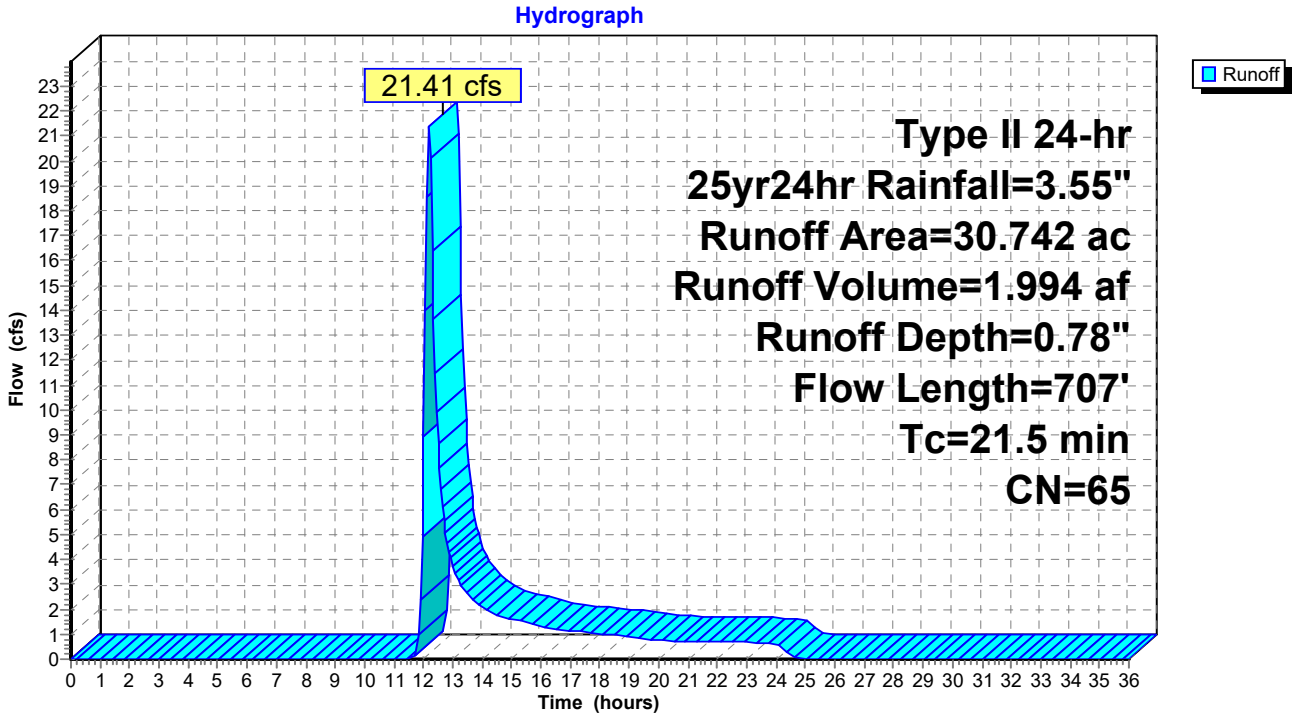
Runoff = 21.41 cfs @ 12.17 hrs, Volume= 1.994 af, Depth= 0.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.176 | 68 | Developed Open Space, HSG B |
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.359 | 68 | Developed Open Space, HSG B |
| * | 0.307 | 68 | Developed Open Space, HSG B |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.739 | 61 | Pasture/Hay, HSG B |
| * | 0.037 | 60 | Deciduous Forest, HSG B |
| * | 0.185 | 60 | Deciduous Forest, HSG B |
| * | 4.448 | 60 | Deciduous Forest, HSG B |
| * | 0.303 | 79 | Deciduous Forest, HSG D |
| * | 0.782 | 60 | Mixed Forest, HSG B |
| * | 0.775 | 60 | Mixed Forest, HSG B |
| * | 0.747 | 60 | Mixed Forest, HSG B |
| * | 0.142 | 79 | Mixed Forest, HSG D |
| * | 2.604 | 71 | Cultivated Crops, HSG B |
| * | 0.038 | 81 | Cultivated Crops, HSG D |
| * | 2.284 | 71 | Cultivated Crops, HSG B |
| * | 2.039 | 60 | Deciduous Forest, HSG B |
| * | 1.421 | 79 | Deciduous Forest, HSG D |
| * | 0.011 | 60 | Deciduous Forest, HSG B |
| * | 0.086 | 61 | Pasture/Hay, HSG B |
| * | 0.277 | 80 | Pasture/Hay, HSG D |
| * | 1.061 | 71 | Cultivated Crops, HSG B |
| * | 0.625 | 81 | Cultivated Crops, HSG D |
| * | 0.244 | 58 | MEADOW, HSG B |
| * | 0.066 | 58 | MEADOW, HSG B |
| * | 0.092 | 58 | MEADOW, HSG B |
| * | 0.048 | 98 | IMPERVIOUS, HSG B |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.099 | 58 | MEADOW, HSG B |
| * | 0.023 | 58 | MEADOW, HSG B |
| * | 0.071 | 58 | MEADOW, HSG B |
| * | 0.095 | 58 | MEADOW, HSG B |
| * | 0.077 | 58 | MEADOW, HSG B |
| * | 0.045 | 98 | IMPERVIOUS, HSG B |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.415 | 58 | MEADOW, HSG B |
| * | 0.565 | 58 | MEADOW, HSG B |
| * | 0.004 | 98 | IMPERVIOUS, HSG B |
| * | 0.027 | 78 | MEADOW, HSG D |
| * | 1.973 | 58 | MEADOW, HSG B |
| * | 0.285 | 58 | MEADOW, HSG B |
| * | 4.793 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.379 | 98 | IMPERVIOUS, HSG B |
| * | 0.716 | 78 | MEADOW, HSG D |
| * | 0.772 | 78 | MEADOW, HSG D |
| * | 0.019 | 98 | IMPERVIOUS, HSG D |
| | 30.742 | 65 | Weighted Average |
| | 30.204 | | 98.25% Pervious Area |
| | 0.537 | | 1.75% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.3 | 89 | 0.0541 | 0.20 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.7 | 11 | 0.0329 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.9 | 63 | 0.0257 | 1.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 69 | 0.0279 | 1.17 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 25 | 0.0360 | 1.33 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 21 | 0.0206 | 2.91 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 34 | 0.0220 | 1.04 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 19 | 0.0145 | 0.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 137 | 0.0170 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 144 | 0.0051 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 95 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 21.5 | 707 | Total | | | |

## Subcatchment 39: WS39



## Summary for Subcatchment 40: WS40

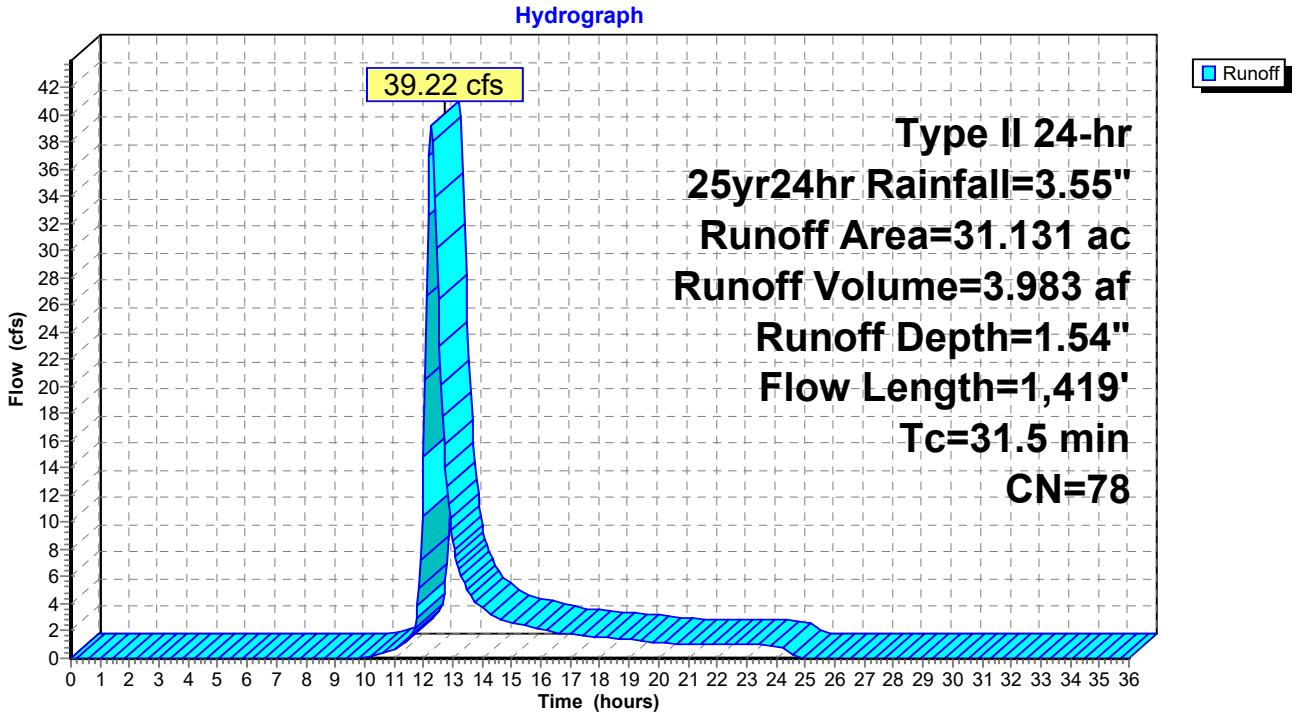
Runoff = 39.22 cfs @ 12.27 hrs, Volume= 3.983 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 81 | Cultivated Crops, HSG D |
| * | 6.748 | 79 | Deciduous Forest, HSG D |
| * | 0.190 | 79 | Deciduous Forest, HSG D |
| * | 1.168 | 80 | Pasture/Hay, HSG D |
| * | 0.518 | 80 | Pasture/Hay, HSG D |
| * | 0.057 | 62 | Cultivated Crops, HSG A |
| * | 0.873 | 81 | Cultivated Crops, HSG D |
| * | 3.427 | 81 | Cultivated Crops, HSG D |
| * | 0.123 | 58 | MEADOW, HSG B |
| * | 0.309 | 58 | MEADOW, HSG B |
| * | 0.780 | 78 | MEADOW, HSG D |
| * | 0.031 | 58 | MEADOW, HSG B |
| * | 0.002 | 58 | MEADOW, HSG B |
| * | 0.119 | 58 | MEADOW, HSG B |
| * | 0.004 | 98 | IMPERVIOUS, HSG B |
| * | 0.140 | 78 | MEADOW, HSG D |
| * | 0.200 | 78 | MEADOW, HSG D |
| * | 0.286 | 78 | MEADOW, HSG D |
| * | 0.078 | 78 | MEADOW, HSG D |
| * | 0.114 | 98 | IMPERVIOUS, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.077 | 58 | MEADOW, HSG B |
| * | 0.924 | 78 | MEADOW, HSG D |
| * | 0.625 | 78 | MEADOW, HSG D |
| * | 0.302 | 58 | MEADOW, HSG B |
| * | 0.712 | 78 | MEADOW, HSG D |
| * | 2.226 | 78 | MEADOW, HSG D |
| * | 1.099 | 78 | MEADOW, HSG D |
| * | 0.991 | 78 | MEADOW, HSG D |
| * | 8.744 | 78 | MEADOW, HSG D |
| * | 0.200 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| | 31.131 | 78 | Weighted Average |
| | 30.814 | | 98.98% Pervious Area |
| | 0.317 | | 1.02% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.4 | 50 | 0.0177 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 6.2 | 50 | 0.0266 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.1 | 7 | 0.0220 | 1.04 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 72 | 0.0159 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.7 | 145 | 0.0412 | 1.42 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 129 | 0.0241 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 57 | 0.0343 | 1.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 18 | 0.0232 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 20 | 0.0223 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 13 | 0.0173 | 2.67 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 21 | 0.0211 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.1 | 227 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.9 | 243 | 0.0142 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 51 | 0.0179 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 9 | 0.0066 | 0.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 210 | 0.0311 | 1.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 13 | 0.0151 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 83 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 31.5 | 1,419 | Total | | | |

## Subcatchment 40: WS40



## Summary for Subcatchment 41: WS41

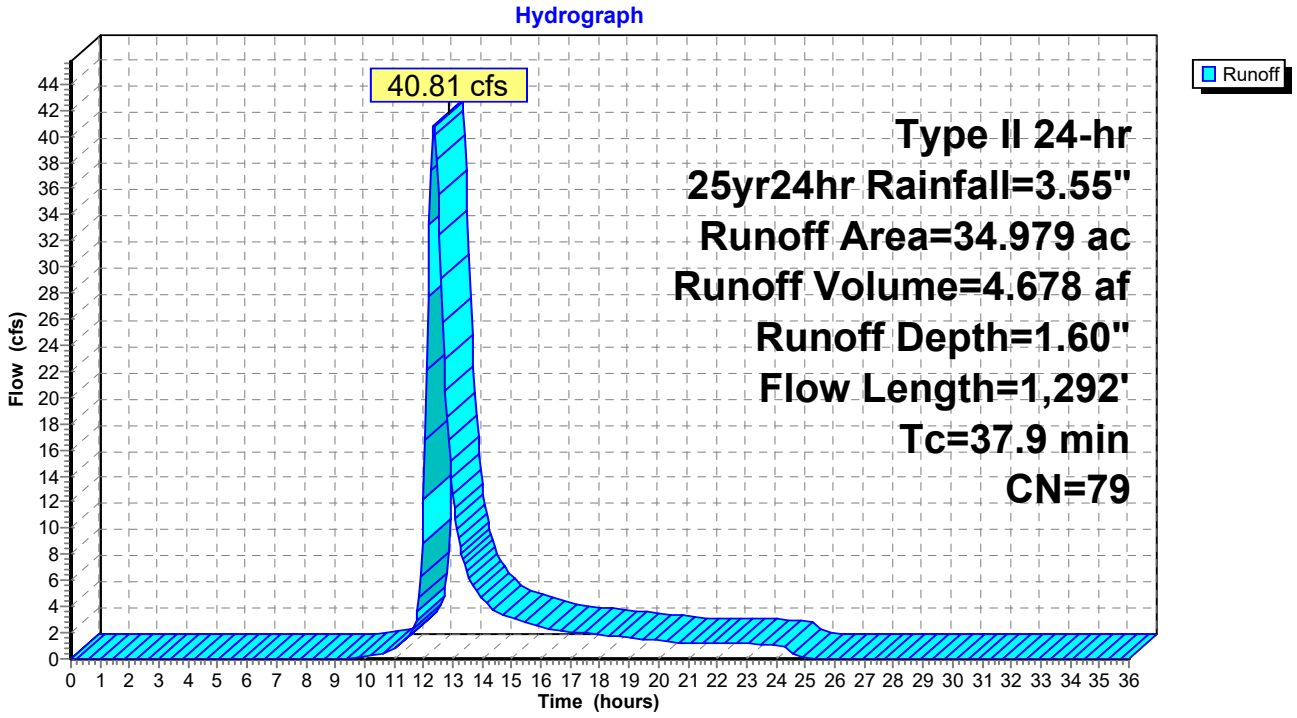
Runoff = 40.81 cfs @ 12.35 hrs, Volume= 4.678 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.146 | 68 | Developed Open Space, HSG B |
| * | 0.081 | 89 | Developed Medium Intensity, HSG B |
| * | 0.083 | 88 | Developed Low Intensity, HSG B |
| * | 0.299 | 93 | Developed Low Intensity, HSG D |
| * | 0.413 | 80 | Pasture/Hay, HSG D |
| * | 2.029 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.882 | 84 | Developed Open Space, HSG D |
| * | 0.146 | 93 | Developed Low Intensity, HSG D |
| * | 0.647 | 79 | Mixed Forest, HSG D |
| * | 0.101 | 80 | Pasture/Hay, HSG D |
| * | 0.333 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 80 | Pasture/Hay, HSG D |
| * | 0.021 | 79 | Mixed Forest, HSG D |
| * | 0.711 | 84 | Developed Open Space, HSG D |
| * | 1.187 | 71 | Cultivated Crops, HSG B |
| * | 4.801 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 80 | Pasture/Hay, HSG D |
| * | 0.113 | 81 | Cultivated Crops, HSG D |
| * | 0.470 | 78 | MEADOW, HSG D |
| * | 0.529 | 78 | MEADOW, HSG D |
| * | 0.753 | 78 | MEADOW, HSG D |
| * | 0.187 | 78 | MEADOW, HSG D |
| * | 0.083 | 98 | IMPERVIOUS, HSG D |
| * | 0.122 | 78 | MEADOW, HSG D |
| * | 0.049 | 98 | IMPERVIOUS, HSG D |
| * | 0.369 | 78 | MEADOW, HSG D |
| * | 0.087 | 78 | MEADOW, HSG D |
| * | 0.069 | 78 | MEADOW, HSG D |
| * | 0.042 | 78 | MEADOW, HSG D |
| * | 0.130 | 78 | MEADOW, HSG D |
| * | 0.104 | 78 | MEADOW, HSG D |
| * | 0.210 | 78 | MEADOW, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 5.749 | 78 | MEADOW, HSG D |
| * | 13.771 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.204 | 98 | IMPERVIOUS, HSG D |
| | 34.979 | 79 | Weighted Average |
| | 34.599 | | 98.92% Pervious Area |
| | 0.379 | | 1.08% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.5 | 100 | 0.0466 | 0.20 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.1 | 63 | 0.0054 | 0.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.4 | 330 | 0.0152 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 66 | 0.0401 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.2 | 253 | 0.0093 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.6 | 424 | 0.0064 | 0.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 36 | 0.0056 | 0.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 21 | 0.0240 | 1.40 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 37.9 | 1,292 | Total | | | |

## Subcatchment 41: WS41



## Summary for Subcatchment 42: WS42

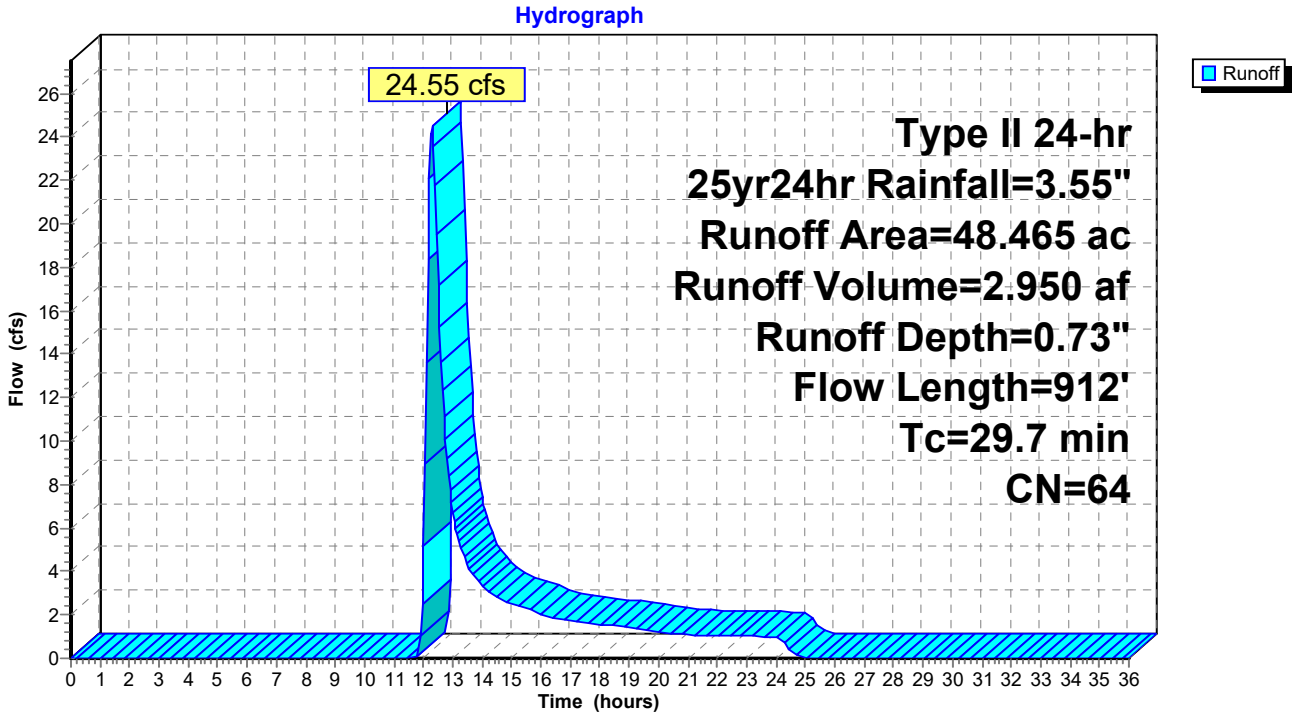
Runoff = 24.55 cfs @ 12.29 hrs, Volume= 2.950 af, Depth= 0.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.086 | 61 | Pasture/Hay, HSG B |
| * | 0.094 | 61 | Pasture/Hay, HSG B |
| * | 0.024 | 67 | Shrub/Scrub, HSG B |
| * | 0.182 | 60 | Deciduous Forest, HSG B |
| * | 1.268 | 81 | Cultivated Crops, HSG D |
| * | 0.576 | 81 | Cultivated Crops, HSG D |
| * | 0.014 | 71 | Cultivated Crops, HSG B |
| * | 0.064 | 81 | Cultivated Crops, HSG D |
| * | 7.666 | 71 | Cultivated Crops, HSG B |
| * | 0.108 | 86 | Woody Wetlands, HSG D |
| * | 0.006 | 86 | Woody Wetlands, HSG D |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.071 | 58 | MEADOW, HSG B |
| * | 0.089 | 58 | MEADOW, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 1.068 | 58 | MEADOW, HSG B |
| * | 1.587 | 78 | MEADOW, HSG D |
| * | 4.131 | 78 | MEADOW, HSG D |
| * | 0.139 | 98 | IMPERVIOUS, HSG D |
| * | 0.381 | 78 | MEADOW, HSG D |
| * | 5.324 | 58 | MEADOW, HSG B |
| * | 24.551 | 58 | MEADOW, HSG B |
| * | 0.085 | 98 | IMPERVIOUS, HSG B |
| * | 0.464 | 98 | IMPERVIOUS, HSG B |
| * | 0.117 | 78 | MEADOW, HSG D |
| | 48.465 | 64 | Weighted Average |
| | 47.776 | | 98.58% Pervious Area |
| | 0.688 | | 1.42% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 14.8 | 100 | 0.0117 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 11.7 | 638 | 0.0169 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 175 | 0.0166 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.7 | 912 | Total | | | |

## Subcatchment 42: WS42



## Summary for Subcatchment 43: WS43

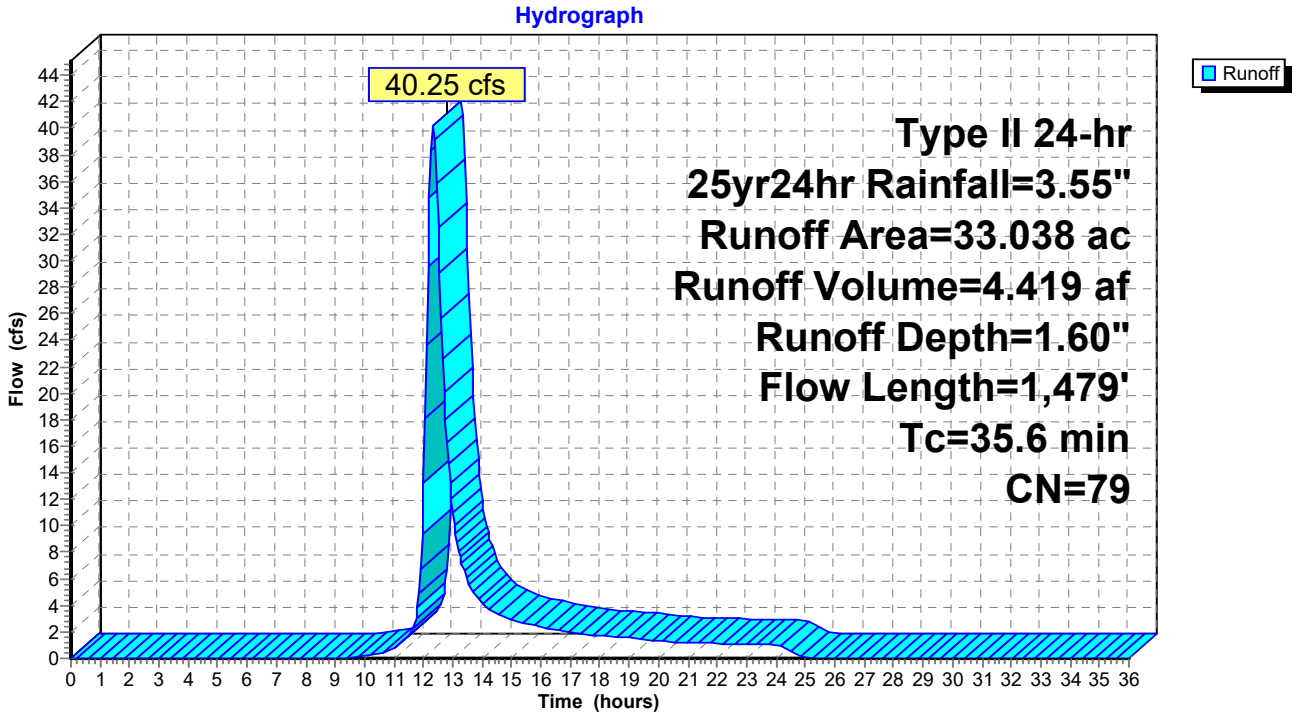
Runoff = 40.25 cfs @ 12.32 hrs, Volume= 4.419 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 79 | Deciduous Forest, HSG D |
| * | 0.032 | 36 | Deciduous Forest, HSG A |
| * | 0.169 | 79 | Mixed Forest, HSG D |
| * | 0.006 | 36 | Mixed Forest, HSG A |
| * | 0.081 | 79 | Evergreen Forest, HSG D |
| * | 0.103 | 79 | Mixed Forest, HSG D |
| * | 1.268 | 79 | Mixed Forest, HSG D |
| * | 0.155 | 79 | Mixed Forest, HSG D |
| * | 0.014 | 60 | Mixed Forest, HSG B |
| * | 0.222 | 79 | Mixed Forest, HSG D |
| * | 0.370 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.029 | 60 | Mixed Forest, HSG B |
| * | 3.432 | 79 | Deciduous Forest, HSG D |
| * | 0.890 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.202 | 93 | Developed Low Intensity, HSG D |
| * | 0.021 | 88 | Developed Low Intensity, HSG B |
| * | 0.183 | 88 | Developed Low Intensity, HSG B |
| * | 0.604 | 84 | Developed Open Space, HSG D |
| * | 0.166 | 84 | Developed Open Space, HSG D |
| * | 0.252 | 93 | Developed Low Intensity, HSG D |
| * | 0.012 | 80 | Pasture/Hay, HSG D |
| * | 0.023 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.030 | 80 | Pasture/Hay, HSG D |
| * | 0.013 | 93 | Developed Low Intensity, HSG D |
| * | 5.016 | 81 | Cultivated Crops, HSG D |
| * | 1.470 | 71 | Cultivated Crops, HSG B |
| * | 0.007 | 62 | Cultivated Crops, HSG A |
| * | 0.226 | 78 | MEADOW, HSG D |
| * | 0.039 | 98 | IMPERVIOUS, HSG D |
| * | 0.040 | 78 | MEADOW, HSG D |
| * | 0.055 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG D |
| * | 5.861 | 78 | MEADOW, HSG D |
| * | 11.012 | 78 | MEADOW, HSG D |
| * | 0.042 | 98 | IMPERVIOUS, HSG D |
| * | 0.417 | 98 | IMPERVIOUS, HSG D |
| * | 0.475 | 58 | MEADOW, HSG B |
| * | 0.037 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| | 33.038 | 79 | Weighted Average |
| | 32.533 | | 98.47% Pervious Area |
| | 0.504 | | 1.53% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.5 | 100 | 0.0221 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.5 | 40 | 0.0244 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 254 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.2 | 183 | 0.0244 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.6 | 117 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 113 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 118 | 0.0191 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 14.0 | 285 | 0.0024 | 0.34 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 120 | 0.0073 | 1.73 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 11 | 0.0035 | 0.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 23 | 0.0106 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 18 | 0.0056 | 1.52 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 33 | 0.0039 | 1.27 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 65 | 0.0070 | 1.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 35.6 | 1,479 | Total | | | |

## Subcatchment 43: WS43



## Summary for Subcatchment 44: WS44

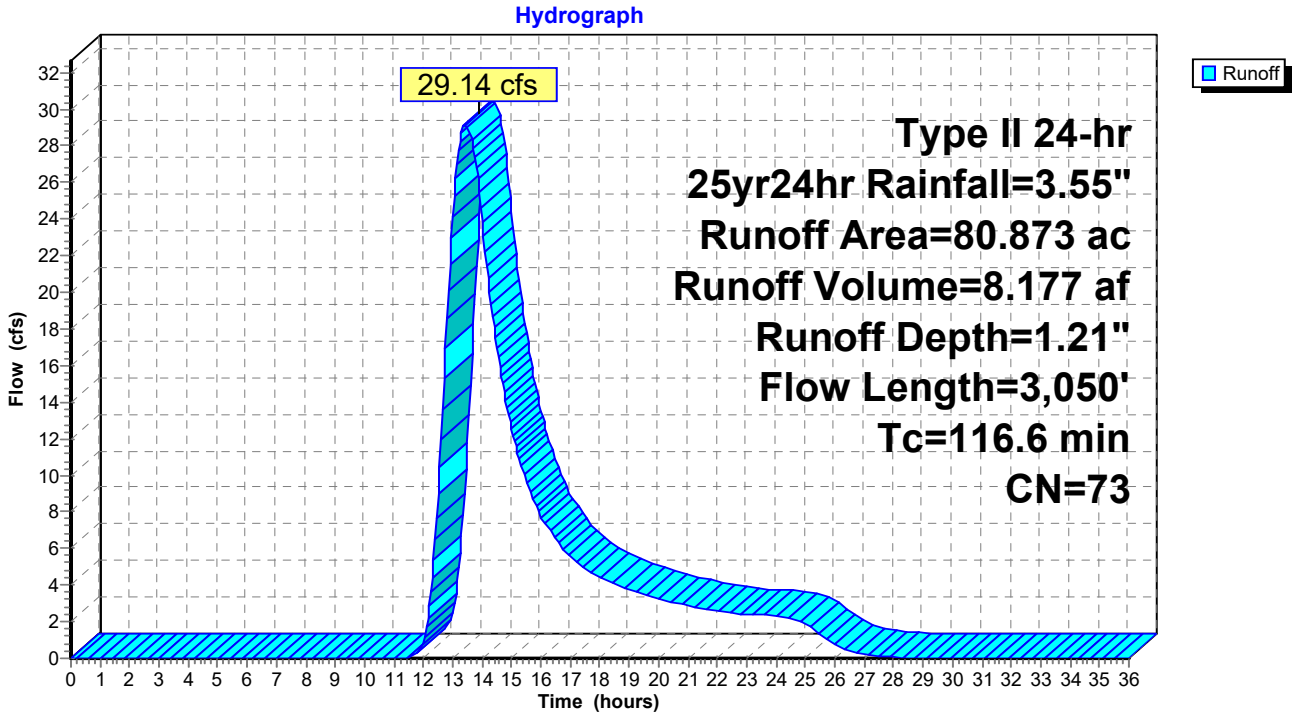
Runoff = 29.14 cfs @ 13.43 hrs, Volume= 8.177 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 0.222 | 39 | Pasture/Hay, HSG A |
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 1.019 | 36 | Deciduous Forest, HSG A |
| * | 0.780 | 36 | Deciduous Forest, HSG A |
| * | 0.046 | 81 | Developed Low Intensity, HSG A |
| * | 0.445 | 36 | Deciduous Forest, HSG A |
| * | 1.557 | 80 | Pasture/Hay, HSG D |
| * | 0.045 | 79 | Mixed Forest, HSG D |
| * | 0.002 | 36 | Mixed Forest, HSG A |
| * | 1.592 | 79 | Evergreen Forest, HSG D |
| * | 0.328 | 36 | Evergreen Forest, HSG A |
| * | 0.720 | 36 | Deciduous Forest, HSG A |
| * | 5.226 | 79 | Deciduous Forest, HSG D |
| * | 6.461 | 79 | Deciduous Forest, HSG D |
| * | 0.057 | 36 | Deciduous Forest, HSG A |
| * | 2.735 | 79 | Mixed Forest, HSG D |
| * | 0.243 | 93 | Developed Low Intensity, HSG D |
| * | 0.965 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.137 | 93 | Developed Low Intensity, HSG D |
| * | 0.648 | 93 | Developed Low Intensity, HSG D |
| * | 0.687 | 93 | Developed Low Intensity, HSG D |
| * | 0.013 | 93 | Developed Low Intensity, HSG D |
| * | 0.401 | 62 | Cultivated Crops, HSG A |
| * | 16.357 | 62 | Cultivated Crops, HSG A |
| * | 3.033 | 81 | Cultivated Crops, HSG D |
| * | 7.467 | 81 | Cultivated Crops, HSG D |
| * | 0.778 | 62 | Cultivated Crops, HSG A |
| * | 0.299 | 78 | MEADOW, HSG D |
| * | 0.146 | 78 | MEADOW, HSG D |
| * | 0.095 | 78 | MEADOW, HSG D |
| * | 0.157 | 78 | MEADOW, HSG D |
| * | 0.044 | 78 | MEADOW, HSG D |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.694 | 30 | MEADOW, HSG A |
| * | 0.340 | 30 | MEADOW, HSG A |
| * | 5.500 | 78 | MEADOW, HSG D |
| * | 16.262 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.793 | 98 | IMPERVIOUS, HSG D |
| * | 0.906 | 78 | MEADOW, HSG D |
| * | 2.741 | 78 | MEADOW, HSG D |
| | 80.873 | 73 | Weighted Average |
| | 80.038 | | 98.97% Pervious Area |
| | 0.836 | | 1.03% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.7 | 100 | 0.0610 | 0.45 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 41 | 0.0505 | 2.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 216 | 0.0304 | 1.57 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.1 | 517 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 186 | 0.0144 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 32.0 | 677 | 0.0050 | 0.35 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.6 | 98 | 0.0132 | 1.03 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.1 | 45 | 0.0089 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 141 | 0.0075 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 28 | 0.0018 | 0.86 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.6 | 66 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 27.9 | 733 | 0.0039 | 0.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 26 | 0.0089 | 1.92 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.3 | 33 | 0.0034 | 0.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.2 | 145 | 0.0001 | 0.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 116.6 | 3,050 | Total | | | |

## Subcatchment 44: WS44



## Summary for Subcatchment 45: WS45

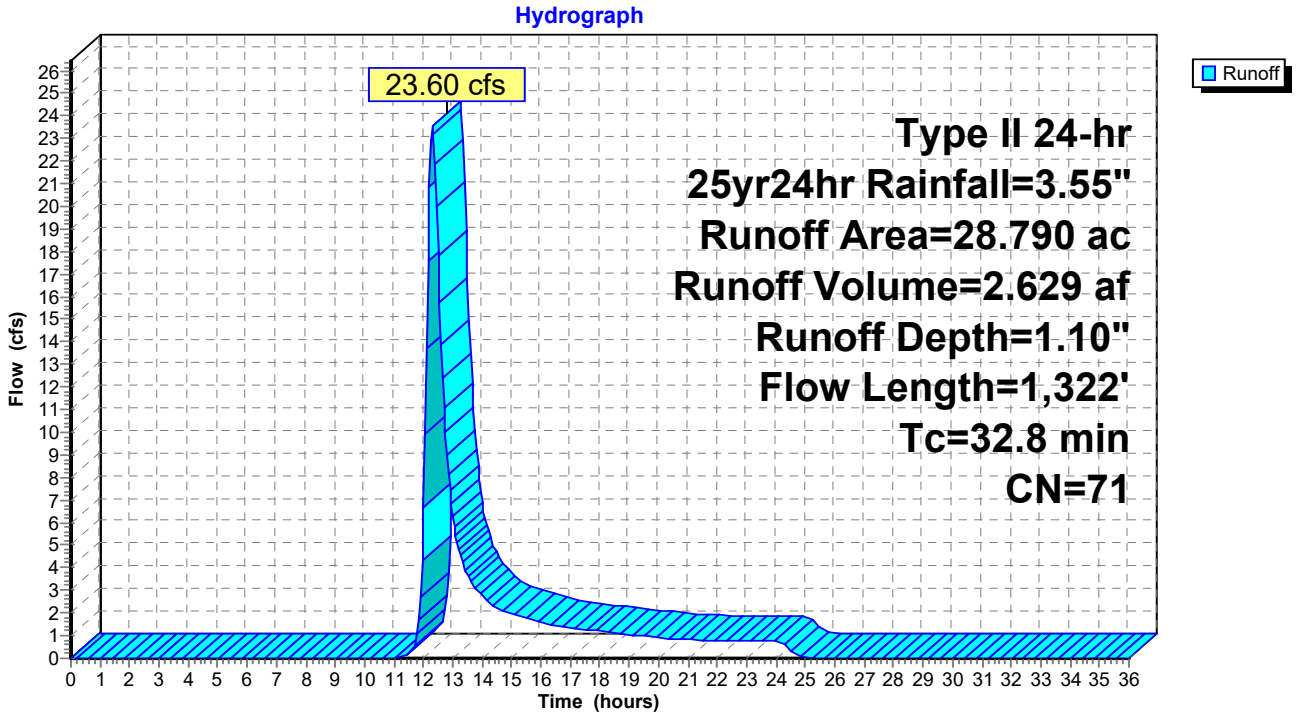
Runoff = 23.60 cfs @ 12.31 hrs, Volume= 2.629 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.280 | 79 | Deciduous Forest, HSG D |
| * | 0.498 | 62 | Cultivated Crops, HSG A |
| * | 0.591 | 81 | Cultivated Crops, HSG D |
| * | 0.275 | 78 | MEADOW, HSG D |
| * | 0.036 | 78 | MEADOW, HSG D |
| * | 0.068 | 98 | IMPERVIOUS, HSG D |
| * | 1.729 | 30 | MEADOW, HSG A |
| * | 2.797 | 30 | MEADOW, HSG A |
| * | 0.888 | 78 | MEADOW, HSG D |
| * | 3.123 | 78 | MEADOW, HSG D |
| * | 17.916 | 78 | MEADOW, HSG D |
| * | 0.085 | 98 | IMPERVIOUS, HSG D |
| * | 0.504 | 98 | IMPERVIOUS, HSG D |
| | 28.790 | 71 | Weighted Average |
| | 28.132 | | 97.72% Pervious Area |
| | 0.657 | | 2.28% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.5 | 61 | 0.0261 | 0.29 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 5.0 | 39 | 0.0274 | 0.13 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.2 | 87 | 0.0295 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 200 | 0.0157 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 277 | 0.0280 | 1.17 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 63 | 0.0099 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 81 | 0.0226 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 29 | 0.0104 | 0.71 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 20 | 0.0101 | 2.04 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 30 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 11.2 | 435 | 0.0085 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 32.8 | 1,322 | Total | | | |

## Subcatchment 45: WS45



## Summary for Subcatchment 46: WS46

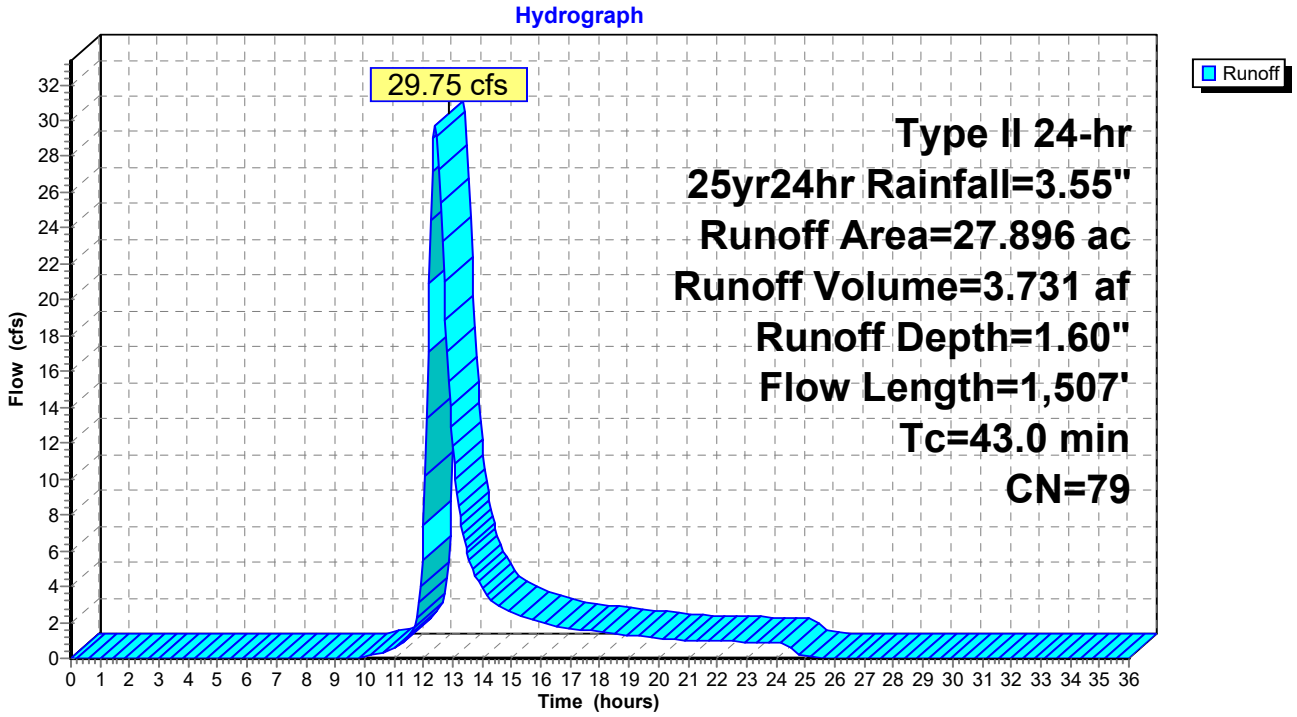
Runoff = 29.75 cfs @ 12.42 hrs, Volume= 3.731 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.235 | 80 | Pasture/Hay, HSG D |
| * | 1.025 | 81 | Cultivated Crops, HSG D |
| * | 4.740 | 81 | Cultivated Crops, HSG D |
| * | 0.522 | 78 | MEADOW, HSG D |
| * | 0.686 | 78 | MEADOW, HSG D |
| * | 1.727 | 78 | MEADOW, HSG D |
| * | 0.462 | 78 | MEADOW, HSG D |
| * | 3.448 | 78 | MEADOW, HSG D |
| * | 0.185 | 98 | IMPERVIOUS, HSG D |
| * | 0.830 | 78 | MEADOW, HSG D |
| * | 2.056 | 78 | MEADOW, HSG D |
| * | 11.673 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.263 | 98 | IMPERVIOUS, HSG D |
| | 27.896 | 79 | Weighted Average |
| | 27.405 | | 98.24% Pervious Area |
| | 0.491 | | 1.76% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.5 | 100 | 0.0180 | 0.13 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.5 | 91 | 0.0207 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.7 | 223 | 0.0037 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.9 | 383 | 0.0343 | 1.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 99 | 0.0327 | 1.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 65 | 0.0242 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 15 | 0.0110 | 2.13 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.2 | 11 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 11 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.3 | 207 | 0.0128 | 0.79 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 81 | 0.0122 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.5 | 142 | 0.0056 | 0.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 33 | 0.0070 | 0.59 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 46 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 43.0 | 1,507 | Total | | | |

## Subcatchment 46: WS46



## Summary for Subcatchment 47: WS47

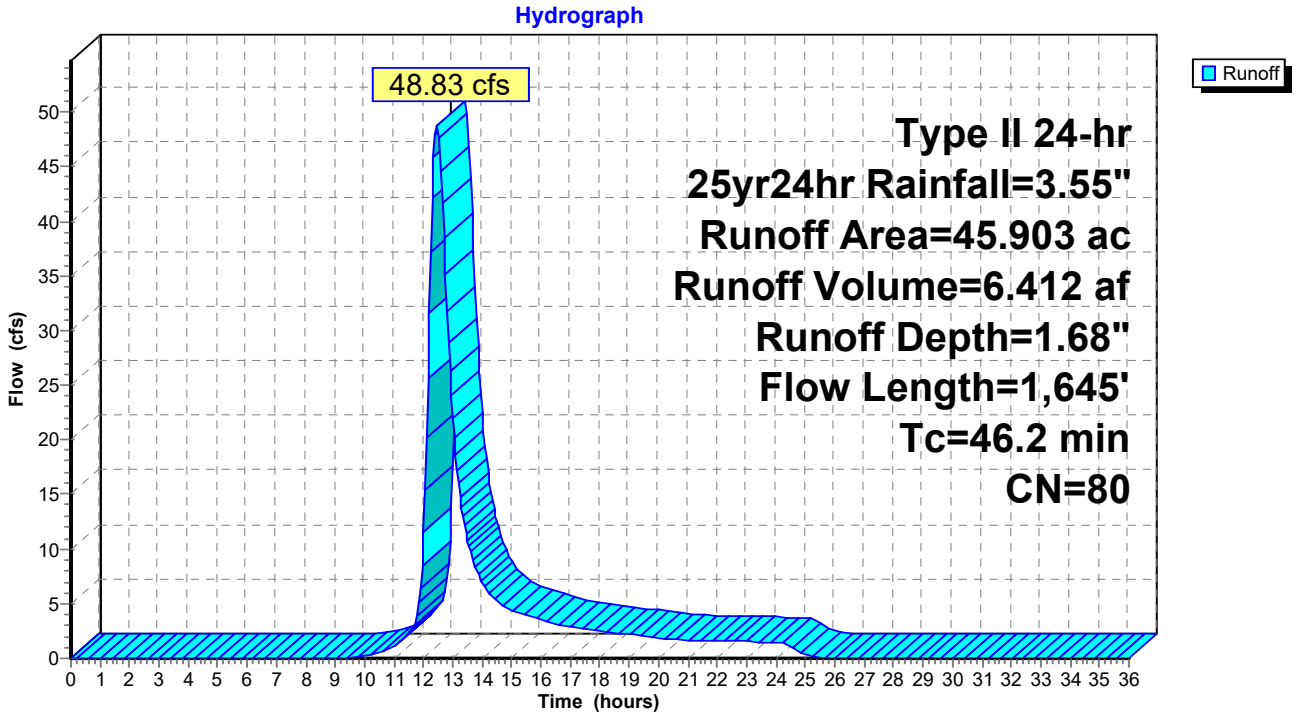
Runoff = 48.83 cfs @ 12.46 hrs, Volume= 6.412 af, Depth= 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.146 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.171 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.424 | 93 | Developed Low Intensity, HSG D |
| * | 0.086 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 0.015 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.119 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.030 | 80 | Pasture/Hay, HSG D |
| * | 0.037 | 80 | Pasture/Hay, HSG D |
| * | 0.039 | 86 | Woody Wetlands, HSG D |
| * | 0.118 | 86 | Woody Wetlands, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.007 | 93 | Developed Low Intensity, HSG D |
| * | 0.438 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 86 | Woody Wetlands, HSG D |
| * | 0.185 | 94 | Developed Medium Intensity, HSG D |
| * | 0.037 | 94 | Developed Medium Intensity, HSG D |
| * | 0.401 | 84 | Developed Open Space, HSG D |
| * | 0.269 | 93 | Developed Low Intensity, HSG D |
| * | 0.259 | 84 | Developed Open Space, HSG D |
| * | 0.522 | 93 | Developed Low Intensity, HSG D |
| * | 0.452 | 81 | Cultivated Crops, HSG D |
| * | 3.861 | 81 | Cultivated Crops, HSG D |
| * | 4.339 | 81 | Cultivated Crops, HSG D |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.010 | 78 | MEADOW, HSG D |
| * | 0.060 | 98 | IMPERVIOUS, HSG D |
| * | 4.951 | 78 | MEADOW, HSG D |
| * | 0.903 | 78 | MEADOW, HSG D |
| * | 14.024 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.275 | 98 | IMPERVIOUS, HSG D |
| * | 0.259 | 78 | MEADOW, HSG D |
| * | 1.284 | 78 | MEADOW, HSG D |
| * | 7.785 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.139 | 98 | IMPERVIOUS, HSG D |
| * | 0.027 | 78 | MEADOW, HSG D |
| * | 0.098 | 78 | MEADOW, HSG D |
| * | 2.885 | 78 | MEADOW, HSG D |
| * | 0.035 | 98 | IMPERVIOUS, HSG D |
| | 45.903 | 80 | Weighted Average |
| | 45.310 | | 98.71% Pervious Area |
| | 0.593 | | 1.29% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.2 | 100 | 0.0025 | 0.13 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.4 | 145 | 0.0396 | 1.79 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.2 | 236 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 28 | 0.0212 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 99 | 0.0241 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.0 | 293 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 40 | 0.0198 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 22 | 0.0236 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 13 | 0.0238 | 3.13 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 23 | 0.0210 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 274 | 0.0141 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.1 | 217 | 0.0018 | 0.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 44 | 0.0284 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 59 | 0.0188 | 1.24 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 42 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 46.2 | 1,645 | Total | | | |

## Subcatchment 47: WS47



## Summary for Subcatchment 48: WS48

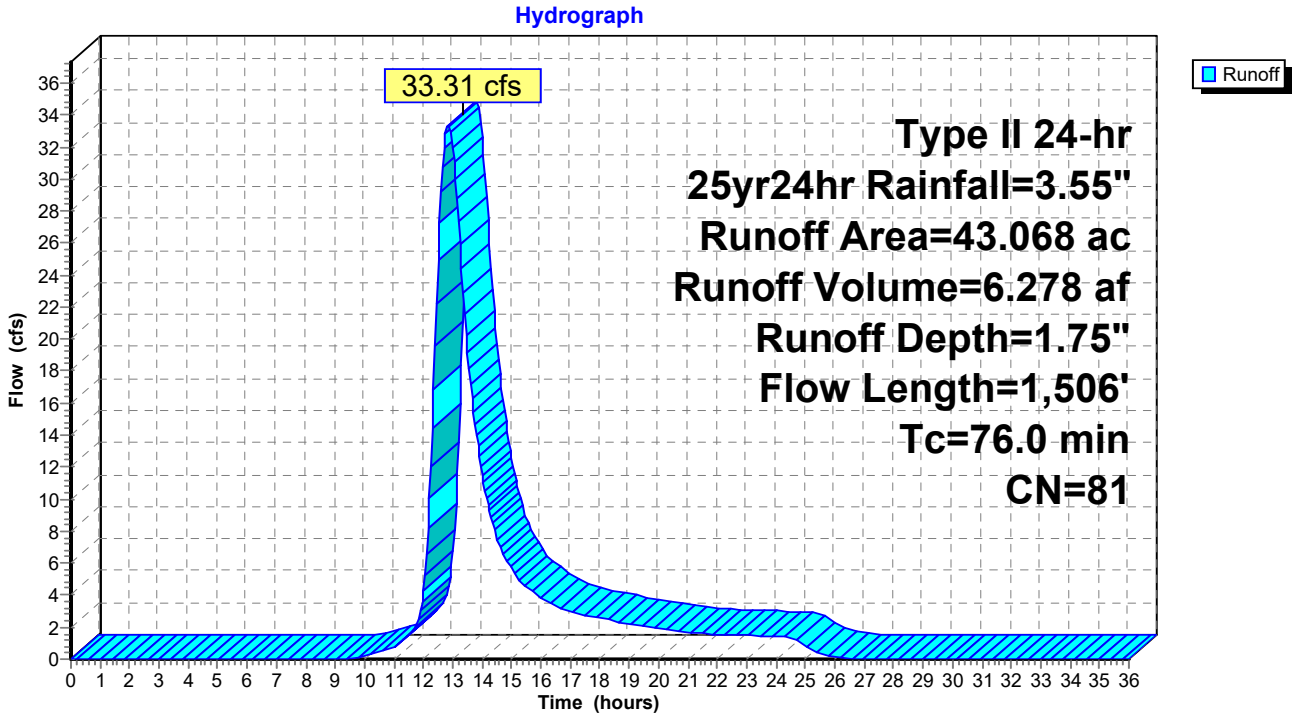
Runoff = 33.31 cfs @ 12.85 hrs, Volume= 6.278 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.059 | 86 | Woody Wetlands, HSG D |
| * | 0.481 | 93 | Developed Low Intensity, HSG D |
| * | 0.214 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.442 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.114 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.280 | 93 | Developed Low Intensity, HSG D |
| * | 0.737 | 93 | Developed Low Intensity, HSG D |
| * | 0.744 | 93 | Developed Low Intensity, HSG D |
| * | 0.144 | 84 | Developed Open Space, HSG D |
| * | 0.217 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 9.970 | 86 | Woody Wetlands, HSG D |
| * | 0.035 | 86 | Woody Wetlands, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 1.916 | 81 | Cultivated Crops, HSG D |
| * | 2.143 | 81 | Cultivated Crops, HSG D |
| * | 2.228 | 81 | Cultivated Crops, HSG D |
| * | 0.008 | 78 | MEADOW, HSG D |
| * | 0.003 | 78 | MEADOW, HSG D |
| * | 0.355 | 78 | MEADOW, HSG D |
| * | 0.454 | 78 | MEADOW, HSG D |
| * | 0.189 | 78 | MEADOW, HSG D |
| * | 0.016 | 78 | MEADOW, HSG D |
| * | 0.033 | 98 | IMPERVIOUS, HSG D |
| * | 0.033 | 78 | MEADOW, HSG D |
| * | 0.005 | 78 | MEADOW, HSG D |
| * | 0.780 | 78 | MEADOW, HSG D |
| * | 0.319 | 78 | MEADOW, HSG D |
| * | 0.011 | 78 | MEADOW, HSG D |
| * | 0.036 | 78 | MEADOW, HSG D |
| * | 1.013 | 78 | MEADOW, HSG D |
| * | 0.999 | 78 | MEADOW, HSG D |
| * | 0.781 | 78 | MEADOW, HSG D |
| * | 0.181 | 78 | MEADOW, HSG D |
| * | 0.086 | 98 | IMPERVIOUS, HSG D |
| * | 4.730 | 78 | MEADOW, HSG D |
| * | 12.469 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.204 | 98 | IMPERVIOUS, HSG D |
| | 43.068 | 81 | Weighted Average |
| | 42.702 | | 99.15% Pervious Area |
| | 0.366 | | 0.85% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.1 | 63 | 0.0685 | 0.21 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.1 | 37 | 0.0122 | 0.20 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.9 | 106 | 0.0110 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.2 | 283 | 0.0038 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.1 | 430 | 0.0056 | 0.38 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 31.6 | 588 | 0.0038 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 76.0 | 1,506 | Total | | | |

## Subcatchment 48: WS48



## Summary for Subcatchment 49: WS49

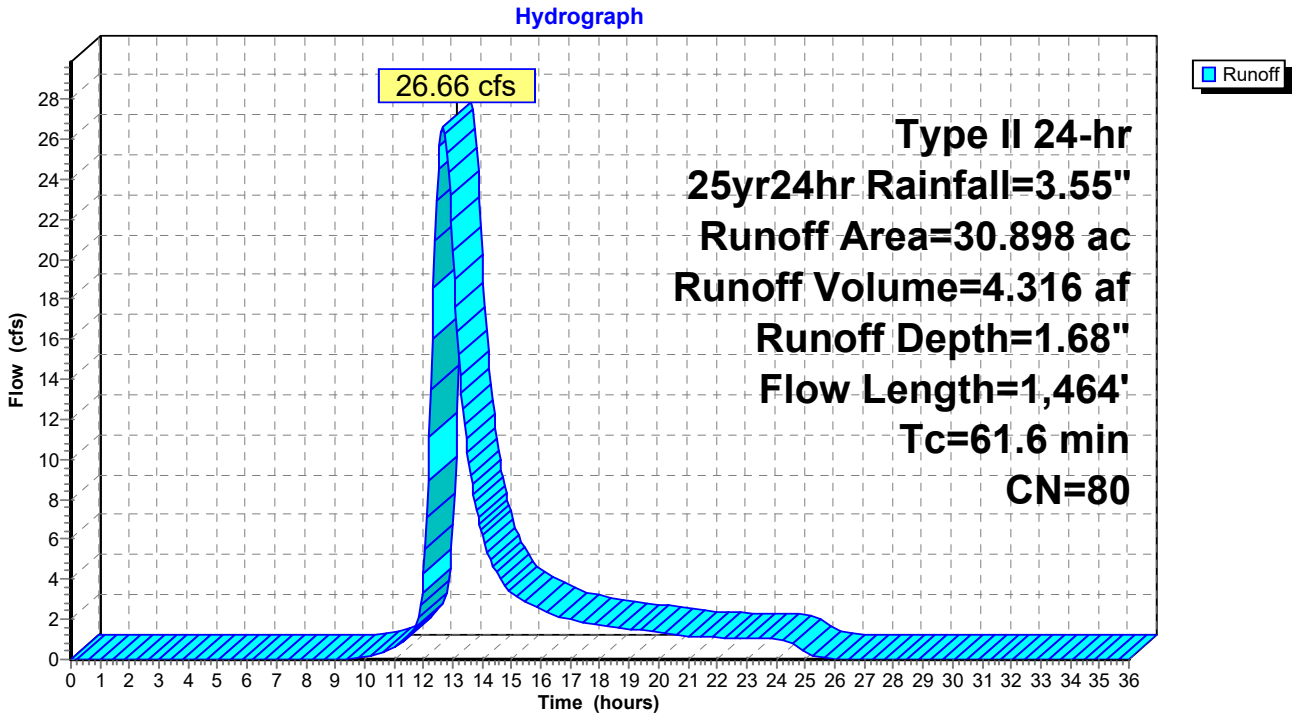
Runoff = 26.66 cfs @ 12.66 hrs, Volume= 4.316 af, Depth= 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.784 | 93 | Developed Low Intensity, HSG D |
| * | 0.080 | 93 | Developed Low Intensity, HSG D |
| * | 0.076 | 94 | Developed Medium Intensity, HSG D |
| * | 0.005 | 84 | Developed Open Space, HSG D |
| * | 0.011 | 84 | Developed Open Space, HSG D |
| * | 0.333 | 93 | Developed Low Intensity, HSG D |
| * | 0.761 | 93 | Developed Low Intensity, HSG D |
| * | 0.328 | 93 | Developed Low Intensity, HSG D |
| * | 0.998 | 81 | Cultivated Crops, HSG D |
| * | 4.032 | 81 | Cultivated Crops, HSG D |
| * | 3.374 | 81 | Cultivated Crops, HSG D |
| * | 0.667 | 78 | MEADOW, HSG D |
| * | 0.222 | 78 | MEADOW, HSG D |
| * | 0.088 | 78 | MEADOW, HSG D |
| * | 0.135 | 78 | MEADOW, HSG D |
| * | 0.180 | 78 | MEADOW, HSG D |
| * | 0.124 | 78 | MEADOW, HSG D |
| * | 0.013 | 98 | IMPERVIOUS, HSG D |
| * | 1.239 | 78 | MEADOW, HSG D |
| * | 0.137 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| * | 0.045 | 78 | MEADOW, HSG D |
| * | 0.058 | 78 | MEADOW, HSG D |
| * | 0.051 | 98 | IMPERVIOUS, HSG D |
| * | 0.315 | 78 | MEADOW, HSG D |
| * | 0.210 | 78 | MEADOW, HSG D |
| * | 2.880 | 78 | MEADOW, HSG D |
| * | 0.162 | 98 | IMPERVIOUS, HSG D |
| * | 4.187 | 78 | MEADOW, HSG D |
| * | 0.030 | 98 | IMPERVIOUS, HSG D |
| * | 1.681 | 78 | MEADOW, HSG D |
| * | 7.562 | 78 | MEADOW, HSG D |
| | 30.898 | 80 | Weighted Average |
| | 30.615 | | 99.09% Pervious Area |
| | 0.283 | | 0.91% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.6 | 55 | 0.0064 | 0.16 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 9.8 | 45 | 0.0068 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 28 | 0.0239 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 221 | 0.0217 | 1.03 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 90 | 0.0207 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 55 | 0.0090 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 84 | 0.0065 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 90 | 0.0185 | 1.22 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.0 | 191 | 0.0010 | 0.23 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 19.1 | 449 | 0.0031 | 0.39 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 58 | 0.0239 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 99 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 61.6 | 1,464 | Total | | | |

## Subcatchment 49: WS49



## Summary for Subcatchment 50: WS50

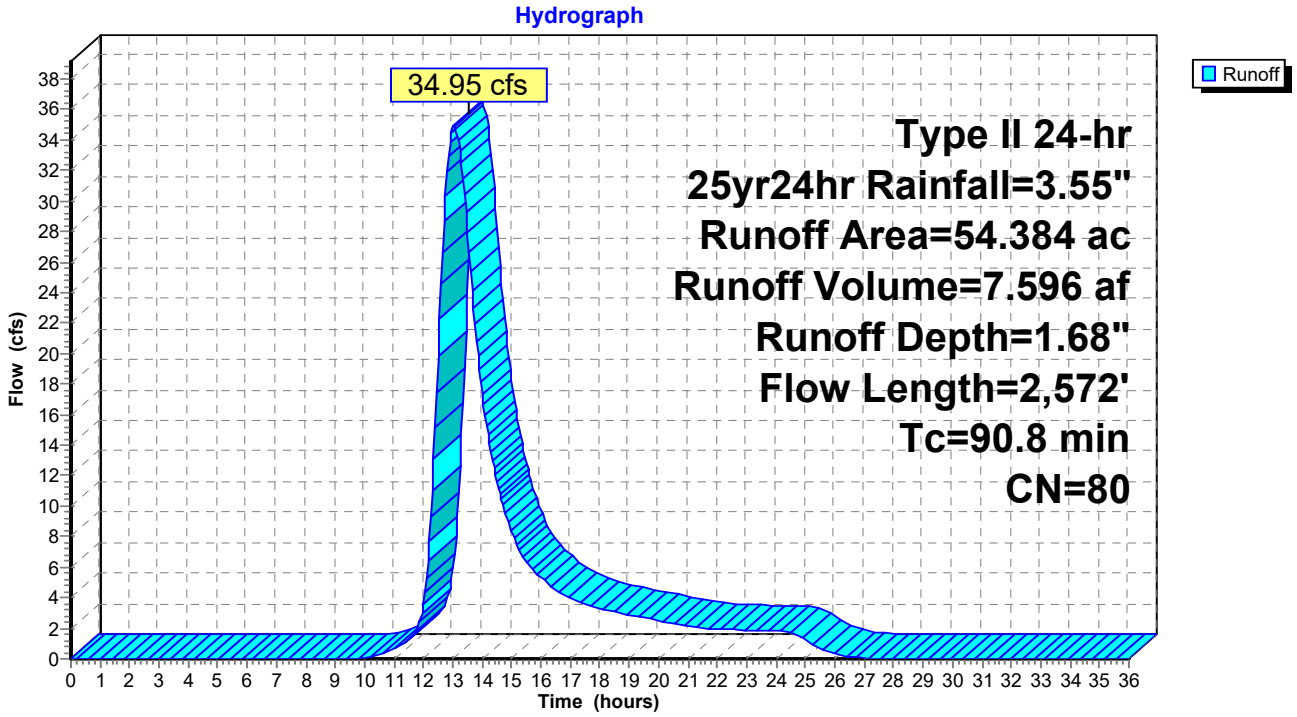
Runoff = 34.95 cfs @ 13.03 hrs, Volume= 7.596 af, Depth= 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.217 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.200 | 84 | Developed Open Space, HSG D |
| * | 0.211 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.633 | 93 | Developed Low Intensity, HSG D |
| * | 0.271 | 93 | Developed Low Intensity, HSG D |
| * | 0.107 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.013 | 94 | Developed Medium Intensity, HSG D |
| * | 0.732 | 93 | Developed Low Intensity, HSG D |
| * | 0.279 | 93 | Developed Low Intensity, HSG D |
| * | 0.079 | 84 | Developed Open Space, HSG D |
| * | 0.028 | 93 | Developed Low Intensity, HSG D |
| * | 5.131 | 81 | Cultivated Crops, HSG D |
| * | 8.761 | 81 | Cultivated Crops, HSG D |
| * | 2.028 | 81 | Cultivated Crops, HSG D |
| * | 0.022 | 78 | MEADOW, HSG D |
| * | 0.010 | 98 | IMPERVIOUS, HSG D |
| * | 4.396 | 78 | MEADOW, HSG D |
| * | 0.183 | 98 | IMPERVIOUS, HSG D |
| * | 8.785 | 78 | MEADOW, HSG D |
| * | 0.015 | 98 | IMPERVIOUS, HSG D |
| * | 5.583 | 78 | MEADOW, HSG D |
| * | 0.399 | 98 | IMPERVIOUS, HSG D |
| * | 10.720 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 2.649 | 78 | MEADOW, HSG D |
| * | 0.136 | 98 | IMPERVIOUS, HSG D |
| * | 2.088 | 78 | MEADOW, HSG D |
| | 54.384 | 80 | Weighted Average |
| | 53.598 | | 98.55% Pervious Area |
| | 0.786 | | 1.45% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 19.5 | 100 | 0.0059 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.1 | 233 | 0.0082 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 13.4 | 518 | 0.0085 | 0.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.5 | 154 | 0.0112 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.6 | 345 | 0.0115 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 13.4 | 214 | 0.0015 | 0.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 16.6 | 309 | 0.0020 | 0.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 42 | 0.0401 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.2 | 657 | 0.0143 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 90.8 | 2,572 | Total | | | |

## Subcatchment 50: WS50



## Summary for Subcatchment 51: WS51

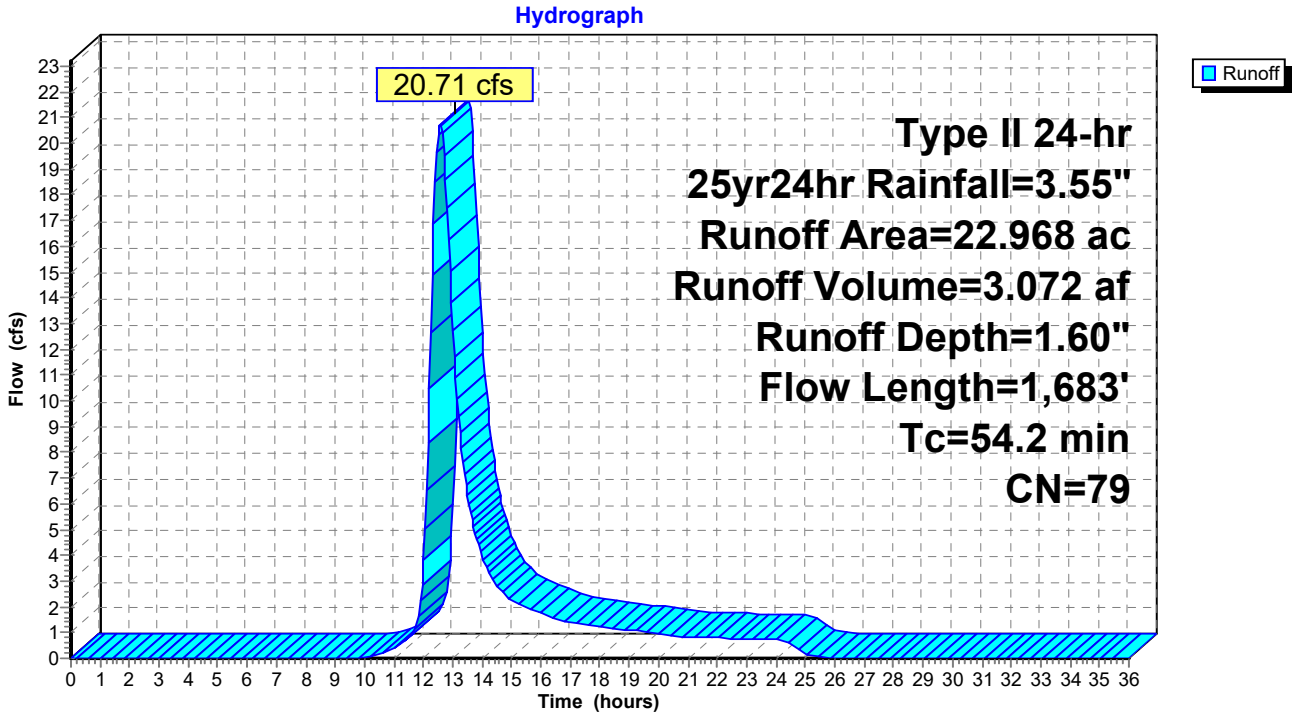
Runoff = 20.71 cfs @ 12.57 hrs, Volume= 3.072 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 4.817 | 81 | Cultivated Crops, HSG D |
| * | 0.028 | 78 | MEADOW, HSG D |
| * | 1.205 | 78 | MEADOW, HSG D |
| * | 4.410 | 78 | MEADOW, HSG D |
| * | 0.392 | 98 | IMPERVIOUS, HSG D |
| * | 12.074 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 22.968 | 79 | Weighted Average |
| | 22.533 | | 98.11% Pervious Area |
| | 0.435 | | 1.89% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.3 | 100 | 0.0092 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.0 | 113 | 0.0189 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 195 | 0.0148 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 123 | 0.0080 | 1.81 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.4 | 159 | 0.0074 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 13.1 | 471 | 0.0073 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 12 | 0.0050 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 203 | 0.0130 | 2.32 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 11.6 | 307 | 0.0040 | 0.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 54.2 | 1,683 | Total | | | |

