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Agenda
Town Board Meeting
February 11, 2026
5:00 PM

Use the Manlius Town Board's recurring Zoom Link!
The same link will be used for all meetings.

Join from PC, Mac, iPad, or Android:
https://us02web.zoom.us/j/87987327153

Pledge Of Allegiance

North Eagle Village Road - Drainage

1. Drainage Reports
2. Manlius Drainage Study Presentation

Other Business

Adjournment

TOWN OF MANLIUS
NORTH EAGLE VILLAGE ROAD
DRAINAGE STUDY

DRAFT

TOWN BOARD

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KAY BLYTHE, DEPUTY TOWN MANAGER

CARRIE GREVELDING, TOWN CLERK

JOSEPH FRATESCHI, ESQ., TOWN ATTORNEY

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MILLER
ENGINEERS

JANUARY 27, 2026

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Project Authorization

This watershed study and runoff analysis has been authorized by and prepared for the Town of Manlius (Town) by Miller Engineers (Miller) in accordance with the Town's request for a watershed drainage study of the North Branch Bishop Brook at the crossing of North Eagle Village Road on June 12, 2024. The purpose of this study is to meet the Town of Manlius' request to determine impacts of recent development within the watershed related to new projects tributary to North Eagle Village Road, analysis of the capacity of the existing overland drainageways and culvert located at North Eagle Village Road, analysis of potential stormwater management improvements to reduce peak stormwater flows to North Eagle Village Road and recommendations of future watershed planning for North Branch Bishop Brook within the Town of Manlius.

Design Reference Materials

- United States Geological Survey (USGS) mapping.
- United States Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS) Web Soil Survey
- United States Department of Agriculture (USDA)– Natural Resources Conservation Service (NRCS) - Technical Release 55 (NRCS TR-55) "Urban Hydrology for Small Watersheds"
- United States Department of Agriculture (USDA)– Natural Resources Conservation Service (NRCS) - Technical Release 20 (NRCS TR-20) "Computer Program for Project Formulation Hydrology" WinTR-20 Version 1.11.11
- Cornell University Web Based Application – "Extreme Precipitation in New York and New England"
- New York State Department of Environmental Conservation (NYSDEC) "Guidelines for Design of Dams" dated January, 1989

General Watershed Information and Basis of Design

Location: North Branch Bishop Brook tributary to North Eagle Village Road, Town of Manlius, Onondaga County, New York. A USGS Location Map is appended to this report for reference.

Watershed Soils: Watershed soils consist of Type "A" "B", "C" "C/D" and "D" hydrologic group soils. The major soil types within the North Branch Bishop Brook watershed are Mohawk silt loam, Manheim silt loam, Herkimer silt loam and Wassaic silt loam. The largest contributing soil hydrologic group is Type "C" Soil, which is moderately poor draining. A total of 550 acres of

Type “C” Soil have been calculated to be tributary to the North Eagle Village Road culvert. Unfortunately, these moderately poorly drained soils provide relatively high Runoff Curve Numbers (CN) with little chance for significant reduction based upon land use. A Soils Map is appended to this Report for reference.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A - Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B - Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C - Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D - Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Watershed Land Use: The contributing watershed area of North Branch Bishop Brook tributary to North Eagle Village Road is 714.28 acres. Land uses include agricultural lands, woods, brush, single family homes, meadow and one commercial business. The largest segment of land cover is tilled agricultural lands consisting of 235 acres. Woods and brush are also large contributors to the watershed land use, with 168 acres of woods and 148 acres of brush. Overall the watershed area is lightly developed and has only seen minor development from 2015 to 2025. Runoff Curve Numbers associated with land use and soil type are outlined within NRCS TR-55. Weighted Runoff Curve Numbers representing each watershed subarea are referenced in the Sub-area Watershed Characteristic Summaries Tables.

Rainfall: Rainfall data used in the modeling and analysis of this watershed is taken from the Cornell University Web Based Application – "Extreme Precipitation in New York and New England". A rainfall duration of 24 hours with a Type 2 Rainfall Distribution was used for this analysis. A Type 2 Rainfall Distribution is a synthetic storm event provided within NRCS TR-55 and NRCS TR-20 representing storm frequencies and rainfall amounts. Storm frequencies and rainfall amounts utilized are as follows:

Table 1. Rainfall Data by Storm Event

Storm Event	Total Rainfall (Inches)
2-Year Storm Event	2.40
10-Year Storm Event	3.45
25-Year Storm Event	4.24
50-Year Storm Event	4.97
100-Year Storm Event	5.82

Antecedent Moisture Condition: The soil Antecedent Moisture Condition (AMC) is used for determining the Runoff Curve Number values used in rainfall runoff modeling. Antecedent Moisture Condition levels are based on the 5-day previous rainfall amount and are categorized into three levels; AMC-1 (dry conditions), AMC-2 (average conditions) and AMC-3 (wet conditions). The AMC-2 condition is considered the reference condition for standard Runoff Curve Number values and was the standard used in determining stormwater runoff.

Time of Concentration: The Time of Concentration (Tc) is the longest calculated travel time for rainfall to collect within a subarea to the point of analysis. Time of Concentration velocities associated with land use and land slope are outlined within NRCS TR-55.

Methodology: The U.S. Department of Agriculture's NRCS TR-55 methodology was utilized in determining Runoff Curve Numbers and the Time of Concentration for each of the sub-areas of the watershed. The U.S. Department of Agriculture's NRCS TR-20 computer program was used to model the watersheds.

Watershed Analysis

A review of the North Branch Bishop Brook watershed was undertaken to determine stormwater runoff rates to keys points within the watershed. Soils maps, New York State Geographic Information Systems (NYSGIS) 2015 and 2022 aerial photography and NYSGIS contour mapping were reviewed to determine basic watershed characteristics. The 2022 aerial photography was compared to current available commercial 2025 aerial photography to verify the land uses. Field observation of the watershed boundary and identifying current land uses was also undertaken, along with cataloging existing road culverts and other stormwater facilities within the watershed. Stormwater facilities within the watershed consist of overland drainage channels and highway culverts. A determination of existing stormwater detention within the watershed was based upon field observations and review of the contour mapping. Based upon our field review, there is little stormwater storage upstream of each roadway

culvert due to the relatively steep slopes within the watershed area. There are several small dug ponds on private property within the watershed. These ponds have little capacity to reduce downstream stormwater impacts based upon our observations. Maps indicating watershed boundaries, land use, soil types and Time of Concertation routes have been appended to this Report for reference. Mapping indicating existing highway culverts and key points of analysis is also appended to this Report for reference.

Review of the watershed consisted of analysis of existing conditions in 2015, current conditions as of 2025 and potential future improvements that could reduce the impacts upon stormwater runoff to the North Eagle Village Road culvert. A total of two analyses we run for the year 2015 calculations. The different analyses were based upon different tilled agricultural lands being planted with different over crops. Soybeans was analyzed as one alternate and corn as another alternate. For the 2025 analyses, a total of three separate runoff calculations were generated. These included all tilled agricultural lands being planted with soybeans as one alternate, corn as another alternate and hay as a third alternate. These different agricultural land covers provide different runoff values for each of the cover crops. Typically hay would provide the best rainfall infiltration, followed by soybean and then corn. As much of the watershed land use is tilled agricultural lands, we felt it was important to review each of the agricultural cover crops to determine what increase or reduction in runoff would occur on these lands utilizing different cover crops.

Potential future improvements that could reduce the impacts of stormwater runoff to North Eagle Village Road include the installation of a large dry detention basin facility just south of East Seneca Turnpike within an existing natural gully. Due to the size of the earthen embankment impoundment volume, a NYSDEC dam permit would be required to construct and maintain this facility. A total of three separate runoff calculations were generated for future improvements which included tilled agricultural lands planted in soybean, corn and hay.

2015 Watershed Conditions and Analysis

The year 2015 serves as the benchmark for base original stormwater flow rates to North Eagle Village Road. The following summary tables represent our findings for runoff conditions for year 2015.

Table 2. Sub-Area Watershed 2015 Characteristics Summary

		Agricultural Tilled Soils – Soy Beans			Agricultural Tilled Soils – Corn		
Sub-Area No.	**Description**	**CN**	**Tc (Hrs.)**	**Area (Acres)**	**CN**	**Tc (Hrs.)**	**Area (Acres)**
1	Lands South of Peck Hill Rd	68.5	1.78	33.09	70.0	1.78	33.09
2	Lands East of Palmer Rd & North of Peck Hill Rd	79.0	0.96	56.48	77.7	0.96	56.48
3	Lands East of Hale Rd & South of E Seneca Tpke	77.7	0.64	15.01	78.4	0.64	15.01
4	Lands West of Hale Rd, East of South Eagle Village Rd, & South of E Seneca Tpke	76.5	2.93	352.88	78.1	2.93	352.88
5	Lands East of Mac Clenthen Rd & North of E Seneca Tpke	73.8	1.67	98.88	74.9	1.67	98.88
6	Land East of S Eagle Village Rd	74.1	0.48	30.49	77.0	0.48	30.49
7	Lands West of S Eagle Village Rd & South of E Seneca Tpke	70.6	0.72	19.70	70.6	0.72	19.70
8	Lands East of S Eagle Village Rd & South of E Seneca Tpke	80.1	0.23	17.52	82.5	0.23	17.52
9	Lands East of N Eagle Village Rd, West of Mac Clenthen Rd, & North of E Seneca Tpke	68.3	1.12	90.23	68.3	1.12	90.23
Overall	**North Branch of Bishop Brook Tributary to North Eagle Village Road**	**75.5**	**-**	**714.28**	**75.9**	**-**	**714.28**

Based upon review of the North Branch Bishop Brook watershed, 2015/2025 key points of analysis are as follows.

Table 3. Key Points of Analysis – 2015/2025 Conditions

Sub-Area No.	*Section ID*	*Location*	*Culvert Size*
1	001	Peck Hill Road	24" Dia CMP
1 – 2	004	Palmer Road	12" Dia DI and 24" Dia HDPE Pipe
1 – 3	006	Hale Road	18" DIA HDPE Pipe
1 – 4	010	East Seneca Turnpike	Twin 50"x31" CMPA
1 – 5	013	Mac Clenthen Road	60" DIA CMP
6	015	South Eagle Village Road	12" Dia HDPE Pipe
6 – 7	018	East Seneca Turnpike	24" Dia HDPE Pipe
8	020	East Seneca Turnpike	24" Dia Concrete Pipe
1 – 9	025	North Eagle Village Road	58"x36" CMPA

Calculated stormwater modeling results for the year 2015 are as follows.

North Branch Bishop Brook Watershed

Table 4. Point of Analysis – Calculated Runoff Rates (CFS) 2015 Conditions

Section ID	2-Year Storm		10-Year Storm		25-Year Storm		50-Year Storm		100-Year Storm	
	Soy	Corn	Soy	Corn	Soy	Corn	Soy	Corn	Soy	Corn
001	14	17	29	33	42	46	55	59	69	74
004	18	21	43	48	65	71	88	84	115	121
006	7	7	15	16	22	23	29	29	37	37
010	62	70	140	153	209	224	276	293	358	377
013	74	84	173	188	259	278	345	366	450	472
015	12	16	30	36	46	52	61	68	79	87
018	16	20	41	46	63	69	84	91	110	118
020	17	20	34	38	49	53	62	67	78	83
025	86	97	205	221	312	331	420	441	552	576

2025 Watershed Conditions and Analysis

From 2015 to 2025 a total of six (6) land use changes were identified within the watershed. These land use changes increase stormwater runoff for the watershed. The parcels identified include:

- Tax Parcel 115.-05-07.4, 8400 East Seneca Turnpike, Large Barn Facility
- Tax Parcel 0.99.-02-14.5, 8401 East Seneca Turnpike, Large Single Family Home Complex
- Tax Parcel 0.99.-02-14.3, 8421 East Seneca Turnpike, Large Single Family Home Complex
- Tax Parcel 0.99.-02-10.4, 5005 Mac Clenthen Road, Single Family Home
- Tax Parcel 116.-01-02.1, Peck Hill Road, Loss of Brush and Woods to Tilled Land
- Tax Parcel 116.-01-01.0, Peck Hill Road, Loss of Brush to Tilled Land

The following summary table represent our findings for runoff conditions for 2025.

Table 5. Sub-Area Watershed 2025 Characteristics Summary

	Agricultural Tilled Soils – Soy Beans			Agricultural Tilled Soils – Corn			Agricultural Tilled Soils – Hay		
Sub-Area No.	**CN**	**Tc (Hrs.)**	**Area (Acres)**	**CN**	**Tc (Hrs.)**	**Area (Acres)**	**CN**	**Tc (Hrs.)**	**Area (Acres)**
1	68.5	1.78	33.09	70.0	1.78	33.09	65.9	1.78	33.09
2	76.0	0.96	56.48	77.7	0.96	56.48	73.0	0.96	56.48
3	77.7	0.64	15.01	78.4	0.64	15.01	76.5	0.64	15.01
4	76.7	2.93	352.88	78.3	2.93	352.88	73.8	2.93	352.88
5	73.8	1.67	98.88	74.9	1.67	98.88	71.7	1.67	98.88
6	74.1	0.48	30.49	77.0	0.48	30.49	69.2	0.48	30.49
7	73.1	0.72	19.70	73.1	0.72	19.70	73.1	0.72	19.70
8	80.1	0.23	17.52	82.5	0.23	17.52	75.9	0.23	17.52
9	69.0	1.12	90.23	69.0	1.12	90.23	69.0	1.12	90.23
Overall	**74.8**	**-**	**714.28**	**76.1**	**-**	**714.28**	**72.4**	**-**	**714.28**

Calculated stormwater modeling results for the year 2025 are as follows.

Point of Analysis – Calculated Runoff Rates (CFS) 2025 Conditions

Section ID	2-Year Storm			10-Year Storm			25-Year Storm			50-Year Storm			100-Year Storm		
	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay
001	14	17	10	29	33	23	42	46	36	55	59	47	69	74	62
004	18	21	13	43	48	36	65	71	57	88	94	77	115	121	104
006	7	7	6	15	16	14	22	23	21	29	29	27	37	37	35
010	63	71	49	142	155	121	210	226	184	278	295	248	360	379	327
013	75	85	58	174	190	149	261	279	229	347	367	310	451	474	411
015	12	16	7	30	36	22	46	52	36	61	68	50	79	87	67
018	18	21	12	43	48	34	66	72	56	87	94	76	114	121	101
020	17	20	12	34	38	28	49	53	41	62	67	54	78	83	70
025	88	99	70	207	224	180	316	335	282	424	446	386	557	581	514

Future Watershed Conditions and Analysis

Future improvements to reduce peak runoff rates to North Eagle Village Road could include construction of a dry detention facility with approximately 20 acre-feet of runoff storage. The following summary tables represent our findings for potential future runoff conditions.

Table 7. Sub-Area Watershed Future Improvements Characteristics Summary

	Agricultural Tilled Soils – Soy Beans			Agricultural Tilled Soils – Corn			Agricultural Tilled Soils – Hay		
Sub-Area No.	**CN**	**Tc (Hrs.)**	**Area (Acres)**	**CN**	**Tc (Hrs.)**	**Area (Acres)**	**CN**	**Tc (Hrs.)**	**Area (Acres)**
1	68.5	1.78	33.09	70.0	1.78	33.09	65.9	1.78	33.09
2	76.0	0.96	56.48	77.7	0.96	56.48	73.0	0.96	56.48
3	77.7	0.64	15.01	78.4	0.64	15.01	76.5	0.64	15.01
4a	76.7	2.91	257.64	78.1	2.91	257.64	74.2	2.91	257.64
4b	76.7	2.89	95.24	78.9	2.89	95.24	72.8	2.89	95.24
5	73.8	1.67	98.88	74.9	1.67	98.88	71.7	1.67	98.88
6	74.1	0.48	30.49	77.0	0.48	30.49	69.2	0.48	30.49
7	73.1	0.72	19.70	73.1	0.72	19.70	73.1	0.72	19.70
8	80.1	0.23	17.52	82.5	0.23	17.52	75.9	0.23	17.52
9	69.0	1.12	90.23	69.0	1.12	90.23	69.0	1.12	90.23
Overall	**74.8**	**-**	**714.28**	**76.1**	**-**	**714.28**	**72.4**	**-**	**714.28**

Based upon review of the North Branch Bishop Brook watershed potential future conditions key points of analysis are as follows.

Table 8. Key Points of Analysis – Future Conditions

Sub-Area No.	*Section ID*	*Location*	*Culvert Size*
1	001	Peck Hill Road	24” Dia CMP
1 – 2	004	Palmer Road	12” Dia DI and 24” Dia HDPE Pipe
1, 2, 4a	RES 01	Detention Basin	Proposed 24” Dia HDPE Pipe
3	009	Hale Road	18” DIA HDPE Pipe
1 – 3, 4a, 4b	010	East Seneca Turnpike	Twin 50”x31” CMPA
1 – 3, 4a, 4b, 5	013	Mac Clenthen Road	60” DIA CMP
6	015	South Eagle Village Road	12” Dia HDPE Pipe
6 – 7	018	East Seneca Turnpike	24” Dia HDPE Pipe
8	020	East Seneca Turnpike	24” Dia Concrete Pipe
1 – 3, 4a, 4b, 5 – 9	025	North Eagle Village Road	58”x36” CMPA

Calculated stormwater modeling results for potential future conditions are as follows.

Point of Analysis – Calculated Runoff Rates (CFS) Future Improvements

Section ID	2-Year Storm			10-Year Storm			25-Year Storm			50-Year Storm			100-Year Storm		
	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay
001	14	17	10	29	33	23	42	46	36	55	59	47	69	74	62
004	18	21	13	43	48	36	65	71	57	88	94	77	115	121	104
RES 01	46	51	37	76	78	70	90	92	85	130	157	96	237	254	205
009	7	7	6	15	16	14	22	23	21	29	29	27	37	37	35
010	61	69	48	106	112	95	133	140	122	173	211	145	315	338	270
013	72	81	58	134	142	119	178	187	162	219	239	202	362	390	308
015	12	16	7	30	36	22	46	52	36	61	68	50	79	87	67
018	18	21	12	43	48	34	66	72	56	87	94	76	114	121	101
020	17	20	12	34	38	28	49	53	41	62	67	54	78	83	70
025	85	94	70	178	188	160	257	269	238	336	349	313	432	446	407

Findings

Based upon our calculations, we find significant peak runoff rates for the 714.28 acre watershed. To verify our calculations, we examined flow rates calculated within the current Onondaga FEMA Flood Study and the USDA StreamStats Runoff Calculations website. The 100-year frequency storm flow rate calculated by FEMA is 284 cubic feet per second just downstream North Eagle Village Road. The 100-year frequency storm flow rate calculated by USDA StreamStats is 331 cubic feet per second at North Eagle Village Road. Our calculations indicate the 100-year frequency storm flow rate would be 557 cubic feet per second at North Eagle Village Road. While our calculated peak runoff rates are higher than FEMA and USDA StreamStats, we feel our results are reasonable based upon the watershed size, soils types, lands slopes and land uses.

While we did see a moderate minor increase in calculated discharge rates from 2015 to 2025, the less than 1% of increased flow would not be significant enough to substantially impact North Eagle Village Road. Additionally, corn planted within the tilled agricultural lands would impact North Eagle Village Road more than the minor development that has occurred within the overall watershed over the last 10 years. However, there is one area where a moderate increase occurred due to localized development. This is within Subareas #6 and #7 watersheds which drain to the 24-inch diameter culvert under East Seneca Turnpike. Calculated flow rates increased at this location approximately 13% in a 2-year frequency storm due to the installation of an asphalt parking area and large barn facility. The percent increase at this location was only 2% for a 100-year frequency storm, which is minor. An increase in runoff for lower rainfall totals would be expected as any impervious area increase would provide runoff for even common everyday events. We anticipate runoff at this location from minor rainfall totals would be observable to those downstream within the outfall channel section.

The overall watershed is limited for siting stormwater detention facilities that could provide a positive impact upon watershed discharges. This is due to the relatively steep slopes of the watershed and all properties being currently privately owned. In an attempt to decrease flow rates to North Eagle Village Road, watershed models were run with a dry detention area capturing, storing and releasing some of the watershed's stormwater runoff. Installation of a dry detention facility with a storage volume of 20-acre feet south of East Seneca Turnpike could provide a reduction from current runoff levels. We calculate a decrease for the 100-year frequency storm from 557 cubic feet per second to approximately 432 cubic feet per second or a 23% reduction from current levels if agriculturally tilled the lands were placed in soy bean cover and the detention basin was in place. If agriculturally tilled lands were placed in hay cover and the detention basin was in place, the overall reduction would be from 557 cubic feet per second to 407 cubic feet per second or a 27% reduction from 2025 levels. If agriculturally tilled lands were placed in hay cover and no detention basin was constructed, the overall reduction of the 100-year frequency storm would be from 557 cubic feet per second to 514 cubic feet per second or an 8% reduction from 2025 levels. If agriculturally tilled the lands were placed in hay cover and no detention basin was constructed, the overall reduction of 2-year frequency storm would be from 88 cubic feet per second to 70 cubic feet per second or a 20% reduction from

2025 levels. This is due to the increased infiltration capacity hay land cover would have on lower rainfall total storms.

In regards to construction of a large dry detention basin facility, the New York State Department of Environmental Conservation "Guidelines for Design of Dams" would be the design standard required to be followed. The structure would be classified as a "Type B - Small Hazard Classification Dam" and would be required to be permitted by the New York State Department of Environmental Conservation. This criteria would require a design spillway of 225% of the 100-year design storm and a service spillway design flood capacity to handle a 25-year frequency storm. This design criteria actually limits the amount of flow discharge moderation which can be accomplished from the structure for the more frequent storms as discharge rates need to allow for the passing of the 25-year frequency storm calculated flow rate. This structure would provide better reduced flow rates for larger storms such as the 25-year, 50- year and 100-year frequency storm discharges. During the design of the dam structure it may be possible to moderate some discharge rates from the proposed detention facility during the final design engineering process and therefore improve lesser storm event discharge rates. Typically lower rainfall total storms would receive minor improvement from the detention facility.

In regards to the capacity of the North Eagle Village Road culvert and adjacent drainage channels, we find them significantly undersized. We calculate the capacity of the 58"x36" C.M.P.A. culvert to be 58 cubic feet per second before road overtopping. We calculate the capacity of the upstream channel to be 145 cubic feet per second. We calculate the capacity of the downstream channel to be 122 cubic feet per second. The channel capacities are approximate as the channel cross-section varies significantly in width and depth. We calculate the 2-year frequency storm to be 88 cubic feet per second. Based upon our runoff calculations we find the existing North Eagle village Road Culvert cannot accommodate a 2-year frequency storm. Additionally, due to the nature of the road slope and property elevations east of the North Eagle Village Road, an overland flood route exists along the eastern portion of North Eagle Village Road prior to the culvert reaching full flow capacity. This impacts adjacent eastern properties in more frequent rainfall events. During more severe storms, the roadway would overtop due to the trajectory and velocity of water intersecting North Eagle Village Road. Both the upstream and downstream channels would overtop their channel banks and flood the adjacent lands on both sides of North Eagle Village Road during these significant storms. The major overland flood route of flood waters is generally east of North Eagle Village Road flowing north impacting private lands. Eventually these flood waters return overland to the North Branch Bishop Brook prior to Duguid Road. Based upon our understanding no structures have been damaged due to the direct flow of water overland into a building at North Eagle Village Road. However, adjacent land flooding and road overtopping is a relatively common occurrence.

Recommendations

The Town of Manlius has several options to consider in an attempt to improve the stormwater impacts upon North Eagle Village Road and the adjacent properties. Options include enforcement of current Town and State Laws, Special Regulation adoptions within the watershed, public outreach with current property owners on ways to reduce landowner impacts from stormwater discharges and infrastructure improvement projects. We offer the following suggestions for the Town Board's consideration.

- The Town of Manlius Town Board could pass a local law establishing more restrictive requirements within the watershed relating to new impervious surfaces within the North Branch Bishop Brook watershed. Peak rates for any future development discharge rates could be designated to be at a lower rate than pre-development rates.

- The Town of Manlius Town Board could pass a local law establishing more restrictive requirements within the watershed than the current New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 which generally does not regulate peak runoff discharges for agricultural land, single family home development or small subdivisions.

- The Town of Manlius needs to ensure they enforce Zoning Chapter 72, Flood Damage Protection, which regulates development within FEMA designated floodways and floodplains. Much of the area within the North Eagle Village culvert area is within FEMA designated floodways and floodplains. More restrictive building freeboard elevations could be adopted for this localized area. Additionally, we do not agree with the floodplain limits within the FEMA mapping as past flooding includes significantly more private lands than indicated. The Town may wish to consider having FEMA re-evaluate this location for an updated representation of impacted lands.

- Potentially work with land owners within the watershed to reduce runoff from their properties. As agriculturally tilled lands are a major component of the watershed, conservation efforts such as crop cover alternatives should be considered as well as farming conservation measures or acquisition of farmland conservation easements. Also, homeowners could implement small onsite rain water saving devices such as rain barrels or rain gardens on their properties.

- Contact Eagle Hill Farm, LLC, 8400 East Seneca Turnpike, (Tax Parcel 115.-05-07), to investigate whether they would be willing to incorporate a stormwater management facility or stormwater storage facility within their parcel to offset the increased runoff from their recent expansion which increased flow rates downstream of their property.

- Construction of a large dry detention basin south of East Seneca Turnpike should be considered. This facility would require special techniques for slope and embankment stability due to shallow limestone bedrock found throughout the entire watershed.

Additionally the land is currently privately owned and this would need to be acquired by the Town of Manlius to construct said facility. Additionally, the cost of constructing and maintaining a stormwater management facility of this size would be significant. Preliminary estimates indicate 12,000 cubic yards of imported earthen dam embankment material would be required for construction as well as drainage structures, piping, riprap stabilization and geosynthetic materials. We anticipate construction costs could be over $1,000,000.00 with maintenance of the facility to be required by the Town in perpetuity.

- The Town should consider seeking Federal and State Grants for Watershed Improvements or Green Infrastructure projects.

- Construction of an improved designated flood route along the east side of North Eagle Village Road and north of the Falcon View subdivision could be considered to reduce overland flooding in the North Eagle Village Road area. This would require land easements, significant construction and associated engineering to limit downstream impacts at Duguid Road and beyond.

- Creation of a Drainage District for the entire Bishop Brook watershed to generate funding for overall watershed improvements may be considered. Should channel or culvert improvements be constructed, work should generally focus on downstream areas first to avoid negative impacts on existing downstream problem areas.

While it seems logical to increase the size of the North Eagle Village culvert and improve the existing drainage channels both upstream and downstream at this location, this will only lead to potential flooding downstream towards the Falcon View subdivision and Duguid Road. Based upon our experience, these locations also experience stormwater runoff issues. We would not encourage enhancement of downstream stormwater issues to alleviate flooding of the North Eagle Village Road area. Should culvert and channel improvements be considerate at this location, improvements downstream would certainly be required. We anticipate a significant cost for any downstream improvements and would need to verify their feasibility.

Please contact us if you have any questions or comments.

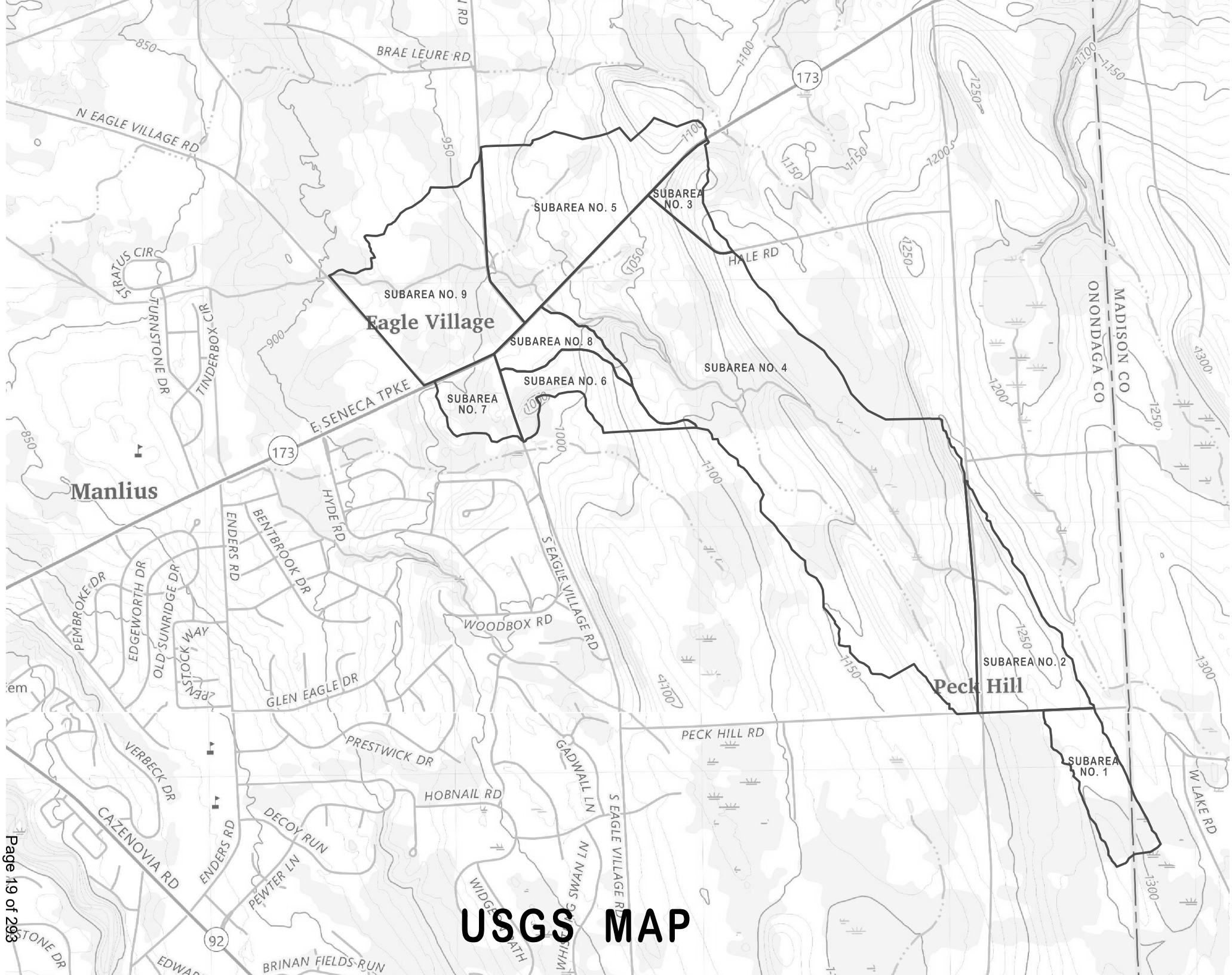
Respectfully submitted,



Douglas A. Miller, P.E.

APPENDIX

USGS LOCATION MAP


SUBAREA NO. 5
SUBAREA NO. 3
SUBAREA NO. 9
Eagle Village
SUBAREA NO. 8
SUBAREA NO. 6
SUBAREA NO. 7
SUBAREA NO. 4
SUBAREA NO. 2
Peck Hill
SUBAREA NO. 1
Manlius
MADISON CO
ONONDAGA CO
E SENECA TPKE
HALE RD
PECK HILL RD
BRAE LEURE RD
N EAGLE VILLAGE RD
STRATUS CIR
TURNSTONE DR
TINDERBOX CIR
HYDE RD
ENDERS RD
BENTBROOK DR
PEMBROKE DR
EDGEWORTH DR
OLD SUNRIDGE DR
PENSTOCK WAY
GLEN EAGLE DR
WOODBOX RD
S EAGLE VILLAGE RD
PRESTWICK DR
HOBNAIL RD
GADWALL LN
VERBECK DR
CAZENOVIA RD
DECOY RUN
PEWTER LN
BRINAN FIELDS RUN
W LAKE RD
173
92
850
900
950
1000
1050
1100
1150
1200
1250
1300

USGS MAP

SOILS MAP

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:15,800 to 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Madison County, New York
Survey Area Data: Version 23, Aug 25, 2024

Soil Survey Area: Onondaga County, New York
Survey Area Data: Version 19, Aug 29, 2024

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 15, 2022—May 28, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AoA	Appleton loam, 0 to 3 percent slopes	B/D	40.3	1.1%
AoB	Appleton loam, 3 to 8 percent slopes	B/D	6.1	0.2%
AuB	Aurora silt loam, 3 to 8 percent slopes	D	2.4	0.1%
AuC	Aurora silt loam, 8 to 15 percent slopes	D	5.6	0.1%
FHF	Farmington-Rock outcrop complex, very steep	D	0.3	0.0%
HnB	Honeoye silt loam, 3 to 8 percent slopes	B	196.0	5.2%
HnC	Honeoye silt loam, 8 to 15 percent slopes	B	50.4	1.3%
HnD	Honeoye silt loam, 15 to 25 percent slopes	B	2.4	0.1%
LtA	Lima silt loam, 0 to 3 percent slopes	B/D	8.5	0.2%
LtB	Lima silt loam, 3 to 8 percent slopes	B/D	64.0	1.7%
Ly	Lyons soils, 0 to 3 percent slopes	C/D	15.4	0.4%
W	Water		0.5	0.0%
Subtotals for Soil Survey Area			**391.7**	**10.4%**
Totals for Area of Interest			**3,779.8**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AnB	Angola-Darien silt loams, 0 to 6 percent slopes	D	7.6	0.2%
ApB	Appleton gravelly silt loam, 3 to 8 percent slopes	B/D	1.7	0.0%
ArB	Arkport very fine sandy loam, 2 to 6 percent slopes	A	6.8	0.2%
AwB	Aurora silt loam, 0 to 6 percent slopes	D	2.7	0.1%
AXE	Aurora-Farmington-Rock outcrop association, steep	D	7.5	0.2%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BeB	Benson silt loam, undulating	D	175.0	4.6%
BNC	Benson-Wassaic-Rock outcrop association, sloping		78.3	2.1%
BNF	Benson-Wassaic-Rock outcrop association, very steep		1.2	0.0%
CaD2	Camillus silt loam, 12 to 18 percent slopes eroded	C	17.5	0.5%
CBE	Camillus and Lairdsville channery soils, steep	C	22.7	0.6%
Ce	Carlisle muck	A/D	4.7	0.1%
CfB	Cazenovia silt loam, 2 to 8 percent slopes	C	107.9	2.9%
FL	Fluvaquents, frequently flooded	A/D	3.8	0.1%
Fo	Fonda mucky silty clay loam	C/D	22.4	0.6%
Fr	Fredon loam	B/D	10.2	0.3%
Ha	Halsey mucky loam	B/D	2.1	0.1%
Hb	Hamlin silt loam	B	7.6	0.2%
Hc	Hamlin silt loam, high bottom	B	4.7	0.1%
He	Herkimer silt loam	C	138.7	3.7%
HnB	Honeoye silt loam, 3 to 8 percent slopes	B	328.6	8.7%
HnC	Honeoye silt loam, 8 to 15 percent slopes	B	119.5	3.2%
HoD	Honeoye and Lansing soils, 15 to 25 percent slopes	B	19.6	0.5%
HTE	Honeoye, Lansing, and Ontario soils, 25 to 35 percent slopes	B	3.3	0.1%
HTF	Honeoye, Lansing, and Ontario soils, 35 to 50 percent slopes	B	8.8	0.2%
HwB	Howard gravelly fine sandy loam, 3 to 8 percent slopes	A	3.1	0.1%
HyA	Howard gravelly silt loam, 0 to 3 percent slopes	A	9.9	0.3%
KeA	Kendaia silt loam, 0 to 3 percent slopes	B/D	21.4	0.6%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KeB	Kendaia silt loam, 3 to 8 percent slopes	B/D	2.6	0.1%
LtB	Lima silt loam, 3 to 8 percent slopes	B/D	9.5	0.3%
Ly	Lyons soils, 0 to 3 percent slopes	C/D	71.6	1.9%
MhA	Manheim silt loam, 0 to 3 percent slopes	C/D	173.1	4.6%
MhB	Manheim silt loam, 3 to 8 percent slopes	C/D	252.5	6.7%
ML	Made land	A	1.9	0.0%
MnB	Manlius channery silt loam, 2 to 6 percent slopes	C	27.0	0.7%
MwB	Mohawk silt loam, 2 to 8 percent slopes	C	634.3	16.8%
MwC	Mohawk silt loam, 8 to 15 percent slopes	C	321.3	8.5%
MwD	Mohawk silt loam, 15 to 25 percent slopes	C	115.4	3.1%
PaB	Palatine shaly silt loam, 2 to 6 percent slopes	C	100.2	2.7%
PaC	Palatine shaly silt loam, 6 to 12 percent slopes	C	97.7	2.6%
PgB	Palmyra gravelly loam, 3 to 8 percent slopes	A	0.7	0.0%
PgC	Palmyra gravelly loam, rolling	A	21.9	0.6%
PHD	Palmyra and Howard soils, hilly	A	15.0	0.4%
PHF	Palmyra and Howard soils, very steep	A	8.8	0.2%
PpB	Phelps gravelly loam, 3 to 8 percent slopes	B/D	2.8	0.1%
Te	Teel silt loam	B/D	24.3	0.6%
Va	Varick silt loam	D	16.4	0.4%
W	Water		0.6	0.0%
WcB	Wassaic silt loam, 0 to 8 percent slopes	C	322.9	8.5%
WcC	Wassaic silt loam, 8 to 15 percent slopes	C	25.2	0.7%
Wn	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	B/D	5.4	0.1%
Subtotals for Soil Survey Area			**3,387.8**	**89.6%**
Totals for Area of Interest			**3,779.8**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

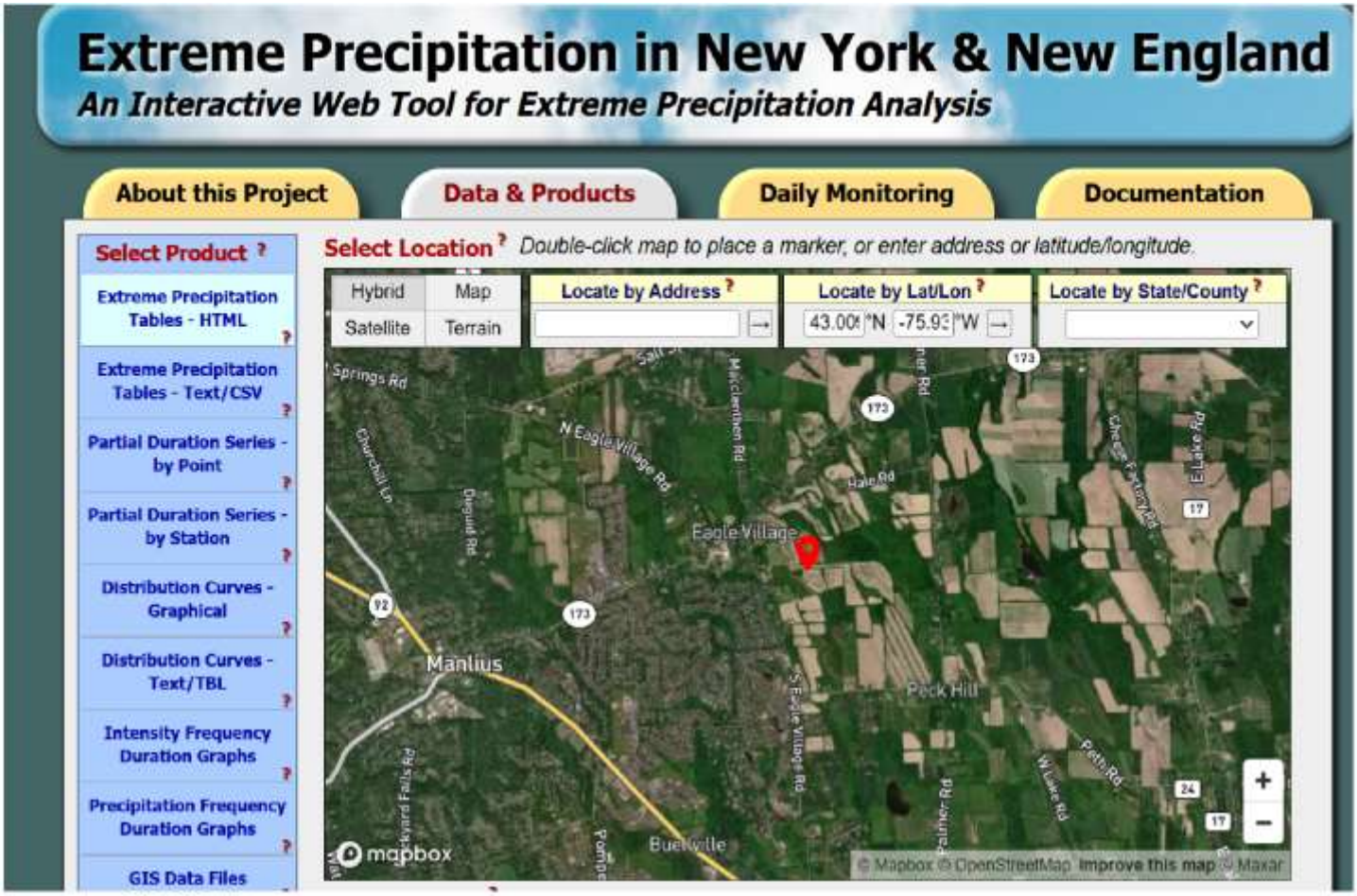
Tie-break Rule: Higher

CONTOUR MAP



CONTOUR MAP

EXTREME PRECIPITATION TABLE



Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point

Smoothing	Yes
State	New York
Location	New York, United States
Latitude	43.010 degrees North
Longitude	75.935 degrees West
Elevation	320 feet
Date/Time	Thu Nov 20 2025 07:48:42 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.42	0.53	0.69	0.86	1.06	**1yr**	0.74	0.96	1.20	1.45	1.74	2.06	2.32	**1yr**	1.83	2.23	2.66	3.21	3.73	**1yr**
2yr	0.33	0.50	0.62	0.82	1.03	1.27	**2yr**	0.89	1.15	1.44	1.73	2.04	2.40	2.70	**2yr**	2.12	2.60	3.05	3.66	4.23	**2yr**
5yr	0.39	0.60	0.76	1.01	1.30	1.61	**5yr**	1.12	1.43	1.82	2.17	2.54	2.95	3.32	**5yr**	2.61	3.19	3.74	4.40	5.03	**5yr**
10yr	0.44	0.69	0.87	1.19	1.54	1.92	**10yr**	1.33	1.68	2.18	2.58	3.00	3.45	3.89	**10yr**	3.05	3.74	4.37	5.06	5.73	**10yr**
25yr	0.53	0.84	1.07	1.47	1.95	2.43	**25yr**	1.68	2.10	2.76	3.25	3.74	4.24	4.79	**25yr**	3.76	4.61	5.37	6.10	6.81	**25yr**
50yr	0.60	0.96	1.23	1.73	2.33	2.92	**50yr**	2.01	2.48	3.31	3.87	4.43	4.97	5.61	**50yr**	4.40	5.40	6.27	7.01	7.77	**50yr**
100yr	0.69	1.12	1.44	2.04	2.78	3.49	**100yr**	2.40	2.94	3.95	4.60	5.22	5.82	6.58	**100yr**	5.15	6.33	7.34	8.08	8.86	**100yr**
200yr	0.80	1.30	1.68	2.41	3.33	4.18	**200yr**	2.87	3.48	4.72	5.47	6.17	6.81	7.72	**200yr**	6.03	7.42	8.59	9.30	10.11	**200yr**
500yr	0.97	1.59	2.08	3.01	4.22	5.30	**500yr**	3.64	4.37	5.97	6.87	7.68	8.40	9.54	**500yr**	7.43	9.17	10.58	11.21	12.04	**500yr**

2015 AERIAL PHOTOGRAPH



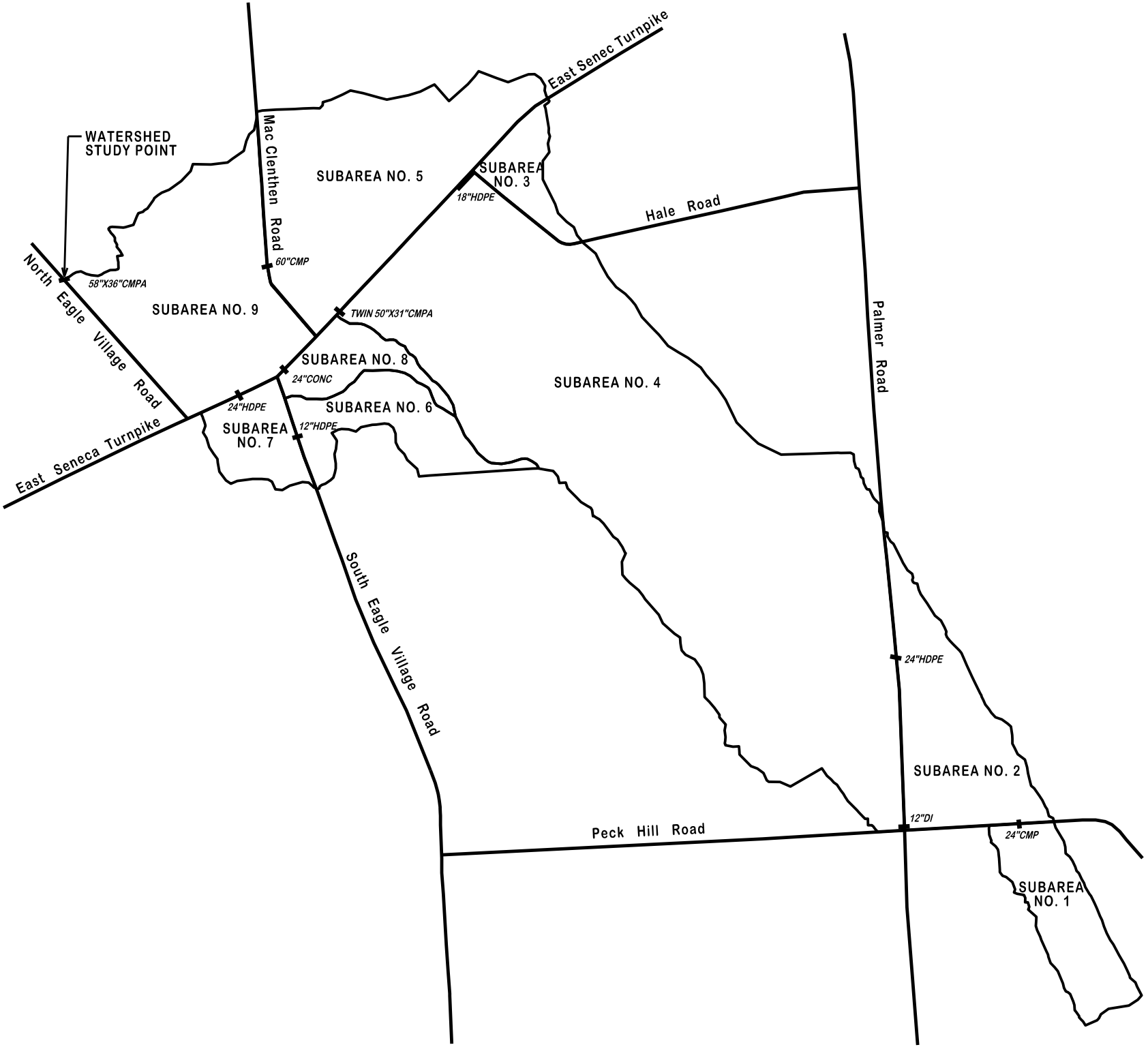
2015 AERIAL PHOTOGRAPH

2022 AERIAL PHOTOGRAPH



2022 AERIAL PHOTOGRAPH

EXISTING CULVERT / KEY POINTS OF ANALYSIS SCHEMATIC



EXISTING CULVERTS / KEY POINTS OF ANALYSIS

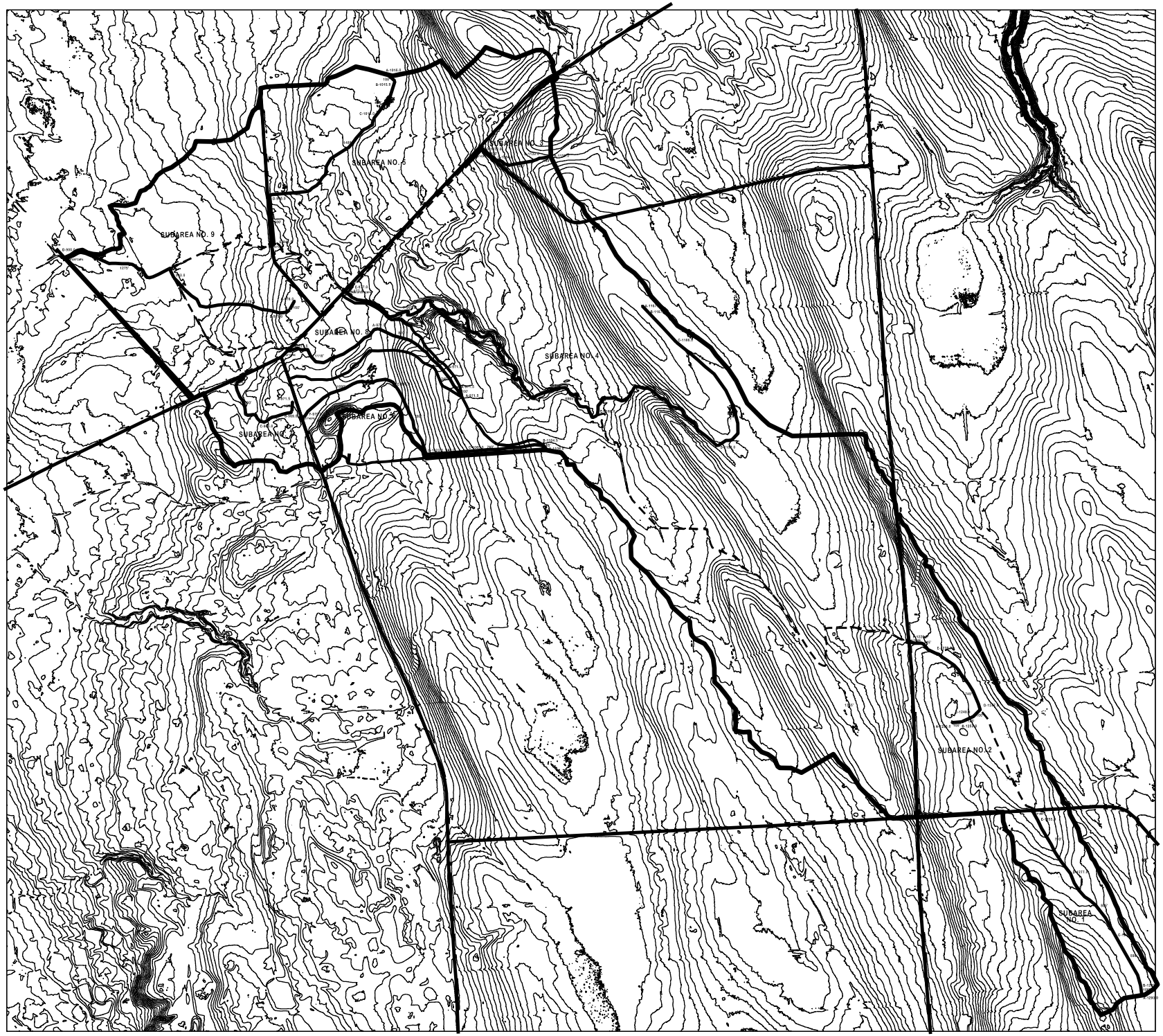
2015 LAND USE MAP



- PASTURE
- LAWN
- BRUSH
- WOODS
- MEADOW
- AG - SOY BEANS
- FARMSTEAD
- 2 ACRES RESIDENTIAL
- 1 ACRES RESIDENTIAL
- 1/2 ACRES RESIDENTIAL
- BARE GROUND
- IMPERVIOUS

2015 LAND USE MAP

2015 TC ROUTE MAP



2015 Tc ROUTE MAP

2015 WATERSHED CHARACTERISTICS

2015 **SUBAREA NO. 1** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												A SOILS AREA 0.00
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.28	5.13					7.16	4.53		0.3		B SOILS AREA 17.40
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00846	0.15503	0.00000	0.00000	0.00000	0.00000	0.21638	0.13690	0.00000	0.00907	0.00000	
	0.82925	11.16228	0.00000	0.00000	0.00000	0.00000	11.90088	8.35086	0.00000	0.61650	0.00000	%B CN 32.86

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.3	4.47					5.49	5.14		0.13	0	C SOILS AREA 15.53
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.00907	0.13509	0.00000	0.00000	0.00000	0.00000	0.16591	0.15533	0.00000	0.00393	0.00000	
	0.88849	10.94198	0.00000	0.00000	0.00000	0.00000	11.61378	11.49471	0.00000	0.31037	0.00000	%C CN 35.25

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.09						0.07				0	D SOILS AREA 0.16
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00272	0.00000	0.00000	0.00000	0.00000	0.00000	0.00212	0.00000	0.00000	0.00000	0.00000	
	0.26655	0.00000	0.00000	0.00000	0.00000	0.00000	0.16289	0.00000	0.00000	0.00000	0.00000	%D CN 0.43

TOTAL AREA 33.09

CN 68.54

2015 **SUBAREA NO. 2** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	58	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.07	6.73				3.41			0.38		
CN	98	72	74	86	58	58	55	61	65	68	70
	0.00124	0.11916	0.00000	0.00000	0.00000	0.06038	0.00000	0.00000	0.00673	0.00000	0.00000
	0.12146	8.57932	0.00000	0.00000	0.00000	3.50177	0.00000	0.00000	0.43732	0.00000	0.00000

B SOILS AREA 10.59

%B CN 12.64

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.03	13.94	3.44			10.31			7.27		
CN	98	81	82	91	71	71	70	74	77	79	80
	0.01824	0.24681	0.06091	0.00000	0.00000	0.18254	0.00000	0.00000	0.12872	0.00000	0.00000
	1.78718	19.99186	4.99433	0.00000	0.00000	12.96052	0.00000	0.00000	9.91130	0.00000	0.00000

C SOILS AREA 35.99

%C CN 49.65

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.21					9.69					
CN	98	85	86	94	78	78	77	80	82	84	85
	0.00372	0.00000	0.00000	0.00000	0.00000	0.17157	0.00000	0.00000	0.00000	0.00000	0.00000
	0.36438	0.00000	0.00000	0.00000	0.00000	13.38208	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 9.90

%D CN 13.75

TOTAL AREA 56.48

CN 76.03

2015 **SUBAREA NO. 3** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	58	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	72	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.35	2.65					1.52	7.4		2.09	
CN	98	81	82	91	71	71	70	74	77	79	80
	0.08994	0.17655	0.00000	0.00000	0.00000	0.00000	0.10127	0.49300	0.00000	0.13924	0.00000
	8.81412	14.30047	0.00000	0.00000	0.00000	0.00000	7.08861	36.48235	0.00000	11.00000	0.00000

C SOILS AREA 15.01

%C CN 77.69

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	85	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 15.01

CN 77.69

2015 **SUBAREA NO. 4** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA		2.27					0.21					A SOILS AREA 2.48
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00643	0.00000	0.00000	0.00000	0.00000	0.00060	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.37310	0.00000	0.00000	0.00000	0.00000	0.01785	0.00000	0.00000	0.00000	0.00000	%A CN 0.39

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	2.85	134.84				39.74	73.52	4.92	15.47	2.11		C SOILS AREA 273.45
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.00808	0.38211	0.00000	0.00000	0.00000	0.11262	0.20834	0.01394	0.04384	0.00598	0.00000	
	0.79149	30.95114	0.00000	0.00000	0.00000	7.99575	14.58399	1.03174	3.37562	0.47237	0.00000	%C CN 59.20

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.21					49.84	26.9					D SOILS AREA 76.95
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00060	0.00000	0.00000	0.00000	0.00000	0.14124	0.07623	0.00000	0.00000	0.00000	0.00000	
	0.05832	0.00000	0.00000	0.00000	0.00000	11.01655	5.86970	0.00000	0.00000	0.00000	0.00000	%D CN 16.94

TOTAL AREA 352.88

CN 76.54

2015 **SUBAREA NO. 5** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.13	0.33				1.15	5.23	0.54		1.11		A SOILS AREA 8.49
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00131	0.00334	0.00000	0.00000	0.00000	0.01163	0.05289	0.00546	0.00000	0.01123	0.00000	
	0.12884	0.19357	0.00000	0.00000	0.00000	0.34891	1.58677	0.21299	0.00000	0.57251	0.00000	%A CN 3.04

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	3.17	28.18	1.85		4.03	12.51	11.77	4.76	4.12	14.69		C SOILS AREA 85.08
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.03206	0.28499	0.01871	0.00000	0.04076	0.12652	0.11903	0.04814	0.04167	0.14856	0.00000	
	3.14179	23.08434	1.53418	0.00000	2.89371	8.98271	8.33232	3.56230	3.20833	11.73655	0.00000	%C CN 66.48

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.26				0.46	2.01	2.2	0.38				D SOILS AREA 5.31
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00263	0.00000	0.00000	0.00000	0.00465	0.02033	0.02225	0.00384	0.00000	0.00000	0.00000	
	0.25769	0.00000	0.00000	0.00000	0.36286	1.58556	1.71319	0.30744	0.00000	0.00000	0.00000	%D CN 4.23

TOTAL AREA 98.88

CN 73.75

2015 **SUBAREA NO. 6** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.05	0.34				2.11	0.83					A SOILS AREA 3.33
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00164	0.01115	0.00000	0.00000	0.00000	0.06920	0.02722	0.00000	0.00000	0.00000	0.00000	
	0.16071	0.64677	0.00000	0.00000	0.00000	2.07609	0.81666	0.00000	0.00000	0.00000	0.00000	%A CN 3.70

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.24	20.63			0.83	2.04	2.3			1.12		C SOILS AREA 27.16
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.00787	0.67662	0.00000	0.00000	0.02722	0.06691	0.07543	0.00000	0.00000	0.03673	0.00000	
	0.77140	54.80584	0.00000	0.00000	1.93276	4.75041	5.28042	0.00000	0.00000	2.90194	0.00000	%C CN 70.44

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 30.49

CN 74.14

2015 **SUBAREA NO. 7** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA					0.05			0.4				A SOILS AREA 0.45
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00254	0.00000	0.00000	0.02030	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.07614	0.00000	0.00000	0.79188	0.00000	0.00000	0.00000	%A CN 0.87

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.13				2.13		0.08	3.32	0.48			B SOILS AREA 6.14
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00660	0.00000	0.00000	0.00000	0.10812	0.00000	0.00406	0.16853	0.02437	0.00000	0.00000	
	0.64670	0.00000	0.00000	0.00000	6.27107	0.00000	0.22335	10.28020	1.58376	0.00000	0.00000	%B CN 19.01

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.59						3.59	1.13	4.78	3.02		C SOILS AREA 13.11
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.02995	0.00000	0.00000	0.00000	0.00000	0.00000	0.18223	0.05736	0.24264	0.15330	0.00000	
	2.93503	0.00000	0.00000	0.00000	0.00000	0.00000	12.75635	4.24467	18.68325	12.11066	0.00000	%C CN 50.73

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 19.70

CN 70.60

2015 **SUBAREA NO. 8** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												A SOILS AREA 0.00
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	1.02	10.53		0.23		0.9	0.75	1.07	2.67	0.35		C SOILS AREA 17.52
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.05822	0.60103	0.00000	0.01313	0.00000	0.05137	0.04281	0.06107	0.15240	0.01998	0.00000	
	5.70548	48.68322	0.00000	1.19463	0.00000	3.64726	2.99658	4.51941	11.73459	1.57820	0.00000	%C CN 80.06

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 17.52

CN 80.06

2015 **SUBAREA NO. 9** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA					2.67	4.09	1.21	1.32			
CN	98	58	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.02959	0.04533	0.01341	0.01463	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.88773	1.35986	0.40231	0.57054	0.00000	0.00000	0.00000

A SOILS AREA 9.29

%A CN 3.22

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.31				0.22		3.37	1.22	1.09		
CN	98	72	74	86	58	58	55	61	65	68	70
	0.00344	0.00000	0.00000	0.00000	0.00244	0.00000	0.03735	0.01352	0.01208	0.00000	0.00000
	0.33670	0.00000	0.00000	0.00000	0.14142	0.00000	2.05419	0.82478	0.78522	0.00000	0.00000

B SOILS AREA 6.21

%B CN 4.14

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	2.84				6.67	10.02	30.36	11.53	3.35		0.89
CN	98	81	82	91	71	71	70	74	77	79	80
	0.03148	0.00000	0.00000	0.00000	0.07392	0.11105	0.33647	0.12778	0.03713	0.00000	0.00986
	3.08456	0.00000	0.00000	0.00000	5.24848	7.88452	23.55314	9.45606	2.85881	0.00000	0.78909

C SOILS AREA 65.66

%C CN 52.87

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.51					2.89	1.89	3.78			
CN	98	85	86	94	78	78	77	80	82	84	85
	0.00565	0.00000	0.00000	0.00000	0.00000	0.03203	0.02095	0.04189	0.00000	0.00000	0.00000
	0.55392	0.00000	0.00000	0.00000	0.00000	2.49828	1.61288	3.35144	0.00000	0.00000	0.00000

D SOILS AREA 9.07

%D CN 8.02

TOTAL AREA 90.23

CN 68.25

2015 **SUBAREA NO. 1** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.28	5.13					7.16	4.53		0.3	
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00846	0.15503	0.00000	0.00000	0.00000	0.00000	0.21638	0.13690	0.00000	0.00907	0.00000
	0.82925	12.09248	0.00000	0.00000	0.00000	0.00000	11.90088	8.35086	0.00000	0.61650	0.00000

B SOILS AREA 17.40

%B CN 33.79

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.3	4.47					5.49	5.14		0.13	0
CN	98	85	82	91	71	71	70	74	77	79	80
	0.00907	0.13509	0.00000	0.00000	0.00000	0.00000	0.16591	0.15533	0.00000	0.00393	0.00000
	0.88849	11.48232	0.00000	0.00000	0.00000	0.00000	11.61378	11.49471	0.00000	0.31037	0.00000

C SOILS AREA 15.53

%C CN 35.79

D SOIL

	IMP.	CCORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.09						0.07				0
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00272	0.00000	0.00000	0.00000	0.00000	0.00000	0.00212	0.00000	0.00000	0.00000	0.00000
	0.26655	0.00000	0.00000	0.00000	0.00000	0.00000	0.16289	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.16

%D CN 0.43

TOTAL AREA 33.09

CN 70.01

2015 **SUBAREA NO. 2** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.07	6.73				3.41			0.38		
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00124	0.11916	0.00000	0.00000	0.00000	0.06038	0.00000	0.00000	0.00673	0.00000	0.00000
	0.12146	9.29426	0.00000	0.00000	0.00000	3.50177	0.00000	0.00000	0.43732	0.00000	0.00000

B SOILS AREA 10.59

%B CN 13.35

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.03	13.94	3.44			10.31			7.27		
CN	98	85	82	91	71	71	70	74	77	79	80
	0.01824	0.24681	0.06091	0.00000	0.00000	0.18254	0.00000	0.00000	0.12872	0.00000	0.00000
	1.78718	20.97911	4.99433	0.00000	0.00000	12.96052	0.00000	0.00000	9.91130	0.00000	0.00000

C SOILS AREA 35.99

%C CN 50.63

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.21					9.69					
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00372	0.00000	0.00000	0.00000	0.00000	0.17157	0.00000	0.00000	0.00000	0.00000	0.00000
	0.36438	0.00000	0.00000	0.00000	0.00000	13.38208	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 9.90

%D CN 13.75

TOTAL AREA 56.48

CN 77.73

2015 **SUBAREA NO. 3** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.35	2.65					1.52	7.4		2.09	
CN	98	85	82	91	71	71	70	74	77	79	80
	0.08994	0.17655	0.00000	0.00000	0.00000	0.00000	0.10127	0.49300	0.00000	0.13924	0.00000
	8.81412	15.00666	0.00000	0.00000	0.00000	0.00000	7.08861	36.48235	0.00000	11.00000	0.00000

C SOILS AREA 15.01

%C CN 78.39

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 15.01

CN 78.39

2015 **SUBAREA NO. 4** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA		2.27					0.21				
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00643	0.00000	0.00000	0.00000	0.00000	0.00060	0.00000	0.00000	0.00000	0.00000
	0.00000	0.43100	0.00000	0.00000	0.00000	0.00000	0.01785	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 2.48

%A CN 0.45

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	2.85	134.84				39.74	73.52	4.92	15.47	2.11	
CN	98	85	82	91	71	71	70	74	77	79	80
	0.00808	0.38211	0.00000	0.00000	0.00000	0.11262	0.20834	0.01394	0.04384	0.00598	0.00000
	0.79149	32.47960	0.00000	0.00000	0.00000	7.99575	14.58399	1.03174	3.37562	0.47237	0.00000

C SOILS AREA 273.45

%C CN 60.73

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.21					49.84	26.9				
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00060	0.00000	0.00000	0.00000	0.00000	0.14124	0.07623	0.00000	0.00000	0.00000	0.00000
	0.05832	0.00000	0.00000	0.00000	0.00000	11.01655	5.86970	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 76.95

%D CN 16.94

TOTAL AREA 352.88

CN 78.12

2015 **SUBAREA NO. 5** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.13	0.33				1.15	5.23	0.54		1.11		A SOILS AREA	8.49
CN	98	67	59	77	30	30	30	39	46	51	54		
	0.00131	0.00334	0.00000	0.00000	0.00000	0.01163	0.05289	0.00546	0.00000	0.01123	0.00000		
	0.12884	0.22360	0.00000	0.00000	0.00000	0.34891	1.58677	0.21299	0.00000	0.57251	0.00000	%A CN	3.07

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA												B SOILS AREA	0.00
CN	98	78	74	86	58	58	55	61	65	68	70		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN	0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	3.17	28.18	1.85		4.03	12.51	11.77	4.76	4.12	14.69		C SOILS AREA	85.08
CN	98	85	82	91	71	71	70	74	77	79	80		
	0.03206	0.28499	0.01871	0.00000	0.04076	0.12652	0.11903	0.04814	0.04167	0.14856	0.00000		
	3.14179	24.22431	1.53418	0.00000	2.89371	8.98271	8.33232	3.56230	3.20833	11.73655	0.00000	%C CN	67.62

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.26				0.46	2.01	2.2	0.38				D SOILS AREA	5.31
CN	98	89	86	94	78	78	77	80	82	84	85		
	0.00263	0.00000	0.00000	0.00000	0.00465	0.02033	0.02225	0.00384	0.00000	0.00000	0.00000		
	0.25769	0.00000	0.00000	0.00000	0.36286	1.58556	1.71319	0.30744	0.00000	0.00000	0.00000	%D CN	4.23

TOTAL AREA 98.88

CN 74.92

2015 **SUBAREA NO. 6** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.05	0.34				2.11	0.83					A SOILS AREA	3.33
CN	98	67	59	77	30	30	30	39	46	51	54		
	0.00164	0.01115	0.00000	0.00000	0.00000	0.06920	0.02722	0.00000	0.00000	0.00000	0.00000		
	0.16071	0.74713	0.00000	0.00000	0.00000	2.07609	0.81666	0.00000	0.00000	0.00000	0.00000	%A CN	3.80

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA												B SOILS AREA	0.00
CN	98	78	74	86	58	58	55	61	65	68	70		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN	0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.24	20.63			0.83	2.04	2.3			1.12		C SOILS AREA	27.16
CN	98	85	82	91	71	71	70	74	77	79	80		
	0.00787	0.67662	0.00000	0.00000	0.02722	0.06691	0.07543	0.00000	0.00000	0.03673	0.00000		
	0.77140	57.51230	0.00000	0.00000	1.93276	4.75041	5.28042	0.00000	0.00000	2.90194	0.00000	%C CN	73.15

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA												D SOILS AREA	0.00
CN	98	89	86	94	78	78	77	80	82	84	85		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN	0.00

TOTAL AREA 30.49

CN 76.95

2015 **SUBAREA NO. 7** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA					0.05			0.4			
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00254	0.00000	0.00000	0.02030	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.07614	0.00000	0.00000	0.79188	0.00000	0.00000	0.00000

A SOILS AREA 0.45

%A CN 0.87

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.13				2.13		0.08	3.32	0.48		
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00660	0.00000	0.00000	0.00000	0.10812	0.00000	0.00406	0.16853	0.02437	0.00000	0.00000
	0.64670	0.00000	0.00000	0.00000	6.27107	0.00000	0.22335	10.28020	1.58376	0.00000	0.00000

B SOILS AREA 6.14

%B CN 19.01

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.59						3.59	1.13	4.78	3.02	
CN	98	85	82	91	71	71	70	74	77	79	80
	0.02995	0.00000	0.00000	0.00000	0.00000	0.00000	0.18223	0.05736	0.24264	0.15330	0.00000
	2.93503	0.00000	0.00000	0.00000	0.00000	0.00000	12.75635	4.24467	18.68325	12.11066	0.00000

C SOILS AREA 13.11

%C CN 50.73

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 19.70

CN 70.60

2015 **SUBAREA NO. 8** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.02	10.53		0.23		0.9	0.75	1.07	2.67	0.35	
CN	98	85	82	91	71	71	70	74	77	79	80
	0.05822	0.60103	0.00000	0.01313	0.00000	0.05137	0.04281	0.06107	0.15240	0.01998	0.00000
	5.70548	51.08733	0.00000	1.19463	0.00000	3.64726	2.99658	4.51941	11.73459	1.57820	0.00000

C SOILS AREA 17.52

%C CN 82.46

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 17.52

CN 82.46

2015 **SUBAREA NO. 9** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA					2.67	4.09	1.21	1.32			
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.02959	0.04533	0.01341	0.01463	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.88773	1.35986	0.40231	0.57054	0.00000	0.00000	0.00000

A SOILS AREA 9.29

%A CN 3.22

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.31				0.22		3.37	1.22	1.09		
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00344	0.00000	0.00000	0.00000	0.00244	0.00000	0.03735	0.01352	0.01208	0.00000	0.00000
	0.33670	0.00000	0.00000	0.00000	0.14142	0.00000	2.05419	0.82478	0.78522	0.00000	0.00000

B SOILS AREA 6.21

%B CN 4.14

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	2.84				6.67	10.02	30.36	11.53	3.35		0.89
CN	98	85	82	91	71	71	70	74	77	79	80
	0.03148	0.00000	0.00000	0.00000	0.07392	0.11105	0.33647	0.12778	0.03713	0.00000	0.00986
	3.08456	0.00000	0.00000	0.00000	5.24848	7.88452	23.55314	9.45606	2.85881	0.00000	0.78909

C SOILS AREA 65.66

%C CN 52.87

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.51					2.89	1.89	3.78			
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00565	0.00000	0.00000	0.00000	0.00000	0.03203	0.02095	0.04189	0.00000	0.00000	0.00000
	0.55392	0.00000	0.00000	0.00000	0.00000	2.49828	1.61288	3.35144	0.00000	0.00000	0.00000

D SOILS AREA 9.07

%D CN 8.02

TOTAL AREA 90.23

CN 68.25

TIME OF CONCENTRATION CALCULATIONS 2015

TomP
North Eagle Village Study
Runoff Calculations 2015
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #1							
SHEET	100	0.0030	0.800				1.537
SHALLOW	590	0.0030	0.050				0.185
CHANNEL	805	0.0170	0.035	7.50	5.30	6.988	0.032
CHANNEL	710	0.0310	0.035	7.50	5.30	9.392	0.021
					Time of Concentration		1.775

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North Eagle Village Study
Runoff Calculations 2015
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #2							
SHEET	100	0.0120	0.800				0.883
SHALLOW	125	0.0460	0.050				0.010
SHALLOW	100	0.0100	0.050				0.017
CHANNEL	740	0.0110	0.035	7.50	5.30	5.556	0.037
CHANNEL	315	0.0410	0.035	7.50	5.30	10.938	0.008
					Time of Concentration		.955

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Runoff Calculations 2015
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #3							
SHEET	100	0.0300	0.800				0.612
SHALLOW	480	0.1000	0.050				0.026
CHANNEL	200	0.0600	0.035	7.50	5.30	13.889	0.004
					Time of Concentration		.642

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North Eagle Village Study
Runoff Calculations 2015
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subare#4							
SHEET	100	0.0010	0.800				2.385
SHALLOW	415	0.0030	0.050				0.130
SHALLOW	1440	0.0090	0.050				0.261
CHANNEL	1710	0.0340	0.035	7.50	5.30	9.896	0.048
CHANNEL	3740	0.0320	0.035	7.50	5.30	9.619	0.108
					Time of Concentration		2.932