## Subcatchment 51: WS51



## Summary for Subcatchment 52: WS52

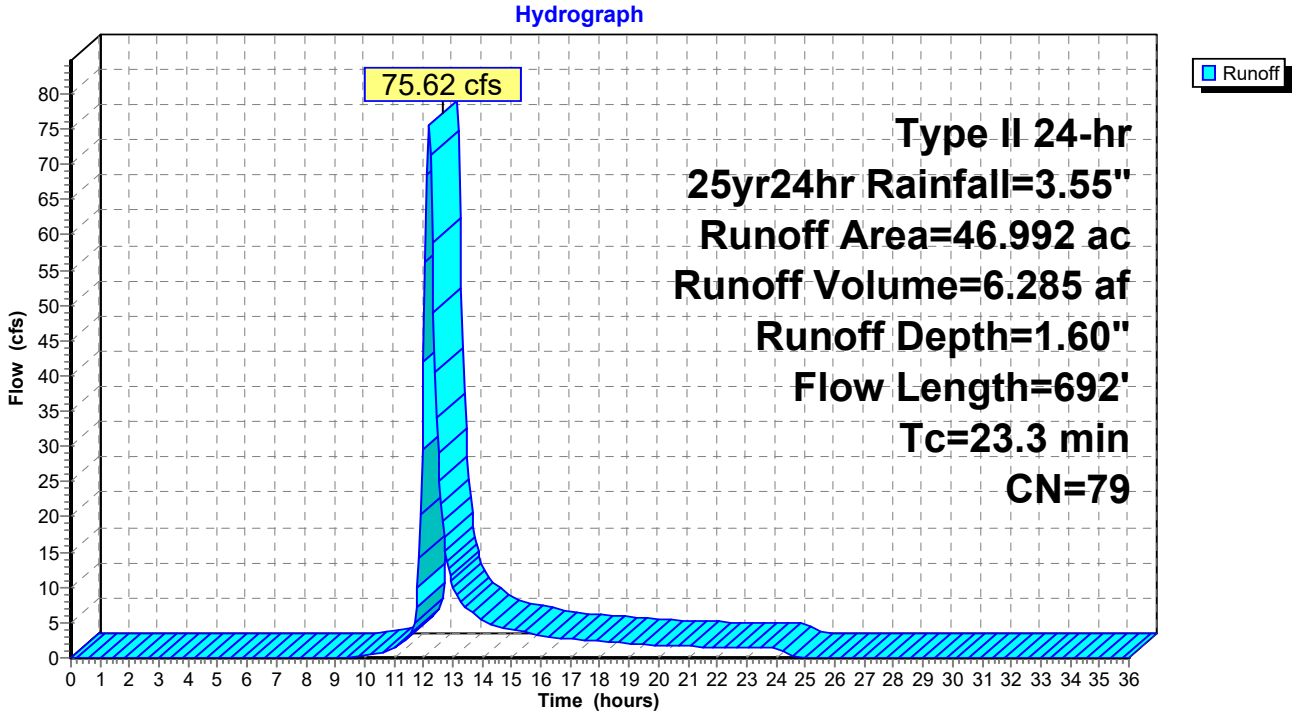
Runoff = 75.62 cfs @ 12.17 hrs, Volume= 6.285 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.465 | 86 | Woody Wetlands, HSG D |
| * | 0.198 | 80 | Pasture/Hay, HSG D |
| * | 0.025 | 80 | Pasture/Hay, HSG D |
| * | 0.415 | 79 | Deciduous Forest, HSG D |
| * | 0.694 | 79 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Pasture/Hay, HSG D |
| * | 0.155 | 80 | Pasture/Hay, HSG D |
| * | 1.958 | 79 | Deciduous Forest, HSG D |
| * | 0.570 | 79 | Deciduous Forest, HSG D |
| * | 0.490 | 79 | Deciduous Forest, HSG D |
| * | 0.003 | 61 | Pasture/Hay, HSG B |
| * | 2.802 | 80 | Pasture/Hay, HSG D |
| * | 0.601 | 80 | Pasture/Hay, HSG D |
| * | 1.445 | 71 | Cultivated Crops, HSG B |
| * | 4.711 | 81 | Cultivated Crops, HSG D |
| * | 8.408 | 81 | Cultivated Crops, HSG D |
| * | 0.659 | 81 | Cultivated Crops, HSG D |
| * | 0.193 | 78 | MEADOW, HSG D |
| * | 0.119 | 78 | MEADOW, HSG D |
| * | 0.199 | 78 | MEADOW, HSG D |
| * | 0.054 | 98 | IMPERVIOUS, HSG D |
| * | 1.806 | 78 | MEADOW, HSG D |
| * | 0.332 | 78 | MEADOW, HSG D |
| * | 0.791 | 78 | MEADOW, HSG D |
| * | 0.375 | 58 | MEADOW, HSG B |
| * | 1.367 | 58 | MEADOW, HSG B |
| * | 0.959 | 78 | MEADOW, HSG D |
| * | 2.266 | 78 | MEADOW, HSG D |
| * | 0.506 | 98 | IMPERVIOUS, HSG D |
| * | 11.617 | 78 | MEADOW, HSG D |
| * | 0.070 | 98 | IMPERVIOUS, HSG D |
| * | 1.213 | 78 | MEADOW, HSG D |
| * | 1.295 | 78 | MEADOW, HSG D |
| * | 0.105 | 78 | MEADOW, HSG D |
| * | 0.058 | 78 | MEADOW, HSG D |
| | 46.992 | 79 | Weighted Average |
| | 46.362 | | 98.66% Pervious Area |
| | 0.630 | | 1.34% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.3 | 77 | 0.0096 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.1 | 23 | 0.0146 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.4 | 138 | 0.0184 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.2 | 249 | 0.0092 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.3 | 206 | 0.0132 | 0.80 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.3 | 692 | Total | | | |

## Subcatchment 52: WS52



## Summary for Subcatchment 53: WS53

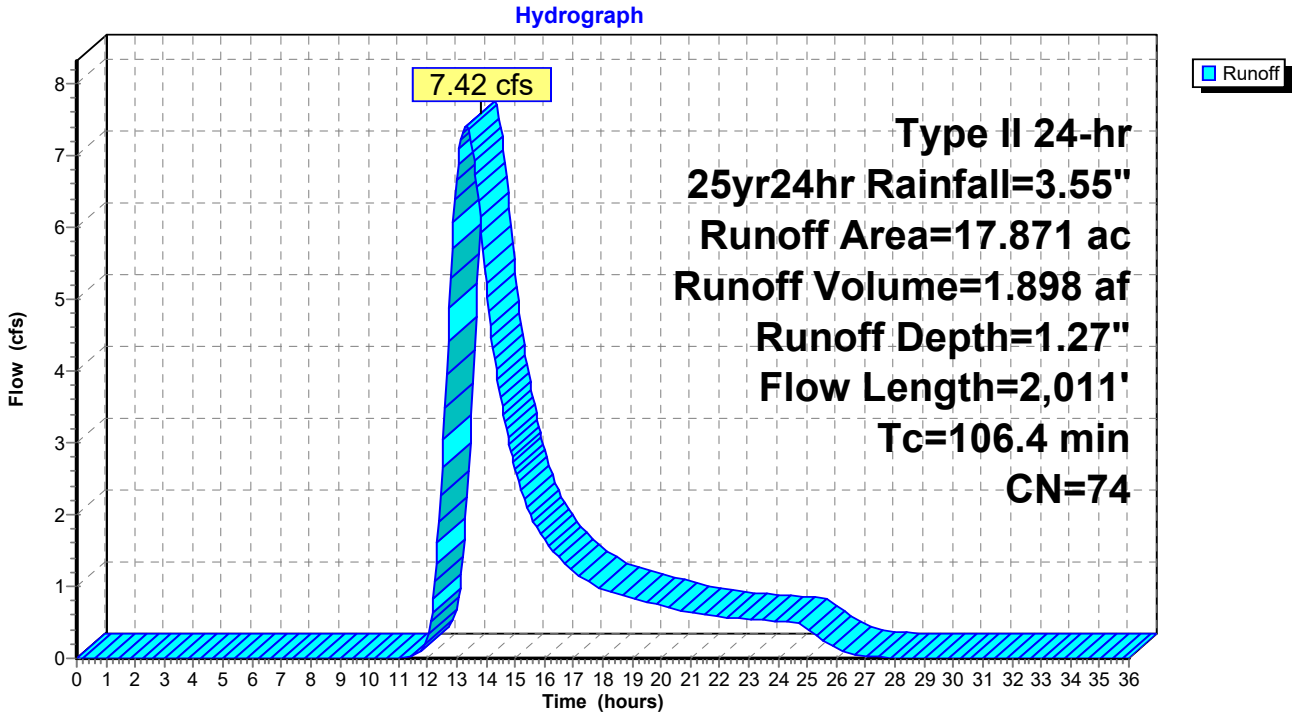
Runoff = 7.42 cfs @ 13.34 hrs, Volume= 1.898 af, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.579 | 79 | Deciduous Forest, HSG D |
| * | 0.013 | 79 | Deciduous Forest, HSG D |
| * | 0.538 | 60 | Mixed Forest, HSG B |
| * | 0.164 | 79 | Mixed Forest, HSG D |
| * | 1.312 | 71 | Cultivated Crops, HSG B |
| * | 5.753 | 81 | Cultivated Crops, HSG D |
| * | 1.830 | 58 | MEADOW, HSG B |
| * | 1.871 | 58 | MEADOW, HSG B |
| * | 3.080 | 78 | MEADOW, HSG D |
| * | 0.205 | 98 | IMPERVIOUS, HSG D |
| * | 2.526 | 78 | MEADOW, HSG D |
| | 17.871 | 74 | Weighted Average |
| | 17.665 | | 98.85% Pervious Area |
| | 0.205 | | 1.15% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 46.4 | 100 | 0.0048 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.5 | 83 | 0.0338 | 0.92 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 34 | 0.0139 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.2 | 402 | 0.0107 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 54 | 0.0238 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 18 | 0.0128 | 2.30 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 8.8 | 280 | 0.0058 | 0.53 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 11.4 | 245 | 0.0026 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.2 | 298 | 0.0034 | 0.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 167 | 0.0068 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.7 | 330 | 0.0038 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 106.4 | 2,011 | Total | | | |

## Subcatchment 53: WS53



## Summary for Subcatchment 54: WS54

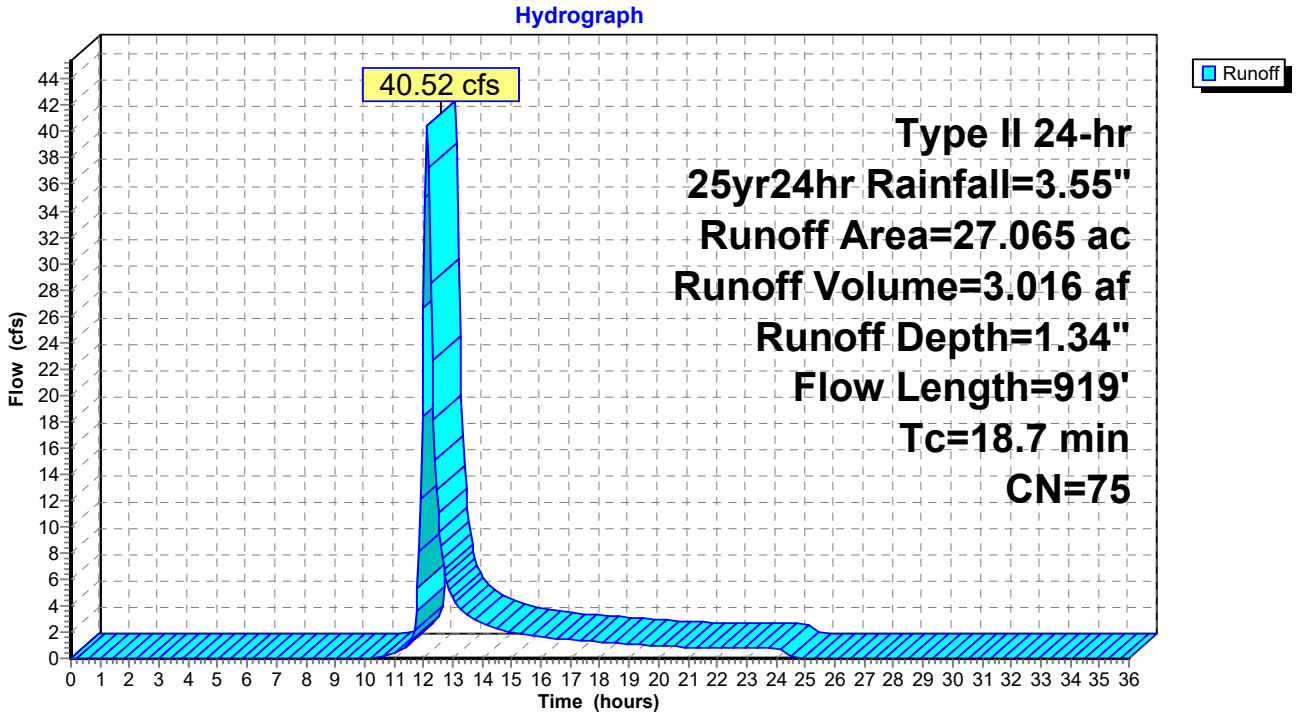
Runoff = 40.52 cfs @ 12.12 hrs, Volume= 3.016 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.008 | 79 | Deciduous Forest, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.417 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.680 | 61 | Pasture/Hay, HSG B |
| * | 2.775 | 60 | Deciduous Forest, HSG B |
| * | 0.844 | 79 | Deciduous Forest, HSG D |
| * | 0.059 | 93 | Developed Low Intensity, HSG D |
| * | 3.457 | 81 | Cultivated Crops, HSG D |
| * | 1.532 | 71 | Cultivated Crops, HSG B |
| * | 7.107 | 81 | Cultivated Crops, HSG D |
| * | 0.165 | 78 | MEADOW, HSG D |
| * | 0.050 | 98 | IMPERVIOUS, HSG D |
| * | 0.149 | 78 | MEADOW, HSG D |
| * | 0.037 | 98 | IMPERVIOUS, HSG D |
| * | 0.025 | 78 | MEADOW, HSG D |
| * | 0.864 | 58 | MEADOW, HSG B |
| * | 2.192 | 58 | MEADOW, HSG B |
| * | 1.913 | 78 | MEADOW, HSG D |
| * | 0.331 | 98 | IMPERVIOUS, HSG D |
| * | 3.726 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 27.065 | 75 | Weighted Average |
| | 26.604 | | 98.30% Pervious Area |
| | 0.461 | | 1.70% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.8 | 100 | 0.0195 | 0.29 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.0 | 312 | 0.0207 | 1.30 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 126 | 0.0206 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 12 | 0.0127 | 2.29 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 7.2 | 369 | 0.0091 | 0.86 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.7 | 919 | Total | | | |

## Subcatchment 54: WS54



## Summary for Subcatchment 55: WS55

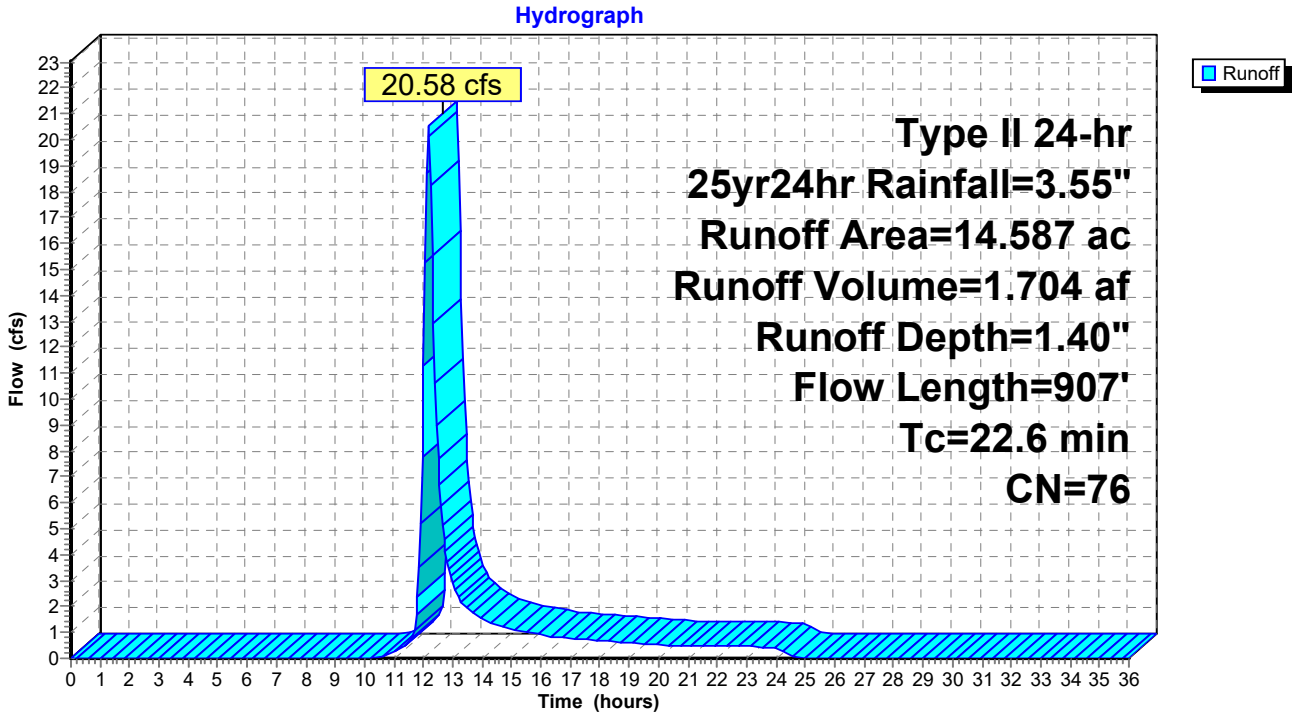
Runoff = 20.58 cfs @ 12.17 hrs, Volume= 1.704 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.010 | 84 | Developed Open Space, HSG D |
| * | 0.225 | 93 | Developed Low Intensity, HSG D |
| * | 0.094 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 81 | Cultivated Crops, HSG D |
| * | 2.811 | 71 | Cultivated Crops, HSG B |
| * | 7.104 | 81 | Cultivated Crops, HSG D |
| * | 0.469 | 58 | MEADOW, HSG B |
| * | 0.178 | 58 | MEADOW, HSG B |
| * | 1.371 | 58 | MEADOW, HSG B |
| * | 0.859 | 78 | MEADOW, HSG D |
| * | 1.466 | 78 | MEADOW, HSG D |
| | 14.587 | 76 | Weighted Average |
| | 14.587 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 2.9 | 26 | 0.0074 | 0.15 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 6.8 | 74 | 0.0071 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.2 | 191 | 0.0072 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 282 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 334 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 22.6 | 907 | Total | | | |

## Subcatchment 55: WS55



## Summary for Subcatchment 56: WS56

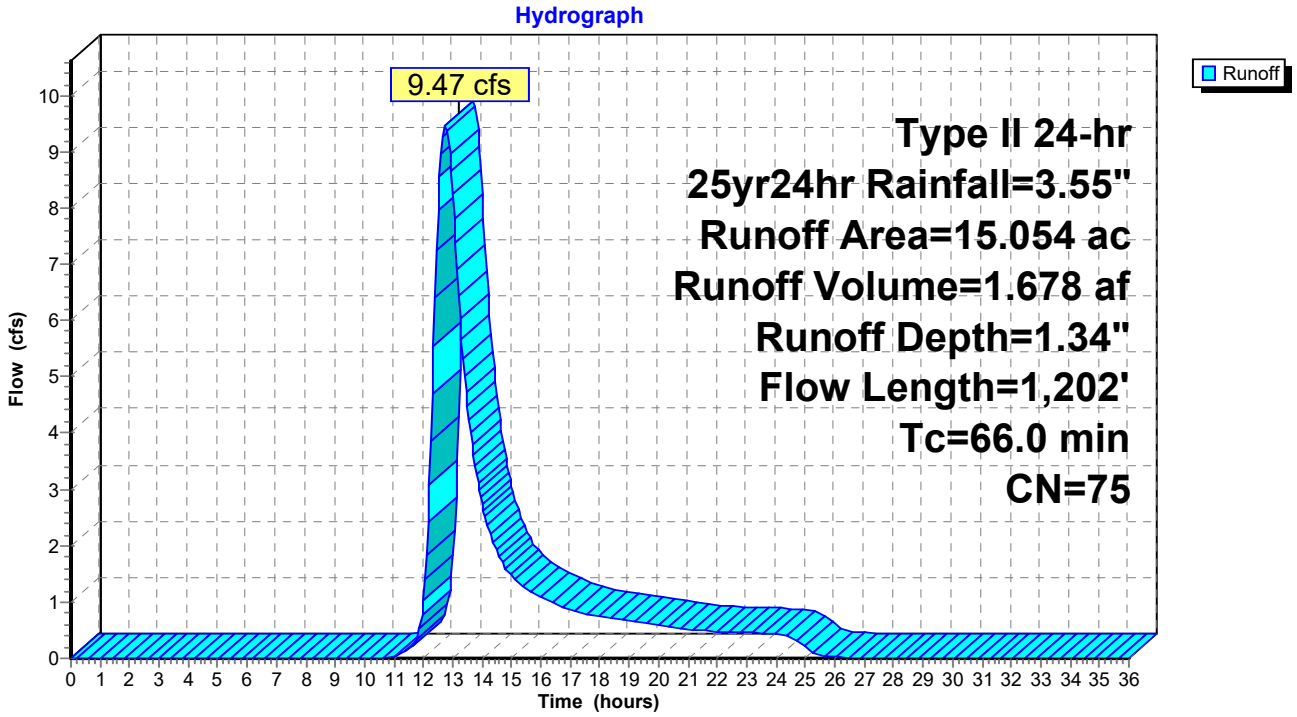
Runoff = 9.47 cfs @ 12.73 hrs, Volume= 1.678 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.006 | 60 | Deciduous Forest, HSG B |
| * | 0.838 | 71 | Cultivated Crops, HSG B |
| * | 1.191 | 81 | Cultivated Crops, HSG D |
| * | 0.607 | 58 | MEADOW, HSG B |
| * | 2.166 | 58 | MEADOW, HSG B |
| * | 2.888 | 78 | MEADOW, HSG D |
| * | 0.278 | 98 | IMPERVIOUS, HSG D |
| * | 7.037 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 15.054 | 75 | Weighted Average |
| | 14.734 | | 97.87% Pervious Area |
| | 0.321 | | 2.13% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.8 | 36 | 0.0120 | 0.75 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 13.1 | 64 | 0.0065 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.3 | 50 | 0.0026 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 73 | 0.0130 | 2.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 30 | 0.0289 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 142 | 0.0250 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 184 | 0.0140 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 37.7 | 368 | 0.0005 | 0.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.2 | 141 | 0.0064 | 0.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 36 | 0.0688 | 1.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 78 | 0.0254 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 66.0 | 1,202 | Total | | | |

## Subcatchment 56: WS56



## Summary for Subcatchment 57: WS57

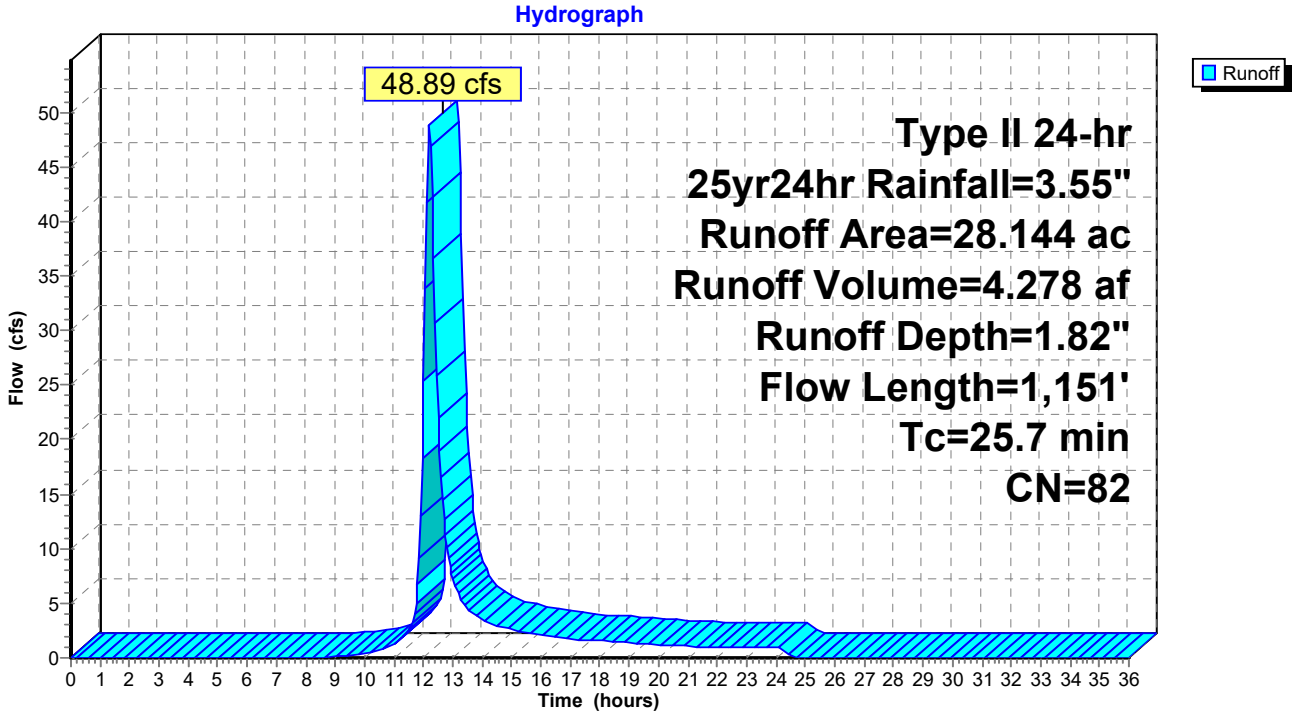
Runoff = 48.89 cfs @ 12.20 hrs, Volume= 4.278 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.213 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.799 | 79 | Deciduous Forest, HSG D |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 1.219 | 81 | Cultivated Crops, HSG D |
| * | 0.119 | 94 | Developed Medium Intensity, HSG D |
| * | 0.116 | 93 | Developed Low Intensity, HSG D |
| * | 0.620 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 94 | Developed Medium Intensity, HSG D |
| * | 0.091 | 93 | Developed Low Intensity, HSG D |
| * | 0.093 | 94 | Developed Medium Intensity, HSG D |
| * | 0.092 | 93 | Developed Low Intensity, HSG D |
| * | 0.562 | 84 | Developed Open Space, HSG D |
| * | 0.626 | 93 | Developed Low Intensity, HSG D |
| * | 9.353 | 81 | Cultivated Crops, HSG D |
| * | 0.285 | 81 | Cultivated Crops, HSG D |
| * | 0.201 | 78 | MEADOW, HSG D |
| * | 0.080 | 98 | IMPERVIOUS, HSG D |
| * | 3.270 | 78 | MEADOW, HSG D |
| * | 0.168 | 98 | IMPERVIOUS, HSG D |
| * | 8.034 | 78 | MEADOW, HSG D |
| | 28.144 | 82 | Weighted Average |
| | 27.895 | | 99.12% Pervious Area |
| | 0.248 | | 0.88% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.9 | 38 | 0.0016 | 0.34 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 4.4 | 62 | 0.0147 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 11 | 0.0221 | 1.34 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 121 | 0.0290 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 153 | 0.0151 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 96 | 0.0281 | 3.40 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.0 | 13 | 0.2093 | 9.29 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 12.5 | 475 | 0.0049 | 0.63 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 73 | 0.0225 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 109 | 0.0309 | 1.23 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 25.7 | 1,151 | Total | | | |

## Subcatchment 57: WS57



## Summary for Subcatchment 58: WS58

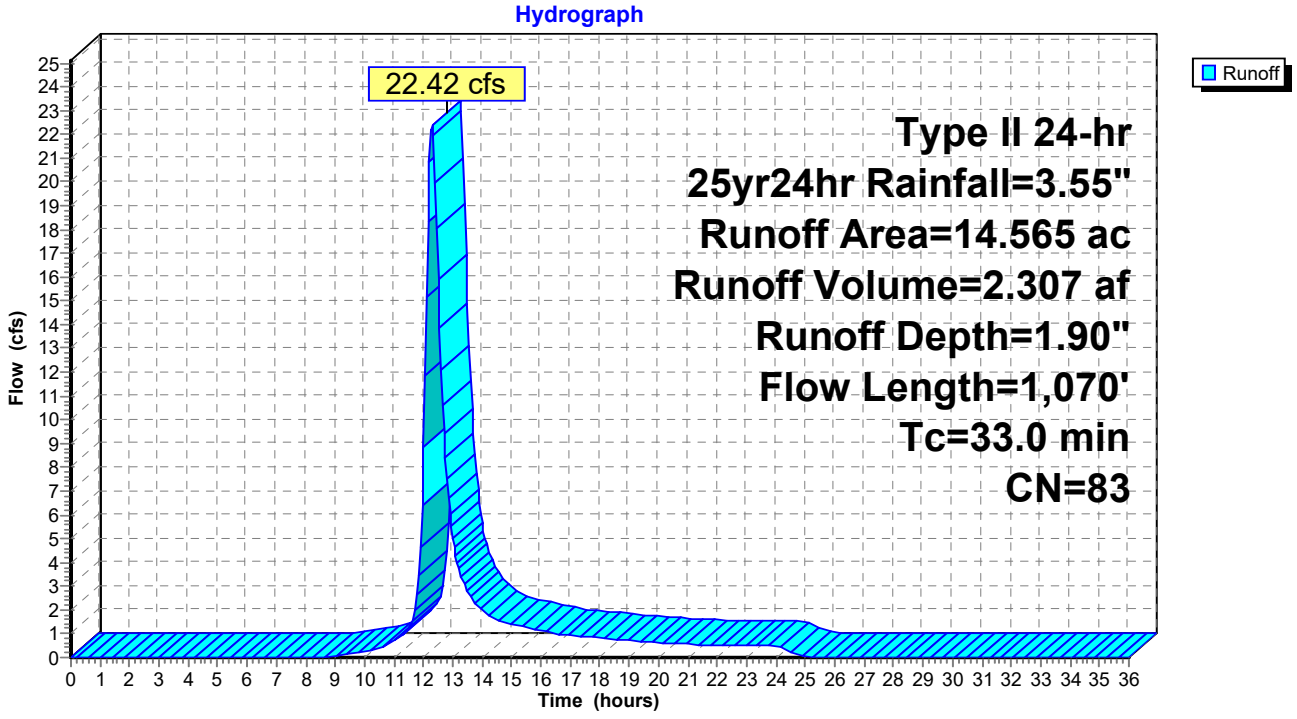
Runoff = 22.42 cfs @ 12.28 hrs, Volume= 2.307 af, Depth= 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.103 | 94 | Developed Medium Intensity, HSG D |
| * | 0.106 | 93 | Developed Low Intensity, HSG D |
| * | 0.672 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 94 | Developed Medium Intensity, HSG D |
| * | 0.131 | 93 | Developed Low Intensity, HSG D |
| * | 0.076 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.188 | 81 | Cultivated Crops, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.343 | 93 | Developed Low Intensity, HSG D |
| * | 2.260 | 93 | Developed Low Intensity, HSG D |
| * | 2.650 | 81 | Cultivated Crops, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.069 | 78 | MEADOW, HSG D |
| * | 3.596 | 78 | MEADOW, HSG D |
| * | 0.118 | 98 | IMPERVIOUS, HSG D |
| * | 3.839 | 78 | MEADOW, HSG D |
| | 14.565 | 83 | Weighted Average |
| | 14.404 | | 98.90% Pervious Area |
| | 0.161 | | 1.10% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.4 | 100 | 0.0107 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.1 | 266 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 22 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0243 | 3.16 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 23 | 0.0213 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 152 | 0.0088 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 47 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 68 | 0.0210 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.8 | 215 | 0.0077 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 153 | 0.0285 | 3.43 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 33.0 | 1,070 | Total | | | |

## Subcatchment 58: WS58



## Summary for Subcatchment 59: WS59

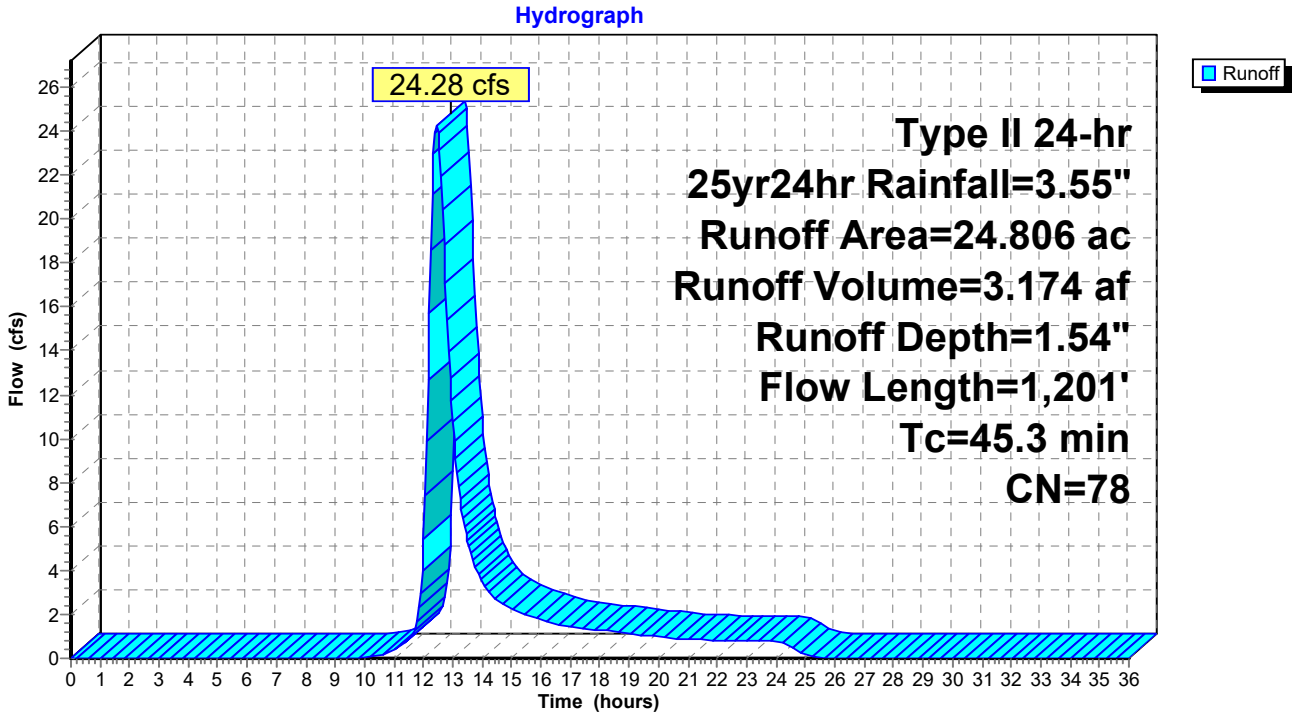
Runoff = 24.28 cfs @ 12.45 hrs, Volume= 3.174 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.484 | 84 | Developed Open Space, HSG D |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 0.036 | 81 | Cultivated Crops, HSG D |
| * | 4.832 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.165 | 78 | MEADOW, HSG D |
| * | 2.797 | 78 | MEADOW, HSG D |
| * | 1.587 | 58 | MEADOW, HSG B |
| * | 2.407 | 78 | MEADOW, HSG D |
| * | 0.202 | 98 | IMPERVIOUS, HSG D |
| * | 10.986 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 24.806 | 78 | Weighted Average |
| | 24.561 | | 99.01% Pervious Area |
| | 0.245 | | 0.99% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.6 | 100 | 0.0088 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 209 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 76 | 0.0175 | 0.93 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 23 | 0.0069 | 1.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 17 | 0.0205 | 1.00 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 74 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 9.6 | 353 | 0.0076 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.5 | 63 | 0.0003 | 0.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.0 | 134 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 151 | 0.0147 | 2.46 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 45.3 | 1,201 | Total | | | |

## Subcatchment 59: WS59



## Summary for Subcatchment 60: WS60

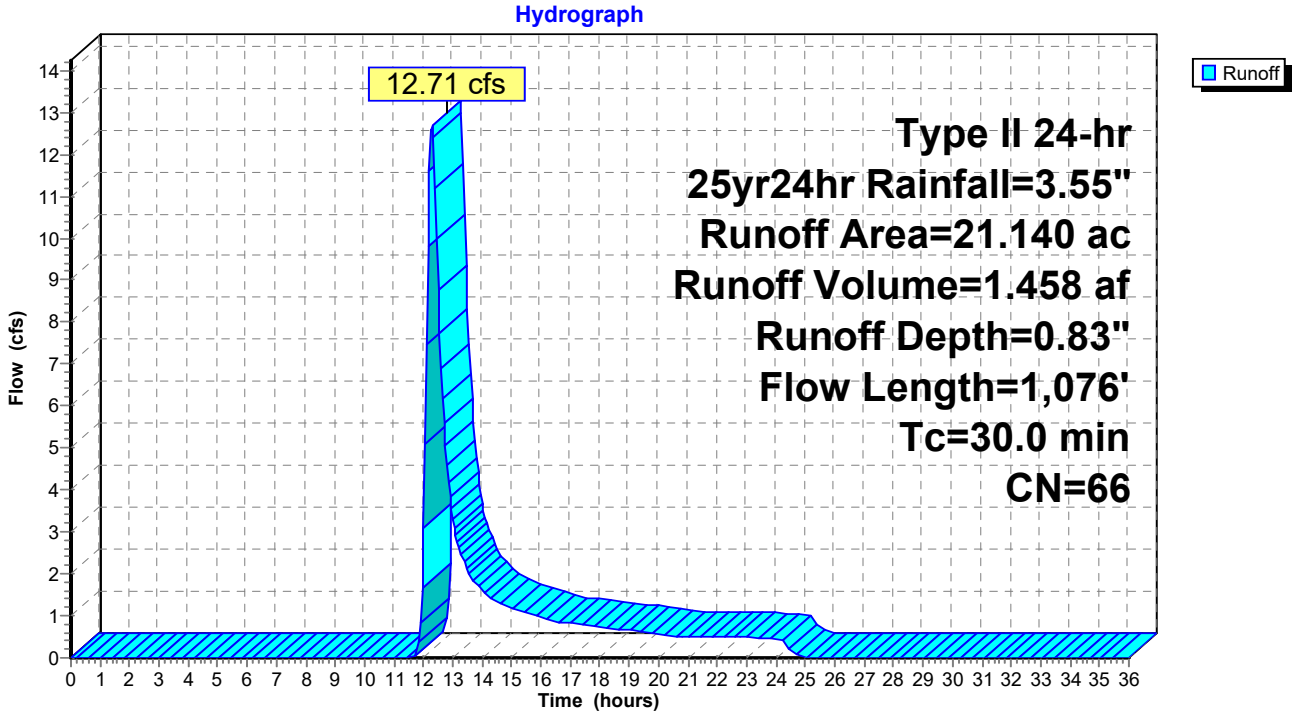
Runoff = 12.71 cfs @ 12.28 hrs, Volume= 1.458 af, Depth= 0.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.096 | 71 | Cultivated Crops, HSG B |
| * | 0.040 | 81 | Cultivated Crops, HSG D |
| * | 0.499 | 81 | Cultivated Crops, HSG D |
| * | 0.701 | 71 | Cultivated Crops, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| * | 0.348 | 78 | MEADOW, HSG D |
| * | 0.075 | 98 | IMPERVIOUS, HSG D |
| * | 0.397 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.694 | 58 | MEADOW, HSG B |
| * | 0.065 | 98 | IMPERVIOUS, HSG B |
| * | 10.636 | 58 | MEADOW, HSG B |
| * | 0.323 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG D |
| * | 0.595 | 78 | MEADOW, HSG D |
| * | 1.544 | 78 | MEADOW, HSG D |
| * | 0.174 | 98 | IMPERVIOUS, HSG D |
| * | 3.623 | 78 | MEADOW, HSG D |
| * | 0.037 | 98 | IMPERVIOUS, HSG D |
| * | 0.219 | 58 | MEADOW, HSG B |
| * | 0.027 | 58 | MEADOW, HSG B |
| | 21.140 | 66 | Weighted Average |
| | 20.742 | | 98.11% Pervious Area |
| | 0.399 | | 1.89% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.0 | 100 | 0.0072 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 30 | 0.0302 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 31 | 0.0472 | 1.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 23 | 0.0448 | 4.29 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 31 | 0.0543 | 1.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.7 | 144 | 0.0425 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 190 | 0.0319 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 294 | 0.0358 | 1.33 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 192 | 0.0485 | 1.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 40 | 0.0123 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 30.0 | 1,076 | Total | | | |

## Subcatchment 60: WS60



## Summary for Subcatchment 61: WS61

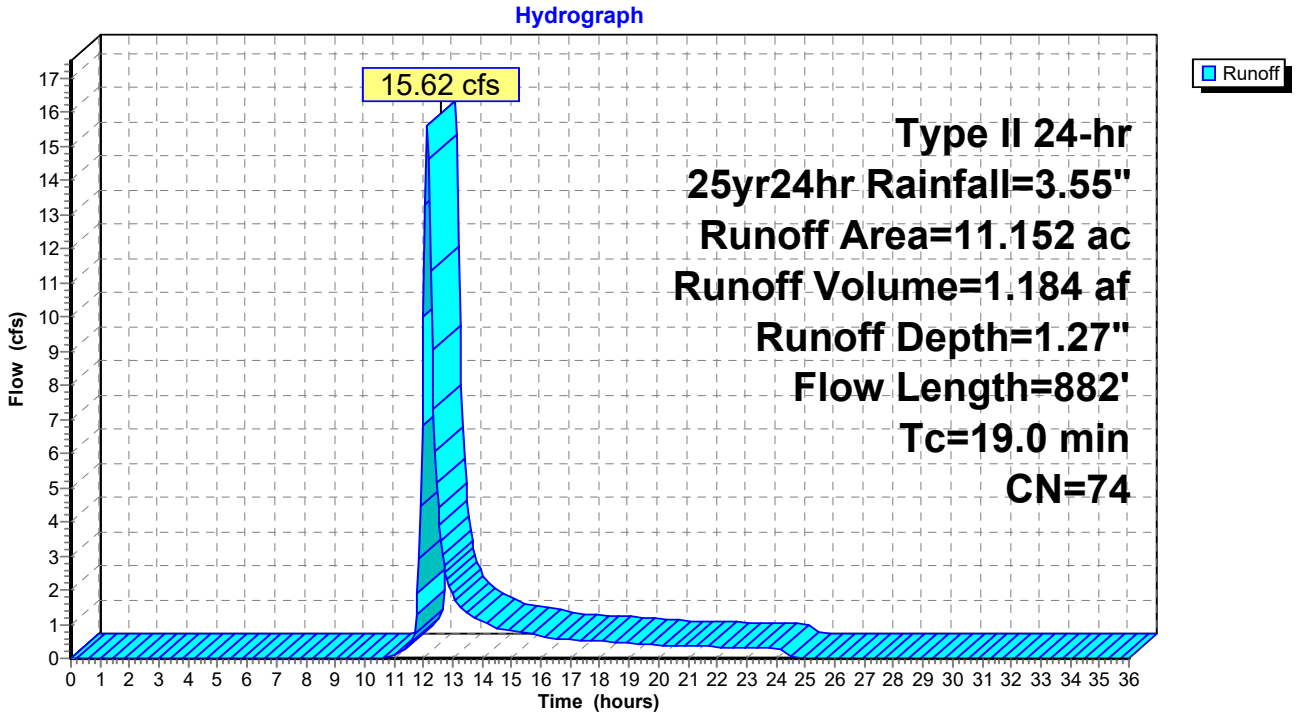
Runoff = 15.62 cfs @ 12.13 hrs, Volume= 1.184 af, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.005 | 61 | Pasture/Hay, HSG B |
| * | 0.480 | 79 | Deciduous Forest, HSG D |
| * | 0.892 | 81 | Cultivated Crops, HSG D |
| * | 0.327 | 81 | Cultivated Crops, HSG D |
| * | 0.940 | 71 | Cultivated Crops, HSG B |
| * | 0.095 | 86 | Woody Wetlands, HSG B |
| * | 0.015 | 78 | MEADOW, HSG D |
| * | 0.971 | 78 | MEADOW, HSG D |
| * | 1.432 | 58 | MEADOW, HSG B |
| * | 0.607 | 78 | MEADOW, HSG D |
| * | 0.098 | 78 | MEADOW, HSG D |
| * | 0.602 | 78 | MEADOW, HSG D |
| * | 0.001 | 98 | IMPERVIOUS, HSG D |
| * | 4.242 | 78 | MEADOW, HSG D |
| * | 0.006 | 98 | IMPERVIOUS, HSG D |
| * | 0.239 | 58 | MEADOW, HSG B |
| * | 0.202 | 58 | MEADOW, HSG B |
| | 11.152 | 74 | Weighted Average |
| | 11.145 | | 99.94% Pervious Area |
| | 0.007 | | 0.06% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.7 | 58 | 0.0697 | 0.21 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.3 | 42 | 0.0850 | 0.21 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.0 | 125 | 0.0825 | 2.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 236 | 0.0554 | 1.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 72 | 0.0380 | 1.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 63 | 0.0032 | 0.39 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 273 | 0.0182 | 1.22 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 12 | 0.0128 | 0.57 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.0 | 882 | Total | | | |

## Subcatchment 61: WS61



## Summary for Subcatchment 62: WS62

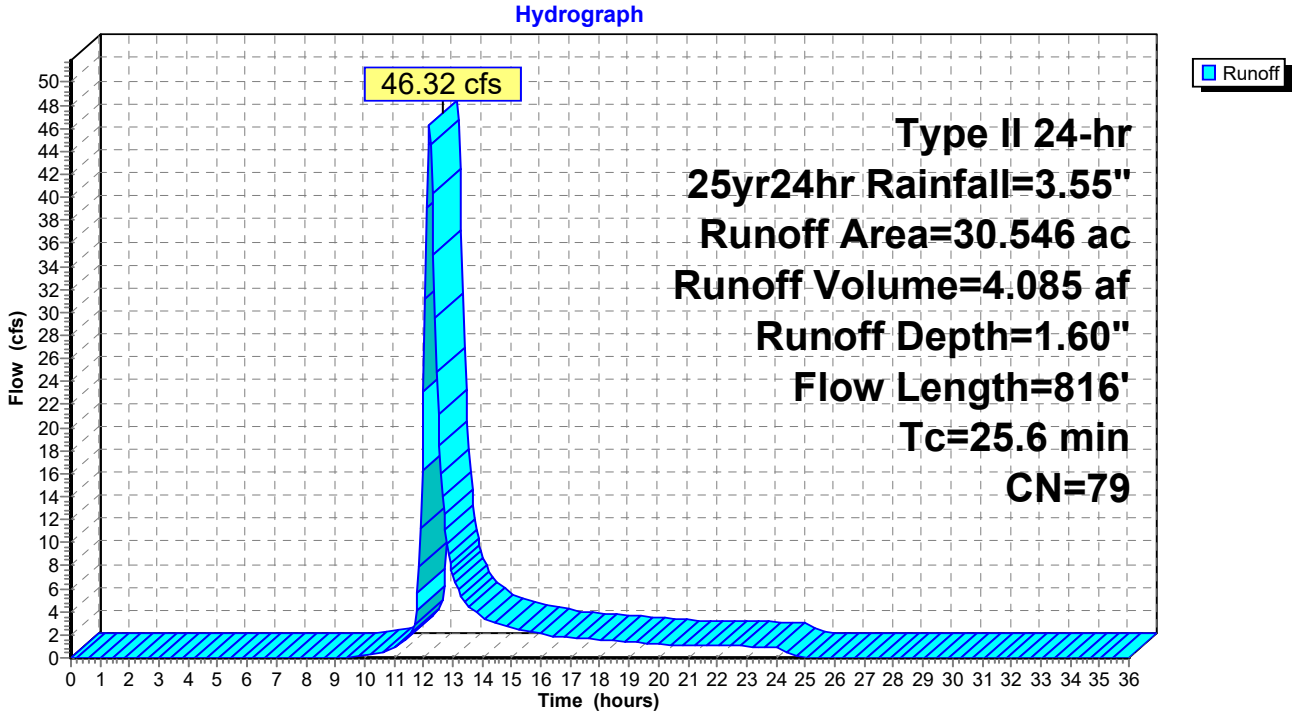
Runoff = 46.32 cfs @ 12.20 hrs, Volume= 4.085 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.426 | 86 | Woody Wetlands, HSG D |
| * | 3.925 | 80 | Pasture/Hay, HSG D |
| * | 1.263 | 81 | Cultivated Crops, HSG D |
| * | 3.524 | 81 | Cultivated Crops, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| * | 0.109 | 78 | MEADOW, HSG D |
| * | 0.011 | 98 | IMPERVIOUS, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| * | 0.093 | 78 | MEADOW, HSG D |
| * | 1.348 | 78 | MEADOW, HSG D |
| * | 6.853 | 78 | MEADOW, HSG D |
| * | 0.032 | 98 | IMPERVIOUS, HSG D |
| * | 0.139 | 98 | IMPERVIOUS, HSG D |
| * | 0.447 | 78 | MEADOW, HSG D |
| * | 0.366 | 78 | MEADOW, HSG D |
| * | 3.160 | 78 | MEADOW, HSG D |
| * | 7.384 | 78 | MEADOW, HSG D |
| * | 0.263 | 98 | IMPERVIOUS, HSG D |
| | 30.546 | 79 | Weighted Average |
| | 30.101 | | 98.54% Pervious Area |
| | 0.445 | | 1.46% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.7 | 32 | 0.0222 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.9 | 10 | 0.0202 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 22 | 0.0346 | 1.04 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 5.0 | 35 | 0.0216 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 23 | 0.0229 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 158 | 0.0094 | 0.68 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 231 | 0.0186 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 53 | 0.0155 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 38 | 0.0106 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.4 | 214 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.6 | 816 | Total | | | |

## Subcatchment 62: WS62



## Summary for Subcatchment 63: WS63

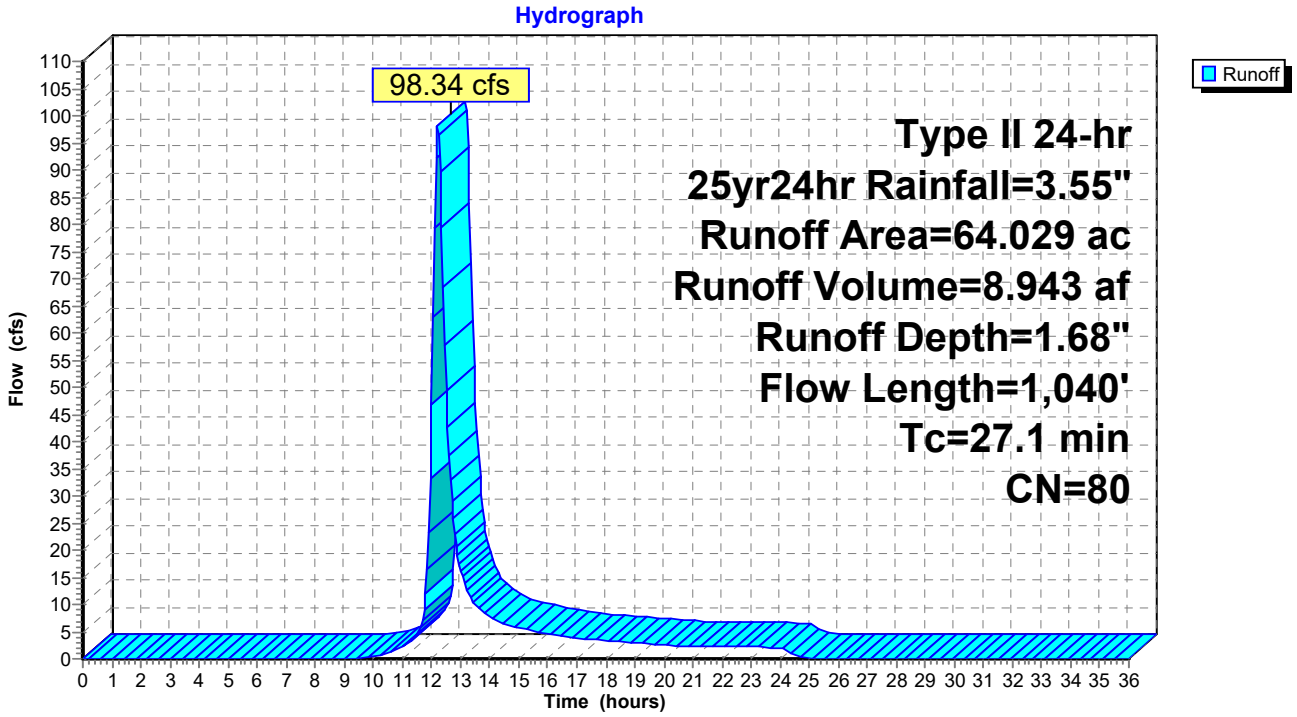
Runoff = 98.34 cfs @ 12.22 hrs, Volume= 8.943 af, Depth= 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.064 | 84 | Developed Open Space, HSG D |
| * | 0.204 | 93 | Developed Low Intensity, HSG D |
| * | 0.191 | 84 | Developed Open Space, HSG D |
| * | 0.261 | 93 | Developed Low Intensity, HSG D |
| * | 0.592 | 93 | Developed Low Intensity, HSG D |
| * | 0.522 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 93 | Developed Low Intensity, HSG D |
| * | 0.068 | 84 | Developed Open Space, HSG D |
| * | 4.348 | 81 | Cultivated Crops, HSG D |
| * | 17.034 | 81 | Cultivated Crops, HSG D |
| * | 0.249 | 78 | MEADOW, HSG D |
| * | 0.351 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.495 | 78 | MEADOW, HSG D |
| * | 3.588 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.883 | 78 | MEADOW, HSG D |
| * | 0.437 | 78 | MEADOW, HSG D |
| * | 6.397 | 78 | MEADOW, HSG D |
| * | 25.818 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.007 | 98 | IMPERVIOUS, HSG D |
| * | 0.054 | 78 | MEADOW, HSG D |
| * | 0.054 | 98 | IMPERVIOUS, HSG D |
| * | 0.083 | 78 | MEADOW, HSG D |
| * | 0.083 | 98 | IMPERVIOUS, HSG D |
| * | 0.572 | 78 | MEADOW, HSG D |
| * | 0.572 | 98 | IMPERVIOUS, HSG D |
| | 64.029 | 80 | Weighted Average |
| | 63.227 | | 98.75% Pervious Area |
| | 0.801 | | 1.25% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.2 | 14 | 0.0698 | 1.25 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.6 | 22 | 0.0422 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.0 | 65 | 0.0314 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 255 | 0.0291 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 115 | 0.0119 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 41 | 0.0171 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 89 | 0.0102 | 0.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 211 | 0.0063 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 228 | 0.0111 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.1 | 1,040 | Total | | | |

## Subcatchment 63: WS63



## Summary for Subcatchment 64: WS64

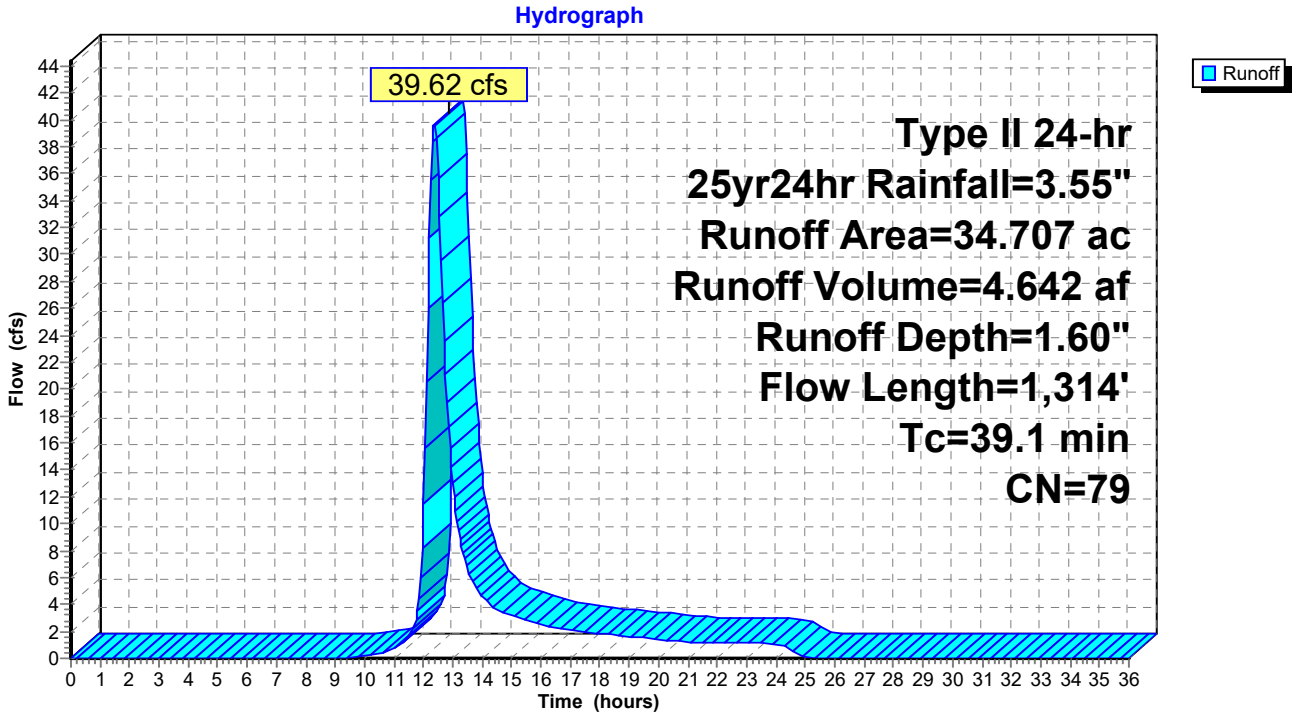
Runoff = 39.62 cfs @ 12.37 hrs, Volume= 4.642 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.070 | 94 | Developed Medium Intensity, HSG D |
| * | 0.213 | 81 | Cultivated Crops, HSG D |
| * | 0.051 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.004 | 84 | Developed Open Space, HSG D |
| * | 0.241 | 93 | Developed Low Intensity, HSG D |
| * | 0.120 | 84 | Developed Open Space, HSG D |
| * | 0.388 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 84 | Developed Open Space, HSG D |
| * | 0.707 | 81 | Cultivated Crops, HSG D |
| * | 2.771 | 81 | Cultivated Crops, HSG D |
| * | 1.011 | 78 | MEADOW, HSG D |
| * | 10.466 | 78 | MEADOW, HSG D |
| * | 0.040 | 98 | IMPERVIOUS, HSG D |
| * | 0.083 | 78 | MEADOW, HSG D |
| * | 0.121 | 78 | MEADOW, HSG D |
| * | 2.314 | 78 | MEADOW, HSG D |
| * | 15.070 | 78 | MEADOW, HSG D |
| * | 0.045 | 98 | IMPERVIOUS, HSG D |
| * | 0.149 | 78 | MEADOW, HSG D |
| * | 0.149 | 98 | IMPERVIOUS, HSG D |
| * | 0.171 | 78 | MEADOW, HSG D |
| * | 0.171 | 98 | IMPERVIOUS, HSG D |
| | 34.707 | 79 | Weighted Average |
| | 34.302 | | 98.83% Pervious Area |
| | 0.405 | | 1.17% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 14.9 | 100 | 0.0115 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.3 | 80 | 0.0230 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 223 | 0.0189 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 170 | 0.0105 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 85 | 0.0270 | 1.15 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 21 | 0.0127 | 0.79 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 11 | 0.0132 | 2.33 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 23 | 0.0180 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 138 | 0.0157 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.5 | 329 | 0.0110 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 26 | 0.0086 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 31 | 0.0084 | 0.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 41 | 0.0076 | 0.79 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 37 | 0.0100 | 2.03 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 39.1 | 1,314 | Total | | | |

## Subcatchment 64: WS64



## Summary for Subcatchment 65: WS65

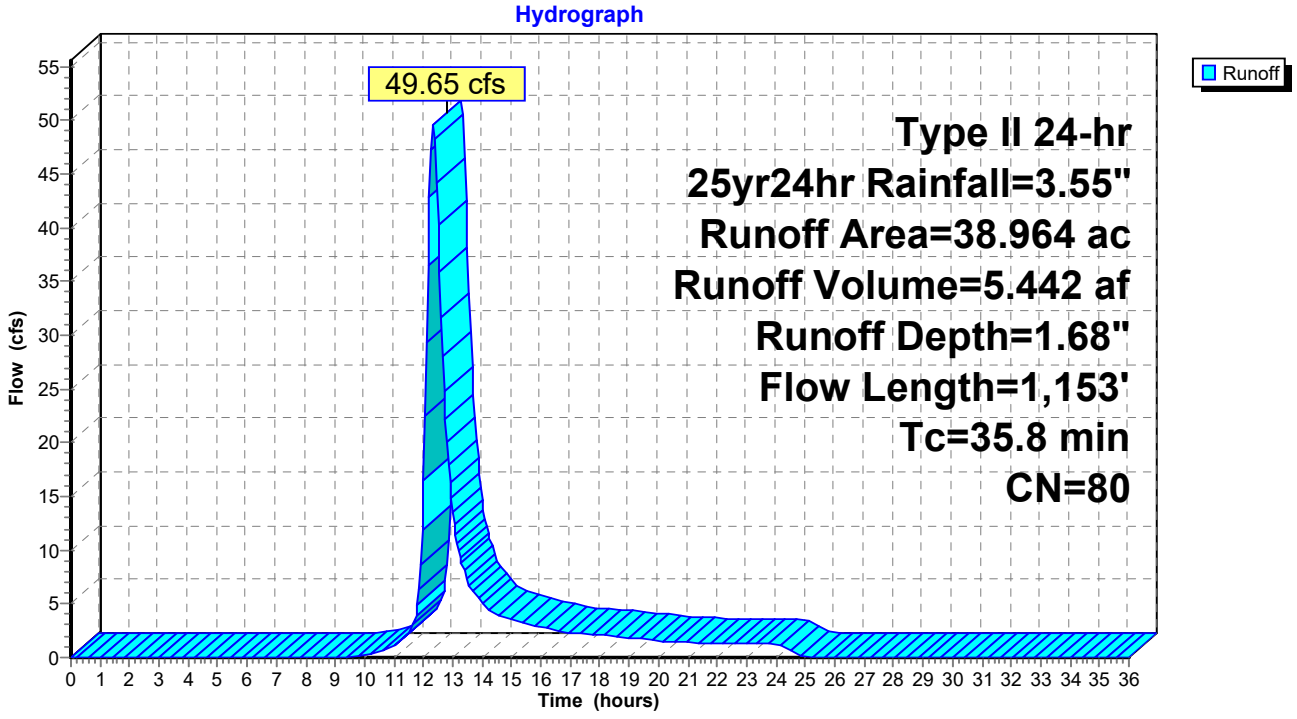
Runoff = 49.65 cfs @ 12.32 hrs, Volume= 5.442 af, Depth= 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.808 | 84 | Developed Open Space, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 93 | Developed Low Intensity, HSG D |
| * | 1.799 | 93 | Developed Low Intensity, HSG D |
| * | 0.220 | 94 | Developed Medium Intensity, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.187 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 81 | Cultivated Crops, HSG D |
| * | 3.888 | 81 | Cultivated Crops, HSG D |
| * | 0.620 | 81 | Cultivated Crops, HSG D |
| * | 2.076 | 81 | Cultivated Crops, HSG D |
| * | 0.180 | 78 | MEADOW, HSG D |
| * | 4.641 | 78 | MEADOW, HSG D |
| * | 14.598 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.341 | 78 | MEADOW, HSG D |
| * | 3.010 | 78 | MEADOW, HSG D |
| * | 1.721 | 78 | MEADOW, HSG D |
| * | 2.243 | 78 | MEADOW, HSG D |
| * | 0.306 | 78 | MEADOW, HSG D |
| * | 0.306 | 98 | IMPERVIOUS, HSG D |
| * | 0.052 | 78 | MEADOW, HSG D |
| * | 0.052 | 98 | IMPERVIOUS, HSG D |
| | 38.964 | 80 | Weighted Average |
| | 38.564 | | 98.97% Pervious Area |
| | 0.401 | | 1.03% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.0 | 100 | 0.0072 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.8 | 44 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 173 | 0.0382 | 1.37 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 122 | 0.0401 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 72 | 0.0156 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 25 | 0.0292 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 36 | 0.0017 | 0.83 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 2.0 | 103 | 0.0151 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 228 | 0.0232 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.9 | 129 | 0.0117 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 121 | 0.0081 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.8 | 1,153 | Total | | | |

## Subcatchment 65: WS65



## Summary for Subcatchment 66: WS66

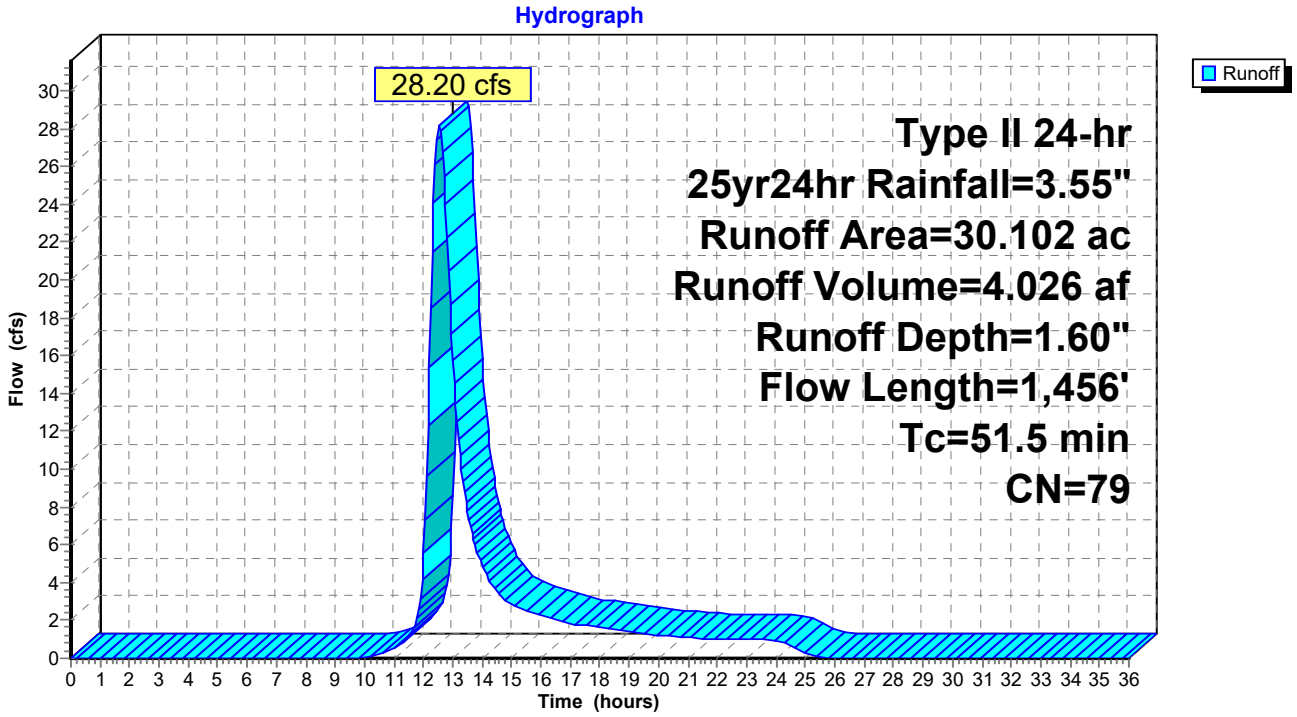
Runoff = 28.20 cfs @ 12.53 hrs, Volume= 4.026 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.002 | 94 | Developed Medium Intensity, HSG D |
| * | 4.099 | 81 | Cultivated Crops, HSG D |
| * | 2.336 | 81 | Cultivated Crops, HSG D |
| * | 2.321 | 78 | MEADOW, HSG D |
| * | 0.469 | 78 | MEADOW, HSG D |
| * | 12.104 | 78 | MEADOW, HSG D |
| * | 1.365 | 78 | MEADOW, HSG D |
| * | 2.497 | 78 | MEADOW, HSG D |
| * | 4.186 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.140 | 78 | MEADOW, HSG D |
| * | 0.140 | 98 | IMPERVIOUS, HSG D |
| * | 0.201 | 78 | MEADOW, HSG D |
| * | 0.201 | 98 | IMPERVIOUS, HSG D |
| | 30.102 | 79 | Weighted Average |
| | 29.719 | | 98.73% Pervious Area |
| | 0.383 | | 1.27% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.5 | 100 | 0.0218 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.3 | 152 | 0.0124 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.8 | 150 | 0.0039 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 291 | 0.0320 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 111 | 0.0135 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 54 | 0.0097 | 0.69 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 5 | 0.0059 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 109 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 26 | 0.0214 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 91 | 0.0125 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 19.4 | 366 | 0.0020 | 0.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 51.5 | 1,456 | Total | | | |

## Subcatchment 66: WS66



## Summary for Subcatchment 67: WS67

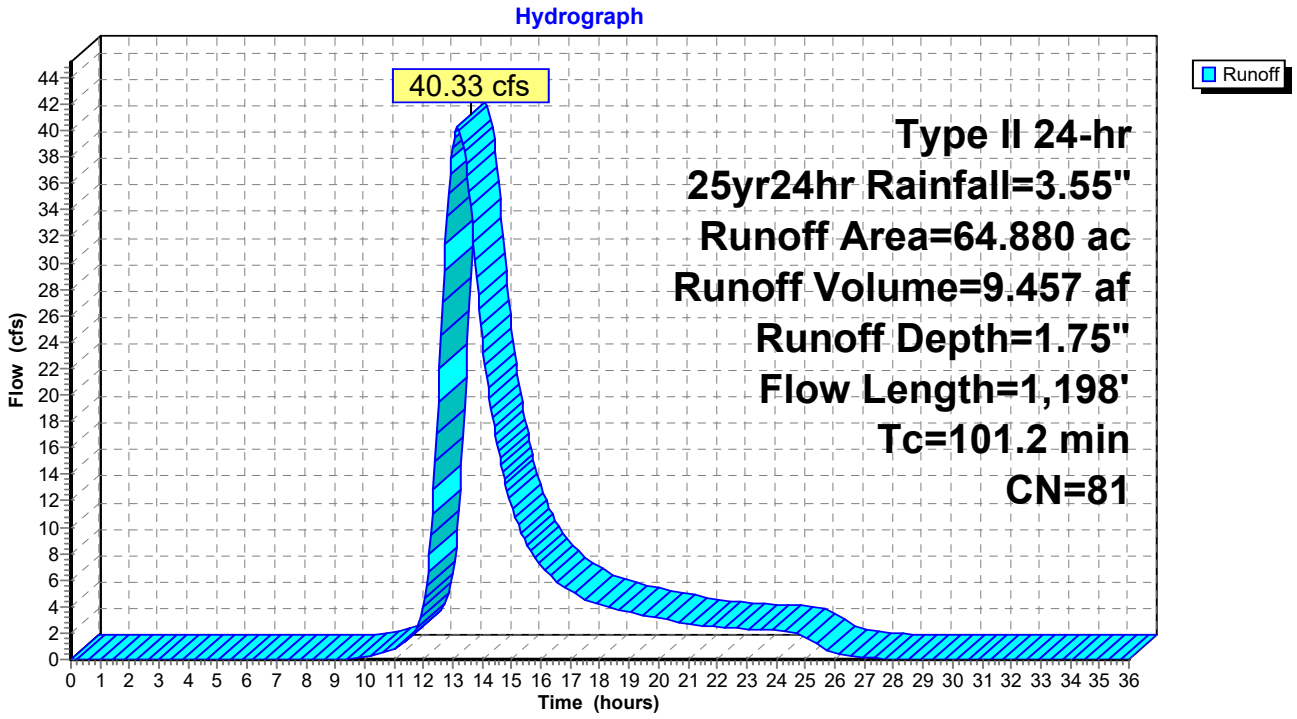
Runoff = 40.33 cfs @ 13.16 hrs, Volume= 9.457 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr24hr Rainfall=3.55"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.065 | 93 | Developed Low Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.110 | 94 | Developed Medium Intensity, HSG D |
| * | 0.317 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.210 | 93 | Developed Low Intensity, HSG D |
| * | 0.490 | 93 | Developed Low Intensity, HSG D |
| * | 0.053 | 84 | Developed Open Space, HSG D |
| * | 0.070 | 84 | Developed Open Space, HSG D |
| * | 0.234 | 86 | Woody Wetlands, HSG D |
| * | 0.117 | 93 | Developed Low Intensity, HSG D |
| * | 0.583 | 93 | Developed Low Intensity, HSG D |
| * | 0.347 | 93 | Developed Low Intensity, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 0.257 | 94 | Developed Medium Intensity, HSG D |
| * | 0.154 | 84 | Developed Open Space, HSG D |
| * | 0.751 | 93 | Developed Low Intensity, HSG D |
| * | 0.173 | 84 | Developed Open Space, HSG D |
| * | 0.904 | 86 | Woody Wetlands, HSG D |
| * | 0.455 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 84 | Developed Open Space, HSG D |
| * | 7.923 | 81 | Cultivated Crops, HSG D |
| * | 7.076 | 81 | Cultivated Crops, HSG D |
| * | 9.818 | 81 | Cultivated Crops, HSG D |
| * | 0.061 | 78 | MEADOW, HSG D |
| * | 0.007 | 98 | IMPERVIOUS, HSG D |
| * | 0.048 | 78 | MEADOW, HSG D |
| * | 0.051 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.130 | 78 | MEADOW, HSG D |
| * | 0.050 | 78 | MEADOW, HSG D |
| * | 2.324 | 78 | MEADOW, HSG D |
| * | 12.998 | 78 | MEADOW, HSG D |
| * | 0.038 | 98 | IMPERVIOUS, HSG D |
| * | 0.179 | 98 | IMPERVIOUS, HSG D |
| * | 4.671 | 78 | MEADOW, HSG D |
| * | 7.788 | 78 | MEADOW, HSG D |
| * | 0.048 | 98 | IMPERVIOUS, HSG D |
| * | 0.404 | 98 | IMPERVIOUS, HSG D |
| * | 1.538 | 78 | MEADOW, HSG D |
| * | 3.645 | 78 | MEADOW, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| | 64.880 | 81 | Weighted Average |
| | 64.153 | | 98.88% Pervious Area |
| | 0.727 | | 1.12% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.3 | 100 | 0.0080 | 0.20 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.5 | 105 | 0.0169 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 55 | 0.0194 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 78.5 | 222 | 0.0000 | 0.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 211 | 0.0156 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 51 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 34 | 0.0685 | 5.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 27 | 0.0549 | 1.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 232 | 0.0273 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 30 | 0.0020 | 0.91 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 12 | 0.0075 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 121 | 0.0148 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 101.2 | 1,198 | Total | | | |