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North Eagle Village Study
Runoff Calculations 2015
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #5							
SHEET	100	0.0030	0.800				1.537
SHALLOW	420	0.0090	0.050				0.076
CHANNEL	1485	0.0400	0.035	7.50	5.30	10.855	0.038
CHANNEL	500	0.0240	0.035	7.50	5.30	8.170	0.017
					Time of Concentration		1.668

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North Eagle Village Study
Runoff Calculations 2015
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #6							
SHEET	65	0.0540	0.800				0.343
SHALLOW	760	0.0520	0.050				0.057
SHALLOW	440	0.0950	0.050				0.025
CHANNEL	780	0.0360	0.035	7.50	5.30	10.317	0.021
CHANNEL	1090	0.0230	0.035	7.50	5.30	8.183	0.037
					Time of Concentration		.483

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North Eagle Village Study
Runoff Calculations 2015
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #7							
SHEET	100	0.0250	0.800				0.658
SHALLOW	270	0.0150	0.050				0.038
CHANNEL	700	0.0310	0.035	7.50	5.30	9.259	0.021
					Time of Concentration		.717

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North Eagle Village Study
Runoff Calculations 2015
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #8							
SHEET	100	0.0400	0.170				0.158
SHALLOW	240	0.0406	0.050				0.021
CHANNEL	810	0.0800	0.035	7.50	5.30	15.000	0.015
CHANNEL	1110	0.0220	0.035	7.50	5.30	7.906	0.039
					Time of Concentration		0.233

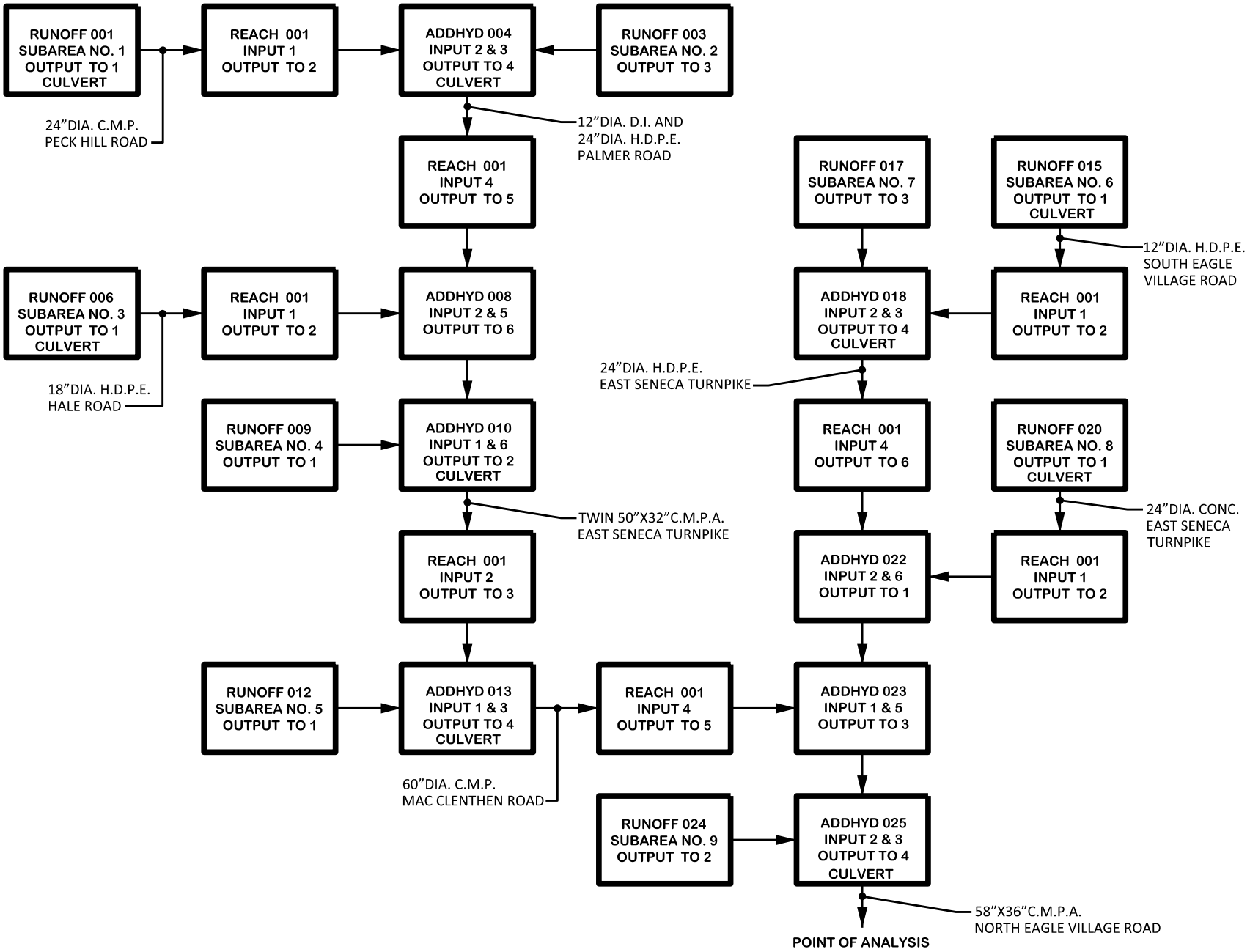
TomP

North Eagle Village Study
Runoff Calculations 2015
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #9							
SHEET	100	0.0100	0.800				0.949
SHALLOW	1350	0.0460	0.050				0.108
CHANNEL	1275	0.0100	0.035	7.50	5.30	5.366	0.066
					Time of Concentration		1.123

2015 TR-20 MODEL SCHEMATIC



TR–20 SCHEMATIC
2015

2015 TR-20 RUNOFF CALCULATIONS

**********80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY**********

```
JOB TR-20                              SUMMARY
TITLE    NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY
TITLE    WATERSHED CONDITIONS 2015 SOY BEANS
 2 XSECTN  001       1         101.5
 8                100.00     0.10      0.1
 8                100.50     4.86      1.5
 8                101.00     24.40     5.0
 8                101.50     65.72     10.5
 8                102.00     253.76    34.0
 8                102.50     452.93    52.5
 8                103.00     728.76    75.0
 9 ENDTBL
 6 RUNOFF 1 001      1 0.0517      68.5       1.78
 6 REACH  3 001   1   2 1865
 6 RUNOFF 1 003      3 0.0883      76.0       0.96
 6 ADDHYD 4 004   2 3 4
 6 REACH  3 001   4   5 8995
 6 RUNOFF 1 006      1 0.0235      77.7       0.64
 6 REACH  3 001   1   2 2025
 6 ADDHYD 4 008   2 5 6
 6 RUNOFF 1 009      1 0.5514      76.5       2.93
 6 ADDHYD 4 010   1 6 2
 6 REACH  3 001   2   3 1025
 6 RUNOFF 1 012      1 0.1545      73.8       1.67
 6 ADDHYD 4 013   1 3 4
 6 REACH  3 001   4   5 1170
 6 RUNOFF 1 015      1 0.0476      74.1       0.48
 6 REACH  3 001   1   2 1090
 6 RUNOFF 1 017      3 0.0308      70.6       0.72
 6 ADDHYD 4 018   2 3 4
 6 REACH  3 001   4   6 2515
 6 RUNOFF 1 020      1 0.0274      80.1       0.23
 6 REACH  3 001   1   2 2930
 6 ADDHYD 4 022   2 6 1
 6 ADDHYD 4 023   1 5 3
 6 RUNOFF 1 024      2 0.1410      68.3       1.12
 6 ADDHYD 4 025   2 3 4
   ENDATA
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        2.40       1.        2 2  01  02
   ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        3.45       1.        2 2  01  10
   ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        4.24       1.        2 2  01  25
   ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        4.97       1.        2 2  01  50
```

```
  ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.         5.82        1.         2 2  01  99
  ENDCMP 1
  ENDJOB 2

*******************************END OF 80-80 LIST*******************************


TR20 ------------------------------------------------------------------- SCS -
           NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY         VERSION
01/15/**            WATERSHED CONDITIONS 2015 SOY BEANS             2.04TEST
01:05:31                 PASS   1   JOB NO.   1                  PAGE   1



EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
   STARTING TIME =   .00      RAIN DEPTH =  2.40      RAIN DURATION =  1.00
   ANT. RUNOFF COND. = 2      MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1          STORM NO. = 2           RAIN TABLE NO. = 2


EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   1


EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
   STARTING TIME =   .00      RAIN DEPTH =  3.45      RAIN DURATION =  1.00
   ANT. RUNOFF COND. = 2      MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1          STORM NO. =10           RAIN TABLE NO. = 2


EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   2


EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


TR20 ------------------------------------------------------------------- SCS -
           NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY         VERSION
01/15/**            WATERSHED CONDITIONS 2015 SOY BEANS             2.04TEST
01:05:31                 PASS   3   JOB NO.   1                  PAGE   2



EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
   STARTING TIME =   .00      RAIN DEPTH =  4.24      RAIN DURATION =  1.00
   ANT. RUNOFF COND. = 2      MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1          STORM NO. =25           RAIN TABLE NO. = 2
```

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   3

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 4.97   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =50   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   4

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

TR20 --- SCS -
          NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY   VERSION
01/15/**   WATERSHED CONDITIONS 2015 SOY BEANS   2.04TEST
01:05:31   PASS   5   JOB NO.   1   PAGE   3

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 5.82   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =99   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   5

TR20 --- SCS -
          NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY   VERSION
01/15/**   WATERSHED CONDITIONS 2015 SOY BEANS   2.04TEST
01:05:31   SUMMARY, JOB NO.   1   PAGE   4

                  SUMMARY TABLE 1

   SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
   A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH   T-TRUNCATED HYDROGRAPH   R-RISING TRUNCATED HYDROGRAPH

 XSECTION/ STANDARD   PEAK DISCHARGE
 STRUCTURE CONTROL   DRAINAGE RUNOFF ------------------------------------
   ID   OPERATION   AREA   AMOUNT ELEVATION TIME   RATE   RATE
                    (SQ MI)   (IN)   (FT)   (HR)   (CFS)   (CSM)

RAINFALL OF 2.40 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.
RAINTABLE NUMBER 2, ARC 2
MAIN TIME INCREMENT .100 HOURS

ALTERNATE 1 STORM 2

XSECTION	1	RUNOFF	.05	.36	---	13.23T	3T	60.0
XSECTION	1	REACH	.05	.36	100.30	13.43T	3T	60.0
XSECTION	3	RUNOFF	.09	.63	---	12.54	17	188.9
XSECTION	4	ADDHYD	.14	.53	---	12.57	18	128.6
XSECTION	1	REACH	.14	.53	100.73	13.00	14	100.0
XSECTION	6	RUNOFF	.02	.71	---	12.30	7	350.0
XSECTION	1	REACH	.02	.71	100.54	12.47	6	300.0
XSECTION	8	ADDHYD	.16	.56	---	12.83	17	106.3
XSECTION	9	RUNOFF	.55	.66	---	13.91	51	92.7
XSECTION	10	ADDHYD	.71	.63	---	13.77	62	87.3
XSECTION	1	REACH	.71	.63	101.45	13.77	62	87.3
XSECTION	12	RUNOFF	.15	.54	---	13.06	17	113.3
XSECTION	13	ADDHYD	.87	.62	---	13.52	74	85.1
XSECTION	1	REACH	.87	.62	101.52	13.52	74	85.1
XSECTION	15	RUNOFF	.05	.56	---	12.22	12	240.0
XSECTION	1	REACH	.05	.56	100.69	12.32	12	240.0
XSECTION	17	RUNOFF	.03	.43	---	12.41T	4T	133.3
XSECTION	18	ADDHYD	.08	.51	---	12.33	16	200.0
XSECTION	1	REACH	.08	.51	100.75	12.50	15	187.5
XSECTION	20	RUNOFF	.03	.83	---	12.04	17	566.7
XSECTION	1	REACH	.03	.82	100.73	12.20	14	466.7
XSECTION	22	ADDHYD	.11	.59	---	12.38	22	200.0
XSECTION	23	ADDHYD	.98	.61	---	13.43	80	81.6
XSECTION	24	RUNOFF	.14	.35	---	12.74	11	78.6
XSECTION	25	ADDHYD	1.12	.58	---	13.34	86	76.8

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 3.45 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 10

XSECTION	1	RUNOFF	.05	.90	---	13.11	9	180.0
XSECTION	1	REACH	.05	.90	100.61	13.27	9	180.0
XSECTION	3	RUNOFF	.09	1.33	---	12.50	40	444.4
XSECTION	4	ADDHYD	.14	1.17	---	12.54	43	307.1
XSECTION	1	REACH	.14	1.17	101.14	12.91	36	257.1
XSECTION	6	RUNOFF	.02	1.44	---	12.29	15	750.0
XSECTION	1	REACH	.02	1.44	100.74	12.43	14	700.0
XSECTION	8	ADDHYD	.16	1.21	---	12.76	44	275.0
XSECTION	9	RUNOFF	.55	1.36	---	13.83	115	209.1
XSECTION	10	ADDHYD	.71	1.33	---	13.64	140	197.2
XSECTION	1	REACH	.71	1.33	101.70	13.64	140	197.2
XSECTION	12	RUNOFF	.15	1.19	---	12.99	42	280.0
XSECTION	13	ADDHYD	.87	1.30	---	13.38	173	198.9
XSECTION	1	REACH	.87	1.30	101.78	13.38	173	198.9
XSECTION	15	RUNOFF	.05	1.21	---	12.19	30	600.0
XSECTION	1	REACH	.05	1.21	101.07	12.19	30	600.0
XSECTION	17	RUNOFF	.03	1.01	---	12.36	12	400.0
XSECTION	18	ADDHYD	.08	1.13	---	12.22	41	512.5
XSECTION	1	REACH	.08	1.13	101.17	12.37	38	475.0
XSECTION	20	RUNOFF	.03	1.60	---	12.03	34	1133.3
XSECTION	1	REACH	.03	1.60	101.06	12.18	29	966.7
XSECTION	22	ADDHYD	.11	1.25	---	12.26	60	545.5
XSECTION	23	ADDHYD	.98	1.30	---	13.31	184	187.8
XSECTION	24	RUNOFF	.14	.89	---	12.65	34	242.9

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 10

XSECTION	25	ADDHYD	1.12	1.25	---	13.11	205	183.0

RAINFALL OF 4.24 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 25

XSECTION	1	RUNOFF	.05	1.39	---	13.07	15	300.0
XSECTION	1	REACH	.05	1.39	100.76	13.22	15	300.0
XSECTION	3	RUNOFF	.09	1.92	---	12.49	58	644.4
XSECTION	4	ADDHYD	.14	1.73	---	12.54	65	464.3
XSECTION	1	REACH	.14	1.73	101.38	12.88	56	400.0
XSECTION	6	RUNOFF	.02	2.05	---	12.28	22	1100.0
XSECTION	1	REACH	.02	2.05	100.92	12.41	21	1050.0
XSECTION	8	ADDHYD	.16	1.77	---	12.74	67	418.8
XSECTION	9	RUNOFF	.55	1.96	---	13.79	170	309.1
XSECTION	10	ADDHYD	.71	1.92	---	13.58	209	294.4
XSECTION	1	REACH	.71	1.92	101.88	13.58	209	294.4
XSECTION	12	RUNOFF	.15	1.76	---	12.96	64	426.7
XSECTION	13	ADDHYD	.87	1.89	---	13.33	259	297.7
XSECTION	1	REACH	.87	1.89	102.01	13.33	259	297.7
XSECTION	15	RUNOFF	.05	1.78	---	12.19	46	920.0
XSECTION	1	REACH	.05	1.78	101.26	12.19	46	920.0
XSECTION	17	RUNOFF	.03	1.53	---	12.34	19	633.3
XSECTION	18	ADDHYD	.08	1.68	---	12.22	63	787.5
XSECTION	1	REACH	.08	1.68	101.43	12.35	60	750.0
XSECTION	20	RUNOFF	.03	2.25	---	12.03	49	1633.3
XSECTION	1	REACH	.03	2.25	101.22	12.17	42	1400.0
XSECTION	22	ADDHYD	.11	1.83	---	12.24	93	845.5
XSECTION	23	ADDHYD	.98	1.88	---	13.25	276	281.6
XSECTION	24	RUNOFF	.14	1.38	---	12.62	57	407.1
XSECTION	25	ADDHYD	1.12	1.82	---	13.00	312	278.6

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE	STANDARD CONTROL	DRAINAGE	PEAK DISCHARGE RUNOFF	----------

ID	OPERATION	AREA (SQ MI)	AMOUNT (IN)	ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 4.97 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 50

XSECTION	1	RUNOFF	.05	1.90	---	13.05	21	420.0
XSECTION	1	REACH	.05	1.90	100.92	13.18	21	420.0
XSECTION	3	RUNOFF	.09	2.51	---	12.48	77	855.6
XSECTION	4	ADDHYD	.14	2.28	---	12.54	88	628.6
XSECTION	1	REACH	.14	2.28	101.53	12.87	75	535.7
XSECTION	6	RUNOFF	.02	2.66	---	12.28	29	1450.0
XSECTION	1	REACH	.02	2.66	101.04	12.41	28	1400.0
XSECTION	8	ADDHYD	.16	2.34	---	12.73	90	562.5
XSECTION	9	RUNOFF	.55	2.55	---	13.77	224	407.3
XSECTION	10	ADDHYD	.71	2.50	---	13.55	276	388.7
XSECTION	1	REACH	.71	2.50	102.06	13.55	276	388.7
XSECTION	12	RUNOFF	.15	2.32	---	12.95	86	573.3
XSECTION	13	ADDHYD	.87	2.47	---	13.30	345	396.6
XSECTION	1	REACH	.87	2.47	102.23	13.30	345	396.6
XSECTION	15	RUNOFF	.05	2.35	---	12.18	61	1220.0
XSECTION	1	REACH	.05	2.35	101.44	12.18	61	1220.0
XSECTION	17	RUNOFF	.03	2.06	---	12.33	26	866.7
XSECTION	18	ADDHYD	.08	2.23	---	12.21	84	1050.0
XSECTION	1	REACH	.08	2.23	101.54	12.34	81	1012.5
XSECTION	20	RUNOFF	.03	2.87	---	12.02	62	2066.7
XSECTION	1	REACH	.03	2.87	101.37	12.16	55	1833.3
XSECTION	22	ADDHYD	.11	2.40	---	12.24	123	1118.2
XSECTION	23	ADDHYD	.98	2.46	---	13.22	367	374.5
XSECTION	24	RUNOFF	.14	1.88	---	12.61	80	571.4

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 50

XSECTION	25	ADDHYD	1.12	2.39	---	12.94	420	375.0

RAINFALL OF 5.82 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 99

XSECTION	1	RUNOFF	.05	2.53	---	13.03	29	580.0
XSECTION	1	REACH	.05	2.53	101.06	13.16	29	580.0
XSECTION	3	RUNOFF	.09	3.22	---	12.47	100	1111.1
XSECTION	4	ADDHYD	.14	2.96	---	12.53	115	821.4
XSECTION	1	REACH	.14	2.96	101.59	12.86	99	707.1
XSECTION	6	RUNOFF	.02	3.39	---	12.26	37	1850.0
XSECTION	1	REACH	.02	3.39	101.14	12.40	36	1800.0
XSECTION	8	ADDHYD	.16	3.03	---	12.72	118	737.5
XSECTION	9	RUNOFF	.55	3.27	---	13.75	289	525.5
XSECTION	10	ADDHYD	.71	3.22	---	13.52	358	504.2
XSECTION	1	REACH	.71	3.22	102.26	13.52	358	504.2
XSECTION	12	RUNOFF	.15	3.01	---	12.93	112	746.7
XSECTION	13	ADDHYD	.87	3.18	---	13.28	450	517.2
XSECTION	1	REACH	.87	3.18	102.49	13.28	450	517.2
XSECTION	15	RUNOFF	.05	3.04	---	12.18	79	1580.0
XSECTION	1	REACH	.05	3.04	101.54	12.18	79	1580.0
XSECTION	17	RUNOFF	.03	2.71	---	12.33	35	1166.7
XSECTION	18	ADDHYD	.08	2.91	---	12.21	110	1375.0
XSECTION	1	REACH	.08	2.91	101.61	12.34	107	1337.5
XSECTION	20	RUNOFF	.03	3.63	---	12.02	78	2600.0
XSECTION	1	REACH	.03	3.63	101.51	12.15	69	2300.0
XSECTION	22	ADDHYD	.11	3.10	---	12.24	160	1454.5
XSECTION	23	ADDHYD	.98	3.17	---	13.19	477	486.7
XSECTION	24	RUNOFF	.14	2.51	---	12.59	110	785.7
XSECTION	25	ADDHYD	1.12	3.09	---	12.90	552	492.9

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

		HYDROGRAPH INFORMATION				ROUTING PARAMETERS				
		FLOOD	INFLOW	OUTFLOW		Q-A EQ.		PEAK	ATT-	
XSEC ID	REACH LENGTH (FT)	PLAIN LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	COEFF (X)	POWER (M)	FACTOR (k*)	Q/I (Q*)	KIN COEFF (C)
BASEFLOW IS .0 CFS											
ALTERNATE 1 STORM 2											
1	1865		3	13.2	3	13.4	2.82	1.34	.016	.986	.54
1	8995		18	12.6	14	13.0	2.82	1.34	.120	.779	.22
1	2025		7	12.3	6	12.5	2.82	1.34	.047	.927	.59
1	1025		62	13.8	62	13.8	2.83	1.34	.002	1.000	1.00?
1	1170		74	13.5	74	13.5	2.87	1.32	.003	1.000	1.00?
1	1090		12	12.2	12	12.3	2.82	1.34	.020	.991	.95?
1	2515		16	12.3	15	12.5	2.82	1.34	.046	.914	.59
1	2930		17	12.0	14	12.2	2.82	1.34	.123	.842	.53
ALTERNATE 1 STORM 10											
1	1865		9	13.1	9	13.3	2.82	1.34	.014	.990	.66
1	8995		43	12.5	36	12.9	2.83	1.34	.101	.836	.26
1	2025		15	12.3	14	12.4	2.82	1.34	.040	.954	.68?
1	1025		140	13.6	140	13.6	3.18	1.26	.003	1.000	1.00?
1	1170		173	13.4	173	13.4	3.34	1.24	.004	1.000	1.00?
1	1090		30	12.2	30	12.2	2.82	1.34	.017	1.000	1.00?
1	2515		40	12.2	38	12.4	2.83	1.34	.039	.936	.69?
1	2930		34	12.0	29	12.2	2.82	1.34	.103	.863	.61
ALTERNATE 1 STORM 25											
1	1865		15	13.1	15	13.2	2.82	1.34	.013	.995	.72?
1	8995		65	12.5	56	12.9	2.83	1.34	.091	.860	.29
1	2025		22	12.3	21	12.4	2.82	1.34	.036	.971	.72?
1	1025		209	13.6	209	13.6	3.51	1.22	.003	1.000	1.00?
1	1170		259	13.3	259	13.3	3.69	1.20	.004	1.000	1.00?
1	1090		46	12.2	46	12.2	2.83	1.34	.016	1.000	1.00?
1	2515		63	12.2	59	12.3	2.83	1.34	.036	.944	.74?
1	2930		48	12.0	42	12.2	2.83	1.34	.093	.870	.64

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

XSEC ID	REACH LENGTH (FT)	FLOOD PLAIN LENGTH (FT)	INFLOW PEAK (CFS)	INFLOW TIME (HR)	OUTFLOW PEAK (CFS)	OUTFLOW TIME (HR)	Q-A EQ. COEFF (X)	Q-A EQ. POWER (M)	PEAK FACTOR (k*)	ATT-KIN RATIO Q/I (Q*)	ATT-KIN COEFF (C)
ALTERNATE 1 STORM 50											
1	1865	21	13.0	21	13.2	2.82	1.34	.012	.997	.76?	
1	8995	88	12.5	75	12.9	2.93	1.31	.094	.862	.29	
1	2025	29	12.3	28	12.4	2.82	1.34	.033	.976	.75?	
1	1025	276	13.5	276	13.5	3.63	1.21	.003	1.000	1.00?	
1	1170	345	13.3	345	13.3	3.40	1.23	.003	1.000	1.00?	
1	1090	61	12.2	61	12.2	2.83	1.34	.014	1.000	1.00?	
1	2515	84	12.2	80	12.3	2.91	1.31	.037	.952	.75?	
1	2930	61	12.0	54	12.2	2.83	1.34	.086	.871	.67?	
ALTERNATE 1 STORM 99											
1	1865	29	13.0	29	13.2	2.82	1.34	.011	.995	.80?	
1	8995	115	12.5	99	12.9	3.06	1.28	.096	.864	.29	
1	2025	36	12.3	36	12.4	2.83	1.34	.030	.985	.78?	
1	1025	358	13.5	358	13.5	3.36	1.23	.003	1.000	1.00?	
1	1170	449	13.3	449	13.3	3.12	1.26	.003	1.000	1.00?	
1	1090	79	12.2	79	12.2	2.89	1.32	.014	1.000	1.00?	
1	2515	110	12.2	106	12.3	3.04	1.28	.038	.957	.76?	
1	2930	77	12.0	67	12.2	2.88	1.32	.084	.869	.68?	

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99

XSECTION 1 .03

ALTERNATE 1 14 29 42 55 69

XSECTION 3 .09

ALTERNATE 1 17 40 58 77 100

XSECTION 4 .14

ALTERNATE 1 18 43 65 88 115

XSECTION 6 .02

ALTERNATE 1 7 15 22 29 37

XSECTION 8 .16

ALTERNATE 1 17 44 67 90 118

XSECTION 9 .55

ALTERNATE 1 51 115 170 224 289

XSECTION 10 .71

ALTERNATE 1 62 140 209 276 358

XSECTION 12 .15

ALTERNATE 1 17 42 64 86 112

XSECTION 13 .87

ALTERNATE 1 74 173 259 345 450

XSECTION 15 .05

ALTERNATE 1 12 30 46 61 79

XSECTION 17 .03

ALTERNATE 1 4 12 19 26 35

XSECTION 18 .08

ALTERNATE 1 16 41 63 84 110

XSECTION 20 .03

ALTERNATE 1 17 34 49 62 78

XSECTION 22 .11

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS 2015 SOY BEANS 2.04TEST
01:05:31 SUMMARY, JOB NO. 1 PAGE 12

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
XSECTION 22	.11					
ALTERNATE 1		22	60	93	123	160
XSECTION 23	.98					
ALTERNATE 1		80	184	276	367	477
XSECTION 24	.14					
ALTERNATE 1		11	34	57	80	110
XSECTION 25	1.12					
ALTERNATE 1		86	205	312	420	552

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS 2015 SOY BEANS 2.04TEST

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 2.04TEST
FILES

INPUT = F:\NEV15SOY.DAT , GIVEN DATA FILE
OUTPUT = F:\NEV15SOY.OUT , DATED 01/15/**,01:05:31

FILES GENERATED - DATED 01/15/**,01:05:31

NONE!

JOB ENDED AT 01:05:32
*** TR-20 RUN COMPLETED ***

**********80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY**********

```
JOB TR-20                              SUMMARY
TITLE    NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY
TITLE    WATERSHED CONDITIONS 2015 CORN
 2 XSECTN  001       1         101.5
 8                 100.00     0.10      0.1
 8                 100.50     4.86      1.5
 8                 101.00     24.40     5.0
 8                 101.50     65.72     10.5
 8                 102.00     253.76    34.0
 8                 102.50     452.93    52.5
 8                 103.00     728.76    75.0
 9 ENDTBL
 6 RUNOFF 1 001      1 0.0517      70.0       1.78
 6 REACH  3 001   1   2 1865
 6 RUNOFF 1 003      3 0.0883      77.7       0.96
 6 ADDHYD 4 004   2 3 4
 6 REACH  3 001   4   5 8995
 6 RUNOFF 1 006      1 0.0235      78.4       0.64
 6 REACH  3 001   1   2 2025
 6 ADDHYD 4 008   2 5 6
 6 RUNOFF 1 009      1 0.5514      78.1       2.93
 6 ADDHYD 4 010   1 6 2
 6 REACH  3 001   2   3 1025
 6 RUNOFF 1 012      1 0.1545      74.9       1.67
 6 ADDHYD 4 013   1 3 4
 6 REACH  3 001   4   5 1170
 6 RUNOFF 1 015      1 0.0476      77.0       0.48
 6 REACH  3 001   1   2 1090
 6 RUNOFF 1 017      3 0.0308      70.6       0.72
 6 ADDHYD 4 018   2 3 4
 6 REACH  3 001   4   6 2515
 6 RUNOFF 1 020      1 0.0274      82.5       0.23
 6 REACH  3 001   1   2 2930
 6 ADDHYD 4 022   2 6 1
 6 ADDHYD 4 023   1 5 3
 6 RUNOFF 1 024      2 0.1410      68.3       1.12
 6 ADDHYD 4 025   2 3 4
  ENDATA
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        2.40       1.        2 2  01  02
  ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        3.45       1.        2 2  01  10
```

```
  ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        4.24       1.        2 2  01  25
  ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        4.97       1.        2 2  01  50
  ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        5.82       1.        2 2  01  99
  ENDCMP 1
  ENDJOB 2

*******************************END OF 80-80 LIST*******************************


 TR20 ------------------------------------------------------------------- SCS -
            NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY         VERSION
 01/15/**               WATERSHED CONDITIONS 2015 CORN               2.04TEST
 01:25:56                 PASS   1   JOB NO.   1                  PAGE   1



 EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


 EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
    STARTING TIME =   .00      RAIN DEPTH =  2.40      RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2      MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. = 1          STORM NO. = 2          RAIN TABLE NO. = 2



 EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   1


 EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


 EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
    STARTING TIME =   .00      RAIN DEPTH =  3.45      RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2      MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. = 1          STORM NO. =10          RAIN TABLE NO. = 2


 EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   2


 EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


 TR20 ------------------------------------------------------------------- SCS -
            NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY         VERSION
 01/15/**               WATERSHED CONDITIONS 2015 CORN               2.04TEST
 01:25:56                 PASS   3   JOB NO.   1                  PAGE   2
```

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 4.24   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =25   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   3

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 4.97   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =50   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   4

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

TR20 --- SCS -
          NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY   VERSION
01/15/**   WATERSHED CONDITIONS 2015 CORN   2.04TEST
01:25:56   PASS   5   JOB NO.   1   PAGE   3

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 5.82   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =99   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   5

TR20 --- SCS -
          NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY   VERSION
01/15/**   WATERSHED CONDITIONS 2015 CORN   2.04TEST
01:25:56   SUMMARY, JOB NO.   1   PAGE   4

                    SUMMARY TABLE 1

   SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
   A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH   T-TRUNCATED HYDROGRAPH   R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 2.40 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.
RAINTABLE NUMBER 2, ARC 2
MAIN TIME INCREMENT .100 HOURS

ALTERNATE 1 STORM 2

XSECTION	1	RUNOFF	.05	.41	---	13.20T	4T	80.0
XSECTION	1	REACH	.05	.41	100.36	13.39T	4T	80.0
XSECTION	3	RUNOFF	.09	.71	---	12.53	20	222.2
XSECTION	4	ADDHYD	.14	.60	---	12.56	21	150.0
XSECTION	1	REACH	.14	.60	100.80	12.97	16	114.3
XSECTION	6	RUNOFF	.02	.74	---	12.30	7	350.0
XSECTION	1	REACH	.02	.74	100.55	12.47	7	350.0
XSECTION	8	ADDHYD	.16	.62	---	12.82	20	125.0
XSECTION	9	RUNOFF	.55	.73	---	13.89	58	105.5
XSECTION	10	ADDHYD	.71	.70	---	13.74	70	98.6
XSECTION	1	REACH	.71	.70	101.51	13.74	70	98.6
XSECTION	12	RUNOFF	.15	.59	---	13.04	19	126.7
XSECTION	13	ADDHYD	.87	.68	---	13.49	84	96.6
XSECTION	1	REACH	.87	.68	101.55	13.49	84	96.6
XSECTION	15	RUNOFF	.05	.68	---	12.20	16	320.0
XSECTION	1	REACH	.05	.68	100.79	12.31	16	320.0
XSECTION	17	RUNOFF	.03	.43	---	12.41T	4T	133.3
XSECTION	18	ADDHYD	.08	.58	---	12.32	20	250.0
XSECTION	1	REACH	.08	.58	100.84	12.48	18	225.0
XSECTION	20	RUNOFF	.03	.95	---	12.04	20	666.7
XSECTION	1	REACH	.03	.95	100.80	12.19	17	566.7
XSECTION	22	ADDHYD	.11	.68	---	12.35	27	245.5
XSECTION	23	ADDHYD	.98	.68	---	13.41	90	91.8
XSECTION	24	RUNOFF	.14	.35	---	12.74	11	78.6
XSECTION	25	ADDHYD	1.12	.64	---	13.33	97	86.6

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STANDARD PEAK DISCHARGE
STRUCTURE CONTROL DRAINAGE RUNOFF ----------
ID OPERATION AREA AMOUNT ELEVATION TIME RATE RATE
(SQ MI) (IN) (FT) (HR) (CFS) (CSM)

RAINFALL OF 3.45 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 10

XSECTION	1	RUNOFF	.05	.98	---	13.10	10	200.0
XSECTION	1	REACH	.05	.98	100.64	13.25	10	200.0
XSECTION	3	RUNOFF	.09	1.44	---	12.49	43	477.8
XSECTION	4	ADDHYD	.14	1.27	---	12.54	48	342.9
XSECTION	1	REACH	.14	1.27	101.19	12.90	40	285.7
XSECTION	6	RUNOFF	.02	1.49	---	12.28	16	800.0
XSECTION	1	REACH	.02	1.49	100.76	12.43	15	750.0
XSECTION	8	ADDHYD	.16	1.30	---	12.76	48	300.0
XSECTION	9	RUNOFF	.55	1.47	---	13.81	125	227.3
XSECTION	10	ADDHYD	.71	1.43	---	13.62	153	215.5
XSECTION	1	REACH	.71	1.43	101.73	13.62	153	215.5
XSECTION	12	RUNOFF	.15	1.26	---	12.98	44	293.3
XSECTION	13	ADDHYD	.87	1.40	---	13.37	188	216.1
XSECTION	1	REACH	.87	1.40	101.83	13.37	188	216.1
XSECTION	15	RUNOFF	.05	1.39	---	12.19	36	720.0
XSECTION	1	REACH	.05	1.39	101.14	12.19	36	720.0
XSECTION	17	RUNOFF	.03	1.01	---	12.36	12	400.0
XSECTION	18	ADDHYD	.08	1.24	---	12.21	46	575.0
XSECTION	1	REACH	.08	1.24	101.23	12.35	44	550.0
XSECTION	20	RUNOFF	.03	1.78	---	12.03	38	1266.7
XSECTION	1	REACH	.03	1.78	101.10	12.17	33	1100.0
XSECTION	22	ADDHYD	.11	1.38	---	12.25	69	627.3
XSECTION	23	ADDHYD	.98	1.40	---	13.29	200	204.1
XSECTION	24	RUNOFF	.14	.89	---	12.65	34	242.9

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STANDARD PEAK DISCHARGE

STRUCTURE ID	CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 10

XSECTION	25	ADDHYD	1.12	1.33	---	13.11	221	197.3

RAINFALL OF 4.24 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 25

XSECTION	1	RUNOFF	.05	1.49	---	13.06	17	340.0
XSECTION	1	REACH	.05	1.49	100.80	13.20	17	340.0
XSECTION	3	RUNOFF	.09	2.05	---	12.49	63	700.0
XSECTION	4	ADDHYD	.14	1.85	---	12.54	71	507.1
XSECTION	1	REACH	.14	1.85	101.44	12.87	61	435.7
XSECTION	6	RUNOFF	.02	2.11	---	12.28	23	1150.0
XSECTION	1	REACH	.02	2.11	100.93	12.42	22	1100.0
XSECTION	8	ADDHYD	.16	1.88	---	12.74	72	450.0
XSECTION	9	RUNOFF	.55	2.09	---	13.78	182	330.9
XSECTION	10	ADDHYD	.71	2.04	---	13.56	224	315.5
XSECTION	1	REACH	.71	2.04	101.92	13.56	224	315.5
XSECTION	12	RUNOFF	.15	1.84	---	12.96	67	446.7
XSECTION	13	ADDHYD	.87	2.01	---	13.32	278	319.5
XSECTION	1	REACH	.87	2.01	102.06	13.32	278	319.5
XSECTION	15	RUNOFF	.05	2.00	---	12.18	52	1040.0
XSECTION	1	REACH	.05	2.00	101.34	12.18	52	1040.0
XSECTION	17	RUNOFF	.03	1.53	---	12.34	19	633.3
XSECTION	18	ADDHYD	.08	1.82	---	12.21	69	862.5
XSECTION	1	REACH	.08	1.82	101.50	12.34	66	825.0
XSECTION	20	RUNOFF	.03	2.45	---	12.02	53	1766.7
XSECTION	1	REACH	.03	2.45	101.27	12.16	46	1533.3
XSECTION	22	ADDHYD	.11	1.98	---	12.24	102	927.3
XSECTION	23	ADDHYD	.98	2.00	---	13.24	295	301.0
XSECTION	24	RUNOFF	.14	1.38	---	12.62	57	407.1
XSECTION	25	ADDHYD	1.12	1.92	---	13.01	331	295.5

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.