## Subcatchment 67: WS67



Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment1: WS1** Runoff Area=13.742 ac 0.36% Impervious Runoff Depth=1.57"
Flow Length=1,870' Tc=28.4 min CN=69 Runoff=18.43 cfs 1.803 af

**Subcatchment2: WS2** Runoff Area=28.882 ac 1.98% Impervious Runoff Depth=1.24"
Flow Length=1,955' Tc=32.4 min CN=64 Runoff=26.25 cfs 2.988 af

**Subcatchment3: WS3** Runoff Area=10.451 ac 0.00% Impervious Runoff Depth=1.00"
Flow Length=1,032' Tc=16.1 min CN=60 Runoff=11.30 cfs 0.869 af

**Subcatchment5: WS5** Runoff Area=56.549 ac 1.61% Impervious Runoff Depth=1.51"
Flow Length=1,143' Tc=74.9 min CN=68 Runoff=35.71 cfs 7.094 af

**Subcatchment6: WS6** Runoff Area=44.409 ac 1.07% Impervious Runoff Depth=1.65"
Flow Length=2,272' Tc=100.4 min CN=70 Runoff=25.01 cfs 6.090 af

**Subcatchment7: WS7** Runoff Area=11.383 ac 0.00% Impervious Runoff Depth=2.26"
Flow Length=436' Tc=53.3 min CN=78 Runoff=14.82 cfs 2.144 af

**Subcatchment8: WS8** Runoff Area=159.778 ac 0.88% Impervious Runoff Depth=2.18"
Flow Length=3,027' Tc=68.2 min CN=77 Runoff=166.73 cfs 29.002 af

**Subcatchment9: WS9** Runoff Area=11.132 ac 2.50% Impervious Runoff Depth=1.06"
Flow Length=888' Tc=27.0 min CN=61 Runoff=9.27 cfs 0.981 af

**Subcatchment10: WS10** Runoff Area=10.435 ac 1.24% Impervious Runoff Depth=1.00"
Flow Length=988' Tc=29.7 min CN=60 Runoff=7.49 cfs 0.868 af

**Subcatchment11: WS11** Runoff Area=16.148 ac 0.00% Impervious Runoff Depth=0.88"
Flow Length=896' Tc=28.2 min CN=58 Runoff=10.11 cfs 1.190 af

**Subcatchment12: WS12** Runoff Area=23.932 ac 1.15% Impervious Runoff Depth=1.18"
Flow Length=2,043' Tc=57.4 min CN=63 Runoff=13.40 cfs 2.350 af

**Subcatchment13: WS13** Runoff Area=19.692 ac 1.11% Impervious Runoff Depth=1.06"
Flow Length=1,865' Tc=43.7 min CN=61 Runoff=11.60 cfs 1.735 af

**Subcatchment14: WS14** Runoff Area=69.773 ac 0.48% Impervious Runoff Depth=1.87"
Flow Length=3,906' Tc=100.2 min CN=73 Runoff=45.73 cfs 10.847 af

**Subcatchment15: WS15** Runoff Area=15.438 ac 1.15% Impervious Runoff Depth=2.18"
Flow Length=1,445' Tc=48.0 min CN=77 Runoff=20.82 cfs 2.802 af

**Subcatchment16: WS16** Runoff Area=47.898 ac 0.83% Impervious Runoff Depth=2.26"
Flow Length=2,796' Tc=47.2 min CN=78 Runoff=68.20 cfs 9.020 af

**Subcatchment17: WS17** Runoff Area=13.311 ac 1.18% Impervious Runoff Depth=2.26"
Flow Length=761' Tc=43.5 min CN=78 Runoff=20.10 cfs 2.507 af

**Subcatchment18: WS18** Runoff Area=5.363 ac 1.83% Impervious Runoff Depth=1.72"
Flow Length=263' Tc=13.1 min CN=71 Runoff=12.45 cfs 0.768 af

**Subcatchment19: WS19** Runoff Area=28.615 ac 2.65% Impervious Runoff Depth=2.34"
Flow Length=1,566' Tc=49.7 min CN=79 Runoff=40.73 cfs 5.587 af

**Subcatchment20: WS20** Runoff Area=13.311 ac 1.77% Impervious Runoff Depth=2.34"
Flow Length=1,400' Tc=32.1 min CN=79 Runoff=25.78 cfs 2.599 af

**Subcatchment21: WS21** Runoff Area=16.482 ac 1.47% Impervious Runoff Depth=2.34"
Flow Length=1,616' Tc=44.6 min CN=79 Runoff=25.42 cfs 3.218 af

**Subcatchment22: WS22** Runoff Area=38.847 ac 0.90% Impervious Runoff Depth=2.18"
Flow Length=2,651' Tc=65.0 min CN=77 Runoff=42.01 cfs 7.051 af

**Subcatchment23: WS23** Runoff Area=7.796 ac 0.00% Impervious Runoff Depth=2.78"
Flow Length=658' Tc=100.8 min CN=84 Runoff=7.85 cfs 1.806 af

**Subcatchment24: WS24** Runoff Area=27.435 ac 2.39% Impervious Runoff Depth=2.26"
Flow Length=921' Tc=82.5 min CN=78 Runoff=25.82 cfs 5.166 af

**Subcatchment25: WS25** Runoff Area=15.083 ac 3.53% Impervious Runoff Depth=1.72"
Flow Length=1,028' Tc=40.8 min CN=71 Runoff=17.44 cfs 2.159 af

**Subcatchment26: WS26** Runoff Area=24.142 ac 0.57% Impervious Runoff Depth=2.51"
Flow Length=1,225' Tc=62.8 min CN=81 Runoff=31.31 cfs 5.057 af

**Subcatchment27: WS27** Runoff Area=22.172 ac 0.75% Impervious Runoff Depth=2.02"
Flow Length=1,163' Tc=35.5 min CN=75 Runoff=34.07 cfs 3.731 af

**Subcatchment28: WS28** Runoff Area=91.586 ac 0.48% Impervious Runoff Depth=2.26"
Flow Length=1,033' Tc=24.0 min CN=78 Runoff=205.05 cfs 17.247 af

**Subcatchment29: WS29** Runoff Area=25.894 ac 1.34% Impervious Runoff Depth=1.79"
Flow Length=808' Tc=33.8 min CN=72 Runoff=35.88 cfs 3.864 af

**Subcatchment30: WS30** Runoff Area=14.220 ac 2.95% Impervious Runoff Depth=1.31"
Flow Length=682' Tc=20.9 min CN=65 Runoff=18.55 cfs 1.547 af

**Subcatchment31: WS31** Runoff Area=5.243 ac 1.12% Impervious Runoff Depth=1.37"
Flow Length=569' Tc=17.4 min CN=66 Runoff=8.12 cfs 0.599 af

**Subcatchment32: WS32** Runoff Area=10.108 ac 0.00% Impervious Runoff Depth=1.87"
Flow Length=678' Tc=23.9 min CN=73 Runoff=18.42 cfs 1.571 af

**Subcatchment33: WS33** Runoff Area=15.180 ac 1.72% Impervious Runoff Depth=1.51"
Flow Length=1,326' Tc=29.5 min CN=68 Runoff=18.81 cfs 1.904 af

**Subcatchment34: WS34** Runoff Area=58.029 ac 1.29% Impervious Runoff Depth=1.51"
Flow Length=1,963' Tc=40.5 min CN=68 Runoff=57.54 cfs 7.280 af

**Subcatchment35: WS35** Runoff Area=63.197 ac 0.55% Impervious Runoff Depth=1.65"
Flow Length=1,782' Tc=32.0 min CN=70 Runoff=82.20 cfs 8.666 af

**Subcatchment36: WS36** Runoff Area=28.631 ac 2.05% Impervious Runoff Depth=1.31"
Flow Length=1,196' Tc=73.0 min CN=65 Runoff=15.38 cfs 3.115 af

**Subcatchment37: WS37** Runoff Area=10.402 ac 0.00% Impervious Runoff Depth=1.18"
Flow Length=661' Tc=20.1 min CN=63 Runoff=12.21 cfs 1.022 af

**Subcatchment38: WS38** Runoff Area=14.434 ac 1.11% Impervious Runoff Depth=2.10"
Flow Length=629' Tc=14.4 min CN=76 Runoff=39.59 cfs 2.524 af

**Subcatchment39: WS39** Runoff Area=30.742 ac 1.75% Impervious Runoff Depth=1.31"
Flow Length=707' Tc=21.5 min CN=65 Runoff=39.41 cfs 3.344 af

**Subcatchment40: WS40** Runoff Area=31.131 ac 1.02% Impervious Runoff Depth=2.26"
Flow Length=1,419' Tc=31.5 min CN=78 Runoff=58.63 cfs 5.863 af

**Subcatchment41: WS41** Runoff Area=34.979 ac 1.08% Impervious Runoff Depth=2.34"
Flow Length=1,292' Tc=37.9 min CN=79 Runoff=60.42 cfs 6.829 af

**Subcatchment42: WS42** Runoff Area=48.465 ac 1.42% Impervious Runoff Depth=1.24"
Flow Length=912' Tc=29.7 min CN=64 Runoff=46.88 cfs 5.013 af

**Subcatchment43: WS43** Runoff Area=33.038 ac 1.53% Impervious Runoff Depth=2.34"
Flow Length=1,479' Tc=35.6 min CN=79 Runoff=59.58 cfs 6.450 af

**Subcatchment44: WS44** Runoff Area=80.873 ac 1.03% Impervious Runoff Depth=1.87"
Flow Length=3,050' Tc=116.6 min CN=73 Runoff=46.86 cfs 12.573 af

**Subcatchment45: WS45** Runoff Area=28.790 ac 2.28% Impervious Runoff Depth=1.72"
Flow Length=1,322' Tc=32.8 min CN=71 Runoff=38.77 cfs 4.121 af

**Subcatchment46: WS46** Runoff Area=27.896 ac 1.76% Impervious Runoff Depth=2.34"
Flow Length=1,507' Tc=43.0 min CN=79 Runoff=44.09 cfs 5.446 af

**Subcatchment47: WS47** Runoff Area=45.903 ac 1.29% Impervious Runoff Depth=2.43"
Flow Length=1,645' Tc=46.2 min CN=80 Runoff=71.60 cfs 9.286 af

**Subcatchment48: WS48** Runoff Area=43.068 ac 0.85% Impervious Runoff Depth=2.51"
Flow Length=1,506' Tc=76.0 min CN=81 Runoff=48.41 cfs 9.021 af

**Subcatchment49: WS49** Runoff Area=30.898 ac 0.91% Impervious Runoff Depth=2.43"
Flow Length=1,464' Tc=61.6 min CN=80 Runoff=39.14 cfs 6.250 af

**Subcatchment50: WS50** Runoff Area=54.384 ac 1.45% Impervious Runoff Depth=2.43"
Flow Length=2,572' Tc=90.8 min CN=80 Runoff=51.45 cfs 11.001 af

**Subcatchment51: WS51** Runoff Area=22.968 ac 1.89% Impervious Runoff Depth=2.34"
Flow Length=1,683' Tc=54.2 min CN=79 Runoff=30.72 cfs 4.484 af

**Subcatchment52: WS52** Runoff Area=46.992 ac 1.34% Impervious Runoff Depth=2.34"
Flow Length=692' Tc=23.3 min CN=79 Runoff=111.46 cfs 9.175 af

**Subcatchment53: WS53** Runoff Area=17.871 ac 1.15% Impervious Runoff Depth=1.94"
Flow Length=2,011' Tc=106.4 min CN=74 Runoff=11.68 cfs 2.892 af

**Subcatchment54: WS54** Runoff Area=27.065 ac 1.70% Impervious Runoff Depth=2.02"
Flow Length=919' Tc=18.7 min CN=75 Runoff=62.35 cfs 4.554 af

**Subcatchment55: WS55** Runoff Area=14.587 ac 0.00% Impervious Runoff Depth=2.10"
Flow Length=907' Tc=22.6 min CN=76 Runoff=31.36 cfs 2.550 af

**Subcatchment56: WS56** Runoff Area=15.054 ac 2.13% Impervious Runoff Depth=2.02"
Flow Length=1,202' Tc=66.0 min CN=75 Runoff=14.78 cfs 2.533 af

**Subcatchment57: WS57** Runoff Area=28.144 ac 0.88% Impervious Runoff Depth=2.60"
Flow Length=1,151' Tc=25.7 min CN=82 Runoff=69.94 cfs 6.100 af

**Subcatchment58: WS58** Runoff Area=14.565 ac 1.10% Impervious Runoff Depth=2.69"
Flow Length=1,070' Tc=33.0 min CN=83 Runoff=31.83 cfs 3.265 af

**Subcatchment59: WS59** Runoff Area=24.806 ac 0.99% Impervious Runoff Depth=2.26"
Flow Length=1,201' Tc=45.3 min CN=78 Runoff=36.39 cfs 4.671 af

**Subcatchment60: WS60** Runoff Area=21.140 ac 1.89% Impervious Runoff Depth=1.37"
Flow Length=1,076' Tc=30.0 min CN=66 Runoff=23.08 cfs 2.415 af

**Subcatchment61: WS61** Runoff Area=11.152 ac 0.06% Impervious Runoff Depth=1.94"
Flow Length=882' Tc=19.0 min CN=74 Runoff=24.41 cfs 1.804 af

**Subcatchment62: WS62** Runoff Area=30.546 ac 1.46% Impervious Runoff Depth=2.34"
Flow Length=816' Tc=25.6 min CN=79 Runoff=68.33 cfs 5.964 af

**Subcatchment63: WS63** Runoff Area=64.029 ac 1.25% Impervious Runoff Depth=2.43"
Flow Length=1,040' Tc=27.1 min CN=80 Runoff=143.64 cfs 12.952 af

**Subcatchment64: WS64** Runoff Area=34.707 ac 1.17% Impervious Runoff Depth=2.34"
Flow Length=1,314' Tc=39.1 min CN=79 Runoff=58.67 cfs 6.776 af

**Subcatchment65: WS65** Runoff Area=38.964 ac 1.03% Impervious Runoff Depth=2.43"
Flow Length=1,153' Tc=35.8 min CN=80 Runoff=72.70 cfs 7.882 af

**Subcatchment66: WS66** Runoff Area=30.102 ac 1.27% Impervious Runoff Depth=2.34"
Flow Length=1,456' Tc=51.5 min CN=79 Runoff=41.81 cfs 5.877 af

**Subcatchment67: WS67** Runoff Area=64.880 ac 1.12% Impervious Runoff Depth=2.51"
Flow Length=1,198' Tc=101.2 min CN=81 Runoff=58.71 cfs 13.590 af

**Total Runoff Area = 2,086.862 ac Runoff Volume = 351.456 af Average Runoff Depth = 2.02"**
**98.82% Pervious = 2,062.216 ac 1.18% Impervious = 24.645 ac**

## Summary for Subcatchment 1: WS1

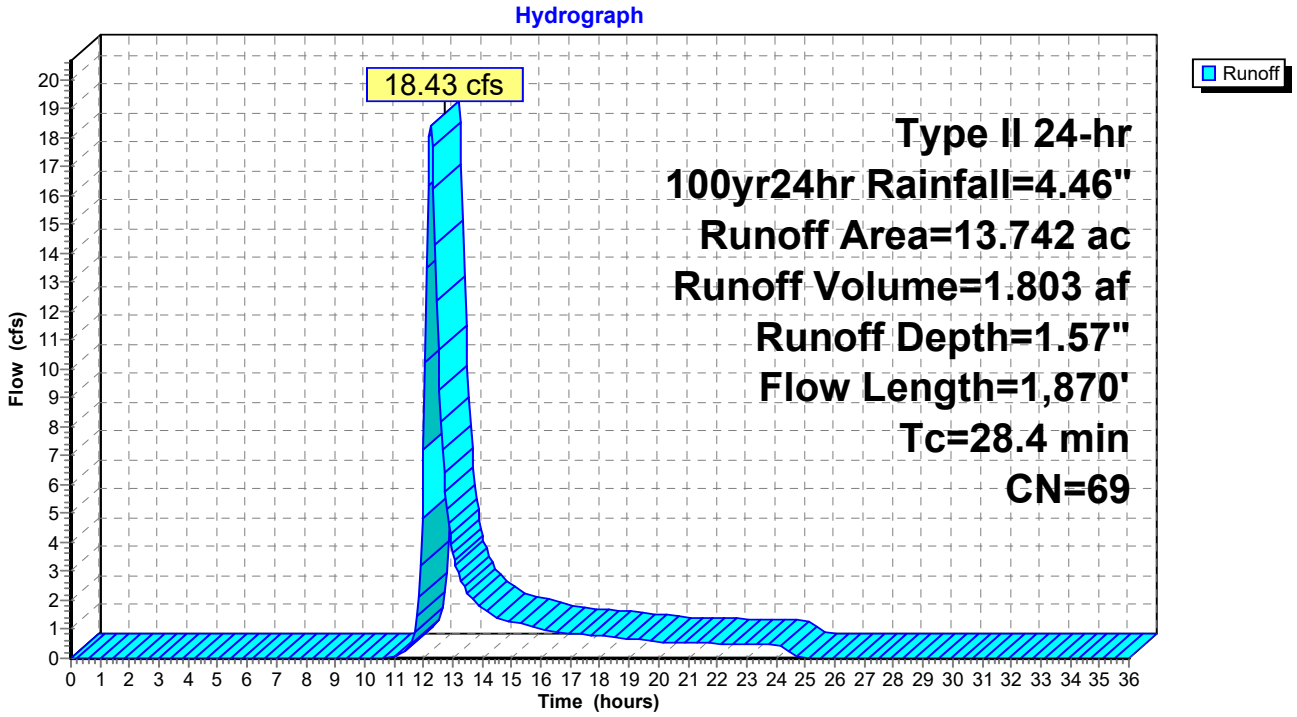
Runoff = 18.43 cfs @ 12.24 hrs, Volume= 1.803 af, Depth= 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.033 | 93 | Developed Low Intensity, HSG D |
| * | 0.085 | 84 | Developed Open Space, HSG D |
| * | 0.075 | 81 | Cultivated Crops, HSG D |
| * | 0.094 | 84 | Developed Open Space, HSG D |
| * | 0.065 | 84 | Developed Open Space, HSG D |
| * | 0.313 | 79 | Mixed Forest, HSG D |
| * | 0.065 | 81 | Cultivated Crops, HSG D |
| * | 0.065 | 80 | Pasture/Hay, HSG D |
| * | 0.011 | 81 | Cultivated Crops, HSG D |
| * | 0.424 | 80 | Pasture/Hay, HSG D |
| * | 0.342 | 81 | Cultivated Crops, HSG D |
| * | 0.001 | 60 | Deciduous Forest, HSG B |
| * | 0.000 | 60 | Deciduous Forest, HSG B |
| * | 0.045 | 61 | Pasture/Hay, HSG B |
| * | 0.582 | 80 | Pasture/Hay, HSG D |
| * | 1.466 | 61 | Pasture/Hay, HSG B |
| * | 0.322 | 71 | Cultivated Crops, HSG B |
| * | 0.113 | 78 | MEADOW, HSG D |
| * | 0.038 | 78 | MEADOW, HSG D |
| * | 0.163 | 78 | MEADOW, HSG D |
| * | 0.217 | 78 | MEADOW, HSG D |
| * | 0.056 | 78 | MEADOW, HSG D |
| * | 0.152 | 78 | MEADOW, HSG D |
| * | 0.194 | 78 | MEADOW, HSG D |
| * | 0.408 | 78 | MEADOW, HSG D |
| * | 0.116 | 78 | MEADOW, HSG D |
| * | 0.041 | 78 | MEADOW, HSG D |
| * | 0.215 | 78 | MEADOW, HSG D |
| * | 0.007 | 58 | MEADOW, HSG B |
| * | 0.162 | 78 | MEADOW, HSG D |
| * | 0.042 | 78 | MEADOW, HSG D |
| * | 0.008 | 98 | IMPERVIOUS, HSG D |
| * | 0.026 | 58 | MEADOW, HSG B |
| * | 0.013 | 58 | MEADOW, HSG B |
| * | 0.424 | 58 | MEADOW, HSG B |
| * | 0.705 | 78 | MEADOW, HSG D |
| * | 2.018 | 78 | MEADOW, HSG D |
| * | 0.042 | 98 | IMPERVIOUS, HSG D |
| * | 0.064 | 58 | MEADOW, HSG B |
| * | 0.112 | 58 | MEADOW, HSG B |
| * | 1.086 | 58 | MEADOW, HSG B |
| * | 3.328 | 58 | MEADOW, HSG B |
| | 13.742 | 69 | Weighted Average |
| | 13.692 | | 99.64% Pervious Area |
| | 0.050 | | 0.36% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.3 | 100 | 0.0247 | 0.32 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.2 | 110 | 0.0293 | 1.54 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 252 | 0.0466 | 1.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 162 | 0.0436 | 1.46 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 80 | 0.0861 | 2.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 212 | 0.0423 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 189 | 0.0460 | 1.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 14 | 0.0062 | 0.55 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 176 | 0.0303 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 51 | 0.0252 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 155 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 27 | 0.0137 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 125 | 0.0254 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 98 | 0.0108 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 77 | 0.0899 | 2.70 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 32 | 0.1660 | 2.04 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 28.4 | 1,870 | Total | | | |

## Subcatchment 1: WS1



## Summary for Subcatchment 2: WS2

Runoff = 26.25 cfs @ 12.31 hrs, Volume= 2.988 af, Depth= 1.24"

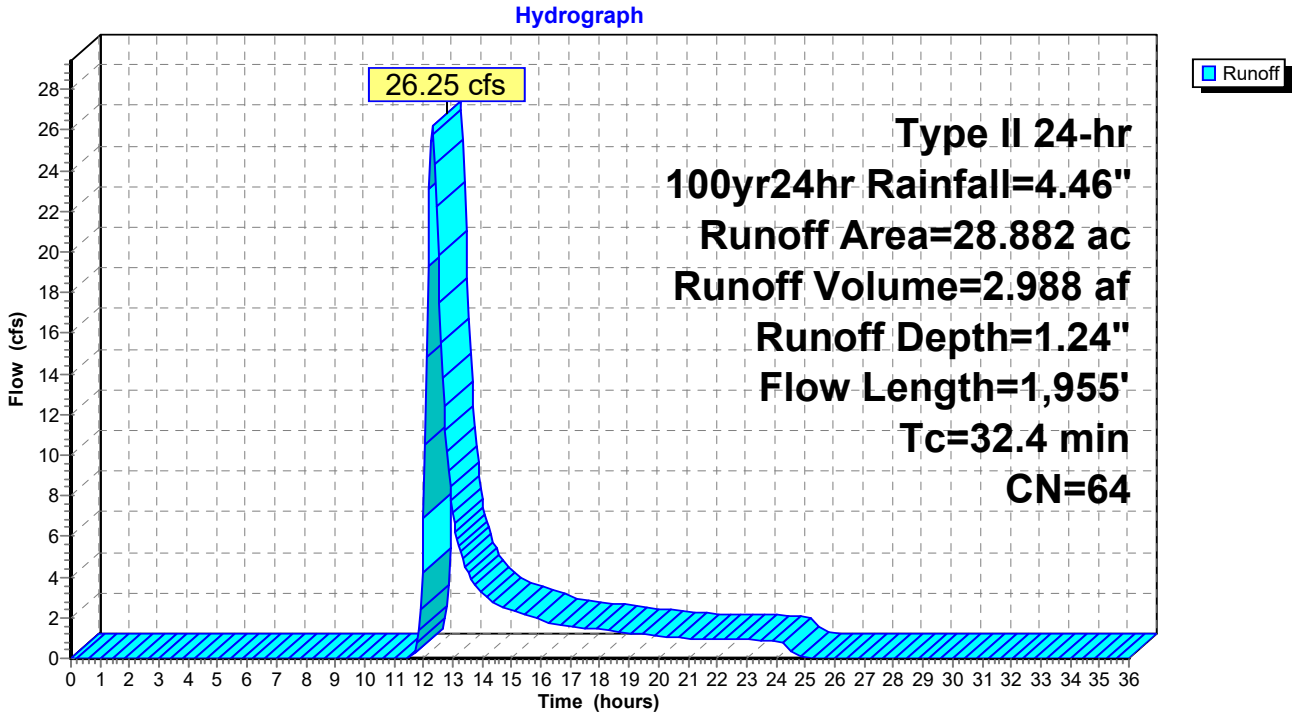
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.021 | 84 | Developed Open Space, HSG D |
| * | 0.697 | 80 | Pasture/Hay, HSG D |
| * | 0.356 | 80 | Pasture/Hay, HSG D |
| * | 0.101 | 93 | Developed Low Intensity, HSG D |
| * | 0.119 | 84 | Developed Open Space, HSG D |
| * | 1.463 | 81 | Cultivated Crops, HSG D |
| * | 0.210 | 71 | Cultivated Crops, HSG B |
| * | 0.111 | 81 | Cultivated Crops, HSG D |
| * | 0.069 | 88 | Developed Low Intensity, HSG B |
| * | 0.210 | 88 | Developed Low Intensity, HSG B |
| * | 0.000 | 68 | Developed Open Space, HSG B |
| * | 0.038 | 68 | Developed Open Space, HSG B |
| * | 0.371 | 61 | Pasture/Hay, HSG B |
| * | 0.036 | 80 | Pasture/Hay, HSG D |
| * | 0.096 | 61 | Pasture/Hay, HSG B |
| * | 0.585 | 61 | Pasture/Hay, HSG B |
| * | 0.125 | 61 | Pasture/Hay, HSG B |
| * | 0.405 | 71 | Cultivated Crops, HSG B |
| * | 0.132 | 58 | MEADOW, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.027 | 98 | IMPERVIOUS, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.002 | 58 | MEADOW, HSG B |
| * | 0.039 | 58 | MEADOW, HSG B |
| * | 0.183 | 58 | MEADOW, HSG B |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.119 | 78 | MEADOW, HSG D |
| * | 0.055 | 58 | MEADOW, HSG B |
| * | 1.377 | 58 | MEADOW, HSG B |
| * | 0.866 | 78 | MEADOW, HSG D |
| * | 1.080 | 78 | MEADOW, HSG D |
| * | 0.645 | 58 | MEADOW, HSG B |
| * | 1.527 | 58 | MEADOW, HSG B |
| * | 0.108 | 78 | MEADOW, HSG D |
| * | 0.001 | 98 | IMPERVIOUS, HSG B |
| * | 0.130 | 58 | MEADOW, HSG B |
| * | 0.157 | 58 | MEADOW, HSG B |
| * | 0.195 | 78 | MEADOW, HSG D |
| * | 0.046 | 78 | MEADOW, HSG D |
| * | 0.034 | 98 | IMPERVIOUS, HSG D |
| * | 0.522 | 58 | MEADOW, HSG B |
| * | 3.886 | 58 | MEADOW, HSG B |
| * | 0.098 | 98 | IMPERVIOUS, HSG B |
| * | 1.672 | 58 | MEADOW, HSG B |
| * | 1.698 | 58 | MEADOW, HSG B |
| * | 0.137 | 98 | IMPERVIOUS, HSG B |
| * | 1.320 | 58 | MEADOW, HSG B |
| * | 7.529 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.191 | 98 | IMPERVIOUS, HSG B |

| | | |
|---|---|---|
| 28.882 | 64 | Weighted Average |
| 28.310 | | 98.02% Pervious Area |
| 0.573 | | 1.98% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.8 | 100 | 0.0320 | 0.35 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.9 | 71 | 0.0204 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.7 | 125 | 0.0323 | 1.26 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 36 | 0.0379 | 1.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 202 | 0.0356 | 1.32 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.4 | 361 | 0.0648 | 1.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 44 | 0.0269 | 1.15 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 18 | 0.0078 | 1.80 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 49 | 0.0408 | 1.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 74 | 0.0276 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 150 | 0.0290 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 116 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 153 | 0.0317 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 37 | 0.0174 | 0.92 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 130 | 0.0139 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 64 | 0.0182 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 60 | 0.0262 | 1.46 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.2 | 164 | 0.0054 | 0.66 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 32.4 | 1,955 | Total | | | |

## Subcatchment 2: WS2



## Summary for Subcatchment 3: WS3

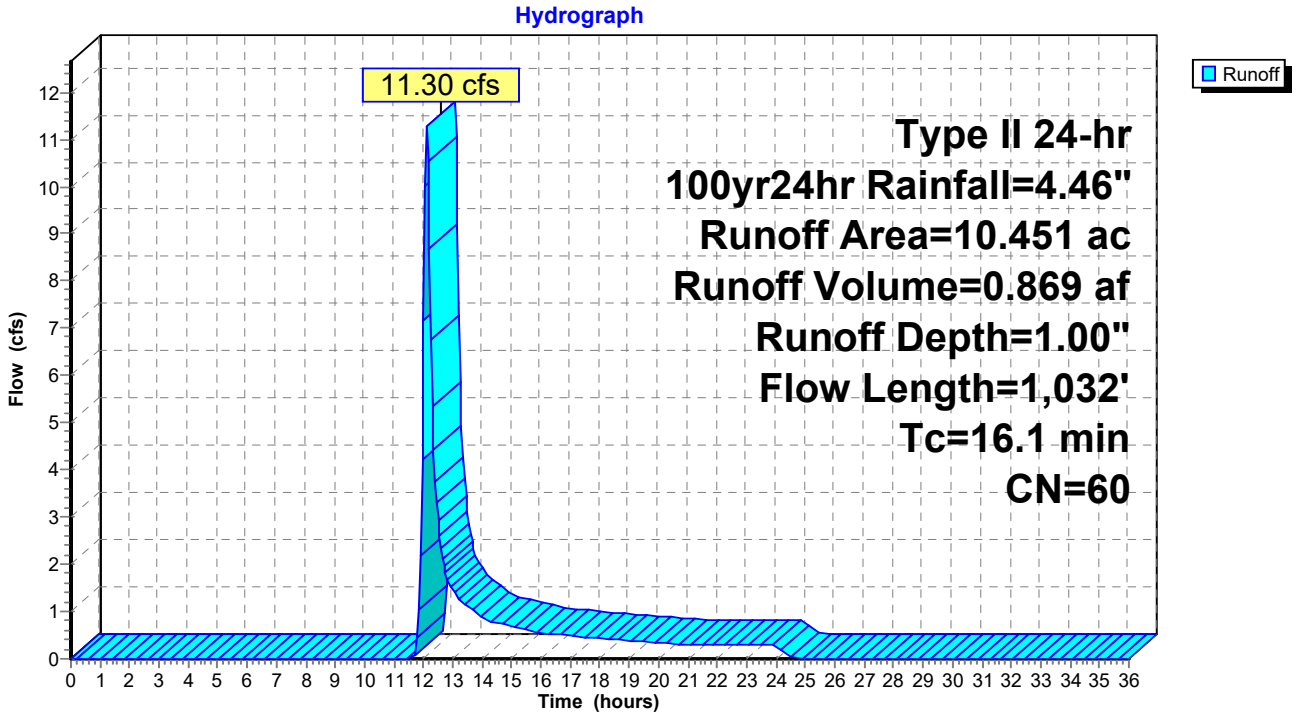
Runoff = 11.30 cfs @ 12.11 hrs, Volume= 0.869 af, Depth= 1.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.079 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.129 | 61 | Pasture/Hay, HSG B |
| * | 0.081 | 61 | Pasture/Hay, HSG B |
| * | 0.731 | 71 | Cultivated Crops, HSG B |
| * | 0.126 | 71 | Cultivated Crops, HSG B |
| * | 0.126 | 71 | Cultivated Crops, HSG B |
| * | 0.003 | 60 | Mixed Forest, HSG B |
| * | 0.020 | 60 | Deciduous Forest, HSG B |
| * | 0.038 | 60 | Deciduous Forest, HSG B |
| * | 0.425 | 60 | Deciduous Forest, HSG B |
| * | 1.655 | 60 | Deciduous Forest, HSG B |
| * | 0.115 | 60 | Mixed Forest, HSG B |
| * | 0.040 | 58 | MEADOW, HSG B |
| * | 0.050 | 58 | MEADOW, HSG B |
| * | 0.046 | 58 | MEADOW, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 0.147 | 58 | MEADOW, HSG B |
| * | 1.974 | 58 | MEADOW, HSG B |
| * | 0.001 | 58 | MEADOW, HSG B |
| * | 0.055 | 58 | MEADOW, HSG B |
| * | 0.620 | 58 | MEADOW, HSG B |
| * | 0.309 | 58 | MEADOW, HSG B |
| * | 0.683 | 58 | MEADOW, HSG B |
| * | 2.832 | 58 | MEADOW, HSG B |
| | 10.451 | 60 | Weighted Average |
| | 10.451 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.5 | 100 | 0.0365 | 0.37 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.8 | 170 | 0.0297 | 1.55 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 28 | 0.0325 | 1.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 24 | 0.0915 | 1.51 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.4 | 31 | 0.0385 | 1.37 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.4 | 386 | 0.0437 | 1.46 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 95 | 0.0480 | 1.53 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 86 | 0.0509 | 1.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 112 | 0.0228 | 0.76 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 16.1 | 1,032 | Total | | | |

## Subcatchment 3: WS3



## Summary for Subcatchment 5: WS5

Runoff = 35.71 cfs @ 12.88 hrs, Volume= 7.094 af, Depth= 1.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

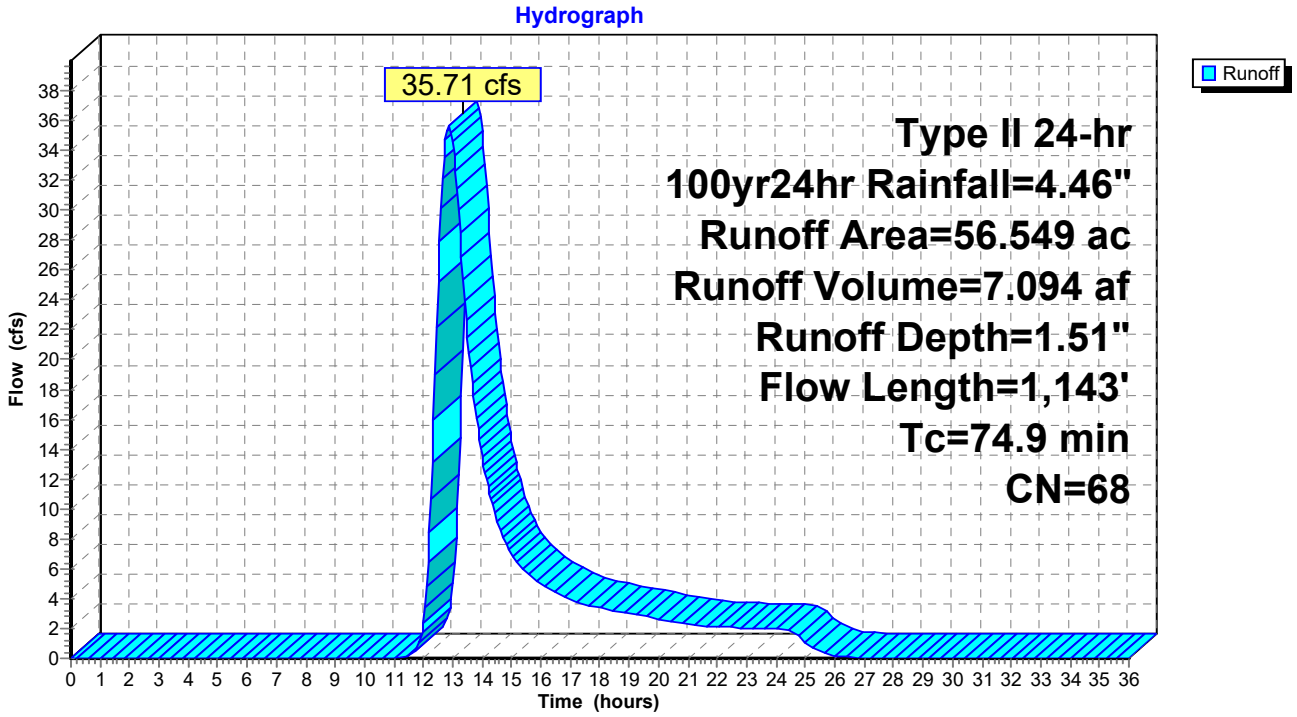
| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.170 | 80 | Pasture/Hay, HSG D |
| * | 0.088 | 79 | Deciduous Forest, HSG D |
| * | 0.088 | 80 | Pasture/Hay, HSG D |
| * | 0.207 | 79 | Deciduous Forest, HSG D |
| * | 0.320 | 80 | Pasture/Hay, HSG D |
| * | 0.065 | 60 | Mixed Forest, HSG B |
| * | 0.041 | 79 | Mixed Forest, HSG D |
| * | 1.140 | 60 | Deciduous Forest, HSG B |
| * | 0.196 | 79 | Deciduous Forest, HSG D |
| * | 0.265 | 60 | Evergreen Forest, HSG B |
| * | 1.468 | 81 | Cultivated Crops, HSG D |
| * | 0.037 | 71 | Cultivated Crops, HSG B |
| * | 1.426 | 81 | Cultivated Crops, HSG D |
| * | 0.203 | 60 | Deciduous Forest, HSG B |
| * | 0.221 | 61 | Pasture/Hay, HSG B |
| * | 0.710 | 61 | Pasture/Hay, HSG B |
| * | 0.005 | 60 | Deciduous Forest, HSG B |
| * | 0.133 | 60 | Mixed Forest, HSG B |
| * | 0.133 | 86 | Woody Wetlands, HSG B |
| * | 0.030 | 86 | Woody Wetlands, HSG B |
| * | 0.012 | 86 | Woody Wetlands, HSG D |
| * | 1.774 | 60 | Evergreen Forest, HSG B |
| * | 0.508 | 60 | Evergreen Forest, HSG B |
| * | 0.168 | 60 | Deciduous Forest, HSG B |
| * | 0.097 | 79 | Deciduous Forest, HSG D |
| * | 0.300 | 60 | Mixed Forest, HSG B |
| * | 0.125 | 79 | Mixed Forest, HSG D |
| * | 1.040 | 61 | Pasture/Hay, HSG B |
| * | 0.304 | 80 | Pasture/Hay, HSG D |
| * | 0.033 | 88 | Developed Low Intensity, HSG B |
| * | 1.346 | 71 | Cultivated Crops, HSG B |
| * | 0.822 | 81 | Cultivated Crops, HSG D |
| * | 0.113 | 78 | MEADOW, HSG D |
| * | 0.244 | 78 | MEADOW, HSG D |
| * | 0.113 | 78 | MEADOW, HSG D |
| * | 0.021 | 78 | MEADOW, HSG D |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.113 | 58 | MEADOW, HSG B |
| * | 0.021 | 58 | MEADOW, HSG B |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.339 | 58 | MEADOW, HSG B |
| * | 0.953 | 58 | MEADOW, HSG B |
| * | 0.094 | 58 | MEADOW, HSG B |
| * | 0.024 | 98 | IMPERVIOUS, HSG B |
| * | 0.937 | 58 | MEADOW, HSG B |
| * | 1.229 | 78 | MEADOW, HSG D |
| * | 0.060 | 98 | IMPERVIOUS, HSG D |
| * | 2.898 | 78 | MEADOW, HSG D |
| * | 0.899 | 58 | MEADOW, HSG B |
| * | 0.212 | 98 | IMPERVIOUS, HSG B |
| * | 2.305 | 58 | MEADOW, HSG B |

| | | | |
|---|---|---|---|
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.820 | 78 | MEADOW, HSG D |
| * | 0.063 | 98 | IMPERVIOUS, HSG D |
| * | 5.440 | 78 | MEADOW, HSG D |
| * | 0.134 | 58 | MEADOW, HSG B |
| * | 0.339 | 58 | MEADOW, HSG B |
| * | 0.508 | 58 | MEADOW, HSG B |
| * | 2.669 | 58 | MEADOW, HSG B |
| * | 0.065 | 58 | MEADOW, HSG B |
| * | 0.136 | 58 | MEADOW, HSG B |
| * | 0.022 | 98 | IMPERVIOUS, HSG B |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.241 | 58 | MEADOW, HSG B |
| * | 0.421 | 58 | MEADOW, HSG B |
| * | 0.031 | 58 | MEADOW, HSG B |
| * | 0.011 | 98 | IMPERVIOUS, HSG B |
| * | 0.018 | 58 | MEADOW, HSG B |
| * | 0.089 | 58 | MEADOW, HSG B |
| * | 0.330 | 58 | MEADOW, HSG B |
| * | 0.033 | 98 | IMPERVIOUS, HSG B |
| * | 0.171 | 58 | MEADOW, HSG B |
| * | 0.080 | 58 | MEADOW, HSG B |
| * | 0.029 | 58 | MEADOW, HSG B |
| * | 0.030 | 78 | MEADOW, HSG D |
| * | 0.042 | 78 | MEADOW, HSG D |
| * | 2.250 | 58 | MEADOW, HSG B |
| * | 0.352 | 98 | IMPERVIOUS, HSG B |
| * | 8.045 | 58 | MEADOW, HSG B |
| * | 0.064 | 98 | IMPERVIOUS, HSG B |
| * | 0.018 | 58 | MEADOW, HSG B |
| * | 0.028 | 78 | MEADOW, HSG D |
| * | 0.143 | 78 | MEADOW, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.061 | 58 | MEADOW, HSG B |
| * | 0.024 | 58 | MEADOW, HSG B |
| * | 0.037 | 78 | MEADOW, HSG D |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.095 | 58 | MEADOW, HSG B |
| * | 0.155 | 78 | MEADOW, HSG D |
| * | 0.623 | 78 | MEADOW, HSG D |
| * | 0.175 | 58 | MEADOW, HSG B |
| * | 0.027 | 98 | IMPERVIOUS, HSG B |
| * | 0.221 | 58 | MEADOW, HSG B |
| * | 0.070 | 58 | MEADOW, HSG B |
| * | 0.079 | 78 | MEADOW, HSG D |
| * | 0.685 | 78 | MEADOW, HSG D |
| * | 0.152 | 58 | MEADOW, HSG B |
| * | 0.316 | 78 | MEADOW, HSG D |
| * | 0.297 | 78 | MEADOW, HSG D |
| * | 0.394 | 58 | MEADOW, HSG B |
| * | 0.504 | 78 | MEADOW, HSG D |
| * | 5.464 | 78 | MEADOW, HSG D |

| | | | |
|---|---|---|---|
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 56.549 | 68 | Weighted Average |
| | 55.639 | | 98.39% Pervious Area |
| | 0.910 | | 1.61% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 45.3 | 100 | 0.0051 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 2.5 | 52 | 0.0050 | 0.35 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.1 | 67 | 0.0051 | 0.36 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.9 | 101 | 0.0311 | 0.88 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 33 | 0.0208 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 133 | 0.0158 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 25 | 0.0397 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 67 | 0.0254 | 1.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.0 | 1 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 12 | 0.0330 | 1.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 78 | 0.0298 | 1.21 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 64 | 0.0275 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.9 | 106 | 0.0020 | 0.22 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.1 | 124 | 0.0178 | 0.67 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 68 | 0.0259 | 0.80 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.2 | 111 | 0.0133 | 0.58 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 74.9 | 1,143 | Total | | | |

## Subcatchment 5: WS5



## Summary for Subcatchment 6: WS6

Runoff = 25.01 cfs @ 13.24 hrs, Volume= 6.090 af, Depth= 1.65"

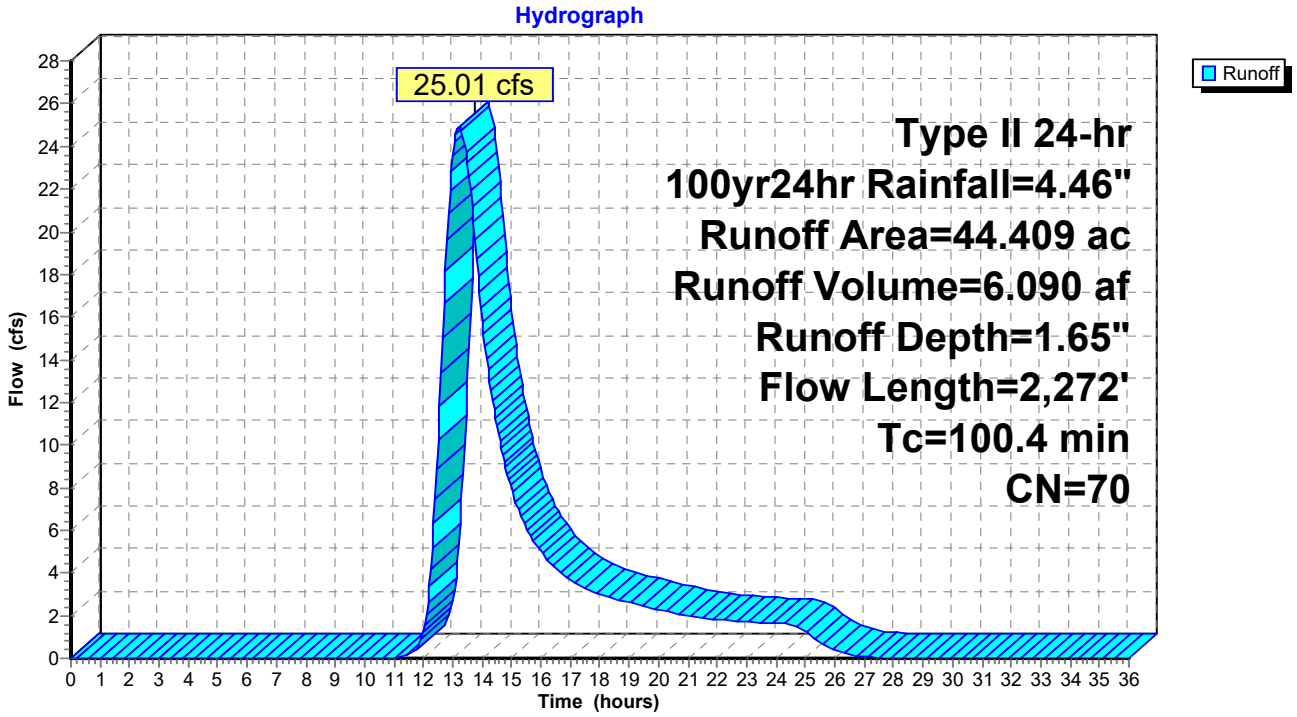
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 0.192 | 80 | Pasture/Hay, HSG D |
| * | 0.540 | 71 | Cultivated Crops, HSG B |
| * | 0.310 | 71 | Cultivated Crops, HSG B |
| * | 2.703 | 81 | Cultivated Crops, HSG D |
| * | 0.092 | 60 | Mixed Forest, HSG B |
| * | 0.096 | 60 | Evergreen Forest, HSG B |
| * | 0.119 | 60 | Evergreen Forest, HSG B |
| * | 0.047 | 60 | Deciduous Forest, HSG B |
| * | 0.083 | 79 | Deciduous Forest, HSG D |
| * | 0.264 | 60 | Mixed Forest, HSG B |
| * | 0.197 | 79 | Mixed Forest, HSG D |
| * | 0.638 | 86 | Woody Wetlands, HSG B |
| * | 0.619 | 86 | Woody Wetlands, HSG D |
| * | 0.225 | 84 | Developed Open Space, HSG D |
| * | 0.047 | 93 | Developed Low Intensity, HSG D |
| * | 0.128 | 84 | Developed Open Space, HSG D |
| * | 0.049 | 93 | Developed Low Intensity, HSG D |
| * | 0.198 | 88 | Developed Low Intensity, HSG B |
| * | 0.345 | 93 | Developed Low Intensity, HSG D |
| * | 0.097 | 71 | Cultivated Crops, HSG B |
| * | 4.683 | 81 | Cultivated Crops, HSG D |
| * | 0.021 | 78 | MEADOW, HSG D |
| * | 0.026 | 58 | MEADOW, HSG B |
| * | 1.031 | 58 | MEADOW, HSG B |
| * | 0.654 | 58 | MEADOW, HSG B |
| * | 0.546 | 58 | MEADOW, HSG B |
| * | 0.579 | 58 | MEADOW, HSG B |
| * | 5.861 | 58 | MEADOW, HSG B |
| * | 1.542 | 78 | MEADOW, HSG D |
| * | 3.667 | 78 | MEADOW, HSG D |
| * | 0.978 | 58 | MEADOW, HSG B |
| * | 0.803 | 58 | MEADOW, HSG B |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 0.062 | 58 | MEADOW, HSG B |
| * | 0.075 | 58 | MEADOW, HSG B |
| * | 0.040 | 58 | MEADOW, HSG B |
| * | 0.108 | 58 | MEADOW, HSG B |
| * | 0.033 | 58 | MEADOW, HSG B |
| * | 0.033 | 58 | MEADOW, HSG B |
| * | 0.035 | 58 | MEADOW, HSG B |
| * | 0.012 | 98 | IMPERVIOUS, HSG B |
| * | 0.128 | 58 | MEADOW, HSG B |
| * | 0.591 | 58 | MEADOW, HSG B |
| * | 0.020 | 98 | IMPERVIOUS, HSG B |
| * | 0.042 | 58 | MEADOW, HSG B |
| * | 0.078 | 58 | MEADOW, HSG B |
| * | 3.182 | 58 | MEADOW, HSG B |
| * | 0.353 | 58 | MEADOW, HSG B |
| * | 0.009 | 58 | MEADOW, HSG B |
| * | 0.062 | 58 | MEADOW, HSG B |

| | | | |
|---|---|---|---|
| * | 0.001 | 58 | MEADOW, HSG B |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.374 | 58 | MEADOW, HSG B |
| * | 0.028 | 98 | IMPERVIOUS, HSG B |
| * | 0.168 | 58 | MEADOW, HSG B |
| * | 0.695 | 58 | MEADOW, HSG B |
| * | 0.054 | 98 | IMPERVIOUS, HSG B |
| * | 0.264 | 58 | MEADOW, HSG B |
| * | 0.067 | 78 | MEADOW, HSG D |
| * | 0.409 | 58 | MEADOW, HSG B |
| * | 0.027 | 98 | IMPERVIOUS, HSG B |
| * | 0.180 | 58 | MEADOW, HSG B |
| * | 0.165 | 78 | MEADOW, HSG D |
| * | 0.036 | 58 | MEADOW, HSG B |
| * | 0.152 | 58 | MEADOW, HSG B |
| * | 0.678 | 58 | MEADOW, HSG B |
| * | 0.034 | 58 | MEADOW, HSG B |
| * | 0.014 | 78 | MEADOW, HSG D |
| * | 0.183 | 58 | MEADOW, HSG B |
| * | 0.045 | 98 | IMPERVIOUS, HSG B |
| * | 0.561 | 58 | MEADOW, HSG B |
| * | 3.281 | 78 | MEADOW, HSG D |
| * | 0.248 | 98 | IMPERVIOUS, HSG D |
| * | 4.316 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 44.409 | 70 | Weighted Average |
| | 43.932 | | 98.93% Pervious Area |
| | 0.477 | | 1.07% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.1 | 40 | 0.0176 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.5 | 20 | 0.0418 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.2 | 12 | 0.0432 | 1.00 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.5 | 19 | 0.0337 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.5 | 9 | 0.0267 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.2 | 86 | 0.0286 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.0 | 252 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 168 | 0.0374 | 1.35 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 15.3 | 107 | 0.0003 | 0.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 30.3 | 663 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 31.4 | 745 | 0.0032 | 0.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 93 | 0.0210 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 57 | 0.0295 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 100.4 | 2,272 | Total | | | |

## Subcatchment 6: WS6



## Summary for Subcatchment 7: WS7

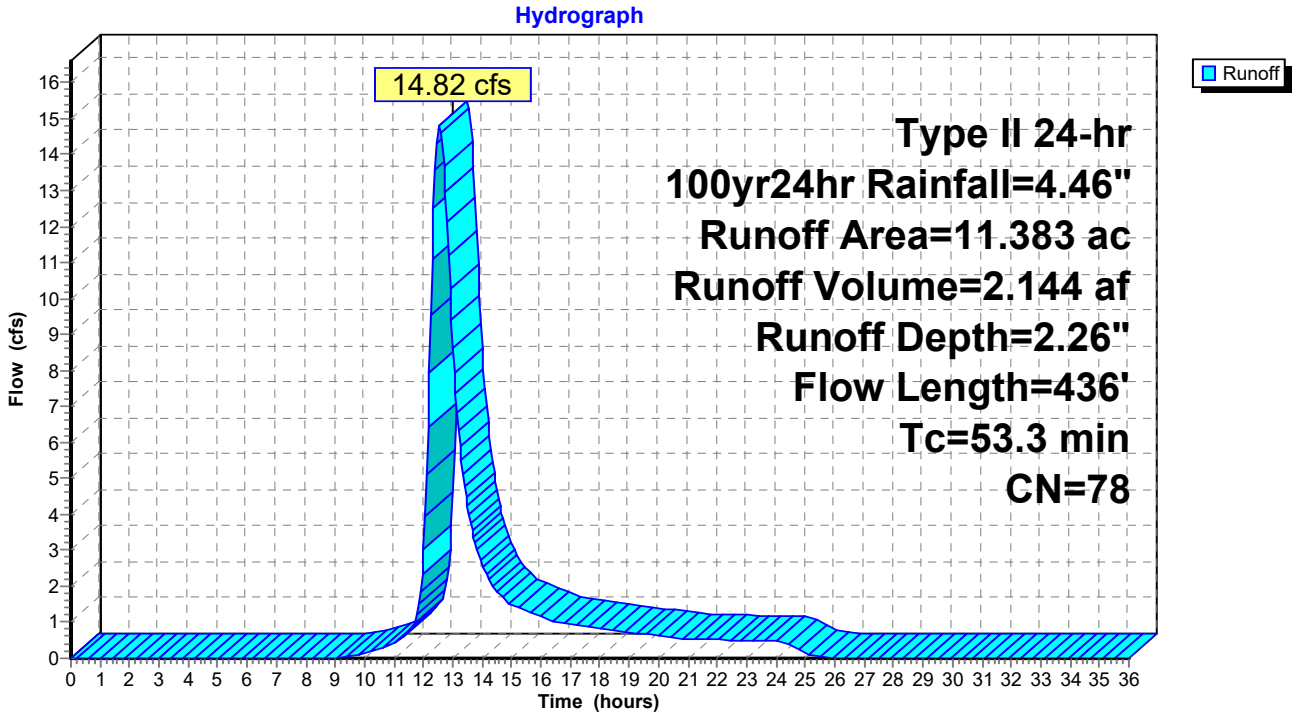
Runoff = 14.82 cfs @ 12.54 hrs, Volume= 2.144 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.227 | 79 | Evergreen Forest, HSG D |
| * | 2.915 | 80 | Pasture/Hay, HSG D |
| * | 0.065 | 80 | Pasture/Hay, HSG D |
| * | 0.034 | 68 | Developed Open Space, HSG B |
| * | 0.019 | 86 | Woody Wetlands, HSG D |
| * | 0.173 | 81 | Cultivated Crops, HSG D |
| * | 3.134 | 81 | Cultivated Crops, HSG D |
| * | 0.780 | 71 | Cultivated Crops, HSG B |
| * | 0.197 | 78 | MEADOW, HSG D |
| * | 0.052 | 78 | MEADOW, HSG D |
| * | 3.077 | 78 | MEADOW, HSG D |
| * | 0.206 | 78 | MEADOW, HSG D |
| * | 0.173 | 58 | MEADOW, HSG B |
| * | 0.330 | 58 | MEADOW, HSG B |
| | 11.383 | 78 | Weighted Average |
| | 11.383 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 45.7 | 100 | 0.0007 | 0.04 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 20 | 0.0137 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 104 | 0.0154 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 69 | 0.0075 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 144 | 0.0108 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 53.3 | 436 | Total | | | |

## Subcatchment 7: WS7



## Summary for Subcatchment 8: WS8

Runoff = 166.73 cfs @ 12.75 hrs, Volume= 29.002 af, Depth= 2.18"

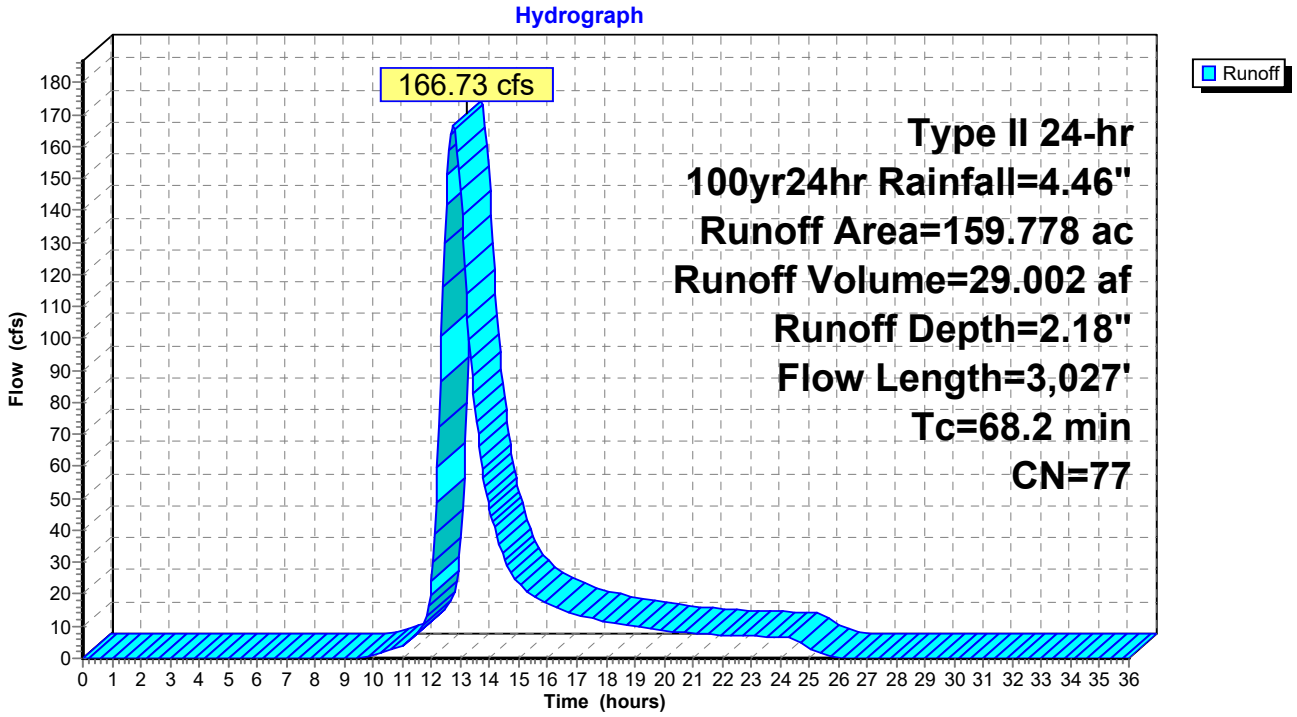
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.381 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.890 | 79 | Deciduous Forest, HSG D |
| * | 1.775 | 80 | Pasture/Hay, HSG D |
| * | 0.468 | 61 | Pasture/Hay, HSG B |
| * | 1.467 | 80 | Pasture/Hay, HSG D |
| * | 0.034 | 80 | Pasture/Hay, HSG D |
| * | 0.662 | 79 | Evergreen Forest, HSG D |
| * | 4.441 | 80 | Pasture/Hay, HSG D |
| * | 1.655 | 61 | Pasture/Hay, HSG B |
| * | 0.391 | 68 | Developed Open Space, HSG B |
| * | 0.047 | 68 | Developed Open Space, HSG B |
| * | 0.667 | 68 | Developed Open Space, HSG B |
| * | 2.294 | 61 | Pasture/Hay, HSG B |
| * | 0.010 | 80 | Pasture/Hay, HSG D |
| * | 0.121 | 68 | Developed Open Space, HSG B |
| * | 0.097 | 68 | Developed Open Space, HSG B |
| * | 0.074 | 68 | Developed Open Space, HSG B |
| * | 0.531 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 89 | Developed Medium Intensity, HSG B |
| * | 0.021 | 68 | Developed Open Space, HSG B |
| * | 0.235 | 93 | Developed Low Intensity, HSG D |
| * | 0.045 | 88 | Developed Low Intensity, HSG B |
| * | 1.339 | 88 | Developed Low Intensity, HSG B |
| * | 0.065 | 86 | Woody Wetlands, HSG D |
| * | 0.040 | 86 | Woody Wetlands, HSG D |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| * | 0.079 | 86 | Woody Wetlands, HSG D |
| * | 3.011 | 86 | Woody Wetlands, HSG D |
| * | 0.229 | 86 | Woody Wetlands, HSG D |
| * | 10.236 | 86 | Woody Wetlands, HSG D |
| * | 1.891 | 86 | Woody Wetlands, HSG D |
| * | 8.074 | 71 | Cultivated Crops, HSG B |
| * | 6.526 | 81 | Cultivated Crops, HSG D |
| * | 1.500 | 71 | Cultivated Crops, HSG B |
| * | 0.962 | 81 | Cultivated Crops, HSG D |
| * | 0.024 | 81 | Cultivated Crops, HSG D |
| * | 0.912 | 71 | Cultivated Crops, HSG B |
| * | 13.271 | 81 | Cultivated Crops, HSG D |
| * | 8.380 | 81 | Cultivated Crops, HSG D |
| * | 2.824 | 71 | Cultivated Crops, HSG B |
| * | 0.055 | 61 | Pasture/Hay, HSG B |
| * | 0.025 | 80 | Pasture/Hay, HSG D |
| * | 0.445 | 58 | MEADOW, HSG B |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.445 | 78 | MEADOW, HSG D |
| * | 0.017 | 78 | MEADOW, HSG D |
| * | 0.428 | 78 | MEADOW, HSG D |

| | | | |
|---|---|---|---|
| * | 0.154 | 78 | MEADOW, HSG D |
| * | 1.180 | 78 | MEADOW, HSG D |
| * | 0.262 | 78 | MEADOW, HSG D |
| * | 0.108 | 78 | MEADOW, HSG D |
| * | 0.004 | 78 | MEADOW, HSG D |
| * | 0.098 | 58 | MEADOW, HSG B |
| * | 0.062 | 98 | IMPERVIOUS, HSG D |
| * | 0.012 | 78 | MEADOW, HSG D |
| * | 0.396 | 58 | MEADOW, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.050 | 98 | IMPERVIOUS, HSG B |
| * | 0.309 | 78 | MEADOW, HSG D |
| * | 0.076 | 78 | MEADOW, HSG D |
| * | 1.579 | 58 | MEADOW, HSG B |
| * | 4.554 | 58 | MEADOW, HSG B |
| * | 0.021 | 98 | IMPERVIOUS, HSG B |
| * | 0.542 | 78 | MEADOW, HSG D |
| * | 2.689 | 78 | MEADOW, HSG D |
| * | 0.761 | 58 | MEADOW, HSG B |
| * | 0.438 | 58 | MEADOW, HSG B |
| * | 0.008 | 98 | IMPERVIOUS, HSG B |
| * | 16.186 | 78 | MEADOW, HSG D |
| * | 43.561 | 78 | MEADOW, HSG D |
| * | 0.128 | 98 | IMPERVIOUS, HSG D |
| * | 0.965 | 98 | IMPERVIOUS, HSG D |
| * | 1.241 | 78 | MEADOW, HSG D |
| * | 1.933 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.134 | 98 | IMPERVIOUS, HSG D |
| * | 1.699 | 58 | MEADOW, HSG B |
| * | 2.580 | 58 | MEADOW, HSG B |
| | 159.778 | 77 | Weighted Average |
| | 158.366 | | 99.12% Pervious Area |
| | 1.412 | | 0.88% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.8 | 100 | 0.0053 | 0.17 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.5 | 185 | 0.0096 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 433 | 0.0381 | 1.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 29 | 0.0317 | 1.60 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 221 | 0.0348 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 138 | 0.0279 | 1.17 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 264 | 0.0171 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 146 | 0.0040 | 0.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 34 | 0.0113 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 66 | 0.0124 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 110 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 68 | 0.0105 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.4 | 180 | 0.0064 | 0.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.7 | 232 | 0.0069 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 29 | 0.0081 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 69 | 0.0023 | 0.98 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.9 | 162 | 0.0061 | 0.55 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 160 | 0.0226 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.7 | 258 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 37 | 0.0243 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 53 | 0.0504 | 1.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 54 | 0.0168 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 68.2 | 3,027 | Total | | | |

## Subcatchment 8: WS8



## Summary for Subcatchment 9: WS9

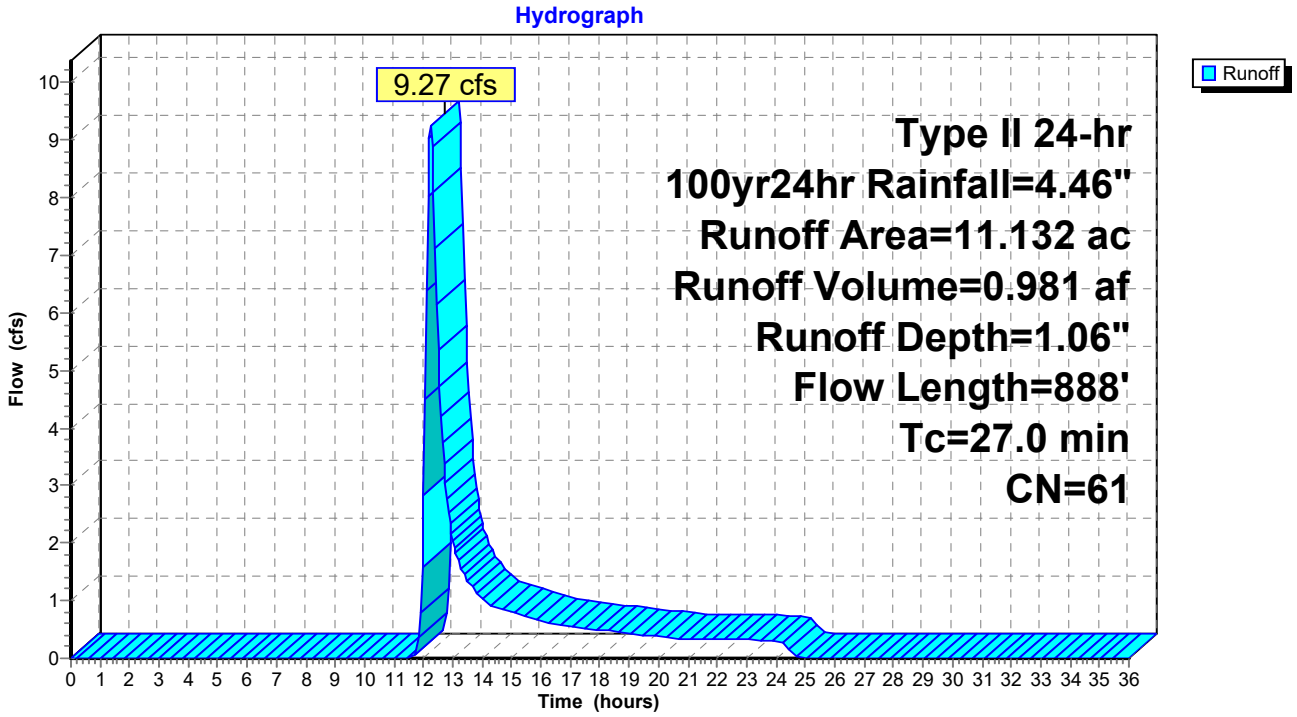
Runoff = 9.27 cfs @ 12.24 hrs, Volume= 0.981 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.016 | 68 | Developed Open Space, HSG B |
| * | 0.042 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.080 | 88 | Developed Low Intensity, HSG B |
| * | 0.123 | 88 | Developed Low Intensity, HSG B |
| * | 0.107 | 61 | Pasture/Hay, HSG B |
| * | 1.266 | 71 | Cultivated Crops, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 0.014 | 98 | IMPERVIOUS, HSG B |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 4.269 | 58 | MEADOW, HSG B |
| * | 0.222 | 98 | IMPERVIOUS, HSG B |
| * | 4.759 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 11.132 | 61 | Weighted Average |
| | 10.854 | | 97.50% Pervious Area |
| | 0.278 | | 2.50% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.0 | 65 | 0.0083 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.8 | 35 | 0.0234 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.6 | 44 | 0.0321 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0236 | 3.12 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 22 | 0.0289 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 157 | 0.0424 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.1 | 247 | 0.0350 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 38 | 0.0301 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 85 | 0.0252 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 180 | 0.0176 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.0 | 888 | Total | | | |

## Subcatchment 9: WS9



## Summary for Subcatchment 10: WS10

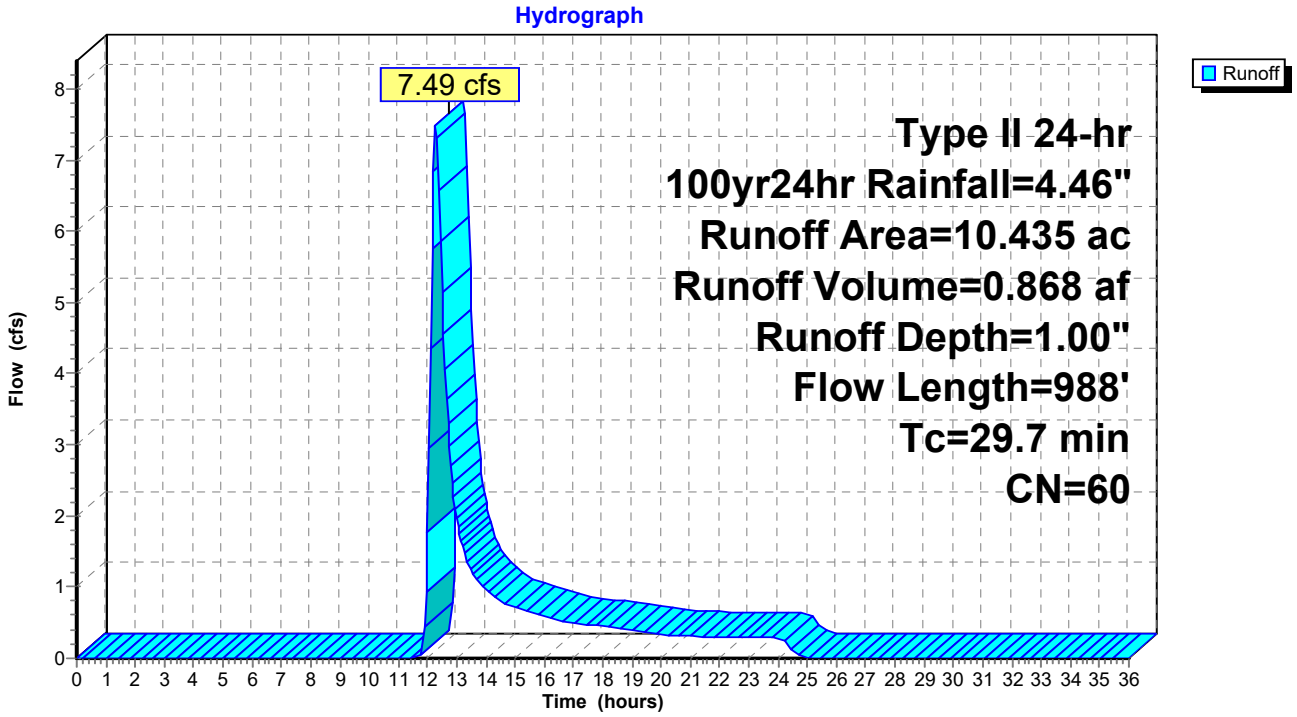
Runoff = 7.49 cfs @ 12.28 hrs, Volume= 0.868 af, Depth= 1.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.136 | 61 | Pasture/Hay, HSG B |
| * | 0.101 | 60 | Deciduous Forest, HSG B |
| * | 0.140 | 60 | Mixed Forest, HSG B |
| * | 0.992 | 60 | Deciduous Forest, HSG B |
| * | 0.867 | 71 | Cultivated Crops, HSG B |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.053 | 58 | MEADOW, HSG B |
| * | 2.475 | 58 | MEADOW, HSG B |
| * | 0.129 | 98 | IMPERVIOUS, HSG B |
| * | 5.538 | 58 | MEADOW, HSG B |
| | 10.435 | 60 | Weighted Average |
| | 10.306 | | 98.76% Pervious Area |
| | 0.129 | | 1.24% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.6 | 65 | 0.0271 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.7 | 7 | 0.0147 | 0.07 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.3 | 9 | 0.0109 | 0.07 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 5.8 | 19 | 0.0042 | 0.05 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.9 | 239 | 0.0132 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.2 | 272 | 0.0155 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 107 | 0.0241 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 119 | 0.0226 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 14 | 0.0183 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 137 | 0.0188 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.7 | 988 | Total | | | |

## Subcatchment 10: WS10



## Summary for Subcatchment 11: WS11

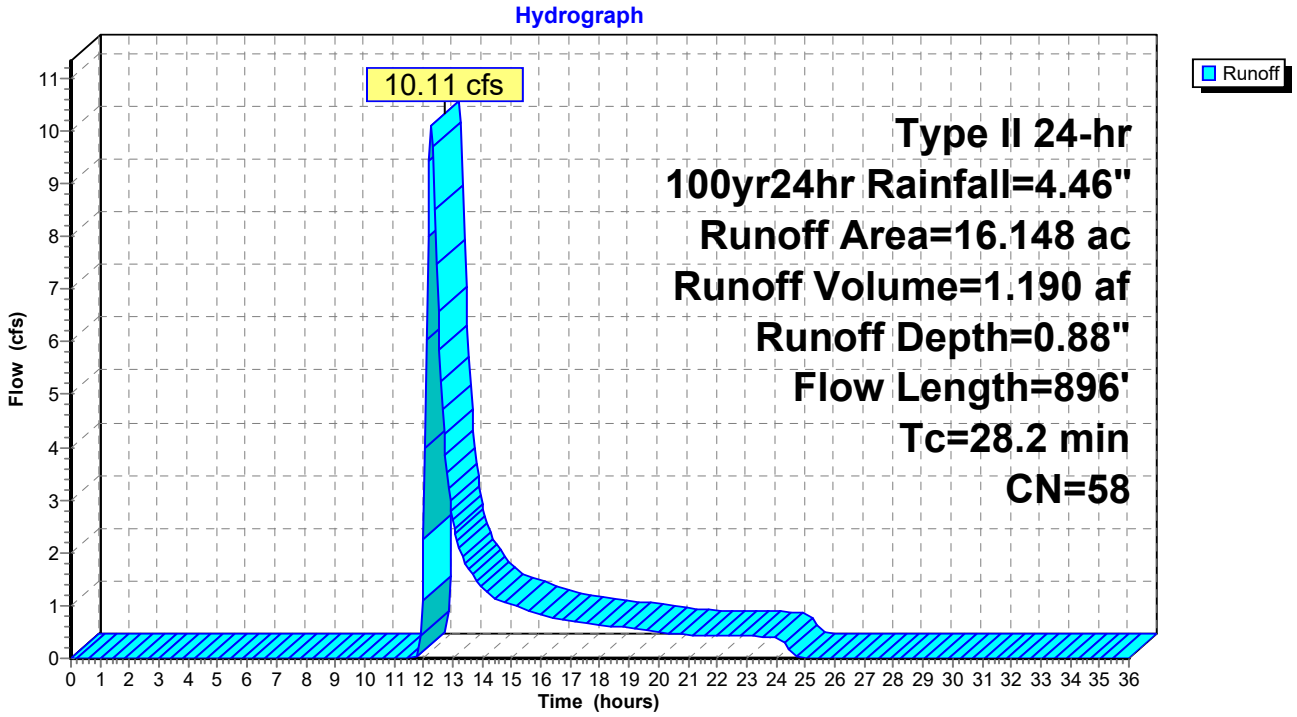
Runoff = 10.11 cfs @ 12.27 hrs, Volume= 1.190 af, Depth= 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.069 | 88 | Developed Low Intensity, HSG B |
| * | 0.146 | 71 | Cultivated Crops, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 0.445 | 58 | MEADOW, HSG B |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.029 | 78 | MEADOW, HSG D |
| * | 0.022 | 78 | MEADOW, HSG D |
| * | 0.048 | 58 | MEADOW, HSG B |
| * | 3.840 | 58 | MEADOW, HSG B |
| * | 11.266 | 58 | MEADOW, HSG B |
| * | 0.132 | 78 | MEADOW, HSG D |
| * | 0.005 | 78 | MEADOW, HSG D |
| | 16.148 | 58 | Weighted Average |
| | 16.148 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.1 | 100 | 0.0112 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.3 | 488 | 0.0250 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 208 | 0.0227 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 100 | 0.0091 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 28.2 | 896 | Total | | | |

## Subcatchment 11: WS11



## Summary for Subcatchment 12: WS12

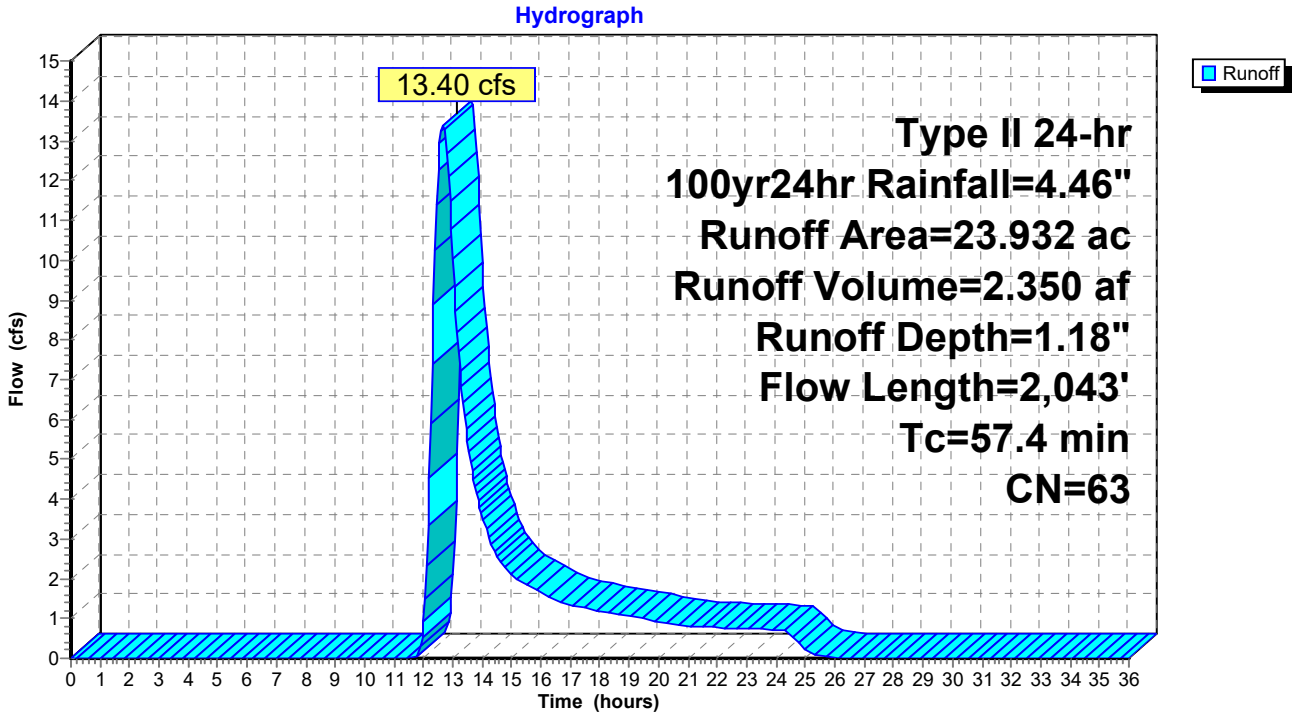
Runoff = 13.40 cfs @ 12.66 hrs, Volume= 2.350 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.054 | 60 | Deciduous Forest, HSG B |
| * | 0.004 | 71 | Cultivated Crops, HSG B |
| * | 0.417 | 61 | Pasture/Hay, HSG B |
| * | 0.246 | 63 | Grassland/Herbaceous, HSG B |
| * | 5.820 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.417 | 60 | Deciduous Forest, HSG B |
| * | 0.000 | 71 | Cultivated Crops, HSG B |
| * | 0.384 | 71 | Cultivated Crops, HSG B |
| * | 0.004 | 58 | MEADOW, HSG B |
| * | 0.093 | 78 | MEADOW, HSG D |
| * | 0.073 | 78 | MEADOW, HSG D |
| * | 0.028 | 58 | MEADOW, HSG B |
| * | 0.415 | 58 | MEADOW, HSG B |
| * | 0.030 | 78 | MEADOW, HSG D |
| * | 0.222 | 78 | MEADOW, HSG D |
| * | 0.301 | 58 | MEADOW, HSG B |
| * | 0.144 | 58 | MEADOW, HSG B |
| * | 0.620 | 58 | MEADOW, HSG B |
| * | 0.118 | 98 | IMPERVIOUS, HSG B |
| * | 3.537 | 58 | MEADOW, HSG B |
| * | 0.527 | 78 | MEADOW, HSG D |
| * | 0.025 | 58 | MEADOW, HSG B |
| * | 1.423 | 58 | MEADOW, HSG B |
| * | 0.054 | 98 | IMPERVIOUS, HSG B |
| * | 3.761 | 58 | MEADOW, HSG B |
| * | 0.909 | 58 | MEADOW, HSG B |
| * | 0.060 | 98 | IMPERVIOUS, HSG B |
| * | 1.302 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 1.295 | 78 | MEADOW, HSG D |
| * | 1.605 | 78 | MEADOW, HSG D |
| | 23.932 | 63 | Weighted Average |
| | 23.657 | | 98.85% Pervious Area |
| | 0.275 | | 1.15% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.2 | 100 | 0.0190 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 18.9 | 569 | 0.0051 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 59 | 0.1044 | 2.26 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 105 | 0.0413 | 1.42 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 90 | 0.0070 | 0.59 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.5 | 260 | 0.0069 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 50 | 0.0481 | 1.53 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 60 | 0.0350 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 24 | 0.0426 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0309 | 3.57 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.1 | 81 | 0.0308 | 1.23 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 161 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 143 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 25 | 0.0183 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 168 | 0.0120 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 135 | 0.0140 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 57.4 | 2,043 | Total | | | |

## Subcatchment 12: WS12



## Summary for Subcatchment 13: WS13

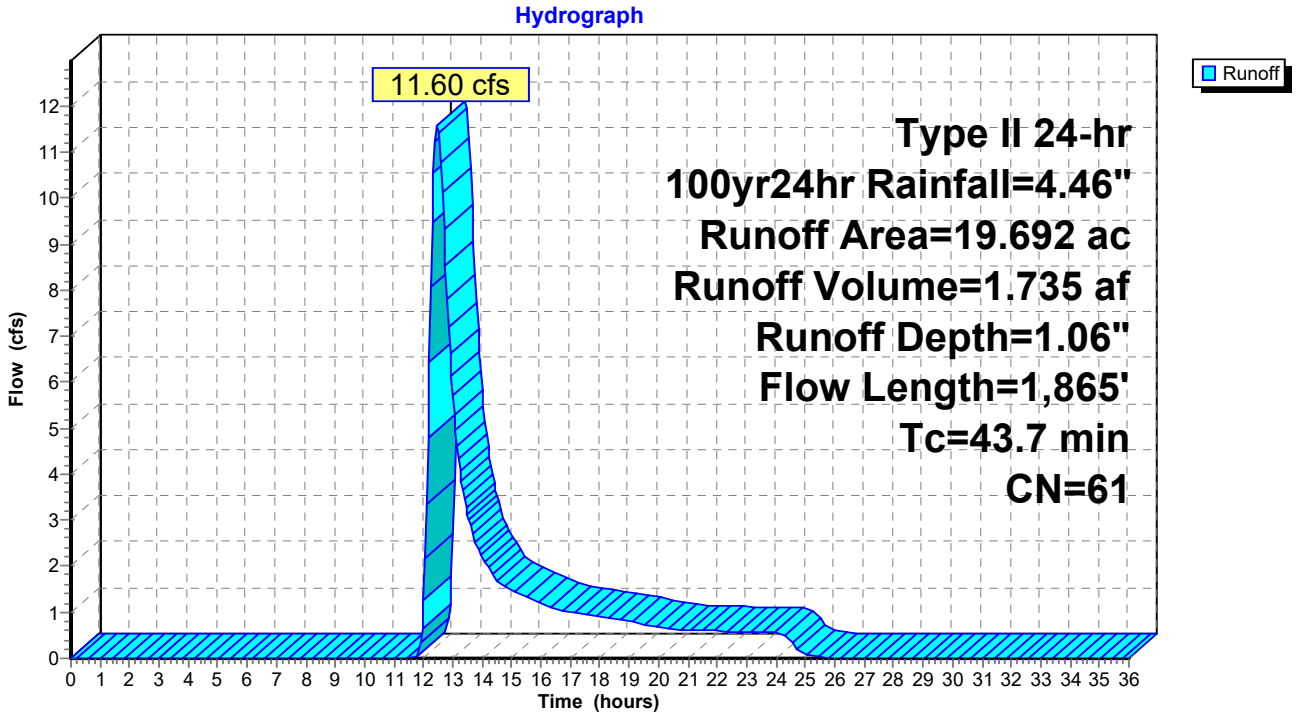
Runoff = 11.60 cfs @ 12.48 hrs, Volume= 1.735 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.217 | 68 | Developed Open Space, HSG B |
| * | 0.645 | 60 | Mixed Forest, HSG B |
| * | 0.000 | 60 | Deciduous Forest, HSG B |
| * | 3.542 | 63 | Grassland/Herbaceous, HSG B |
| * | 1.445 | 60 | Deciduous Forest, HSG B |
| * | 1.406 | 71 | Cultivated Crops, HSG B |
| * | 0.184 | 58 | MEADOW, HSG B |
| * | 0.017 | 98 | IMPERVIOUS, HSG B |
| * | 0.484 | 58 | MEADOW, HSG B |
| * | 0.025 | 98 | IMPERVIOUS, HSG B |
| * | 0.445 | 58 | MEADOW, HSG B |
| * | 0.901 | 58 | MEADOW, HSG B |
| * | 0.159 | 98 | IMPERVIOUS, HSG B |
| * | 0.705 | 58 | MEADOW, HSG B |
| * | 0.018 | 98 | IMPERVIOUS, HSG B |
| * | 0.357 | 58 | MEADOW, HSG B |
| * | 0.031 | 58 | MEADOW, HSG B |
| * | 1.598 | 58 | MEADOW, HSG B |
| * | 2.725 | 58 | MEADOW, HSG B |
| * | 1.576 | 58 | MEADOW, HSG B |
| * | 3.092 | 58 | MEADOW, HSG B |
| * | 0.017 | 78 | MEADOW, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| | 19.692 | 61 | Weighted Average |
| | 19.472 | | 98.89% Pervious Area |
| | 0.219 | | 1.11% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.1 | 100 | 0.0195 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.5 | 283 | 0.0109 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 211 | 0.0120 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.7 | 100 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 143 | 0.0294 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 174 | 0.0385 | 1.37 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 59 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 19 | 0.0247 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0266 | 3.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.4 | 94 | 0.0264 | 1.14 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 68 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.5 | 434 | 0.0189 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 104 | 0.0163 | 0.89 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 62 | 0.0055 | 0.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 43.7 | 1,865 | Total | | | |

## Subcatchment 13: WS13



## Summary for Subcatchment 14: WS14

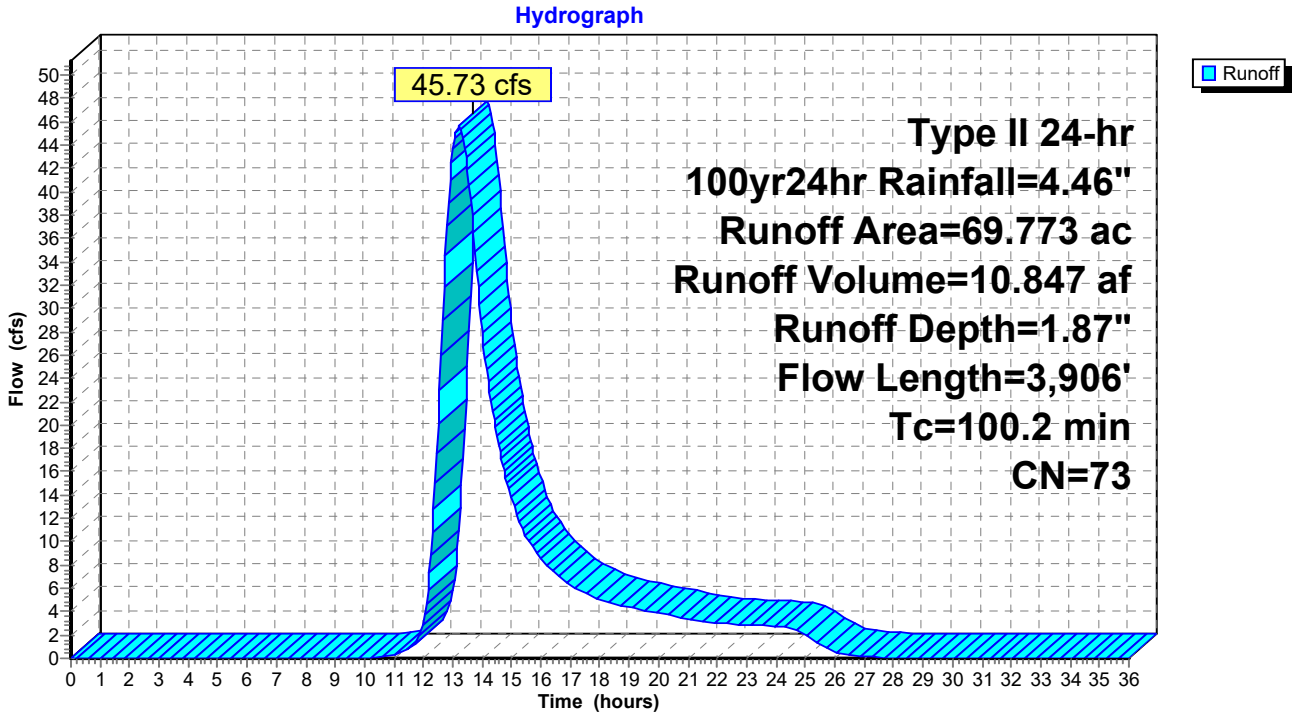
Runoff = 45.73 cfs @ 13.23 hrs, Volume= 10.847 af, Depth= 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.295 | 60 | Deciduous Forest, HSG B |
| * | 0.007 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.017 | 61 | Pasture/Hay, HSG B |
| * | 0.472 | 61 | Pasture/Hay, HSG B |
| * | 0.003 | 85 | Grassland/Herbaceous, HSG D |
| * | 3.784 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.055 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.025 | 79 | Deciduous Forest, HSG D |
| * | 3.895 | 60 | Deciduous Forest, HSG B |
| * | 1.726 | 60 | Deciduous Forest, HSG B |
| * | 21.139 | 71 | Cultivated Crops, HSG B |
| * | 13.877 | 81 | Cultivated Crops, HSG D |
| * | 4.280 | 71 | Cultivated Crops, HSG B |
| * | 0.532 | 58 | MEADOW, HSG B |
| * | 0.060 | 58 | MEADOW, HSG B |
| * | 3.344 | 78 | MEADOW, HSG D |
| * | 0.248 | 98 | IMPERVIOUS, HSG D |
| * | 15.706 | 78 | MEADOW, HSG D |
| * | 0.085 | 98 | IMPERVIOUS, HSG D |
| | 69.773 | 73 | Weighted Average |
| | 69.440 | | 99.52% Pervious Area |
| | 0.334 | | 0.48% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.2 | 100 | 0.0070 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 94 | 0.0038 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 74 | 0.0056 | 1.51 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.8 | 91 | 0.0144 | 0.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 165 | 0.0074 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.9 | 450 | 0.0188 | 0.69 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 4.0 | 192 | 0.0258 | 0.80 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.2 | 746 | 0.0225 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 9.3 | 571 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.8 | 194 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 80 | 0.0146 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 63 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 19.0 | 377 | 0.0022 | 0.33 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 23 | 0.0069 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0206 | 2.92 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 20 | 0.0223 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 229 | 0.0188 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 234 | 0.0232 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 63 | 0.0113 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 24 | 0.0160 | 0.89 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 103 | 0.0056 | 0.67 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 100.2 | 3,906 | Total | | | |

## Subcatchment 14: WS14



## Summary for Subcatchment 15: WS15

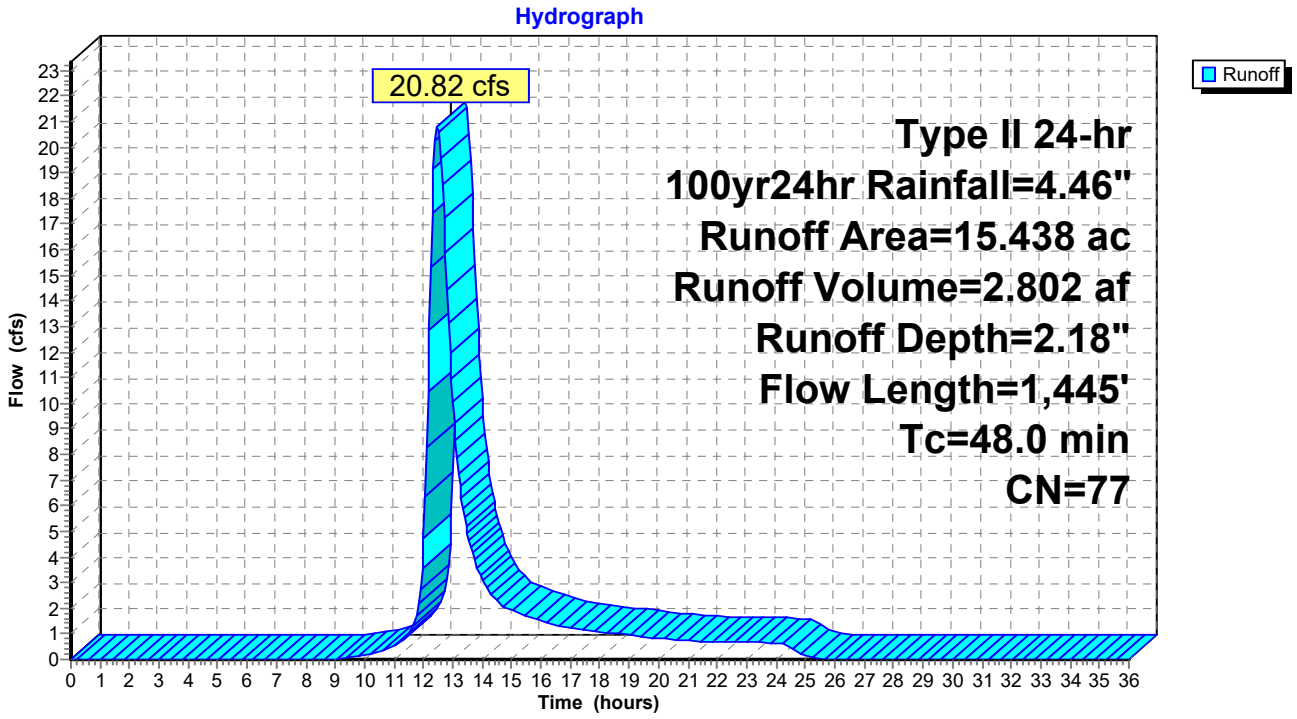
Runoff = 20.82 cfs @ 12.48 hrs, Volume= 2.802 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.042 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.028 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.112 | 79 | Deciduous Forest, HSG D |
| * | 1.067 | 79 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Shrub/Scrub, HSG D |
| * | 0.432 | 80 | Shrub/Scrub, HSG D |
| * | 0.516 | 79 | Mixed Forest, HSG D |
| * | 0.000 | 79 | Mixed Forest, HSG D |
| * | 0.413 | 71 | Cultivated Crops, HSG B |
| * | 1.507 | 81 | Cultivated Crops, HSG D |
| * | 0.032 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.016 | 58 | MEADOW, HSG B |
| * | 0.100 | 78 | MEADOW, HSG D |
| * | 0.041 | 78 | MEADOW, HSG D |
| * | 0.126 | 58 | MEADOW, HSG B |
| * | 0.167 | 78 | MEADOW, HSG D |
| * | 0.266 | 78 | MEADOW, HSG D |
| * | 0.456 | 78 | MEADOW, HSG D |
| * | 0.696 | 78 | MEADOW, HSG D |
| * | 0.307 | 78 | MEADOW, HSG D |
| * | 0.289 | 78 | MEADOW, HSG D |
| * | 0.417 | 58 | MEADOW, HSG B |
| * | 0.098 | 98 | IMPERVIOUS, HSG B |
| * | 0.967 | 58 | MEADOW, HSG B |
| * | 0.896 | 78 | MEADOW, HSG D |
| * | 0.079 | 98 | IMPERVIOUS, HSG D |
| * | 6.256 | 78 | MEADOW, HSG D |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.031 | 78 | MEADOW, HSG D |
| | 15.438 | 77 | Weighted Average |
| | 15.261 | | 98.85% Pervious Area |
| | 0.177 | | 1.15% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 17.8 | 38 | 0.0011 | 0.04 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.2 | 62 | 0.0403 | 0.17 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.9 | 108 | 0.0179 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 38 | 0.0214 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 17 | 0.0129 | 2.30 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 43 | 0.0285 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.9 | 432 | 0.0133 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 245 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 25 | 0.0178 | 0.93 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 14 | 0.0419 | 1.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 113 | 0.0313 | 1.24 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.9 | 311 | 0.0095 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 48.0 | 1,445 | Total | | | |

## Subcatchment 15: WS15



## Summary for Subcatchment 16: WS16

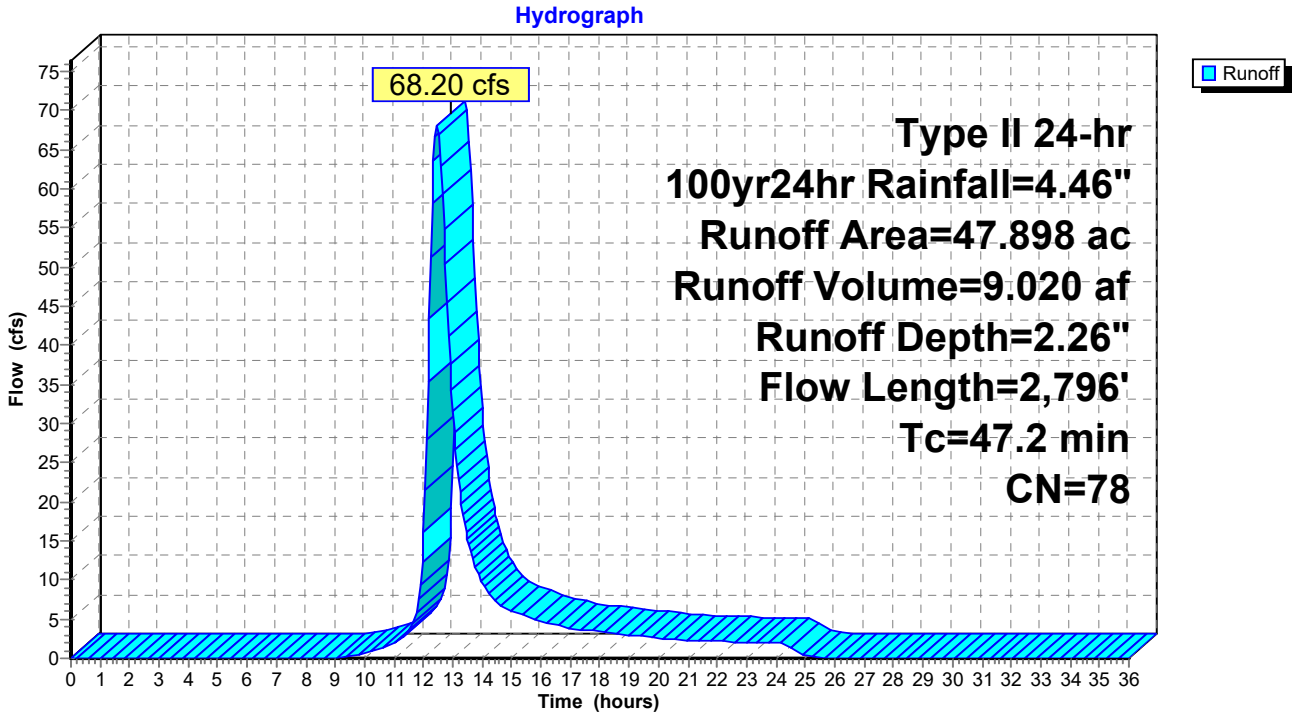
Runoff = 68.20 cfs @ 12.46 hrs, Volume= 9.020 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.205 | 84 | Developed Open Space, HSG D |
| * | 0.128 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.127 | 93 | Developed Low Intensity, HSG D |
| * | 0.242 | 84 | Developed Open Space, HSG D |
| * | 0.713 | 93 | Developed Low Intensity, HSG D |
| * | 0.372 | 84 | Developed Open Space, HSG D |
| * | 6.393 | 71 | Cultivated Crops, HSG B |
| * | 12.903 | 81 | Cultivated Crops, HSG D |
| * | 3.221 | 71 | Cultivated Crops, HSG B |
| * | 0.101 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.094 | 78 | MEADOW, HSG D |
| * | 0.045 | 98 | IMPERVIOUS, HSG D |
| * | 5.837 | 78 | MEADOW, HSG D |
| * | 0.284 | 98 | IMPERVIOUS, HSG D |
| * | 16.718 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 47.898 | 78 | Weighted Average |
| | 47.499 | | 99.17% Pervious Area |
| | 0.399 | | 0.83% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.4 | 100 | 0.0384 | 0.38 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.2 | 250 | 0.0450 | 1.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 408 | 0.0364 | 1.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.0 | 574 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 223 | 0.0109 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 10.1 | 454 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 23 | 0.0167 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 12 | 0.0189 | 2.79 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 21 | 0.0105 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 113 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.3 | 374 | 0.0197 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 76 | 0.0210 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 167 | 0.0086 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 47.2 | 2,796 | Total | | | |

## Subcatchment 16: WS16



## Summary for Subcatchment 17: WS17

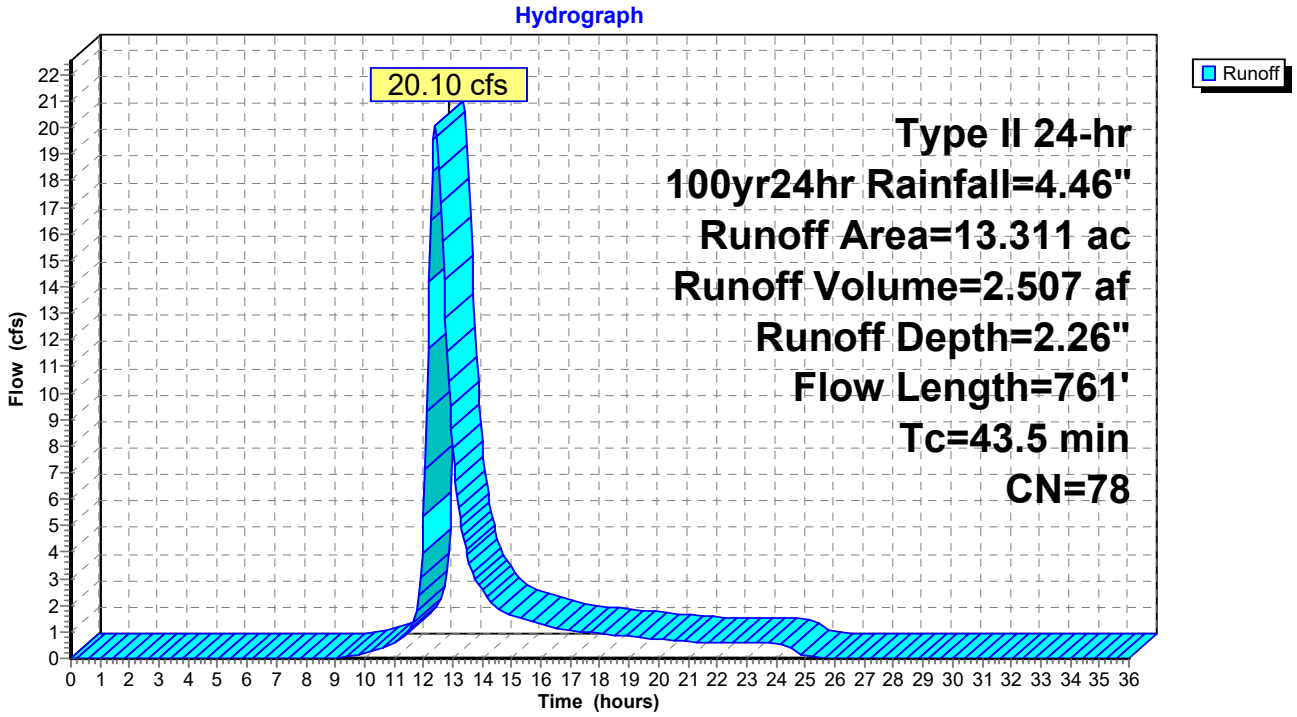
Runoff = 20.10 cfs @ 12.42 hrs, Volume= 2.507 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.015 | 93 | Developed Low Intensity, HSG D |
| * | 0.247 | 81 | Cultivated Crops, HSG D |
| * | 0.046 | 78 | MEADOW, HSG D |
| * | 0.179 | 78 | MEADOW, HSG D |
| * | 0.059 | 78 | MEADOW, HSG D |
| * | 0.072 | 78 | MEADOW, HSG D |
| * | 0.107 | 58 | MEADOW, HSG B |
| * | 0.114 | 98 | IMPERVIOUS, HSG D |
| * | 8.638 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 3.791 | 78 | MEADOW, HSG D |
| | 13.311 | 78 | Weighted Average |
| | 13.155 | | 98.82% Pervious Area |
| | 0.156 | | 1.18% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.9 | 48 | 0.0058 | 0.07 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.3 | 35 | 0.0083 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.5 | 17 | 0.0094 | 0.58 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.6 | 18 | 0.0061 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 13 | 0.0055 | 0.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 177 | 0.0059 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.5 | 97 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 40 | 0.0073 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.4 | 145 | 0.0060 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 44 | 0.0099 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.2 | 126 | 0.0017 | 0.29 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 43.5 | 761 | Total | | | |

## Subcatchment 17: WS17



## Summary for Subcatchment 18: WS18

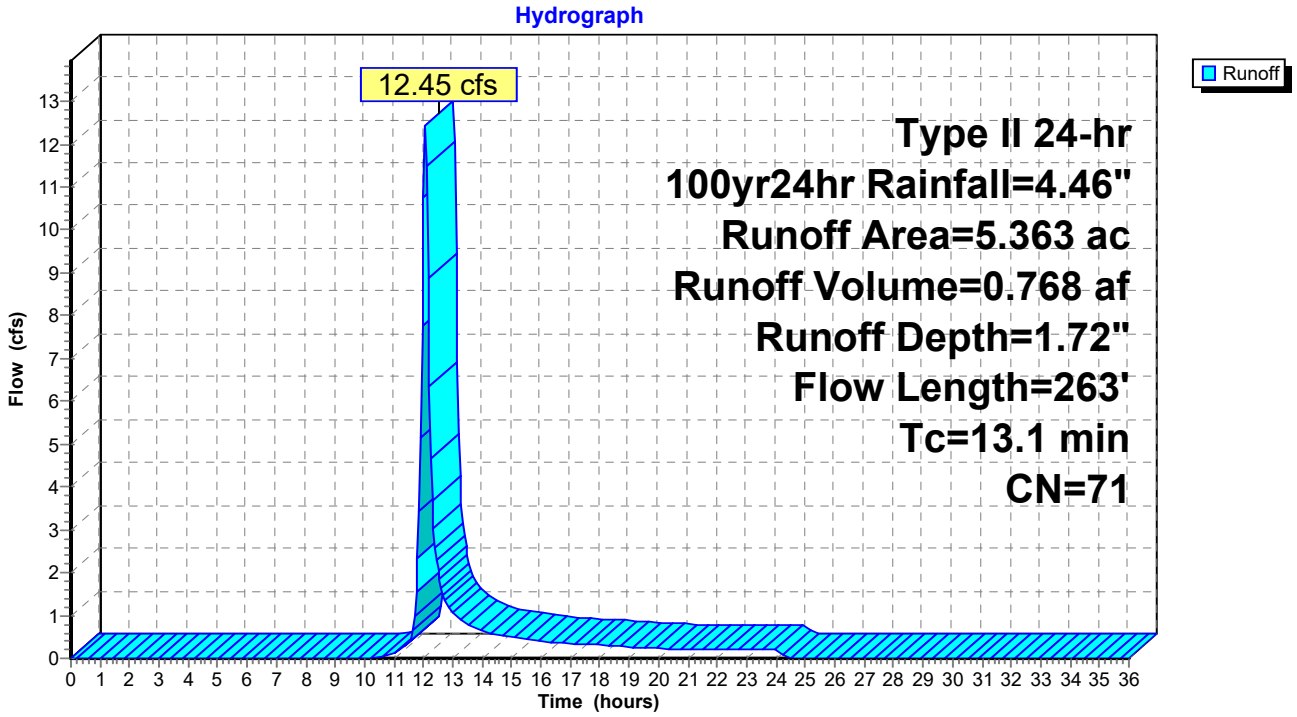
Runoff = 12.45 cfs @ 12.06 hrs, Volume= 0.768 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.143 | 71 | Cultivated Crops, HSG B |
| * | 0.481 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG B |
| * | 1.757 | 58 | MEADOW, HSG B |
| * | 0.211 | 58 | MEADOW, HSG B |
| * | 0.093 | 98 | IMPERVIOUS, HSG D |
| * | 1.767 | 78 | MEADOW, HSG D |
| * | 0.906 | 78 | MEADOW, HSG D |
| | 5.363 | 71 | Weighted Average |
| | 5.265 | | 98.17% Pervious Area |
| | 0.098 | | 1.83% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.5 | 100 | 0.0357 | 0.18 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.3 | 29 | 0.0407 | 1.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 83 | 0.0079 | 0.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 51 | 0.0080 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.1 | 263 | Total | | | |

## Subcatchment 18: WS18



## Summary for Subcatchment 19: WS19

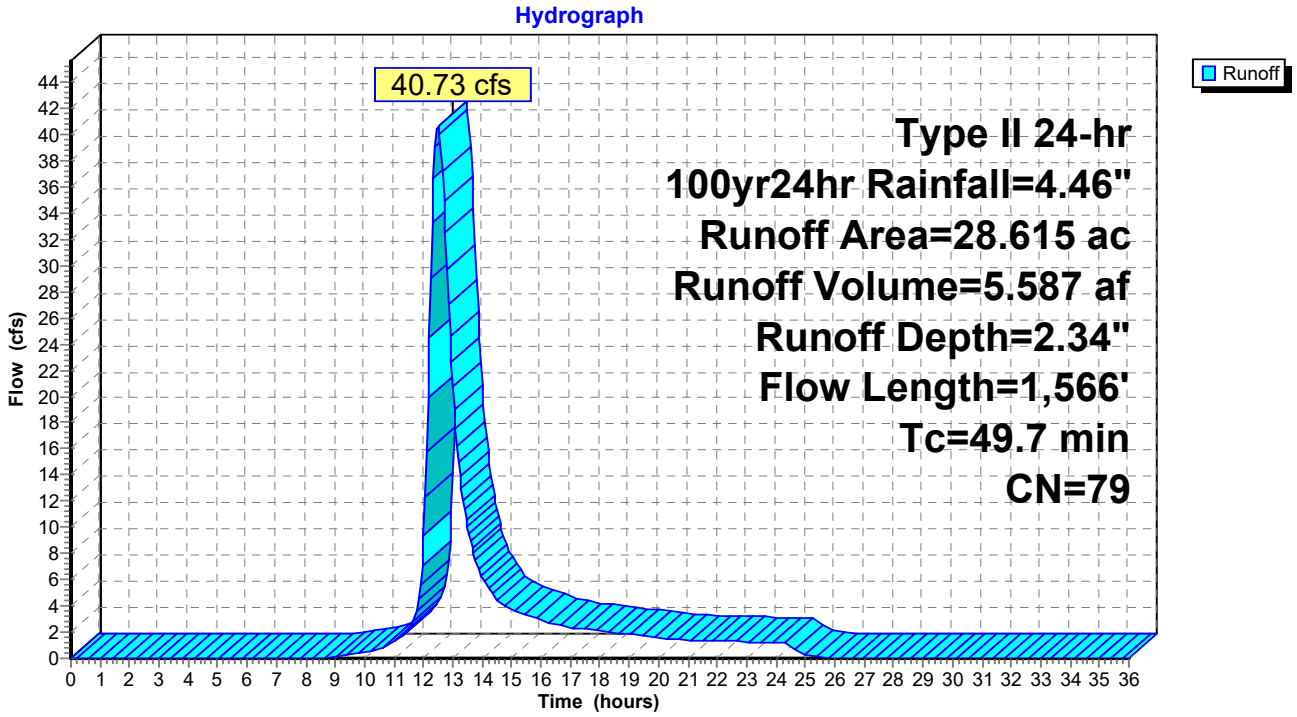
Runoff = 40.73 cfs @ 12.50 hrs, Volume= 5.587 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.077 | 80 | Pasture/Hay, HSG D |
| * | 0.030 | 86 | Woody Wetlands, HSG D |
| * | 1.654 | 81 | Cultivated Crops, HSG D |
| * | 0.043 | 78 | MEADOW, HSG D |
| * | 0.501 | 78 | MEADOW, HSG D |
| * | 0.094 | 78 | MEADOW, HSG D |
| * | 0.714 | 98 | IMPERVIOUS, HSG D |
| * | 19.120 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 6.338 | 78 | MEADOW, HSG D |
| | 28.615 | 79 | Weighted Average |
| | 27.858 | | 97.35% Pervious Area |
| | 0.757 | | 2.65% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.2 | 100 | 0.0093 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.6 | 158 | 0.0201 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 15.4 | 693 | 0.0115 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 64 | 0.0059 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 28 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 19 | 0.0081 | 1.82 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 25 | 0.0126 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 135 | 0.0076 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 35 | 0.0106 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.7 | 251 | 0.0079 | 0.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 59 | 0.0029 | 1.09 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 49.7 | 1,566 | Total | | | |

## Subcatchment 19: WS19



## Summary for Subcatchment 20: WS20

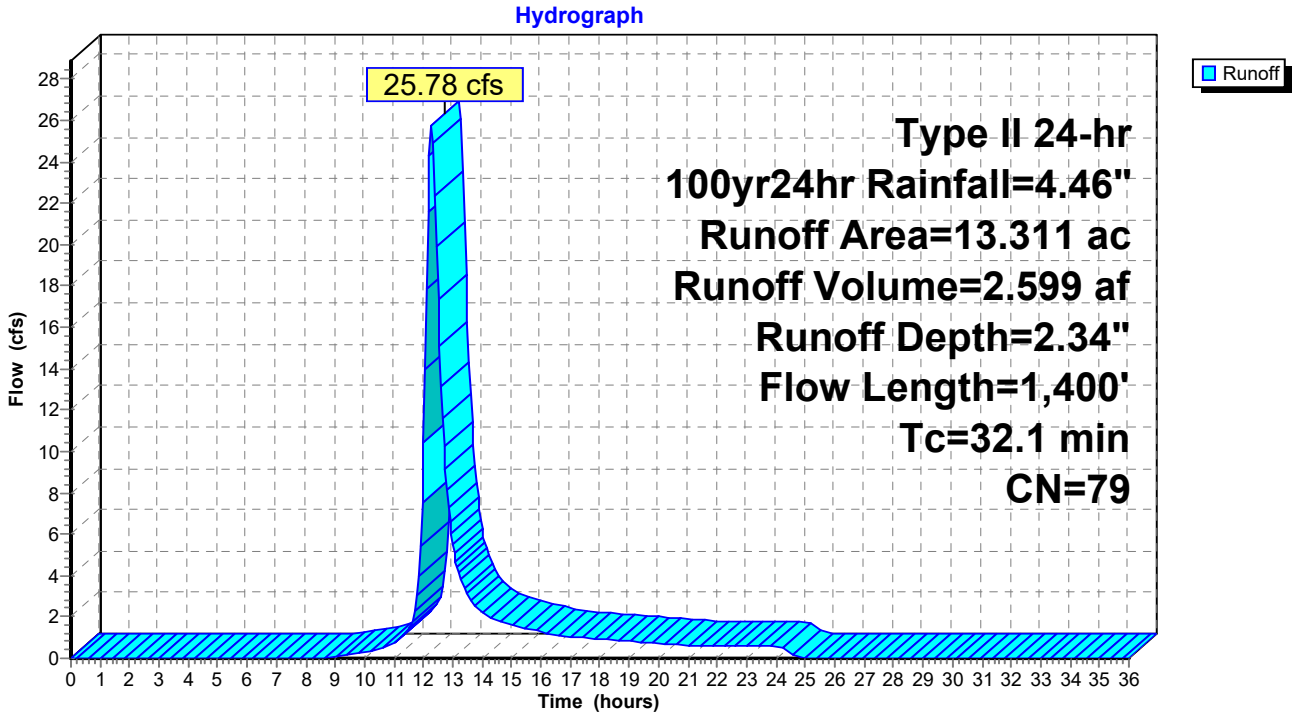
Runoff = 25.78 cfs @ 12.27 hrs, Volume= 2.599 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.283 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 94 | Developed Medium Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 0.723 | 81 | Cultivated Crops, HSG D |
| * | 0.193 | 98 | IMPERVIOUS, HSG D |
| * | 9.668 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.887 | 78 | MEADOW, HSG D |
| | 13.311 | 79 | Weighted Average |
| | 13.075 | | 98.23% Pervious Area |
| | 0.236 | | 1.77% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.3 | 287 | 0.0087 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.2 | 223 | 0.0042 | 0.45 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 24 | 0.0183 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 16 | 0.0275 | 3.37 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 23 | 0.0291 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 205 | 0.0331 | 1.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 131 | 0.0093 | 0.68 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.1 | 129 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 58 | 0.0091 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 80 | 0.0144 | 0.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.8 | 97 | 0.0042 | 0.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 128 | 0.0126 | 2.28 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 32.1 | 1,400 | Total | | | |

## Subcatchment 20: WS20



## Summary for Subcatchment 21: WS21

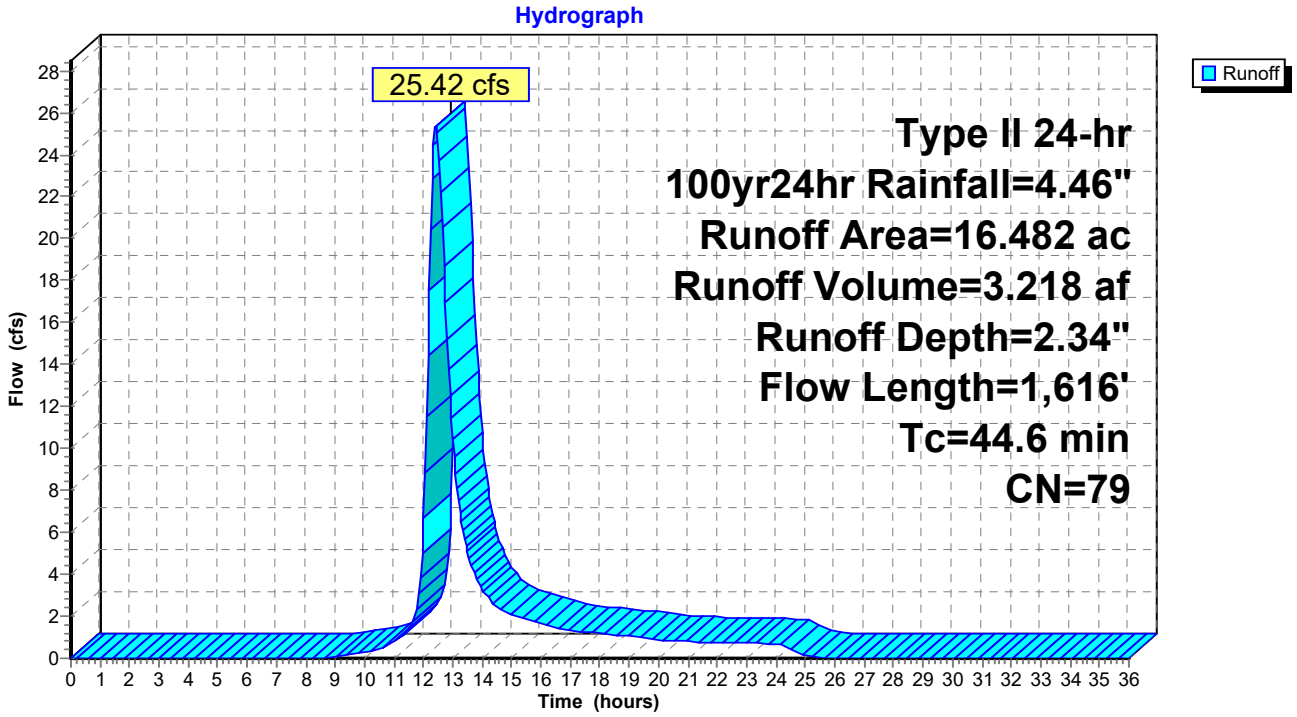
Runoff = 25.42 cfs @ 12.43 hrs, Volume= 3.218 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.154 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 89 | Developed Medium Intensity, HSG B |
| * | 0.162 | 94 | Developed Medium Intensity, HSG D |
| * | 0.159 | 88 | Developed Low Intensity, HSG B |
| * | 1.790 | 93 | Developed Low Intensity, HSG D |
| * | 0.153 | 88 | Developed Low Intensity, HSG B |
| * | 0.136 | 93 | Developed Low Intensity, HSG D |
| * | 0.269 | 71 | Cultivated Crops, HSG B |
| * | 0.243 | 81 | Cultivated Crops, HSG D |
| * | 0.373 | 81 | Cultivated Crops, HSG D |
| * | 0.001 | 58 | MEADOW, HSG B |
| * | 0.273 | 78 | MEADOW, HSG D |
| * | 0.137 | 58 | MEADOW, HSG B |
| * | 0.342 | 78 | MEADOW, HSG D |
| * | 0.702 | 78 | MEADOW, HSG D |
| * | 0.490 | 58 | MEADOW, HSG B |
| * | 0.344 | 58 | MEADOW, HSG B |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.199 | 98 | IMPERVIOUS, HSG D |
| * | 8.973 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.529 | 78 | MEADOW, HSG D |
| | 16.482 | 79 | Weighted Average |
| | 16.240 | | 98.53% Pervious Area |
| | 0.242 | | 1.47% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.5 | 56 | 0.0111 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.6 | 36 | 0.0281 | 0.13 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.2 | 8 | 0.0205 | 0.69 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.1 | 13 | 0.0208 | 2.93 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 37 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 205 | 0.0146 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.9 | 355 | 0.0149 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.8 | 340 | 0.0109 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.3 | 239 | 0.0081 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 52 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 33 | 0.0313 | 1.24 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 26 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 116 | 0.0216 | 1.03 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 27 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 73 | 0.0137 | 2.37 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 44.6 | 1,616 | Total | | | |

## Subcatchment 21: WS21



## Summary for Subcatchment 22: WS22

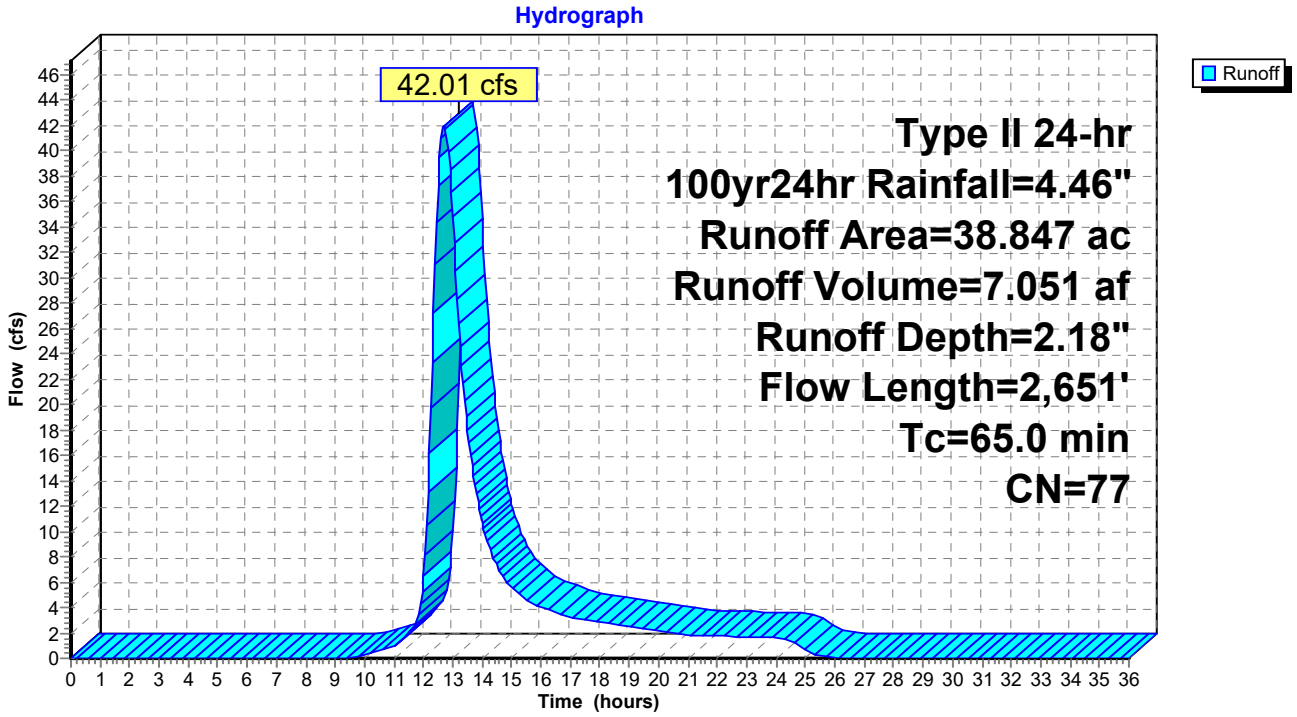
Runoff = 42.01 cfs @ 12.70 hrs, Volume= 7.051 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.574 | 71 | Cultivated Crops, HSG B |
| * | 1.670 | 81 | Cultivated Crops, HSG D |
| * | 1.539 | 81 | Cultivated Crops, HSG D |
| * | 7.511 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 78 | MEADOW, HSG D |
| * | 0.106 | 98 | IMPERVIOUS, HSG B |
| * | 3.145 | 58 | MEADOW, HSG B |
| * | 1.137 | 58 | MEADOW, HSG B |
| * | 0.769 | 78 | MEADOW, HSG D |
| * | 0.320 | 78 | MEADOW, HSG D |
| * | 0.006 | 98 | IMPERVIOUS, HSG D |
| * | 0.043 | 78 | MEADOW, HSG D |
| * | 0.194 | 98 | IMPERVIOUS, HSG D |
| * | 17.835 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 2.949 | 78 | MEADOW, HSG D |
| | 38.847 | 77 | Weighted Average |
| | 38.498 | | 99.10% Pervious Area |
| | 0.349 | | 0.90% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.9 | 51 | 0.0109 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.4 | 26 | 0.0164 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.3 | 16 | 0.0263 | 0.88 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.9 | 6 | 0.0486 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.2 | 125 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 9.6 | 535 | 0.0106 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 37 | 0.0080 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 147 | 0.0086 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.6 | 396 | 0.0121 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.4 | 560 | 0.0165 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 11.7 | 536 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 47 | 0.0158 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 81 | 0.0152 | 1.11 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 87 | 0.0145 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 65.0 | 2,651 | Total | | | |

## Subcatchment 22: WS22



## Summary for Subcatchment 23: WS23

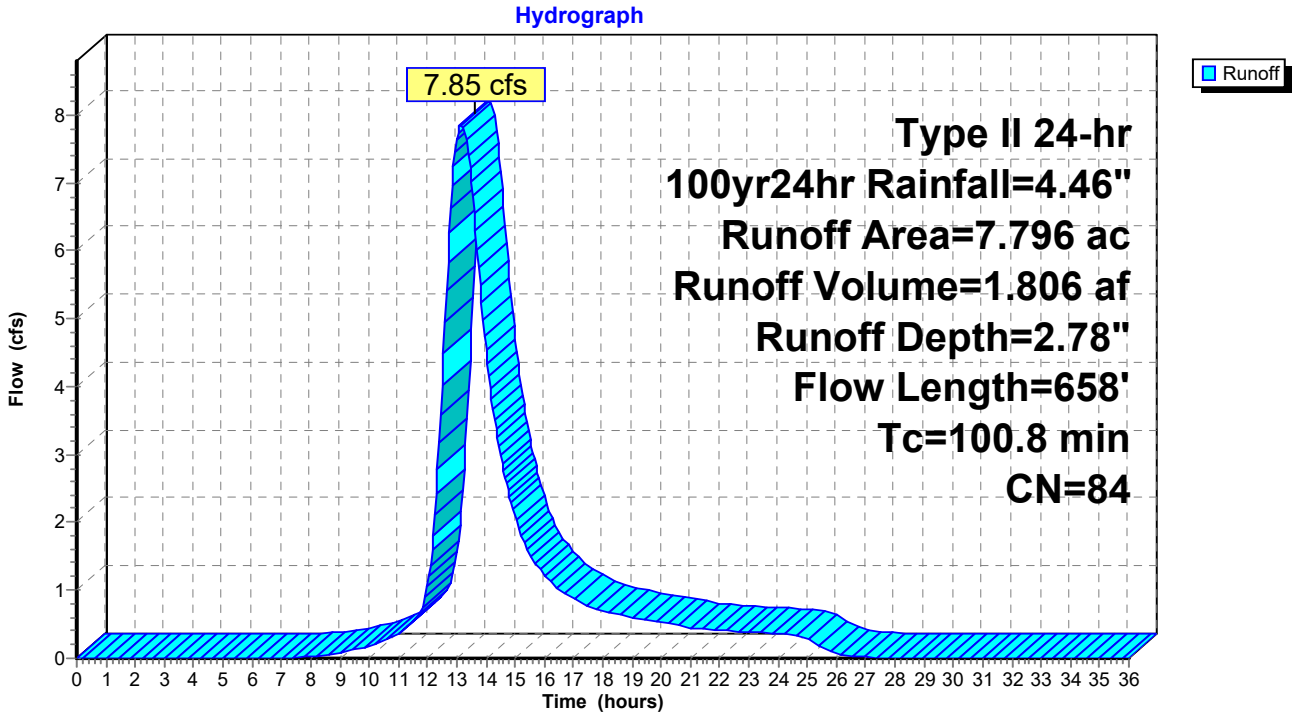
Runoff = 7.85 cfs @ 13.12 hrs, Volume= 1.806 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.781 | 80 | Pasture/Hay, HSG D |
| * | 0.222 | 80 | Pasture/Hay, HSG D |
| * | 0.192 | 86 | Woody Wetlands, HSG D |
| * | 0.415 | 84 | Developed Open Space, HSG D |
| * | 4.720 | 86 | Woody Wetlands, HSG D |
| * | 1.466 | 81 | Cultivated Crops, HSG D |
| | 7.796 | 84 | Weighted Average |
| | 7.796 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 56.0 | 100 | 0.0030 | 0.03 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.2 | 36 | 0.0104 | 0.51 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 26.7 | 259 | 0.0010 | 0.16 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 15.1 | 163 | 0.0013 | 0.18 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.8 | 100 | 0.0020 | 0.91 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 100.8 | 658 | Total | | | |

## Subcatchment 23: WS23



## Summary for Subcatchment 24: WS24

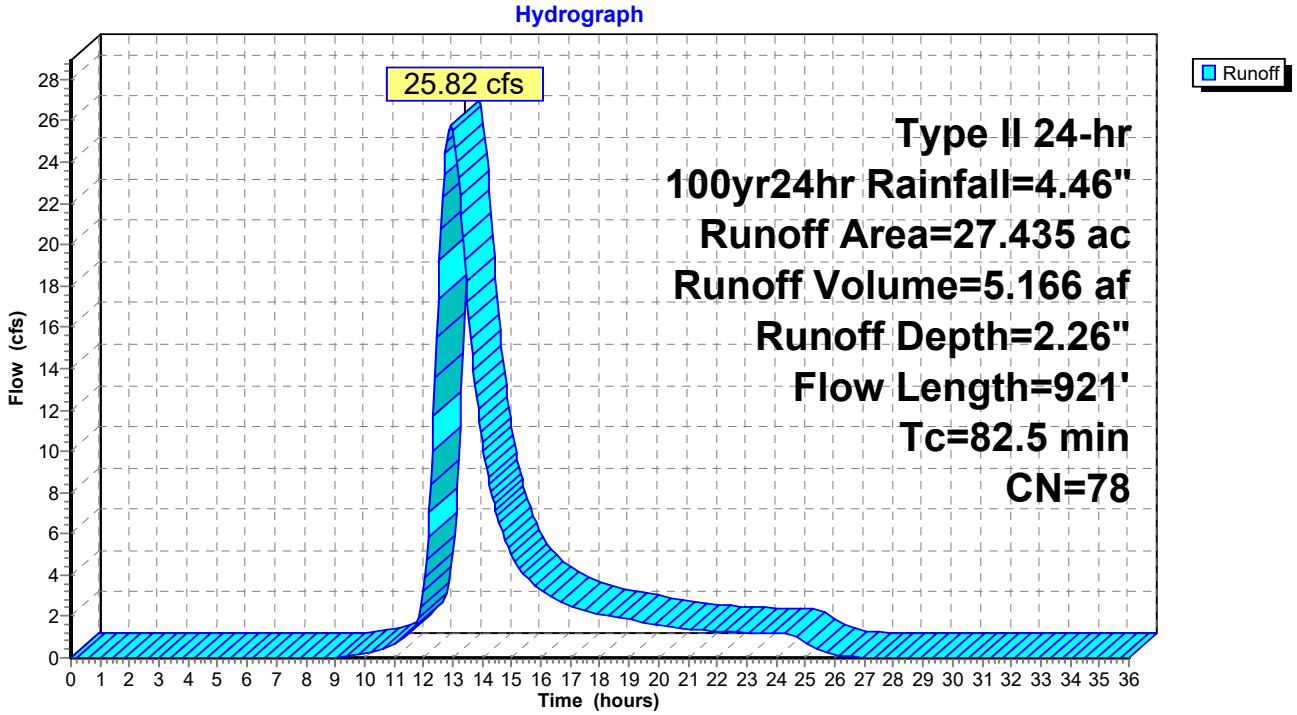
Runoff = 25.82 cfs @ 12.93 hrs, Volume= 5.166 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.266 | 80 | Pasture/Hay, HSG D |
| * | 0.369 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 84 | Developed Open Space, HSG D |
| * | 0.106 | 86 | Woody Wetlands, HSG D |
| * | 0.861 | 86 | Woody Wetlands, HSG D |
| * | 0.149 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.036 | 86 | Woody Wetlands, HSG D |
| * | 2.354 | 81 | Cultivated Crops, HSG D |
| * | 0.012 | 78 | MEADOW, HSG D |
| * | 0.105 | 78 | MEADOW, HSG D |
| * | 0.050 | 78 | MEADOW, HSG D |
| * | 0.248 | 78 | MEADOW, HSG D |
| * | 0.445 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG D |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.111 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.777 | 78 | MEADOW, HSG D |
| * | 0.086 | 78 | MEADOW, HSG D |
| * | 0.250 | 78 | MEADOW, HSG D |
| * | 0.339 | 78 | MEADOW, HSG D |
| * | 0.196 | 78 | MEADOW, HSG D |
| * | 0.222 | 78 | MEADOW, HSG D |
| * | 0.123 | 78 | MEADOW, HSG D |
| * | 0.094 | 78 | MEADOW, HSG D |
| * | 2.575 | 78 | MEADOW, HSG D |
| * | 0.167 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.195 | 78 | MEADOW, HSG D |
| * | 0.081 | 98 | IMPERVIOUS, HSG D |
| * | 0.757 | 78 | MEADOW, HSG D |
| * | 0.900 | 78 | MEADOW, HSG D |
| * | 0.126 | 98 | IMPERVIOUS, HSG B |
| * | 0.929 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.816 | 58 | MEADOW, HSG B |
| * | 0.305 | 98 | IMPERVIOUS, HSG D |
| * | 8.320 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 4.901 | 78 | MEADOW, HSG D |
| | 27.435 | 78 | Weighted Average |
| | 26.778 | | 97.61% Pervious Area |
| | 0.657 | | 2.39% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 47.1 | 82 | 0.0031 | 0.03 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 3.3 | 18 | 0.0173 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 15.5 | 65 | 0.0001 | 0.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 25 | 0.0112 | 2.15 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 38 | 0.0304 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 195 | 0.0164 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 141 | 0.0149 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 21 | 0.0061 | 0.55 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.2 | 236 | 0.0060 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 100 | 0.0101 | 0.90 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 82.5 | 921 | Total | | | |

## Subcatchment 24: WS24



## Summary for Subcatchment 25: WS25

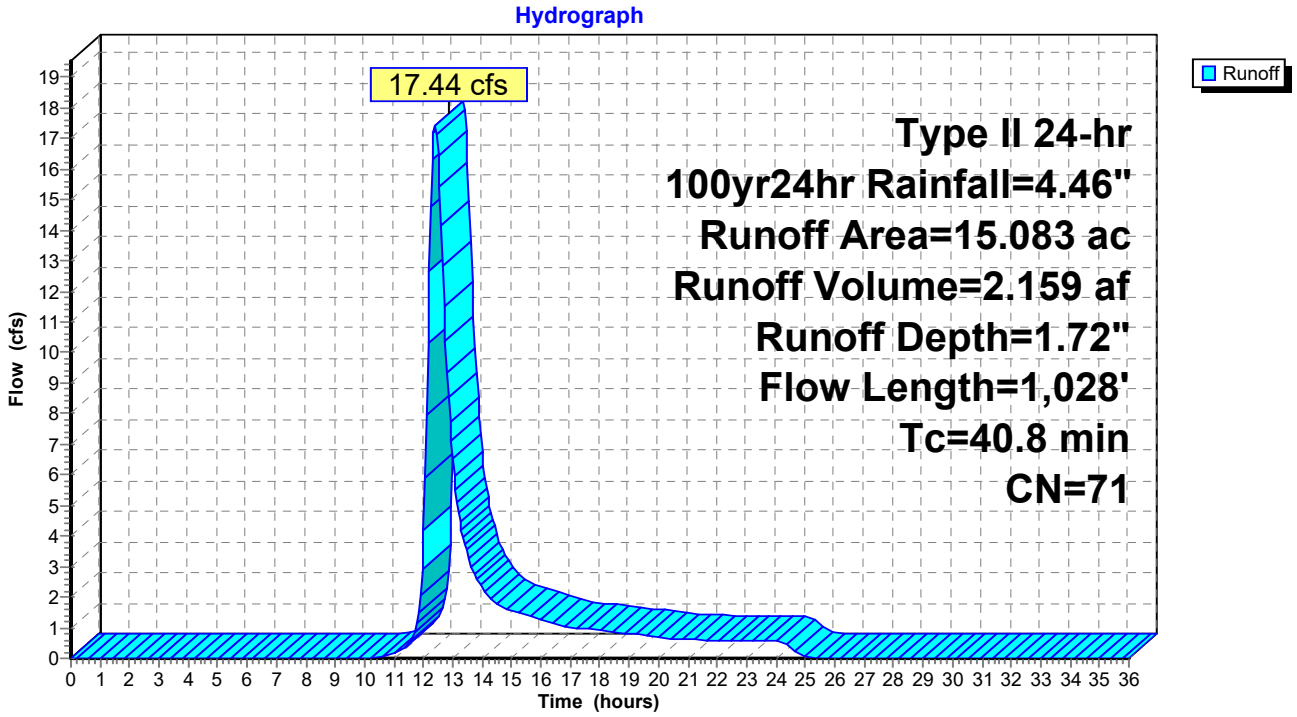
Runoff = 17.44 cfs @ 12.40 hrs, Volume= 2.159 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.336 | 71 | Cultivated Crops, HSG B |
| * | 3.913 | 81 | Cultivated Crops, HSG D |
| * | 0.301 | 98 | IMPERVIOUS, HSG B |
| * | 4.190 | 58 | MEADOW, HSG B |
| * | 2.181 | 58 | MEADOW, HSG B |
| * | 0.232 | 98 | IMPERVIOUS, HSG D |
| * | 1.515 | 78 | MEADOW, HSG D |
| * | 2.417 | 78 | MEADOW, HSG D |
| | 15.083 | 71 | Weighted Average |
| | 14.551 | | 96.47% Pervious Area |
| | 0.533 | | 3.53% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 17.7 | 100 | 0.0075 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.7 | 103 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.9 | 181 | 0.0076 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.4 | 59 | 0.0010 | 0.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 23 | 0.0221 | 1.04 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 21 | 0.0329 | 3.68 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.9 | 150 | 0.0352 | 1.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 76 | 0.0259 | 1.45 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.8 | 315 | 0.0102 | 0.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 40.8 | 1,028 | Total | | | |