A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 4.97 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 50

XSECTION	1	RUNOFF	.05	2.01	---	13.04	23	460.0
XSECTION	1	REACH	.05	2.01	100.96	13.17	23	460.0
XSECTION	3	RUNOFF	.09	2.66	---	12.47	83	922.2
XSECTION	4	ADDHYD	.14	2.42	---	12.53	94	671.4
XSECTION	1	REACH	.14	2.42	101.54	12.86	81	578.6
XSECTION	6	RUNOFF	.02	2.72	---	12.27	29	1450.0
XSECTION	1	REACH	.02	2.72	101.05	12.40	29	1450.0
XSECTION	8	ADDHYD	.16	2.46	---	12.73	96	600.0
XSECTION	9	RUNOFF	.55	2.69	---	13.76	237	430.9
XSECTION	10	ADDHYD	.71	2.64	---	13.53	293	412.7
XSECTION	1	REACH	.71	2.64	102.10	13.53	293	412.7
XSECTION	12	RUNOFF	.15	2.42	---	12.94	89	593.3
XSECTION	13	ADDHYD	.87	2.60	---	13.29	366	420.7
XSECTION	1	REACH	.87	2.60	102.28	13.29	366	420.7
XSECTION	15	RUNOFF	.05	2.60	---	12.18	68	1360.0
XSECTION	1	REACH	.05	2.60	101.51	12.18	68	1360.0
XSECTION	17	RUNOFF	.03	2.06	---	12.33	26	866.7
XSECTION	18	ADDHYD	.08	2.39	---	12.21	91	1137.5
XSECTION	1	REACH	.08	2.39	101.56	12.34	88	1100.0
XSECTION	20	RUNOFF	.03	3.10	---	12.02	67	2233.3
XSECTION	1	REACH	.03	3.10	101.42	12.15	59	1966.7
XSECTION	22	ADDHYD	.11	2.57	---	12.24	134	1218.2
XSECTION	23	ADDHYD	.98	2.60	---	13.21	388	395.9
XSECTION	24	RUNOFF	.14	1.88	---	12.61	80	571.4

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	PEAK DISCHARGE RUNOFF AMOUNT (IN)	ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 50

XSECTION	25	ADDHYD	1.12	2.51	---	12.95	441	393.8

RAINFALL OF 5.82 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 99

XSECTION	1	RUNOFF	.05	2.66	---	13.02	31	620.0
XSECTION	1	REACH	.05	2.66	101.08	13.15	31	620.0
XSECTION	3	RUNOFF	.09	3.39	---	12.47	105	1166.7
XSECTION	4	ADDHYD	.14	3.12	---	12.53	121	864.3
XSECTION	1	REACH	.14	3.12	101.60	12.86	105	750.0
XSECTION	6	RUNOFF	.02	3.45	---	12.27	37	1850.0
XSECTION	1	REACH	.02	3.45	101.15	12.40	36	1800.0
XSECTION	8	ADDHYD	.16	3.17	---	12.73	124	775.0
XSECTION	9	RUNOFF	.55	3.43	---	13.74	304	552.7
XSECTION	10	ADDHYD	.71	3.37	---	13.51	377	531.0
XSECTION	1	REACH	.71	3.37	102.31	13.51	377	531.0
XSECTION	12	RUNOFF	.15	3.12	---	12.93	117	780.0
XSECTION	13	ADDHYD	.87	3.32	---	13.27	472	542.5
XSECTION	1	REACH	.87	3.32	102.53	13.27	472	542.5
XSECTION	15	RUNOFF	.05	3.32	---	12.17	87	1740.0
XSECTION	1	REACH	.05	3.32	101.56	12.17	87	1740.0
XSECTION	17	RUNOFF	.03	2.71	---	12.33	35	1166.7
XSECTION	18	ADDHYD	.08	3.08	---	12.20	118	1475.0
XSECTION	1	REACH	.08	3.08	101.63	12.33	114	1425.0
XSECTION	20	RUNOFF	.03	3.87	---	12.02	83	2766.7
XSECTION	1	REACH	.03	3.87	101.52	12.15	74	2466.7
XSECTION	22	ADDHYD	.11	3.29	---	12.23	171	1554.5
XSECTION	23	ADDHYD	.98	3.32	---	13.19	501	511.2
XSECTION	24	RUNOFF	.14	2.51	---	12.59	110	785.7
XSECTION	25	ADDHYD	1.12	3.22	---	12.91	576	514.3

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

XSEC ID	REACH LENGTH (FT)	FLOOD PLAIN LENGTH (FT)	HYDROGRAPH INFORMATION INFLOW PEAK (CFS)	INFLOW TIME (HR)	OUTFLOW PEAK (CFS)	OUTFLOW TIME (HR)	ROUTING PARAMETERS Q-A EQ. COEFF (X)	POWER (M)	PEAK FACTOR (k*)	ATT-KIN RATIO Q/I (Q*)	ATT-KIN COEFF (C)
BASEFLOW IS .0 CFS											
ALTERNATE 1 STORM 2											
1	1865		4	13.2	4	13.4	2.82	1.34	.016	.987	.56
1	8995		21	12.6	16	13.0	2.82	1.34	.120	.789	.22
1	2025		7	12.3	7	12.5	2.82	1.34	.047	.928	.60
1	1025		70	13.7	70	13.7	2.85	1.33	.002	1.000	1.00?
1	1170		84	13.5	84	13.5	2.91	1.31	.003	1.000	1.00?
1	1090		16	12.2	16	12.3	2.82	1.34	.020	.998	.99?
1	2515		20	12.3	18	12.5	2.82	1.34	.047	.910	.62
1	2930		20	12.0	17	12.2	2.82	1.34	.120	.848	.55
ALTERNATE 1 STORM 10											
1	1865		10	13.1	10	13.2	2.82	1.34	.014	.989	.67?
1	8995		47	12.5	40	12.9	2.83	1.34	.100	.841	.27
1	2025		16	12.3	15	12.4	2.82	1.34	.039	.957	.68?
1	1025		153	13.6	153	13.6	3.25	1.25	.003	1.000	1.00?
1	1170		188	13.4	188	13.4	3.41	1.23	.004	1.000	1.00?
1	1090		36	12.2	36	12.2	2.83	1.34	.017	1.000	1.00?
1	2515		46	12.2	43	12.3	2.83	1.34	.039	.930	.71?
1	2930		38	12.0	33	12.2	2.83	1.34	.100	.862	.62
ALTERNATE 1 STORM 25											
1	1865		17	13.1	17	13.2	2.82	1.34	.013	.996	.73?
1	8995		70	12.5	61	12.9	2.85	1.33	.093	.860	.29
1	2025		22	12.3	22	12.4	2.82	1.34	.035	.970	.73?
1	1025		224	13.6	224	13.6	3.58	1.21	.003	1.000	1.00?
1	1170		278	13.3	278	13.3	3.62	1.21	.004	1.000	1.00?
1	1090		52	12.2	52	12.2	2.83	1.34	.015	1.000	1.00?
1	2515		69	12.2	65	12.3	2.85	1.33	.036	.950	.75?
1	2930		52	12.0	45	12.2	2.83	1.34	.091	.867	.65

TR20 ---------- SCS -

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

			HYDROGRAPH INFORMATION				ROUTING PARAMETERS			
		FLOOD	INFLOW		OUTFLOW		Q-A EQ.		PEAK	ATT-
XSEC	REACH	PLAIN					LENGTH	RATIO		KIN
ID	LENGTH	LENGTH	PEAK	TIME	PEAK	TIME	COEFF	POWER	FACTOR	Q/I COEFF
	(FT)	(FT)	(CFS)	(HR)	(CFS)	(HR)	(X)	(M)	(k*)	(Q*) (C)
ALTERNATE 1 STORM 50										
1	1865		23	13.0	23	13.2	2.82	1.34	.012	.996 .77?
1	8995		94	12.5	81	12.9	2.96	1.30	.095	.860 .29
1	2025		29	12.3	29	12.4	2.82	1.34	.033	.980 .76?
1	1025		293	13.5	293	13.5	3.57	1.21	.003	1.000 1.00?
1	1170		366	13.3	366	13.3	3.34	1.24	.003	1.000 1.00?
1	1090		67	12.2	67	12.2	2.84	1.33	.014	1.000 1.00?
1	2515		91	12.2	87	12.3	2.94	1.30	.038	.956 .76?
1	2930		66	12.0	57	12.2	2.83	1.34	.084	.869 .68?
ALTERNATE 1 STORM 99										
1	1865		31	13.0	31	13.1	2.82	1.34	.011	.994 .80?
1	8995		121	12.5	105	12.9	3.09	1.27	.096	.866 .29
1	2025		37	12.3	36	12.4	2.83	1.34	.030	.985 .78?
1	1025		377	13.5	377	13.5	3.31	1.24	.003	1.000 1.00?
1	1170		472	13.3	472	13.3	3.09	1.26	.003	1.000 1.00?
1	1090		86	12.2	86	12.2	2.92	1.31	.015	1.000 1.00?
1	2515		118	12.2	113	12.3	3.07	1.28	.039	.960 .76?
1	2930		82	12.0	71	12.2	2.90	1.31	.084	.867 .68?

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
XSECTION 1	.03					
ALTERNATE 1		17	33	46	59	74
XSECTION 3	.09					
ALTERNATE 1		20	43	63	83	105
XSECTION 4	.14					
ALTERNATE 1		21	48	71	94	121
XSECTION 6	.02					
ALTERNATE 1		7	16	23	29	37
XSECTION 8	.16					
ALTERNATE 1		20	48	72	96	124
XSECTION 9	.55					
ALTERNATE 1		58	125	182	237	304
XSECTION 10	.71					
ALTERNATE 1		70	153	224	293	377
XSECTION 12	.15					
ALTERNATE 1		19	44	67	89	117
XSECTION 13	.87					
ALTERNATE 1		84	188	278	366	472
XSECTION 15	.05					
ALTERNATE 1		16	36	52	68	87
XSECTION 17	.03					
ALTERNATE 1		4	12	19	26	35
XSECTION 18	.08					
ALTERNATE 1		20	46	69	91	118

XSECTION 20 .03

ALTERNATE 1 20 38 53 67 83

XSECTION 22 .11

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS 2015 CORN 2.04TEST
01:25:56 SUMMARY, JOB NO. 1 PAGE 12

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
XSECTION 22	.11					
ALTERNATE 1		27	69	102	134	171
XSECTION 23	.98					
ALTERNATE 1		90	200	295	388	501
XSECTION 24	.14					
ALTERNATE 1		11	34	57	80	110
XSECTION 25	1.12					
ALTERNATE 1		97	221	331	441	576

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS 2015 CORN 2.04TEST

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 2.04TEST
FILES

INPUT = F:\NEV15CRN.DAT , GIVEN DATA FILE
OUTPUT = F:\NEV15CRN.OUT , DATED 01/15/**,01:25:56

FILES GENERATED - DATED 01/15/**,01:25:56

NONE!

JOB ENDED AT 01:25:56
*** TR-20 RUN COMPLETED ***

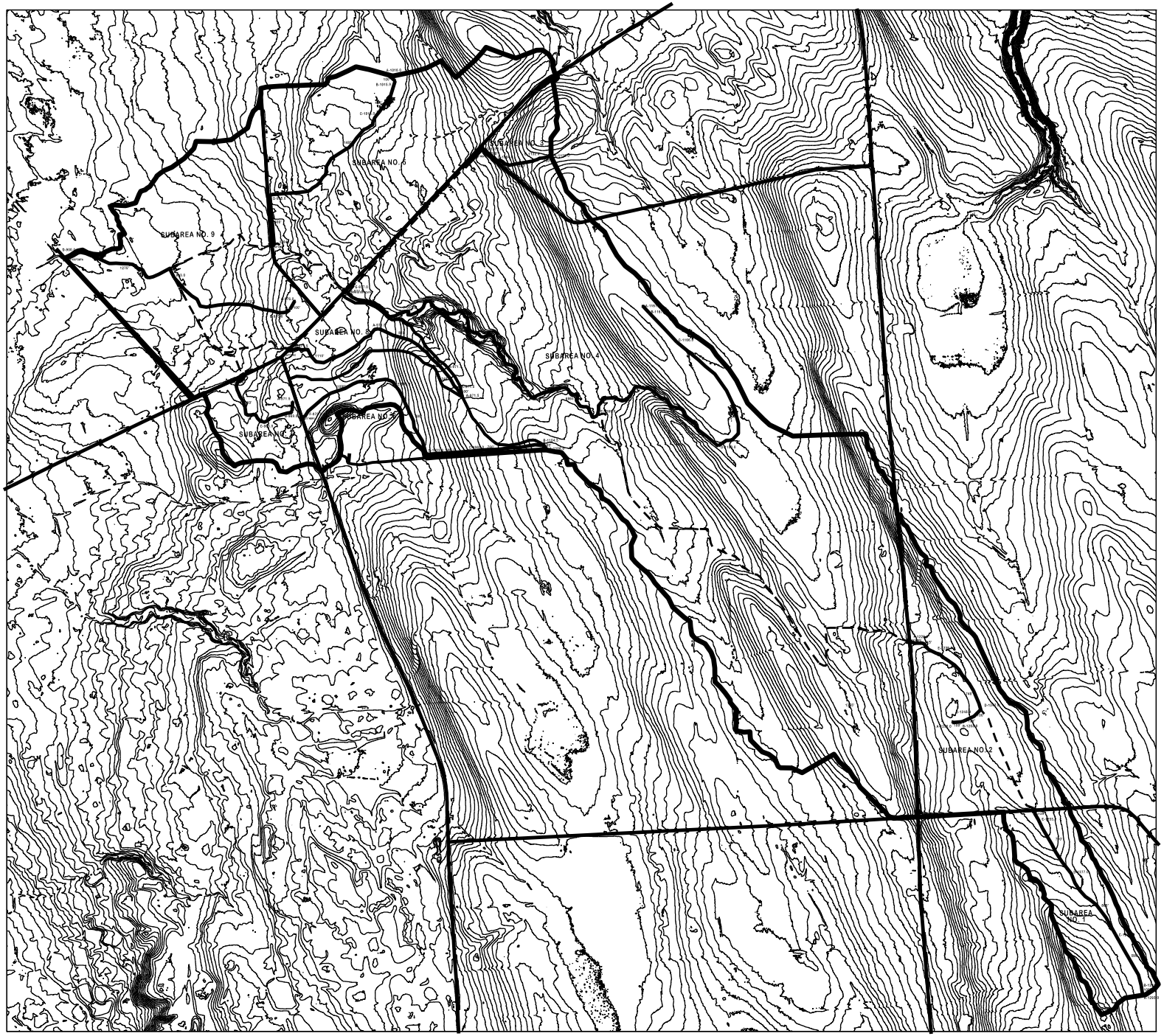
2025 LAND USE MAP



- PASTURE
- LAWN
- BRUSH
- WOODS
- MEADOW
- AG - SOY BEANS
- FARMSTEAD
- 2 ACRES RESIDENTIAL
- 1 ACRES RESIDENTIAL
- 1/2 ACRES RESIDENTIAL
- BARE GROUND
- IMPERVIOUS

2025 LAND USE MAP

2025 TC ROUTE MAP



2025 Tc ROUTE MAP

2025 WATERSHED CHARACTERISTICS

2025 **SUBAREA NO. 1** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												A SOILS AREA 0.00
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.28	5.13					7.16	4.53		0.3		B SOILS AREA 17.40
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00846	0.15503	0.00000	0.00000	0.00000	0.00000	0.21638	0.13690	0.00000	0.00907	0.00000	
	0.82925	11.16228	0.00000	0.00000	0.00000	0.00000	11.90088	8.35086	0.00000	0.61650	0.00000	%B CN 32.86

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.3	4.47					5.49	5.14		0.13	0	C SOILS AREA 15.53
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.00907	0.13509	0.00000	0.00000	0.00000	0.00000	0.16591	0.15533	0.00000	0.00393	0.00000	
	0.88849	10.94198	0.00000	0.00000	0.00000	0.00000	11.61378	11.49471	0.00000	0.31037	0.00000	%C CN 35.25

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.09						0.07				0	D SOILS AREA 0.16
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00272	0.00000	0.00000	0.00000	0.00000	0.00000	0.00212	0.00000	0.00000	0.00000	0.00000	
	0.26655	0.00000	0.00000	0.00000	0.00000	0.00000	0.16289	0.00000	0.00000	0.00000	0.00000	%D CN 0.43

TOTAL AREA 33.09

CN 68.54

2025 **SUBAREA NO. 2** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	58	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.07	6.73				3.41			0.38		
CN	98	72	74	86	58	58	55	61	65	68	70
	0.00124	0.11916	0.00000	0.00000	0.00000	0.06038	0.00000	0.00000	0.00673	0.00000	0.00000
	0.12146	8.57932	0.00000	0.00000	0.00000	3.50177	0.00000	0.00000	0.43732	0.00000	0.00000

B SOILS AREA 10.59

%B CN 12.64

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.03	13.94	3.44			10.31			7.27		
CN	98	81	82	91	71	71	70	74	77	79	80
	0.01824	0.24681	0.06091	0.00000	0.00000	0.18254	0.00000	0.00000	0.12872	0.00000	0.00000
	1.78718	19.99186	4.99433	0.00000	0.00000	12.96052	0.00000	0.00000	9.91130	0.00000	0.00000

C SOILS AREA 35.99

%C CN 49.65

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.21					9.69					
CN	98	85	86	94	78	78	77	80	82	84	85
	0.00372	0.00000	0.00000	0.00000	0.00000	0.17157	0.00000	0.00000	0.00000	0.00000	0.00000
	0.36438	0.00000	0.00000	0.00000	0.00000	13.38208	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 9.90

%D CN 13.75

TOTAL AREA 56.48

CN 76.03

2025 **SUBAREA NO. 3** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	58	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	72	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.35	2.65					1.52	7.4		2.09	
CN	98	81	82	91	71	71	70	74	77	79	80
	0.08994	0.17655	0.00000	0.00000	0.00000	0.00000	0.10127	0.49300	0.00000	0.13924	0.00000
	8.81412	14.30047	0.00000	0.00000	0.00000	0.00000	7.08861	36.48235	0.00000	11.00000	0.00000

C SOILS AREA 15.01

%C CN 77.69

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	85	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 15.01

CN 77.69

2025 **SUBAREA NO. 4** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA		2.27					0.21					A SOILS AREA 2.48
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00643	0.00000	0.00000	0.00000	0.00000	0.00060	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.37310	0.00000	0.00000	0.00000	0.00000	0.01785	0.00000	0.00000	0.00000	0.00000	%A CN 0.39

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	2.85	140.17				39.49	69.43	4.92	15.47	2.11		C SOILS AREA 274.44
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.00808	0.39722	0.00000	0.00000	0.00000	0.11191	0.19675	0.01394	0.04384	0.00598	0.00000	
	0.79149	32.17459	0.00000	0.00000	0.00000	7.94545	13.77267	1.03174	3.37562	0.47237	0.00000	%C CN 59.56

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.21					49.84	25.91					D SOILS AREA 75.96
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00060	0.00000	0.00000	0.00000	0.00000	0.14124	0.07342	0.00000	0.00000	0.00000	0.00000	
	0.05832	0.00000	0.00000	0.00000	0.00000	11.01655	5.65368	0.00000	0.00000	0.00000	0.00000	%D CN 16.73

TOTAL AREA 352.88

CN 76.68

2025 **SUBAREA NO. 5** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.13	0.33				1.15	5.23	0.54		1.11		A SOILS AREA 8.49
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00131	0.00334	0.00000	0.00000	0.00000	0.01163	0.05289	0.00546	0.00000	0.01123	0.00000	
	0.12884	0.19357	0.00000	0.00000	0.00000	0.34891	1.58677	0.21299	0.00000	0.57251	0.00000	%A CN 3.04

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	3.17	28.18	1.85		4.03	12.51	11.77	4.76	4.12	14.69		C SOILS AREA 85.08
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.03206	0.28499	0.01871	0.00000	0.04076	0.12652	0.11903	0.04814	0.04167	0.14856	0.00000	
	3.14179	23.08434	1.53418	0.00000	2.89371	8.98271	8.33232	3.56230	3.20833	11.73655	0.00000	%C CN 66.48

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.26				0.46	2.01	2.2	0.38				D SOILS AREA 5.31
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00263	0.00000	0.00000	0.00000	0.00465	0.02033	0.02225	0.00384	0.00000	0.00000	0.00000	
	0.25769	0.00000	0.00000	0.00000	0.36286	1.58556	1.71319	0.30744	0.00000	0.00000	0.00000	%D CN 4.23

TOTAL AREA 98.88

CN 73.75

2025 **SUBAREA NO. 6** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.05	0.34				2.11	0.83				
CN	98	58	59	77	30	30	30	39	46	51	54
	0.00164	0.01115	0.00000	0.00000	0.00000	0.06920	0.02722	0.00000	0.00000	0.00000	0.00000
	0.16071	0.64677	0.00000	0.00000	0.00000	2.07609	0.81666	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 3.33

%A CN 3.70

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	72	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.24	20.63			0.83	2.04	2.3			1.12	
CN	98	81	82	91	71	71	70	74	77	79	80
	0.00787	0.67662	0.00000	0.00000	0.02722	0.06691	0.07543	0.00000	0.00000	0.03673	0.00000
	0.77140	54.80584	0.00000	0.00000	1.93276	4.75041	5.28042	0.00000	0.00000	2.90194	0.00000

C SOILS AREA 27.16

%C CN 70.44

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	85	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 30.49

CN 74.14

2025 **SUBAREA NO. 7** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.13							0.32				A SOILS AREA 0.45
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00660	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01624	0.00000	0.00000	0.00000	
	0.64670	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.63350	0.00000	0.00000	0.00000	%A CN 1.28

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	1.09						0.08	4.49	0.48			B SOILS AREA 6.14
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.05533	0.00000	0.00000	0.00000	0.00000	0.00000	0.00406	0.22792	0.02437	0.00000	0.00000	
	5.42234	0.00000	0.00000	0.00000	0.00000	0.00000	0.22335	13.90305	1.58376	0.00000	0.00000	%B CN 21.13

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.59						3.59	1.13	4.78	3.02		C SOILS AREA 13.11
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.02995	0.00000	0.00000	0.00000	0.00000	0.00000	0.18223	0.05736	0.24264	0.15330	0.00000	
	2.93503	0.00000	0.00000	0.00000	0.00000	0.00000	12.75635	4.24467	18.68325	12.11066	0.00000	%C CN 50.73

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 19.70

CN 73.14

2025 **SUBAREA NO. 8** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	58	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	72	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.02	10.53		0.23		0.9	0.75	1.07	2.67	0.35	
CN	98	81	82	91	71	71	70	74	77	79	80
	0.05822	0.60103	0.00000	0.01313	0.00000	0.05137	0.04281	0.06107	0.15240	0.01998	0.00000
	5.70548	48.68322	0.00000	1.19463	0.00000	3.64726	2.99658	4.51941	11.73459	1.57820	0.00000

C SOILS AREA 17.52

%C CN 80.06

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	85	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 17.52

CN 80.06

2025 **SUBAREA NO. 9** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA					2.67	4.09	1.21	1.32				A SOILS AREA 9.29
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.02959	0.04533	0.01341	0.01463	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.88773	1.35986	0.40231	0.57054	0.00000	0.00000	0.00000	%A CN 3.22

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.31				0.22		3.37	1.22	1.09			B SOILS AREA 6.21
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00344	0.00000	0.00000	0.00000	0.00244	0.00000	0.03735	0.01352	0.01208	0.00000	0.00000	
	0.33670	0.00000	0.00000	0.00000	0.14142	0.00000	2.05419	0.82478	0.78522	0.00000	0.00000	%B CN 4.14

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	4.1				6.67	7.6	25.11	16.79	3.35	1.15	0.89	C SOILS AREA 65.66
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.04544	0.00000	0.00000	0.00000	0.07392	0.08423	0.27829	0.18608	0.03713	0.01275	0.00986	
	4.45306	0.00000	0.00000	0.00000	5.24848	5.98027	19.48022	13.76992	2.85881	1.00687	0.78909	%C CN 53.59

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.51					2.89	1.89	3.78				D SOILS AREA 9.07
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00565	0.00000	0.00000	0.00000	0.00000	0.03203	0.02095	0.04189	0.00000	0.00000	0.00000	
	0.55392	0.00000	0.00000	0.00000	0.00000	2.49828	1.61288	3.35144	0.00000	0.00000	0.00000	%D CN 8.02

TOTAL AREA 90.23

CN 68.97

2025 **SUBAREA NO. 1** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.28	5.13					7.16	4.53		0.3	
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00846	0.15503	0.00000	0.00000	0.00000	0.00000	0.21638	0.13690	0.00000	0.00907	0.00000
	0.82925	12.09248	0.00000	0.00000	0.00000	0.00000	11.90088	8.35086	0.00000	0.61650	0.00000

B SOILS AREA 17.40

%B CN 33.79

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.3	4.47					5.49	5.14		0.13	0
CN	98	85	82	91	71	71	70	74	77	79	80
	0.00907	0.13509	0.00000	0.00000	0.00000	0.00000	0.16591	0.15533	0.00000	0.00393	0.00000
	0.88849	11.48232	0.00000	0.00000	0.00000	0.00000	11.61378	11.49471	0.00000	0.31037	0.00000

C SOILS AREA 15.53

%C CN 35.79

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.09						0.07				0
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00272	0.00000	0.00000	0.00000	0.00000	0.00000	0.00212	0.00000	0.00000	0.00000	0.00000
	0.26655	0.00000	0.00000	0.00000	0.00000	0.00000	0.16289	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.16

%D CN 0.43

TOTAL AREA 33.09

CN 70.01

2025 **SUBAREA NO. 2** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.07	6.73				3.41			0.38		
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00124	0.11916	0.00000	0.00000	0.00000	0.06038	0.00000	0.00000	0.00673	0.00000	0.00000
	0.12146	9.29426	0.00000	0.00000	0.00000	3.50177	0.00000	0.00000	0.43732	0.00000	0.00000

B SOILS AREA 10.59

%B CN 13.35

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.03	13.94	3.44			10.31			7.27		
CN	98	85	82	91	71	71	70	74	77	79	80
	0.01824	0.24681	0.06091	0.00000	0.00000	0.18254	0.00000	0.00000	0.12872	0.00000	0.00000
	1.78718	20.97911	4.99433	0.00000	0.00000	12.96052	0.00000	0.00000	9.91130	0.00000	0.00000

C SOILS AREA 35.99

%C CN 50.63

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.21					9.69					
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00372	0.00000	0.00000	0.00000	0.00000	0.17157	0.00000	0.00000	0.00000	0.00000	0.00000
	0.36438	0.00000	0.00000	0.00000	0.00000	13.38208	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 9.90

%D CN 13.75

TOTAL AREA 56.48

CN 77.73

2025 **SUBAREA NO. 3** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.35	2.65					1.52	7.4		2.09	
CN	98	85	82	91	71	71	70	74	77	79	80
	0.08994	0.17655	0.00000	0.00000	0.00000	0.00000	0.10127	0.49300	0.00000	0.13924	0.00000
	8.81412	15.00666	0.00000	0.00000	0.00000	0.00000	7.08861	36.48235	0.00000	11.00000	0.00000

C SOILS AREA 15.01

%C CN 78.39

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 15.01

CN 78.39

2025 **SUBAREA NO. 4** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA		2.27					0.21					A SOILS AREA	2.48
CN	98	67	59	77	30	30	30	39	46	51	54		
	0.00000	0.00643	0.00000	0.00000	0.00000	0.00000	0.00060	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.43100	0.00000	0.00000	0.00000	0.00000	0.01785	0.00000	0.00000	0.00000	0.00000	%A CN	0.45

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA												B SOILS AREA	0.00
CN	98	78	74	86	58	58	55	61	65	68	70		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN	0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	2.85	140.17				39.49	69.43	4.92	15.47	2.11		C SOILS AREA	274.44
CN	98	85	82	91	71	71	70	74	77	79	80		
	0.00808	0.39722	0.00000	0.00000	0.00000	0.11191	0.19675	0.01394	0.04384	0.00598	0.00000		
	0.79149	33.76346	0.00000	0.00000	0.00000	7.94545	13.77267	1.03174	3.37562	0.47237	0.00000	%C CN	61.15

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.21					49.84	25.91					D SOILS AREA	75.96
CN	98	89	86	94	78	78	77	80	82	84	85		
	0.00060	0.00000	0.00000	0.00000	0.00000	0.14124	0.07342	0.00000	0.00000	0.00000	0.00000		
	0.05832	0.00000	0.00000	0.00000	0.00000	11.01655	5.65368	0.00000	0.00000	0.00000	0.00000	%D CN	16.73

TOTAL AREA	352.88
CN	78.33

2025 **SUBAREA NO. 5** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.13	0.33				1.15	5.23	0.54		1.11		A SOILS AREA	8.49
CN	98	67	59	77	30	30	30	39	46	51	54		
	0.00131	0.00334	0.00000	0.00000	0.00000	0.01163	0.05289	0.00546	0.00000	0.01123	0.00000		
	0.12884	0.22360	0.00000	0.00000	0.00000	0.34891	1.58677	0.21299	0.00000	0.57251	0.00000	%A CN	3.07

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA												B SOILS AREA	0.00
CN	98	78	74	86	58	58	55	61	65	68	70		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN	0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	3.17	28.18	1.85		4.03	12.51	11.77	4.76	4.12	14.69		C SOILS AREA	85.08
CN	98	85	82	91	71	71	70	74	77	79	80		
	0.03206	0.28499	0.01871	0.00000	0.04076	0.12652	0.11903	0.04814	0.04167	0.14856	0.00000		
	3.14179	24.22431	1.53418	0.00000	2.89371	8.98271	8.33232	3.56230	3.20833	11.73655	0.00000	%C CN	67.62

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.26				0.46	2.01	2.2	0.38				D SOILS AREA	5.31
CN	98	89	86	94	78	78	77	80	82	84	85		
	0.00263	0.00000	0.00000	0.00000	0.00465	0.02033	0.02225	0.00384	0.00000	0.00000	0.00000		
	0.25769	0.00000	0.00000	0.00000	0.36286	1.58556	1.71319	0.30744	0.00000	0.00000	0.00000	%D CN	4.23

TOTAL AREA 98.88

CN 74.92

2025 **SUBAREA NO. 6** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.05	0.34				2.11	0.83					A SOILS AREA	3.33
CN	98	67	59	77	30	30	30	39	46	51	54		
	0.00164	0.01115	0.00000	0.00000	0.00000	0.06920	0.02722	0.00000	0.00000	0.00000	0.00000		
	0.16071	0.74713	0.00000	0.00000	0.00000	2.07609	0.81666	0.00000	0.00000	0.00000	0.00000	%A CN	3.80

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA												B SOILS AREA	0.00
CN	98	78	74	86	58	58	55	61	65	68	70		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN	0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.24	20.63			0.83	2.04	2.3			1.12		C SOILS AREA	27.16
CN	98	85	82	91	71	71	70	74	77	79	80		
	0.00787	0.67662	0.00000	0.00000	0.02722	0.06691	0.07543	0.00000	0.00000	0.03673	0.00000		
	0.77140	57.51230	0.00000	0.00000	1.93276	4.75041	5.28042	0.00000	0.00000	2.90194	0.00000	%C CN	73.15

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA												D SOILS AREA	0.00
CN	98	89	86	94	78	78	77	80	82	84	85		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN	0.00

TOTAL AREA 30.49

CN 76.95

2025 **SUBAREA NO. 7** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.13							0.32			
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00660	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01624	0.00000	0.00000	0.00000
	0.64670	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.63350	0.00000	0.00000	0.00000

A SOILS AREA 0.45

%A CN 1.28

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.09						0.08	4.49	0.48		
CN	98	78	74	86	58	58	55	61	65	68	70
	0.05533	0.00000	0.00000	0.00000	0.00000	0.00000	0.00406	0.22792	0.02437	0.00000	0.00000
	5.42234	0.00000	0.00000	0.00000	0.00000	0.00000	0.22335	13.90305	1.58376	0.00000	0.00000

B SOILS AREA 6.14

%B CN 21.13

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.59						3.59	1.13	4.78	3.02	
CN	98	85	82	91	71	71	70	74	77	79	80
	0.02995	0.00000	0.00000	0.00000	0.00000	0.00000	0.18223	0.05736	0.24264	0.15330	0.00000
	2.93503	0.00000	0.00000	0.00000	0.00000	0.00000	12.75635	4.24467	18.68325	12.11066	0.00000

C SOILS AREA 13.11

%C CN 50.73

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 19.70

CN 73.14

2025 **SUBAREA NO. 8** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.02	10.53		0.23		0.9	0.75	1.07	2.67	0.35	
CN	98	85	82	91	71	71	70	74	77	79	80
	0.05822	0.60103	0.00000	0.01313	0.00000	0.05137	0.04281	0.06107	0.15240	0.01998	0.00000
	5.70548	51.08733	0.00000	1.19463	0.00000	3.64726	2.99658	4.51941	11.73459	1.57820	0.00000

C SOILS AREA 17.52

%C CN 82.46

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 17.52

CN 82.46

2025 **SUBAREA NO. 9** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA					2.67	4.09	1.21	1.32			
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.02959	0.04533	0.01341	0.01463	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.88773	1.35986	0.40231	0.57054	0.00000	0.00000	0.00000

A SOILS AREA 9.29

%A CN 3.22

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.31				0.22		3.37	1.22	1.09		
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00344	0.00000	0.00000	0.00000	0.00244	0.00000	0.03735	0.01352	0.01208	0.00000	0.00000
	0.33670	0.00000	0.00000	0.00000	0.14142	0.00000	2.05419	0.82478	0.78522	0.00000	0.00000

B SOILS AREA 6.21

%B CN 4.14

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	4.1				6.67	7.6	25.11	16.79	3.35	1.15	0.89
CN	98	85	82	91	71	71	70	74	77	79	80
	0.04544	0.00000	0.00000	0.00000	0.07392	0.08423	0.27829	0.18608	0.03713	0.01275	0.00986
	4.45306	0.00000	0.00000	0.00000	5.24848	5.98027	19.48022	13.76992	2.85881	1.00687	0.78909

C SOILS AREA 65.66

%C CN 53.59

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.51					2.89	1.89	3.78			
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00565	0.00000	0.00000	0.00000	0.00000	0.03203	0.02095	0.04189	0.00000	0.00000	0.00000
	0.55392	0.00000	0.00000	0.00000	0.00000	2.49828	1.61288	3.35144	0.00000	0.00000	0.00000

D SOILS AREA 9.07

%D CN 8.02

TOTAL AREA 90.23

CN 68.97

2025 **SUBAREA NO. 1** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.28	5.13					7.16	4.53		0.3	
CN	98	61	74	86	58	58	55	61	65	68	70
	0.00846	0.15503	0.00000	0.00000	0.00000	0.00000	0.21638	0.13690	0.00000	0.00907	0.00000
	0.82925	9.45694	0.00000	0.00000	0.00000	0.00000	11.90088	8.35086	0.00000	0.61650	0.00000

B SOILS AREA 17.40

%B CN 31.15

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.3	4.47					5.49	5.14		0.13	0
CN	98	74	82	91	71	71	70	74	77	79	80
	0.00907	0.13509	0.00000	0.00000	0.00000	0.00000	0.16591	0.15533	0.00000	0.00393	0.00000
	0.88849	9.99637	0.00000	0.00000	0.00000	0.00000	11.61378	11.49471	0.00000	0.31037	0.00000

C SOILS AREA 15.53

%C CN 34.30

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.09						0.07				0
CN	98	80	86	94	78	78	77	80	82	84	85
	0.00272	0.00000	0.00000	0.00000	0.00000	0.00000	0.00212	0.00000	0.00000	0.00000	0.00000
	0.26655	0.00000	0.00000	0.00000	0.00000	0.00000	0.16289	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.16