## Subcatchment 25: WS25



## Summary for Subcatchment 26: WS26

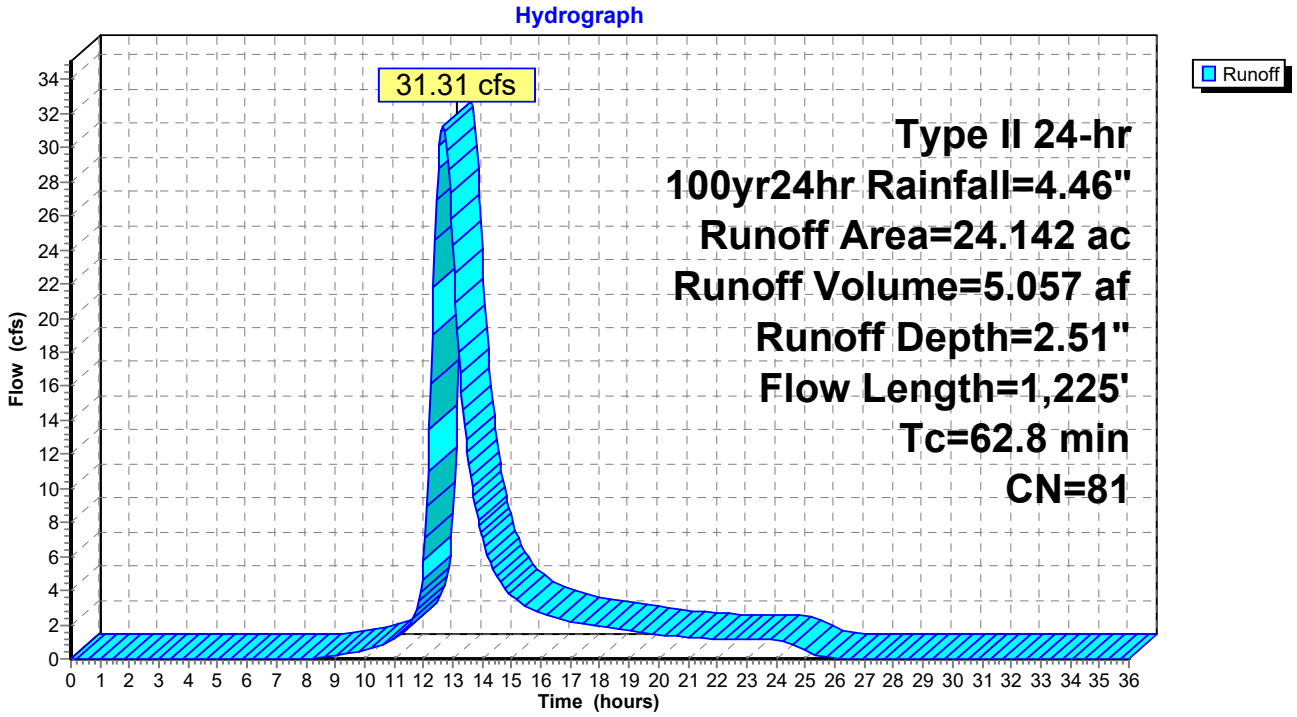
Runoff = 31.31 cfs @ 12.66 hrs, Volume= 5.057 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.020 | 84 | Developed Open Space, HSG D |
| * | 0.777 | 88 | Developed Low Intensity, HSG B |
| * | 0.216 | 93 | Developed Low Intensity, HSG D |
| * | 1.284 | 86 | Woody Wetlands, HSG D |
| * | 1.334 | 79 | Deciduous Forest, HSG D |
| * | 0.088 | 60 | Evergreen Forest, HSG B |
| * | 0.062 | 86 | Woody Wetlands, HSG B |
| * | 0.002 | 86 | Woody Wetlands, HSG B |
| * | 6.342 | 86 | Woody Wetlands, HSG D |
| * | 1.083 | 61 | Pasture/Hay, HSG B |
| * | 0.052 | 61 | Pasture/Hay, HSG B |
| * | 3.489 | 80 | Pasture/Hay, HSG D |
| * | 1.468 | 81 | Cultivated Crops, HSG D |
| * | 0.104 | 78 | MEADOW, HSG D |
| * | 0.520 | 78 | MEADOW, HSG D |
| * | 0.020 | 98 | IMPERVIOUS, HSG D |
| * | 0.137 | 78 | MEADOW, HSG D |
| * | 0.273 | 78 | MEADOW, HSG D |
| * | 0.206 | 58 | MEADOW, HSG B |
| * | 0.118 | 98 | IMPERVIOUS, HSG D |
| * | 5.372 | 78 | MEADOW, HSG D |
| * | 1.174 | 78 | MEADOW, HSG D |
| | 24.142 | 81 | Weighted Average |
| | 24.004 | | 99.43% Pervious Area |
| | 0.138 | | 0.57% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 100 | 0.0275 | 1.28 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 45 | 0.0189 | 2.79 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.5 | 140 | 0.0499 | 1.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 77 | 0.0199 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 112 | 0.0311 | 0.88 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 9.8 | 150 | 0.0026 | 0.26 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 11.5 | 194 | 0.0031 | 0.28 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 16.2 | 197 | 0.0016 | 0.20 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 18.8 | 211 | 0.0007 | 0.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 62.8 | 1,225 | Total | | | |

## Subcatchment 26: WS26



## Summary for Subcatchment 27: WS27

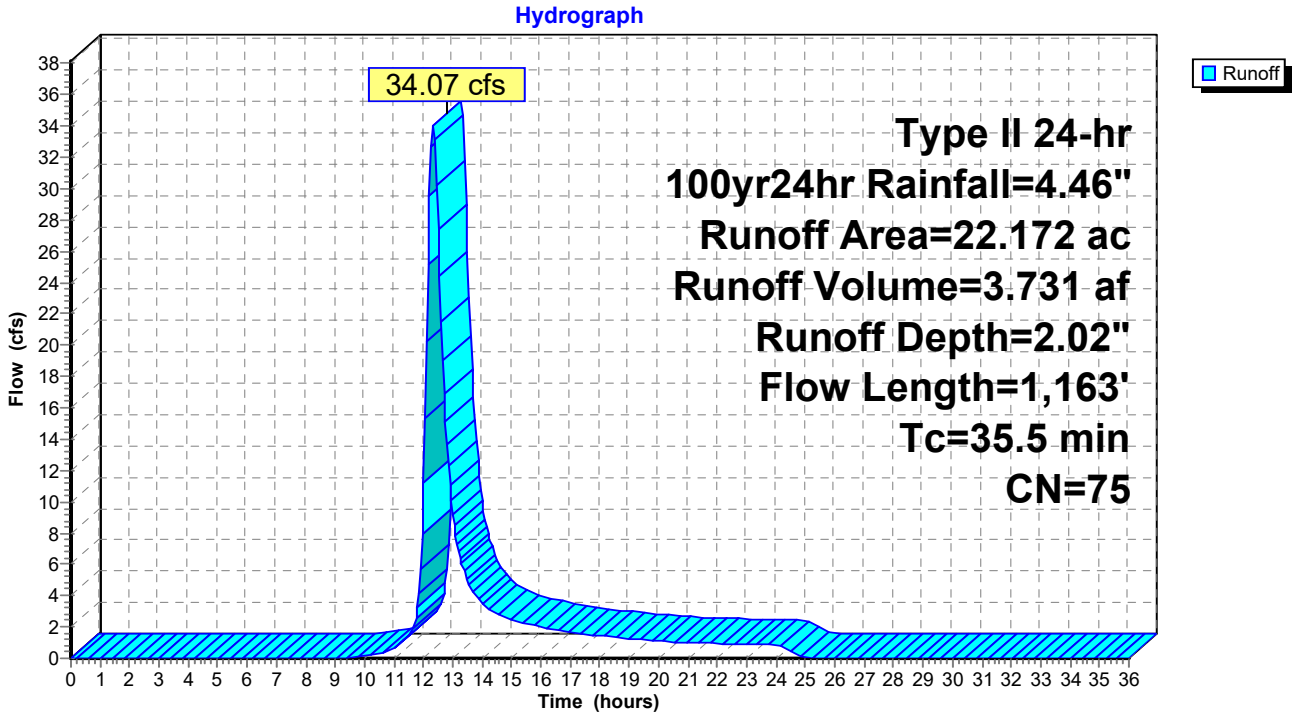
Runoff = 34.07 cfs @ 12.32 hrs, Volume= 3.731 af, Depth= 2.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.039 | 80 | Pasture/Hay, HSG D |
| * | 0.457 | 79 | Deciduous Forest, HSG D |
| * | 0.286 | 79 | Deciduous Forest, HSG D |
| * | 3.997 | 81 | Cultivated Crops, HSG D |
| * | 0.445 | 78 | MEADOW, HSG D |
| * | 0.104 | 58 | MEADOW, HSG B |
| * | 3.512 | 78 | MEADOW, HSG D |
| * | 1.264 | 78 | MEADOW, HSG D |
| * | 0.026 | 78 | MEADOW, HSG D |
| * | 0.773 | 78 | MEADOW, HSG D |
| * | 0.603 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG B |
| * | 3.250 | 58 | MEADOW, HSG B |
| * | 0.690 | 58 | MEADOW, HSG B |
| * | 0.119 | 98 | IMPERVIOUS, HSG D |
| * | 3.285 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 3.273 | 78 | MEADOW, HSG D |
| | 22.172 | 75 | Weighted Average |
| | 22.005 | | 99.25% Pervious Area |
| | 0.167 | | 0.75% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.5 | 100 | 0.0148 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.0 | 216 | 0.0288 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.2 | 352 | 0.0137 | 0.82 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 62 | 0.0040 | 0.45 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 172 | 0.0112 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 173 | 0.0123 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 88 | 0.0071 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.5 | 1,163 | Total | | | |

## Subcatchment 27: WS27



## Summary for Subcatchment 28: WS28

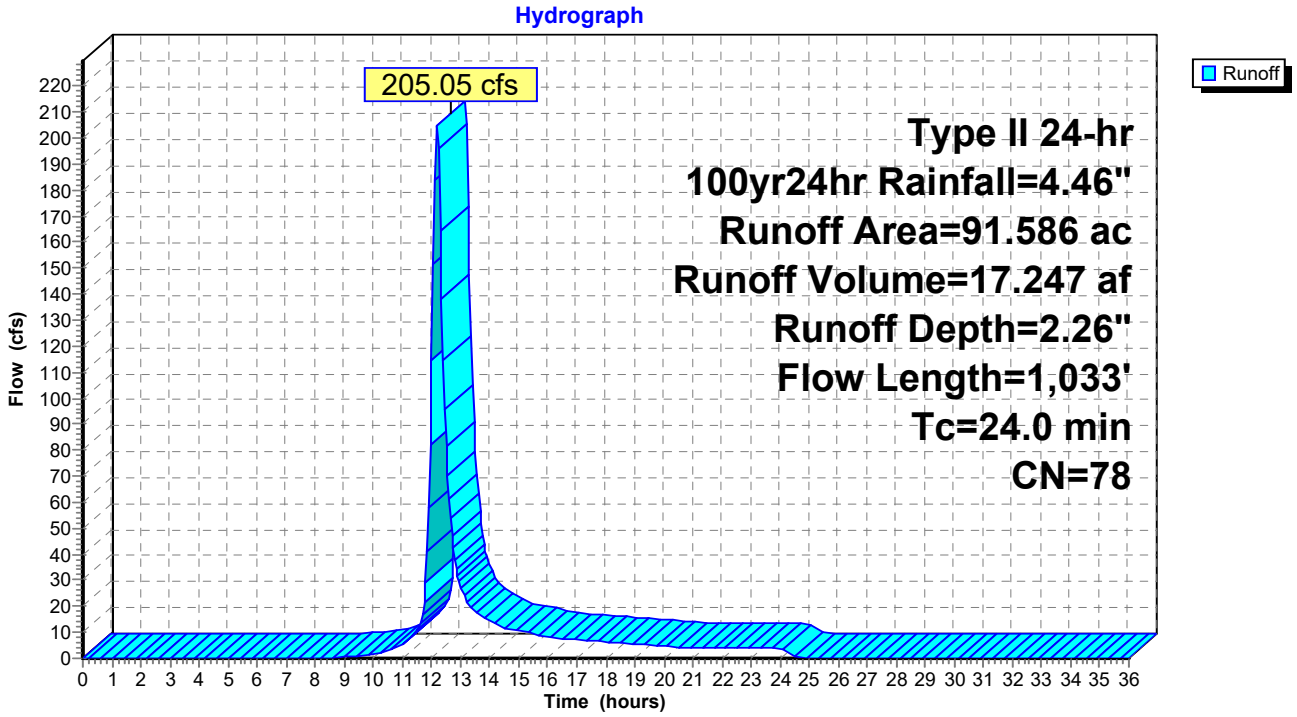
Runoff = 205.05 cfs @ 12.18 hrs, Volume= 17.247 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.197 | 61 | Pasture/Hay, HSG B |
| * | 0.793 | 80 | Pasture/Hay, HSG D |
| * | 0.117 | 79 | Deciduous Forest, HSG D |
| * | 0.589 | 71 | Cultivated Crops, HSG B |
| * | 4.338 | 71 | Cultivated Crops, HSG B |
| * | 1.150 | 71 | Cultivated Crops, HSG B |
| * | 0.357 | 71 | Cultivated Crops, HSG B |
| * | 0.102 | 71 | Cultivated Crops, HSG B |
| * | 62.673 | 81 | Cultivated Crops, HSG D |
| * | 0.989 | 58 | MEADOW, HSG B |
| * | 0.137 | 98 | IMPERVIOUS, HSG B |
| * | 3.445 | 58 | MEADOW, HSG B |
| * | 1.793 | 58 | MEADOW, HSG B |
| * | 0.058 | 98 | IMPERVIOUS, HSG B |
| * | 1.642 | 58 | MEADOW, HSG B |
| * | 0.481 | 58 | MEADOW, HSG B |
| * | 0.088 | 98 | IMPERVIOUS, HSG B |
| * | 0.348 | 58 | MEADOW, HSG B |
| * | 2.648 | 78 | MEADOW, HSG D |
| * | 0.136 | 98 | IMPERVIOUS, HSG D |
| * | 9.335 | 78 | MEADOW, HSG D |
| * | 0.024 | 98 | IMPERVIOUS, HSG D |
| * | 0.146 | 78 | MEADOW, HSG D |
| | 91.586 | 78 | Weighted Average |
| | 91.143 | | 99.52% Pervious Area |
| | 0.443 | | 0.48% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.8 | 100 | 0.0133 | 0.25 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 3.7 | 231 | 0.0134 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.1 | 313 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 228 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.3 | 161 | 0.0047 | 0.62 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 24.0 | 1,033 | Total | | | |

## Subcatchment 28: WS28



## Summary for Subcatchment 29: WS29

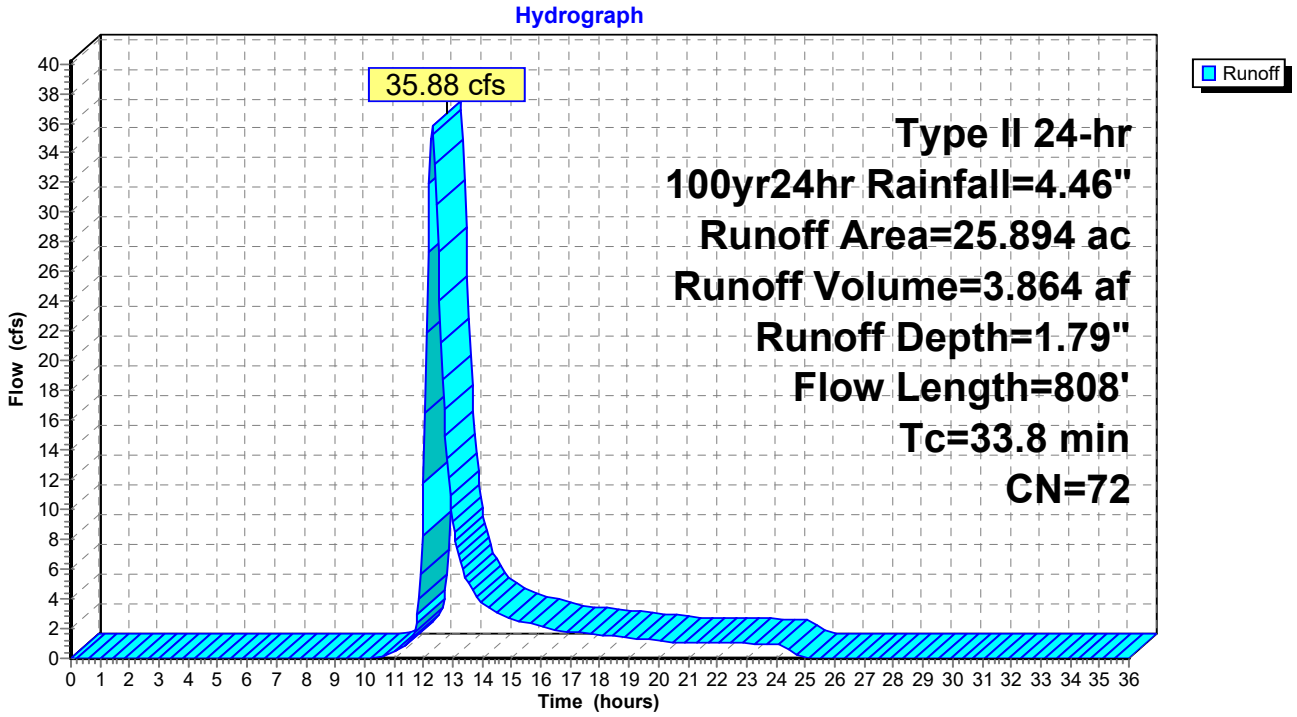
Runoff = 35.88 cfs @ 12.31 hrs, Volume= 3.864 af, Depth= 1.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 3.057 | 71 | Cultivated Crops, HSG B |
| * | 0.219 | 71 | Cultivated Crops, HSG B |
| * | 0.241 | 71 | Cultivated Crops, HSG B |
| * | 2.951 | 81 | Cultivated Crops, HSG D |
| * | 1.544 | 58 | MEADOW, HSG B |
| * | 0.042 | 98 | IMPERVIOUS, HSG B |
| * | 3.480 | 58 | MEADOW, HSG B |
| * | 0.404 | 58 | MEADOW, HSG B |
| * | 0.060 | 98 | IMPERVIOUS, HSG B |
| * | 1.633 | 58 | MEADOW, HSG B |
| * | 0.042 | 98 | IMPERVIOUS, HSG B |
| * | 2.821 | 78 | MEADOW, HSG D |
| * | 0.203 | 98 | IMPERVIOUS, HSG D |
| * | 9.194 | 78 | MEADOW, HSG D |
| * | 0.001 | 98 | IMPERVIOUS, HSG D |
| | 25.894 | 72 | Weighted Average |
| | 25.545 | | 98.66% Pervious Area |
| | 0.348 | | 1.34% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 17.9 | 100 | 0.0073 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 5.5 | 198 | 0.0072 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 20 | 0.0117 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 13 | 0.0061 | 1.59 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 21 | 0.0089 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 61 | 0.0088 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.8 | 299 | 0.0150 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 60 | 0.0084 | 0.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 35 | 0.0228 | 1.36 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 33.8 | 808 | Total | | | |

## Subcatchment 29: WS29



## Summary for Subcatchment 30: WS30

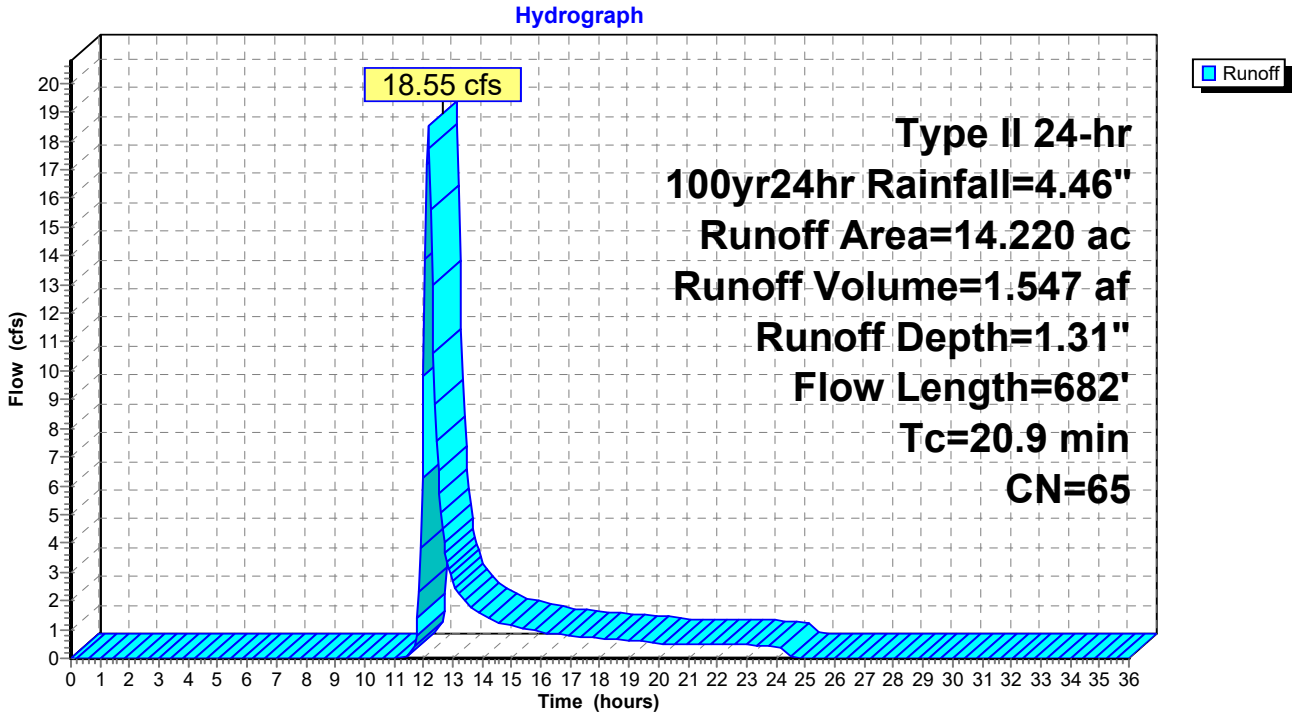
Runoff = 18.55 cfs @ 12.16 hrs, Volume= 1.547 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.159 | 71 | Cultivated Crops, HSG B |
| * | 0.668 | 71 | Cultivated Crops, HSG B |
| * | 0.583 | 81 | Cultivated Crops, HSG D |
| * | 0.473 | 58 | MEADOW, HSG B |
| * | 0.579 | 58 | MEADOW, HSG B |
| * | 0.257 | 58 | MEADOW, HSG B |
| * | 1.600 | 58 | MEADOW, HSG B |
| * | 0.358 | 98 | IMPERVIOUS, HSG B |
| * | 6.601 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 1.111 | 78 | MEADOW, HSG D |
| * | 1.770 | 78 | MEADOW, HSG D |
| * | 0.018 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 14.220 | 65 | Weighted Average |
| | 13.801 | | 97.05% Pervious Area |
| | 0.419 | | 2.95% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.6 | 66 | 0.0154 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.6 | 34 | 0.0184 | 0.88 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.8 | 60 | 0.0025 | 0.35 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.9 | 169 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 234 | 0.0306 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 119 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 20.9 | 682 | Total | | | |

## Subcatchment 30: WS30



## Summary for Subcatchment 31: WS31

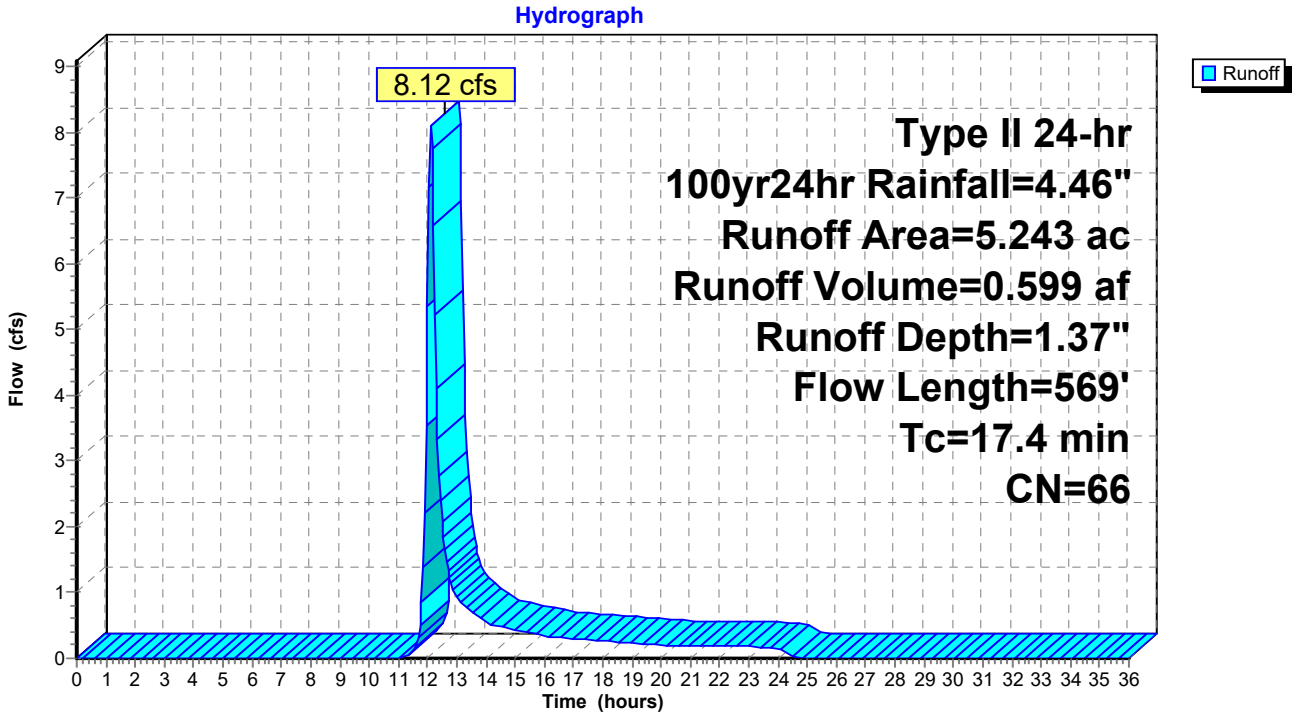
Runoff = 8.12 cfs @ 12.11 hrs, Volume= 0.599 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.184 | 93 | Developed Low Intensity, HSG D |
| * | 1.726 | 71 | Cultivated Crops, HSG B |
| * | 0.504 | 81 | Cultivated Crops, HSG D |
| * | 1.761 | 58 | MEADOW, HSG B |
| * | 0.059 | 98 | IMPERVIOUS, HSG B |
| * | 1.009 | 58 | MEADOW, HSG B |
| | 5.243 | 66 | Weighted Average |
| | 5.184 | | 98.88% Pervious Area |
| | 0.059 | | 1.12% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 9.3 | 81 | 0.0247 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.7 | 19 | 0.0295 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.8 | 98 | 0.0173 | 0.92 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 40 | 0.0512 | 1.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 38 | 0.0534 | 1.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 97 | 0.0588 | 1.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 52 | 0.0562 | 2.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 78 | 0.0405 | 1.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 65 | 0.0265 | 1.47 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 17.4 | 569 | Total | | | |

## Subcatchment 31: WS31



## Summary for Subcatchment 32: WS32

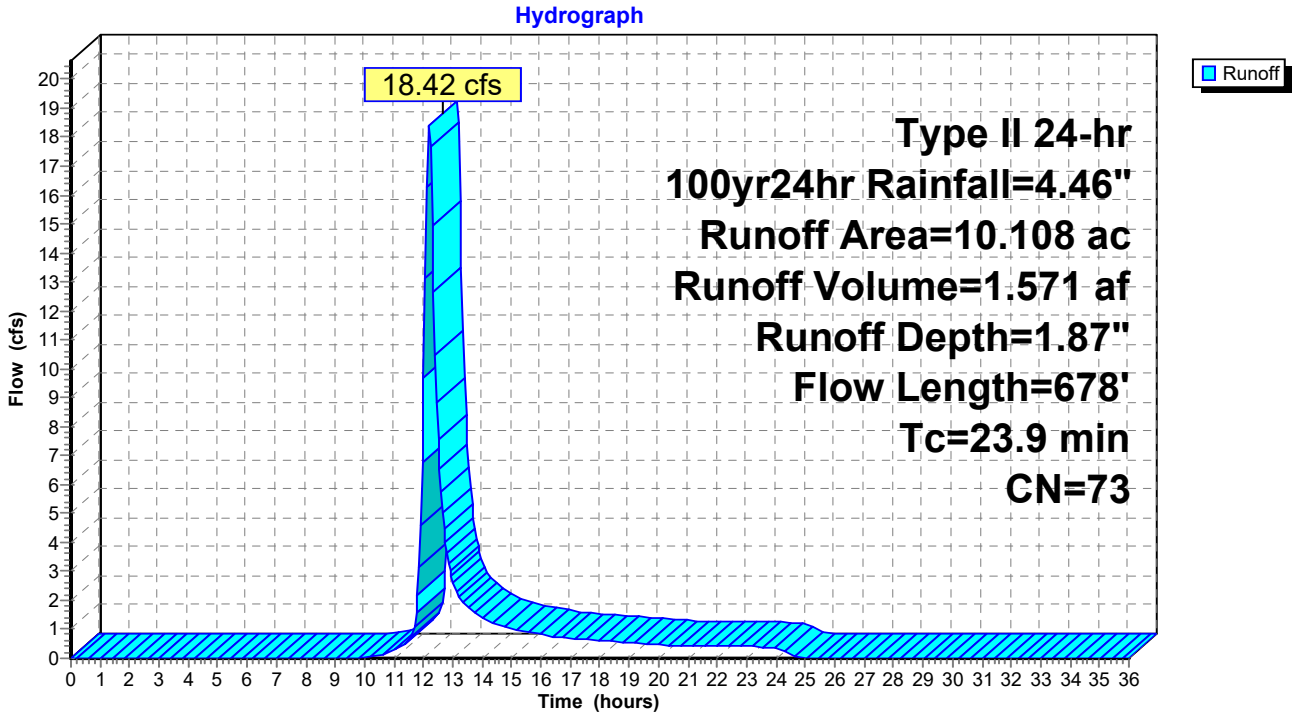
Runoff = 18.42 cfs @ 12.18 hrs, Volume= 1.571 af, Depth= 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.078 | 88 | Developed Low Intensity, HSG B |
| * | 0.021 | 93 | Developed Low Intensity, HSG D |
| * | 0.125 | 71 | Cultivated Crops, HSG B |
| * | 0.177 | 81 | Cultivated Crops, HSG D |
| * | 0.443 | 71 | Cultivated Crops, HSG B |
| * | 1.562 | 81 | Cultivated Crops, HSG D |
| * | 0.154 | 86 | Woody Wetlands, HSG D |
| * | 0.085 | 86 | Woody Wetlands, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG D |
| * | 0.003 | 58 | MEADOW, HSG B |
| * | 0.276 | 58 | MEADOW, HSG B |
| * | 0.326 | 58 | MEADOW, HSG B |
| * | 0.013 | 78 | MEADOW, HSG D |
| * | 0.321 | 58 | MEADOW, HSG B |
| * | 2.039 | 58 | MEADOW, HSG B |
| * | 0.910 | 78 | MEADOW, HSG D |
| * | 3.575 | 78 | MEADOW, HSG D |
| | 10.108 | 73 | Weighted Average |
| | 10.108 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.0 | 100 | 0.0123 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.5 | 86 | 0.0108 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.0 | 92 | 0.0053 | 0.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 60 | 0.0132 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 205 | 0.0078 | 0.62 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.7 | 133 | 0.0031 | 0.39 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.9 | 678 | Total | | | |

## Subcatchment 32: WS32



## Summary for Subcatchment 33: WS33

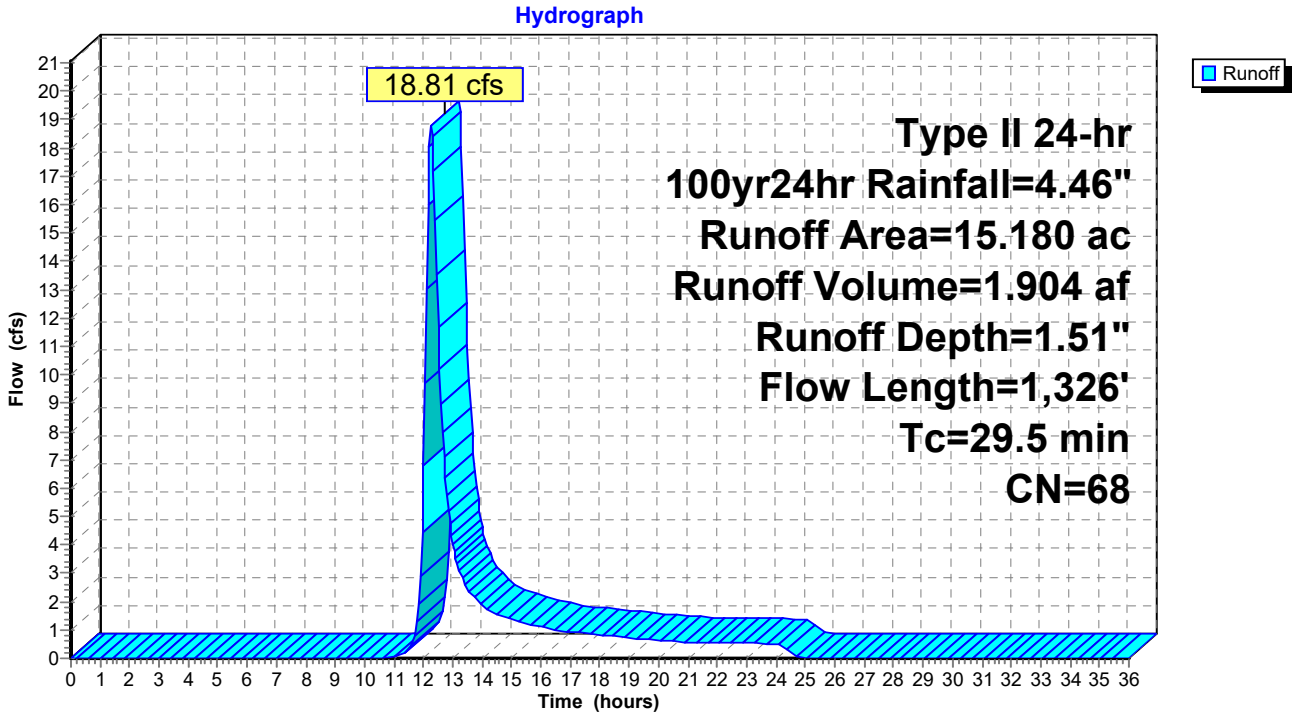
Runoff = 18.81 cfs @ 12.26 hrs, Volume= 1.904 af, Depth= 1.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.023 | 93 | Developed Low Intensity, HSG D |
| * | 0.044 | 71 | Cultivated Crops, HSG B |
| * | 0.500 | 81 | Cultivated Crops, HSG D |
| * | 1.263 | 71 | Cultivated Crops, HSG B |
| * | 0.959 | 58 | MEADOW, HSG B |
| * | 0.054 | 98 | IMPERVIOUS, HSG B |
| * | 0.009 | 58 | MEADOW, HSG B |
| * | 1.519 | 78 | MEADOW, HSG D |
| * | 1.567 | 78 | MEADOW, HSG D |
| * | 1.497 | 78 | MEADOW, HSG D |
| * | 0.970 | 78 | MEADOW, HSG D |
| * | 1.452 | 58 | MEADOW, HSG B |
| * | 0.165 | 98 | IMPERVIOUS, HSG B |
| * | 5.115 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| | 15.180 | 68 | Weighted Average |
| | 14.919 | | 98.28% Pervious Area |
| | 0.261 | | 1.72% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.4 | 11 | 0.0054 | 0.43 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.4 | 60 | 0.0022 | 0.42 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 4.3 | 20 | 0.0101 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.0 | 5 | 0.0258 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.0 | 3 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 69 | 0.0237 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 211 | 0.0190 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 43 | 0.0148 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 27 | 0.0151 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 143 | 0.0188 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 205 | 0.0234 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 120 | 0.0203 | 1.00 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.5 | 194 | 0.0169 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.8 | 133 | 0.0127 | 0.79 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0167 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 19 | 0.0224 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 52 | 0.0122 | 0.99 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 29.5 | 1,326 | Total | | | |

## Subcatchment 33: WS33



## Summary for Subcatchment 34: WS34

Runoff = 57.54 cfs @ 12.40 hrs, Volume= 7.280 af, Depth= 1.51"

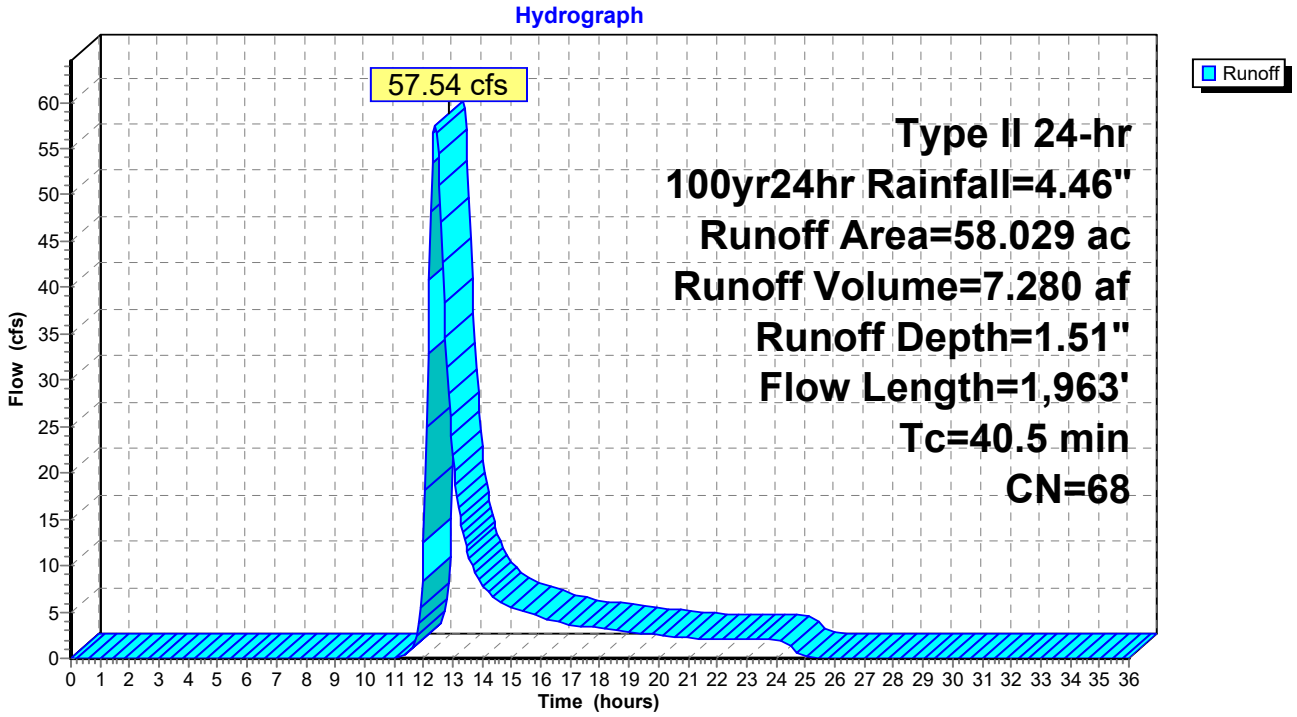
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.223 | 79 | Evergreen Forest, HSG D |
| * | 0.016 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.023 | 60 | Deciduous Forest, HSG B |
| * | 0.092 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.057 | 63 | Grassland/Herbaceous, HSG B |
| * | 0.003 | 80 | Pasture/Hay, HSG D |
| * | 0.055 | 61 | Pasture/Hay, HSG B |
| * | 0.024 | 61 | Pasture/Hay, HSG B |
| * | 0.139 | 89 | Developed Medium Intensity, HSG B |
| * | 0.766 | 88 | Developed Low Intensity, HSG B |
| * | 0.179 | 88 | Developed Low Intensity, HSG B |
| * | 0.222 | 89 | Developed Medium Intensity, HSG B |
| * | 0.174 | 89 | Developed Medium Intensity, HSG B |
| * | 0.133 | 88 | Developed Low Intensity, HSG B |
| * | 0.353 | 93 | Developed Low Intensity, HSG D |
| * | 0.150 | 84 | Developed Open Space, HSG D |
| * | 0.584 | 93 | Developed Low Intensity, HSG D |
| * | 0.363 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.389 | 84 | Developed Open Space, HSG D |
| * | 0.194 | 88 | Developed Low Intensity, HSG B |
| * | 0.109 | 68 | Developed Open Space, HSG B |
| * | 0.452 | 68 | Developed Open Space, HSG B |
| * | 0.148 | 84 | Developed Open Space, HSG D |
| * | 0.212 | 88 | Developed Low Intensity, HSG B |
| * | 1.124 | 93 | Developed Low Intensity, HSG D |
| * | 0.169 | 84 | Developed Open Space, HSG D |
| * | 0.018 | 94 | Developed Medium Intensity, HSG D |
| * | 0.051 | 71 | Cultivated Crops, HSG B |
| * | 0.393 | 81 | Cultivated Crops, HSG D |
| * | 0.529 | 81 | Cultivated Crops, HSG D |
| * | 0.463 | 81 | Cultivated Crops, HSG D |
| * | 1.719 | 71 | Cultivated Crops, HSG B |
| * | 7.463 | 71 | Cultivated Crops, HSG B |
| * | 0.978 | 81 | Cultivated Crops, HSG D |
| * | 0.115 | 58 | MEADOW, HSG B |
| * | 0.020 | 58 | MEADOW, HSG B |
| * | 0.067 | 98 | IMPERVIOUS, HSG B |
| * | 0.497 | 58 | MEADOW, HSG B |
| * | 0.765 | 58 | MEADOW, HSG B |
| * | 0.083 | 98 | IMPERVIOUS, HSG B |
| * | 0.107 | 58 | MEADOW, HSG B |
| * | 0.955 | 58 | MEADOW, HSG B |
| * | 0.305 | 78 | MEADOW, HSG D |
| * | 0.056 | 78 | MEADOW, HSG D |
| * | 0.114 | 58 | MEADOW, HSG B |
| * | 0.061 | 98 | IMPERVIOUS, HSG B |
| * | 0.016 | 78 | MEADOW, HSG D |
| * | 0.133 | 78 | MEADOW, HSG D |
| * | 1.405 | 58 | MEADOW, HSG B |
| * | 3.608 | 58 | MEADOW, HSG B |

| | | | |
|---|---|---|---|
| * | 0.029 | 98 | IMPERVIOUS, HSG B |
| * | 5.146 | 58 | MEADOW, HSG B |
| * | 16.585 | 58 | MEADOW, HSG B |
| * | 0.085 | 98 | IMPERVIOUS, HSG B |
| * | 0.422 | 98 | IMPERVIOUS, HSG B |
| * | 1.119 | 78 | MEADOW, HSG D |
| * | 8.143 | 78 | MEADOW, HSG D |
| | 58.029 | 68 | Weighted Average |
| | 57.283 | | 98.71% Pervious Area |
| | 0.746 | | 1.29% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 10.3 | 95 | 0.0264 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.8 | 5 | 0.0019 | 0.03 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.5 | 220 | 0.0230 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 30 | 0.0645 | 1.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 20 | 0.0786 | 5.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 32 | 0.0526 | 1.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.6 | 438 | 0.0504 | 1.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 162 | 0.0233 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 76 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 235 | 0.0192 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 143 | 0.0115 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 117 | 0.0141 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 99 | 0.0130 | 2.32 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.7 | 291 | 0.0026 | 1.04 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 40.5 | 1,963 | Total | | | |

## Subcatchment 34: WS34



## Summary for Subcatchment 35: WS35

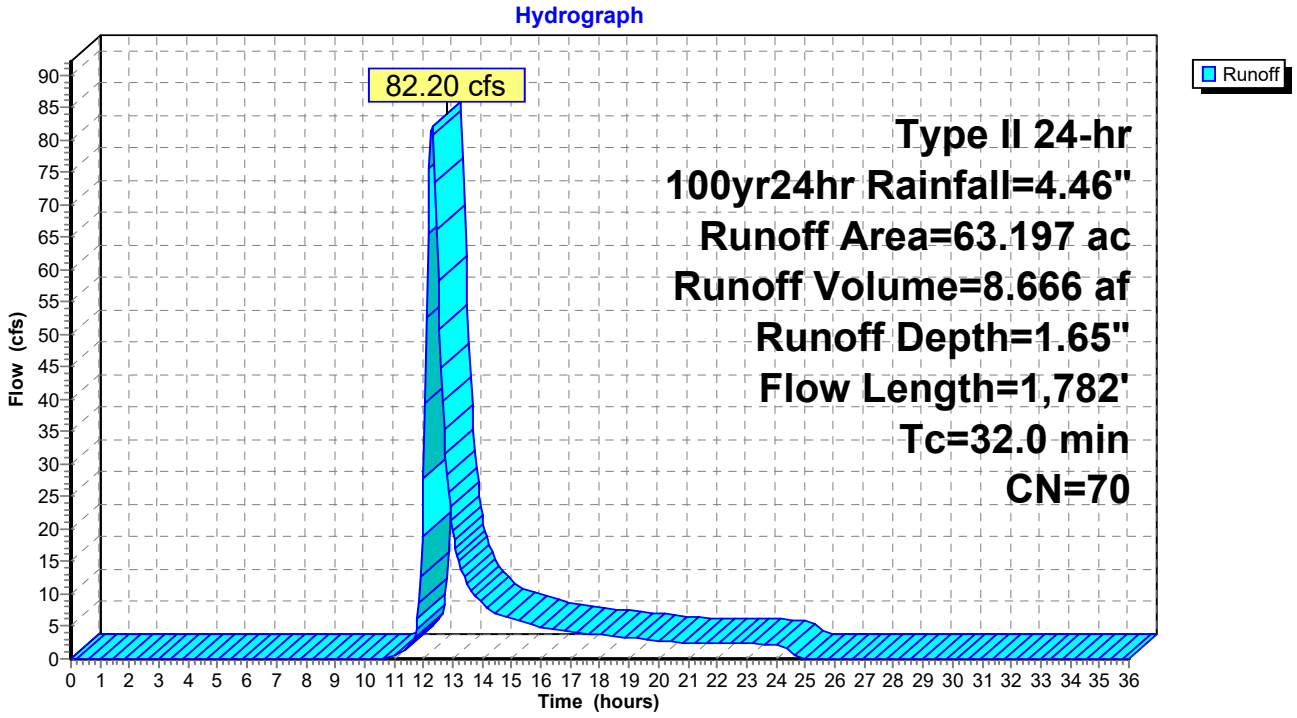
Runoff = 82.20 cfs @ 12.29 hrs, Volume= 8.666 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.060 | 93 | Developed Low Intensity, HSG D |
| * | 0.072 | 84 | Developed Open Space, HSG D |
| * | 0.305 | 93 | Developed Low Intensity, HSG D |
| * | 0.197 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.194 | 93 | Developed Low Intensity, HSG D |
| * | 1.190 | 80 | Pasture/Hay, HSG D |
| * | 0.558 | 61 | Pasture/Hay, HSG B |
| * | 0.164 | 89 | Developed Medium Intensity, HSG B |
| * | 0.485 | 94 | Developed Medium Intensity, HSG D |
| * | 0.096 | 68 | Developed Open Space, HSG B |
| * | 0.866 | 88 | Developed Low Intensity, HSG B |
| * | 0.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.002 | 71 | Cultivated Crops, HSG B |
| * | 0.049 | 81 | Cultivated Crops, HSG D |
| * | 1.288 | 71 | Cultivated Crops, HSG B |
| * | 10.960 | 81 | Cultivated Crops, HSG D |
| * | 1.419 | 71 | Cultivated Crops, HSG B |
| * | 3.398 | 71 | Cultivated Crops, HSG B |
| * | 9.815 | 71 | Cultivated Crops, HSG B |
| * | 6.074 | 81 | Cultivated Crops, HSG D |
| * | 0.125 | 58 | MEADOW, HSG B |
| * | 0.120 | 58 | MEADOW, HSG B |
| * | 1.241 | 58 | MEADOW, HSG B |
| * | 4.762 | 58 | MEADOW, HSG B |
| * | 0.600 | 78 | MEADOW, HSG D |
| * | 1.888 | 78 | MEADOW, HSG D |
| * | 0.471 | 58 | MEADOW, HSG B |
| * | 0.387 | 58 | MEADOW, HSG B |
| * | 0.336 | 58 | MEADOW, HSG B |
| * | 3.508 | 58 | MEADOW, HSG B |
| * | 0.053 | 98 | IMPERVIOUS, HSG B |
| * | 2.924 | 58 | MEADOW, HSG B |
| * | 9.040 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.250 | 98 | IMPERVIOUS, HSG B |
| * | 0.000 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG B |
| | 63.197 | 70 | Weighted Average |
| | 62.851 | | 99.45% Pervious Area |
| | 0.346 | | 0.55% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.3 | 79 | 0.0156 | 0.97 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.3 | 21 | 0.0605 | 1.29 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 0.4 | 83 | 0.0264 | 3.30 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 3.4 | 291 | 0.0251 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 5.3 | 303 | 0.0111 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.1 | 210 | 0.0088 | 0.85 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 13.3 | 582 | 0.0066 | 0.73 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.9 | 213 | 0.0167 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 32.0 | 1,782 | Total | | | |

## Subcatchment 35: WS35



## Summary for Subcatchment 36: WS36

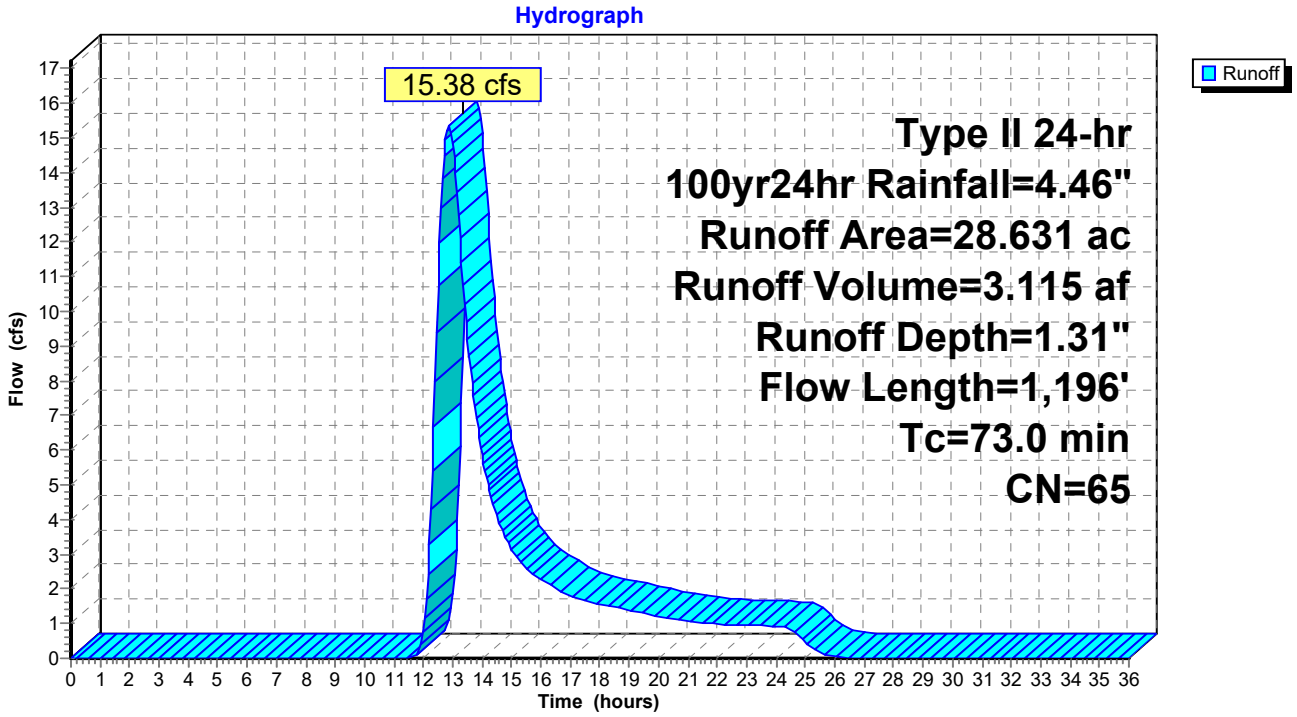
Runoff = 15.38 cfs @ 12.88 hrs, Volume= 3.115 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.192 | 61 | Pasture/Hay, HSG B |
| * | 0.386 | 80 | Pasture/Hay, HSG D |
| * | 0.342 | 61 | Pasture/Hay, HSG B |
| * | 1.804 | 71 | Cultivated Crops, HSG B |
| * | 0.670 | 81 | Cultivated Crops, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.069 | 78 | MEADOW, HSG D |
| * | 0.173 | 78 | MEADOW, HSG D |
| * | 3.854 | 58 | MEADOW, HSG B |
| * | 10.170 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.327 | 98 | IMPERVIOUS, HSG B |
| * | 0.998 | 78 | MEADOW, HSG D |
| * | 5.499 | 78 | MEADOW, HSG D |
| * | 0.091 | 98 | IMPERVIOUS, HSG D |
| * | 0.809 | 58 | MEADOW, HSG B |
| * | 3.072 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.085 | 98 | IMPERVIOUS, HSG B |
| | 28.631 | 65 | Weighted Average |
| | 28.043 | | 97.95% Pervious Area |
| | 0.588 | | 2.05% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 2.8 | 100 | 0.0040 | 0.59 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 49.6 | 205 | 0.0001 | 0.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 123 | 0.0415 | 1.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.4 | 328 | 0.0149 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.8 | 440 | 0.0067 | 0.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 73.0 | 1,196 | Total | | | |

## Subcatchment 36: WS36



## Summary for Subcatchment 37: WS37

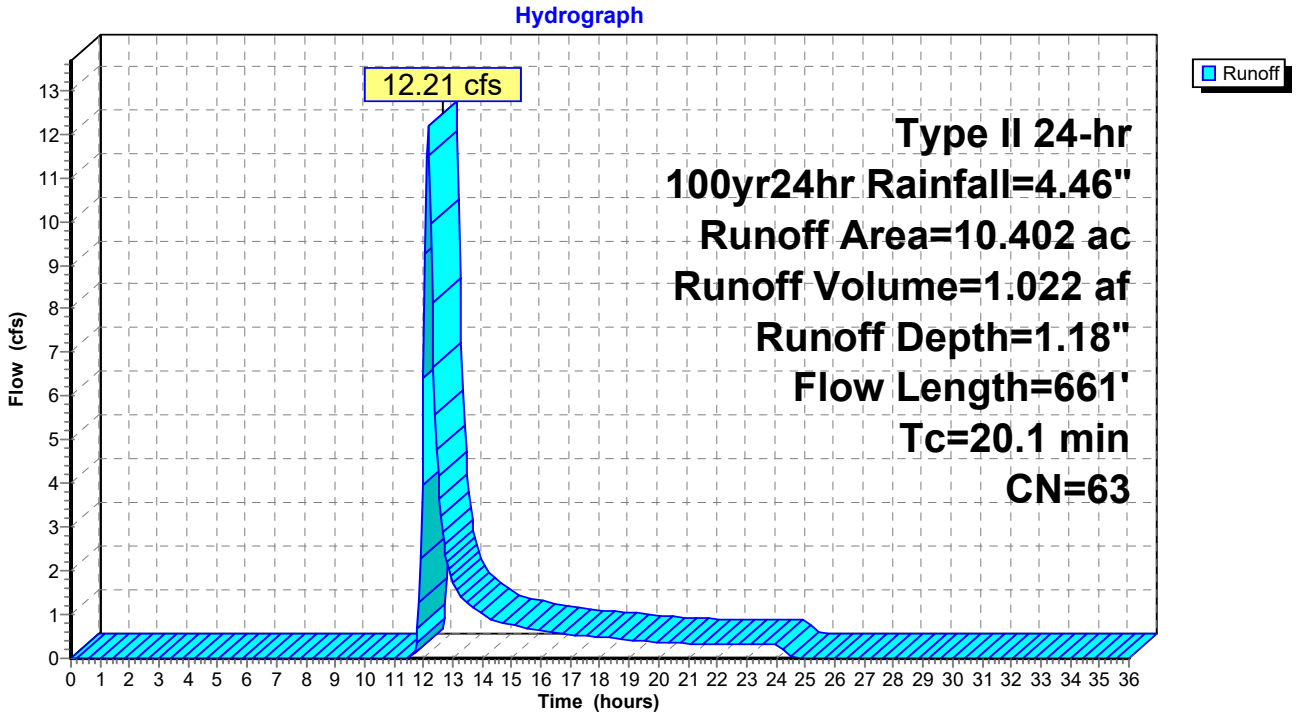
Runoff = 12.21 cfs @ 12.15 hrs, Volume= 1.022 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.009 | 88 | Developed Low Intensity, HSG B |
| * | 0.007 | 68 | Developed Open Space, HSG B |
| * | 0.044 | 68 | Developed Open Space, HSG B |
| * | 0.002 | 79 | Mixed Forest, HSG D |
| * | 0.127 | 60 | Mixed Forest, HSG B |
| * | 0.546 | 60 | Mixed Forest, HSG B |
| * | 0.476 | 60 | Deciduous Forest, HSG B |
| * | 0.079 | 88 | Developed Low Intensity, HSG B |
| * | 0.019 | 68 | Developed Open Space, HSG B |
| * | 0.318 | 81 | Cultivated Crops, HSG D |
| * | 2.556 | 71 | Cultivated Crops, HSG B |
| * | 0.120 | 71 | Cultivated Crops, HSG B |
| * | 0.138 | 58 | MEADOW, HSG B |
| * | 0.061 | 58 | MEADOW, HSG B |
| * | 0.207 | 58 | MEADOW, HSG B |
| * | 0.313 | 58 | MEADOW, HSG B |
| * | 0.022 | 78 | MEADOW, HSG D |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.574 | 58 | MEADOW, HSG B |
| * | 2.870 | 58 | MEADOW, HSG B |
| * | 0.294 | 58 | MEADOW, HSG B |
| * | 1.622 | 58 | MEADOW, HSG B |
| | 10.402 | 63 | Weighted Average |
| | 10.402 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.1 | 100 | 0.0240 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.2 | 70 | 0.0200 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 130 | 0.0263 | 1.14 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 23 | 0.0098 | 0.69 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 64 | 0.0416 | 1.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 52 | 0.0226 | 1.35 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 222 | 0.0108 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 20.1 | 661 | Total | | | |

## Subcatchment 37: WS37



## Summary for Subcatchment 38: WS38

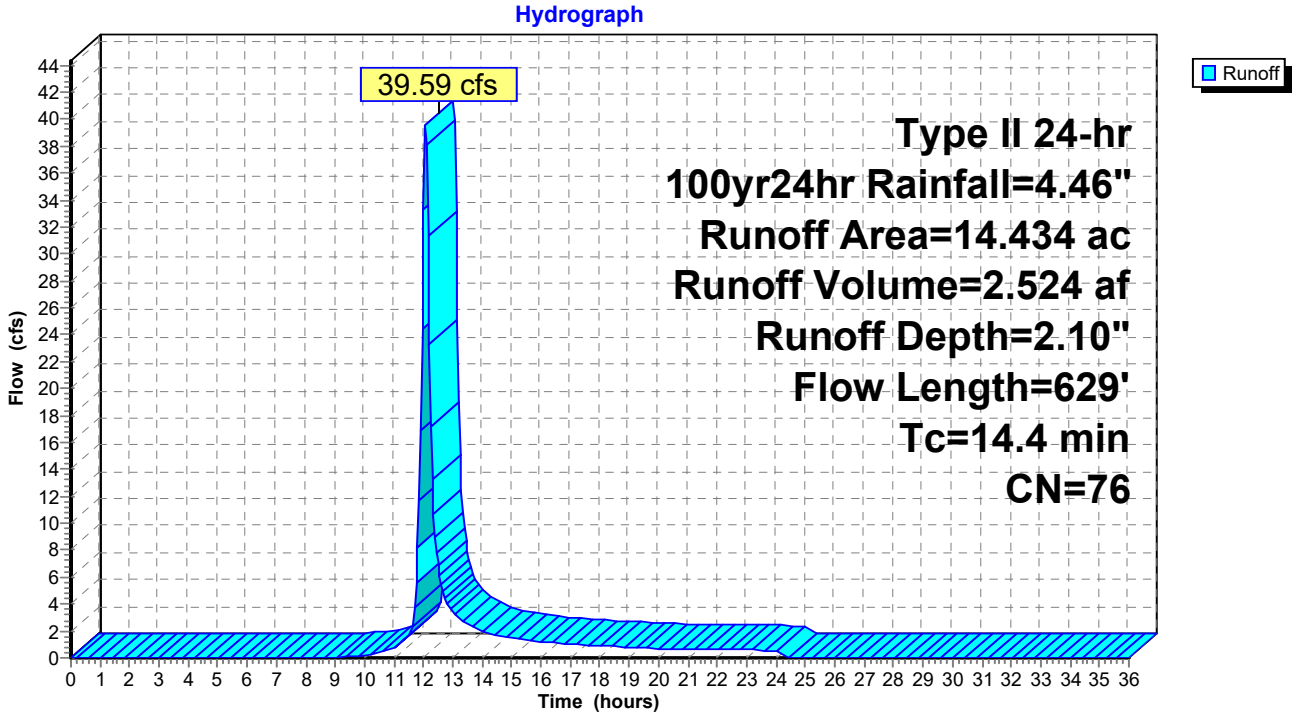
Runoff = 39.59 cfs @ 12.07 hrs, Volume= 2.524 af, Depth= 2.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.049 | 88 | Developed Low Intensity, HSG B |
| * | 0.006 | 88 | Developed Low Intensity, HSG B |
| * | 0.025 | 68 | Developed Open Space, HSG B |
| * | 0.018 | 88 | Developed Low Intensity, HSG B |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 0.191 | 84 | Developed Open Space, HSG D |
| * | 0.082 | 93 | Developed Low Intensity, HSG D |
| * | 0.200 | 84 | Developed Open Space, HSG D |
| * | 0.118 | 93 | Developed Low Intensity, HSG D |
| * | 0.043 | 84 | Developed Open Space, HSG D |
| * | 0.046 | 68 | Developed Open Space, HSG B |
| * | 0.509 | 61 | Pasture/Hay, HSG B |
| * | 1.654 | 80 | Pasture/Hay, HSG D |
| * | 3.128 | 71 | Cultivated Crops, HSG B |
| * | 0.039 | 81 | Cultivated Crops, HSG D |
| * | 0.073 | 71 | Cultivated Crops, HSG B |
| * | 3.794 | 81 | Cultivated Crops, HSG D |
| * | 0.021 | 98 | IMPERVIOUS, HSG D |
| * | 0.495 | 58 | MEADOW, HSG B |
| * | 0.040 | 58 | MEADOW, HSG B |
| * | 0.081 | 58 | MEADOW, HSG B |
| * | 0.034 | 98 | IMPERVIOUS, HSG B |
| * | 1.134 | 78 | MEADOW, HSG D |
| * | 0.151 | 78 | MEADOW, HSG D |
| * | 0.051 | 98 | IMPERVIOUS, HSG D |
| * | 0.002 | 58 | MEADOW, HSG B |
| * | 0.006 | 58 | MEADOW, HSG B |
| * | 0.039 | 98 | IMPERVIOUS, HSG B |
| * | 0.016 | 98 | IMPERVIOUS, HSG D |
| * | 0.123 | 58 | MEADOW, HSG B |
| * | 0.070 | 58 | MEADOW, HSG B |
| * | 0.754 | 78 | MEADOW, HSG D |
| * | 1.435 | 78 | MEADOW, HSG D |
| | 14.434 | 76 | Weighted Average |
| | 14.275 | | 98.89% Pervious Area |
| | 0.160 | | 1.11% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.9 | 100 | 0.0301 | 0.34 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 2.7 | 136 | 0.0086 | 0.84 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 220 | 0.0134 | 1.04 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 43 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 7 | 0.0073 | 0.77 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 124 | 0.0097 | 0.88 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.4 | 629 | Total | | | |

## Subcatchment 38: WS38



## Summary for Subcatchment 39: WS39

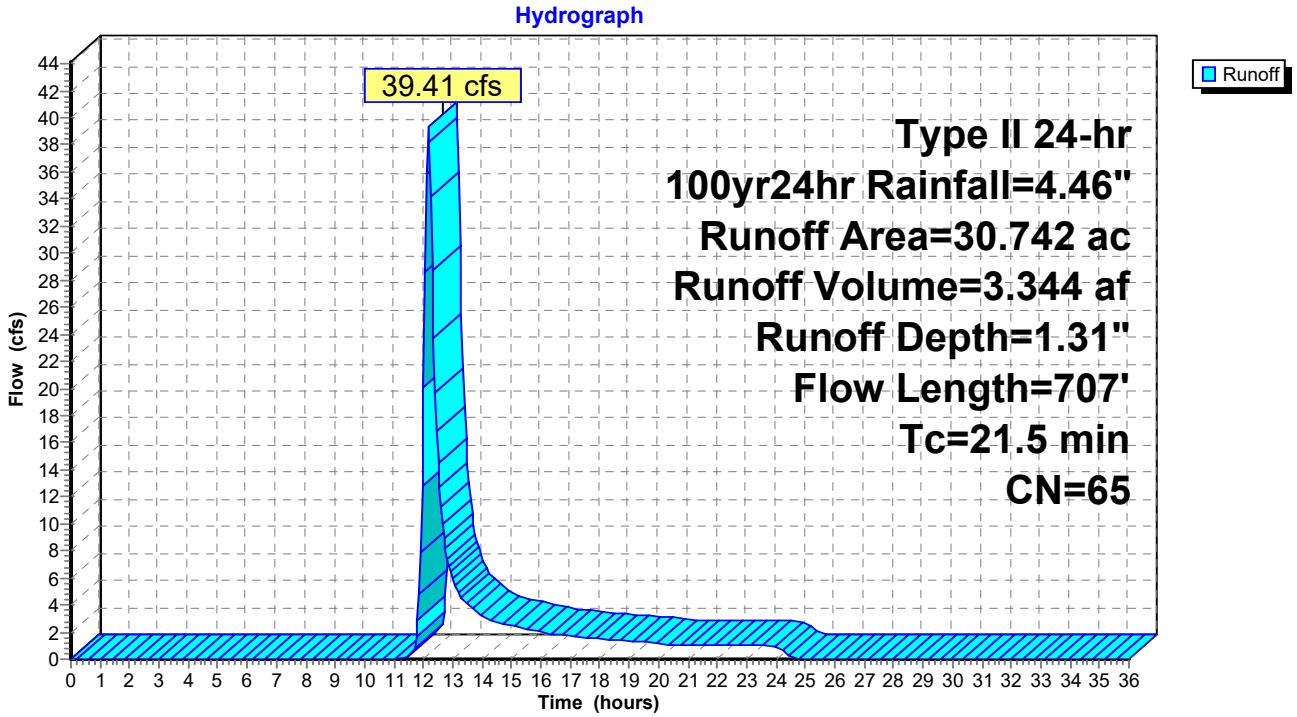
Runoff = 39.41 cfs @ 12.16 hrs, Volume= 3.344 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.176 | 68 | Developed Open Space, HSG B |
| * | 0.001 | 68 | Developed Open Space, HSG B |
| * | 0.359 | 68 | Developed Open Space, HSG B |
| * | 0.307 | 68 | Developed Open Space, HSG B |
| * | 0.222 | 68 | Developed Open Space, HSG B |
| * | 0.739 | 61 | Pasture/Hay, HSG B |
| * | 0.037 | 60 | Deciduous Forest, HSG B |
| * | 0.185 | 60 | Deciduous Forest, HSG B |
| * | 4.448 | 60 | Deciduous Forest, HSG B |
| * | 0.303 | 79 | Deciduous Forest, HSG D |
| * | 0.782 | 60 | Mixed Forest, HSG B |
| * | 0.775 | 60 | Mixed Forest, HSG B |
| * | 0.747 | 60 | Mixed Forest, HSG B |
| * | 0.142 | 79 | Mixed Forest, HSG D |
| * | 2.604 | 71 | Cultivated Crops, HSG B |
| * | 0.038 | 81 | Cultivated Crops, HSG D |
| * | 2.284 | 71 | Cultivated Crops, HSG B |
| * | 2.039 | 60 | Deciduous Forest, HSG B |
| * | 1.421 | 79 | Deciduous Forest, HSG D |
| * | 0.011 | 60 | Deciduous Forest, HSG B |
| * | 0.086 | 61 | Pasture/Hay, HSG B |
| * | 0.277 | 80 | Pasture/Hay, HSG D |
| * | 1.061 | 71 | Cultivated Crops, HSG B |
| * | 0.625 | 81 | Cultivated Crops, HSG D |
| * | 0.244 | 58 | MEADOW, HSG B |
| * | 0.066 | 58 | MEADOW, HSG B |
| * | 0.092 | 58 | MEADOW, HSG B |
| * | 0.048 | 98 | IMPERVIOUS, HSG B |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.099 | 58 | MEADOW, HSG B |
| * | 0.023 | 58 | MEADOW, HSG B |
| * | 0.071 | 58 | MEADOW, HSG B |
| * | 0.095 | 58 | MEADOW, HSG B |
| * | 0.077 | 58 | MEADOW, HSG B |
| * | 0.045 | 98 | IMPERVIOUS, HSG B |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.415 | 58 | MEADOW, HSG B |
| * | 0.565 | 58 | MEADOW, HSG B |
| * | 0.004 | 98 | IMPERVIOUS, HSG B |
| * | 0.027 | 78 | MEADOW, HSG D |
| * | 1.973 | 58 | MEADOW, HSG B |
| * | 0.285 | 58 | MEADOW, HSG B |
| * | 4.793 | 58 | MEADOW, HSG B |
| * | 0.043 | 98 | IMPERVIOUS, HSG B |
| * | 0.379 | 98 | IMPERVIOUS, HSG B |
| * | 0.716 | 78 | MEADOW, HSG D |
| * | 0.772 | 78 | MEADOW, HSG D |
| * | 0.019 | 98 | IMPERVIOUS, HSG D |
| | 30.742 | 65 | Weighted Average |
| | 30.204 | | 98.25% Pervious Area |
| | 0.537 | | 1.75% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.3 | 89 | 0.0541 | 0.20 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.7 | 11 | 0.0329 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.9 | 63 | 0.0257 | 1.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 69 | 0.0279 | 1.17 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 25 | 0.0360 | 1.33 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 21 | 0.0206 | 2.91 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 34 | 0.0220 | 1.04 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 19 | 0.0145 | 0.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 137 | 0.0170 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 144 | 0.0051 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 95 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 21.5 | 707 | Total | | | |