%D CN 0.43

TOTAL AREA 33.09

CN 65.89

2025 **SUBAREA NO. 2** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.07	6.73				3.41			0.38		
CN	98	61	74	86	58	58	55	61	65	68	70
	0.00124	0.11916	0.00000	0.00000	0.00000	0.06038	0.00000	0.00000	0.00673	0.00000	0.00000
	0.12146	7.26859	0.00000	0.00000	0.00000	3.50177	0.00000	0.00000	0.43732	0.00000	0.00000

B SOILS AREA 10.59

%B CN 11.33

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.03	13.94	3.44			10.31			7.27		
CN	98	74	82	91	71	71	70	74	77	79	80
	0.01824	0.24681	0.06091	0.00000	0.00000	0.18254	0.00000	0.00000	0.12872	0.00000	0.00000
	1.78718	18.26416	4.99433	0.00000	0.00000	12.96052	0.00000	0.00000	9.91130	0.00000	0.00000

C SOILS AREA 35.99

%C CN 47.92

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.21					9.69					
CN	98	80	86	94	78	78	77	80	82	84	85
	0.00372	0.00000	0.00000	0.00000	0.00000	0.17157	0.00000	0.00000	0.00000	0.00000	0.00000
	0.36438	0.00000	0.00000	0.00000	0.00000	13.38208	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 9.90

%D CN 13.75

TOTAL AREA 56.48

CN 72.99

2025 **SUBAREA NO. 3** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	61	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.35	2.65					1.52	7.4		2.09	
CN	98	74	82	91	71	71	70	74	77	79	80
	0.08994	0.17655	0.00000	0.00000	0.00000	0.00000	0.10127	0.49300	0.00000	0.13924	0.00000
	8.81412	13.06462	0.00000	0.00000	0.00000	0.00000	7.08861	36.48235	0.00000	11.00000	0.00000

C SOILS AREA 15.01

%C CN 76.45

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	80	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 15.01

CN 76.45

2025 **SUBAREA NO. 4** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA		2.27					0.21				
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00000	0.00643	0.00000	0.00000	0.00000	0.00000	0.00060	0.00000	0.00000	0.00000	0.00000
	0.00000	0.25088	0.00000	0.00000	0.00000	0.00000	0.01785	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 2.48

%A CN 0.27

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	61	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	2.85	140.17				39.49	69.43	4.92	15.47	2.11	
CN	98	74	82	91	71	71	70	74	77	79	80
	0.00808	0.39722	0.00000	0.00000	0.00000	0.11191	0.19675	0.01394	0.04384	0.00598	0.00000
	0.79149	29.39407	0.00000	0.00000	0.00000	7.94545	13.77267	1.03174	3.37562	0.47237	0.00000

C SOILS AREA 274.44

%C CN 56.78

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.21					49.84	25.91				
CN	98	80	86	94	78	78	77	80	82	84	85
	0.00060	0.00000	0.00000	0.00000	0.00000	0.14124	0.07342	0.00000	0.00000	0.00000	0.00000
	0.05832	0.00000	0.00000	0.00000	0.00000	11.01655	5.65368	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 75.96

%D CN 16.73

TOTAL AREA 352.88

CN 73.78

2025 **SUBAREA NO. 5** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.13	0.33				1.15	5.23	0.54		1.11	
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00131	0.00334	0.00000	0.00000	0.00000	0.01163	0.05289	0.00546	0.00000	0.01123	0.00000
	0.12884	0.13016	0.00000	0.00000	0.00000	0.34891	1.58677	0.21299	0.00000	0.57251	0.00000

A SOILS AREA 8.49

%A CN 2.98

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	61	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	3.17	28.18	1.85		4.03	12.51	11.77	4.76	4.12	14.69	
CN	98	74	82	91	71	71	70	74	77	79	80
	0.03206	0.28499	0.01871	0.00000	0.04076	0.12652	0.11903	0.04814	0.04167	0.14856	0.00000
	3.14179	21.08940	1.53418	0.00000	2.89371	8.98271	8.33232	3.56230	3.20833	11.73655	0.00000

C SOILS AREA 85.08

%C CN 64.48

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.26				0.46	2.01	2.2	0.38			
CN	98	80	86	94	78	78	77	80	82	84	85
	0.00263	0.00000	0.00000	0.00000	0.00465	0.02033	0.02225	0.00384	0.00000	0.00000	0.00000
	0.25769	0.00000	0.00000	0.00000	0.36286	1.58556	1.71319	0.30744	0.00000	0.00000	0.00000

D SOILS AREA 5.31

%D CN 4.23

TOTAL AREA 98.88

CN 71.69

2025 **SUBAREA NO. 6** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.05	0.34				2.11	0.83				
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00164	0.01115	0.00000	0.00000	0.00000	0.06920	0.02722	0.00000	0.00000	0.00000	0.00000
	0.16071	0.43490	0.00000	0.00000	0.00000	2.07609	0.81666	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 3.33

%A CN 3.49

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	61	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.24	20.63			0.83	2.04	2.3			1.12	
CN	98	74	82	91	71	71	70	74	77	79	80
	0.00787	0.67662	0.00000	0.00000	0.02722	0.06691	0.07543	0.00000	0.00000	0.03673	0.00000
	0.77140	50.06953	0.00000	0.00000	1.93276	4.75041	5.28042	0.00000	0.00000	2.90194	0.00000

C SOILS AREA 27.16

%C CN 65.71

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	8084	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 30.49

CN 69.19

2025 **SUBAREA NO. 7** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.13							0.32			
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00660	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01624	0.00000	0.00000	0.00000
	0.64670	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.63350	0.00000	0.00000	0.00000

A SOILS AREA 0.45

%A CN 1.28

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.09						0.08	4.49	0.48		
CN	98	61	74	86	58	58	55	61	65	68	70
	0.05533	0.00000	0.00000	0.00000	0.00000	0.00000	0.00406	0.22792	0.02437	0.00000	0.00000
	5.42234	0.00000	0.00000	0.00000	0.00000	0.00000	0.22335	13.90305	1.58376	0.00000	0.00000

B SOILS AREA 6.14

%B CN 21.13

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.59						3.59	1.13	4.78	3.02	
CN	98	74	82	91	71	71	70	74	77	79	80
	0.02995	0.00000	0.00000	0.00000	0.00000	0.00000	0.18223	0.05736	0.24264	0.15330	0.00000
	2.93503	0.00000	0.00000	0.00000	0.00000	0.00000	12.75635	4.24467	18.68325	12.11066	0.00000

C SOILS AREA 13.11

%C CN 50.73

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	80	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 19.70

CN 73.14

2025 **SUBAREA NO. 8** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	61	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.02	10.53		0.23		0.9	0.75	1.07	2.67	0.35	
CN	98	74	82	91	71	71	70	74	77	79	80
	0.05822	0.60103	0.00000	0.01313	0.00000	0.05137	0.04281	0.06107	0.15240	0.01998	0.00000
	5.70548	44.47603	0.00000	1.19463	0.00000	3.64726	2.99658	4.51941	11.73459	1.57820	0.00000

C SOILS AREA 17.52

%C CN 75.85

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	80	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 17.52

CN 75.85

2025 **SUBAREA NO. 9** RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA					2.67	4.09	1.21	1.32			
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.02959	0.04533	0.01341	0.01463	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.88773	1.35986	0.40231	0.57054	0.00000	0.00000	0.00000

A SOILS AREA 9.29

%A CN 3.22

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.31				0.22		3.37	1.22	1.09		
CN	98	61	74	86	58	58	55	61	65	68	70
	0.00344	0.00000	0.00000	0.00000	0.00244	0.00000	0.03735	0.01352	0.01208	0.00000	0.00000
	0.33670	0.00000	0.00000	0.00000	0.14142	0.00000	2.05419	0.82478	0.78522	0.00000	0.00000

B SOILS AREA 6.21

%B CN 4.14

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	4.1				6.67	7.6	25.11	16.79	3.35	1.15	0.89
CN	98	74	82	91	71	71	70	74	77	79	80
	0.04544	0.00000	0.00000	0.00000	0.07392	0.08423	0.27829	0.18608	0.03713	0.01275	0.00986
	4.45306	0.00000	0.00000	0.00000	5.24848	5.98027	19.48022	13.76992	2.85881	1.00687	0.78909

C SOILS AREA 65.66

%C CN 53.59

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.51					2.89	1.89	3.78			
CN	98	80	86	94	78	78	77	80	82	84	85
	0.00565	0.00000	0.00000	0.00000	0.00000	0.03203	0.02095	0.04189	0.00000	0.00000	0.00000
	0.55392	0.00000	0.00000	0.00000	0.00000	2.49828	1.61288	3.35144	0.00000	0.00000	0.00000

D SOILS AREA 9.07

%D CN 8.02

TOTAL AREA 90.23

CN 68.97

TIME OF CONCENTRATION CALCULATIONS 2025

TomP
North Eagle Village Study
Runoff Calculations 2025
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #1							
SHEET	100	0.0030	0.800				1.537
SHALLOW	590	0.0030	0.050				0.185
CHANNEL	805	0.0170	0.035	7.50	5.30	6.988	0.032
CHANNEL	710	0.0310	0.035	7.50	5.30	9.392	0.021
					Time of Concentration		1.775

TomP
North Eagle Village Study
Runoff Calculations 2025
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #2							
SHEET	100	0.0120	0.800				0.883
SHALLOW	125	0.0460	0.050				0.010
SHALLOW	100	0.0100	0.050				0.017
CHANNEL	740	0.0110	0.035	7.50	5.30	5.556	0.037
CHANNEL	315	0.0410	0.035	7.50	5.30	10.938	0.008
					Time of Concentration		.955

TomP
North Eagle Village Study
Runoff Calculations 2025
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #3							
SHEET	100	0.0300	0.800				0.612
SHALLOW	480	0.1000	0.050				0.026
CHANNEL	200	0.0600	0.035	7.50	5.30	13.889	0.004
					Time of Concentration		.642

TomP North Eagle Village Study
Runoff Calculations 2025
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subare#4							
SHEET	100	0.0010	0.800				2.385
SHALLOW	415	0.0030	0.050				0.130
SHALLOW	1440	0.0090	0.050				0.261
CHANNEL	1710	0.0340	0.035	7.50	5.30	9.896	0.048
CHANNEL	3740	0.0320	0.035	7.50	5.30	9.619	0.108
					Time of Concentration		2.932

TomP North Eagle Village Study
Runoff Calculations 2025
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #5							
SHEET	100	0.0030	0.800				1.537
SHALLOW	420	0.0090	0.050				0.076
CHANNEL	1485	0.0400	0.035	7.50	5.30	10.855	0.038
CHANNEL	500	0.0240	0.035	7.50	5.30	8.170	0.017
					Time of Concentration		1.668

TomP North Eagle Village Study
Runoff Calculations 2025
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #6							
SHEET	65	0.0540	0.800				0.343
SHALLOW	760	0.0520	0.050				0.057
SHALLOW	440	0.0950	0.050				0.025
CHANNEL	780	0.0360	0.035	7.50	5.30	10.317	0.021
CHANNEL	1090	0.0230	0.035	7.50	5.30	8.183	0.037
					Time of Concentration		.483

TomP

North Eagle Village Study
Runoff Calculations 2025
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #7							
SHEET	100	0.0250	0.800				0.658
SHALLOW	270	0.0150	0.050				0.038
CHANNEL	700	0.0310	0.035	7.50	5.30	9.259	0.021
					Time of Concentration		.717

TomP

North Eagle Village Study
Runoff Calculations 2025
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #8							
SHEET	100	0.0400	0.170				0.158
SHALLOW	240	0.0406	0.050				0.021
CHANNEL	810	0.0800	0.035	7.50	5.30	15.000	0.015
CHANNEL	1110	0.0220	0.035	7.50	5.30	7.906	0.039
					Time of Concentration		0.233

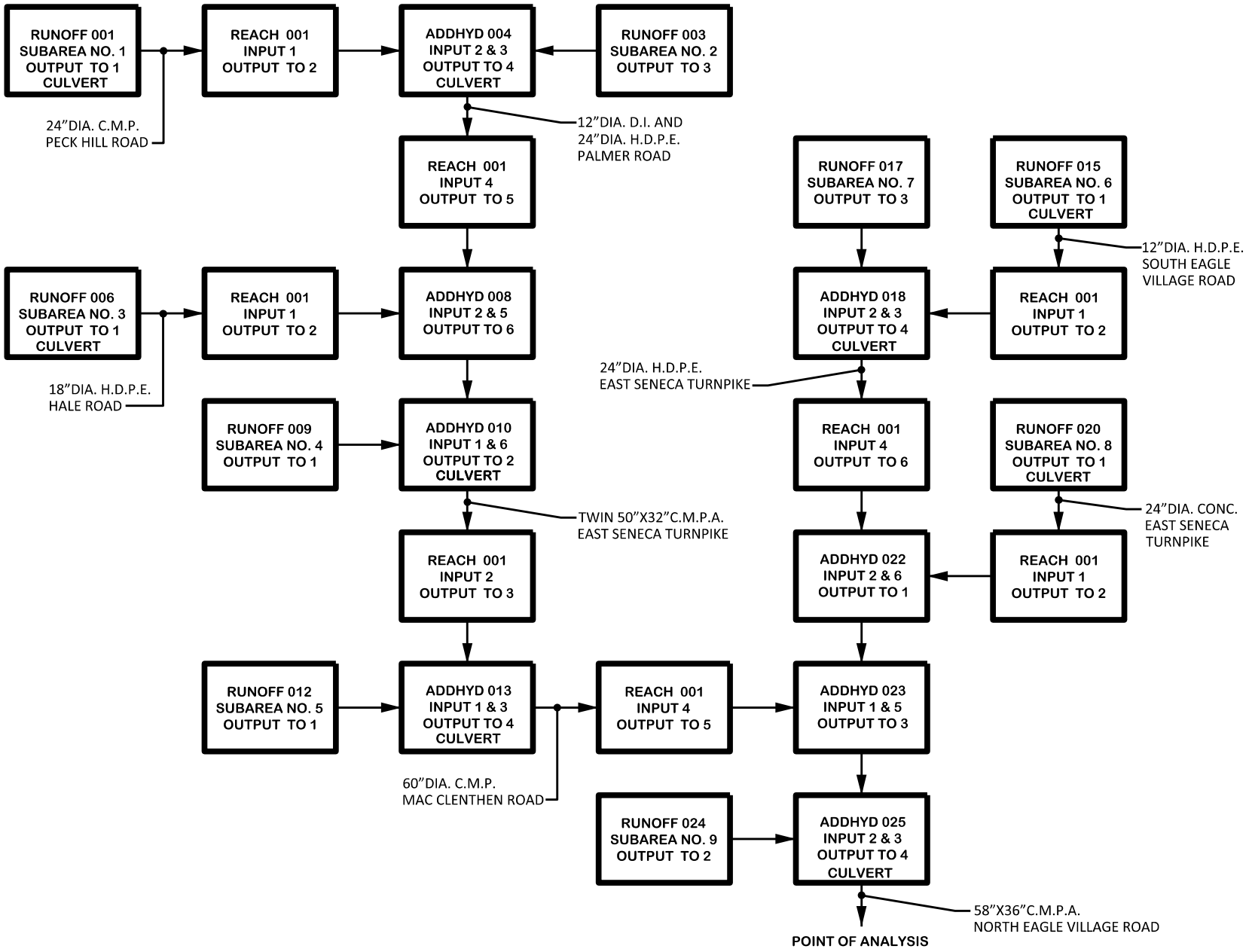
TomP

North Eagle Village Study
Runoff Calculations 2025
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #9							
SHEET	100	0.0100	0.800				0.949
SHALLOW	1350	0.0460	0.050				0.108
CHANNEL	1275	0.0100	0.035	7.50	5.30	5.366	0.066
					Time of Concentration		1.123

2025 TR-20 MODEL SCHEMATIC



TR–20 SCHEMATIC
2025

2025 TR-20 RUNOFF CALCULATIONS

**********80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY**********

```
JOB TR-20                              SUMMARY
TITLE    NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY
TITLE    WATERSHED CONDITIONS 2025 SOY BEANS
 2 XSECTN  001       1         101.5
 8                100.00     0.10      0.1
 8                100.50     4.86      1.5
 8                101.00     24.40     5.0
 8                101.50     65.72     10.5
 8                102.00     253.76    34.0
 8                102.50     452.93    52.5
 8                103.00     728.76    75.0
 9 ENDTBL
 6 RUNOFF 1 001      1 0.0517      68.5       1.78
 6 REACH  3 001   1   2 1865
 6 RUNOFF 1 003      3 0.0883      76.0       0.96
 6 ADDHYD 4 004   2 3 4
 6 REACH  3 001   4   5 8995
 6 RUNOFF 1 006      1 0.0235      77.7       0.64
 6 REACH  3 001   1   2 2025
 6 ADDHYD 4 008   2 5 6
 6 RUNOFF 1 009      1 0.5514      76.7       2.93
 6 ADDHYD 4 010   1 6 2
 6 REACH  3 001   2   3 1025
 6 RUNOFF 1 012      1 0.1545      73.8       1.67
 6 ADDHYD 4 013   1 3 4
 6 REACH  3 001   4   5 1170
 6 RUNOFF 1 015      1 0.0476      74.1       0.48
 6 REACH  3 001   1   2 1090
 6 RUNOFF 1 017      3 0.0308      73.1       0.72
 6 ADDHYD 4 018   2 3 4
 6 REACH  3 001   4   6 2515
 6 RUNOFF 1 020      1 0.0274      80.1       0.23
 6 REACH  3 001   1   2 2930
 6 ADDHYD 4 022   2 6 1
 6 ADDHYD 4 023   1 5 3
 6 RUNOFF 1 024      2 0.1410      69.0       1.12
 6 ADDHYD 4 025   2 3 4
   ENDATA
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        2.40       1.        2 2  01  02
   ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        3.45       1.        2 2  01  10
   ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        4.24       1.        2 2  01  25
   ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        4.97       1.        2 2  01  50
```

```
  ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.         5.82       1.         2 2  01  99
  ENDCMP 1
  ENDJOB 2

*******************************END OF 80-80 LIST*******************************


TR20 ------------------------------------------------------------------- SCS -
           NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY         VERSION
01/15/**            WATERSHED CONDITIONS 2025 SOY BEANS             2.04TEST
01:06:00                 PASS   1   JOB NO.   1                  PAGE   1



EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
   STARTING TIME =   .00      RAIN DEPTH =  2.40      RAIN DURATION =  1.00
   ANT. RUNOFF COND. = 2      MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1          STORM NO. = 2           RAIN TABLE NO. = 2


EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   1


EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
   STARTING TIME =   .00      RAIN DEPTH =  3.45      RAIN DURATION =  1.00
   ANT. RUNOFF COND. = 2      MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1          STORM NO. =10           RAIN TABLE NO. = 2

 *

EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   2


EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


TR20 ------------------------------------------------------------------- SCS -
           NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY         VERSION
01/15/**            WATERSHED CONDITIONS 2025 SOY BEANS             2.04TEST
01:06:00                 PASS   3   JOB NO.   1                  PAGE   2



EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
   STARTING TIME =   .00      RAIN DEPTH =  4.24      RAIN DURATION =  1.00
   ANT. RUNOFF COND. = 2      MAIN TIME INCREMENT =   .100 HOURS
```

ALTERNATE NO. = 1 STORM NO. =25 RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 3

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .100 HOURS

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 25
STARTING TIME = .00 RAIN DEPTH = 4.97 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. = 1 STORM NO. =50 RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 4

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .100 HOURS

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 25
STARTING TIME = .00 RAIN DEPTH = 5.82 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. = 1 STORM NO. =99 RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 5

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 2.40 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

RAINTABLE NUMBER 2, ARC 2
MAIN TIME INCREMENT .100 HOURS

ALTERNATE 1 STORM 2

XSECTION	1	RUNOFF	.05	.36	---	13.23T	3T	60.0
XSECTION	1	REACH	.05	.36	100.30	13.43T	3T	60.0
XSECTION	3	RUNOFF	.09	.63	---	12.54	17	188.9
XSECTION	4	ADDHYD	.14	.53	---	12.57	18	128.6
XSECTION	1	REACH	.14	.53	100.73	13.00	14	100.0
XSECTION	6	RUNOFF	.02	.71	---	12.30	7	350.0
XSECTION	1	REACH	.02	.71	100.54	12.47	6	300.0
XSECTION	8	ADDHYD	.16	.56	---	12.83	17	106.3
XSECTION	9	RUNOFF	.55	.67	---	13.91	52	94.5
XSECTION	10	ADDHYD	.71	.64	---	13.77	63	88.7
XSECTION	1	REACH	.71	.64	101.46	13.77	63	88.7
XSECTION	12	RUNOFF	.15	.54	---	13.06	17	113.3
XSECTION	13	ADDHYD	.87	.62	---	13.52	75	86.2
XSECTION	1	REACH	.87	.62	101.52	13.52	75	86.2
XSECTION	15	RUNOFF	.05	.56	---	12.22	12	240.0
XSECTION	1	REACH	.05	.56	100.69	12.32	12	240.0
XSECTION	17	RUNOFF	.03	.52	---	12.39	5	166.7
XSECTION	18	ADDHYD	.08	.54	---	12.33	18	225.0
XSECTION	1	REACH	.08	.54	100.79	12.50	16	200.0
XSECTION	20	RUNOFF	.03	.83	---	12.04	17	566.7
XSECTION	1	REACH	.03	.82	100.73	12.20	14	466.7
XSECTION	22	ADDHYD	.11	.61	---	12.38	23	209.1
XSECTION	23	ADDHYD	.98	.62	---	13.43	81	82.7
XSECTION	24	RUNOFF	.14	.38	---	12.73	12	85.7
XSECTION	25	ADDHYD	1.12	.59	---	13.32	88	78.6

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 3.45 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 10

XSECTION	1	RUNOFF	.05	.90	---	13.11	9	180.0
XSECTION	1	REACH	.05	.90	100.61	13.27	9	180.0
XSECTION	3	RUNOFF	.09	1.33	---	12.50	40	444.4
XSECTION	4	ADDHYD	.14	1.17	---	12.54	43	307.1
XSECTION	1	REACH	.14	1.17	101.14	12.91	36	257.1
XSECTION	6	RUNOFF	.02	1.44	---	12.29	15	750.0
XSECTION	1	REACH	.02	1.44	100.74	12.43	14	700.0
XSECTION	8	ADDHYD	.16	1.21	---	12.76	44	275.0
XSECTION	9	RUNOFF	.55	1.37	---	13.83	116	210.9
XSECTION	10	ADDHYD	.71	1.34	---	13.64	142	200.0
XSECTION	1	REACH	.71	1.34	101.70	13.64	142	200.0
XSECTION	12	RUNOFF	.15	1.19	---	12.99	42	280.0
XSECTION	13	ADDHYD	.87	1.31	---	13.38	174	200.0
XSECTION	1	REACH	.87	1.31	101.79	13.38	174	200.0
XSECTION	15	RUNOFF	.05	1.21	---	12.19	30	600.0
XSECTION	1	REACH	.05	1.21	101.07	12.19	30	600.0
XSECTION	17	RUNOFF	.03	1.15	---	12.35	14	466.7
XSECTION	18	ADDHYD	.08	1.19	---	12.22	43	537.5
XSECTION	1	REACH	.08	1.19	101.19	12.37	40	500.0
XSECTION	20	RUNOFF	.03	1.60	---	12.03	34	1133.3
XSECTION	1	REACH	.03	1.60	101.06	12.18	29	966.7
XSECTION	22	ADDHYD	.11	1.29	---	12.26	62	563.6
XSECTION	23	ADDHYD	.98	1.31	---	13.31	186	189.8
XSECTION	24	RUNOFF	.14	.92	---	12.65	36	257.1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 10

XSECTION 25 ADDHYD 1.12 1.26 --- 13.09 207 184.8

RAINFALL OF 4.24 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 25

XSECTION 1 RUNOFF .05 1.39 --- 13.07 15 300.0
XSECTION 1 REACH .05 1.39 100.76 13.22 15 300.0
XSECTION 3 RUNOFF .09 1.92 --- 12.49 58 644.4
XSECTION 4 ADDHYD .14 1.73 --- 12.54 65 464.3
XSECTION 1 REACH .14 1.73 101.38 12.88 56 400.0

XSECTION 6 RUNOFF .02 2.05 --- 12.28 22 1100.0
XSECTION 1 REACH .02 2.05 100.92 12.41 21 1050.0
XSECTION 8 ADDHYD .16 1.77 --- 12.74 67 418.8
XSECTION 9 RUNOFF .55 1.98 --- 13.79 171 310.9
XSECTION 10 ADDHYD .71 1.93 --- 13.58 210 295.8

XSECTION 1 REACH .71 1.93 101.88 13.58 210 295.8
XSECTION 12 RUNOFF .15 1.76 --- 12.96 64 426.7
XSECTION 13 ADDHYD .87 1.90 --- 13.33 261 300.0
XSECTION 1 REACH .87 1.90 102.02 13.33 261 300.0
XSECTION 15 RUNOFF .05 1.78 --- 12.19 46 920.0

XSECTION 1 REACH .05 1.78 101.26 12.19 46 920.0
XSECTION 17 RUNOFF .03 1.71 --- 12.33 22 733.3
XSECTION 18 ADDHYD .08 1.75 --- 12.22 66 825.0
XSECTION 1 REACH .08 1.75 101.47 12.35 63 787.5
XSECTION 20 RUNOFF .03 2.25 --- 12.03 49 1633.3

XSECTION 1 REACH .03 2.25 101.22 12.17 42 1400.0
XSECTION 22 ADDHYD .11 1.88 --- 12.25 95 863.6
XSECTION 23 ADDHYD .98 1.90 --- 13.25 278 283.7
XSECTION 24 RUNOFF .14 1.42 --- 12.62 59 421.4
XSECTION 25 ADDHYD 1.12 1.84 --- 12.99 316 282.1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 4.97 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 50

XSECTION	1	RUNOFF	.05	1.90	---	13.05	21	420.0
XSECTION	1	REACH	.05	1.90	100.92	13.18	21	420.0
XSECTION	3	RUNOFF	.09	2.51	---	12.48	77	855.6
XSECTION	4	ADDHYD	.14	2.28	---	12.54	88	628.6
XSECTION	1	REACH	.14	2.28	101.53	12.87	75	535.7
XSECTION	6	RUNOFF	.02	2.66	---	12.28	29	1450.0
XSECTION	1	REACH	.02	2.66	101.04	12.41	28	1400.0
XSECTION	8	ADDHYD	.16	2.34	---	12.73	90	562.5
XSECTION	9	RUNOFF	.55	2.57	---	13.77	225	409.1
XSECTION	10	ADDHYD	.71	2.52	---	13.55	278	391.5
XSECTION	1	REACH	.71	2.52	102.06	13.55	278	391.5
XSECTION	12	RUNOFF	.15	2.32	---	12.95	86	573.3
XSECTION	13	ADDHYD	.87	2.48	---	13.30	347	398.9
XSECTION	1	REACH	.87	2.48	102.23	13.30	347	398.9
XSECTION	15	RUNOFF	.05	2.35	---	12.18	61	1220.0
XSECTION	1	REACH	.05	2.35	101.44	12.18	61	1220.0
XSECTION	17	RUNOFF	.03	2.26	---	12.33	29	966.7
XSECTION	18	ADDHYD	.08	2.31	---	12.21	87	1087.5
XSECTION	1	REACH	.08	2.31	101.55	12.34	84	1050.0
XSECTION	20	RUNOFF	.03	2.87	---	12.02	62	2066.7
XSECTION	1	REACH	.03	2.87	101.37	12.16	55	1833.3
XSECTION	22	ADDHYD	.11	2.46	---	12.24	126	1145.5
XSECTION	23	ADDHYD	.98	2.48	---	13.22	369	376.5
XSECTION	24	RUNOFF	.14	1.94	---	12.61	83	592.9

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 50

XSECTION	25	ADDHYD	1.12	2.41	---	12.93	424	378.6

RAINFALL OF 5.82 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 99

XSECTION	1	RUNOFF	.05	2.53	---	13.03	29	580.0
XSECTION	1	REACH	.05	2.53	101.06	13.16	29	580.0
XSECTION	3	RUNOFF	.09	3.22	---	12.47	100	1111.1
XSECTION	4	ADDHYD	.14	2.96	---	12.53	115	821.4
XSECTION	1	REACH	.14	2.96	101.59	12.86	99	707.1
XSECTION	6	RUNOFF	.02	3.39	---	12.26	37	1850.0
XSECTION	1	REACH	.02	3.39	101.14	12.40	36	1800.0
XSECTION	8	ADDHYD	.16	3.03	---	12.72	118	737.5
XSECTION	9	RUNOFF	.55	3.29	---	13.75	291	529.1
XSECTION	10	ADDHYD	.71	3.23	---	13.52	360	507.0
XSECTION	1	REACH	.71	3.23	102.27	13.52	360	507.0
XSECTION	12	RUNOFF	.15	3.01	---	12.93	112	746.7
XSECTION	13	ADDHYD	.87	3.19	---	13.28	451	518.4
XSECTION	1	REACH	.87	3.19	102.50	13.28	451	518.4
XSECTION	15	RUNOFF	.05	3.04	---	12.18	79	1580.0
XSECTION	1	REACH	.05	3.04	101.54	12.18	79	1580.0
XSECTION	17	RUNOFF	.03	2.95	---	12.33	38	1266.7
XSECTION	18	ADDHYD	.08	3.00	---	12.21	114	1425.0
XSECTION	1	REACH	.08	3.00	101.62	12.34	110	1375.0
XSECTION	20	RUNOFF	.03	3.63	---	12.02	78	2600.0
XSECTION	1	REACH	.03	3.63	101.51	12.15	69	2300.0
XSECTION	22	ADDHYD	.11	3.16	---	12.24	163	1481.8
XSECTION	23	ADDHYD	.98	3.19	---	13.19	480	489.8
XSECTION	24	RUNOFF	.14	2.57	---	12.59	113	807.1
XSECTION	25	ADDHYD	1.12	3.11	---	12.89	557	497.3

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

HYDROGRAPH INFORMATION ROUTING PARAMETERS

XSEC ID	REACH LENGTH (FT)	FLOOD PLAIN LENGTH (FT)	INFLOW PEAK (CFS)	INFLOW TIME (HR)	OUTFLOW PEAK (CFS)	OUTFLOW TIME (HR)	Q-A EQ. COEFF (X)	Q-A EQ. POWER (M)	PEAK ATT-FACTOR (k*)	LENGTH RATIO Q/I (Q*)	KIN COEFF (C)
BASEFLOW IS .0 CFS											
ALTERNATE 1 STORM 2											
1	1865		3	13.2	3	13.4	2.82	1.34	.016	.986	.54
1	8995		18	12.6	14	13.0	2.82	1.34	.120	.779	.22
1	2025		7	12.3	6	12.5	2.82	1.34	.047	.927	.59
1	1025		63	13.8	63	13.8	2.83	1.34	.002	1.000	1.00?
1	1170		75	13.5	75	13.5	2.87	1.32	.003	1.000	1.00?
1	1090		12	12.2	12	12.3	2.82	1.34	.020	.991	.95?
1	2515		18	12.3	16	12.5	2.82	1.34	.045	.919	.60
1	2930		17	12.0	14	12.2	2.82	1.34	.123	.842	.53
ALTERNATE 1 STORM 10											
1	1865		9	13.1	9	13.3	2.82	1.34	.014	.990	.66
1	8995		43	12.5	36	12.9	2.83	1.34	.101	.836	.26
1	2025		15	12.3	14	12.4	2.82	1.34	.040	.954	.68?
1	1025		142	13.6	142	13.6	3.19	1.26	.003	1.000	1.00?
1	1170		174	13.4	174	13.4	3.35	1.24	.004	1.000	1.00?
1	1090		30	12.2	30	12.2	2.82	1.34	.017	1.000	1.00?
1	2515		43	12.2	40	12.4	2.83	1.34	.039	.941	.70?
1	2930		34	12.0	29	12.2	2.82	1.34	.103	.863	.61
ALTERNATE 1 STORM 25											
1	1865		15	13.1	15	13.2	2.82	1.34	.013	.995	.72?
1	8995		65	12.5	56	12.9	2.83	1.34	.091	.860	.29
1	2025		22	12.3	21	12.4	2.82	1.34	.036	.971	.72?
1	1025		210	13.6	210	13.6	3.51	1.22	.003	1.000	1.00?
1	1170		261	13.3	261	13.3	3.68	1.20	.004	1.000	1.00?
1	1090		46	12.2	46	12.2	2.83	1.34	.016	1.000	1.00?
1	2515		65	12.2	62	12.3	2.83	1.34	.036	.945	.75?
1	2930		48	12.0	42	12.2	2.83	1.34	.093	.870	.64

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

XSEC ID	REACH LENGTH (FT)	PLAIN LENGTH (FT)	HYDROGRAPH INFORMATION FLOOD PEAK (CFS)	FLOOD TIME (HR)	INFLOW PEAK (CFS)	INFLOW TIME (HR)	OUTFLOW Q-A EQ. COEFF (X)	OUTFLOW Q-A EQ. POWER (M)	PEAK FACTOR (k*)	ATT-KIN LENGTH RATIO (Q*)	ATT-KIN Q/I COEFF (C)
ALTERNATE 1 STORM 50											
1	1865		21	13.0	21	13.2	2.82	1.34	.012	.997	.76?
1	8995		88	12.5	75	12.9	2.93	1.31	.094	.862	.29
1	2025		29	12.3	28	12.4	2.82	1.34	.033	.976	.75?
1	1025		278	13.5	278	13.5	3.62	1.21	.003	1.000	1.00?
1	1170		347	13.3	347	13.3	3.40	1.23	.003	1.000	1.00?
1	1090		61	12.2	61	12.2	2.83	1.34	.014	1.000	1.00?
1	2515		87	12.2	83	12.3	2.92	1.31	.037	.953	.76?
1	2930		61	12.0	54	12.2	2.83	1.34	.086	.871	.67?
ALTERNATE 1 STORM 99											
1	1865		29	13.0	29	13.2	2.82	1.34	.011	.995	.80?
1	8995		115	12.5	99	12.9	3.06	1.28	.096	.864	.29
1	2025		36	12.3	36	12.4	2.83	1.34	.030	.985	.78?
1	1025		360	13.5	360	13.5	3.36	1.23	.003	1.000	1.00?
1	1170		451	13.3	451	13.3	3.11	1.26	.003	1.000	1.00?
1	1090		79	12.2	79	12.2	2.89	1.32	.014	1.000	1.00?
1	2515		114	12.2	109	12.3	3.05	1.28	.038	.958	.76?
1	2930		77	12.0	67	12.2	2.88	1.32	.084	.869	.68?

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
XSECTION 1	.03					

```
---------------------------
  ALTERNATE  1          14      29      42      55      69

XSECTION   3       .09
---------------------------
  ALTERNATE  1          17      40      58      77     100

XSECTION   4       .14
---------------------------
  ALTERNATE  1          18      43      65      88     115

XSECTION   6       .02
---------------------------
  ALTERNATE  1           7      15      22      29      37

XSECTION   8       .16
---------------------------
  ALTERNATE  1          17      44      67      90     118

XSECTION   9       .55
---------------------------
  ALTERNATE  1          52     116     171     225     291

XSECTION  10       .71
---------------------------
  ALTERNATE  1          63     142     210     278     360

XSECTION  12       .15
---------------------------
  ALTERNATE  1          17      42      64      86     112

XSECTION  13       .87
---------------------------
  ALTERNATE  1          75     174     261     347     451

XSECTION  15       .05
---------------------------
  ALTERNATE  1          12      30      46      61      79

XSECTION  17       .03
---------------------------
  ALTERNATE  1           5      14      22      29      38

XSECTION  18       .08
---------------------------
  ALTERNATE  1          18      43      66      87     114

XSECTION  20       .03
---------------------------
  ALTERNATE  1          17      34      49      62      78

XSECTION  22       .11
---------------------------
```

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
XSECTION 22	.11					
ALTERNATE 1		23	62	95	126	163
XSECTION 23	.98					
ALTERNATE 1		81	186	278	369	480
XSECTION 24	.14					
ALTERNATE 1		12	36	59	83	113
XSECTION 25	1.12					
ALTERNATE 1		88	207	316	424	557

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS 2025 SOY BEANS 2.04TEST

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 2.04TEST
FILES

INPUT = F:\NEV25SOY.DAT , GIVEN DATA FILE
OUTPUT = F:\NEV25SOY.OUT , DATED 01/15/**,01:06:00

FILES GENERATED - DATED 01/15/**,01:06:00

NONE!