## Subcatchment 39: WS39



## Summary for Subcatchment 40: WS40

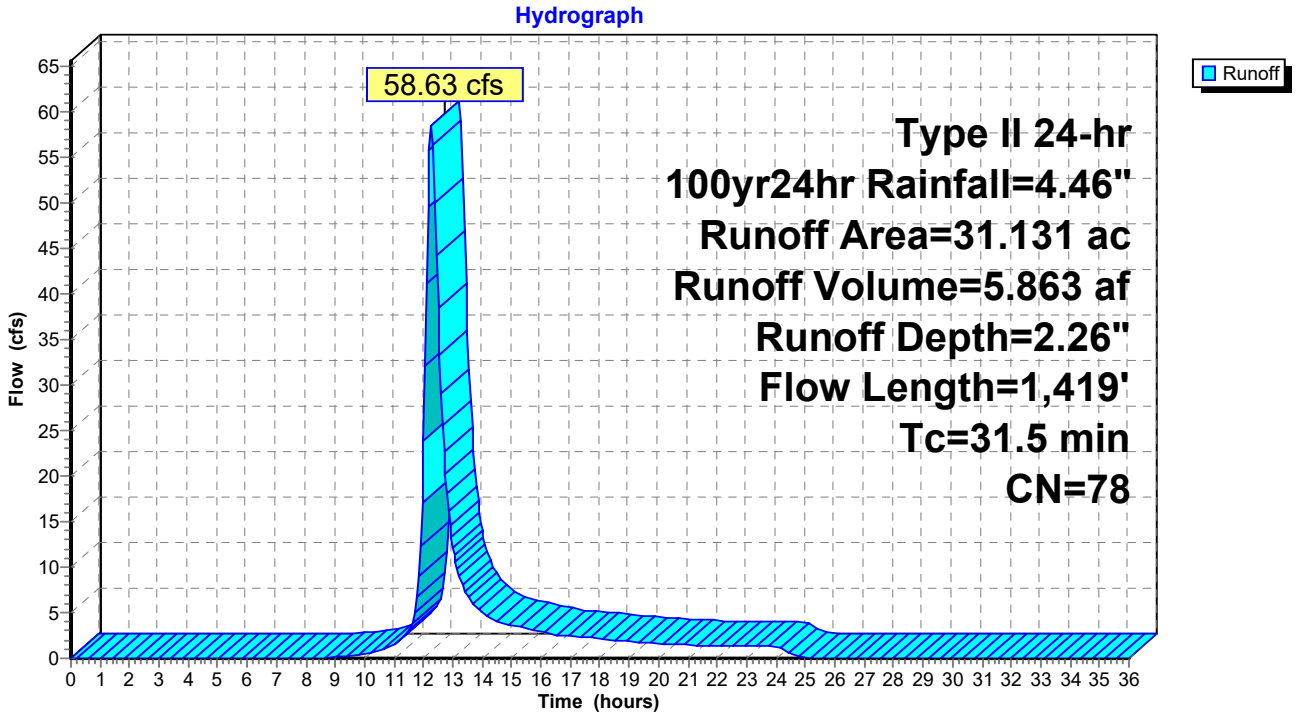
Runoff = 58.63 cfs @ 12.27 hrs, Volume= 5.863 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 81 | Cultivated Crops, HSG D |
| * | 6.748 | 79 | Deciduous Forest, HSG D |
| * | 0.190 | 79 | Deciduous Forest, HSG D |
| * | 1.168 | 80 | Pasture/Hay, HSG D |
| * | 0.518 | 80 | Pasture/Hay, HSG D |
| * | 0.057 | 62 | Cultivated Crops, HSG A |
| * | 0.873 | 81 | Cultivated Crops, HSG D |
| * | 3.427 | 81 | Cultivated Crops, HSG D |
| * | 0.123 | 58 | MEADOW, HSG B |
| * | 0.309 | 58 | MEADOW, HSG B |
| * | 0.780 | 78 | MEADOW, HSG D |
| * | 0.031 | 58 | MEADOW, HSG B |
| * | 0.002 | 58 | MEADOW, HSG B |
| * | 0.119 | 58 | MEADOW, HSG B |
| * | 0.004 | 98 | IMPERVIOUS, HSG B |
| * | 0.140 | 78 | MEADOW, HSG D |
| * | 0.200 | 78 | MEADOW, HSG D |
| * | 0.286 | 78 | MEADOW, HSG D |
| * | 0.078 | 78 | MEADOW, HSG D |
| * | 0.114 | 98 | IMPERVIOUS, HSG D |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.077 | 58 | MEADOW, HSG B |
| * | 0.924 | 78 | MEADOW, HSG D |
| * | 0.625 | 78 | MEADOW, HSG D |
| * | 0.302 | 58 | MEADOW, HSG B |
| * | 0.712 | 78 | MEADOW, HSG D |
| * | 2.226 | 78 | MEADOW, HSG D |
| * | 1.099 | 78 | MEADOW, HSG D |
| * | 0.991 | 78 | MEADOW, HSG D |
| * | 8.744 | 78 | MEADOW, HSG D |
| * | 0.200 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| | 31.131 | 78 | Weighted Average |
| | 30.814 | | 98.98% Pervious Area |
| | 0.317 | | 1.02% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.4 | 50 | 0.0177 | 0.24 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 6.2 | 50 | 0.0266 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.1 | 7 | 0.0220 | 1.04 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 72 | 0.0159 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.7 | 145 | 0.0412 | 1.42 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 129 | 0.0241 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 57 | 0.0343 | 1.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 18 | 0.0232 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 20 | 0.0223 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 13 | 0.0173 | 2.67 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 21 | 0.0211 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.1 | 227 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.9 | 243 | 0.0142 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 51 | 0.0179 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 9 | 0.0066 | 0.57 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 210 | 0.0311 | 1.59 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 13 | 0.0151 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.4 | 83 | 0.0196 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 31.5 | 1,419 | Total | | | |

## Subcatchment 40: WS40



## Summary for Subcatchment 41: WS41

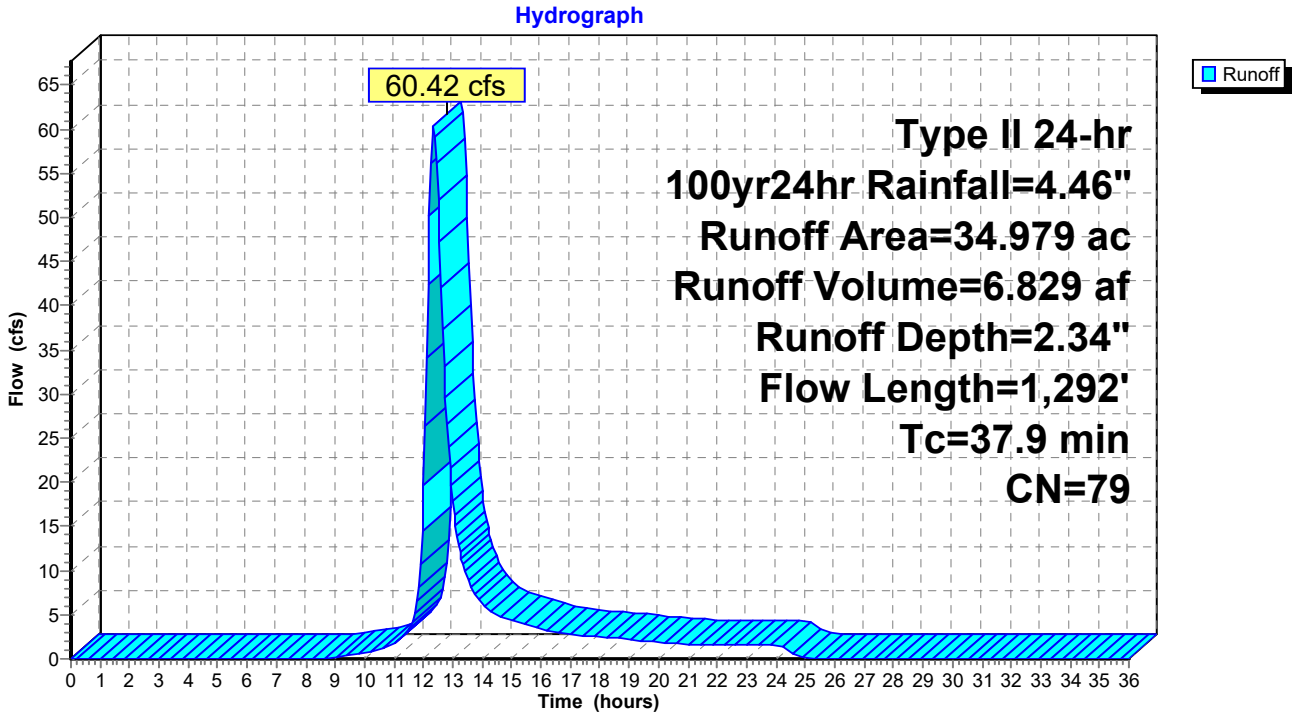
Runoff = 60.42 cfs @ 12.35 hrs, Volume= 6.829 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.146 | 68 | Developed Open Space, HSG B |
| * | 0.081 | 89 | Developed Medium Intensity, HSG B |
| * | 0.083 | 88 | Developed Low Intensity, HSG B |
| * | 0.299 | 93 | Developed Low Intensity, HSG D |
| * | 0.413 | 80 | Pasture/Hay, HSG D |
| * | 2.029 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.882 | 84 | Developed Open Space, HSG D |
| * | 0.146 | 93 | Developed Low Intensity, HSG D |
| * | 0.647 | 79 | Mixed Forest, HSG D |
| * | 0.101 | 80 | Pasture/Hay, HSG D |
| * | 0.333 | 80 | Pasture/Hay, HSG D |
| * | 0.017 | 80 | Pasture/Hay, HSG D |
| * | 0.021 | 79 | Mixed Forest, HSG D |
| * | 0.711 | 84 | Developed Open Space, HSG D |
| * | 1.187 | 71 | Cultivated Crops, HSG B |
| * | 4.801 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 80 | Pasture/Hay, HSG D |
| * | 0.113 | 81 | Cultivated Crops, HSG D |
| * | 0.470 | 78 | MEADOW, HSG D |
| * | 0.529 | 78 | MEADOW, HSG D |
| * | 0.753 | 78 | MEADOW, HSG D |
| * | 0.187 | 78 | MEADOW, HSG D |
| * | 0.083 | 98 | IMPERVIOUS, HSG D |
| * | 0.122 | 78 | MEADOW, HSG D |
| * | 0.049 | 98 | IMPERVIOUS, HSG D |
| * | 0.369 | 78 | MEADOW, HSG D |
| * | 0.087 | 78 | MEADOW, HSG D |
| * | 0.069 | 78 | MEADOW, HSG D |
| * | 0.042 | 78 | MEADOW, HSG D |
| * | 0.130 | 78 | MEADOW, HSG D |
| * | 0.104 | 78 | MEADOW, HSG D |
| * | 0.210 | 78 | MEADOW, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 5.749 | 78 | MEADOW, HSG D |
| * | 13.771 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.204 | 98 | IMPERVIOUS, HSG D |
| | 34.979 | 79 | Weighted Average |
| | 34.599 | | 98.92% Pervious Area |
| | 0.379 | | 1.08% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.5 | 100 | 0.0466 | 0.20 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.1 | 63 | 0.0054 | 0.51 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.4 | 330 | 0.0152 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 66 | 0.0401 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.2 | 253 | 0.0093 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.6 | 424 | 0.0064 | 0.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 36 | 0.0056 | 0.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 21 | 0.0240 | 1.40 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 37.9 | 1,292 | Total | | | |

## Subcatchment 41: WS41



## Summary for Subcatchment 42: WS42

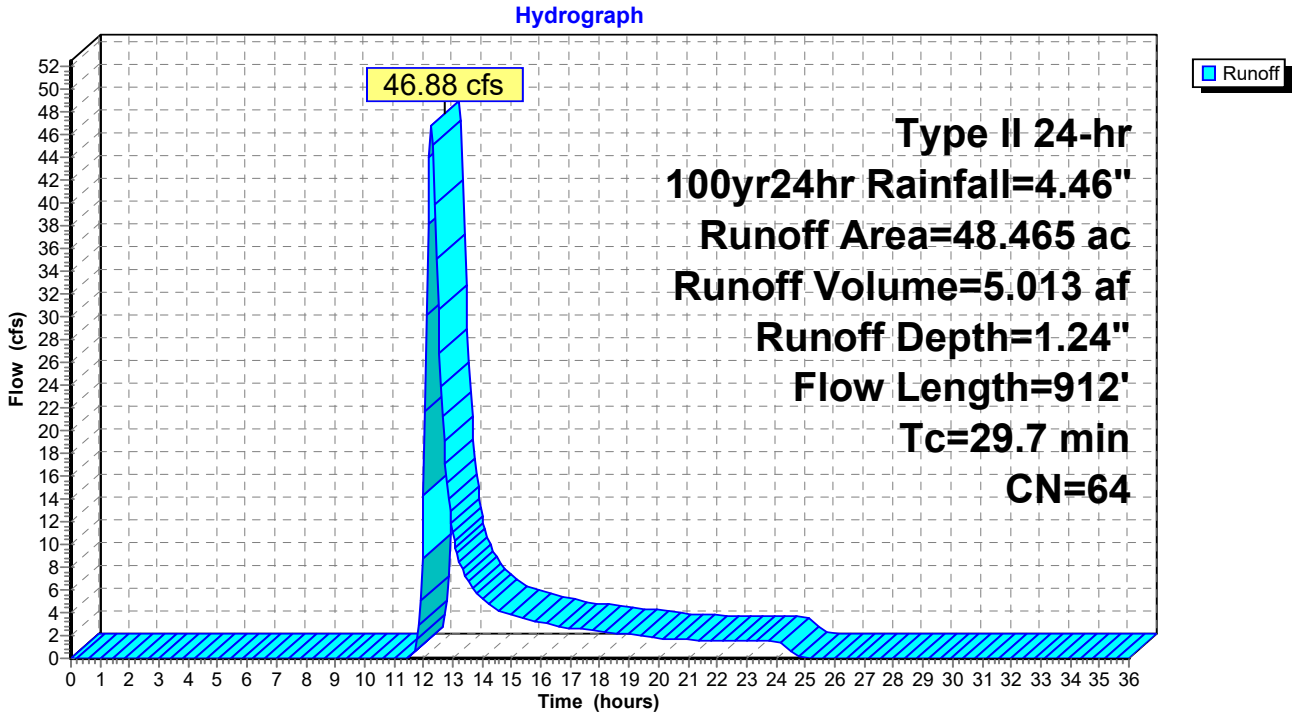
Runoff = 46.88 cfs @ 12.27 hrs, Volume= 5.013 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.086 | 61 | Pasture/Hay, HSG B |
| * | 0.094 | 61 | Pasture/Hay, HSG B |
| * | 0.024 | 67 | Shrub/Scrub, HSG B |
| * | 0.182 | 60 | Deciduous Forest, HSG B |
| * | 1.268 | 81 | Cultivated Crops, HSG D |
| * | 0.576 | 81 | Cultivated Crops, HSG D |
| * | 0.014 | 71 | Cultivated Crops, HSG B |
| * | 0.064 | 81 | Cultivated Crops, HSG D |
| * | 7.666 | 71 | Cultivated Crops, HSG B |
| * | 0.108 | 86 | Woody Wetlands, HSG D |
| * | 0.006 | 86 | Woody Wetlands, HSG D |
| * | 0.222 | 58 | MEADOW, HSG B |
| * | 0.005 | 58 | MEADOW, HSG B |
| * | 0.071 | 58 | MEADOW, HSG B |
| * | 0.089 | 58 | MEADOW, HSG B |
| * | 0.142 | 58 | MEADOW, HSG B |
| * | 1.068 | 58 | MEADOW, HSG B |
| * | 1.587 | 78 | MEADOW, HSG D |
| * | 4.131 | 78 | MEADOW, HSG D |
| * | 0.139 | 98 | IMPERVIOUS, HSG D |
| * | 0.381 | 78 | MEADOW, HSG D |
| * | 5.324 | 58 | MEADOW, HSG B |
| * | 24.551 | 58 | MEADOW, HSG B |
| * | 0.085 | 98 | IMPERVIOUS, HSG B |
| * | 0.464 | 98 | IMPERVIOUS, HSG B |
| * | 0.117 | 78 | MEADOW, HSG D |
| | 48.465 | 64 | Weighted Average |
| | 47.776 | | 98.58% Pervious Area |
| | 0.688 | | 1.42% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 14.8 | 100 | 0.0117 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 11.7 | 638 | 0.0169 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.2 | 175 | 0.0166 | 0.90 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.7 | 912 | Total | | | |

## Subcatchment 42: WS42



## Summary for Subcatchment 43: WS43

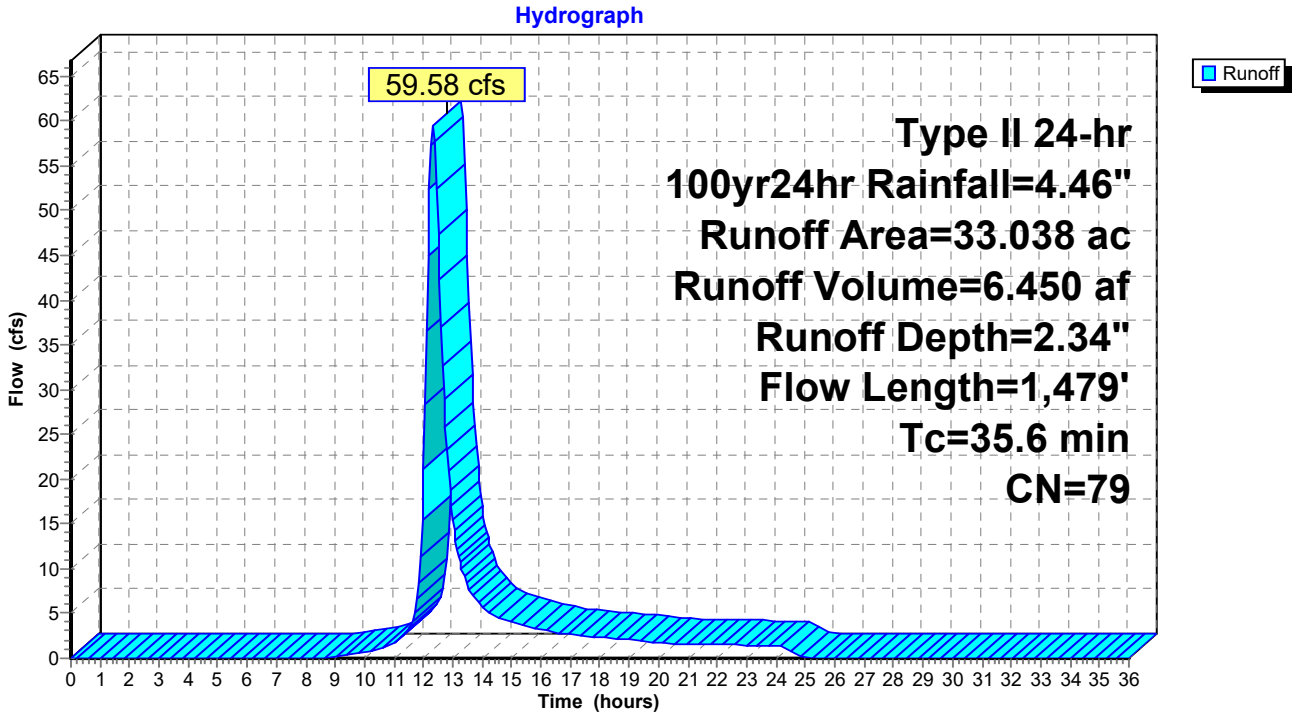
Runoff = 59.58 cfs @ 12.31 hrs, Volume= 6.450 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.057 | 79 | Deciduous Forest, HSG D |
| * | 0.032 | 36 | Deciduous Forest, HSG A |
| * | 0.169 | 79 | Mixed Forest, HSG D |
| * | 0.006 | 36 | Mixed Forest, HSG A |
| * | 0.081 | 79 | Evergreen Forest, HSG D |
| * | 0.103 | 79 | Mixed Forest, HSG D |
| * | 1.268 | 79 | Mixed Forest, HSG D |
| * | 0.155 | 79 | Mixed Forest, HSG D |
| * | 0.014 | 60 | Mixed Forest, HSG B |
| * | 0.222 | 79 | Mixed Forest, HSG D |
| * | 0.370 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.029 | 60 | Mixed Forest, HSG B |
| * | 3.432 | 79 | Deciduous Forest, HSG D |
| * | 0.890 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.202 | 93 | Developed Low Intensity, HSG D |
| * | 0.021 | 88 | Developed Low Intensity, HSG B |
| * | 0.183 | 88 | Developed Low Intensity, HSG B |
| * | 0.604 | 84 | Developed Open Space, HSG D |
| * | 0.166 | 84 | Developed Open Space, HSG D |
| * | 0.252 | 93 | Developed Low Intensity, HSG D |
| * | 0.012 | 80 | Pasture/Hay, HSG D |
| * | 0.023 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.030 | 80 | Pasture/Hay, HSG D |
| * | 0.013 | 93 | Developed Low Intensity, HSG D |
| * | 5.016 | 81 | Cultivated Crops, HSG D |
| * | 1.470 | 71 | Cultivated Crops, HSG B |
| * | 0.007 | 62 | Cultivated Crops, HSG A |
| * | 0.226 | 78 | MEADOW, HSG D |
| * | 0.039 | 98 | IMPERVIOUS, HSG D |
| * | 0.040 | 78 | MEADOW, HSG D |
| * | 0.055 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG D |
| * | 5.861 | 78 | MEADOW, HSG D |
| * | 11.012 | 78 | MEADOW, HSG D |
| * | 0.042 | 98 | IMPERVIOUS, HSG D |
| * | 0.417 | 98 | IMPERVIOUS, HSG D |
| * | 0.475 | 58 | MEADOW, HSG B |
| * | 0.037 | 58 | MEADOW, HSG B |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| | 33.038 | 79 | Weighted Average |
| | 32.533 | | 98.47% Pervious Area |
| | 0.504 | | 1.53% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.5 | 100 | 0.0221 | 0.30 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.5 | 40 | 0.0244 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.5 | 254 | 0.0177 | 1.20 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.2 | 183 | 0.0244 | 1.41 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.6 | 117 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 113 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.0 | 118 | 0.0191 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 14.0 | 285 | 0.0024 | 0.34 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 120 | 0.0073 | 1.73 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 11 | 0.0035 | 0.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 23 | 0.0106 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.2 | 18 | 0.0056 | 1.52 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 33 | 0.0039 | 1.27 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.6 | 65 | 0.0070 | 1.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 35.6 | 1,479 | Total | | | |

## Subcatchment 43: WS43



## Summary for Subcatchment 44: WS44

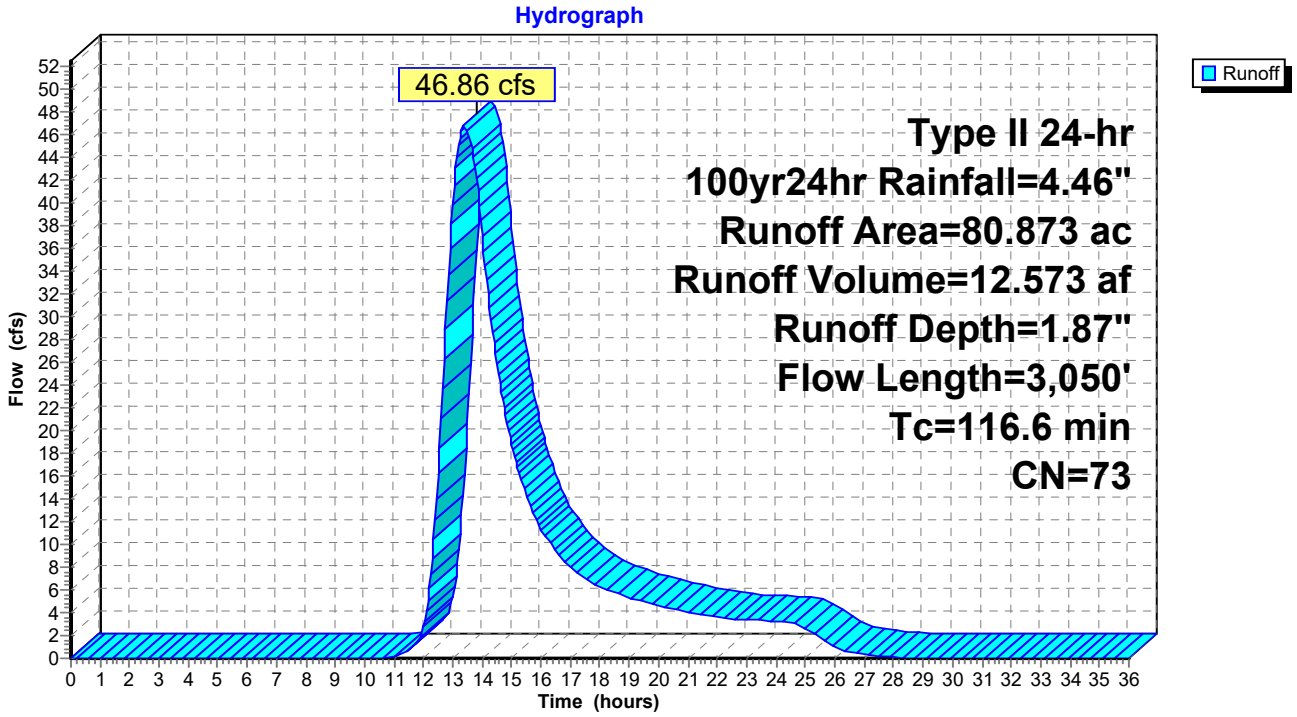
Runoff = 46.86 cfs @ 13.37 hrs, Volume= 12.573 af, Depth= 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 0.222 | 39 | Pasture/Hay, HSG A |
| * | 0.445 | 39 | Pasture/Hay, HSG A |
| * | 1.019 | 36 | Deciduous Forest, HSG A |
| * | 0.780 | 36 | Deciduous Forest, HSG A |
| * | 0.046 | 81 | Developed Low Intensity, HSG A |
| * | 0.445 | 36 | Deciduous Forest, HSG A |
| * | 1.557 | 80 | Pasture/Hay, HSG D |
| * | 0.045 | 79 | Mixed Forest, HSG D |
| * | 0.002 | 36 | Mixed Forest, HSG A |
| * | 1.592 | 79 | Evergreen Forest, HSG D |
| * | 0.328 | 36 | Evergreen Forest, HSG A |
| * | 0.720 | 36 | Deciduous Forest, HSG A |
| * | 5.226 | 79 | Deciduous Forest, HSG D |
| * | 6.461 | 79 | Deciduous Forest, HSG D |
| * | 0.057 | 36 | Deciduous Forest, HSG A |
| * | 2.735 | 79 | Mixed Forest, HSG D |
| * | 0.243 | 93 | Developed Low Intensity, HSG D |
| * | 0.965 | 85 | Grassland/Herbaceous, HSG D |
| * | 0.137 | 93 | Developed Low Intensity, HSG D |
| * | 0.648 | 93 | Developed Low Intensity, HSG D |
| * | 0.687 | 93 | Developed Low Intensity, HSG D |
| * | 0.013 | 93 | Developed Low Intensity, HSG D |
| * | 0.401 | 62 | Cultivated Crops, HSG A |
| * | 16.357 | 62 | Cultivated Crops, HSG A |
| * | 3.033 | 81 | Cultivated Crops, HSG D |
| * | 7.467 | 81 | Cultivated Crops, HSG D |
| * | 0.778 | 62 | Cultivated Crops, HSG A |
| * | 0.299 | 78 | MEADOW, HSG D |
| * | 0.146 | 78 | MEADOW, HSG D |
| * | 0.095 | 78 | MEADOW, HSG D |
| * | 0.157 | 78 | MEADOW, HSG D |
| * | 0.044 | 78 | MEADOW, HSG D |
| * | 0.001 | 78 | MEADOW, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.694 | 30 | MEADOW, HSG A |
| * | 0.340 | 30 | MEADOW, HSG A |
| * | 5.500 | 78 | MEADOW, HSG D |
| * | 16.262 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.793 | 98 | IMPERVIOUS, HSG D |
| * | 0.906 | 78 | MEADOW, HSG D |
| * | 2.741 | 78 | MEADOW, HSG D |
| | 80.873 | 73 | Weighted Average |
| | 80.038 | | 98.97% Pervious Area |
| | 0.836 | | 1.03% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.7 | 100 | 0.0610 | 0.45 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.3 | 41 | 0.0505 | 2.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 216 | 0.0304 | 1.57 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 8.1 | 517 | 0.0141 | 1.07 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 186 | 0.0144 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 32.0 | 677 | 0.0050 | 0.35 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.6 | 98 | 0.0132 | 1.03 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.1 | 45 | 0.0089 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 141 | 0.0075 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 28 | 0.0018 | 0.86 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.6 | 66 | 0.0100 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 27.9 | 733 | 0.0039 | 0.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 26 | 0.0089 | 1.92 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 1.3 | 33 | 0.0034 | 0.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 29.2 | 145 | 0.0001 | 0.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 116.6 | 3,050 | Total | | | |

## Subcatchment 44: WS44



## Summary for Subcatchment 45: WS45

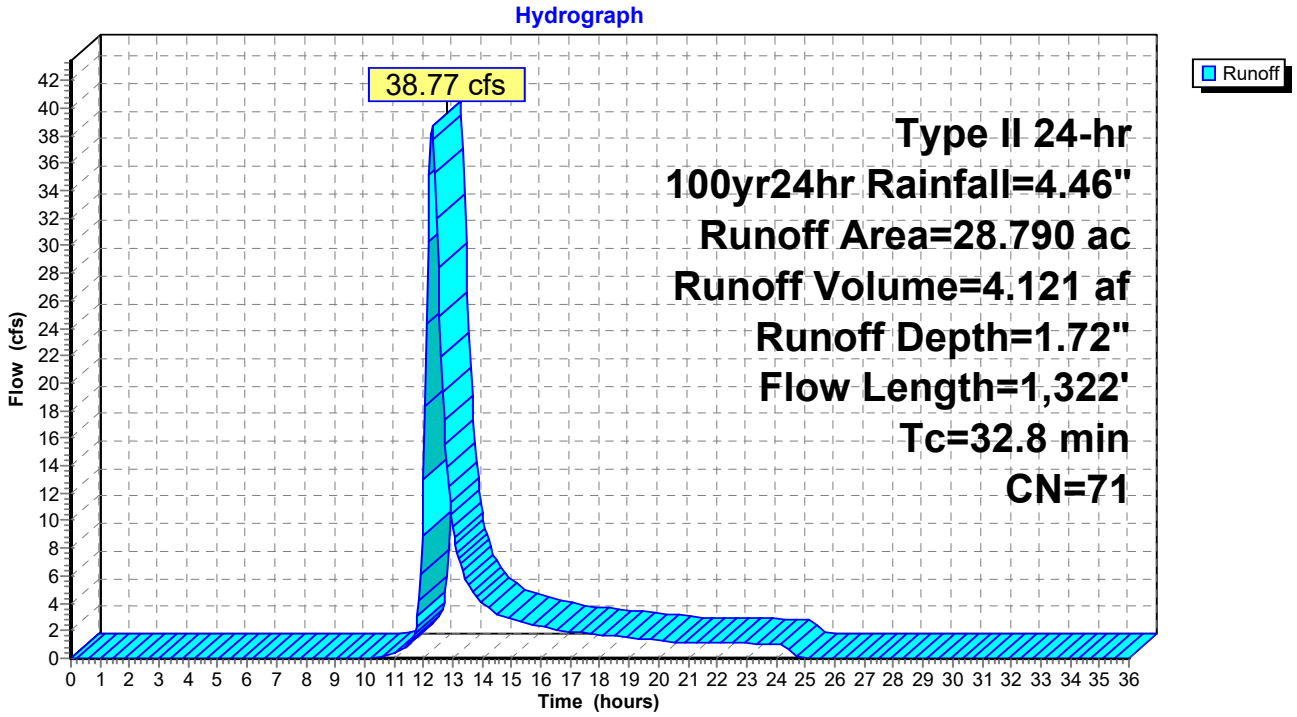
Runoff = 38.77 cfs @ 12.30 hrs, Volume= 4.121 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.280 | 79 | Deciduous Forest, HSG D |
| * | 0.498 | 62 | Cultivated Crops, HSG A |
| * | 0.591 | 81 | Cultivated Crops, HSG D |
| * | 0.275 | 78 | MEADOW, HSG D |
| * | 0.036 | 78 | MEADOW, HSG D |
| * | 0.068 | 98 | IMPERVIOUS, HSG D |
| * | 1.729 | 30 | MEADOW, HSG A |
| * | 2.797 | 30 | MEADOW, HSG A |
| * | 0.888 | 78 | MEADOW, HSG D |
| * | 3.123 | 78 | MEADOW, HSG D |
| * | 17.916 | 78 | MEADOW, HSG D |
| * | 0.085 | 98 | IMPERVIOUS, HSG D |
| * | 0.504 | 98 | IMPERVIOUS, HSG D |
| | 28.790 | 71 | Weighted Average |
| | 28.132 | | 97.72% Pervious Area |
| | 0.657 | | 2.28% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.5 | 61 | 0.0261 | 0.29 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 5.0 | 39 | 0.0274 | 0.13 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.2 | 87 | 0.0295 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 200 | 0.0157 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 277 | 0.0280 | 1.17 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 63 | 0.0099 | 0.70 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 81 | 0.0226 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 29 | 0.0104 | 0.71 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 20 | 0.0101 | 2.04 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.5 | 30 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 11.2 | 435 | 0.0085 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 32.8 | 1,322 | Total | | | |

## Subcatchment 45: WS45



## Summary for Subcatchment 46: WS46

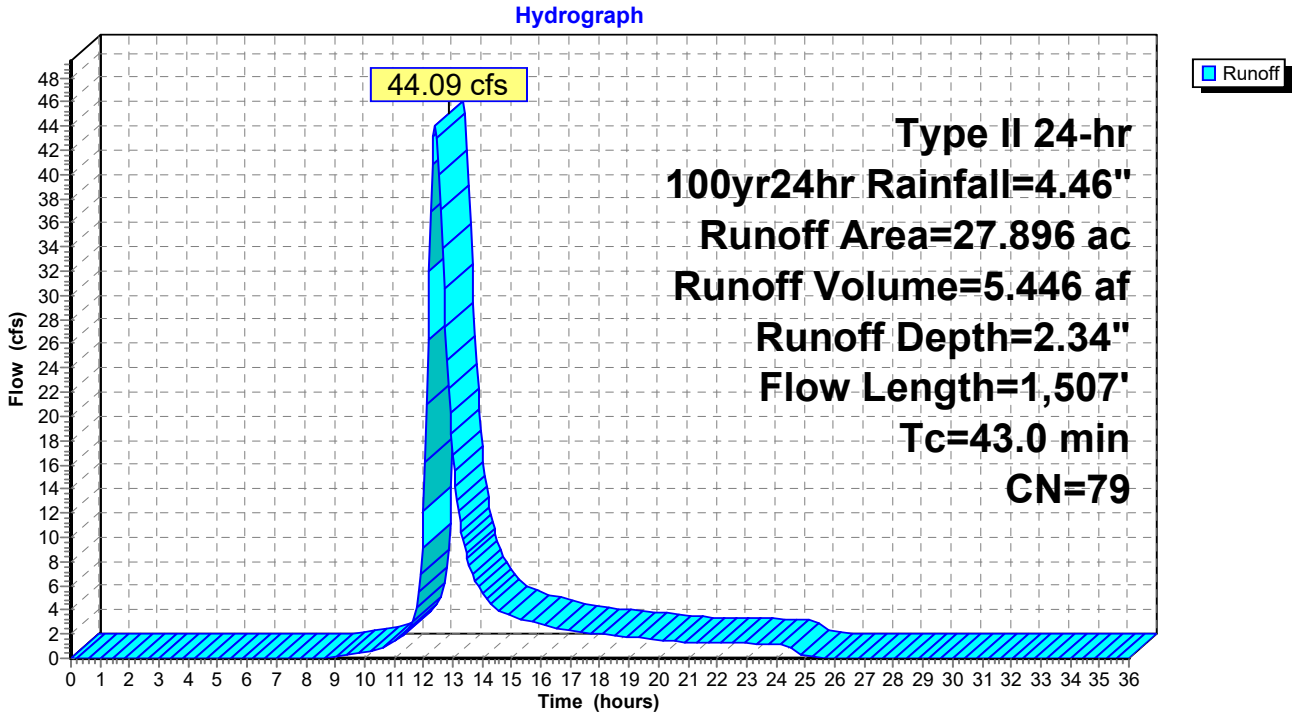
Runoff = 44.09 cfs @ 12.41 hrs, Volume= 5.446 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.235 | 80 | Pasture/Hay, HSG D |
| * | 1.025 | 81 | Cultivated Crops, HSG D |
| * | 4.740 | 81 | Cultivated Crops, HSG D |
| * | 0.522 | 78 | MEADOW, HSG D |
| * | 0.686 | 78 | MEADOW, HSG D |
| * | 1.727 | 78 | MEADOW, HSG D |
| * | 0.462 | 78 | MEADOW, HSG D |
| * | 3.448 | 78 | MEADOW, HSG D |
| * | 0.185 | 98 | IMPERVIOUS, HSG D |
| * | 0.830 | 78 | MEADOW, HSG D |
| * | 2.056 | 78 | MEADOW, HSG D |
| * | 11.673 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.263 | 98 | IMPERVIOUS, HSG D |
| | 27.896 | 79 | Weighted Average |
| | 27.405 | | 98.24% Pervious Area |
| | 0.491 | | 1.76% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.5 | 100 | 0.0180 | 0.13 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.5 | 91 | 0.0207 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.7 | 223 | 0.0037 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.9 | 383 | 0.0343 | 1.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 99 | 0.0327 | 1.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 65 | 0.0242 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 15 | 0.0110 | 2.13 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.2 | 11 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 11 | 0.0027 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.3 | 207 | 0.0128 | 0.79 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.8 | 81 | 0.0122 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.5 | 142 | 0.0056 | 0.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 33 | 0.0070 | 0.59 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 46 | 0.0105 | 0.92 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 43.0 | 1,507 | Total | | | |

## Subcatchment 46: WS46



## Summary for Subcatchment 47: WS47

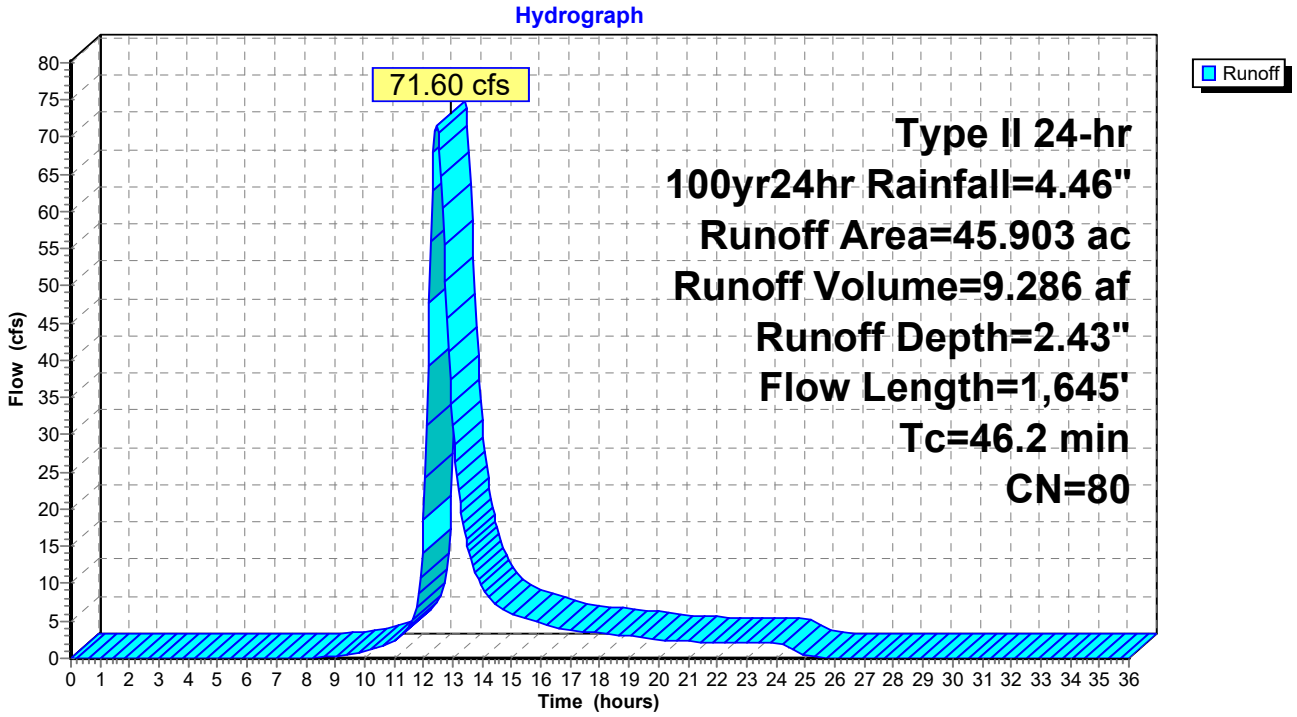
Runoff = 71.60 cfs @ 12.45 hrs, Volume= 9.286 af, Depth= 2.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.146 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.171 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.424 | 93 | Developed Low Intensity, HSG D |
| * | 0.086 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 0.015 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.119 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.030 | 80 | Pasture/Hay, HSG D |
| * | 0.037 | 80 | Pasture/Hay, HSG D |
| * | 0.039 | 86 | Woody Wetlands, HSG D |
| * | 0.118 | 86 | Woody Wetlands, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.007 | 93 | Developed Low Intensity, HSG D |
| * | 0.438 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 86 | Woody Wetlands, HSG D |
| * | 0.185 | 94 | Developed Medium Intensity, HSG D |
| * | 0.037 | 94 | Developed Medium Intensity, HSG D |
| * | 0.401 | 84 | Developed Open Space, HSG D |
| * | 0.269 | 93 | Developed Low Intensity, HSG D |
| * | 0.259 | 84 | Developed Open Space, HSG D |
| * | 0.522 | 93 | Developed Low Intensity, HSG D |
| * | 0.452 | 81 | Cultivated Crops, HSG D |
| * | 3.861 | 81 | Cultivated Crops, HSG D |
| * | 4.339 | 81 | Cultivated Crops, HSG D |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.010 | 78 | MEADOW, HSG D |
| * | 0.060 | 98 | IMPERVIOUS, HSG D |
| * | 4.951 | 78 | MEADOW, HSG D |
| * | 0.903 | 78 | MEADOW, HSG D |
| * | 14.024 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.275 | 98 | IMPERVIOUS, HSG D |
| * | 0.259 | 78 | MEADOW, HSG D |
| * | 1.284 | 78 | MEADOW, HSG D |
| * | 7.785 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.139 | 98 | IMPERVIOUS, HSG D |
| * | 0.027 | 78 | MEADOW, HSG D |
| * | 0.098 | 78 | MEADOW, HSG D |
| * | 2.885 | 78 | MEADOW, HSG D |
| * | 0.035 | 98 | IMPERVIOUS, HSG D |
| | 45.903 | 80 | Weighted Average |
| | 45.310 | | 98.71% Pervious Area |
| | 0.593 | | 1.29% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.2 | 100 | 0.0025 | 0.13 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.4 | 145 | 0.0396 | 1.79 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.2 | 236 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 28 | 0.0212 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0114 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 99 | 0.0241 | 1.09 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.0 | 293 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 40 | 0.0198 | 0.99 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 22 | 0.0236 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 13 | 0.0238 | 3.13 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 23 | 0.0210 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.5 | 274 | 0.0141 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.1 | 217 | 0.0018 | 0.30 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 44 | 0.0284 | 1.18 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 59 | 0.0188 | 1.24 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.7 | 42 | 0.0128 | 1.02 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 46.2 | 1,645 | Total | | | |

## Subcatchment 47: WS47



## Summary for Subcatchment 48: WS48

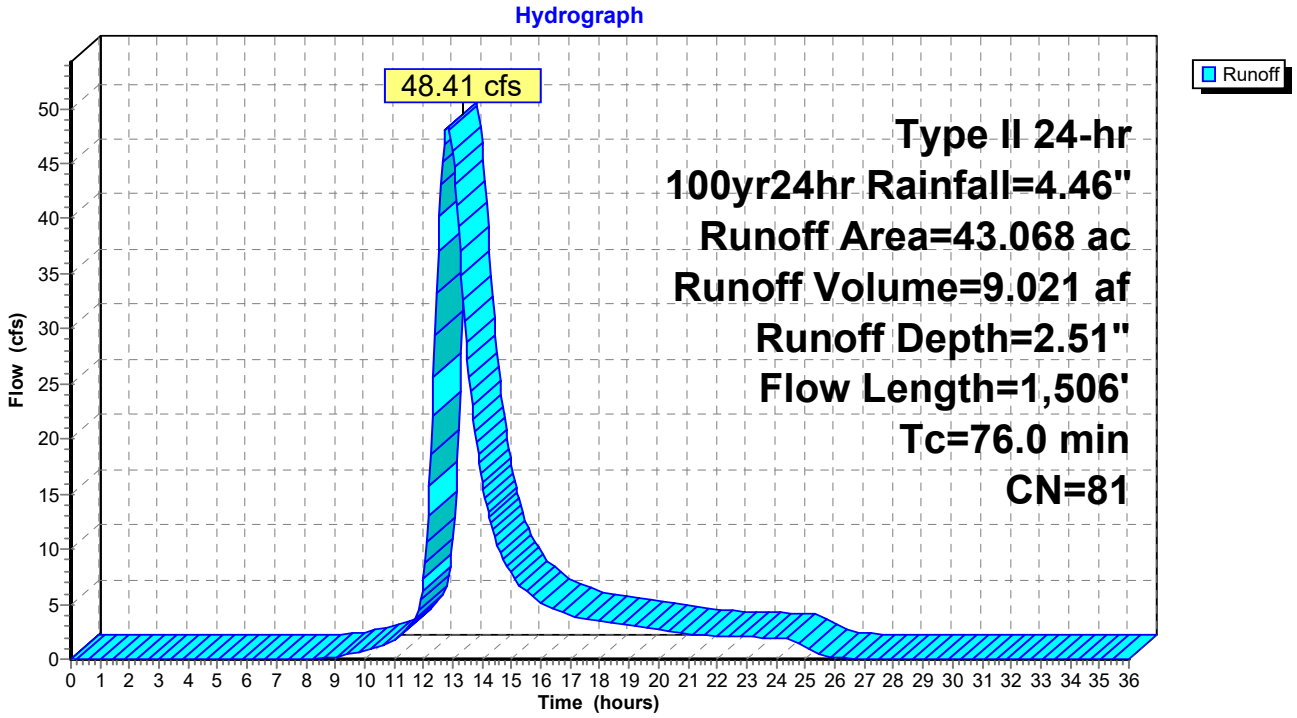
Runoff = 48.41 cfs @ 12.84 hrs, Volume= 9.021 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.059 | 86 | Woody Wetlands, HSG D |
| * | 0.481 | 93 | Developed Low Intensity, HSG D |
| * | 0.214 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.442 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.114 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.280 | 93 | Developed Low Intensity, HSG D |
| * | 0.737 | 93 | Developed Low Intensity, HSG D |
| * | 0.744 | 93 | Developed Low Intensity, HSG D |
| * | 0.144 | 84 | Developed Open Space, HSG D |
| * | 0.217 | 80 | Emergent Herbaceous Wetlands, HSG D |
| * | 0.115 | 86 | Woody Wetlands, HSG D |
| * | 9.970 | 86 | Woody Wetlands, HSG D |
| * | 0.035 | 86 | Woody Wetlands, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 1.916 | 81 | Cultivated Crops, HSG D |
| * | 2.143 | 81 | Cultivated Crops, HSG D |
| * | 2.228 | 81 | Cultivated Crops, HSG D |
| * | 0.008 | 78 | MEADOW, HSG D |
| * | 0.003 | 78 | MEADOW, HSG D |
| * | 0.355 | 78 | MEADOW, HSG D |
| * | 0.454 | 78 | MEADOW, HSG D |
| * | 0.189 | 78 | MEADOW, HSG D |
| * | 0.016 | 78 | MEADOW, HSG D |
| * | 0.033 | 98 | IMPERVIOUS, HSG D |
| * | 0.033 | 78 | MEADOW, HSG D |
| * | 0.005 | 78 | MEADOW, HSG D |
| * | 0.780 | 78 | MEADOW, HSG D |
| * | 0.319 | 78 | MEADOW, HSG D |
| * | 0.011 | 78 | MEADOW, HSG D |
| * | 0.036 | 78 | MEADOW, HSG D |
| * | 1.013 | 78 | MEADOW, HSG D |
| * | 0.999 | 78 | MEADOW, HSG D |
| * | 0.781 | 78 | MEADOW, HSG D |
| * | 0.181 | 78 | MEADOW, HSG D |
| * | 0.086 | 98 | IMPERVIOUS, HSG D |
| * | 4.730 | 78 | MEADOW, HSG D |
| * | 12.469 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.204 | 98 | IMPERVIOUS, HSG D |
| | 43.068 | 81 | Weighted Average |
| | 42.702 | | 99.15% Pervious Area |
| | 0.366 | | 0.85% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.1 | 63 | 0.0685 | 0.21 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.1 | 37 | 0.0122 | 0.20 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.9 | 106 | 0.0110 | 0.94 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 15.2 | 283 | 0.0038 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.1 | 430 | 0.0056 | 0.38 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 31.6 | 588 | 0.0038 | 0.31 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 76.0 | 1,506 | Total | | | |

## Subcatchment 48: WS48



## Summary for Subcatchment 49: WS49

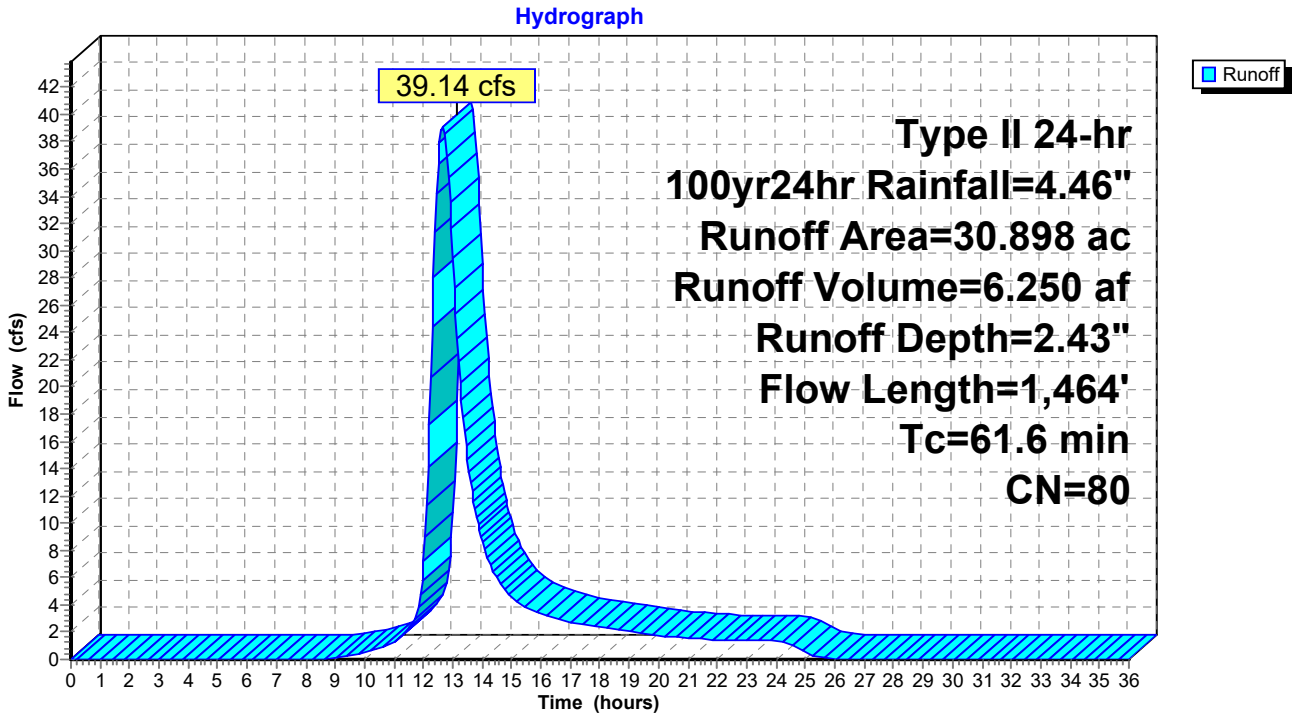
Runoff = 39.14 cfs @ 12.65 hrs, Volume= 6.250 af, Depth= 2.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.784 | 93 | Developed Low Intensity, HSG D |
| * | 0.080 | 93 | Developed Low Intensity, HSG D |
| * | 0.076 | 94 | Developed Medium Intensity, HSG D |
| * | 0.005 | 84 | Developed Open Space, HSG D |
| * | 0.011 | 84 | Developed Open Space, HSG D |
| * | 0.333 | 93 | Developed Low Intensity, HSG D |
| * | 0.761 | 93 | Developed Low Intensity, HSG D |
| * | 0.328 | 93 | Developed Low Intensity, HSG D |
| * | 0.998 | 81 | Cultivated Crops, HSG D |
| * | 4.032 | 81 | Cultivated Crops, HSG D |
| * | 3.374 | 81 | Cultivated Crops, HSG D |
| * | 0.667 | 78 | MEADOW, HSG D |
| * | 0.222 | 78 | MEADOW, HSG D |
| * | 0.088 | 78 | MEADOW, HSG D |
| * | 0.135 | 78 | MEADOW, HSG D |
| * | 0.180 | 78 | MEADOW, HSG D |
| * | 0.124 | 78 | MEADOW, HSG D |
| * | 0.013 | 98 | IMPERVIOUS, HSG D |
| * | 1.239 | 78 | MEADOW, HSG D |
| * | 0.137 | 78 | MEADOW, HSG D |
| * | 0.027 | 98 | IMPERVIOUS, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| * | 0.045 | 78 | MEADOW, HSG D |
| * | 0.058 | 78 | MEADOW, HSG D |
| * | 0.051 | 98 | IMPERVIOUS, HSG D |
| * | 0.315 | 78 | MEADOW, HSG D |
| * | 0.210 | 78 | MEADOW, HSG D |
| * | 2.880 | 78 | MEADOW, HSG D |
| * | 0.162 | 98 | IMPERVIOUS, HSG D |
| * | 4.187 | 78 | MEADOW, HSG D |
| * | 0.030 | 98 | IMPERVIOUS, HSG D |
| * | 1.681 | 78 | MEADOW, HSG D |
| * | 7.562 | 78 | MEADOW, HSG D |
| | 30.898 | 80 | Weighted Average |
| | 30.615 | | 99.09% Pervious Area |
| | 0.283 | | 0.91% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.6 | 55 | 0.0064 | 0.16 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 9.8 | 45 | 0.0068 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 28 | 0.0239 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 221 | 0.0217 | 1.03 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 90 | 0.0207 | 1.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 55 | 0.0090 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 84 | 0.0065 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 90 | 0.0185 | 1.22 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 14.0 | 191 | 0.0010 | 0.23 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 19.1 | 449 | 0.0031 | 0.39 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 58 | 0.0239 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.2 | 99 | 0.0119 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 61.6 | 1,464 | Total | | | |

## Subcatchment 49: WS49



## Summary for Subcatchment 50: WS50

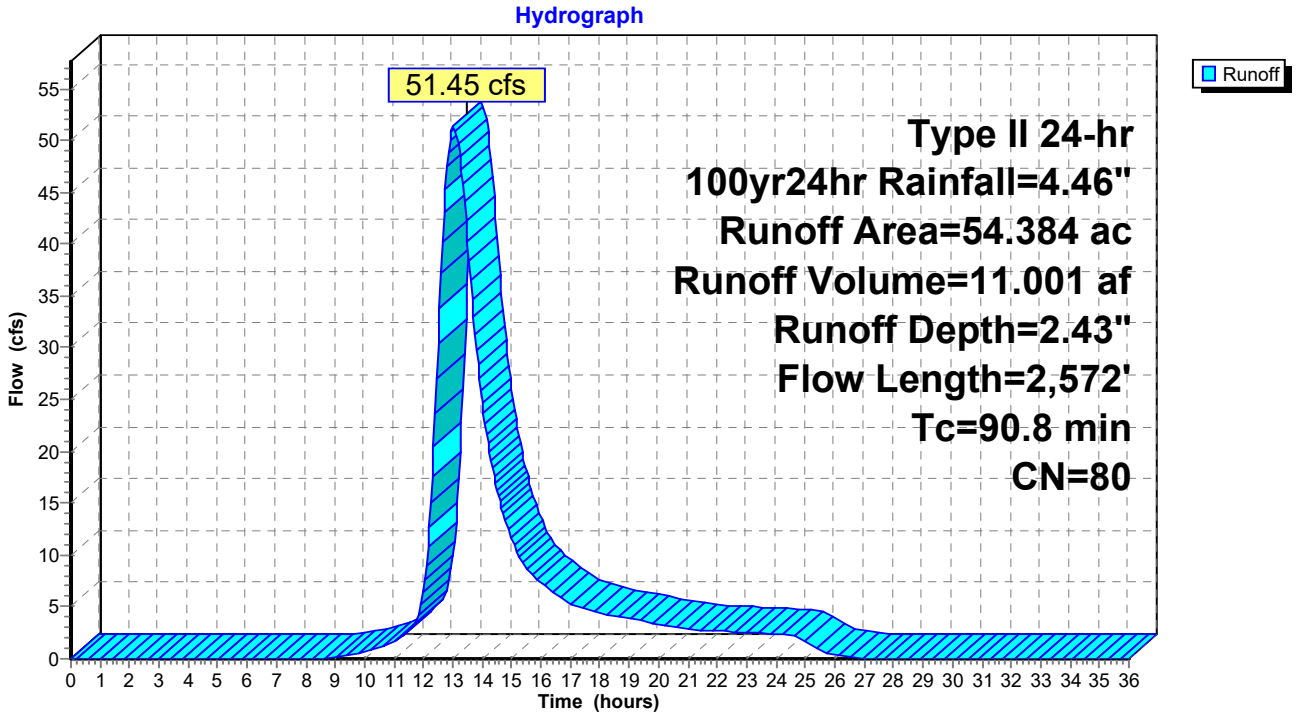
Runoff = 51.45 cfs @ 13.02 hrs, Volume= 11.001 af, Depth= 2.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.217 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.200 | 84 | Developed Open Space, HSG D |
| * | 0.211 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.633 | 93 | Developed Low Intensity, HSG D |
| * | 0.271 | 93 | Developed Low Intensity, HSG D |
| * | 0.107 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.013 | 94 | Developed Medium Intensity, HSG D |
| * | 0.732 | 93 | Developed Low Intensity, HSG D |
| * | 0.279 | 93 | Developed Low Intensity, HSG D |
| * | 0.079 | 84 | Developed Open Space, HSG D |
| * | 0.028 | 93 | Developed Low Intensity, HSG D |
| * | 5.131 | 81 | Cultivated Crops, HSG D |
| * | 8.761 | 81 | Cultivated Crops, HSG D |
| * | 2.028 | 81 | Cultivated Crops, HSG D |
| * | 0.022 | 78 | MEADOW, HSG D |
| * | 0.010 | 98 | IMPERVIOUS, HSG D |
| * | 4.396 | 78 | MEADOW, HSG D |
| * | 0.183 | 98 | IMPERVIOUS, HSG D |
| * | 8.785 | 78 | MEADOW, HSG D |
| * | 0.015 | 98 | IMPERVIOUS, HSG D |
| * | 5.583 | 78 | MEADOW, HSG D |
| * | 0.399 | 98 | IMPERVIOUS, HSG D |
| * | 10.720 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 2.649 | 78 | MEADOW, HSG D |
| * | 0.136 | 98 | IMPERVIOUS, HSG D |
| * | 2.088 | 78 | MEADOW, HSG D |
| | 54.384 | 80 | Weighted Average |
| | 53.598 | | 98.55% Pervious Area |
| | 0.786 | | 1.45% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 19.5 | 100 | 0.0059 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 6.1 | 233 | 0.0082 | 0.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 13.4 | 518 | 0.0085 | 0.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.5 | 154 | 0.0112 | 0.74 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.6 | 345 | 0.0115 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 13.4 | 214 | 0.0015 | 0.27 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 16.6 | 309 | 0.0020 | 0.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 42 | 0.0401 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 10.2 | 657 | 0.0143 | 1.08 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 90.8 | 2,572 | Total | | | |

## Subcatchment 50: WS50



## Summary for Subcatchment 51: WS51

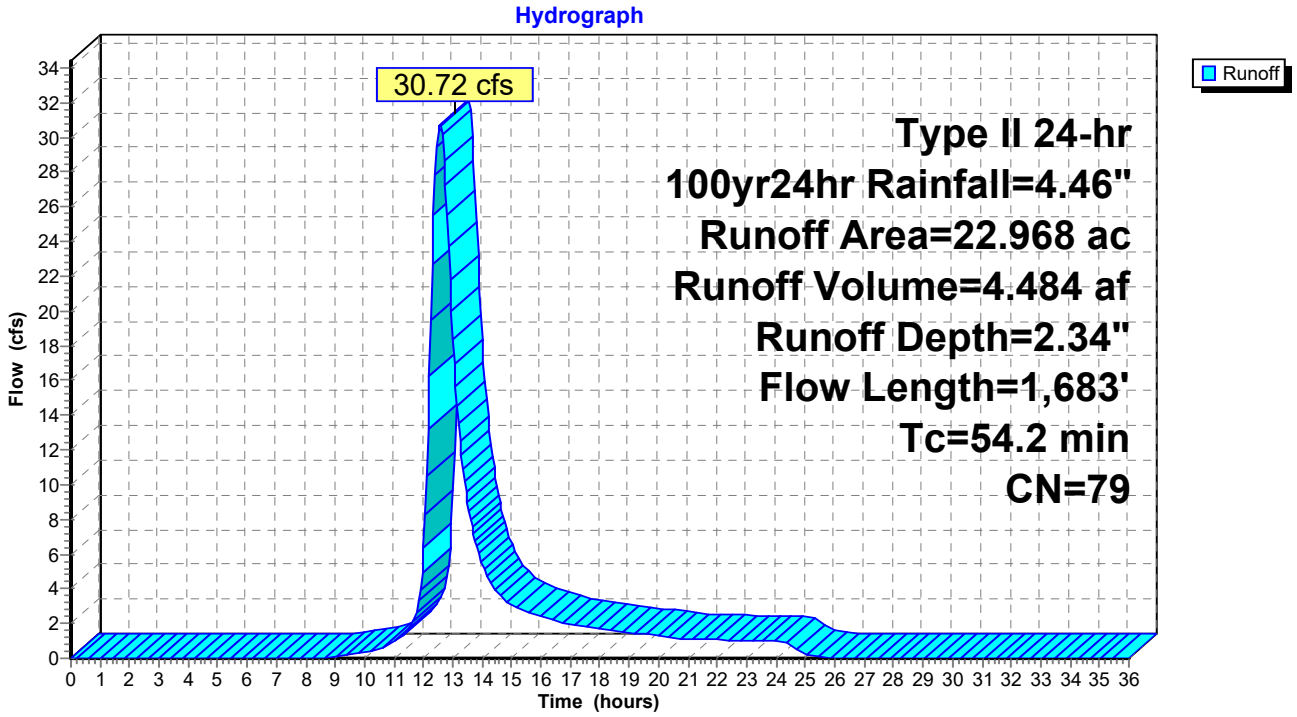
Runoff = 30.72 cfs @ 12.56 hrs, Volume= 4.484 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 4.817 | 81 | Cultivated Crops, HSG D |
| * | 0.028 | 78 | MEADOW, HSG D |
| * | 1.205 | 78 | MEADOW, HSG D |
| * | 4.410 | 78 | MEADOW, HSG D |
| * | 0.392 | 98 | IMPERVIOUS, HSG D |
| * | 12.074 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 22.968 | 79 | Weighted Average |
| | 22.533 | | 98.11% Pervious Area |
| | 0.435 | | 1.89% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.3 | 100 | 0.0092 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.0 | 113 | 0.0189 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.8 | 195 | 0.0148 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 123 | 0.0080 | 1.81 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 4.4 | 159 | 0.0074 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 13.1 | 471 | 0.0073 | 0.60 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.4 | 12 | 0.0050 | 0.50 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 203 | 0.0130 | 2.32 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 11.6 | 307 | 0.0040 | 0.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 54.2 | 1,683 | Total | | | |

## Subcatchment 51: WS51



## Summary for Subcatchment 52: WS52

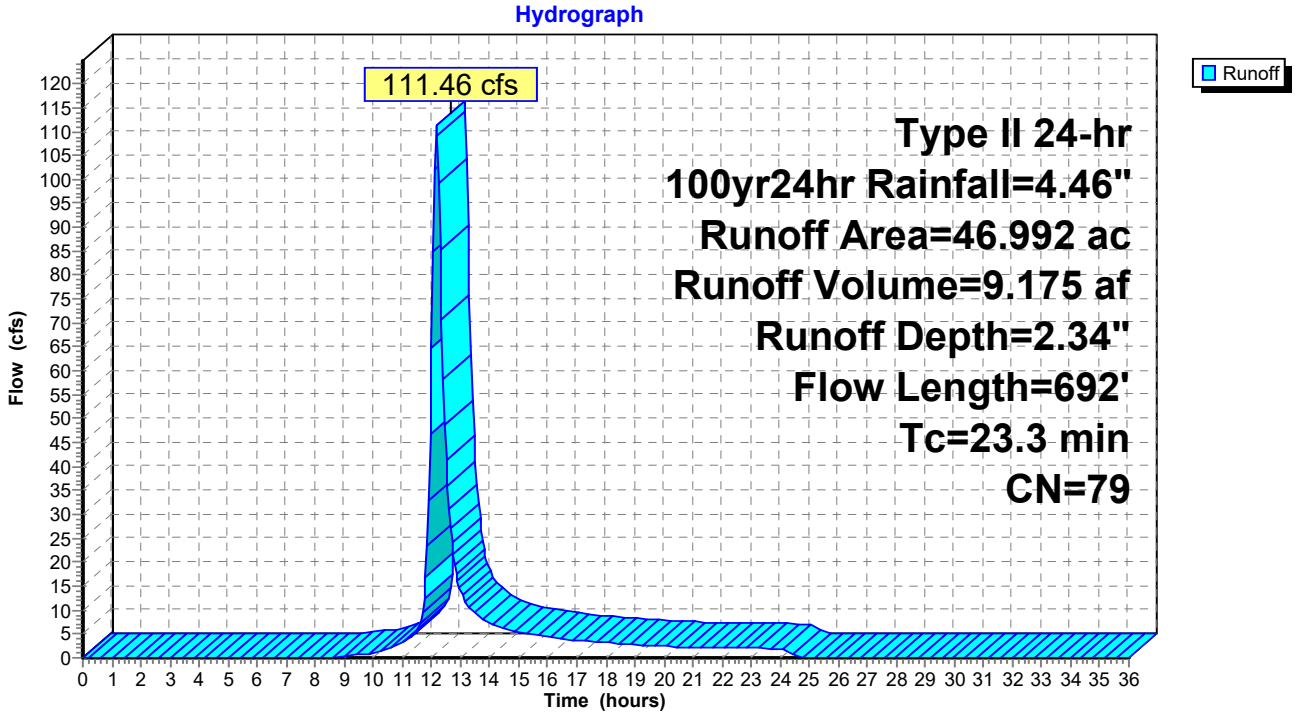
Runoff = 111.46 cfs @ 12.17 hrs, Volume= 9.175 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.465 | 86 | Woody Wetlands, HSG D |
| * | 0.198 | 80 | Pasture/Hay, HSG D |
| * | 0.025 | 80 | Pasture/Hay, HSG D |
| * | 0.415 | 79 | Deciduous Forest, HSG D |
| * | 0.694 | 79 | Deciduous Forest, HSG D |
| * | 0.067 | 80 | Pasture/Hay, HSG D |
| * | 0.155 | 80 | Pasture/Hay, HSG D |
| * | 1.958 | 79 | Deciduous Forest, HSG D |
| * | 0.570 | 79 | Deciduous Forest, HSG D |
| * | 0.490 | 79 | Deciduous Forest, HSG D |
| * | 0.003 | 61 | Pasture/Hay, HSG B |
| * | 2.802 | 80 | Pasture/Hay, HSG D |
| * | 0.601 | 80 | Pasture/Hay, HSG D |
| * | 1.445 | 71 | Cultivated Crops, HSG B |
| * | 4.711 | 81 | Cultivated Crops, HSG D |
| * | 8.408 | 81 | Cultivated Crops, HSG D |
| * | 0.659 | 81 | Cultivated Crops, HSG D |
| * | 0.193 | 78 | MEADOW, HSG D |
| * | 0.119 | 78 | MEADOW, HSG D |
| * | 0.199 | 78 | MEADOW, HSG D |
| * | 0.054 | 98 | IMPERVIOUS, HSG D |
| * | 1.806 | 78 | MEADOW, HSG D |
| * | 0.332 | 78 | MEADOW, HSG D |
| * | 0.791 | 78 | MEADOW, HSG D |
| * | 0.375 | 58 | MEADOW, HSG B |
| * | 1.367 | 58 | MEADOW, HSG B |
| * | 0.959 | 78 | MEADOW, HSG D |
| * | 2.266 | 78 | MEADOW, HSG D |
| * | 0.506 | 98 | IMPERVIOUS, HSG D |
| * | 11.617 | 78 | MEADOW, HSG D |
| * | 0.070 | 98 | IMPERVIOUS, HSG D |
| * | 1.213 | 78 | MEADOW, HSG D |
| * | 1.295 | 78 | MEADOW, HSG D |
| * | 0.105 | 78 | MEADOW, HSG D |
| * | 0.058 | 78 | MEADOW, HSG D |
| | 46.992 | 79 | Weighted Average |
| | 46.362 | | 98.66% Pervious Area |
| | 0.630 | | 1.34% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.3 | 77 | 0.0096 | 0.21 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.1 | 23 | 0.0146 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.4 | 138 | 0.0184 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 6.2 | 249 | 0.0092 | 0.67 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.3 | 206 | 0.0132 | 0.80 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 23.3 | 692 | Total | | | |

## Subcatchment 52: WS52



## Summary for Subcatchment 53: WS53

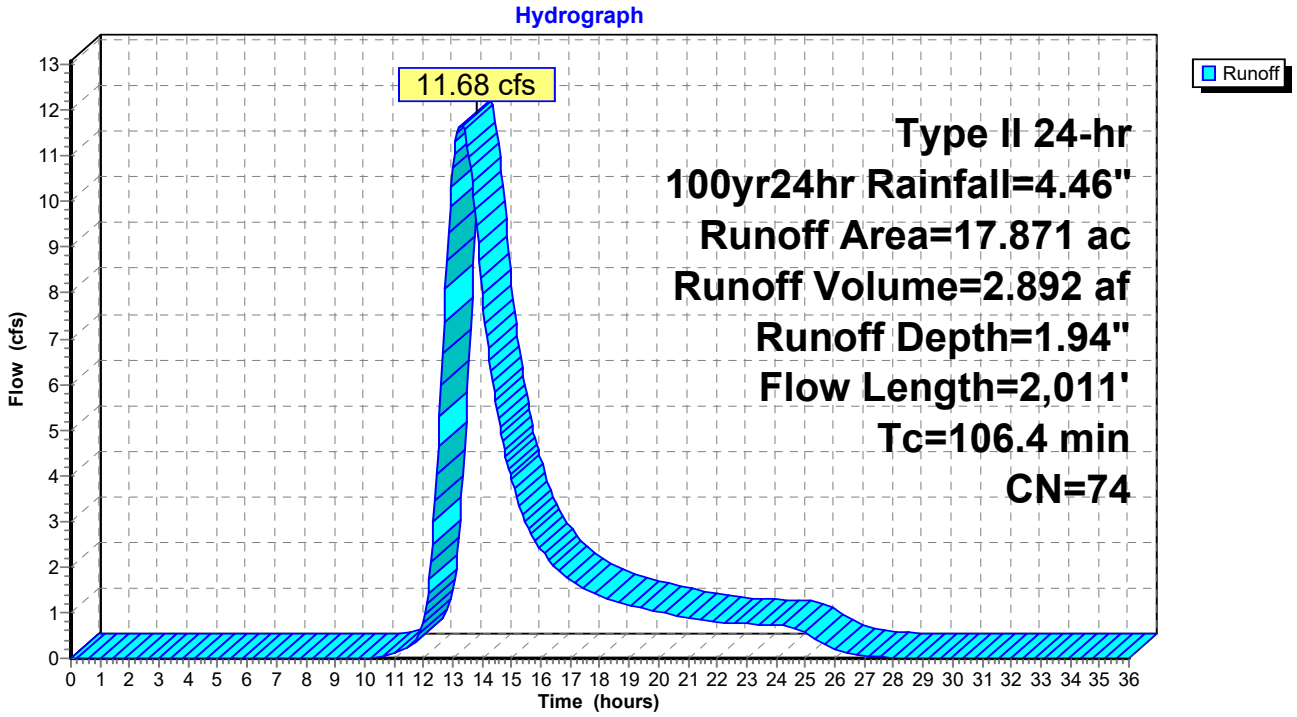
Runoff = 11.68 cfs @ 13.32 hrs, Volume= 2.892 af, Depth= 1.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.579 | 79 | Deciduous Forest, HSG D |
| * | 0.013 | 79 | Deciduous Forest, HSG D |
| * | 0.538 | 60 | Mixed Forest, HSG B |
| * | 0.164 | 79 | Mixed Forest, HSG D |
| * | 1.312 | 71 | Cultivated Crops, HSG B |
| * | 5.753 | 81 | Cultivated Crops, HSG D |
| * | 1.830 | 58 | MEADOW, HSG B |
| * | 1.871 | 58 | MEADOW, HSG B |
| * | 3.080 | 78 | MEADOW, HSG D |
| * | 0.205 | 98 | IMPERVIOUS, HSG D |
| * | 2.526 | 78 | MEADOW, HSG D |
| | 17.871 | 74 | Weighted Average |
| | 17.665 | | 98.85% Pervious Area |
| | 0.205 | | 1.15% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 46.4 | 100 | 0.0048 | 0.04 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.15" |
| 1.5 | 83 | 0.0338 | 0.92 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 0.5 | 34 | 0.0139 | 1.06 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 7.2 | 402 | 0.0107 | 0.93 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.8 | 54 | 0.0238 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 18 | 0.0128 | 2.30 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 8.8 | 280 | 0.0058 | 0.53 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 11.4 | 245 | 0.0026 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.2 | 298 | 0.0034 | 0.41 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.8 | 167 | 0.0068 | 0.58 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 12.7 | 330 | 0.0038 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 106.4 | 2,011 | Total | | | |

## Subcatchment 53: WS53



## Summary for Subcatchment 54: WS54

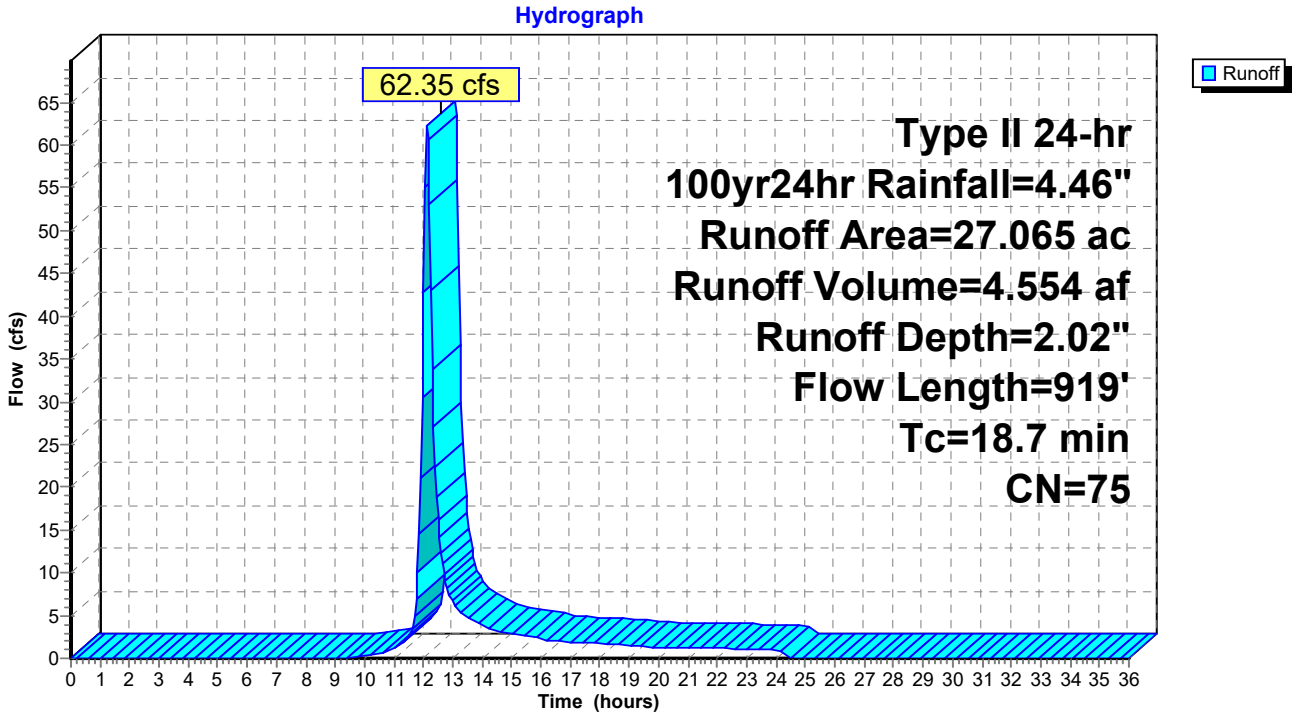
Runoff = 62.35 cfs @ 12.12 hrs, Volume= 4.554 af, Depth= 2.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.008 | 79 | Deciduous Forest, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.024 | 84 | Developed Open Space, HSG D |
| * | 0.417 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.680 | 61 | Pasture/Hay, HSG B |
| * | 2.775 | 60 | Deciduous Forest, HSG B |
| * | 0.844 | 79 | Deciduous Forest, HSG D |
| * | 0.059 | 93 | Developed Low Intensity, HSG D |
| * | 3.457 | 81 | Cultivated Crops, HSG D |
| * | 1.532 | 71 | Cultivated Crops, HSG B |
| * | 7.107 | 81 | Cultivated Crops, HSG D |
| * | 0.165 | 78 | MEADOW, HSG D |
| * | 0.050 | 98 | IMPERVIOUS, HSG D |
| * | 0.149 | 78 | MEADOW, HSG D |
| * | 0.037 | 98 | IMPERVIOUS, HSG D |
| * | 0.025 | 78 | MEADOW, HSG D |
| * | 0.864 | 58 | MEADOW, HSG B |
| * | 2.192 | 58 | MEADOW, HSG B |
| * | 1.913 | 78 | MEADOW, HSG D |
| * | 0.331 | 98 | IMPERVIOUS, HSG D |
| * | 3.726 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 27.065 | 75 | Weighted Average |
| | 26.604 | | 98.30% Pervious Area |
| | 0.461 | | 1.70% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.8 | 100 | 0.0195 | 0.29 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.0 | 312 | 0.0207 | 1.30 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 126 | 0.0206 | 1.29 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.1 | 12 | 0.0127 | 2.29 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 7.2 | 369 | 0.0091 | 0.86 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 18.7 | 919 | Total | | | |

## Subcatchment 54: WS54



## Summary for Subcatchment 55: WS55

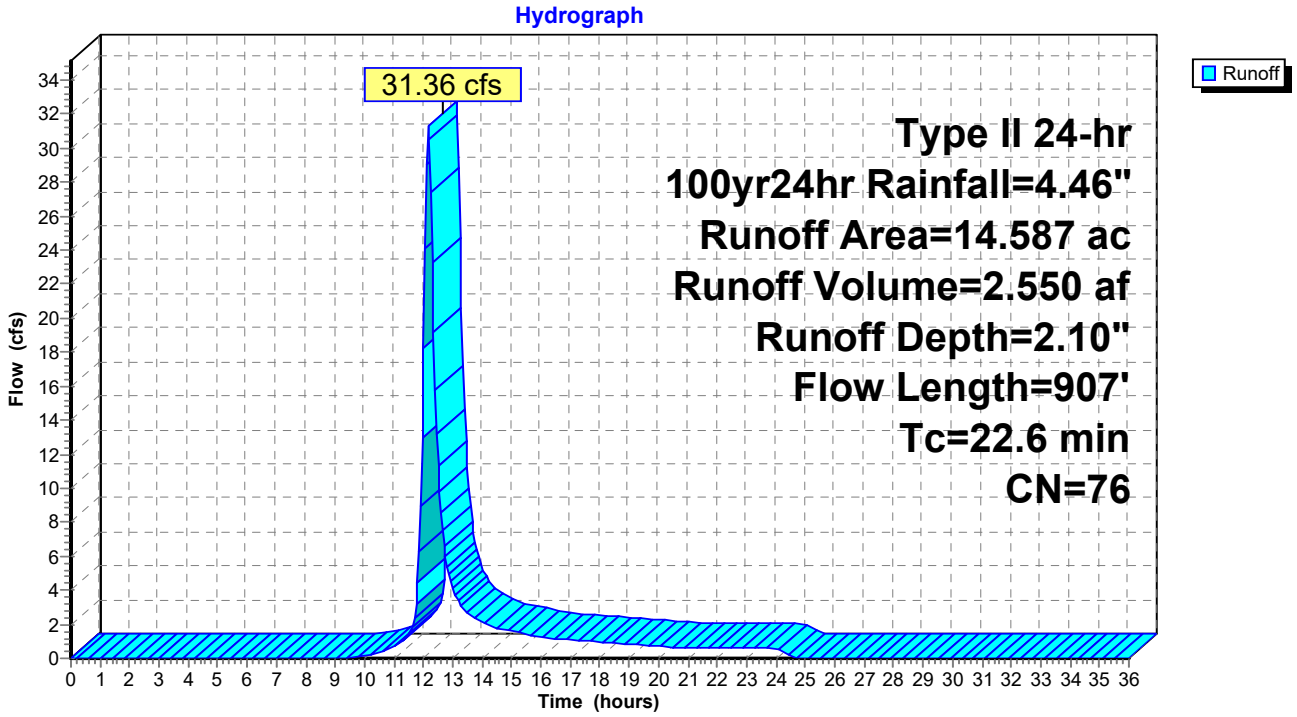
Runoff = 31.36 cfs @ 12.16 hrs, Volume= 2.550 af, Depth= 2.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.010 | 84 | Developed Open Space, HSG D |
| * | 0.225 | 93 | Developed Low Intensity, HSG D |
| * | 0.094 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 81 | Cultivated Crops, HSG D |
| * | 2.811 | 71 | Cultivated Crops, HSG B |
| * | 7.104 | 81 | Cultivated Crops, HSG D |
| * | 0.469 | 58 | MEADOW, HSG B |
| * | 0.178 | 58 | MEADOW, HSG B |
| * | 1.371 | 58 | MEADOW, HSG B |
| * | 0.859 | 78 | MEADOW, HSG D |
| * | 1.466 | 78 | MEADOW, HSG D |
| | 14.587 | 76 | Weighted Average |
| | 14.587 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 2.9 | 26 | 0.0074 | 0.15 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 6.8 | 74 | 0.0071 | 0.18 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 4.2 | 191 | 0.0072 | 0.76 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 282 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 334 | 0.0159 | 1.13 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 22.6 | 907 | Total | | | |

## Subcatchment 55: WS55



## Summary for Subcatchment 56: WS56

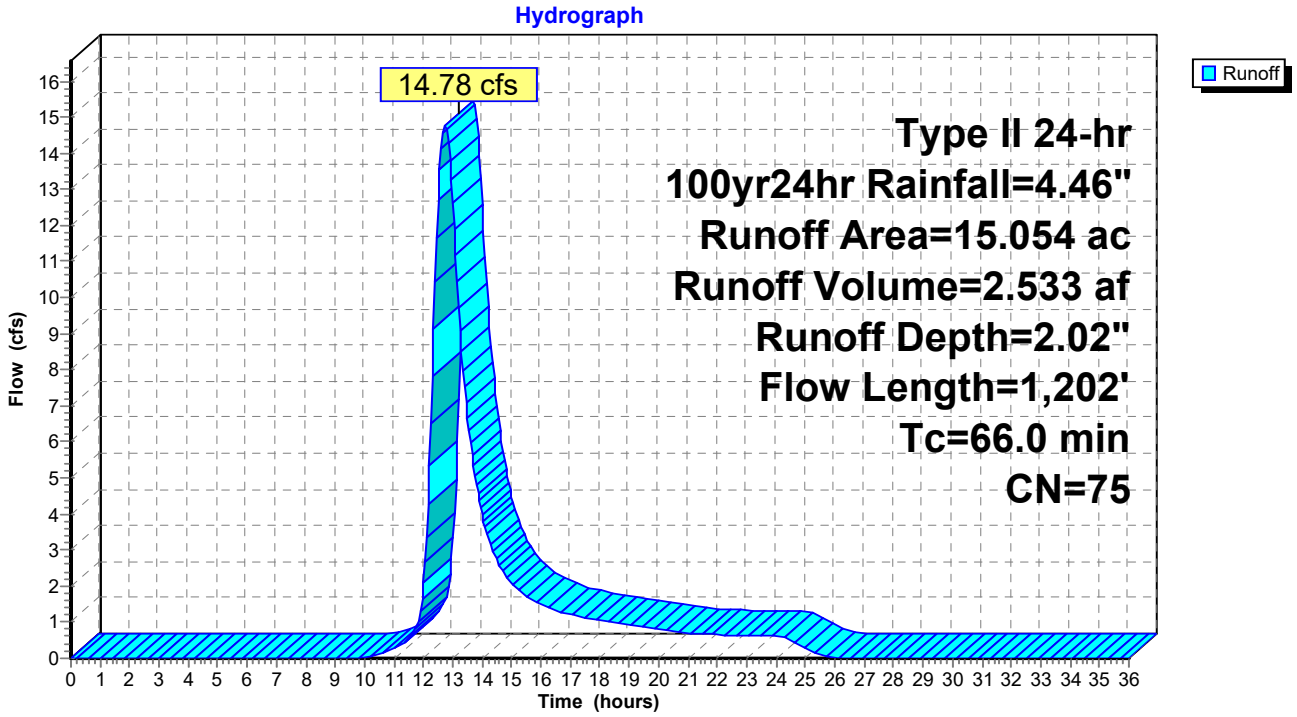
Runoff = 14.78 cfs @ 12.72 hrs, Volume= 2.533 af, Depth= 2.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.006 | 60 | Deciduous Forest, HSG B |
| * | 0.838 | 71 | Cultivated Crops, HSG B |
| * | 1.191 | 81 | Cultivated Crops, HSG D |
| * | 0.607 | 58 | MEADOW, HSG B |
| * | 2.166 | 58 | MEADOW, HSG B |
| * | 2.888 | 78 | MEADOW, HSG D |
| * | 0.278 | 98 | IMPERVIOUS, HSG D |
| * | 7.037 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 15.054 | 75 | Weighted Average |
| | 14.734 | | 97.87% Pervious Area |
| | 0.321 | | 2.13% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.8 | 36 | 0.0120 | 0.75 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 13.1 | 64 | 0.0065 | 0.08 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 2.3 | 50 | 0.0026 | 0.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 73 | 0.0130 | 2.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 30 | 0.0289 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 142 | 0.0250 | 1.11 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 184 | 0.0140 | 0.83 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 37.7 | 368 | 0.0005 | 0.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.2 | 141 | 0.0064 | 0.56 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 36 | 0.0688 | 1.84 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 78 | 0.0254 | 1.43 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 66.0 | 1,202 | Total | | | |

## Subcatchment 56: WS56



## Summary for Subcatchment 57: WS57

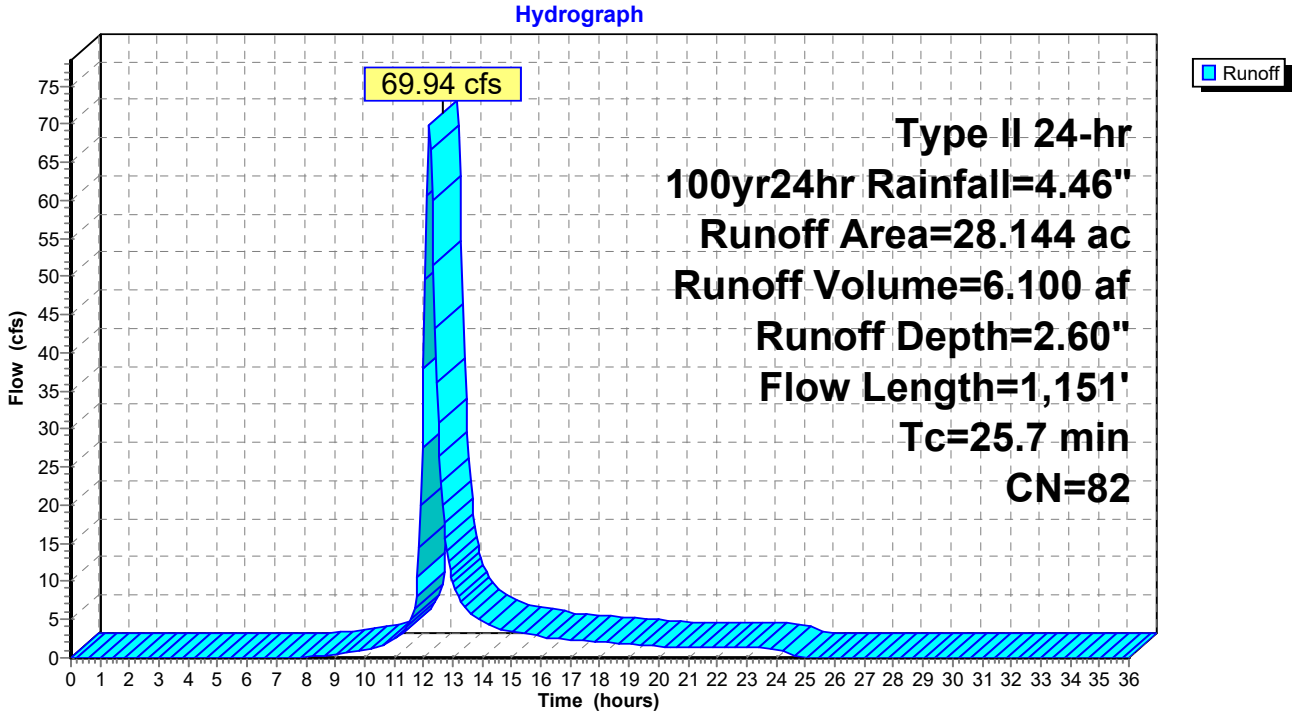
Runoff = 69.94 cfs @ 12.19 hrs, Volume= 6.100 af, Depth= 2.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.213 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.799 | 79 | Deciduous Forest, HSG D |
| * | 0.445 | 84 | Developed Open Space, HSG D |
| * | 0.445 | 93 | Developed Low Intensity, HSG D |
| * | 1.219 | 81 | Cultivated Crops, HSG D |
| * | 0.119 | 94 | Developed Medium Intensity, HSG D |
| * | 0.116 | 93 | Developed Low Intensity, HSG D |
| * | 0.620 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 94 | Developed Medium Intensity, HSG D |
| * | 0.091 | 93 | Developed Low Intensity, HSG D |
| * | 0.093 | 94 | Developed Medium Intensity, HSG D |
| * | 0.092 | 93 | Developed Low Intensity, HSG D |
| * | 0.562 | 84 | Developed Open Space, HSG D |
| * | 0.626 | 93 | Developed Low Intensity, HSG D |
| * | 9.353 | 81 | Cultivated Crops, HSG D |
| * | 0.285 | 81 | Cultivated Crops, HSG D |
| * | 0.201 | 78 | MEADOW, HSG D |
| * | 0.080 | 98 | IMPERVIOUS, HSG D |
| * | 3.270 | 78 | MEADOW, HSG D |
| * | 0.168 | 98 | IMPERVIOUS, HSG D |
| * | 8.034 | 78 | MEADOW, HSG D |
| | 28.144 | 82 | Weighted Average |
| | 27.895 | | 99.12% Pervious Area |
| | 0.248 | | 0.88% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.9 | 38 | 0.0016 | 0.34 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 4.4 | 62 | 0.0147 | 0.23 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 0.1 | 11 | 0.0221 | 1.34 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 121 | 0.0290 | 1.53 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 2.3 | 153 | 0.0151 | 1.10 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.5 | 96 | 0.0281 | 3.40 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.0 | 13 | 0.2093 | 9.29 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 12.5 | 475 | 0.0049 | 0.63 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 73 | 0.0225 | 1.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 109 | 0.0309 | 1.23 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 25.7 | 1,151 | Total | | | |

**Subcatchment 57: WS57**



## Summary for Subcatchment 58: WS58

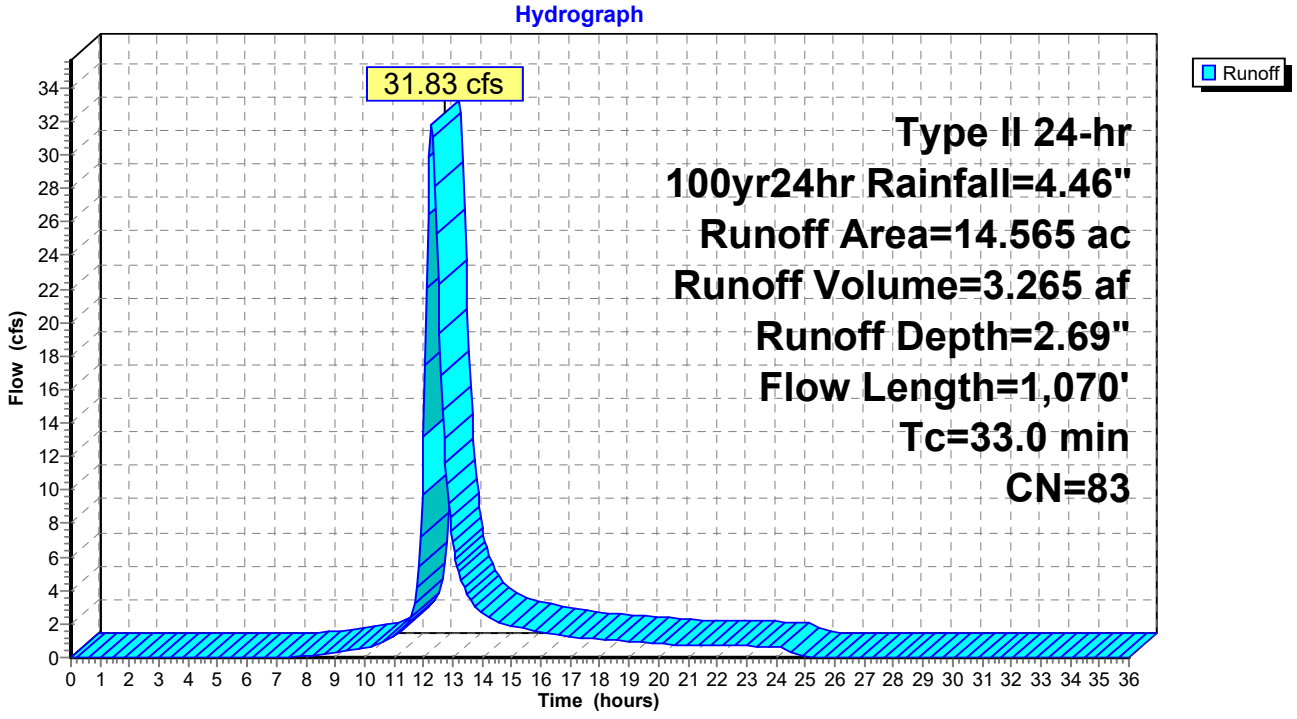
Runoff = 31.83 cfs @ 12.28 hrs, Volume= 3.265 af, Depth= 2.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.103 | 94 | Developed Medium Intensity, HSG D |
| * | 0.106 | 93 | Developed Low Intensity, HSG D |
| * | 0.672 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 94 | Developed Medium Intensity, HSG D |
| * | 0.131 | 93 | Developed Low Intensity, HSG D |
| * | 0.076 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.188 | 81 | Cultivated Crops, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.343 | 93 | Developed Low Intensity, HSG D |
| * | 2.260 | 93 | Developed Low Intensity, HSG D |
| * | 2.650 | 81 | Cultivated Crops, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.069 | 78 | MEADOW, HSG D |
| * | 3.596 | 78 | MEADOW, HSG D |
| * | 0.118 | 98 | IMPERVIOUS, HSG D |
| * | 3.839 | 78 | MEADOW, HSG D |
| | 14.565 | 83 | Weighted Average |
| | 14.404 | | 98.90% Pervious Area |
| | 0.161 | | 1.10% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.4 | 100 | 0.0107 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 4.1 | 266 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 11 | 0.0240 | 1.08 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 22 | 0.0116 | 0.75 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 14 | 0.0243 | 3.16 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 23 | 0.0213 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 152 | 0.0088 | 0.66 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 47 | 0.0187 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 68 | 0.0210 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.8 | 215 | 0.0077 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 153 | 0.0285 | 3.43 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 33.0 | 1,070 | Total | | | |

## Subcatchment 58: WS58



## Summary for Subcatchment 59: WS59

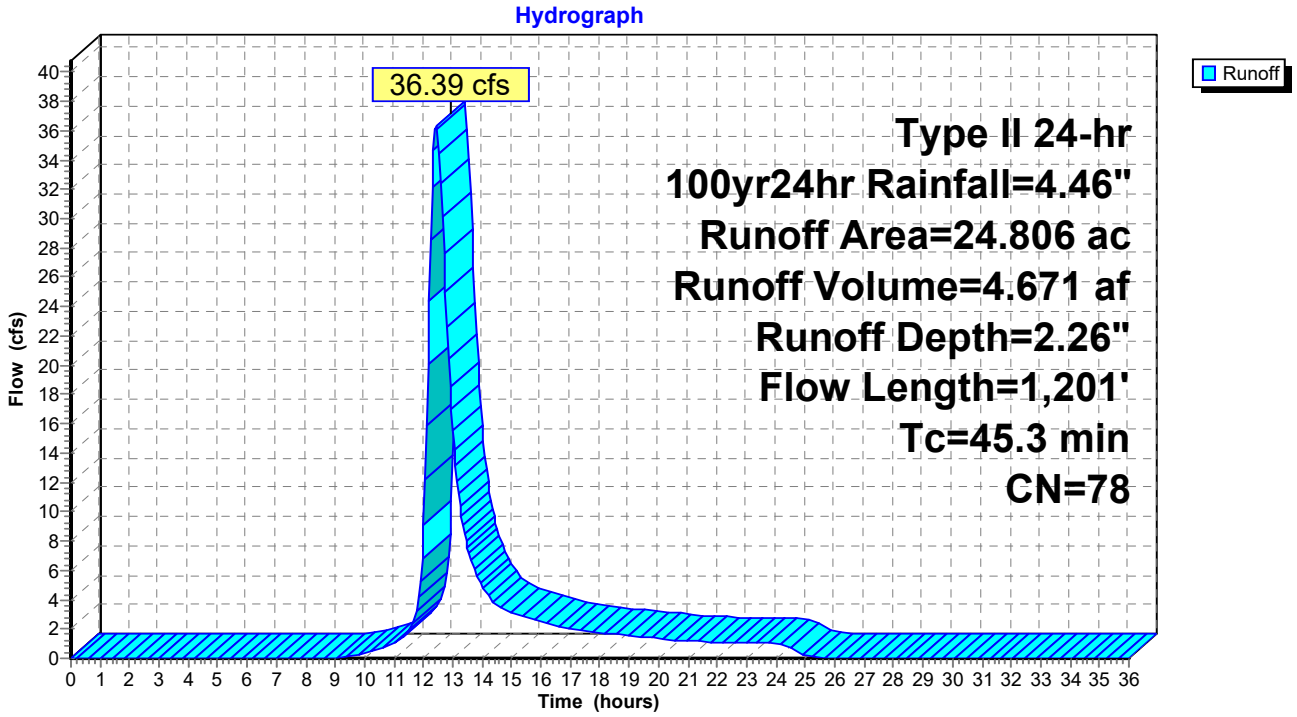
Runoff = 36.39 cfs @ 12.44 hrs, Volume= 4.671 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.256 | 93 | Developed Low Intensity, HSG D |
| * | 0.484 | 84 | Developed Open Space, HSG D |
| * | 0.010 | 93 | Developed Low Intensity, HSG D |
| * | 0.036 | 81 | Cultivated Crops, HSG D |
| * | 4.832 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.165 | 78 | MEADOW, HSG D |
| * | 2.797 | 78 | MEADOW, HSG D |
| * | 1.587 | 58 | MEADOW, HSG B |
| * | 2.407 | 78 | MEADOW, HSG D |
| * | 0.202 | 98 | IMPERVIOUS, HSG D |
| * | 10.986 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| | 24.806 | 78 | Weighted Average |
| | 24.561 | | 99.01% Pervious Area |
| | 0.245 | | 0.99% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 16.6 | 100 | 0.0088 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 209 | 0.0194 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 76 | 0.0175 | 0.93 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 23 | 0.0069 | 1.69 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 17 | 0.0205 | 1.00 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.1 | 74 | 0.0248 | 1.10 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 9.6 | 353 | 0.0076 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 8.5 | 63 | 0.0003 | 0.12 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.0 | 134 | 0.0069 | 0.75 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 1.0 | 151 | 0.0147 | 2.46 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 45.3 | 1,201 | Total | | | |

## Subcatchment 59: WS59



## Summary for Subcatchment 60: WS60

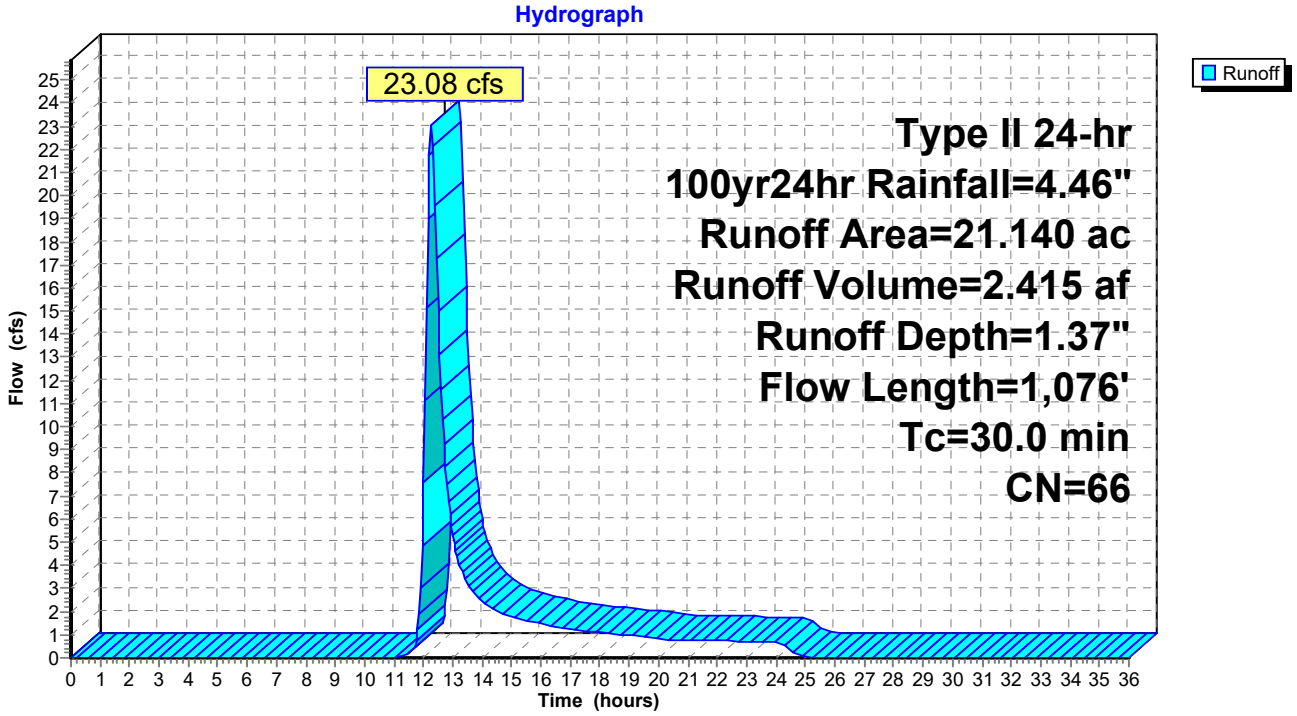
Runoff = 23.08 cfs @ 12.27 hrs, Volume= 2.415 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.096 | 71 | Cultivated Crops, HSG B |
| * | 0.040 | 81 | Cultivated Crops, HSG D |
| * | 0.499 | 81 | Cultivated Crops, HSG D |
| * | 0.701 | 71 | Cultivated Crops, HSG B |
| * | 0.000 | 86 | Woody Wetlands, HSG B |
| * | 0.348 | 78 | MEADOW, HSG D |
| * | 0.075 | 98 | IMPERVIOUS, HSG D |
| * | 0.397 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.694 | 58 | MEADOW, HSG B |
| * | 0.065 | 98 | IMPERVIOUS, HSG B |
| * | 10.636 | 58 | MEADOW, HSG B |
| * | 0.323 | 78 | MEADOW, HSG D |
| * | 0.005 | 98 | IMPERVIOUS, HSG D |
| * | 0.595 | 78 | MEADOW, HSG D |
| * | 1.544 | 78 | MEADOW, HSG D |
| * | 0.174 | 98 | IMPERVIOUS, HSG D |
| * | 3.623 | 78 | MEADOW, HSG D |
| * | 0.037 | 98 | IMPERVIOUS, HSG D |
| * | 0.219 | 58 | MEADOW, HSG B |
| * | 0.027 | 58 | MEADOW, HSG B |
| | 21.140 | 66 | Weighted Average |
| | 20.742 | | 98.11% Pervious Area |
| | 0.399 | | 1.89% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.0 | 100 | 0.0072 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 30 | 0.0302 | 1.22 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 31 | 0.0472 | 1.52 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 23 | 0.0448 | 4.29 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 31 | 0.0543 | 1.63 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.7 | 144 | 0.0425 | 1.44 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 190 | 0.0319 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 294 | 0.0358 | 1.33 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 192 | 0.0485 | 1.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 40 | 0.0123 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 30.0 | 1,076 | Total | | | |

## Subcatchment 60: WS60



## Summary for Subcatchment 61: WS61

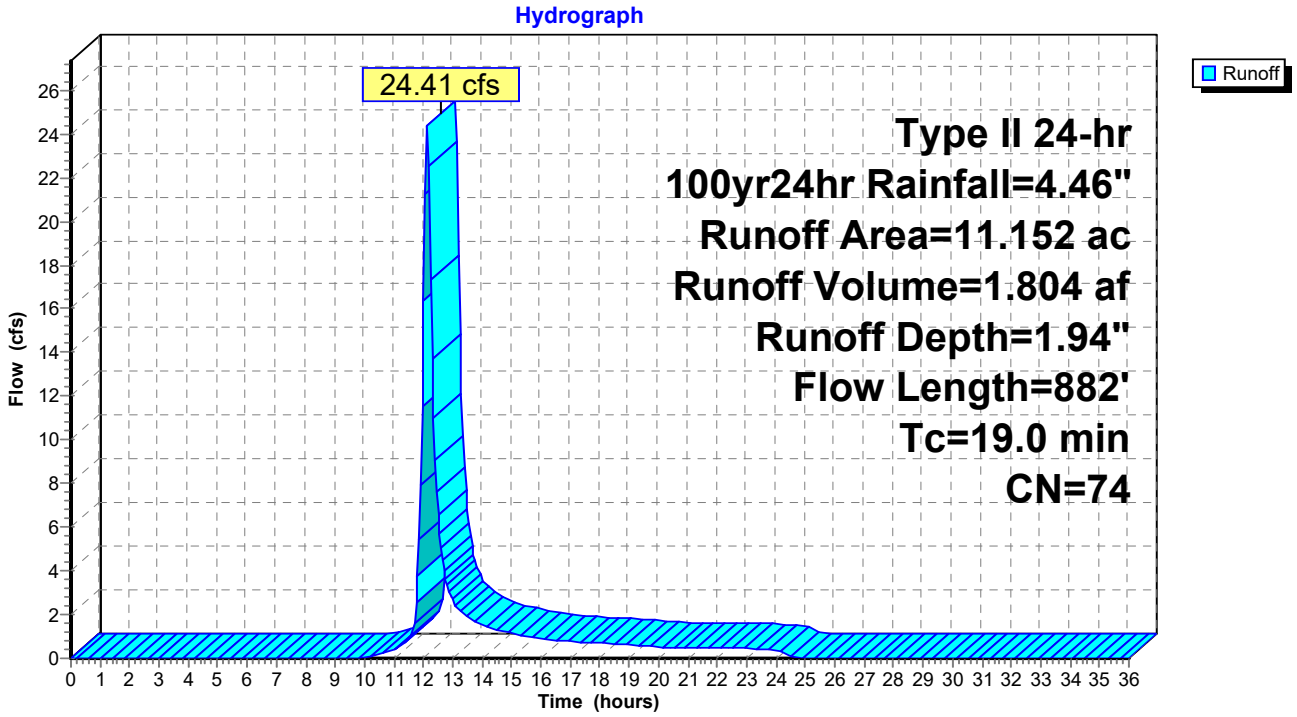
Runoff = 24.41 cfs @ 12.12 hrs, Volume= 1.804 af, Depth= 1.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.005 | 61 | Pasture/Hay, HSG B |
| * | 0.480 | 79 | Deciduous Forest, HSG D |
| * | 0.892 | 81 | Cultivated Crops, HSG D |
| * | 0.327 | 81 | Cultivated Crops, HSG D |
| * | 0.940 | 71 | Cultivated Crops, HSG B |
| * | 0.095 | 86 | Woody Wetlands, HSG B |
| * | 0.015 | 78 | MEADOW, HSG D |
| * | 0.971 | 78 | MEADOW, HSG D |
| * | 1.432 | 58 | MEADOW, HSG B |
| * | 0.607 | 78 | MEADOW, HSG D |
| * | 0.098 | 78 | MEADOW, HSG D |
| * | 0.602 | 78 | MEADOW, HSG D |
| * | 0.001 | 98 | IMPERVIOUS, HSG D |
| * | 4.242 | 78 | MEADOW, HSG D |
| * | 0.006 | 98 | IMPERVIOUS, HSG D |
| * | 0.239 | 58 | MEADOW, HSG B |
| * | 0.202 | 58 | MEADOW, HSG B |
| | 11.152 | 74 | Weighted Average |
| | 11.145 | | 99.94% Pervious Area |
| | 0.007 | | 0.06% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.7 | 58 | 0.0697 | 0.21 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.3 | 42 | 0.0850 | 0.21 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.0 | 125 | 0.0825 | 2.01 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 236 | 0.0554 | 1.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 72 | 0.0380 | 1.36 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.7 | 63 | 0.0032 | 0.39 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.7 | 273 | 0.0182 | 1.22 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 12 | 0.0128 | 0.57 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.0 | 882 | Total | | | |

## Subcatchment 61: WS61



## Summary for Subcatchment 62: WS62

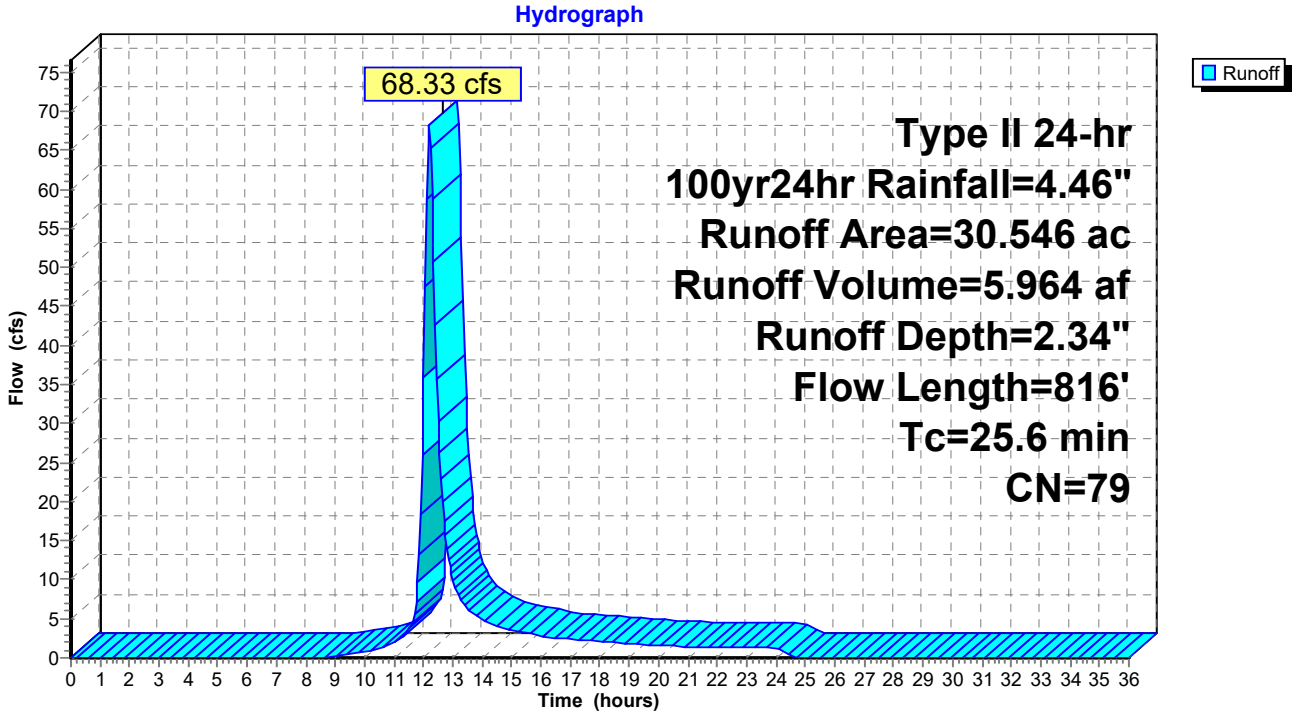
Runoff = 68.33 cfs @ 12.20 hrs, Volume= 5.964 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 1.426 | 86 | Woody Wetlands, HSG D |
| * | 3.925 | 80 | Pasture/Hay, HSG D |
| * | 1.263 | 81 | Cultivated Crops, HSG D |
| * | 3.524 | 81 | Cultivated Crops, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| * | 0.109 | 78 | MEADOW, HSG D |
| * | 0.011 | 98 | IMPERVIOUS, HSG D |
| * | 0.102 | 78 | MEADOW, HSG D |
| * | 0.093 | 78 | MEADOW, HSG D |
| * | 1.348 | 78 | MEADOW, HSG D |
| * | 6.853 | 78 | MEADOW, HSG D |
| * | 0.032 | 98 | IMPERVIOUS, HSG D |
| * | 0.139 | 98 | IMPERVIOUS, HSG D |
| * | 0.447 | 78 | MEADOW, HSG D |
| * | 0.366 | 78 | MEADOW, HSG D |
| * | 3.160 | 78 | MEADOW, HSG D |
| * | 7.384 | 78 | MEADOW, HSG D |
| * | 0.263 | 98 | IMPERVIOUS, HSG D |
| | 30.546 | 79 | Weighted Average |
| | 30.101 | | 98.54% Pervious Area |
| | 0.445 | | 1.46% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 4.7 | 32 | 0.0222 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.9 | 10 | 0.0202 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 22 | 0.0346 | 1.04 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 5.0 | 35 | 0.0216 | 0.12 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.4 | 23 | 0.0229 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 158 | 0.0094 | 0.68 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 231 | 0.0186 | 0.95 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 53 | 0.0155 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 38 | 0.0106 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.4 | 214 | 0.0135 | 1.05 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 25.6 | 816 | Total | | | |

## Subcatchment 62: WS62



## Summary for Subcatchment 63: WS63

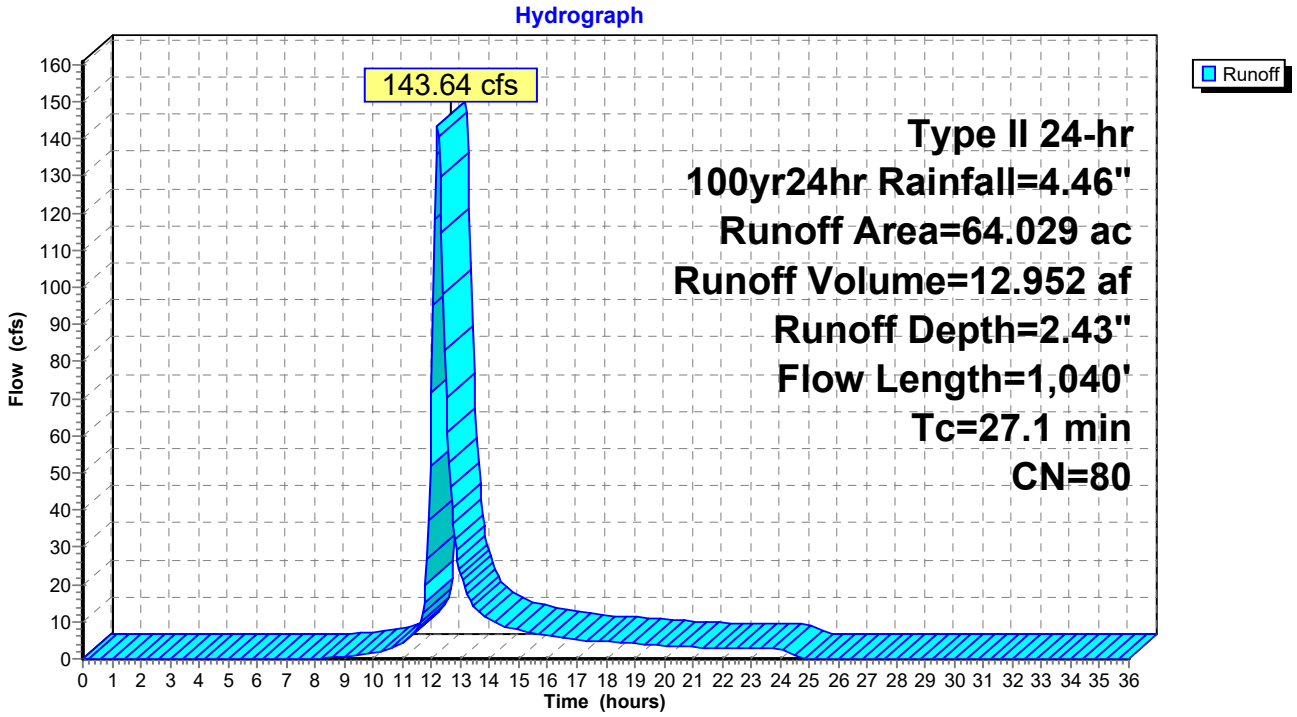
Runoff = 143.64 cfs @ 12.21 hrs, Volume= 12.952 af, Depth= 2.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.064 | 84 | Developed Open Space, HSG D |
| * | 0.204 | 93 | Developed Low Intensity, HSG D |
| * | 0.191 | 84 | Developed Open Space, HSG D |
| * | 0.261 | 93 | Developed Low Intensity, HSG D |
| * | 0.592 | 93 | Developed Low Intensity, HSG D |
| * | 0.522 | 94 | Developed Medium Intensity, HSG D |
| * | 0.009 | 81 | Cultivated Crops, HSG D |
| * | 0.000 | 93 | Developed Low Intensity, HSG D |
| * | 0.068 | 84 | Developed Open Space, HSG D |
| * | 4.348 | 81 | Cultivated Crops, HSG D |
| * | 17.034 | 81 | Cultivated Crops, HSG D |
| * | 0.249 | 78 | MEADOW, HSG D |
| * | 0.351 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.495 | 78 | MEADOW, HSG D |
| * | 3.588 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.883 | 78 | MEADOW, HSG D |
| * | 0.437 | 78 | MEADOW, HSG D |
| * | 6.397 | 78 | MEADOW, HSG D |
| * | 25.818 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| * | 0.007 | 78 | MEADOW, HSG D |
| * | 0.007 | 98 | IMPERVIOUS, HSG D |
| * | 0.054 | 78 | MEADOW, HSG D |
| * | 0.054 | 98 | IMPERVIOUS, HSG D |
| * | 0.083 | 78 | MEADOW, HSG D |
| * | 0.083 | 98 | IMPERVIOUS, HSG D |
| * | 0.572 | 78 | MEADOW, HSG D |
| * | 0.572 | 98 | IMPERVIOUS, HSG D |
| | 64.029 | 80 | Weighted Average |
| | 63.227 | | 98.75% Pervious Area |
| | 0.801 | | 1.25% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.2 | 14 | 0.0698 | 1.25 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.15" |
| 2.6 | 22 | 0.0422 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 7.0 | 65 | 0.0314 | 0.15 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.6 | 255 | 0.0291 | 1.19 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 115 | 0.0119 | 0.77 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 41 | 0.0171 | 0.91 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.6 | 89 | 0.0102 | 0.91 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 211 | 0.0063 | 0.72 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 4.0 | 228 | 0.0111 | 0.95 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 27.1 | 1,040 | Total | | | |

## Subcatchment 63: WS63



## Summary for Subcatchment 64: WS64

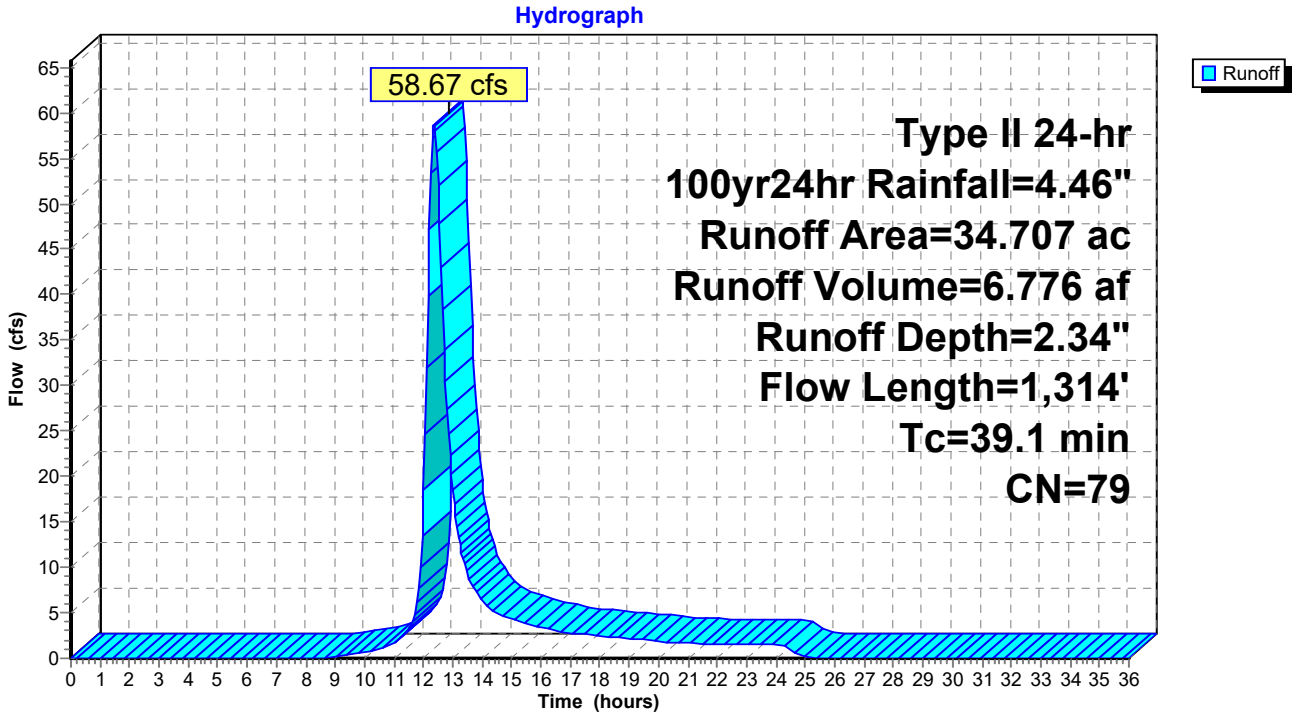
Runoff = 58.67 cfs @ 12.36 hrs, Volume= 6.776 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.070 | 94 | Developed Medium Intensity, HSG D |
| * | 0.213 | 81 | Cultivated Crops, HSG D |
| * | 0.051 | 84 | Developed Open Space, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.004 | 84 | Developed Open Space, HSG D |
| * | 0.241 | 93 | Developed Low Intensity, HSG D |
| * | 0.120 | 84 | Developed Open Space, HSG D |
| * | 0.388 | 93 | Developed Low Intensity, HSG D |
| * | 0.132 | 84 | Developed Open Space, HSG D |
| * | 0.707 | 81 | Cultivated Crops, HSG D |
| * | 2.771 | 81 | Cultivated Crops, HSG D |
| * | 1.011 | 78 | MEADOW, HSG D |
| * | 10.466 | 78 | MEADOW, HSG D |
| * | 0.040 | 98 | IMPERVIOUS, HSG D |
| * | 0.083 | 78 | MEADOW, HSG D |
| * | 0.121 | 78 | MEADOW, HSG D |
| * | 2.314 | 78 | MEADOW, HSG D |
| * | 15.070 | 78 | MEADOW, HSG D |
| * | 0.045 | 98 | IMPERVIOUS, HSG D |
| * | 0.149 | 78 | MEADOW, HSG D |
| * | 0.149 | 98 | IMPERVIOUS, HSG D |
| * | 0.171 | 78 | MEADOW, HSG D |
| * | 0.171 | 98 | IMPERVIOUS, HSG D |
| | 34.707 | 79 | Weighted Average |
| | 34.302 | | 98.83% Pervious Area |
| | 0.405 | | 1.17% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 14.9 | 100 | 0.0115 | 0.11 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 1.3 | 80 | 0.0230 | 1.06 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 223 | 0.0189 | 0.96 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 170 | 0.0105 | 0.72 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.2 | 85 | 0.0270 | 1.15 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.5 | 21 | 0.0127 | 0.79 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 11 | 0.0132 | 2.33 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.4 | 23 | 0.0180 | 0.94 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.6 | 138 | 0.0157 | 0.88 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 7.5 | 329 | 0.0110 | 0.73 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 26 | 0.0086 | 0.65 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.8 | 31 | 0.0084 | 0.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.9 | 41 | 0.0076 | 0.79 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.3 | 37 | 0.0100 | 2.03 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 39.1 | 1,314 | Total | | | |

## Subcatchment 64: WS64



## Summary for Subcatchment 65: WS65

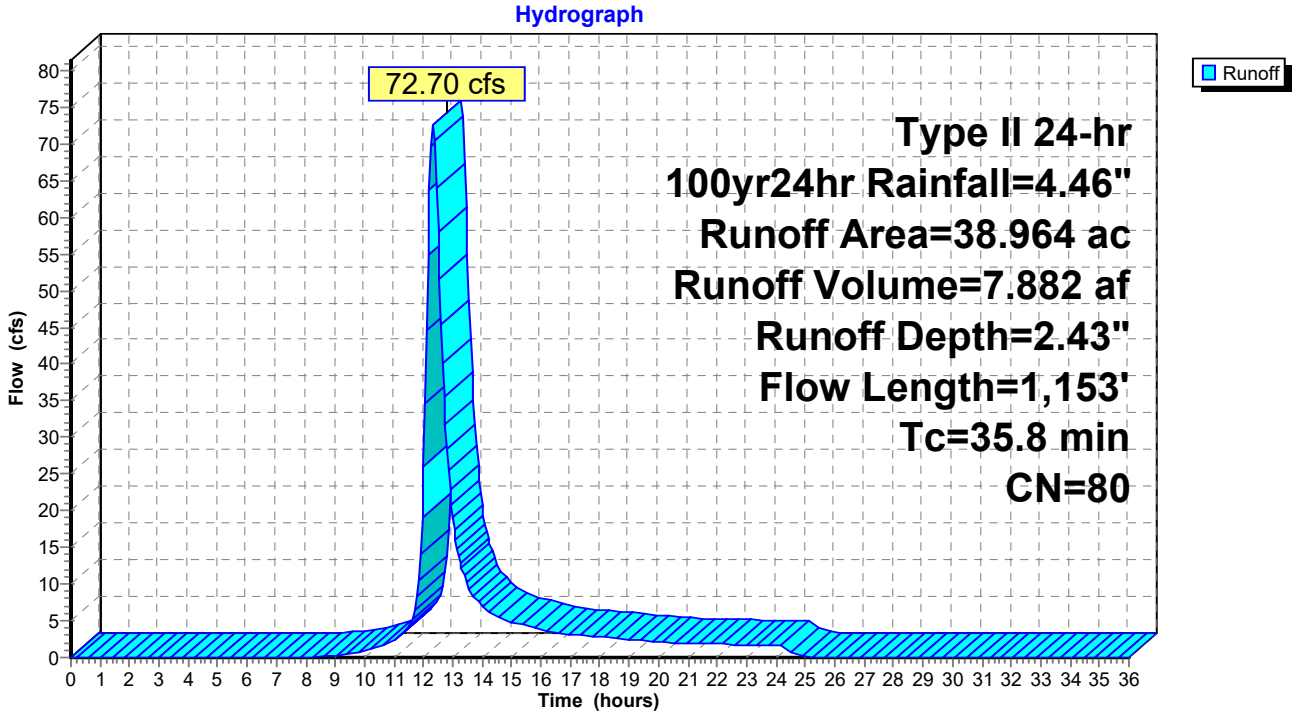
Runoff = 72.70 cfs @ 12.32 hrs, Volume= 7.882 af, Depth= 2.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.808 | 84 | Developed Open Space, HSG D |
| * | 0.016 | 84 | Developed Open Space, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.008 | 93 | Developed Low Intensity, HSG D |
| * | 1.799 | 93 | Developed Low Intensity, HSG D |
| * | 0.220 | 94 | Developed Medium Intensity, HSG D |
| * | 0.157 | 93 | Developed Low Intensity, HSG D |
| * | 0.187 | 93 | Developed Low Intensity, HSG D |
| * | 0.090 | 93 | Developed Low Intensity, HSG D |
| * | 0.445 | 81 | Cultivated Crops, HSG D |
| * | 3.888 | 81 | Cultivated Crops, HSG D |
| * | 0.620 | 81 | Cultivated Crops, HSG D |
| * | 2.076 | 81 | Cultivated Crops, HSG D |
| * | 0.180 | 78 | MEADOW, HSG D |
| * | 4.641 | 78 | MEADOW, HSG D |
| * | 14.598 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 1.341 | 78 | MEADOW, HSG D |
| * | 3.010 | 78 | MEADOW, HSG D |
| * | 1.721 | 78 | MEADOW, HSG D |
| * | 2.243 | 78 | MEADOW, HSG D |
| * | 0.306 | 78 | MEADOW, HSG D |
| * | 0.306 | 98 | IMPERVIOUS, HSG D |
| * | 0.052 | 78 | MEADOW, HSG D |
| * | 0.052 | 98 | IMPERVIOUS, HSG D |
| | 38.964 | 80 | Weighted Average |
| | 38.564 | | 98.97% Pervious Area |
| | 0.401 | | 1.03% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.0 | 100 | 0.0072 | 0.09 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 0.8 | 44 | 0.0195 | 0.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.1 | 173 | 0.0382 | 1.37 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 122 | 0.0401 | 1.40 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.4 | 72 | 0.0156 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 25 | 0.0292 | 1.20 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.7 | 36 | 0.0017 | 0.83 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 2.0 | 103 | 0.0151 | 0.86 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 228 | 0.0232 | 1.07 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.9 | 129 | 0.0117 | 0.76 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.5 | 121 | 0.0081 | 0.81 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 35.8 | 1,153 | Total | | | |

## Subcatchment 65: WS65



## Summary for Subcatchment 66: WS66

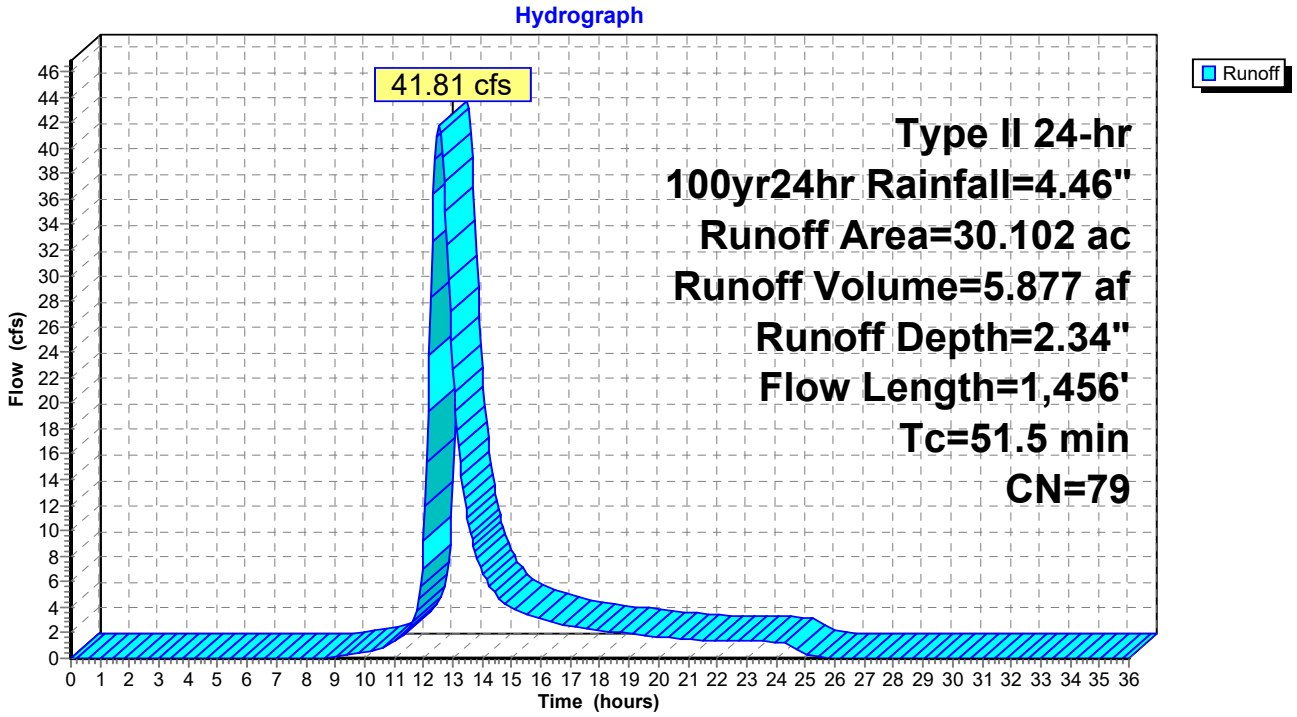
Runoff = 41.81 cfs @ 12.52 hrs, Volume= 5.877 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.002 | 94 | Developed Medium Intensity, HSG D |
| * | 4.099 | 81 | Cultivated Crops, HSG D |
| * | 2.336 | 81 | Cultivated Crops, HSG D |
| * | 2.321 | 78 | MEADOW, HSG D |
| * | 0.469 | 78 | MEADOW, HSG D |
| * | 12.104 | 78 | MEADOW, HSG D |
| * | 1.365 | 78 | MEADOW, HSG D |
| * | 2.497 | 78 | MEADOW, HSG D |
| * | 4.186 | 78 | MEADOW, HSG D |
| * | 0.043 | 98 | IMPERVIOUS, HSG D |
| * | 0.140 | 78 | MEADOW, HSG D |
| * | 0.140 | 98 | IMPERVIOUS, HSG D |
| * | 0.201 | 78 | MEADOW, HSG D |
| * | 0.201 | 98 | IMPERVIOUS, HSG D |
| | 30.102 | 79 | Weighted Average |
| | 29.719 | | 98.73% Pervious Area |
| | 0.383 | | 1.27% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.5 | 100 | 0.0218 | 0.14 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 2.15" |
| 3.3 | 152 | 0.0124 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 5.8 | 150 | 0.0039 | 0.43 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.9 | 291 | 0.0320 | 1.25 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.3 | 111 | 0.0135 | 0.81 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.3 | 54 | 0.0097 | 0.69 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.2 | 5 | 0.0059 | 0.54 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.5 | 109 | 0.0187 | 1.23 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.4 | 26 | 0.0214 | 1.02 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.9 | 91 | 0.0125 | 0.78 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 19.4 | 366 | 0.0020 | 0.31 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 51.5 | 1,456 | Total | | | |

## Subcatchment 66: WS66



## Summary for Subcatchment 67: WS67

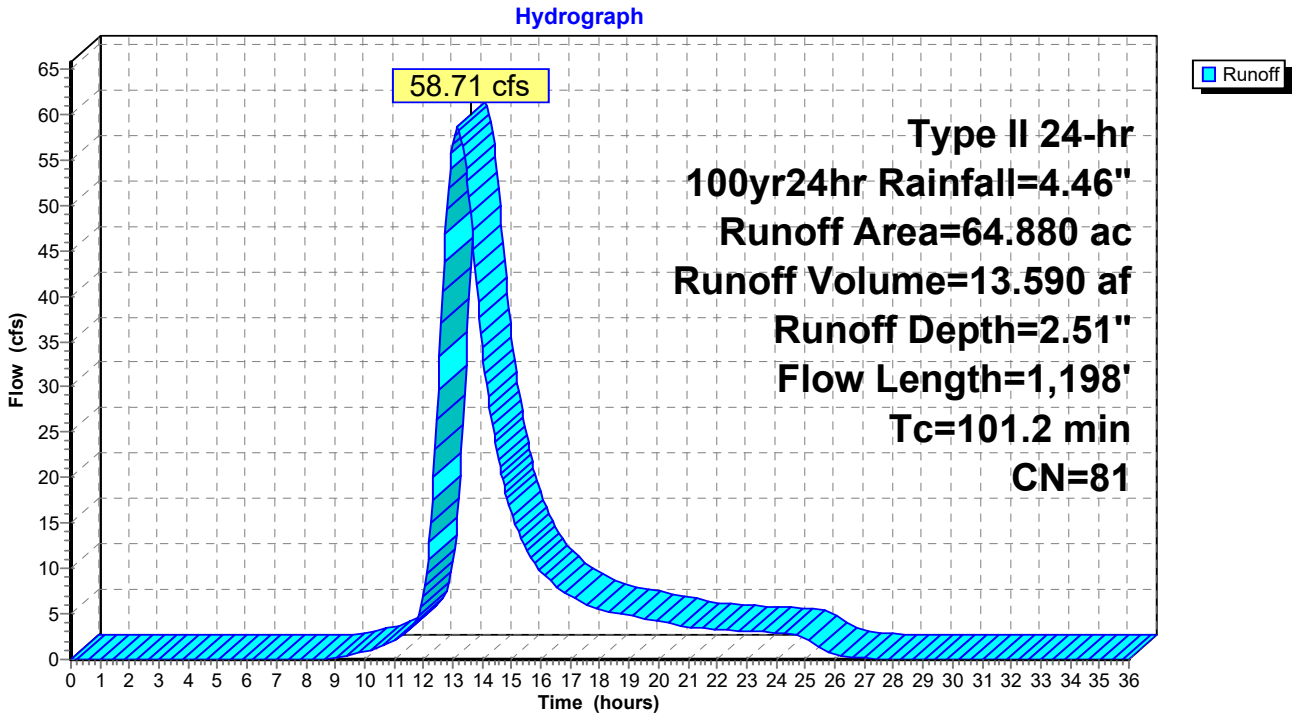
Runoff = 58.71 cfs @ 13.16 hrs, Volume= 13.590 af, Depth= 2.51"

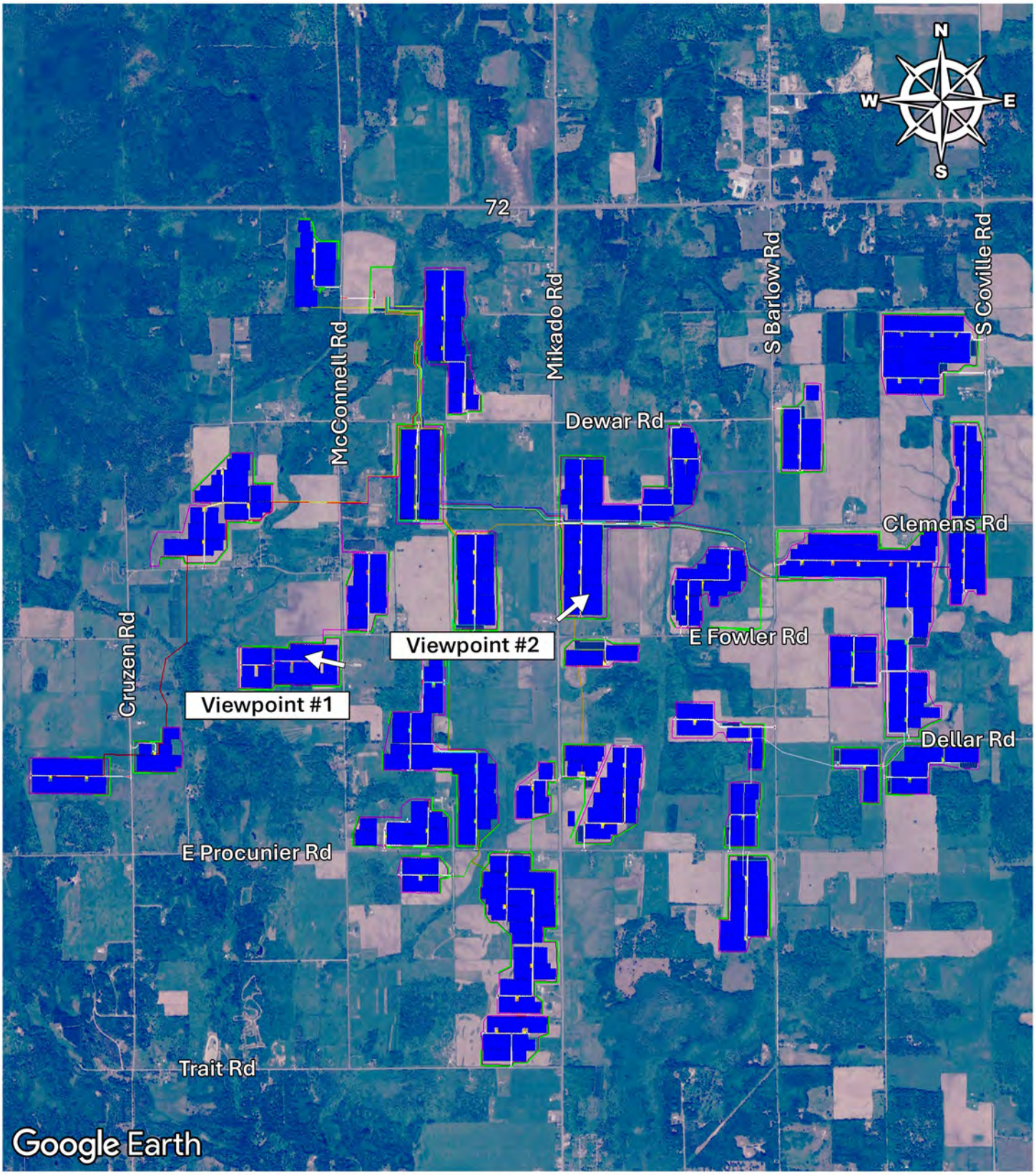
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr24hr Rainfall=4.46"

| | Area (ac) | CN | Description |
|---|---|---|---|
| * | 0.065 | 93 | Developed Low Intensity, HSG D |
| * | 0.316 | 93 | Developed Low Intensity, HSG D |
| * | 0.222 | 93 | Developed Low Intensity, HSG D |
| * | 0.110 | 94 | Developed Medium Intensity, HSG D |
| * | 0.317 | 94 | Developed Medium Intensity, HSG D |
| * | 0.222 | 84 | Developed Open Space, HSG D |
| * | 0.210 | 93 | Developed Low Intensity, HSG D |
| * | 0.490 | 93 | Developed Low Intensity, HSG D |
| * | 0.053 | 84 | Developed Open Space, HSG D |
| * | 0.070 | 84 | Developed Open Space, HSG D |
| * | 0.234 | 86 | Woody Wetlands, HSG D |
| * | 0.117 | 93 | Developed Low Intensity, HSG D |
| * | 0.583 | 93 | Developed Low Intensity, HSG D |
| * | 0.347 | 93 | Developed Low Intensity, HSG D |
| * | 0.034 | 81 | Cultivated Crops, HSG D |
| * | 0.257 | 94 | Developed Medium Intensity, HSG D |
| * | 0.154 | 84 | Developed Open Space, HSG D |
| * | 0.751 | 93 | Developed Low Intensity, HSG D |
| * | 0.173 | 84 | Developed Open Space, HSG D |
| * | 0.904 | 86 | Woody Wetlands, HSG D |
| * | 0.455 | 93 | Developed Low Intensity, HSG D |
| * | 0.000 | 84 | Developed Open Space, HSG D |
| * | 7.923 | 81 | Cultivated Crops, HSG D |
| * | 7.076 | 81 | Cultivated Crops, HSG D |
| * | 9.818 | 81 | Cultivated Crops, HSG D |
| * | 0.061 | 78 | MEADOW, HSG D |
| * | 0.007 | 98 | IMPERVIOUS, HSG D |
| * | 0.048 | 78 | MEADOW, HSG D |
| * | 0.051 | 98 | IMPERVIOUS, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.130 | 78 | MEADOW, HSG D |
| * | 0.050 | 78 | MEADOW, HSG D |
| * | 2.324 | 78 | MEADOW, HSG D |
| * | 12.998 | 78 | MEADOW, HSG D |
| * | 0.038 | 98 | IMPERVIOUS, HSG D |
| * | 0.179 | 98 | IMPERVIOUS, HSG D |
| * | 4.671 | 78 | MEADOW, HSG D |
| * | 7.788 | 78 | MEADOW, HSG D |
| * | 0.048 | 98 | IMPERVIOUS, HSG D |
| * | 0.404 | 98 | IMPERVIOUS, HSG D |
| * | 1.538 | 78 | MEADOW, HSG D |
| * | 3.645 | 78 | MEADOW, HSG D |
| * | 0.000 | 78 | MEADOW, HSG D |
| * | 0.000 | 98 | IMPERVIOUS, HSG D |
| | 64.880 | 81 | Weighted Average |
| | 64.153 | | 98.88% Pervious Area |
| | 0.727 | | 1.12% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.3 | 100 | 0.0080 | 0.20 | | **Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.15" |
| 1.5 | 105 | 0.0169 | 1.17 | | **Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 55 | 0.0194 | 0.97 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 78.5 | 222 | 0.0000 | 0.05 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 4.0 | 211 | 0.0156 | 0.87 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 51 | 0.0147 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.1 | 34 | 0.0685 | 5.31 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 27 | 0.0549 | 1.64 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.3 | 232 | 0.0273 | 1.16 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 0.6 | 30 | 0.0020 | 0.91 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.3 | 12 | 0.0075 | 0.61 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 2.4 | 121 | 0.0148 | 0.85 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 101.2 | 1,198 | Total | | | |

## Subcatchment 67: WS67






BURNS McDONNELL

# Gustin Solar Project

Viewpoint Map

Consumers Energy

Created: 5/13/26

EXISTING

PROPOSED AT PLANTING

BURNS McDONNELL

# Gustin Solar Project

Viewpoint #1

2 Rows of Evergreen Trees

Consumers Energy

Created: 5/13/26

PROPOSED AT 5 YEARS FROM PLANTING

PROPOSED AT 10 YEARS FROM PLANTING

BURNS McDONNELL

# Gustin Solar Project

Viewpoint #1

2 Rows of Evergreen Trees

Consumers Energy

Created: 5/13/26

EXISTING

PROPOSED AT PLANTING

# Gustin Solar Project

Viewpoint #1

2 Rows of MxG

BURNS McDONNELL

Consumers Energy

Created: 5/13/26

PROPOSED AT 2 YEARS FROM PLANTING

PROPOSED AT 5 YEARS FROM PLANTING

# Gustin Solar Project

Viewpoint #1

2 Rows of MxG

BURNS McDONNELL

Consumers Energy

Created: 5/13/26

EXISTING

PROPOSED AT PLANTING

# Gustin Solar Project

Viewpoint #1

Evergreen Trees and MxG

BURNS McDONNELL

Consumers Energy

Created: 5/13/26

PROPOSED AT 5 YEARS FROM PLANTING

PROPOSED AT 10 YEARS FROM PLANTING

BURNS McDONNELL

# Gustin Solar Project

Viewpoint #1

Evergreen Trees and MxG

Consumers Energy

Created: 5/13/26

EXISTING

PROPOSED AT PLANTING

# Gustin Solar Project

Viewpoint #1

Evergreen Trees (”Gustin” in Morse Code) and MxG

BURNS McDONNELL

Consumers Energy

Created: 5/13/26

PROPOSED AT 5 YEARS FROM PLANTING

PROPOSED AT 10 YEARS FROM PLANTING

BURNS McDONNELL

# Gustin Solar Project

Viewpoint #1

Evergreen Trees (”Gustin” in Morse Code) and MxG

Consumers Energy

Created: 5/13/26

EXISTING

PROPOSED AT PLANTING

BURNS McDONNELL

# Gustin Solar Project

Viewpoint #2

2 Rows of Evergreen Trees

Consumers Energy

Created: 5/13/26

PROPOSED AT 5 YEARS FROM PLANTING

PROPOSED AT 10 YEARS FROM PLANTING

BURNS McDONNELL

# Gustin Solar Project

Viewpoint #2

2 Rows of Evergreen Trees

Consumers Energy

Created: 5/13/26

EXISTING

PROPOSED AT PLANTING

# Gustin Solar Project

Viewpoint #2

2 Rows of MxG

BURNS McDONNELL

Consumers Energy

Created: 5/13/26

PROPOSED AT 2 YEARS FROM PLANTING

PROPOSED AT 5 YEARS FROM PLANTING

BURNS McDONNELL

# Gustin Solar Project

Viewpoint #2

2 Rows of MxG

Consumers Energy

Created: 5/13/26

EXISTING

PROPOSED AT PLANTING

BURNS McDONNELL

# Gustin Solar Project

Viewpoint #2

Evergreen Trees and MxG

Consumers Energy

Created: 5/13/26

PROPOSED AT 5 YEARS FROM PLANTING

PROPOSED AT 10 YEARS FROM PLANTING

BURNS McDONNELL

# Gustin Solar Project

Viewpoint #2

Evergreen Trees and MxG

Consumers Energy

Created: 5/13/26

EXISTING

PROPOSED AT PLANTING

# Gustin Solar Project

Viewpoint #2

Evergreen Trees (”Gustin” in Morse Code) and MxG

BURNS McDONNELL

Consumers Energy

Created: 5/13/26

PROPOSED AT 5 YEARS FROM PLANTING

PROPOSED AT 10 YEARS FROM PLANTING

# Gustin Solar Project

Viewpoint #2

Evergreen Trees (”Gustin” in Morse Code) and MxG

BURNS McDONNELL

Consumers Energy

# Gustin Solar Energy Center

# Special Land Use Permit – Gustin Township

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## Exhibits

Exhibit A – Landowner Agreements (Deeds and Recorded Memorandums)

Exhibit B – Site Plan

Exhibit C – Glare Study

Exhibit D – Solar PV Station O&M Manual

Exhibit E – Solar PV Station Emergency Response Plan

Exhibit F – Sound Study

Exhibit G – Decommissioning Plan

Exhibit H – Stormwater Calculations

# A. Applicant Information

## 1. Company Profile

Consumers Energy is the principal subsidiary of Jackson-based CMS Energy Corporation and is Michigan's largest energy provider, providing electricity and gas to almost 7 million of the state's 10 million residents in all 68 counties in the Lower Peninsula. Consumers Energy provides electric service to 1.9 million customers. Consumers Energy operates three coal-fueled generating units, two oil/gas-fueled generating units, and six gas-fueled generating units, 13 hydroelectric plants, a pumped storage electric generating plant, four wind-powered energy parks, four solar photovoltaic (PV) generation systems, and several combustion-turbine plants that produce electricity when needed during peak demand periods. Consumers Energy also purchases power from several independent power producers through long-term Power Purchase Agreements (PPAs).