JOB ENDED AT 01:06:00
*** TR-20 RUN COMPLETED ***

**********80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY**********

```
JOB TR-20                              SUMMARY
TITLE    NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY
TITLE    WATERSHED CONDITIONS 2025 CORN
 2 XSECTN  001       1         101.5
 8                 100.00     0.10      0.1
 8                 100.50     4.86      1.5
 8                 101.00     24.40     5.0
 8                 101.50     65.72     10.5
 8                 102.00     253.76    34.0
 8                 102.50     452.93    52.5
 8                 103.00     728.76    75.0
 9 ENDTBL
 6 RUNOFF 1 001      1 0.0517      70.0      1.78
 6 REACH  3 001   1  2 1865
 6 RUNOFF 1 003      3 0.0883      77.7      0.96
 6 ADDHYD 4 004   2 3 4
 6 REACH  3 001   4  5 8995
 6 RUNOFF 1 006      1 0.0235      78.4      0.64
 6 REACH  3 001   1  2 2025
 6 ADDHYD 4 008   2 5 6
 6 RUNOFF 1 009      1 0.5514      78.3      2.93
 6 ADDHYD 4 010   1 6 2
 6 REACH  3 001   2  3 1025
 6 RUNOFF 1 012      1 0.1545      74.9      1.67
 6 ADDHYD 4 013   1 3 4
 6 REACH  3 001   4  5 1170
 6 RUNOFF 1 015      1 0.0476      77.0      0.48
 6 REACH  3 001   1  2 1090
 6 RUNOFF 1 017      3 0.0308      73.1      0.72
 6 ADDHYD 4 018   2 3 4
 6 REACH  3 001   4  6 2515
 6 RUNOFF 1 020      1 0.0274      82.5      0.23
 6 REACH  3 001   1  2 2930
 6 ADDHYD 4 022   2 6 1
 6 ADDHYD 4 023   1 5 3
 6 RUNOFF 1 024      2 0.1410      69.0      1.12
 6 ADDHYD 4 025   2 3 4
  ENDATA
 7 INCREM 6          .1
 7 COMPUT 7 001   025  0.        2.40      1.        2 2  01  02
  ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025  0.        3.45      1.        2 2  01  10
```

```
  ENDCMP 1
7 INCREM 6          .1
7 COMPUT 7 001   025   0.        4.24       1.        2 2  01  25
  ENDCMP 1
7 INCREM 6          .1
7 COMPUT 7 001   025   0.        4.97       1.        2 2  01  50
  ENDCMP 1
7 INCREM 6          .1
7 COMPUT 7 001   025   0.        5.82       1.        2 2  01  99
  ENDCMP 1
  ENDJOB 2
```

**********END OF 80-80 LIST**********

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS 2025 CORN 2.04TEST
01:28:02 PASS 1 JOB NO. 1 PAGE 1

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .100 HOURS

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 25
STARTING TIME = .00 RAIN DEPTH = 2.40 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. = 1 STORM NO. = 2 RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .100 HOURS

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 25
STARTING TIME = .00 RAIN DEPTH = 3.45 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. = 1 STORM NO. =10 RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 2

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .100 HOURS

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS 2025 CORN 2.04TEST
01:28:02 PASS 3 JOB NO. 1 PAGE 2

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 4.24   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =25   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   3

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 4.97   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =50   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   4

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 5.82   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =99   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   5

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	PEAK DISCHARGE RUNOFF AMOUNT (IN)	ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 2.40 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.
RAINTABLE NUMBER 2, ARC 2
MAIN TIME INCREMENT .100 HOURS

ALTERNATE 1 STORM 2

XSECTION	1	RUNOFF	.05	.41	---	13.20T	4T 80.0
XSECTION	1	REACH	.05	.41	100.36	13.39T	4T 80.0
XSECTION	3	RUNOFF	.09	.71	---	12.53	20 222.2
XSECTION	4	ADDHYD	.14	.60	---	12.56	21 150.0
XSECTION	1	REACH	.14	.60	100.80	12.97	16 114.3
XSECTION	6	RUNOFF	.02	.74	---	12.30	7 350.0
XSECTION	1	REACH	.02	.74	100.55	12.47	7 350.0
XSECTION	8	ADDHYD	.16	.62	---	12.82	20 125.0
XSECTION	9	RUNOFF	.55	.74	---	13.89	59 107.3
XSECTION	10	ADDHYD	.71	.71	---	13.74	71 100.0
XSECTION	1	REACH	.71	.71	101.52	13.74	71 100.0
XSECTION	12	RUNOFF	.15	.59	---	13.04	19 126.7
XSECTION	13	ADDHYD	.87	.69	---	13.49	85 97.7
XSECTION	1	REACH	.87	.69	101.55	13.49	85 97.7
XSECTION	15	RUNOFF	.05	.68	---	12.20	16 320.0
XSECTION	1	REACH	.05	.68	100.79	12.31	16 320.0
XSECTION	17	RUNOFF	.03	.52	---	12.39	5 166.7
XSECTION	18	ADDHYD	.08	.61	---	12.32	21 262.5
XSECTION	1	REACH	.08	.61	100.88	12.48	20 250.0
XSECTION	20	RUNOFF	.03	.95	---	12.04	20 666.7
XSECTION	1	REACH	.03	.95	100.80	12.19	17 566.7
XSECTION	22	ADDHYD	.11	.70	---	12.36	29 263.6
XSECTION	23	ADDHYD	.98	.69	---	13.41	92 93.9
XSECTION	24	RUNOFF	.14	.38	---	12.73	12 85.7
XSECTION	25	ADDHYD	1.12	.65	---	13.31	99 88.4

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 3.45 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 10

XSECTION	1	RUNOFF	.05	.98	---	13.10	10	200.0
XSECTION	1	REACH	.05	.98	100.64	13.25	10	200.0
XSECTION	3	RUNOFF	.09	1.44	---	12.49	43	477.8
XSECTION	4	ADDHYD	.14	1.27	---	12.54	48	342.9
XSECTION	1	REACH	.14	1.27	101.19	12.90	40	285.7
XSECTION	6	RUNOFF	.02	1.49	---	12.28	16	800.0
XSECTION	1	REACH	.02	1.49	100.76	12.43	15	750.0
XSECTION	8	ADDHYD	.16	1.30	---	12.76	48	300.0
XSECTION	9	RUNOFF	.55	1.48	---	13.81	126	229.1
XSECTION	10	ADDHYD	.71	1.44	---	13.62	155	218.3
XSECTION	1	REACH	.71	1.44	101.74	13.62	155	218.3
XSECTION	12	RUNOFF	.15	1.26	---	12.98	44	293.3
XSECTION	13	ADDHYD	.87	1.41	---	13.37	190	218.4
XSECTION	1	REACH	.87	1.41	101.83	13.37	190	218.4
XSECTION	15	RUNOFF	.05	1.39	---	12.19	36	720.0
XSECTION	1	REACH	.05	1.39	101.14	12.19	36	720.0
XSECTION	17	RUNOFF	.03	1.15	---	12.35	14	466.7
XSECTION	18	ADDHYD	.08	1.30	---	12.22	48	600.0
XSECTION	1	REACH	.08	1.30	101.25	12.35	45	562.5
XSECTION	20	RUNOFF	.03	1.78	---	12.03	38	1266.7
XSECTION	1	REACH	.03	1.78	101.10	12.17	33	1100.0
XSECTION	22	ADDHYD	.11	1.42	---	12.25	71	645.5
XSECTION	23	ADDHYD	.98	1.41	---	13.29	202	206.1
XSECTION	24	RUNOFF	.14	.92	---	12.65	36	257.1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ID	OPERATION	AREA (SQ MI)	AMOUNT (IN)	ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 10

XSECTION	25	ADDHYD	1.12	1.35	---	13.09	224	200.0

RAINFALL OF 4.24 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 25

XSECTION	1	RUNOFF	.05	1.49	---	13.06	17	340.0
XSECTION	1	REACH	.05	1.49	100.80	13.20	17	340.0
XSECTION	3	RUNOFF	.09	2.05	---	12.49	63	700.0
XSECTION	4	ADDHYD	.14	1.85	---	12.54	71	507.1
XSECTION	1	REACH	.14	1.85	101.44	12.87	61	435.7
XSECTION	6	RUNOFF	.02	2.11	---	12.28	23	1150.0
XSECTION	1	REACH	.02	2.11	100.93	12.42	22	1100.0
XSECTION	8	ADDHYD	.16	1.88	---	12.74	72	450.0
XSECTION	9	RUNOFF	.55	2.10	---	13.78	183	332.7
XSECTION	10	ADDHYD	.71	2.05	---	13.56	226	318.3
XSECTION	1	REACH	.71	2.05	101.93	13.56	226	318.3
XSECTION	12	RUNOFF	.15	1.84	---	12.96	67	446.7
XSECTION	13	ADDHYD	.87	2.02	---	13.32	279	320.7
XSECTION	1	REACH	.87	2.02	102.06	13.32	279	320.7
XSECTION	15	RUNOFF	.05	2.00	---	12.18	52	1040.0
XSECTION	1	REACH	.05	2.00	101.34	12.18	52	1040.0
XSECTION	17	RUNOFF	.03	1.71	---	12.33	22	733.3
XSECTION	18	ADDHYD	.08	1.89	---	12.21	72	900.0
XSECTION	1	REACH	.08	1.89	101.51	12.34	69	862.5
XSECTION	20	RUNOFF	.03	2.45	---	12.02	53	1766.7
XSECTION	1	REACH	.03	2.45	101.27	12.16	46	1533.3
XSECTION	22	ADDHYD	.11	2.03	---	12.24	104	945.5
XSECTION	23	ADDHYD	.98	2.02	---	13.24	297	303.1
XSECTION	24	RUNOFF	.14	1.42	---	12.62	59	421.4
XSECTION	25	ADDHYD	1.12	1.94	---	12.99	335	299.1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:

F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 4.97 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 50

XSECTION	1	RUNOFF	.05	2.01	---	13.04	23	460.0
XSECTION	1	REACH	.05	2.01	100.96	13.17	23	460.0
XSECTION	3	RUNOFF	.09	2.66	---	12.47	83	922.2
XSECTION	4	ADDHYD	.14	2.42	---	12.53	94	671.4
XSECTION	1	REACH	.14	2.42	101.54	12.86	81	578.6
XSECTION	6	RUNOFF	.02	2.72	---	12.27	29	1450.0
XSECTION	1	REACH	.02	2.72	101.05	12.40	29	1450.0
XSECTION	8	ADDHYD	.16	2.46	---	12.73	96	600.0
XSECTION	9	RUNOFF	.55	2.71	---	13.76	239	434.5
XSECTION	10	ADDHYD	.71	2.66	---	13.53	295	415.5
XSECTION	1	REACH	.71	2.66	102.10	13.53	295	415.5
XSECTION	12	RUNOFF	.15	2.42	---	12.94	89	593.3
XSECTION	13	ADDHYD	.87	2.61	---	13.30	367	421.8
XSECTION	1	REACH	.87	2.61	102.28	13.30	367	421.8
XSECTION	15	RUNOFF	.05	2.60	---	12.18	68	1360.0
XSECTION	1	REACH	.05	2.60	101.51	12.18	68	1360.0
XSECTION	17	RUNOFF	.03	2.26	---	12.33	29	966.7
XSECTION	18	ADDHYD	.08	2.46	---	12.21	94	1175.0
XSECTION	1	REACH	.08	2.46	101.57	12.34	90	1125.0
XSECTION	20	RUNOFF	.03	3.10	---	12.02	67	2233.3
XSECTION	1	REACH	.03	3.10	101.42	12.15	59	1966.7
XSECTION	22	ADDHYD	.11	2.63	---	12.24	136	1236.4
XSECTION	23	ADDHYD	.98	2.61	---	13.21	390	398.0
XSECTION	24	RUNOFF	.14	1.94	---	12.61	83	592.9

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	PEAK DISCHARGE RUNOFF AMOUNT (IN)	ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 1 STORM 50							
XSECTION 25	ADDHYD	1.12	2.53	---	12.93	446	398.2

RAINFALL OF 5.82 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 99							
XSECTION 1	RUNOFF	.05	2.66	---	13.02	31	620.0
XSECTION 1	REACH	.05	2.66	101.08	13.15	31	620.0
XSECTION 3	RUNOFF	.09	3.39	---	12.47	105	1166.7
XSECTION 4	ADDHYD	.14	3.12	---	12.53	121	864.3
XSECTION 1	REACH	.14	3.12	101.60	12.86	105	750.0
XSECTION 6	RUNOFF	.02	3.45	---	12.27	37	1850.0
XSECTION 1	REACH	.02	3.45	101.15	12.40	36	1800.0
XSECTION 8	ADDHYD	.16	3.17	---	12.73	124	775.0
XSECTION 9	RUNOFF	.55	3.45	---	13.74	305	554.5
XSECTION 10	ADDHYD	.71	3.38	---	13.51	379	533.8
XSECTION 1	REACH	.71	3.38	102.31	13.51	379	533.8
XSECTION 12	RUNOFF	.15	3.12	---	12.93	117	780.0
XSECTION 13	ADDHYD	.87	3.34	---	13.27	474	544.8
XSECTION 1	REACH	.87	3.34	102.54	13.27	474	544.8
XSECTION 15	RUNOFF	.05	3.32	---	12.17	87	1740.0
XSECTION 1	REACH	.05	3.32	101.56	12.17	87	1740.0
XSECTION 17	RUNOFF	.03	2.95	---	12.33	38	1266.7
XSECTION 18	ADDHYD	.08	3.17	---	12.20	121	1512.5
XSECTION 1	REACH	.08	3.17	101.64	12.33	117	1462.5
XSECTION 20	RUNOFF	.03	3.87	---	12.02	83	2766.7
XSECTION 1	REACH	.03	3.87	101.52	12.15	74	2466.7
XSECTION 22	ADDHYD	.11	3.35	---	12.23	174	1581.8
XSECTION 23	ADDHYD	.98	3.34	---	13.18	504	514.3
XSECTION 24	RUNOFF	.14	2.57	---	12.59	113	807.1
XSECTION 25	ADDHYD	1.12	3.24	---	12.90	581	518.8

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

XSEC ID	REACH LENGTH (FT)	PLAIN LENGTH (FT)	HYDROGRAPH INFORMATION: FLOOD PEAK (CFS)	FLOOD TIME (HR)	INFLOW PEAK (CFS)	INFLOW TIME (HR)	ROUTING PARAMETERS: OUTFLOW Q-A EQ. (X)	OUTFLOW Q-A EQ. (M)	PEAK LENGTH FACTOR (k*)	ATT-KIN RATIO Q/I (Q*)	ATT-KIN COEFF (C)
BASEFLOW IS .0 CFS											
ALTERNATE 1 STORM 2											
1	1865		4	13.2	4	13.4	2.82	1.34	.016	.987	.56
1	8995		21	12.6	16	13.0	2.82	1.34	.120	.789	.22
1	2025		7	12.3	7	12.5	2.82	1.34	.047	.928	.60
1	1025		71	13.7	71	13.7	2.86	1.33	.002	1.000	1.00?
1	1170		85	13.5	85	13.5	2.92	1.31	.003	1.000	1.00?
1	1090		16	12.2	16	12.3	2.82	1.34	.020	.998	.99?
1	2515		21	12.3	20	12.5	2.82	1.34	.047	.915	.62
1	2930		20	12.0	17	12.2	2.82	1.34	.120	.848	.55
ALTERNATE 1 STORM 10											
1	1865		10	13.1	10	13.2	2.82	1.34	.014	.989	.67?
1	8995		47	12.5	40	12.9	2.83	1.34	.100	.841	.27
1	2025		16	12.3	15	12.4	2.82	1.34	.039	.957	.68?
1	1025		155	13.6	155	13.6	3.25	1.25	.003	1.000	1.00?
1	1170		190	13.4	190	13.4	3.42	1.23	.004	1.000	1.00?
1	1090		36	12.2	36	12.2	2.83	1.34	.017	1.000	1.00?
1	2515		48	12.2	45	12.4	2.83	1.34	.039	.933	.71?
1	2930		38	12.0	33	12.2	2.83	1.34	.100	.862	.62
ALTERNATE 1 STORM 25											
1	1865		17	13.1	17	13.2	2.82	1.34	.013	.996	.73?
1	8995		70	12.5	61	12.9	2.85	1.33	.093	.860	.29
1	2025		22	12.3	22	12.4	2.82	1.34	.035	.970	.73?
1	1025		225	13.6	225	13.6	3.58	1.21	.003	1.000	1.00?
1	1170		279	13.3	279	13.3	3.62	1.21	.004	1.000	1.00?
1	1090		52	12.2	52	12.2	2.83	1.34	.015	1.000	1.00?
1	2515		72	12.2	68	12.3	2.86	1.33	.037	.949	.75?
1	2930		52	12.0	45	12.2	2.83	1.34	.091	.867	.65

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

XSEC ID	REACH LENGTH (FT)	PLAIN LENGTH (FT)	HYDROGRAPH INFORMATION FLOOD PEAK (CFS)	FLOOD TIME (HR)	INFLOW PEAK (CFS)	INFLOW TIME (HR)	OUTFLOW Q-A EQ. COEFF (X)	OUTFLOW Q-A EQ. POWER (M)	ROUTING PARAMETERS PEAK FACTOR (k*)	ROUTING PARAMETERS ATT-KIN Q/I (Q*)	ROUTING PARAMETERS ATT-KIN COEFF (C)
ALTERNATE 1 STORM 50											
1	1865		23	13.0	23	13.2	2.82	1.34	.012	.996	.77?
1	8995		94	12.5	81	12.9	2.96	1.30	.095	.860	.29
1	2025		29	12.3	29	12.4	2.82	1.34	.033	.980	.76?
1	1025		295	13.5	295	13.5	3.56	1.21	.003	1.000	1.00?
1	1170		367	13.3	367	13.3	3.34	1.24	.003	1.000	1.00?
1	1090		67	12.2	67	12.2	2.84	1.33	.014	1.000	1.00?
1	2515		93	12.2	89	12.3	2.96	1.30	.038	.956	.76?
1	2930		66	12.0	57	12.2	2.83	1.34	.084	.869	.68?
ALTERNATE 1 STORM 99											
1	1865		31	13.0	31	13.1	2.82	1.34	.011	.994	.80?
1	8995		121	12.5	105	12.9	3.09	1.27	.096	.866	.29
1	2025		37	12.3	36	12.4	2.83	1.34	.030	.985	.78?
1	1025		379	13.5	379	13.5	3.30	1.24	.003	1.000	1.00?
1	1170		474	13.3	474	13.3	3.08	1.26	.003	1.000	1.00?
1	1090		86	12.2	86	12.2	2.92	1.31	.015	1.000	1.00?
1	2515		121	12.2	116	12.3	3.09	1.27	.039	.960	.76?
1	2930		82	12.0	71	12.2	2.90	1.31	.084	.867	.68?

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
XSECTION 1	.03					
ALTERNATE 1		17	33	46	59	74
XSECTION 3	.09					
ALTERNATE 1		20	43	63	83	105
XSECTION 4	.14					
ALTERNATE 1		21	48	71	94	121
XSECTION 6	.02					
ALTERNATE 1		7	16	23	29	37
XSECTION 8	.16					
ALTERNATE 1		20	48	72	96	124
XSECTION 9	.55					
ALTERNATE 1		59	126	183	239	305
XSECTION 10	.71					
ALTERNATE 1		71	155	226	295	379
XSECTION 12	.15					
ALTERNATE 1		19	44	67	89	117
XSECTION 13	.87					
ALTERNATE 1		85	190	279	367	474
XSECTION 15	.05					
ALTERNATE 1		16	36	52	68	87
XSECTION 17	.03					
ALTERNATE 1		5	14	22	29	38
XSECTION 18	.08					
ALTERNATE 1		21	48	72	94	121
XSECTION 20	.03					

ALTERNATE 1 20 38 53 67 83

XSECTION 22 .11

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS 2025 CORN 2.04TEST
01:28:02 SUMMARY, JOB NO. 1 PAGE 12

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
XSECTION 22	.11					
ALTERNATE 1		29	71	104	136	174
XSECTION 23	.98					
ALTERNATE 1		92	202	297	390	504
XSECTION 24	.14					
ALTERNATE 1		12	36	59	83	113
XSECTION 25	1.12					
ALTERNATE 1		99	224	335	446	581

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS 2025 CORN 2.04TEST

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 2.04TEST
FILES

INPUT = F:\NEV25CRN.DAT , GIVEN DATA FILE
OUTPUT = F:\NEV25CRN.OUT , DATED 01/15/**,01:28:02

FILES GENERATED - DATED 01/15/**,01:28:02

NONE!

JOB ENDED AT 01:28:02
*** TR-20 RUN COMPLETED ***

**********80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY**********

```
JOB TR-20                              SUMMARY
TITLE    NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY
TITLE    WATERSHED CONDITIONS 2025 HAY
 2 XSECTN  001       1        101.5
 8                100.00    0.10      0.1
 8                100.50    4.86      1.5
 8                101.00    24.40     5.0
 8                101.50    65.72     10.5
 8                102.00    253.76    34.0
 8                102.50    452.93    52.5
 8                103.00    728.76    75.0
 9 ENDTBL
 6 RUNOFF 1 001      1 0.0517      65.9       1.78
 6 REACH  3 001   1   2 1865
 6 RUNOFF 1 003      3 0.0883      73.0       0.96
 6 ADDHYD 4 004   2 3 4
 6 REACH  3 001   4   5 8995
 6 RUNOFF 1 006      1 0.0235      76.5       0.64
 6 REACH  3 001   1   2 2025
 6 ADDHYD 4 008   2 5 6
 6 RUNOFF 1 009      1 0.5514      73.8       2.93
 6 ADDHYD 4 010   1 6 2
 6 REACH  3 001   2   3 1025
 6 RUNOFF 1 012      1 0.1545      71.7       1.67
 6 ADDHYD 4 013   1 3 4
 6 REACH  3 001   4   5 1170
 6 RUNOFF 1 015      1 0.0476      69.2       0.48
 6 REACH  3 001   1   2 1090
 6 RUNOFF 1 017      3 0.0308      73.1       0.72
 6 ADDHYD 4 018   2 3 4
 6 REACH  3 001   4   6 2515
 6 RUNOFF 1 020      1 0.0274      75.9       0.23
 6 REACH  3 001   1   2 2930
 6 ADDHYD 4 022   2 6 1
```

```
 6 ADDHYD 4 023   1 5 3
 6 RUNOFF 1 024      2 0.1410      69.0       1.12
 6 ADDHYD 4 025   2 3 4
  ENDATA
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        2.40       1.        2 2  01  02
  ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        3.45       1.        2 2  01  10
  ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        4.24       1.        2 2  01  25
  ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        4.97       1.        2 2  01  50
  ENDCMP 1
 7 INCREM 6          .1
 7 COMPUT 7 001   025   0.        5.82       1.        2 2  01  99
  ENDCMP 1
  ENDJOB 2

********************************END OF 80-80 LIST*******************************


TR20 ------------------------------------------------------------------- SCS -
          NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY         VERSION
01/15/**              WATERSHED CONDITIONS 2025 HAY               2.04TEST
03:15:00                PASS   1   JOB NO.   1                  PAGE   1



 EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


 EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
    STARTING TIME =   .00      RAIN DEPTH =  2.40      RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2      MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. = 1          STORM NO. = 2           RAIN TABLE NO. = 2


 EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   1


 EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


 EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
    STARTING TIME =   .00      RAIN DEPTH =  3.45      RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2      MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. = 1          STORM NO. =10           RAIN TABLE NO. = 2


 EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   2
```

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS 2025 HAY 2.04TEST
03:15:00 PASS 3 JOB NO. 1 PAGE 2

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
STARTING TIME = .00 RAIN DEPTH = 4.24 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. = 1 STORM NO. =25 RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   3

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
STARTING TIME = .00 RAIN DEPTH = 4.97 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. = 1 STORM NO. =50 RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   4

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS 2025 HAY 2.04TEST
03:15:00 PASS 5 JOB NO. 1 PAGE 3

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
STARTING TIME = .00 RAIN DEPTH = 5.82 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. = 1 STORM NO. =99 RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   5

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 2.40 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.
RAINTABLE NUMBER 2, ARC 2
MAIN TIME INCREMENT .100 HOURS

ALTERNATE 1 STORM 2

XSECTION	1	RUNOFF	.05	.28	---	13.31T	2T 40.0
XSECTION	1	REACH	.05	.28	100.21	13.51T	2T 40.0
XSECTION	3	RUNOFF	.09	.51	---	12.56	13 144.4
XSECTION	4	ADDHYD	.14	.43	---	12.60	13 92.9
XSECTION	1	REACH	.14	.43	100.64	13.05	10 71.4
XSECTION	6	RUNOFF	.02	.66	---	12.32	6 300.0
XSECTION	1	REACH	.02	.65	100.52	12.49	6 300.0
XSECTION	8	ADDHYD	.16	.46	---	12.82	13 81.3
XSECTION	9	RUNOFF	.55	.54	---	13.96	40 72.7
XSECTION	10	ADDHYD	.71	.53	---	13.83	49 69.0
XSECTION	1	REACH	.71	.53	101.29	13.83	49 69.0
XSECTION	12	RUNOFF	.15	.47	---	13.09	14 93.3
XSECTION	13	ADDHYD	.87	.52	---	13.59	58 66.7
XSECTION	1	REACH	.87	.52	101.41	13.59	58 66.7
XSECTION	15	RUNOFF	.05	.38	---	12.24	7 140.0
XSECTION	1	REACH	.05	.38	100.55	12.36	7 140.0
XSECTION	17	RUNOFF	.03	.52	---	12.39	5 166.7
XSECTION	18	ADDHYD	.08	.44	---	12.37	12 150.0
XSECTION	1	REACH	.08	.43	100.66	12.54	11 137.5
XSECTION	20	RUNOFF	.03	.63	---	12.05	12 400.0
XSECTION	1	REACH	.03	.63	100.62	12.31	10 333.3
XSECTION	22	ADDHYD	.11	.49	---	12.42	18 163.6
XSECTION	23	ADDHYD	.98	.51	---	13.47	63 64.3
XSECTION	24	RUNOFF	.14	.38	---	12.73	12 85.7
XSECTION	25	ADDHYD	1.12	.49	---	13.33	70 62.5

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 3.45 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 1 STORM 10							
XSECTION 1	RUNOFF	.05	.77	---	13.14	7	140.0
XSECTION 1	REACH	.05	.77	100.57	13.31	7	140.0
XSECTION 3	RUNOFF	.09	1.15	---	12.52	33	366.7
XSECTION 4	ADDHYD	.14	1.01	---	12.56	36	257.1
XSECTION 1	REACH	.14	1.01	101.06	13.04	29	207.1
XSECTION 6	RUNOFF	.02	1.36	---	12.29	14	700.0
XSECTION 1	REACH	.02	1.36	100.72	12.43	14	700.0
XSECTION 8	ADDHYD	.16	1.06	---	12.91	35	218.8
XSECTION 9	RUNOFF	.55	1.19	---	13.86	98	178.2
XSECTION 10	ADDHYD	.71	1.16	---	13.69	121	170.4
XSECTION 1	REACH	.71	1.16	101.65	13.69	121	170.4
XSECTION 12	RUNOFF	.15	1.07	---	13.00	36	240.0
XSECTION 13	ADDHYD	.87	1.15	---	13.42	149	171.3
XSECTION 1	REACH	.87	1.15	101.72	13.42	149	171.3
XSECTION 15	RUNOFF	.05	.93	---	12.21	22	440.0
XSECTION 1	REACH	.05	.93	100.93	12.21	22	440.0
XSECTION 17	RUNOFF	.03	1.15	---	12.35	14	466.7
XSECTION 18	ADDHYD	.08	1.02	---	12.24	34	425.0
XSECTION 1	REACH	.08	1.02	101.10	12.40	33	412.5
XSECTION 20	RUNOFF	.03	1.32	---	12.04	28	933.3
XSECTION 1	REACH	.03	1.32	100.98	12.18	23	766.7
XSECTION 22	ADDHYD	.11	1.10	---	12.29	49	445.5
XSECTION 23	ADDHYD	.98	1.14	---	13.34	159	162.2
XSECTION 24	RUNOFF	.14	.92	---	12.65	36	257.1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 1 STORM 10							
XSECTION 25	ADDHYD	1.12	1.11	---	13.13	180	160.7
RAINFALL OF 4.24 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 1 STORM 25							
XSECTION 1	RUNOFF	.05	1.23	---	13.09	13	260.0
XSECTION 1	REACH	.05	1.23	100.71	13.24	13	260.0
XSECTION 3	RUNOFF	.09	1.70	---	12.49	51	566.7
XSECTION 4	ADDHYD	.14	1.52	---	12.54	57	407.1
XSECTION 1	REACH	.14	1.52	101.28	12.90	48	342.9
XSECTION 6	RUNOFF	.02	1.96	---	12.29	21	1050.0
XSECTION 1	REACH	.02	1.96	100.89	12.42	20	1000.0
XSECTION 8	ADDHYD	.16	1.59	---	12.74	59	368.8
XSECTION 9	RUNOFF	.55	1.76	---	13.82	150	272.7
XSECTION 10	ADDHYD	.71	1.72	---	13.62	184	259.2
XSECTION 1	REACH	.71	1.72	101.81	13.62	184	259.2
XSECTION 12	RUNOFF	.15	1.61	---	12.97	57	380.0
XSECTION 13	ADDHYD	.87	1.70	---	13.35	229	263.2
XSECTION 1	REACH	.87	1.70	101.93	13.35	229	263.2
XSECTION 15	RUNOFF	.05	1.44	---	12.20	36	720.0
XSECTION 1	REACH	.05	1.44	101.14	12.20	36	720.0
XSECTION 17	RUNOFF	.03	1.71	---	12.33	22	733.3
XSECTION 18	ADDHYD	.08	1.54	---	12.23	56	700.0
XSECTION 1	REACH	.08	1.54	101.35	12.37	53	662.5
XSECTION 20	RUNOFF	.03	1.92	---	12.03	41	1366.7
XSECTION 1	REACH	.03	1.92	101.13	12.17	36	1200.0
XSECTION 22	ADDHYD	.11	1.64	---	12.27	79	718.2
XSECTION 23	ADDHYD	.98	1.69	---	13.27	244	249.0
XSECTION 24	RUNOFF	.14	1.42	---	12.62	59	421.4
XSECTION 25	ADDHYD	1.12	1.66	---	12.96	282	251.8

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 4.97 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 1 STORM 50							
XSECTION 1	RUNOFF	.05	1.70	---	13.07	19	380.0
XSECTION 1	REACH	.05	1.70	100.85	13.20	19	380.0
XSECTION 3	RUNOFF	.09	2.25	---	12.49	69	766.7
XSECTION 4	ADDHYD	.14	2.05	---	12.55	77	550.0
XSECTION 1	REACH	.14	2.05	101.50	12.89	66	471.4
XSECTION 6	RUNOFF	.02	2.55	---	12.27	27	1350.0
XSECTION 1	REACH	.02	2.55	101.03	12.41	27	1350.0
XSECTION 8	ADDHYD	.16	2.12	---	12.73	81	506.3
XSECTION 9	RUNOFF	.55	2.32	---	13.79	201	365.5
XSECTION 10	ADDHYD	.71	2.28	---	13.58	248	349.3
XSECTION 1	REACH	.71	2.28	101.98	13.58	248	349.3
XSECTION 12	RUNOFF	.15	2.15	---	12.96	78	520.0
XSECTION 13	ADDHYD	.87	2.25	---	13.32	310	356.3
XSECTION 1	REACH	.87	2.25	102.14	13.32	310	356.3
XSECTION 15	RUNOFF	.05	1.95	---	12.19	50	1000.0
XSECTION 1	REACH	.05	1.95	101.31	12.19	50	1000.0
XSECTION 17	RUNOFF	.03	2.26	---	12.33	29	966.7
XSECTION 18	ADDHYD	.08	2.07	---	12.22	76	950.0
XSECTION 1	REACH	.08	2.07	101.52	12.35	73	912.5
XSECTION 20	RUNOFF	.03	2.50	---	12.03	54	1800.0
XSECTION 1	REACH	.03	2.50	101.28	12.17	47	1566.7
XSECTION 22	ADDHYD	.11	2.18	---	12.25	107	972.7
XSECTION 23	ADDHYD	.98	2.25	---	13.24	331	337.8
XSECTION 24	RUNOFF	.14	1.94	---	12.61	83	592.9

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 1 STORM 50							
XSECTION 25	ADDHYD	1.12	2.21	---	12.92	386	344.6
RAINFALL OF 5.82 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 1 STORM 99							
XSECTION 1	RUNOFF	.05	2.30	---	13.04	26	520.0
XSECTION 1	REACH	.05	2.30	101.02	13.17	26	520.0
XSECTION 3	RUNOFF	.09	2.94	---	12.48	91	1011.1
XSECTION 4	ADDHYD	.14	2.70	---	12.54	104	742.9
XSECTION 1	REACH	.14	2.70	101.56	12.87	89	635.7
XSECTION 6	RUNOFF	.02	3.27	---	12.27	35	1750.0
XSECTION 1	REACH	.02	3.27	101.12	12.40	34	1700.0
XSECTION 8	ADDHYD	.16	2.78	---	12.73	107	668.8
XSECTION 9	RUNOFF	.55	3.01	---	13.77	264	480.0
XSECTION 10	ADDHYD	.71	2.96	---	13.54	327	460.6
XSECTION 1	REACH	.71	2.96	102.18	13.54	327	460.6
XSECTION 12	RUNOFF	.15	2.82	---	12.94	104	693.3
XSECTION 13	ADDHYD	.87	2.94	---	13.30	411	472.4
XSECTION 1	REACH	.87	2.94	102.39	13.30	411	472.4
XSECTION 15	RUNOFF	.05	2.59	---	12.18	67	1340.0
XSECTION 1	REACH	.05	2.59	101.50	12.18	67	1340.0
XSECTION 17	RUNOFF	.03	2.95	---	12.33	38	1266.7
XSECTION 18	ADDHYD	.08	2.73	---	12.22	101	1262.5
XSECTION 1	REACH	.08	2.73	101.59	12.35	98	1225.0
XSECTION 20	RUNOFF	.03	3.22	---	12.03	70	2333.3
XSECTION 1	REACH	.03	3.21	101.45	12.16	62	2066.7
XSECTION 22	ADDHYD	.11	2.85	---	12.24	144	1309.1
XSECTION 23	ADDHYD	.98	2.93	---	13.21	437	445.9
XSECTION 24	RUNOFF	.14	2.57	---	12.59	113	807.1
XSECTION 25	ADDHYD	1.12	2.88	---	12.88	514	458.9

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

XSEC ID	REACH LENGTH (FT)	PLAIN LENGTH (FT)	HYDROGRAPH INFORMATION FLOOD PEAK (CFS)	FLOOD TIME (HR)	INFLOW PEAK (CFS)	INFLOW TIME (HR)	ROUTING PARAMETERS OUTFLOW Q-A EQ. COEFF (X)	OUTFLOW Q-A EQ. POWER (M)	PEAK FACTOR (k*)	ATT-KIN Q/I (Q*)	ATT-KIN COEFF (C)
BASEFLOW IS .0 CFS											
ALTERNATE 1 STORM 2											
1	1865		2	13.3	2	13.5	2.82	1.34	.015	.984	.51
1	8995		13	12.6	10	13.1	2.82	1.34	.120	.759	.20
1	2025		6	12.3	6	12.5	2.82	1.34	.047	.928	.58
1	1025		49	13.8	49	13.8	2.83	1.34	.002	1.000	1.00?
1	1170		58	13.6	58	13.6	2.83	1.34	.002	1.000	1.00?
1	1090		7	12.2	7	12.4	2.82	1.34	.018	.974	.88?
1	2515		12	12.4	11	12.5	2.82	1.34	.042	.911	.56
1	2930		12	12.1	10	12.3	2.82	1.34	.124	.827	.50
ALTERNATE 1 STORM 10											
1	1865		7	13.1	7	13.3	2.82	1.34	.014	.992	.64
1	8995		36	12.6	29	13.0	2.83	1.34	.102	.824	.25
1	2025		14	12.3	13	12.4	2.82	1.34	.040	.950	.67?
1	1025		121	13.7	121	13.7	3.09	1.27	.003	1.000	1.00?
1	1170		149	13.4	149	13.4	3.22	1.25	.003	1.000	1.00?
1	1090		22	12.2	22	12.2	2.82	1.34	.017	1.000	1.00?
1	2515		34	12.2	33	12.4	2.82	1.34	.038	.961	.67?
1	2930		27	12.0	23	12.2	2.82	1.34	.107	.863	.58
ALTERNATE 1 STORM 25											
1	1865		13	13.1	13	13.2	2.82	1.34	.013	.992	.70?
1	8995		56	12.5	48	12.9	2.83	1.34	.093	.851	.28
1	2025		21	12.3	20	12.4	2.82	1.34	.036	.965	.72?

1	1025	184	13.6	184	13.6	3.39	1.23	.003	1.000	1.00?
1	1170	228	13.4	228	13.4	3.60	1.21	.004	1.000	1.00?
1	1090	36	12.2	36	12.2	2.83	1.34	.016	1.000	1.00?
1	2515	56	12.2	53	12.4	2.83	1.34	.036	.950	.73?
1	2930	40	12.0	35	12.2	2.83	1.34	.097	.875	.63

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

		HYDROGRAPH INFORMATION				ROUTING PARAMETERS				
		FLOOD	INFLOW	OUTFLOW		Q-A EQ.		PEAK		ATT-KIN
XSEC ID	REACH LENGTH (FT)	PLAIN LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	COEFF (X)	POWER (M)	FACTOR (k*)	Q/I (Q*)	COEFF (C)
ALTERNATE 1 STORM 50											
1	1865		19	13.1	19	13.2	2.82	1.34	.012	.996	.74?
1	8995		77	12.5	66	12.9	2.88	1.32	.091	.864	.29
1	2025		27	12.3	27	12.4	2.82	1.34	.033	.977	.75?
1	1025		248	13.6	248	13.6	3.68	1.20	.004	1.000	1.00?
1	1170		310	13.3	310	13.3	3.51	1.22	.004	1.000	1.00?
1	1090		50	12.2	50	12.2	2.83	1.34	.015	1.000	1.00?
1	2515		76	12.2	72	12.4	2.88	1.32	.035	.948	.75?
1	2930		53	12.0	46	12.2	2.83	1.34	.089	.878	.66
ALTERNATE 1 STORM 99											
1	1865		26	13.0	26	13.2	2.82	1.34	.011	.997	.78?
1	8995		103	12.5	89	12.9	3.00	1.29	.094	.865	.29
1	2025		35	12.3	34	12.4	2.83	1.34	.031	.983	.78?
1	1025		327	13.5	327	13.5	3.46	1.22	.003	1.000	1.00?
1	1170		411	13.3	411	13.3	3.22	1.25	.003	1.000	1.00?
1	1090		67	12.2	67	12.2	2.84	1.34	.014	1.000	1.00?
1	2515		101	12.2	96	12.3	2.99	1.29	.037	.952	.76?
1	2930		69	12.0	60	12.2	2.84	1.33	.084	.876	.68?

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
XSECTION 1	.03					
ALTERNATE 1		10	23	36	47	62
XSECTION 3	.09					
ALTERNATE 1		13	33	51	69	91
XSECTION 4	.14					
ALTERNATE 1		13	36	57	77	104
XSECTION 6	.02					
ALTERNATE 1		6	14	21	27	35
XSECTION 8	.16					
ALTERNATE 1		13	35	59	81	107
XSECTION 9	.55					
ALTERNATE 1		40	98	150	201	264
XSECTION 10	.71					
ALTERNATE 1		49	121	184	248	327
XSECTION 12	.15					
ALTERNATE 1		14	36	57	78	104
XSECTION 13	.87					
ALTERNATE 1		58	149	229	310	411
XSECTION 15	.05					
ALTERNATE 1		7	22	36	50	67

XSECTION 17 .03

ALTERNATE 1 5 14 22 29 38

XSECTION 18 .08

ALTERNATE 1 12 34 56 76 101

XSECTION 20 .03

ALTERNATE 1 12 28 41 54 70

XSECTION 22 .11

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
XSECTION 22	.11					
ALTERNATE 1		18	49	79	107	144
XSECTION 23	.98					
ALTERNATE 1		63	159	244	331	437
XSECTION 24	.14					
ALTERNATE 1		12	36	59	83	113
XSECTION 25	1.12					
ALTERNATE 1		70	180	282	386	514

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 2.04TEST
FILES

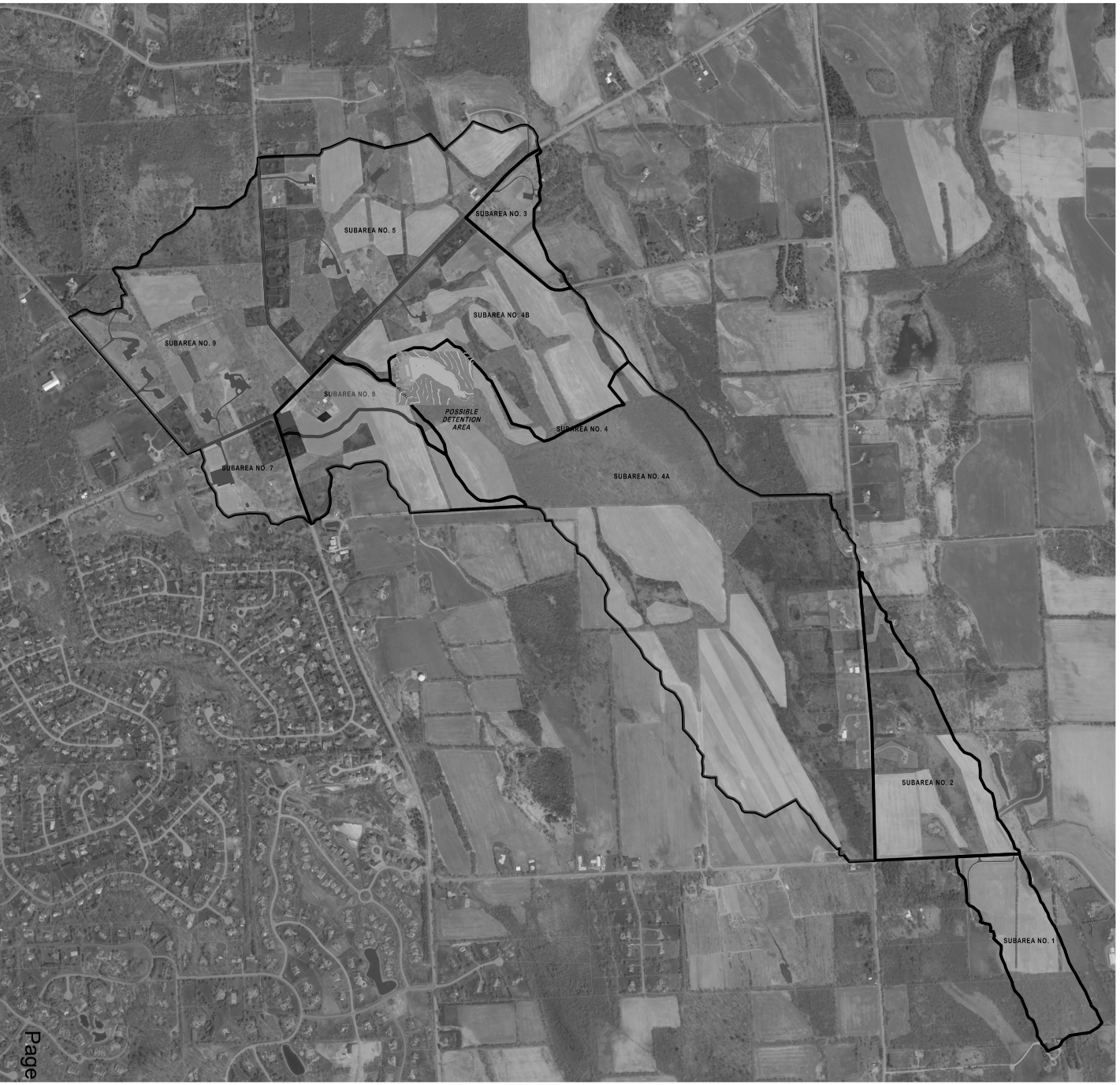
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JOB ENDED AT 03:15:01
*** TR-20 RUN COMPLETED ***

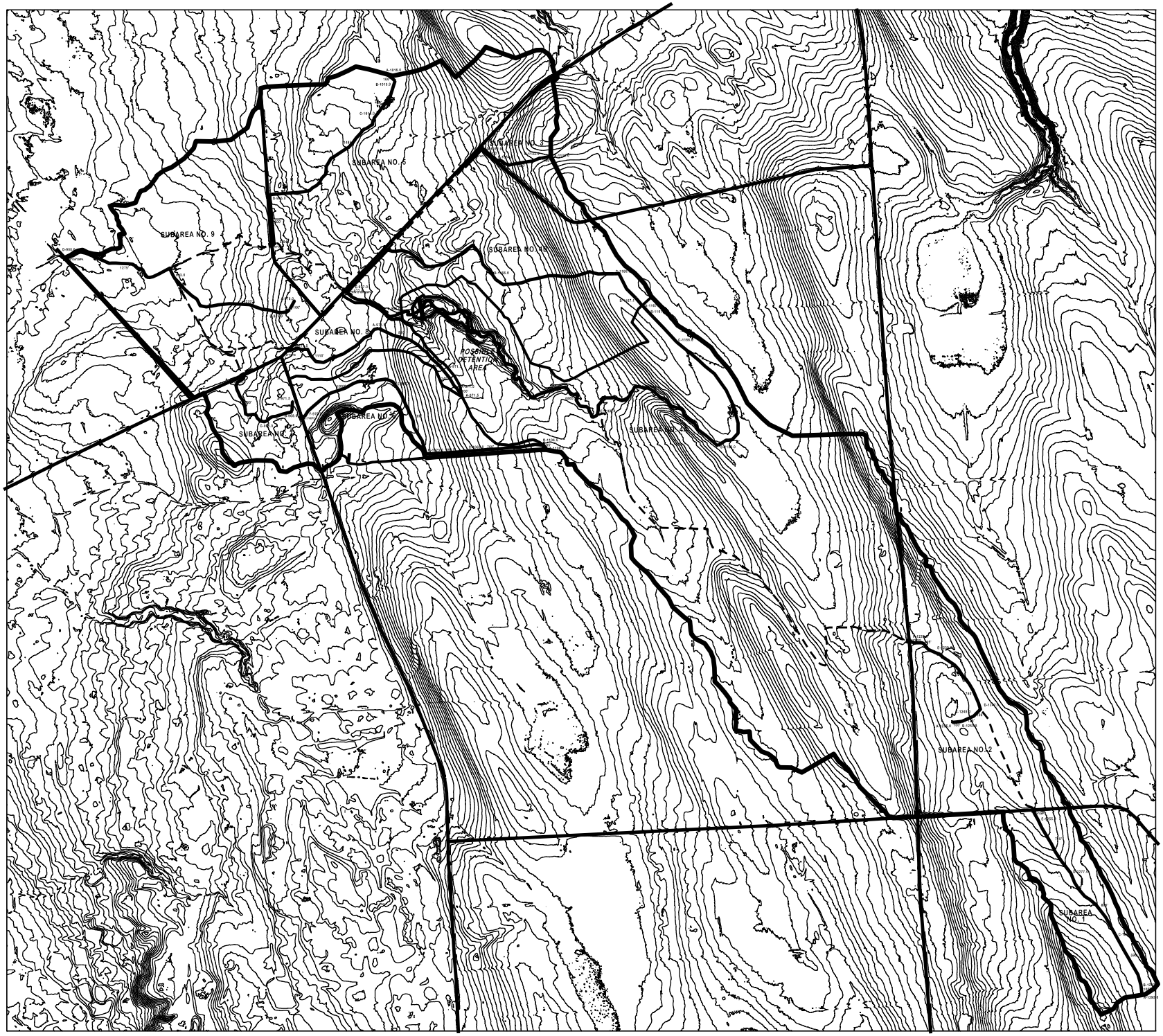
FUTURE LAND USE MAP



- PASTURE
- LAWN
- BRUSH
- WOODS
- MEADOW
- AG - SOY BEANS
- FARMSTEAD
- 2 ACRES RESIDENTIAL
- 1 ACRES RESIDENTIAL
- 1/2 ACRES RESIDENTIAL
- BARE GROUND
- IMPERVIOUS

FUTURE LAND USE MAP

FUTURE TC ROUTE MAP



FUTURE Tc ROUTE MAP

FUTURE WATERSHED CHARACTERISTICS

DETENTION SUBAREA NO. 1 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												A SOILS AREA 0.00
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.28	5.13					7.16	4.53		0.3		B SOILS AREA 17.40
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00846	0.15503	0.00000	0.00000	0.00000	0.00000	0.21638	0.13690	0.00000	0.00907	0.00000	
	0.82925	11.16228	0.00000	0.00000	0.00000	0.00000	11.90088	8.35086	0.00000	0.61650	0.00000	%B CN 32.86

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.3	4.47					5.49	5.14		0.13	0	C SOILS AREA 15.53
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.00907	0.13509	0.00000	0.00000	0.00000	0.00000	0.16591	0.15533	0.00000	0.00393	0.00000	
	0.88849	10.94198	0.00000	0.00000	0.00000	0.00000	11.61378	11.49471	0.00000	0.31037	0.00000	%C CN 35.25

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.09						0.07				0	D SOILS AREA 0.16
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00272	0.00000	0.00000	0.00000	0.00000	0.00000	0.00212	0.00000	0.00000	0.00000	0.00000	
	0.26655	0.00000	0.00000	0.00000	0.00000	0.00000	0.16289	0.00000	0.00000	0.00000	0.00000	%D CN 0.43

TOTAL AREA 33.09

CN 68.54

DETENTION SUBAREA NO. 2 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												A SOILS AREA 0.00
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.07	6.73				3.41			0.38			B SOILS AREA 10.59
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00124	0.11916	0.00000	0.00000	0.00000	0.06038	0.00000	0.00000	0.00673	0.00000	0.00000	
	0.12146	8.57932	0.00000	0.00000	0.00000	3.50177	0.00000	0.00000	0.43732	0.00000	0.00000	%B CN 12.64

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	1.03	13.94	3.44			10.31			7.27			C SOILS AREA 35.99
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.01824	0.24681	0.06091	0.00000	0.00000	0.18254	0.00000	0.00000	0.12872	0.00000	0.00000	
	1.78718	19.99186	4.99433	0.00000	0.00000	12.96052	0.00000	0.00000	9.91130	0.00000	0.00000	%C CN 49.65

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.21					9.69						D SOILS AREA 9.90
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00372	0.00000	0.00000	0.00000	0.00000	0.17157	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.36438	0.00000	0.00000	0.00000	0.00000	13.38208	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 13.75

TOTAL AREA 56.48

CN 76.03

DETENTION SUBAREA NO. 3 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												A SOILS AREA 0.00
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	1.35	2.65					1.52	7.4		2.09		C SOILS AREA 15.01
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.08994	0.17655	0.00000	0.00000	0.00000	0.00000	0.10127	0.49300	0.00000	0.13924	0.00000	
	8.81412	14.30047	0.00000	0.00000	0.00000	0.00000	7.08861	36.48235	0.00000	11.00000	0.00000	%C CN 77.69

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 15.01

CN 77.69

DETENTION SUBAREA NO. 4A RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA		0					0					A SOILS AREA 0.00
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	1.08	93.01				26.58	52.53		13.77	0		C SOILS AREA 186.97
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.00419	0.36101	0.00000	0.00000	0.00000	0.10317	0.20389	0.00000	0.05345	0.00000	0.00000	
	0.41081	29.24162	0.00000	0.00000	0.00000	7.32487	14.27224	0.00000	4.11539	0.00000	0.00000	%C CN 55.36

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.21					47.38	23.08					D SOILS AREA 70.67
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00082	0.00000	0.00000	0.00000	0.00000	0.18390	0.08958	0.00000	0.00000	0.00000	0.00000	
	0.07988	0.00000	0.00000	0.00000	0.00000	14.34420	6.89784	0.00000	0.00000	0.00000	0.00000	%D CN 21.32

TOTAL AREA 257.64

CN 76.69

DETENTION SUBAREA NO. 4B RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA		2.27					0.21				
CN	98	58	59	77	30	30	30	39	46	51	54
	0.00000	0.02383	0.00000	0.00000	0.00000	0.00000	0.00220	0.00000	0.00000	0.00000	0.00000
	0.00000	1.38240	0.00000	0.00000	0.00000	0.00000	0.06615	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 2.48

%A CN 1.45

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	72	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.77	47.16				12.91	16.9	4.92	1.7	2.11	
CN	98	81	82	91	71	71	70	74	77	79	80
	0.01858	0.49517	0.00000	0.00000	0.00000	0.13555	0.17745	0.05166	0.01785	0.02215	0.00000
	1.82129	40.10878	0.00000	0.00000	0.00000	9.62421	12.42125	3.82276	1.37442	1.75021	0.00000

C SOILS AREA 87.47

%C CN 70.92

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA						2.46	2.83				
CN	98	85	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.02583	0.02971	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	2.01470	2.28801	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 5.29

%D CN 4.30

TOTAL AREA 95.24

CN 76.67

DETENTION SUBAREA NO. 5 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.13	0.33				1.15	5.23	0.54		1.11		A SOILS AREA	8.49
CN	98	58	59	77	30	30	30	39	46	51	54		
	0.00131	0.00334	0.00000	0.00000	0.00000	0.01163	0.05289	0.00546	0.00000	0.01123	0.00000		
	0.12884	0.19357	0.00000	0.00000	0.00000	0.34891	1.58677	0.21299	0.00000	0.57251	0.00000	%A CN	3.04

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA												B SOILS AREA	0.00
CN	98	72	74	86	58	58	55	61	65	68	70		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN	0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	3.17	28.18	1.85		4.03	12.51	11.77	4.76	4.12	14.69		C SOILS AREA	85.08
CN	98	81	82	91	71	71	70	74	77	79	80		
	0.03206	0.28499	0.01871	0.00000	0.04076	0.12652	0.11903	0.04814	0.04167	0.14856	0.00000		
	3.14179	23.08434	1.53418	0.00000	2.89371	8.98271	8.33232	3.56230	3.20833	11.73655	0.00000	%C CN	66.48

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.26				0.46	2.01	2.2	0.38				D SOILS AREA	5.31
CN	98	85	86	94	78	78	77	80	82	84	85		
	0.00263	0.00000	0.00000	0.00000	0.00465	0.02033	0.02225	0.00384	0.00000	0.00000	0.00000		
	0.25769	0.00000	0.00000	0.00000	0.36286	1.58556	1.71319	0.30744	0.00000	0.00000	0.00000	%D CN	4.23

TOTAL AREA	98.88
CN	73.75

DETENTION SUBAREA NO. 6 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.05	0.34				2.11	0.83					A SOILS AREA 3.33
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00164	0.01115	0.00000	0.00000	0.00000	0.06920	0.02722	0.00000	0.00000	0.00000	0.00000	
	0.16071	0.64677	0.00000	0.00000	0.00000	2.07609	0.81666	0.00000	0.00000	0.00000	0.00000	%A CN 3.70

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.24	20.63			0.83	2.04	2.3			1.12		C SOILS AREA 27.16
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.00787	0.67662	0.00000	0.00000	0.02722	0.06691	0.07543	0.00000	0.00000	0.03673	0.00000	
	0.77140	54.80584	0.00000	0.00000	1.93276	4.75041	5.28042	0.00000	0.00000	2.90194	0.00000	%C CN 70.44

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 30.49

CN 74.14

DETENTION SUBAREA NO. 7 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.13							0.32				A SOILS AREA 0.45
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00660	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01624	0.00000	0.00000	0.00000	
	0.64670	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.63350	0.00000	0.00000	0.00000	%A CN 1.28

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	1.09						0.08	4.49	0.48			B SOILS AREA 6.14
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.05533	0.00000	0.00000	0.00000	0.00000	0.00000	0.00406	0.22792	0.02437	0.00000	0.00000	
	5.42234	0.00000	0.00000	0.00000	0.00000	0.00000	0.22335	13.90305	1.58376	0.00000	0.00000	%B CN 21.13

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.59						3.59	1.13	4.78	3.02		C SOILS AREA 13.11
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.02995	0.00000	0.00000	0.00000	0.00000	0.00000	0.18223	0.05736	0.24264	0.15330	0.00000	
	2.93503	0.00000	0.00000	0.00000	0.00000	0.00000	12.75635	4.24467	18.68325	12.11066	0.00000	%C CN 50.73

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 19.70

CN 73.14

DETENTION SUBAREA NO. 8 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												A SOILS AREA 0.00
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN 0.00

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	1.02	10.53		0.23		0.9	0.75	1.07	2.67	0.35		C SOILS AREA 17.52
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.05822	0.60103	0.00000	0.01313	0.00000	0.05137	0.04281	0.06107	0.15240	0.01998	0.00000	
	5.70548	48.68322	0.00000	1.19463	0.00000	3.64726	2.99658	4.51941	11.73459	1.57820	0.00000	%C CN 80.06

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 17.52

CN 80.06

DETENTION SUBAREA NO. 9 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA					2.67	4.09	1.21	1.32				A SOILS AREA 9.29
CN	98	58	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.02959	0.04533	0.01341	0.01463	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.88773	1.35986	0.40231	0.57054	0.00000	0.00000	0.00000	%A CN 3.22

B SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.31				0.22		3.37	1.22	1.09			B SOILS AREA 6.21
CN	98	72	74	86	58	58	55	61	65	68	70	
	0.00344	0.00000	0.00000	0.00000	0.00244	0.00000	0.03735	0.01352	0.01208	0.00000	0.00000	
	0.33670	0.00000	0.00000	0.00000	0.14142	0.00000	2.05419	0.82478	0.78522	0.00000	0.00000	%B CN 4.14

C SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	4.1				6.67	7.6	25.11	16.79	3.35	1.15	0.89	C SOILS AREA 65.66
CN	98	81	82	91	71	71	70	74	77	79	80	
	0.04544	0.00000	0.00000	0.00000	0.07392	0.08423	0.27829	0.18608	0.03713	0.01275	0.00986	
	4.45306	0.00000	0.00000	0.00000	5.24848	5.98027	19.48022	13.76992	2.85881	1.00687	0.78909	%C CN 53.59

D SOIL

	IMP.	SOY BEANS	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.51					2.89	1.89	3.78				D SOILS AREA 9.07
CN	98	85	86	94	78	78	77	80	82	84	85	
	0.00565	0.00000	0.00000	0.00000	0.00000	0.03203	0.02095	0.04189	0.00000	0.00000	0.00000	
	0.55392	0.00000	0.00000	0.00000	0.00000	2.49828	1.61288	3.35144	0.00000	0.00000	0.00000	%D CN 8.02

TOTAL AREA 90.23

CN 68.97

DETENTION SUBAREA NO. 1 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												A SOILS AREA 0.00
CN	98	67	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.28	5.13					7.16	4.53		0.3		B SOILS AREA 17.40
CN	98	78	74	86	58	58	55	61	65	68	70	
	0.00846	0.15503	0.00000	0.00000	0.00000	0.00000	0.21638	0.13690	0.00000	0.00907	0.00000	
	0.82925	12.09248	0.00000	0.00000	0.00000	0.00000	11.90088	8.35086	0.00000	0.61650	0.00000	%B CN 33.79

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.3	4.47					5.49	5.14		0.13	0	C SOILS AREA 15.53
CN	98	85	82	91	71	71	70	74	77	79	80	
	0.00907	0.13509	0.00000	0.00000	0.00000	0.00000	0.16591	0.15533	0.00000	0.00393	0.00000	
	0.88849	11.48232	0.00000	0.00000	0.00000	0.00000	11.61378	11.49471	0.00000	0.31037	0.00000	%C CN 35.79

D SOIL

	IMP.	CCORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.09						0.07				0	D SOILS AREA 0.16
CN	98	89	86	94	78	78	77	80	82	84	85	
	0.00272	0.00000	0.00000	0.00000	0.00000	0.00000	0.00212	0.00000	0.00000	0.00000	0.00000	
	0.26655	0.00000	0.00000	0.00000	0.00000	0.00000	0.16289	0.00000	0.00000	0.00000	0.00000	%D CN 0.43

TOTAL AREA 33.09

CN 70.01

DETENTION SUBAREA NO. 2 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.07	6.73				3.41			0.38		
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00124	0.11916	0.00000	0.00000	0.00000	0.06038	0.00000	0.00000	0.00673	0.00000	0.00000
	0.12146	9.29426	0.00000	0.00000	0.00000	3.50177	0.00000	0.00000	0.43732	0.00000	0.00000

B SOILS AREA 10.59

%B CN 13.35

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.03	13.94	3.44			10.31			7.27		
CN	98	85	82	91	71	71	70	74	77	79	80
	0.01824	0.24681	0.06091	0.00000	0.00000	0.18254	0.00000	0.00000	0.12872	0.00000	0.00000
	1.78718	20.97911	4.99433	0.00000	0.00000	12.96052	0.00000	0.00000	9.91130	0.00000	0.00000

C SOILS AREA 35.99

%C CN 50.63

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.21					9.69					
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00372	0.00000	0.00000	0.00000	0.00000	0.17157	0.00000	0.00000	0.00000	0.00000	0.00000
	0.36438	0.00000	0.00000	0.00000	0.00000	13.38208	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 9.90

%D CN 13.75

TOTAL AREA 56.48

CN 77.73

DETENTION SUBAREA NO. 3 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.35	2.65					1.52	7.4		2.09	
CN	98	85	82	91	71	71	70	74	77	79	80
	0.08994	0.17655	0.00000	0.00000	0.00000	0.00000	0.10127	0.49300	0.00000	0.13924	0.00000
	8.81412	15.00666	0.00000	0.00000	0.00000	0.00000	7.08861	36.48235	0.00000	11.00000	0.00000

C SOILS AREA 15.01

%C CN 78.39

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 15.01

CN 78.39

DETENTION SUBAREA NO. 4A RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA		0					0					A SOILS AREA	0.00
CN	98	67	59	77	30	30	30	39	46	51	54		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN	0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA												B SOILS AREA	0.00
CN	98	78	74	86	58	58	55	61	65	68	70		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN	0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	1.08	93.01				26.58	52.53		13.77	0		C SOILS AREA	186.97
CN	98	85	82	91	71	71	70	74	77	79	80		
	0.00419	0.36101	0.00000	0.00000	0.00000	0.10317	0.20389	0.00000	0.05345	0.00000	0.00000		
	0.41081	30.68565	0.00000	0.00000	0.00000	7.32487	14.27224	0.00000	4.11539	0.00000	0.00000	%C CN	56.81

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.21					47.38	23.08					D SOILS AREA	70.67
CN	98	89	86	94	78	78	77	80	82	84	85		
	0.00082	0.00000	0.00000	0.00000	0.00000	0.18390	0.08958	0.00000	0.00000	0.00000	0.00000		
	0.07988	0.00000	0.00000	0.00000	0.00000	14.34420	6.89784	0.00000	0.00000	0.00000	0.00000	%D CN	21.32

TOTAL AREA	257.64
CN	78.13

DETENTION SUBAREA NO. 4B RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA		2.27					0.21				
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.02383	0.00000	0.00000	0.00000	0.00000	0.00220	0.00000	0.00000	0.00000	0.00000
	0.00000	1.59691	0.00000	0.00000	0.00000	0.00000	0.06615	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 2.48

%A CN 1.66

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.77	47.16				12.91	16.9	4.92	1.7	2.11	
CN	98	85	82	91	71	71	70	74	77	79	80
	0.01858	0.49517	0.00000	0.00000	0.00000	0.13555	0.17745	0.05166	0.01785	0.02215	0.00000
	1.82129	42.08946	0.00000	0.00000	0.00000	9.62421	12.42125	3.82276	1.37442	1.75021	0.00000

C SOILS AREA 87.47

%C CN 72.90

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA						2.46	2.83				
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.02583	0.02971	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	2.01470	2.28801	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 5.29

%D CN 4.30

TOTAL AREA 95.24

CN 78.87

DETENTION SUBAREA NO. 5 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.13	0.33				1.15	5.23	0.54		1.11		A SOILS AREA	8.49
CN	98	67	59	77	30	30	30	39	46	51	54		
	0.00131	0.00334	0.00000	0.00000	0.00000	0.01163	0.05289	0.00546	0.00000	0.01123	0.00000		
	0.12884	0.22360	0.00000	0.00000	0.00000	0.34891	1.58677	0.21299	0.00000	0.57251	0.00000	%A CN	3.07

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA												B SOILS AREA	0.00
CN	98	78	74	86	58	58	55	61	65	68	70		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN	0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	3.17	28.18	1.85		4.03	12.51	11.77	4.76	4.12	14.69		C SOILS AREA	85.08
CN	98	85	82	91	71	71	70	74	77	79	80		
	0.03206	0.28499	0.01871	0.00000	0.04076	0.12652	0.11903	0.04814	0.04167	0.14856	0.00000		
	3.14179	24.22431	1.53418	0.00000	2.89371	8.98271	8.33232	3.56230	3.20833	11.73655	0.00000	%C CN	67.62

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.		
AREA	0.26				0.46	2.01	2.2	0.38				D SOILS AREA	5.31
CN	98	89	86	94	78	78	77	80	82	84	85		
	0.00263	0.00000	0.00000	0.00000	0.00465	0.02033	0.02225	0.00384	0.00000	0.00000	0.00000		
	0.25769	0.00000	0.00000	0.00000	0.36286	1.58556	1.71319	0.30744	0.00000	0.00000	0.00000	%D CN	4.23

TOTAL AREA	98.88
CN	74.92

DETENTION SUBAREA NO. 6 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.05	0.34				2.11	0.83					A SOILS AREA 3.33
CN	98	67	59	77	30	30	30	39	46	51	54	
	0.00164	0.01115	0.00000	0.00000	0.00000	0.06920	0.02722	0.00000	0.00000	0.00000	0.00000	
	0.16071	0.74713	0.00000	0.00000	0.00000	2.07609	0.81666	0.00000	0.00000	0.00000	0.00000	%A CN 3.80

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	78	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.24	20.63			0.83	2.04	2.3			1.12		C SOILS AREA 27.16
CN	98	85	82	91	71	71	70	74	77	79	80	
	0.00787	0.67662	0.00000	0.00000	0.02722	0.06691	0.07543	0.00000	0.00000	0.03673	0.00000	
	0.77140	57.51230	0.00000	0.00000	1.93276	4.75041	5.28042	0.00000	0.00000	2.90194	0.00000	%C CN 73.15

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	89	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 30.49

CN 76.95

DETENTION SUBAREA NO. 7 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.13							0.32			
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00660	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01624	0.00000	0.00000	0.00000
	0.64670	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.63350	0.00000	0.00000	0.00000

A SOILS AREA 0.45

%A CN 1.28

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.09						0.08	4.49	0.48		
CN	98	78	74	86	58	58	55	61	65	68	70
	0.05533	0.00000	0.00000	0.00000	0.00000	0.00000	0.00406	0.22792	0.02437	0.00000	0.00000
	5.42234	0.00000	0.00000	0.00000	0.00000	0.00000	0.22335	13.90305	1.58376	0.00000	0.00000

B SOILS AREA 6.14

%B CN 21.13

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.59						3.59	1.13	4.78	3.02	
CN	98	85	82	91	71	71	70	74	77	79	80
	0.02995	0.00000	0.00000	0.00000	0.00000	0.00000	0.18223	0.05736	0.24264	0.15330	0.00000
	2.93503	0.00000	0.00000	0.00000	0.00000	0.00000	12.75635	4.24467	18.68325	12.11066	0.00000

C SOILS AREA 13.11

%C CN 50.73

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 19.70

CN 73.14

DETENTION SUBAREA NO. 8 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	67	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	78	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.02	10.53		0.23		0.9	0.75	1.07	2.67	0.35	
CN	98	85	82	91	71	71	70	74	77	79	80
	0.05822	0.60103	0.00000	0.01313	0.00000	0.05137	0.04281	0.06107	0.15240	0.01998	0.00000
	5.70548	51.08733	0.00000	1.19463	0.00000	3.64726	2.99658	4.51941	11.73459	1.57820	0.00000

C SOILS AREA 17.52

%C CN 82.46

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	89	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 17.52

CN 82.46

DETENTION SUBAREA NO. 9 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA					2.67	4.09	1.21	1.32				A SOILS AREA 9.29
CN	98	67	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.02959	0.04533	0.01341	0.01463	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.88773	1.35986	0.40231	0.57054	0.00000	0.00000	0.00000	%A CN 3.22

B SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.31				0.22		3.37	1.22	1.09			B SOILS AREA 6.21
CN	98	78	74	86	58	58	55	61	65	68	70	
	0.00344	0.00000	0.00000	0.00000	0.00244	0.00000	0.03735	0.01352	0.01208	0.00000	0.00000	
	0.33670	0.00000	0.00000	0.00000	0.14142	0.00000	2.05419	0.82478	0.78522	0.00000	0.00000	%B CN 4.14

C SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	4.1				6.67	7.6	25.11	16.79	3.35	1.15	0.89	C SOILS AREA 65.66
CN	98	85	82	91	71	71	70	74	77	79	80	
	0.04544	0.00000	0.00000	0.00000	0.07392	0.08423	0.27829	0.18608	0.03713	0.01275	0.00986	
	4.45306	0.00000	0.00000	0.00000	5.24848	5.98027	19.48022	13.76992	2.85881	1.00687	0.78909	%C CN 53.59

D SOIL

	IMP.	CORN	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.51					2.89	1.89	3.78				D SOILS AREA 9.07
CN	98	89	86	94	78	78	77	80	82	84	85	
	0.00565	0.00000	0.00000	0.00000	0.00000	0.03203	0.02095	0.04189	0.00000	0.00000	0.00000	
	0.55392	0.00000	0.00000	0.00000	0.00000	2.49828	1.61288	3.35144	0.00000	0.00000	0.00000	%D CN 8.02

TOTAL AREA 90.23

CN 68.97

DETENTION SUBAREA NO. 1 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												A SOILS AREA 0.00
CN	98	39	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN 0.00

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.28	5.13					7.16	4.53		0.3		B SOILS AREA 17.40
CN	98	61	74	86	58	58	55	61	65	68	70	
	0.00846	0.15503	0.00000	0.00000	0.00000	0.00000	0.21638	0.13690	0.00000	0.00907	0.00000	
	0.82925	9.45694	0.00000	0.00000	0.00000	0.00000	11.90088	8.35086	0.00000	0.61650	0.00000	%B CN 31.15

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.3	4.47					5.49	5.14		0.13	0	C SOILS AREA 15.53
CN	98	74	82	91	71	71	70	74	77	79	80	
	0.00907	0.13509	0.00000	0.00000	0.00000	0.00000	0.16591	0.15533	0.00000	0.00393	0.00000	
	0.88849	9.99637	0.00000	0.00000	0.00000	0.00000	11.61378	11.49471	0.00000	0.31037	0.00000	%C CN 34.30

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.09						0.07				0	D SOILS AREA 0.16
CN	98	80	86	94	78	78	77	80	82	84	85	
	0.00272	0.00000	0.00000	0.00000	0.00000	0.00000	0.00212	0.00000	0.00000	0.00000	0.00000	
	0.26655	0.00000	0.00000	0.00000	0.00000	0.00000	0.16289	0.00000	0.00000	0.00000	0.00000	%D CN 0.43

TOTAL AREA 33.09

CN 65.89

DETENTION SUBAREA NO. 2 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.07	6.73				3.41			0.38		
CN	98	61	74	86	58	58	55	61	65	68	70
	0.00124	0.11916	0.00000	0.00000	0.00000	0.06038	0.00000	0.00000	0.00673	0.00000	0.00000
	0.12146	7.26859	0.00000	0.00000	0.00000	3.50177	0.00000	0.00000	0.43732	0.00000	0.00000

B SOILS AREA 10.59

%B CN 11.33

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.03	13.94	3.44			10.31			7.27		
CN	98	74	82	91	71	71	70	74	77	79	80
	0.01824	0.24681	0.06091	0.00000	0.00000	0.18254	0.00000	0.00000	0.12872	0.00000	0.00000
	1.78718	18.26416	4.99433	0.00000	0.00000	12.96052	0.00000	0.00000	9.91130	0.00000	0.00000

C SOILS AREA 35.99

%C CN 47.92

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.21					9.69					
CN	98	80	86	94	78	78	77	80	82	84	85
	0.00372	0.00000	0.00000	0.00000	0.00000	0.17157	0.00000	0.00000	0.00000	0.00000	0.00000
	0.36438	0.00000	0.00000	0.00000	0.00000	13.38208	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 9.90