## 2. Project Contacts

The following contacts are authorized representatives of Consumers Energy for the Gustin Solar Energy Center ("Project").

- Peter Wyckoff, P.E. – Project Development Manager
- Basel Djazmati – Principal EPC Project Manager
- Joseph Lawson – Principal Permit and Zoning Agent
- Carlin Smith – Community Affairs Manager
- Dena Isabell – Stakeholder Engagement Manager

Email: POBoxGustinSolar@cmsenergy.com

## 3. Participating Parcels

Consumers Energy has acquired land and secured agreements with the landowners for the land rights necessary to construct and operate the Project on the land included in this application. The agreements allow Consumers Energy to operate the Project for up to 30 years from the commercial operation date. Copies of the deeds and recorded memorandums are included in **Exhibit A**.

# B. Introduction

As required by Section 6.1.C.1 of the Zoning Ordinance, the following describes the proposed use, including any parking facilities and traffic generation.

## 1. Project Summary

### i. Project Location

The Project spans land located in Gustin and Harrisville Townships and includes parcels that have already been approved for commercial solar energy system use (Sapling Solar).

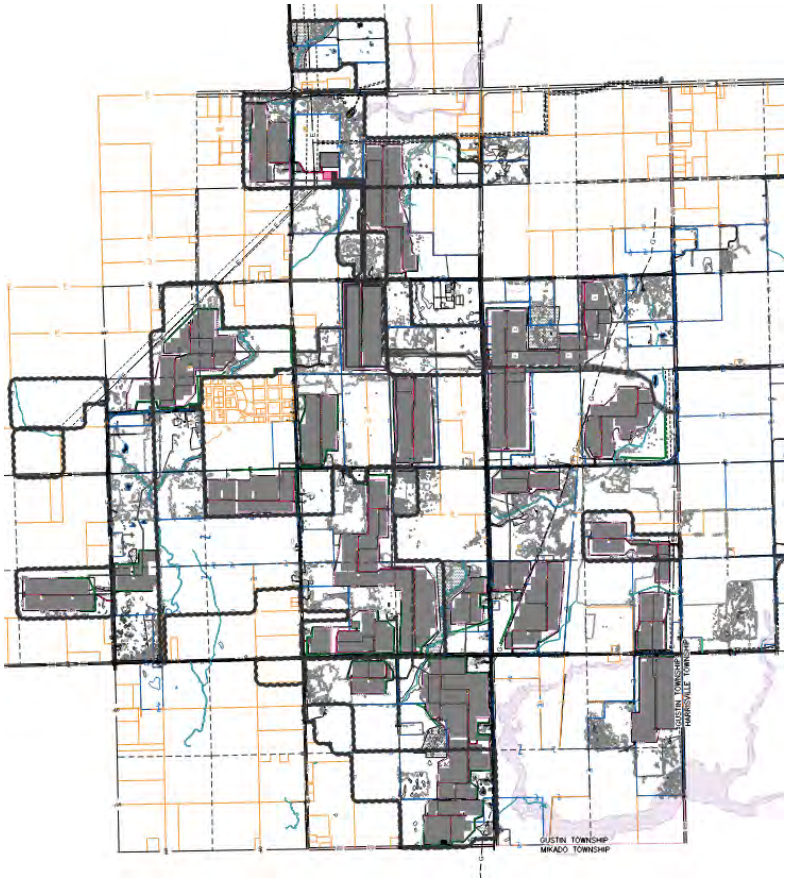


*Figure 1: Site Layout*

### ii. Sapling Solar Special Land Use Approval and Variances

On December 2, 2024, the Gustin Township Planning Commission granted special land use and site plan approval for the Sapling Solar project, a commercial solar energy system with a name-plate generation capacity of 215 megawatts alternating current ($MW_{AC}$). Gustin Solar is seeking an approval of an additional 25 $MW_{AC}$. The parcels included in the Sapling Solar approval are clouded in back in **Figure 1**. The additional parcels that make up Gustin Solar are the subject of this application.

That same day, the Zoning Board of Appeals granted two zoning variances for Sapling Solar. The first variance increased the maximum sound level at the outer wall of a nonparticipating building from 45 dBA to 50 dBA. The second variance reduced the minimum setback from all nonparticipating property lines, as measured from the nearest end of a solar panel at its minimum tilt, from 200 feet to 50 feet.

On January 2, 2025, the Planning Commission amended Sapling Solar's special land use and site plan approval. The amended approval extended the approval expiration date to January 2, 2030 and authorized changes to the approved site plan without additional action by the Township provided all zoning requirements were met.

### iii. Project Overview

Consumers Energy intends to construct and operate Sapling Solar as part of the Gustin Solar Energy Center. When combined, the Project will have an overall capacity rating of 240 $MW_{AC}$ and a total direct current (DC) capacity of 299 megawatts direct current ($MW_{DC}$). The Project will be connected via underground cables to a 34.5 kilovolt (kV) to 138 kV collector substation, which will be connected to a switchyard owned and operated by METC, the grid transmission operator.

Consumers Energy anticipates construction starting in the fourth quarter (Q4) of 2026 with an anticipated in-service date (Commercial Operation Date) of December 31, 2028.

## 2. Design Approach

The Project has been designed to minimize impacts to natural resources and adjoining properties and to maximize habitat value. To achieve these goals, the Project incorporates the following design considerations:

- Racking piles are spaced to create meadow-like vegetative strips having sufficient width to allow stormwater to be filtered and infiltrated, resulting in improved water quality and reduced runoff as compared to existing conditions.
- Inverters are sited within the interior of the solar arrays to minimize sound emissions.
- Vegetative buffers are sited in designated areas to screen the arrays from adjacent residences.
- The buffer design incorporates materials, colors, textures, vegetative and landscape elements that blend with the natural landscape and existing environment.
- The ground within the permanent fence line will be pre-seeded with a pollinator-friendly seed mix. The vegetated ground cover will be maintained throughout the life of the Project.

Additionally, to achieve the desired objectives, vegetation best management practices (BMPs) will be employed throughout the construction and operational life of the Project. Implementation of these practices will provide habitat for pollinators, grassland bird species, and small mammals.

## 3. Project Components

### i. Solar Modules and Tracking System

Approximately 184,411 Trina Solar TSM-DEG21C.20 655-665 W modules and 251,507 Trina Solar TSM-NEG21C.20 700-715 W PV modules (or equivalent solar PV modules) will be installed on approximately 5,693 Array Technologies OmniTrack single-axis tracker rows (or equivalent tracking system). Use of the terrain-following tracking system will result in minimal on-site grading.

No exterior lighting is required or proposed.

### ii. Electrical Collection System

The solar PV modules are connected in serial groups (“strings”) with approximately 0.25-inch diameter cable. Each string of modules is connected in parallel with surrounding strings via a “Big Lead Assembly” (BLA) system produced by Shoals. The BLA system consists of cables approximately one inch in diameter. The BLA system is routed to disconnect switches through an above-ground cable management system produced by CAB Solar. The CAB system routes the cables through hangers attached to a messenger wire running along the tracker rows.

The CAB system contains cables from multiple circuits and is supported on the tracker rows or standalone pile foundations. From the disconnect switches, DC circuits connect to an inverter skid via approximately one-inch-diameter cables buried at a minimum depth of 30 inches. The maximum voltage of the DC system is approximately 1500 volts (V). The Project includes 64 inverters, with one inverter for approximately every 6,756 modules and 88 tracker rows.

The alternating current (AC) collection system's 34.5 kV cables connect each inverter skid to the collector substation. These cables are between 1.5 and 3 inches in diameter and buried at a minimum of 36 inches deep. The AC cables are routed with direct-buried fiber optic cables, which are used to control the inverters and for communications.

### iii. Perimeter Fencing

A 7-foot fence will be installed around the solar arrays to enclose and secure the perimeter. The fence height and openings are designed in accordance with the National Electric Safety Code (NESC). **Figure 2** below details the fence proposed for the Project. Fencing locations are shown on the Site Plan (**Exhibit B)**.

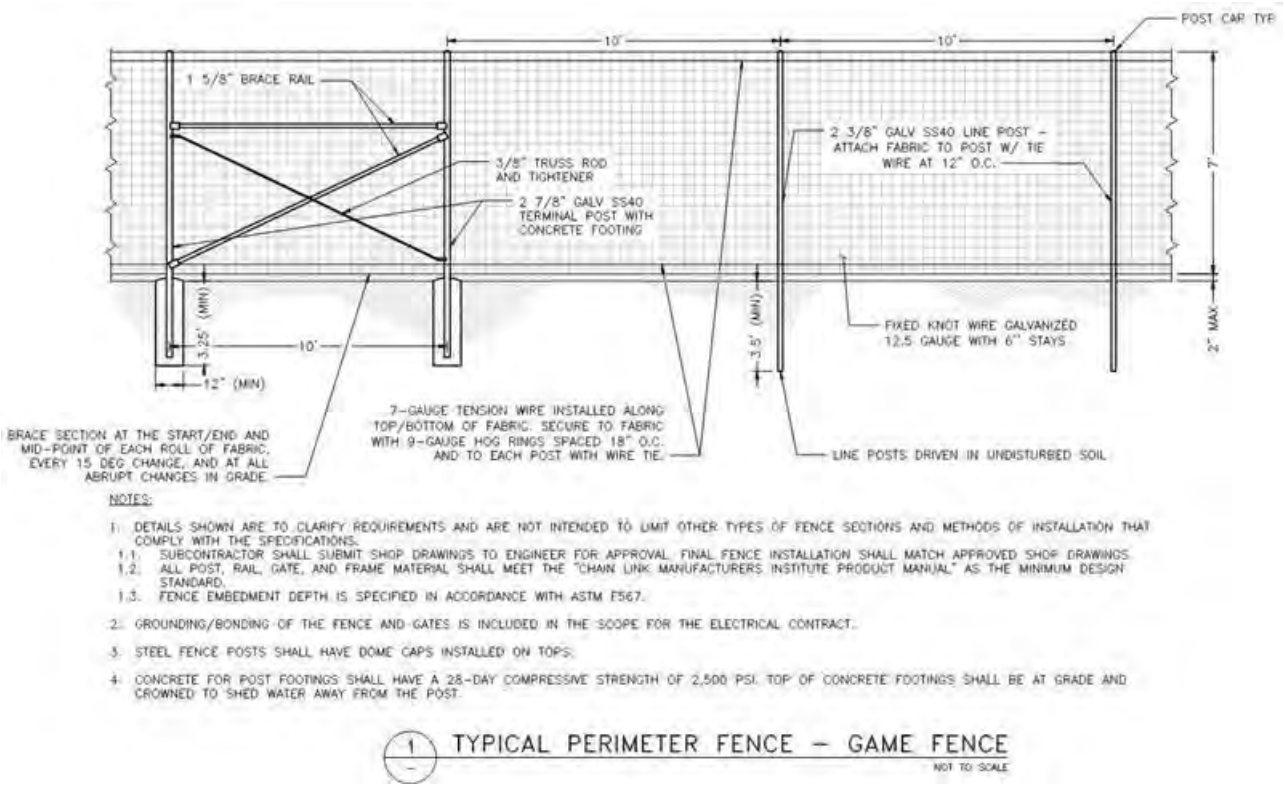


*Figure 2: Permanent Fence Detail*

### iv. Construction Sequence

Construction is expected to follow the sequence described below with some steps occurring in parallel:

- Install temporary stormwater BMPs per Erosion & Sediment Control Plans and SESC permit.
- Pre-seed the area with a low-grow and pollinator friendly seed mix.

- Install driveways, access roads and staging areas to receive and store construction materials, equipment, and trailers, and to provide parking for personnel and construction-related vehicles.
- Deliver and install security fencing and gate materials to secure future deliveries and equipment.
- Complete localized grading activities.
- Re-seed areas upon achieving final grade.
- Deliver equipment, including piles, aluminum supports, mounting structures, tracking systems, solar PV modules, and inverters.
- Construct the Project in blocks, with multiple blocks constructed simultaneously, in accordance with the steps below.
- Drive pile foundations and install aluminum supports and mounting structures.
- Deliver and install the electrical collection system using trenching and directional drilling.
- Install solar PV modules.
- Conduct interconnection inspections, testing, and Project commissioning.
- Reclaim staging areas, demobilize all construction equipment.
- Commence final restoration and re-seed and re-vegetate staging areas and other disturbed areas.
- Begin commercial operation of the Project.

#### v. Statement of Project's Effect on the Neighborhood

The Project will not have a negative effect on the neighborhood because it has been designed to comply with all applicable regulations and will be appropriately screened from view of adjacent residences and roadways. In fact, construction of the Project will result in the removal of dilapidated structures and inoperable vehicles and other equipment.

The Project is expected to support the local, regional, and state economies by creating construction-phase jobs and generating substantial tax revenue once operational. The Project will also avoid negatively affecting the value of adjacent properties.

## C. Compliance with Applicable Zoning Regulations

### 1. Compliance with Zoning Ordinance Section 7.31

The following demonstrates the Project's compliance with the commercial solar energy system regulations contained in Section 7.31 of the Zoning Ordinance. For ease of review, applicable subsections of Section 7.31 are reproduced below with responsive information immediately following in blue:

- *Section 7.31.A General Requirements - Solar Energy Systems*
  - 7.31.A.1 All Solar Energy Systems must conform to the provisions of this Ordinance and all County, State, and Federal regulations and safety requirements as well as applicable industry standards.

As summarized in this narrative and appended materials, the Project has been designed to comply with all provisions of the Ordinance, along with applicable county, state, and federal regulations and safety requirements. As demonstrated by the appended materials, the Project's design is consistent with applicable industry standards.

- 7.31.A.2 Solar Energy Systems shall be located or placed so that concentrated solar glare shall not be directed toward or onto nearby properties or roadways at any time of the day.

  Included as **Exhibit C** is a glare modeling and analysis ("Glare Study") performed by Burns & McDonnell.

  The Glare Study, which assumes sunlight 365 days a year, predicts visible, consequential glare at 10 of the 150 modeled receptors in Gustin Township during limited times of the year. An additional six receptors are anticipated to experience visible glare from the same direction as the sun during the hour following sunrise or preceding sunset; however, the glare is not considered consequential as the retinal irradiance caused by viewing the sun directly is much higher than that expected from the Project. Due to the conservative approach of the study, the actual duration and intensity of glare experienced at each receptor is expected to be less than those reported in the study. Planned visual screening will eliminate the impact of glare on all ten instances of consequential glare.

- *Section 7.31.C Commercial Solar Energy Systems*

Commercial Solar Energy Systems shall only be allowed in the Agricultural-Residential District or the Industrial District as a special use approved by the Planning Commission. In addition to any other requirements for special use approval, Commercial Solar Energy Systems shall be ground mounted and are subject to the following requirements:

- 7.31.C.1 The property owner or applicant for a Commercial Solar Energy System shall provide the Planning Commission with proof of ownership of the subject property, a copy of any lease agreement for a commercial solar energy system, together with an operations agreement, which shall set forth the operations parameters, the name and contact information of the certified operator, inspection protocol, emergency procedures and general safety documentation.

  Applicable ownership documents are included in **Exhibit A**.

  Consumers Energy will operate the facility. Because there is no operations agreement with a third-party, Consumers Energy's "Solar PV Station O&M Manual" is included in **Exhibit D**. The Solar PV Station O&M Manual discusses Consumers Energy's parameters for operating and maintaining solar facilities. In addition, a "Solar PV Station Emergency Response Plan" is included in **Exhibit E**. The Solar PV Station Emergency Response Plan describes emergency procedures and contact information.

- 7.31.C.3 The Commercial Solar Energy System shall be set back two hundred (200) feet from all property lines of non-participating lots. Setbacks should be measured when the panel is at minimum tilt.

As shown on the Site Plan (**Exhibit B**), the Project will be setback at least 200 feet from all property lines of non-participating lots.

- 7.31.C.4 The height of the Commercial Solar Energy System and any mounts shall not exceed fifteen (15) feet when oriented at maximum tilt.

  The anticipated maximum height (approximately 11 feet) of the solar arrays and associated equipment are shown in the Collector System ISA Elevation View and the Collector System CAB Details included in the Site Plan (**Exhibit B)**.

- 7.31.C.5 Solar devices shall be screened year-round from view from any existing residential use and the public right-of-way by use of a screening wall, evergreen vegetation, or other screening of similar effectiveness and quality, as determined by the Planning Commission. Screening shall be installed which screen the facility fully from view from the time of planting or installation. Screening shall be maintained throughout the life of the facility including replacing dead vegetation within six (6) months or at the earliest feasible time of the year dependent on the weather.

  A vegetative buffer is proposed along the Project perimeter in locations where existing vegetation does not adequately screen views of the Project from the perspective of adjacent residences and public rights-of-way. Proposed vegetative buffer locations are shown on the Site Improvements & Grading Plan page of the Site Plan (**Exhibit B**).

- 7.31.C.6 The sound pressure level of a solar energy facility and all ancillary solar equipment shall not exceed 45 dBA (Leq (1 hour)) at the property line of an adjacent non-participating lot. The site plan shall include modeled sound isolines extending from the sound source to the property lines to demonstrate compliance with this standard.

  Included as **Exhibit F** is a Sound Study for the Project. The sound study demonstrates the Project will not exceed 45 dBA at any property line of an adjacent non-participating parcel. The Site Plan includes modeled isolines extending from the sound source to the property lines.

- 7.31.C.7 Prior to installation, the applicant shall submit a descriptive site plan to the Planning Commission which includes where and how the Commercial Solar Energy System will connect to the power grid.

  The Site Plan (**Exhibit B**) shows the location of the point of interconnection to the power grid. The connection is via a switchyard owned and operated by METC.

- 7.31.C.8 No Commercial Solar Energy System shall be installed until evidence has been given to the Planning Commission that the electric utility company has agreed to an interconnection with the electrical grid or a power purchase agreement. Any such agreement shall be furnished to the Planning Commission.

  The Project will be owned by Consumers Energy and will be connected to the transmission grid by METC, the transmission operator. Consumers Energy has two pending generator interconnection requests for the Project with the Mid-Continent System Operator (MISO), the regional grid operator for the central United States. The generator interconnection requests have

been assigned project numbers (J2611 and N3451) and are under study. At the completion of the studies, MISO will provide generator interconnection agreements that specify the terms for interconnecting to the grid via the METC transmission system. Consumers Energy will provide interconnection updates and evidence of a final interconnection agreement once received.

- 7.31.C.9 Condition of every approval of a Commercial Solar Energy System shall be adequate provision for the removal of the system whenever it ceases to be used for one (1) year or more. In the event that a system has been abandoned (meaning not having been in operation for a period of one (1) year), the property owner and developer/applicant shall notify the Township and shall remove the system within one (1) year from the date of abandonment. Removal includes the proper receipt of a demolition permit from the Building Official and proper restoration of the site to the satisfaction of the Zoning Administrator. The site shall then be filled and covered with topsoil and restored to a state compatible with the surrounding vegetation.

  Consumers Energy expects the Project to be in service for at least 30 years. A Decommissioning Plan for the Project prepared by Black & Veatch is included in **Exhibit G**. The Decommissioning Plan details the process of decommissioning, removing Project components from the property, and restoring the site to a state compatible with the surrounding vegetation.

- 7.31.C.10 To ensure proper removal of a Commercial Solar Energy System upon discontinued use or abandonment, applications shall include a description of the financial security guaranteeing removal of the system which must be posted with the Township within fifteen (15) days after approval or before a construction permit is issued for the facility. The financial security shall be: 1) a cash bond; or 2) an irrevocable bank letter of credit or a performance bond, in a form approved by the Township. The amount of such guarantee shall be no less than the estimated cost of removal and may include a provision for inflationary cost adjustments. The estimate shall be prepared by the engineer for the developer and shall be approved by the Township. The applicant shall be responsible for the payment of any costs or attorney fees incurred by the Township in securing removal.

  The Decommissioning Plan included as **Exhibit G** includes an estimate of the cost of removal of Project components and restoration of the site. Consumers Energy will provide a decommissioning bond in an amount equal to the decommissioning estimate. Upon ceasing operations, Consumers Energy will decommission and remove Project components pursuant to the Decommissioning Plan.

## 2. Compliance with Other Applicable Zoning Ordinance Regulations

The zoning designations of all participating parcels are shown on the Existing Conditions & Clearing Plan within the Site Plan (**Exhibit B)**. All participating parcels are zoned as A-R Agricultural-Residential. Commercial solar energy systems are a special land use in the A-R district.

The following sections that Project's compliance with other applicable general regulations and design standards of the Ordinance. For ease of review, applicable sections are reproduced below with responsive information immediately following in blue:

- *Section 3.17 Stormwater Management*

  The property owner or developer is required to retain on site all stormwater drainage in excess of natural conditions. This provision may require stormwater retention ponds where appropriate. An exception can be made for water leaving the site via an existing stormwater pipe, or through other stormwater facilities which will be developed at the same time as the proposed new use. All stormwater facilities, including detention or retention ponds, shall be designed at minimum to handle a storm with the projected frequency of once every ten years (ten year design storm).

  The Project has been designed to comply with the requirement to retain stormwater runoff in excess of natural conditions. Unlike traditional development, the Project will convert predominantly agricultural cropland to a vegetated condition consisting of perennial grasses beneath elevated solar panels. This land cover functions similarly to meadow conditions, promoting infiltration and evapotranspiration of stormwater.

  The conversion from row crop agriculture to stabilized vegetative cover generally results in a reduction in runoff potential due to lower curve numbers and improved soil structure. Rainfall is either intercepted by vegetation or falls to the ground surface, where it infiltrates or is otherwise absorbed. Additionally, because grading will be minimal, existing drainage patterns will be maintained, preventing concentration or redirection of flows.

  Based on hydrologic modeling, the majority of the site is expected to experience the same or reduced runoff as existing conditions. In localized areas where post-development runoff may exceed existing conditions, stormwater management measures will be implemented.

  All stormwater facilities, where required, will be designed in accordance with applicable standards to safely convey and manage runoff from at least a 10-year design storm event. Through this combination of reduced runoff generation and targeted stormwater controls, the Project will meet the intent of retaining on-site stormwater in excess of natural conditions while maintaining downstream hydrologic stability.

- *Section 5.4FF.3 Impact Statement*

  Statements relative to the impact of the proposed development on soil erosion, drainage patterns, shoreline protection, wildlife habitat, air pollution, water pollution (ground and surface), noise pollution and the aesthetics and scale of development in terms of the surrounding environment. Statement of the impact of the development with respect to noise, dust, fire hazard, fumes, odors, vibration, smoke, or excessive light.

  **Environmental Impact Statement**

  The proposed commercial solar energy system is a passive land use designed to minimize environmental and community impacts. The statements below summarize the anticipated impacts of the Project on the natural environment and surrounding community.

- **Soil Erosion:**
  Construction will follow issuance of a soil erosion and sedimentation control (SESC) permit and applicable Best Management Practices (BMPs), including the use of silt fence and vegetative stabilization. The use of terrain-following tracking systems for mounting PV solar modules minimizes grading and helps preserve existing soil conditions.

- **Drainage Patterns:**
  As discussed above, the Project is designed to maintain existing drainage and flow patterns. See **Exhibit H**.

- **Shoreline Protection:**
  Not applicable; there is no shoreline within the Project footprint.

- **Wildlife Habitat:**

  The Project will convert land used for row crop agriculture to grassland and will utilize native, pollinator-friendly, native prairie mix around the perimeter of the Project to create habitat for pollinators, grassland birds, and small mammals during the life of the Project.

- **Air Pollution:**

  Solar PV modules and associated electrical equipment do not generate air emissions, smoke, or pollutants.

- **Water Pollution (Surface Water and Groundwater):**

  As designed, the Project will not cause impacts to surface water. Proposed vegetative ground cover will filter stormwater runoff and is expected to improve stormwater quality compared to the land's prior agricultural use involving cyclical row crop planting. The Project will not use or produce hazardous materials that could impact groundwater quality.

- **Aesthetics (Screening and Visual Impact):**

  A vegetative buffer is proposed along the Project perimeter where existing vegetation does not adequately screen views of the Project from adjacent roads and nearby residences. Proposed vegetative buffer locations are shown in the Site Improvements & Grading Plan page of the Site Plan (**Exhibit B**).

- **Noise:**

  The Sound Study for the Project (**Exhibit F**) demonstrates that the Project will not exceed 45 dBA at any property line of an adjacent non-participating parcel, as required by the Zoning Ordinance.

- **Dust, Fumes, Odors, and Smoke:**
  During construction, dust will be managed by utilizing industry-standard dust-control measures. Solar PV modules and associated electrical equipment do not produce fumes, odors, or smoke.

- **Fire Hazard:**
  Commercial solar energy systems are not unusually susceptible to fire, and the Project will not pose a significant fire hazard. The facility has been designed to incorporate adequate spacing between equipment. While fires are unlikely, use of vegetative strips throughout the Project assist in containing fires to localized areas. The Solar PV Station Emergency Response Plan

(**Exhibit E**) details emergency procedures and provides contact information in the event of a fire. .

- **Lighting and Glare:**
  No permanent lighting is proposed for operations. The Glare Study (**Exhibit C**) utilized a conservative approach when modeling potential glare caused by the Project. The Glare Study's modeling predicts visible and consequential glare at 10 of the 150 modeled receptors in Gustin Township during limited times of the year. An additional six receptors are anticipated to experience visible glare from a similar direction as the sun and during the hour following sunrise or proceeding sunset. However, the impact of these instances of glare is negligible because viewing the sun directly from the same direction is significantly more intense than the estimated glare from the Project. In the locations modeled to experience consequential glare, the proposed vegetative buffers shown on the Site Plan (**Exhibit B**) will eliminate the impact of glare in all 10 instances.

- *Section 5.4 Site Plan Data Required*

  Each site plan submitted shall contain the following information unless specifically waived, in whole or in part, by the Planning Commission. The Planning Commission can waive any of the site plan requirements listed below when it finds those requirements are not applicable to the proposed development.

  - 5.4A. Contact Information: Name and address of the property owner(s), developer(s), and designer(s), and their interest in said properties.

    See Site Plan Cover & Index, Drawing Number CV-200-001.

  - 5.4B. Legal Description: The parcel's legal description.

    See Site Plan Civil Notes, Drawing Number CV-210-001 through 003.

  - 5.4C. Map Requirements: The date, a north arrow, the scale and name of the individual or firm responsible for preparing said plan. The scale must be at least one inch = 40 feet for parcels under three acres and at least one inch = 100 feet for parcels of three acres or more.

    See Site Plan Cover & Index, Existing Conditions & Clearing, Site Improvements & Grading and Erosion & Sediment Control. Because of the size of the site, a scale of one inch = 200 feet was utilized.

  - 5.4D. Boundary Lines: The boundary lines and dimension of the property. Show relationship of the subject property to abutting properties. A certified survey of the property which has been prepared and sealed by a professional licensed surveyor may be required by the Zoning Administrator.

    See Site Plan Existing Conditions & Clearing, Drawing Numbers CV-220 and CV-221-001-012.

  - 5.4E. Natural Features: Boundary dimensions of natural features such as existing trees and vegetation, forests, water bodies, wetlands, floodplains, high risk erosion areas, slopes over ten percent, drainage and other similar features.

See Site Plan Existing Conditions & Clearing, Drawing Numbers CV-220 and CV-221-001-012.

- 5.4F. Topography: The topography of the existing and finished site shall be shown by contours or spot elevations. Where the existing slope on any part of the site is ten percent or greater, contours shall be shown at height intervals of two feet or less.

  See Site Plan Existing Conditions & Clearing, Drawing Numbers CV-220 and CV-221-001-012 and Site Improvements & Grading, Drawing Numbers CV-240 and CV-241-001-024.

- 5.4G. Location of Structures and Accessory Features: The location, dimension, and height of all existing structures and all proposed uses or structures on the site, including principal building(s), accessory structures, trash receptacles, walkways, signs, exterior lighting, common use areas, recreational areas and facilities, and any impervious surface. Indicate gross building areas.

  See Site Plan Existing Conditions & Clearing Drawing Numbers CV-220 and CV-221-001-012 and Site Improvements & Grading Drawing Numbers CV-240 and CV-241-001-024.

- 5.4H. Location of Vehicular Features: Location of proposed drives, neighboring drives, vehicle entrances and loading points, vehicular circulation features, size and number of parking spaces, service lanes (show the dimensions of a typical parking stall and parking lot), and loading and unloading areas.

  See Site Plan Site Improvements & Grading Drawing Numbers CV-240 and CV-241-001-024. No permanent parking is proposed as part of the Project. Operation of the Project will not generate daily employee or customer traffic, and the only vehicle traffic to the site will be occasional visits by maintenance personnel.

- 5.4I. Location of Pedestrian Circulation Features: Location and design of sidewalks, walkways, barrier-free access points, bicycle paths, bicycle parking areas, and areas for public use.

  Not applicable. Pedestrians will not be permitted to access the solar facilities.

- 5.4J. Signs: Location, size and specifications of all signs and advertising features with cross sections.

  See Site Plan Site Improvements & Grading Drawing Number CV-245.

- 5.4K. Elevations: Drawings or sketches of the exterior and elevations, and/or perspective drawings of the building or structures under consideration. Indicate number of stories.

  No buildings are proposed. Elevations of perimeter fencing and equipment are presented on EP-350-CAB DETAILS and EP-351-ISA ELEVATION VIEW.

- 5.4L. Type of Surface: Types of surfacing such as paving, turfing or gravel to be used at the various locations.

See Site Plan Site Improvements & Grading Drawing Numbers CV-240 and CV-241-001-024.

- 5.4M. Setbacks: Setback lines and distances between structures and lot lines.

  See Site Plan Site Improvements & Grading Drawing Numbers CV-240 and CV-241-001-024.

- 5.4N. Area of Development: Indicate the gross land area of the development and area of the property subject to be covered by structures (not available as open space).

  See Site Plan Cover & Index, Drawing Number CV-200-001 and Site Improvements & Grading Drawing Numbers CV-240 and CV-241-001-024.

- 5.4O. Rights-of-Way, Easements, And Public Spaces: The location and width of all abutting rights-of-way, easements, and public open spaces within or bordering the subject project.

  See Site Plan Existing Conditions & Clearing Drawing Numbers CV-220 and CV-221-001-012 and Site Improvements & Grading Drawing Numbers CV-240 and CV-241-001-024.

- 5.4P. Utilities: Size and location of proposed sewer and water lines and connections. Location of all other utilities on the site.

  See Site Plan Site Improvements & Grading Drawing Numbers CV-240 and CV-241-001-024.

- 5.4Q. Nearby Structures: The location and identification of all existing structures, lighting, signs, ingress drives, roads, and parking within a two hundred (200) foot radius of the site, including road names.

  See Site Plan, Existing Conditions & Clearing CV-220-001-012.

- 5.4R. Adjacent Front Yard Dimensions: The front yard dimensions of the nearest building on both sides of the proposed structure.

  Not applicable; no buildings are proposed.

- 5.4S. Zoning Classification: The existing zoning district in which the site is located and the zoning of adjacent parcels.

  See Site Plan CV-220-002.

- 5.4T. Landscaping, Fences, And Walls: Location and height of all walls, fences and screen planting, including a general plan for the landscaping of the development and the method by which landscaping is to be accomplished and be maintained. (Plant materials shall be chosen and installed in accordance with §3.21 of this Ordinance.)

  See Site Improvements & Grading Drawing Numbers CV-240, CV-241-001-024 and Landscape Buffer Detail CV-245.

- 5.4U. Lighting: Exterior lighting locations with area of illumination illustrated as well as the type of fixtures and shielding to be used.

  Not applicable; no outdoor lighting is proposed.

- 5.4V. Outdoor Storage: Description and location of any existing or proposed outdoor storage facilities (above ground and below ground storage).

  Outdoor storage is not proposed as part of this Project.

- 5.4W. Drainage: The location, size and slope of all surface and subsurface drainage facilities.

  See Site Plan, Drawing Number CV-250 and CV-251-001 through CV-251-024.

- 5.4.BB. Documentation of Compliance with Soil Erosion and Stormwater Standards: All site plans shall comply with the terms of the Alcona County soil erosion and Sedimentation Control Standards. It shall be the applicant's responsibility to provide documentation of compliance with these standards.

  A soil erosion and sedimentation control plan will be prepared and a permit obtained from the Alcona County Building Department. A copy of the permit will be available at the construction office. Further, **Exhibit H** contains the Project's Stormwater Calculations detailing compliance with Alcona County's soil erosion and sedimentation control standards.

- 5.4CC. Hours of operation: Anticipated hours of operation for the proposed use. The Planning Commission may impose reasonable limits to hours of operation as a condition of site plan approval when warranted to assure compatibility with surrounding land uses.

  The proposed use will operate on a daily basis during daylight hours but will not have on-site employees or customers. Routine maintenance will occur during daytime hours on business days.

- 5.4EE. Phased Construction: Where phases or staged construction is contemplated for the development of a project, the site plan submitted must show the interrelationship of the proposed project to the future stages, including the following:

  The Project will be constructed in one phase.

- 5.4FF. Impact Statement: The Zoning Administrator may require a statement which addresses the following as applicable to the type of use:

- 5.4FF.1. A complete description of the proposed development including: areas of the site; the number of lots or units; and the number and characteristics of the population impact such as density, as it relates to elderly persons, school children, tourists, family size, income, and related information as applicable.

  Not applicable.

- 5.4FF.2. Expected demands on community services, and how these services are to be provided, to specifically include: school classroom needs, volume of water consumption related to ground water reserves, change in traffic volume on adjacent streets and other factors that may apply to the particular development.

  The proposed use will not place any demands on community services (schools, water supplies, roadways). The proposed use does not require a public water supply or well and no wells are proposed. The proposed use

does not have on-site employees or customers so will not impact existing traffic volumes. The only vehicle traffic to the site will be occasional visits by maintenance personnel.

## D. Compliance with Zoning Ordinance Approval Standards

### 1. Section 5.6 Site Plan Approval Standards

Upon finding that a proposed site plan complies with all application provisions of the Zoning Ordinance and the standards contained in Section 5.6, the proposed site plan must be approved or approved with conditions. In conducting its review, the Planning Commission may waive a particular standard upon finding that the standard is not applicable to the proposed use and that the waiver will not be a significant detriment to surrounding property or the intent of the ordinance.

- *Section 5.6 Site Plan Approval Standards*

  The Site Plan complies with the below site plan approval standards.

  - 5.6A. Compliance with District Requirements: The site plan shall comply with the district requirements for minimum floor space, height of structures, lot size, yard space, density and all other requirements as set forth in the Zoning Ordinance, unless otherwise provided.

    All participating parcels are zoned as A-R Agricultural Residential, and as shown on the Site Plan (**Exhibit B**), the Project complies with all dimensional requirements applicable to the Project and the district. The parcels comprising the Project satisfy the 20-acre minimum size requirement of Section 4.5.C. The Project will be setback at least 200 feet from all property lines of non-participating parcels, in accordance with Section 7.31.C.3. As shown in the Collector System ISA Elevation View and the Collector System CAB Details on the Site Plan, the height of the PV solar modules, when oriented at maximum tilt will be 11 feet, which is below the 15-foot maximum height required by Section 7.31.C.3. The requirements of Section 4.5.C related to minimum ground floor area and yard space are not applicable to the Project, as no buildings are proposed.

  - 5.6B. Public Welfare And Adjoining Properties: The uses proposed will not adversely affect the public health, safety, or welfare. Uses and structures located on the site shall take into account the size of the property, uses on the adjoining property and the relationship and size of buildings to the site. The site shall be developed so as not to impede the normal, orderly, and reasonable development or improvement of surrounding property for uses permitted in this Ordinance nor to diminish the value thereof and will be harmonious in use, appearance, and layout with existing and planned future uses in the immediate area.

    All solar arrays will be enclosed by a 7-foot-tall perimeter fence with locked gates that will restrict unauthorized access. No hazardous materials or waste are proposed to be handled at the site. Utility-scale solar energy facilities are not unusually susceptible to fire, and the proposed use will not burden local emergency response services. The Sound Study (**Exhibit F**) demonstrates that the Project will not exceed 45 dBA at any property line of an adjacent non-participating parcel, satisfying the requirement of Section 7.31.C.6. Of

the 10 areas modeled to experience short periods of consequential glare pursuant to the Glare Study (**Exhibit C**), the proposed vegetative buffers shown on the Site Plan will eliminate the impact of glare in all ten instances.

As shown on the Site Plan, the facility has been designed to satisfy all dimensional and performance requirements of the Zoning Ordinance without the need for a variance. The Project will be setback at least 200 feet from all property lines of non-participating parcels, and the height of the PV solar modules, when oriented at maximum tilt will be 11 feet, which is below the 15-foot maximum allowable height. Use of the site for the Project will not impede development of surrounding property, as the Project will be entirely self-contained and will not generate daily customer or employee traffic.

The facility will be surrounded by a perimeter fence utilizing wire mesh that resembles agricultural fencing and obscures views of the equipment. Where views of the facility from adjacent residences and public roadways are not obscured by existing vegetation, vegetative buffers are proposed. The perennial grass and native pollinator ground cover proposed for the footprint of the solar arrays will be visually consistent with the agricultural character of the surrounding area, and the ground cover will attract native pollinator insects. The facility's use of agricultural-style fencing material, landscape screening, and ground cover seed mixes will be harmonious with the agricultural character of the surrounding area.

- 5.6C. Light, Air, And Access: The location, size, and height of the structures, walls, and fences shall be such that there is adequate open space so as to provide light, air, and access to the persons occupying the structures and that there will be no interference with adequate light, air, and access to adjacent lands.

  The Project is not residential, so there will be no persons occupying the structures of the facility. The Project will be setback at least 200 feet from all property lines of non-participating parcels, and the height of the PV solar modules, when oriented at maximum tilt, will be 11 feet. The facility's solar arrays are also designed to allow light to travel between rows of PV solar modules, a critical facet of solar energy facilities. Given the setbacks, maximum height of the PV solar modules, and spacing between the solar arrays, the facility has been designed to preserve circulation of light and air.

  As shown on the Site Plan, driveways for the facility will be limited and have been located to provide sufficient distance between existing driveways or intersections. By appropriately locating the driveways and satisfying the setback requirements, the proposed facility will not restrict access to adjacent lands.

- 5.6D. Topography And Natural Landscape: All elements of the site plan shall be designed so that there is a limited amount of change in the overall natural contours of the site and shall minimize reshaping in favor of elements that respect existing features of the site in relation to topography. The landscape shall be preserved in its natural state, insofar as practical, by minimizing tree and soil removal, and by topographic modifications which result in smooth natural appearing slopes as opposed to abrupt changes in grade between the project and adjacent areas.

The site for the Project was selected because the proposed solar energy facility use is compatible with the existing character of the land. The land's relatively clear, flat nature allows for the broad placement of solar arrays with minimal need for grading or clearing. The Project's use of terrain-following tracking systems will result in minimal on-site grading. Because developing this site for use as a solar energy facility will involve only minimal physical changes to the land, when commercial operations cease the land will be well-suited to return to its original agricultural use.

- 5.6E. Drainage: On-site drainage shall be required. Appropriate measures shall be taken to ensure that removal of surface waters will not adversely affect neighboring properties. Provisions shall be made to accommodate stormwater and to prevent erosion and the formation of dust. The use of detention/retention ponds may be required. Surface water on all paved areas shall be collected at intervals so that it will not obstruct the flow of vehicular or pedestrian traffic or create puddles in paved areas. Catch basins may be required to contain oil filters or traps to prevent contaminants from being discharged to the natural drainage system.

  The Stormwater Calculations included as **Exhibit H** demonstrate that the Project is designed to comply with the requirement that the site retain any stormwater runoff in excess of natural conditions. The Project's use of perennial grasses beneath solar panels and in open areas will promote infiltration, filtration, and evapotranspiration of stormwater. Based on modeling, the majority of the site is expected to experience equal or reduced stormwater runoff compared to existing conditions. If necessary to address runoff in localized areas, Consumers Energy will implement appropriate stormwater management measures.

- 5.6F. Privacy: The site plan shall provide reasonable visual and sound privacy for all dwelling units located therein. Fences, walls, barriers and landscaping shall be used, as appropriate, for the protection and enhancement of property and for the privacy of its occupants.

  The proposed vegetative bugger shown in the Site Improvements & Grading Plan page of the Site Plan (**Exhibit B**) is designed to visually screen adjacent residences and public roadways where existing vegetation does not adequately screen views of the Project.

- 5.6G. General Access: Every structure or dwelling unit shall have access to a public street, private road, walkway or other area dedicated to common use.

  As shown on the Site Plan, each solar array will be served by a network of internal access roads and driveways connecting to a public right-of-way for purposes of ingress and egress.

- 5.6H. Vehicular and Pedestrian Circulation: Safe, convenient, uncontested, and well-defined vehicular and pedestrian circulation shall be provided for ingress/egress points and within the site. A pedestrian circulation system shall be provided and shall be as insulated as completely as reasonably possible from the vehicular circulation system. Drives, streets and other circulation routes shall be designed to promote safe and efficient traffic operations within the site and at ingress/egress points. The arrangement of public or common ways for vehicular and pedestrian circulation shall respect

the pattern of existing or planned streets and pedestrian or bicycle pathways in the area. Streets and drives which are part of an existing or planned street pattern which serves the project area shall be capable of safely and effectively accommodating the traffic volume and pattern proposed by the project. Where possible, shared commercial access drives shall be encouraged.

The operation of the facility will not generate daily employee or customer traffic, and no parking is needed or proposed. The only vehicle traffic to the site will be occasional visits by maintenance personnel. The Project will be served by internal gravel access roads as shown on the Site Plan. The proposed access roads will provide adequate space on site for temporary parking and circulation of vehicles within the site. The location of access road driveway connections to the county road system will be subject to review and approval by the Alcona County Road Commission.

- 5.6I. Emergency Vehicle Access/Fire and Safety: All buildings or groups of buildings shall be so arranged as to permit emergency vehicle access by some practical means. The vehicular transportation system shall provide for circulation throughout the site and for efficient ingress and egress to all parts of the site by fire and safety equipment. Fire protection measures shall be provided as deemed necessary by the Fire Chief in conformance with all applicable laws of the State of Michigan for the protection of residents and/or occupants of the structures.

  The proposed internal access roads shown on the Site Plan provide vehicular access throughout the solar arrays and to all inverters. The Project's proposed 12-foot-wide internal access roads are designed to accommodate emergency response vehicles. Commercial solar energy facilities are not unusually susceptible to fire, so no fire suppression measures are proposed.

- 5.6J. Loading and Storage: All loading and unloading areas and outside storage areas, including areas for the storage of trash, which face or are visible from residential districts or public thoroughfares, shall be screened by a vertical screen consisting of structural or plant materials of sufficient height to obscure the direct view from adjacent first floor elevations. The site plan shall provide for adequate storage space for the use therein.

  Not applicable. No areas for the storage of trash are proposed because the facility will not regularly generate trash that requires removal from the property.

- 5.6K. Snow Storage: Proper snow storage areas shall be provided so to not adversely affect neighboring properties, vehicular and pedestrian clear vision, and parking area capacity.

  Not applicable. To the extent plowing gravel access roads becomes necessary, the Site Plan shows that sufficient area exists between the access roads and facility equipment to allow for snow storage.

- 5.6L. Exterior Lighting: Exterior lighting shall be arranged so that it is deflected away from adjacent properties and so that it does not interfere with the vision of motorists along adjacent streets. Lighting of building or

structures shall be minimized to reduce light pollution. Lighting standards contained in §3.19 shall be adhered to.

Not applicable. No exterior lighting is required or proposed.

- 5.6M. Utilities: All utility services shall be provided in a manner least harmful to surrounding properties. All utilities shall be located underground, as applicable, unless specifically waived by the Planning Commission.

  Not applicable. The proposed use does not require utility services.

- 5.6N. Compliance with Other Statutes and Regulations: Site plans shall conform to all applicable requirements of state and federal statutes, and approval may be conditioned on the applicant receiving necessary state and federal permits before the actual zoning permit is granted.

  The facility is designed to comply with all applicable state and federal requirements. Consumers Energy will obtain all necessary permits prior to beginning construction of the facility.

## 2. Section 6.3 Special Land Use Approval Standards

After the required public hearing, the Planning Commission must approve or approve with conditions an application for a special land use permit upon finding that the proposed use complies with standards A-I. For the reasons described below, the Project satisfies those standards:

- 6.3A. Allowed Special Land Use: The property subject to the application is located in a zoning district in which the proposed Special Land Use is allowed.

  Commercial Solar Energy Systems are a special land use within the A-R and Industrial zoning districts. The Project is located entirely within the A-R zoning district.

- 6.3B. Compatibility with Adjacent Uses: The proposed Special Land Use shall be designed, constructed, operated and maintained to be harmonious, compatible and appropriate in appearance with existing or planned uses and the intended character of the area and the surrounding land, and shall not change the essential character of the area in which it is proposed to be located. The use shall not be hazardous or disturbing to existing or future nearby uses. In determining whether a Special Land Use will be compatible and not create a significant detrimental impact, as compared to the impacts of permitted uses, consideration shall be given to the degree of impact the Special Land Use may have on adjacent property, as compared with the expected value to the community. The following types of impacts shall be considered:

  - 6.3B.1. Use activities, processes, materials, equipment, or conditions of operation;

    The Project includes security fencing, landscape screening, access roads, PV panels, inverters, underground collection lines, and an overhead transmission line to the point-of-interconnection. A seven-foot-tall perimeter security fence will surround the facility and all access points will be gated to prevent unauthorized access and potential harm to individuals. The facility will be setback at least 200 feet from all non-participating parcels, and the solar PV modules will be 11-feet tall when oriented at maximum tilt, below the Zoning Ordinance's 15-foot

maximum height. The proposed vegetative buffers shown on the Site Improvements & Grading Plan page of the Site Plan (**Exhibit** B) are designed to screen views of the facility from adjacent residences and public rights-of-way where existing vegetation does not provide adequate screening. The facility's internal gravel roads are designed to provide safe and efficient ingress and egress for maintenance crews and emergency service vehicles. All collection lines from the facility to the substation will be buried underground and there will be one overhead transmission line connecting to the point-of-interconnection.

- 6.3B.2. Vehicular circulation and parking areas;

  During construction, equipment and trucks will park on gravel staging areas. A main staging area with temporary construction trailers will be utilized as the main check-in point onsite. Upon completion of construction, no permanent parking spaces are proposed. The facility will not generate customer traffic and will not require on-site employees. The facility's internal gravel access roads are designed to provide access for maintenance crews and emergency service vehicles, as well as sufficient temporary parking when needed for maintenance personnel.

- 6.3B.3. Outdoor activity, storage and work areas;

  During construction, temporary gravel staging areas will be utilized for unloading and temporarily staging materials. Upon completion of construction, no permanent storage or work areas are planned for the Project.

- 6.3B.4. Hours of operation;

  The Project will be operational during all daylight hours throughout the year.

- 6.3B.5. Production of traffic, noise, vibration, smoke, fumes, odors, dust, glare, and light;

  Solar energy generation is a passive land use that does not involve any activities or equipment that generate vibration, smoke, fumes, odors, dust or light. The proposed use will not generate excessive noise, as demonstrated by the Sound Study included as **Exhibit F**. The Glare Study included as **Exhibit C** shows that the Project is anticipated to cause consequential glare in only a handful of locations and during brief times of the day for limited periods of the year. Proposed vegetative buffers will eliminate the occurrences of consequential glare in the areas modeled to experience such glare. The Project will not produce traffic, as its operation will not generate daily employee or customer traffic.

- 6.3B.6. The relative ease by which the impacts above will be mitigated.

  The Project will not result in an increase in traffic during operation. According to the Sound Study (**Exhibit F**), under maximum operating circumstances, sound associated with and emanating from the Project will not exceed 45 dba at the Project's perimeter property lines. Of the ten areas modeled to experience short periods of consequential glare pursuant to the Glare Study (**Exhibit C**), the proposed vegetative buffers

shown on the Site Plan will eliminate the impact of glare in all ten instances.

- 6.3C. Public Services:
  - 6.3C.1. The proposed Special Land Use will not place demands on fire, police, or other public resources in excess of current capacity.

    The Project is not anticipated to place demands on local public resources. Utility-scale solar energy facilities are not unusually susceptible to fire. As detailed in the Solar PV Station Emergency Response Plan (**Exhibit E**), support from local police and fire personnel is anticipated to be limited to emergency response activities outside the perimeter fence and keeping the public at a safe distance. Should response activities be necessary, the internal gravel access roads will provide access to any first responders and their equipment.

  - 6.3C.2. The proposed Special Land Use shall be served adequately by essential public facilities and services including but not limited to streets, police and fire protection, storm water drainage, refuse disposal, water and sewage facilities, and schools.

    The Project will be adequately supported by the existing road network during both construction and operation. The solar PV modules and supporting equipment are not so large that transporting and installing Project components will require modifications or special accommodations to current infrastructure. During construction and operation, the facility will remain closed to the public and secured with perimeter fencing to restrict access. Consumers Energy's Emergency Response Plan, which has been shared with local emergency service providers, is included as **Exhibit E**. The proposed facility does not require public water, sewer, or stormwater utilities. Accordingly, the proposed use is consistent with the lack of public utility services at the site.

- 6.3D. Economic Well-Being of the Community: The proposed Special Land Use shall not be detrimental to the economic well-being of the surrounding residents, businesses, landowners, and the community as a whole. The use will not create excessive additional public costs and will not be detrimental to the economic welfare of the Township.

  The Project will not be detrimental to the economic well-being of surrounding residents and landowners because it has been designed in compliance with all applicable governmental regulations. The Project will not be detrimental to the economic well-being of the community as a whole. The Project will generate significant real and personal property tax revenues that will support the provision of public services in Gustin Township without increasing the demand of public services. The Project supports socially and economically beneficial land use within Gustin Township by delivering renewable energy to Michigan communities through a low-profile, strategically sited solar installation designed to preserve the land's historical agricultural character. Solar energy generation in Alcona County will also contribute to the reliability and availability of Michigan's energy resources.

- 6.3E. Compatibility with Natural Environment: The proposed Special Land Use will not involve uses, activities, processes, materials, or equipment that will create a substantially negative impact on the natural resources of the Township or the natural environment as a whole. Natural features of the landscape, including but not limited to, ponds, streams, hills, and wooded areas, shall be retained where they afford a barrier or buffer from adjoining properties. The landscape shall be preserved in its natural state, as far as practical, by minimizing tree and soil removal, and any grade or slope changes shall be in keeping with the general appearances of the neighborhood.

  The Project's use of terrain-following tracking systems will result in minimal on-site grading. The Project has been designed to avoid the use of delineated wetland and streams, and the Project will utilize vegetative screening, multiple grass ground covers and aggregate rock roads to naturalize the Project consistent with the current land uses. The native pollinator ground cover will further enhance ecological benefits of the proposed solar land use by providing forage for native pollinator insects which will enhance the surrounding environment. At the end of commercial operations, the solar facility will be decommissioned and the land restored to a condition that will allow for resumption of agricultural activity in the areas originally used for such purpose.

- 6.3F. Impact of Traffic on Street System: The location and design of the proposed Special Land Use shall minimize the negative impact on the street system in consideration of items such as vehicle trip generation (i.e. volume), types of traffic, access location and design, circulation and parking design, street and bridge capacity, traffic operations at proposed access points, and traffic operations at nearby intersections and access points. The proposed Special Land Use shall not cause traffic congestion, conflict or movement in greater proportion to that normally prevailing for the use in the particular zoning district.

  Operation of the solar facility will generate minimal traffic because the facility will not generate daily employee or customer traffic. Additionally, entrances to the solar facility have been selected and designed in coordination with Alcona County Road Commission to optimize line of sight from entrances. Internal access roads for ingress and egress to the solar arrays are designed to self-contain onsite traffic within the facility. The internal access roads will be located behind the perimeter security fence and locked gates to restrict public access.

- 6.3G. Non-Detrimental Standards: The proposed Special Land Use shall not involve uses, activities, processes, materials, equipment or conditions of operation that will be hazardous or detrimental to any persons, property, or the general welfare by reason of noxious or offensive production of noise, smoke, fumes, glare, vibration, odor or traffic.

  Solar energy generation is a passive land use that does not involve any activities or equipment that generate noxious or offensive noise, smoke, fumes, glare, vibration, odor or traffic. As demonstrated by the Sound Study included as **Exhibit F**, noise generated by the facility will not exceed 45 dBA at any property line of an adjacent non-participating parcel. The Glare Study included as **Exhibit C** shows that the Project is anticipated to cause consequential glare in only a handful of locations and during brief times of the day for limited periods of the year. Proposed vegetative buffers will eliminate the occurrences of consequential glare in the areas modeled to experience such glare. The Project will not produce traffic, as its operation will not

generate daily employee or customer traffic. The solar PV modules and ancillary electrical equipment do not generate smoke, fumes, or odor, and no hazardous materials or waste are proposed to be handled at the site.

- 6.3H. Consistent with Zoning Ordinance and Master Plan: The use will be consistent with the intent and purposes of this Ordinance and meet the goals and objectives of the currently adopted Master Plan.

  The Project is consistent with the Zoning Ordinance because the site plan and site layout comply with all applicable zoning regulations. The Project is also consistent with the intent of the A-R district, which is to encourage retention of farmland in large enough parcels to support and encourage agricultural production until such time as further non-farm development is warranted. Commercial solar energy facilities – which are best suited for large parcels – represent a land use that can be decommissioned and the land restored to a condition that supports the resumption of agriculture in the future. In this way, the Project supports the intent of the A-R district despite being a non-agricultural use.

  The Township Master Plan promotes the retention of large parcels in the A-R district. It recommends a 20-acre minimum and recommends increasing the minimum if the splitting agricultural land becomes a problem. The Project – which is being sited on parcels greater than 20-acres – will preserve the parcels as large acreage holdings for the life of the project and is therefore a land use that fits with the Master Plan recommendation that large parcels be preserved in the A-R district to the extent possible.

- 6.3I. Compliance with Supplemental Development Regulations: The proposed Special Land Use complies with all applicable supplemental development regulations as contained in Article 7 of this Ordinance.

  As demonstrated by this narrative, the Site Plan, and the materials appended to Consumers Energy's application, the Project meets or exceeds all applicable standards of Article 7 of the Ordinance.

### 3. Section 6.5 Compliance with Other Regulations

- 6.5A. All applicable federal, state and local licensing regulations shall be complied with. Initial and annual proof of such compliance may be a condition of Special Land Use approval and the continuance thereof.

  The facility is designed to comply with all applicable state and federal requirements. Consumers Energy will obtain all necessary permits prior to beginning construction of the facility.

- 6.5B. As a minimum, or unless specifically modified by the provisions of Article 7 (Supplemental Development Regulations), the dimensional standards and landscape, buffering and parking regulations otherwise applicable to the use and/or zoning district shall be maintained as outlined within the other applicable articles of this Ordinance. In such cases where there are conflicting standards, the most restrictive shall apply unless specifically modified by the provisions of Article 7.

  All participating parcels are zoned as A-R Agricultural Residential, and as shown on the Site Plan (**Exhibit B**), the Project complies with all dimensional requirements applicable to the Project and the district. The

parcels comprising the Project satisfy the 20-acre minimum size requirement of Section 4.5.C. The requirements of Section 4.5.C related to minimum ground floor area and yard space are not applicable to the Project, as no buildings are proposed.

The Project also satisfies the more restrictive standards of Section 7.31.C, as the solar arrays and equipment will be setback at least 200 feet from all property lines of non-participating parcels, and the height of the PV solar modules, when oriented at maximum tilt will be 11 feet.

# SPECIAL USE PERMIT (ZONING PERMIT) APPLICATION for a SPECIAL LAND USE

## Gustin Township, Alcona County, Michigan

This application to be used for all Special Land Use delineated in Section 6, See also Section 4 and 5

(All references to "Section" refer to Gustin Township Zoning Ordinance)

**Important Notice to Applicants:** Uses which require a site plan shall submit five (5) copies of a site plan prepared under the requirements of **§5.4**. Uses which require a plot plan shall submit five (5) copies of a plot plan prepared under the requirements of **§5.1**. All questions must be answered completely. If additional space is needed, number and attach additional sheets. The total number of sheets is 1212. Approval of this application is required before a Special Use/Zoning Permit can be issued. The erection of a building or stricture, or excavation for any building or structure, prior to the issuance of a Zoning Permit is a violation of the Gustin Township Zoning Ordinance.

Name of Applicant: Consumers Energy

Address of Applicant: One Energy Plaza

Jackson, MI 49201

Phone Number and email of Applicant: 517-788-8912

Applicants Interest in Property:

(Circle appropriate response) **Owner** Lessee Option to Buy

Other (please explain) _____

Name, Address, Phone Number of Property Owner: (If different than Applicant)

Name, Address, and Phone Number of all property owners is included within Exhibit A - Landowner Agreements

**FOR TOWNSHIP USE ONLY**

**File Number:** _____

Date Received: _____ Tax Parcel Number: _____

Fee Received (amount and date): _____

**Planning Commission:** _____

Date Application was Received by Commission: ____ Public Hearing Date: _____

Recommendation/Decision Date: _____

Recommendation/Decision: (circle as appropriate) Approval Approval with Conditions Denial

**Township Board:** _____

Date Application received by Board: _____

Date Action Taken: _____ (Circle as Appropriate) Approved Approved with Conditions Denied

## PART 1: ACTION REQUESTED:

A special Land Use may only be permitted in a zoning district which specifically permits the proposed special land use, as delineated in Sections 5 and 6 of the Zoning Ordinance. This application is for the following proposed special land use:

Gustin Solar (Utility Solar Energy System)

## PART 2: PROPERTY INFORMATION

A. Legal Description and acreage of property affected:

Refer to the legal descriptions within the Participating Parcel table in Exhibit B - Site Plan

B. Address of property:

All property addresses are included within a landowner table located in Exhibit B - Site Plan

C. List of all deed restrictions:

There are no known deed restrictions.

D. Names and addressed of all other persons, firms, or corporations having a legal or equitable interest in the land:

1) This information is provided within Exhibit A - Landowner Agreements
2)
3)

E. This property is: **unplatted** or **platted** (Circle appropriate answer)

If platted, name of Plat:

F. Present use of the property is:

Agriculture and Residential Uses

G. Existing zoning classification of the property is: A-R Agricultural-Residential

H. If any existing structure(s) are nonconforming, check all of the following applicable reasons below for the nonconformity for each such structure:

Height NA
Floor area NA
Front yard setback NA
rear yard setback NA
one side yard setback NA
both side yard setbacks NA

## PART 3: BASIS FOR DETERMINATION

**A. Please provide responses to the following questions**

1. Will the use be harmonious with and in accordance with the general principles and objectives of the Master Plan of the Township? Yes, please refer to section 6.3H of the attached Gustin Solar Application Narrative.

2. Will the use be designed, constructed, operated and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and will the use change the essential character of the area in which it is proposed?
Yes, please refer to section 6.3B of the attached Gustin Solar Application Narrative.

3. Will the use be hazardous or disturbing to existing or future uses in the same general vicinity?
No, please refer to section 6.3B of the attached Gustin Solar Application Narrative.

4. Will the use be served adequately by essential public facilities and services, such as highways, streets, police, fire protection, drainage structures, refuse disposal, water, and sewer facilities and schools?
Yes, please refer to section 6.3C.2 of the attached Gustin Solar Application Narrative.

5. Will the use involve uses, activities, processes, materials and equipment or conditions of operations that will be detrimental to any person, property, or general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare, or odors?
No, please refer to section 6.3B.5 of the attached Gustin Solar Application Narrative. The project will not create excessive production of traffic, noise, smoke, fumes, glare or ordors.

6. Will the use be necessary to meet the intent and purpose of the zoning regulations; be related to the standards established in the Ordinance for the land use or activity under consideration; and be necessary to insure compliance with these standards?
Yes, please refer to section 6.3H of the attached Gustin Solar Application Narrative.

7. Will the use protect the natural environment and special natural resources, such as wetlands, woodlands, hillside and water courses, and ensure that landscaping shall be preserved in its natural state, insofar as practical by minimizing tree and soil removal, and by topographic modifications which result in maximum harmony with adjacent areas?
Yes, please refer to section 6.3E of the attached Gustin Solar Application Narrative.

8. Will the use insure that special attention will be given to proper site surface drainage so that removal of storm waters will not be adversely affect neighboring properties?
Yes, please refer to section 6.3C.2 of the attached Gustin Solar Application Narrative in addition to the Stormwater Memorandum included within Exhibit H.

9. Will the use insure that all exterior lighting shall be so arranged that it is deflected away from adjacent properties and so that it does not impede the vision of traffic along adjacent streets?
Yes, please refer to section 5.6L of the attached Gustin Solar Application Narrative.

10. Will the use meet the site plan requirements of Article 5?
Yes, please refer to section 6.3H and 6.3I of the attached Gustin Solar Application Narrative.

11. Will the use comply with all applicable county, state, and federal requirements for that use?
Yes, please refer to section 6.5A of the attached Gustin Solar Application Narrative.

12. If this application is for a Planned Unit Development

a. Does the planned unit development encourage the use of Township land in accordance with its character and adaptability?

N/A, this project is not a Planned Unit Development.

b. Does the planned unit development assure the permanent preservation of open space, woodlands, and other natural resources?

N/A

c. Does the planned unit development allow for innovation and greater flexibility in the design of residential developments?

N/A

d. Does the planned unit development facilitate the construction and maintenance of streets, utilities, and public services in a more economical and efficient manner?

N/A

e. Does the planned unit development ensure compatibility of design and use between neighboring properties?

N/A

f. Does the planned unit development encourage a less sprawling form of development, thus preserving open space as undeveloped land the overall design and land uses proposed consistent with the intent of an open space development?

N/A

**PART 4: AFFIDAVIT**

I (we) the undersigned affirm that the foregoing answers, statements, and information are in all respects true and correct to the best of my (our) knowledge and belief. I (we) the undersigned understand that the special use permit (zoning permit) applied for, if granted, is issued on the representations made herein and that any zoning permit or building permit subsequently issued may be revoked because of any breach of representations or conditions, or because of the lack of continued conformance with zoning ordinance requirements.

May 15, 2026

Joe Lawson - Prin. Permitting & Zoning Lead

Applicant Signature(s) Date

Property Owner's(s) Signature(s) Date
(if different than applicant)

Property owner signatures are located in Exhibit A.