%D CN 13.75

TOTAL AREA 56.48

CN 72.99

DETENTION SUBAREA NO. 3 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	61	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.35	2.65					1.52	7.4		2.09	
CN	98	74	82	91	71	71	70	74	77	79	80
	0.08994	0.17655	0.00000	0.00000	0.00000	0.00000	0.10127	0.49300	0.00000	0.13924	0.00000
	8.81412	13.06462	0.00000	0.00000	0.00000	0.00000	7.08861	36.48235	0.00000	11.00000	0.00000

C SOILS AREA 15.01

%C CN 76.45

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	80	86	94	78	78	77	80	82	84	85
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 0.00

%D CN 0.00

TOTAL AREA 15.01

CN 76.45

DETENTION SUBAREA NO. 4A RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA		0					0				
CN	98	39	59	77	30	30	30	39	46	51	54
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

A SOILS AREA 0.00

%A CN 0.00

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA											
CN	98	61	74	86	58	58	55	61	65	68	70
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

B SOILS AREA 0.00

%B CN 0.00

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	1.08	93.01				26.58	52.53		13.77	0	
CN	98	74	82	91	71	71	70	74	77	79	80
	0.00419	0.36101	0.00000	0.00000	0.00000	0.10317	0.20389	0.00000	0.05345	0.00000	0.00000
	0.41081	26.71456	0.00000	0.00000	0.00000	7.32487	14.27224	0.00000	4.11539	0.00000	0.00000

C SOILS AREA 186.97

%C CN 52.84

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.
AREA	0.21					47.38	23.08				
CN	98	80	86	94	78	78	77	80	82	84	85
	0.00082	0.00000	0.00000	0.00000	0.00000	0.18390	0.08958	0.00000	0.00000	0.00000	0.00000
	0.07988	0.00000	0.00000	0.00000	0.00000	14.34420	6.89784	0.00000	0.00000	0.00000	0.00000

D SOILS AREA 70.67

%D CN 21.32

TOTAL AREA 257.64

CN 74.16

DETENTION SUBAREA NO. 4B RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA		2.27					0.21					A SOILS AREA 2.48
CN	98	39	59	77	30	30	30	39	46	51	54	
	0.00000	0.02383	0.00000	0.00000	0.00000	0.00000	0.00220	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.92955	0.00000	0.00000	0.00000	0.00000	0.06615	0.00000	0.00000	0.00000	0.00000	%A CN 1.00

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	61	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	1.77	47.16				12.91	16.9	4.92	1.7	2.11		C SOILS AREA 87.47
CN	98	74	82	91	71	71	70	74	77	79	80	
	0.01858	0.49517	0.00000	0.00000	0.00000	0.13555	0.17745	0.05166	0.01785	0.02215	0.00000	
	1.82129	36.64259	0.00000	0.00000	0.00000	9.62421	12.42125	3.82276	1.37442	1.75021	0.00000	%C CN 67.46

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA						2.46	2.83					D SOILS AREA 5.29
CN	98	80	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.02583	0.02971	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	2.01470	2.28801	0.00000	0.00000	0.00000	0.00000	%D CN 4.30

TOTAL AREA 95.24

CN 72.76

DETENTION SUBAREA NO. 5 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.13	0.33				1.15	5.23	0.54		1.11		A SOILS AREA 8.49
CN	98	39	59	77	30	30	30	39	46	51	54	
	0.00131	0.00334	0.00000	0.00000	0.00000	0.01163	0.05289	0.00546	0.00000	0.01123	0.00000	
	0.12884	0.13016	0.00000	0.00000	0.00000	0.34891	1.58677	0.21299	0.00000	0.57251	0.00000	%A CN 2.98

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	61	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	3.17	28.18	1.85		4.03	12.51	11.77	4.76	4.12	14.69		C SOILS AREA 85.08
CN	98	74	82	91	71	71	70	74	77	79	80	
	0.03206	0.28499	0.01871	0.00000	0.04076	0.12652	0.11903	0.04814	0.04167	0.14856	0.00000	
	3.14179	21.08940	1.53418	0.00000	2.89371	8.98271	8.33232	3.56230	3.20833	11.73655	0.00000	%C CN 64.48

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.26				0.46	2.01	2.2	0.38				D SOILS AREA 5.31
CN	98	80	86	94	78	78	77	80	82	84	85	
	0.00263	0.00000	0.00000	0.00000	0.00465	0.02033	0.02225	0.00384	0.00000	0.00000	0.00000	
	0.25769	0.00000	0.00000	0.00000	0.36286	1.58556	1.71319	0.30744	0.00000	0.00000	0.00000	%D CN 4.23

TOTAL AREA 98.88

CN 71.69

DETENTION SUBAREA NO. 6 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.05	0.34				2.11	0.83					A SOILS AREA 3.33
CN	98	39	59	77	30	30	30	39	46	51	54	
	0.00164	0.01115	0.00000	0.00000	0.00000	0.06920	0.02722	0.00000	0.00000	0.00000	0.00000	
	0.16071	0.43490	0.00000	0.00000	0.00000	2.07609	0.81666	0.00000	0.00000	0.00000	0.00000	%A CN 3.49

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	61	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.24	20.63			0.83	2.04	2.3			1.12		C SOILS AREA 27.16
CN	98	74	82	91	71	71	70	74	77	79	80	
	0.00787	0.67662	0.00000	0.00000	0.02722	0.06691	0.07543	0.00000	0.00000	0.03673	0.00000	
	0.77140	50.06953	0.00000	0.00000	1.93276	4.75041	5.28042	0.00000	0.00000	2.90194	0.00000	%C CN 65.71

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	80	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 30.49

CN 69.19

DETENTION SUBAREA NO. 7 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.13							0.32				A SOILS AREA 0.45
CN	98	39	59	77	30	30	30	39	46	51	54	
	0.00660	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01624	0.00000	0.00000	0.00000	
	0.64670	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.63350	0.00000	0.00000	0.00000	%A CN 1.28

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	1.09						0.08	4.49	0.48			B SOILS AREA 6.14
CN	98	61	74	86	58	58	55	61	65	68	70	
	0.05533	0.00000	0.00000	0.00000	0.00000	0.00000	0.00406	0.22792	0.02437	0.00000	0.00000	
	5.42234	0.00000	0.00000	0.00000	0.00000	0.00000	0.22335	13.90305	1.58376	0.00000	0.00000	%B CN 21.13

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.59						3.59	1.13	4.78	3.02		C SOILS AREA 13.11
CN	98	74	82	91	71	71	70	74	77	79	80	
	0.02995	0.00000	0.00000	0.00000	0.00000	0.00000	0.18223	0.05736	0.24264	0.15330	0.00000	
	2.93503	0.00000	0.00000	0.00000	0.00000	0.00000	12.75635	4.24467	18.68325	12.11066	0.00000	%C CN 50.73

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	80	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 19.70

CN 73.14

DETENTION SUBAREA NO. 8 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												A SOILS AREA 0.00
CN	98	39	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%A CN 0.00

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												B SOILS AREA 0.00
CN	98	61	74	86	58	58	55	61	65	68	70	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%B CN 0.00

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	1.02	10.53		0.23		0.9	0.75	1.07	2.67	0.35		C SOILS AREA 17.52
CN	98	74	82	91	71	71	70	74	77	79	80	
	0.05822	0.60103	0.00000	0.01313	0.00000	0.05137	0.04281	0.06107	0.15240	0.01998	0.00000	
	5.70548	44.47603	0.00000	1.19463	0.00000	3.64726	2.99658	4.51941	11.73459	1.57820	0.00000	%C CN 75.85

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA												D SOILS AREA 0.00
CN	98	80	86	94	78	78	77	80	82	84	85	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	%D CN 0.00

TOTAL AREA 17.52

CN 75.85

DETENTION SUBAREA NO. 9 RUNOFF CURVE NUMBER CALCULATION

A SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA					2.67	4.09	1.21	1.32				A SOILS AREA 9.29
CN	98	39	59	77	30	30	30	39	46	51	54	
	0.00000	0.00000	0.00000	0.00000	0.02959	0.04533	0.01341	0.01463	0.00000	0.00000	0.00000	
	0.00000	0.00000	0.00000	0.00000	0.88773	1.35986	0.40231	0.57054	0.00000	0.00000	0.00000	%A CN 3.22

B SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.31				0.22		3.37	1.22	1.09			B SOILS AREA 6.21
CN	98	61	74	86	58	58	55	61	65	68	70	
	0.00344	0.00000	0.00000	0.00000	0.00244	0.00000	0.03735	0.01352	0.01208	0.00000	0.00000	
	0.33670	0.00000	0.00000	0.00000	0.14142	0.00000	2.05419	0.82478	0.78522	0.00000	0.00000	%B CN 4.14

C SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	4.1				6.67	7.6	25.11	16.79	3.35	1.15	0.89	C SOILS AREA 65.66
CN	98	74	82	91	71	71	70	74	77	79	80	
	0.04544	0.00000	0.00000	0.00000	0.07392	0.08423	0.27829	0.18608	0.03713	0.01275	0.00986	
	4.45306	0.00000	0.00000	0.00000	5.24848	5.98027	19.48022	13.76992	2.85881	1.00687	0.78909	%C CN 53.59

D SOIL

	IMP.	GRASSLAND	FARMSTEAD	BARE SOIL	MEADOW	BRUSH	WOODS	LAWN/PASTURE	2 AC. RES.	1 AC. RES.	1/2 AC. RES.	
AREA	0.51					2.89	1.89	3.78				D SOILS AREA 9.07
CN	98	80	86	94	78	78	77	80	82	84	85	
	0.00565	0.00000	0.00000	0.00000	0.00000	0.03203	0.02095	0.04189	0.00000	0.00000	0.00000	
	0.55392	0.00000	0.00000	0.00000	0.00000	2.49828	1.61288	3.35144	0.00000	0.00000	0.00000	%D CN 8.02

TOTAL AREA 90.23

CN 68.97

TIME OF CONCENTRATION CALCULATIONS FUTURE

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North Eagle Village Study
Runoff Calculations FUTURE
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #1							
SHEET	100	0.0030	0.800				1.537
SHALLOW	590	0.0030	0.050				0.185
CHANNEL	805	0.0170	0.035	7.50	5.30	6.988	0.032
CHANNEL	710	0.0310	0.035	7.50	5.30	9.392	0.021
					Time of Concentration		1.775

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Runoff Calculations FUTURE
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #2							
SHEET	100	0.0120	0.800				0.883
SHALLOW	125	0.0460	0.050				0.010
SHALLOW	100	0.0100	0.050				0.017
CHANNEL	740	0.0110	0.035	7.50	5.30	5.556	0.037
CHANNEL	315	0.0410	0.035	7.50	5.30	10.938	0.008
					Time of Concentration		.955

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Runoff Calculations FUTURE
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #3							
SHEET	100	0.0300	0.800				0.612
SHALLOW	480	0.1000	0.050				0.026
CHANNEL	200	0.0600	0.035	7.50	5.30	13.889	0.004
					Time of Concentration		.642

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North Eagle Village Study
Runoff Calculations 2015
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subare#4a							
SHEET	100	0.0010	0.800				2.385
SHALLOW	415	0.0030	0.050				0.130
SHALLOW	1440	0.0090	0.050				0.261
CHANNEL	1710	0.0340	0.035	7.50	5.30	9.896	0.048
CHANNEL	3090	0.0330	0.035	7.50	5.30	9.754	0.088
					Time of Concentration		2.912

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North Eagle Village Study
Runoff Calculations 2015
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subare#4-2							
SHEET	100	0.0010	0.800				2.385
SHALLOW	365	0.0030	0.050				0.115
SHALLOW	1320	0.0045	0.050				0.339
CHANNEL	1970	0.0420	0.035	7.50	5.30	10.944	0.050
					Time of Concentration		2.889

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North Eagle Village Study
Runoff Calculations FUTURE
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #5							
SHEET	100	0.0030	0.800				1.537
SHALLOW	420	0.0090	0.050				0.076
CHANNEL	1485	0.0400	0.035	7.50	5.30	10.855	0.038
CHANNEL	500	0.0240	0.035	7.50	5.30	8.170	0.017
					Time of Concentration		1.668

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Runoff Calculations FUTURE
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #6							
SHEET	65	0.0540	0.800				0.343
SHALLOW	760	0.0520	0.050				0.057
SHALLOW	440	0.0950	0.050				0.025
CHANNEL	780	0.0360	0.035	7.50	5.30	10.317	0.021
CHANNEL	1090	0.0230	0.035	7.50	5.30	8.183	0.037
					Time of Concentration		.483

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Runoff Calculations FUTURE
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #7							
SHEET	100	0.0250	0.800				0.658
SHALLOW	270	0.0150	0.050				0.038
CHANNEL	700	0.0310	0.035	7.50	5.30	9.259	0.021
					Time of Concentration		.717

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Runoff Calculations FUTURE
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #8							
SHEET	100	0.0400	0.170				0.158
SHALLOW	240	0.0406	0.050				0.021
CHANNEL	810	0.0800	0.035	7.50	5.30	15.000	0.015
CHANNEL	1110	0.0220	0.035	7.50	5.30	7.906	0.039
					Time of Concentration		0.233

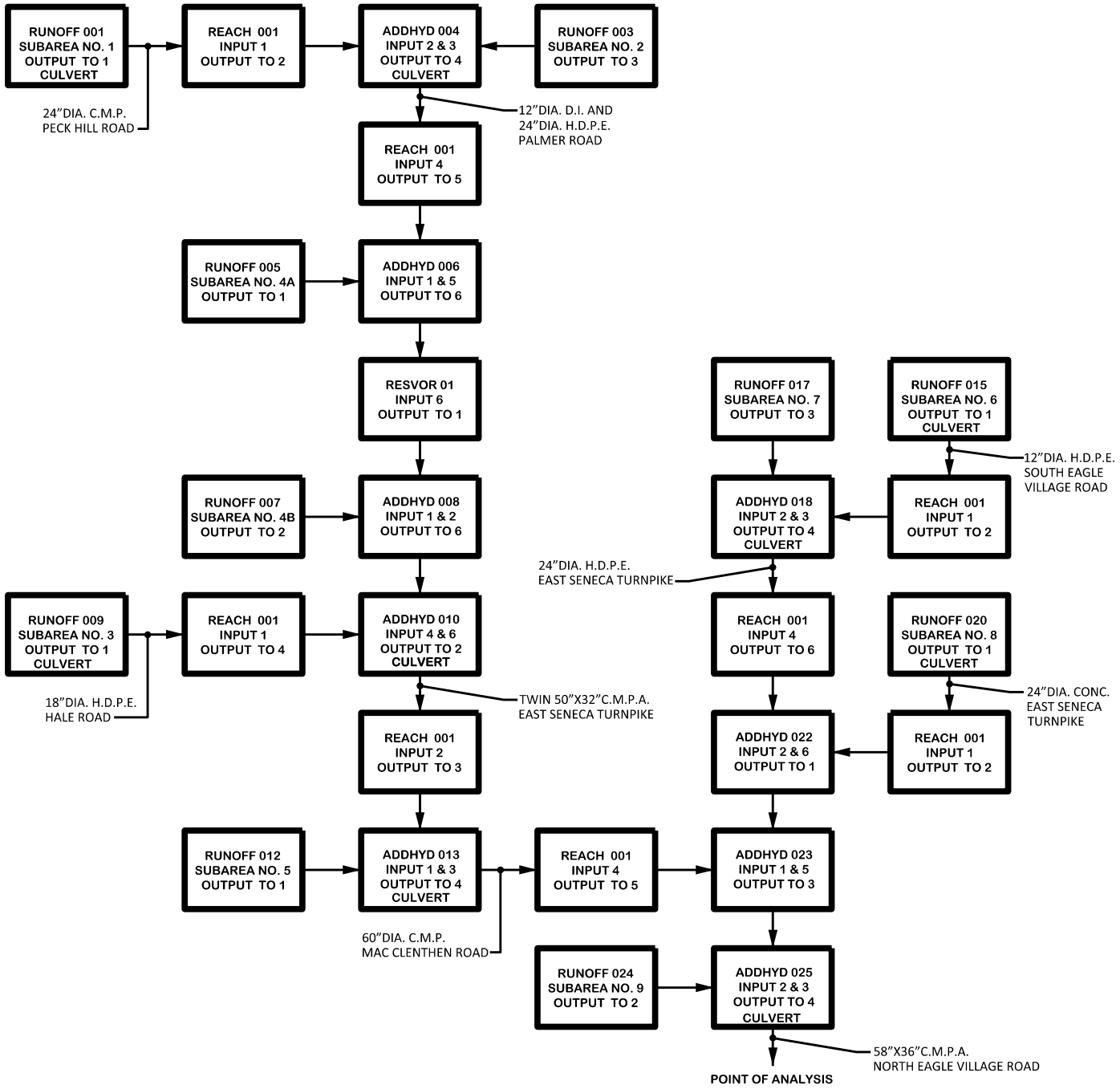
TomP

North Eagle Village Study
Runoff Calculations FUTURE
Region: New York Locale: Town of Manlius

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Subarea #9							
SHEET	100	0.0100	0.800				0.949
SHALLOW	1350	0.0460	0.050				0.108
CHANNEL	1275	0.0100	0.035	7.50	5.30	5.366	0.066
					Time of Concentration		1.123

FUTURE TR-20 MODEL SCHEMATIC



TR–20 SCHEMATIC
FUTURE WITH DETENTION

FUTURE TR-20 RUNOFF CALCULATIONS

**********80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY**********

```
JOB TR-20                              SUMMARY
TITLE    NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY
TITLE    WATERSHED CONDITIONS FUTURE WITH LARGE DETENTION SOY BEANS
 2 XSECTN  001       1        101.5
 8              100.00    0.10      0.1
 8              100.50    4.86      1.5
 8              101.00    24.40     5.0
 8              101.50    65.72     10.5
 8              102.00    253.76    34.0
 8              102.50    452.93    52.5
 8              103.00    728.76    75.0
 9 ENDTBL
 3 STRUCT    01
 8              1000.0    0.00      0.000
 8              1001.0    17.3      0.006
 8              1002.0    34.7      0.029
 8              1003.0    40.3      0.082
 8              1004.0    44.5      0.168
 8              1005.0    49.0      0.293
 8              1006.0    53.1      0.516
 8              1007.0    56.4      0.857
 8              1008.0    60.0      1.279
 8              1009.0    63.4      1.778
 8              1010.0    66.2      2.354
 8              1012.0    72.3      3.778
 8              1014.0    77.5      5.653
 8              1016.0    82.4      7.753
 8              1018.0    87.3      10.25
 8              1020.0    91.7      13.18
 8              1022.0    95.9      16.55
 8              1023.0    98.0      18.38
 8              1024.0    250.      20.34
 9 ENDTBL
 6 RUNOFF 1 001      1 0.0517     68.5      1.78
 6 REACH  3 001   1   2 1865
 6 RUNOFF 1 003      3 0.0883     76.0      0.96
 6 ADDHYD 4 004   2 3 4
 6 REACH  3 001   4   5 8345
 6 RUNOFF 1 005      1 0.3948     76.7      2.91
 6 ADDHYD 4 006   1 5 6
 6 RESVOR 2    01 6   1
 6 RUNOFF 1 007      2 0.1488     76.7      2.89
 6 ADDHYD 4 008   1 2 6
 6 RUNOFF 1 009      1 0.0235     77.7      0.64
 6 REACH  3 001   1   4 2025
 6 ADDHYD 4 010   4 6 2
 6 REACH  3 001   2   3 1025
 6 RUNOFF 1 012      1 0.1545     73.8      1.67
 6 ADDHYD 4 013   1 3 4
```

```
 6 REACH  3 001   4   5 1170
 6 RUNOFF 1 015       1 0.0476       74.1        0.48
 6 REACH  3 001   1   2 1090
 6 RUNOFF 1 017       3 0.0308       73.1        0.72
 6 ADDHYD 4 018   2 3 4
 6 REACH  3 001   4   6 2515
 6 RUNOFF 1 020       1 0.0274       80.1        0.23


**********80-80 LIST OF INPUT DATA (CONTINUED)**********

 6 REACH  3 001   1   2 2930
 6 ADDHYD 4 022   2 6 1
 6 ADDHYD 4 023   1 5 3
 6 RUNOFF 1 024       2 0.1410       69.0        1.12
 6 ADDHYD 4 025   2 3 4
  ENDATA
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.         2.40        1.          2 2  01  02
  ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.         3.45        1.          2 2  01  10
  ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.         4.24        1.          2 2  01  25
  ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.         4.97        1.          2 2  01  50
  ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.         5.82        1.          2 2  01  99
  ENDCMP 1
  ENDJOB 2

**********END OF 80-80 LIST**********


TR20 ---------- SCS -
            NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY          VERSION
01/15/**   WATERSHED CONDITIONS FUTURE WITH LARGE DETENTION SOY BEANS   2.04TEST
01:47:03                  PASS   1   JOB NO.   1                   PAGE   1



EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
   STARTING TIME =   .00       RAIN DEPTH =  2.40       RAIN DURATION =  1.00
   ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1           STORM NO. = 2           RAIN TABLE NO. = 2
```

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   1

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 3.45   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =10   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   2

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 4.24   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =25   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   3

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 4.97   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =50   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   4

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 5.82   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =99   RAIN TABLE NO. = 2

 *** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION OR STRUCTURE TABLE
          STARTS   .00 FEET BELOW ASSUMED CREST ELEVATION AT 1000.00.
          THIS CAN DECREASE OUTFLOW HYDROGRAPH VOLUME.   ***

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   5

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH   T-TRUNCATED HYDROGRAPH   R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 2.40 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 2, ARC 2							
MAIN TIME INCREMENT .100 HOURS							
ALTERNATE 1 STORM 2							
XSECTION 1	RUNOFF	.05	.36	---	13.23T	3T	60.0
XSECTION 1	REACH	.05	.36	100.30	13.43T	3T	60.0
XSECTION 3	RUNOFF	.09	.63	---	12.54	17	188.9
XSECTION 4	ADDHYD	.14	.53	---	12.57	18	128.6
XSECTION 1	REACH	.14	.53	100.74	12.98	14	100.0

XSECTION 5 RUNOFF .39 .67 --- 13.90 37 94.9
XSECTION 6 ADDHYD .53 .63 --- 13.72 47 88.7
STRUCTURE 1 RESVOR .53 .63 1004.34 13.98 46 86.8
XSECTION 7 RUNOFF .15 .66 --- 13.88 14 93.3
XSECTION 8 ADDHYD .68 .64 --- 13.95 60 88.2

XSECTION 9 RUNOFF .02 .71 --- 12.30 7 350.0
XSECTION 1 REACH .02 .71 100.54 12.47 6 300.0
XSECTION 10 ADDHYD .71 .64 --- 13.92 61 85.9
XSECTION 1 REACH .71 .64 101.45 13.92 61 85.9
XSECTION 12 RUNOFF .15 .54 --- 13.06 17 113.3

XSECTION 13 ADDHYD .86 .62 --- 13.61 72 83.7
XSECTION 1 REACH .86 .62 101.52 13.61 72 83.7
XSECTION 15 RUNOFF .05 .56 --- 12.22 12 240.0
XSECTION 1 REACH .05 .56 100.69 12.32 12 240.0
XSECTION 17 RUNOFF .03 .52 --- 12.39 5 166.7

XSECTION 18 ADDHYD .08 .54 --- 12.33 18 225.0
XSECTION 1 REACH .08 .54 100.79 12.50 16 200.0
XSECTION 20 RUNOFF .03 .83 --- 12.04 17 566.7
XSECTION 1 REACH .03 .82 100.73 12.20 14 466.7
XSECTION 22 ADDHYD .11 .61 --- 12.38 23 209.1

XSECTION 23 ADDHYD .97 .62 --- 13.47 78 80.4
XSECTION 24 RUNOFF .14 .38 --- 12.73 12 85.7
XSECTION 25 ADDHYD 1.11 .59 --- 13.24 85 76.6

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 3.45 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 10

XSECTION 1 RUNOFF .05 .90 --- 13.11 9 180.0
XSECTION 1 REACH .05 .90 100.61 13.27 9 180.0

XSECTION 3 RUNOFF .09 1.33 --- 12.50 40 444.4
XSECTION 4 ADDHYD .14 1.17 --- 12.54 43 307.1
XSECTION 1 REACH .14 1.17 101.15 12.89 37 264.3

XSECTION 5 RUNOFF .39 1.37 --- 13.81 83 212.8
XSECTION 6 ADDHYD .53 1.32 --- 13.57 107 201.9
STRUCTURE 1 RESVOR .53 1.32 1013.26 14.70 76 143.4
XSECTION 7 RUNOFF .15 1.37 --- 13.80 32 213.3
XSECTION 8 ADDHYD .68 1.33 --- 14.07 104 152.9

XSECTION 9 RUNOFF .02 1.44 --- 12.29 15 750.0
XSECTION 1 REACH .02 1.44 100.74 12.43 14 700.0
XSECTION 10 ADDHYD .71 1.33 --- 14.02 106 149.3
XSECTION 1 REACH .71 1.33 101.61 14.02 106 149.3
XSECTION 12 RUNOFF .15 1.19 --- 12.99 42 280.0

XSECTION 13 ADDHYD .86 1.31 --- 13.36 134 155.8
XSECTION 1 REACH .86 1.31 101.68 13.36 134 155.8
XSECTION 15 RUNOFF .05 1.21 --- 12.19 30 600.0
XSECTION 1 REACH .05 1.21 101.07 12.19 30 600.0
XSECTION 17 RUNOFF .03 1.15 --- 12.35 14 466.7

XSECTION 18 ADDHYD .08 1.19 --- 12.22 43 537.5
XSECTION 1 REACH .08 1.19 101.19 12.37 40 500.0
XSECTION 20 RUNOFF .03 1.60 --- 12.03 34 1133.3
XSECTION 1 REACH .03 1.60 101.06 12.18 29 966.7

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 10

XSECTION 22 ADDHYD .11 1.29 --- 12.26 62 563.6
XSECTION 23 ADDHYD .97 1.31 --- 13.19 146 150.5
XSECTION 24 RUNOFF .14 .92 --- 12.65 36 257.1
XSECTION 25 ADDHYD 1.11 1.26 --- 12.72 178 160.4

RAINFALL OF 4.24 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 25

XSECTION	1	RUNOFF	.05	1.39	---	13.07	15	300.0
XSECTION	1	REACH	.05	1.39	100.76	13.22	15	300.0
XSECTION	3	RUNOFF	.09	1.92	---	12.49	58	644.4
XSECTION	4	ADDHYD	.14	1.73	---	12.54	65	464.3
XSECTION	1	REACH	.14	1.73	101.39	12.87	57	407.1
XSECTION	5	RUNOFF	.39	1.98	---	13.78	123	315.4
XSECTION	6	ADDHYD	.53	1.91	---	13.51	160	301.9
STRUCTURE	1	RESVOR	.53	1.91	1019.06	15.04	90	169.8
XSECTION	7	RUNOFF	.15	1.98	---	13.77	47	313.3
XSECTION	8	ADDHYD	.68	1.93	---	14.06	131	192.6
XSECTION	9	RUNOFF	.02	2.05	---	12.28	22	1100.0
XSECTION	1	REACH	.02	2.05	100.92	12.41	21	1050.0
XSECTION	10	ADDHYD	.71	1.93	---	14.01	133	187.3
XSECTION	1	REACH	.71	1.93	101.68	14.01	133	187.3
XSECTION	12	RUNOFF	.15	1.76	---	12.96	64	426.7
XSECTION	13	ADDHYD	.86	1.90	---	13.27	178	207.0
XSECTION	1	REACH	.86	1.90	101.80	13.27	178	207.0
XSECTION	15	RUNOFF	.05	1.78	---	12.19	46	920.0
XSECTION	1	REACH	.05	1.78	101.26	12.19	46	920.0
XSECTION	17	RUNOFF	.03	1.71	---	12.33	22	733.3
XSECTION	18	ADDHYD	.08	1.75	---	12.22	66	825.0
XSECTION	1	REACH	.08	1.75	101.47	12.35	63	787.5

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 25

XSECTION	20	RUNOFF	.03	2.25	---	12.03	49	1633.3

XSECTION 1 REACH .03 2.25 101.22 12.17 42 1400.0
XSECTION 22 ADDHYD .11 1.88 --- 12.25 95 863.6
XSECTION 23 ADDHYD .97 1.90 --- 12.51 199 205.2
XSECTION 24 RUNOFF .14 1.42 --- 12.62 59 421.4

XSECTION 25 ADDHYD 1.11 1.84 --- 12.58 257 231.5

RAINFALL OF 4.97 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 50

XSECTION 1 RUNOFF .05 1.90 --- 13.05 21 420.0
XSECTION 1 REACH .05 1.90 100.92 13.18 21 420.0
XSECTION 3 RUNOFF .09 2.51 --- 12.48 77 855.6
XSECTION 4 ADDHYD .14 2.28 --- 12.54 88 628.6
XSECTION 1 REACH .14 2.28 101.53 12.85 77 550.0

XSECTION 5 RUNOFF .39 2.57 --- 13.76 162 415.4
XSECTION 6 ADDHYD .53 2.50 --- 13.48 212 400.0
STRUCTURE 1 RESVOR .53 2.50 1023.21 14.85 130 245.3
XSECTION 7 RUNOFF .15 2.57 --- 13.74 61 406.7
XSECTION 8 ADDHYD .68 2.51 --- 14.81 171 251.5

XSECTION 9 RUNOFF .02 2.66 --- 12.28 29 1450.0
XSECTION 1 REACH .02 2.66 101.04 12.41 28 1400.0
XSECTION 10 ADDHYD .71 2.52 --- 14.81 173 243.7
XSECTION 1 REACH .71 2.52 101.79 14.81 173 243.7
XSECTION 12 RUNOFF .15 2.32 --- 12.95 86 573.3

XSECTION 13 ADDHYD .86 2.48 --- 13.24 219 254.7
XSECTION 1 REACH .86 2.48 101.91 13.24 219 254.7
XSECTION 15 RUNOFF .05 2.35 --- 12.18 61 1220.0
XSECTION 1 REACH .05 2.35 101.44 12.18 61 1220.0
XSECTION 17 RUNOFF .03 2.26 --- 12.33 29 966.7

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 50

XSECTION	18	ADDHYD	.08	2.31	---	12.21	87 1087.5
XSECTION	1	REACH	.08	2.31	101.55	12.34	84 1050.0
XSECTION	20	RUNOFF	.03	2.87	---	12.02	62 2066.7
XSECTION	1	REACH	.03	2.87	101.37	12.16	55 1833.3
XSECTION	22	ADDHYD	.11	2.46	---	12.24	126 1145.5
XSECTION	23	ADDHYD	.97	2.48	---	12.44	256 263.9
XSECTION	24	RUNOFF	.14	1.94	---	12.61	83 592.9
XSECTION	25	ADDHYD	1.11	2.41	---	12.55	336 302.7

RAINFALL OF 5.82 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 99

XSECTION	1	RUNOFF	.05	2.53	---	13.03	29 580.0
XSECTION	1	REACH	.05	2.53	101.06	13.16	29 580.0
XSECTION	3	RUNOFF	.09	3.22	---	12.47	100 1111.1
XSECTION	4	ADDHYD	.14	2.96	---	12.53	115 821.4
XSECTION	1	REACH	.14	2.96	101.59	12.84	101 721.4
XSECTION	5	RUNOFF	.39	3.29	---	13.74	209 535.9
XSECTION	6	ADDHYD	.53	3.21	---	13.45	275 518.9
STRUCTURE	1	RESVOR	.53	3.21	1023.91	14.17	237 447.2
XSECTION	7	RUNOFF	.15	3.29	---	13.73	79 526.7
XSECTION	8	ADDHYD	.68	3.22	---	14.14	311 457.4
XSECTION	9	RUNOFF	.02	3.39	---	12.26	37 1850.0
XSECTION	1	REACH	.02	3.39	101.14	12.40	36 1800.0
XSECTION	10	ADDHYD	.71	3.23	---	14.13	315 443.7
XSECTION	1	REACH	.71	3.23	102.15	14.13	315 443.7
XSECTION	12	RUNOFF	.15	3.01	---	12.93	112 746.7
XSECTION	13	ADDHYD	.86	3.19	---	14.09	362 420.9
XSECTION	1	REACH	.86	3.19	102.27	14.09	362 420.9
XSECTION	15	RUNOFF	.05	3.04	---	12.18	79 1580.0

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE	STANDARD CONTROL	DRAINAGE	PEAK DISCHARGE RUNOFF

ID	OPERATION	AREA (SQ MI)	AMOUNT (IN)	ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 99

XSECTION	1	REACH	.05	3.04	101.54	12.18	79	1580.0
XSECTION	17	RUNOFF	.03	2.95	---	12.33	38	1266.7
XSECTION	18	ADDHYD	.08	3.00	---	12.21	114	1425.0
XSECTION	1	REACH	.08	3.00	101.62	12.34	110	1375.0
XSECTION	20	RUNOFF	.03	3.63	---	12.02	78	2600.0
XSECTION	1	REACH	.03	3.63	101.51	12.15	69	2300.0
XSECTION	22	ADDHYD	.11	3.16	---	12.24	163	1481.8
XSECTION	23	ADDHYD	.97	3.19	---	14.08	376	387.6
XSECTION	24	RUNOFF	.14	2.57	---	12.59	113	807.1
XSECTION	25	ADDHYD	1.11	3.11	---	12.52	432	389.2

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

			HYDROGRAPH INFORMATION				ROUTING PARAMETERS			
XSEC ID	REACH LENGTH (FT)	PLAIN LENGTH (FT)	FLOOD INFLOW PEAK (CFS)	TIME (HR)	OUTFLOW PEAK (CFS)	TIME (HR)	Q-A EQ. COEFF (X)	POWER (M)	PEAK FACTOR (k*)	ATT-KIN RATIO Q/I (Q*)	ATT-KIN COEFF (C)

BASEFLOW IS .0 CFS

ALTERNATE 1 STORM 2

1	1865		3	13.2	3	13.4	2.82	1.34	.016	.986	.54
1	8345		18	12.6	14	13.0	2.82	1.34	.109	.796	.23
1	2025		7	12.3	6	12.5	2.82	1.34	.047	.927	.59
1	1025		61	13.9	61	13.9	2.83	1.34	.002	1.000	1.00?
1	1170		72	13.6	72	13.6	2.86	1.33	.002	1.000	1.00?
1	1090		12	12.2	12	12.3	2.82	1.34	.020	.991	.95?
1	2515		18	12.3	16	12.5	2.82	1.34	.045	.919	.60
1	2930		17	12.0	14	12.2	2.82	1.34	.123	.842	.53

ALTERNATE 1 STORM 10

1	1865	9	13.1	9	13.3	2.82	1.34	.014	.990	.66
1	8345	43	12.5	37	12.9	2.83	1.34	.092	.850	.28
1	2025	15	12.3	14	12.4	2.82	1.34	.040	.954	.68?
1	1025	106	14.0	106	14.0	3.02	1.29	.002	1.000	1.00?
1	1170	133	13.4	133	13.4	3.15	1.26	.002	1.000	1.00?
1	1090	30	12.2	30	12.2	2.82	1.34	.017	1.000	1.00?
1	2515	43	12.2	40	12.4	2.83	1.34	.039	.941	.70?
1	2930	34	12.0	29	12.2	2.82	1.34	.103	.863	.61

ALTERNATE 1 STORM 25

1	1865	15	13.1	15	13.2	2.82	1.34	.013	.995	.72?
1	8345	65	12.5	57	12.9	2.83	1.34	.083	.872	.31
1	2025	22	12.3	21	12.4	2.82	1.34	.036	.971	.72?
1	1025	133	14.0	133	14.0	3.15	1.26	.002	1.000	1.00?
1	1170	178	13.3	178	13.3	3.36	1.23	.002	1.000	1.00?
1	1090	46	12.2	46	12.2	2.83	1.34	.016	1.000	1.00?
1	2515	65	12.2	62	12.3	2.83	1.34	.036	.945	.75?
1	2930	48	12.0	42	12.2	2.83	1.34	.093	.870	.64

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

XSEC ID	REACH LENGTH (FT)	FLOOD PLAIN LENGTH (FT)	HYDROGRAPH INFORMATION INFLOW PEAK (CFS)	INFLOW TIME (HR)	OUTFLOW PEAK (CFS)	OUTFLOW TIME (HR)	ROUTING PARAMETERS Q-A EQ. COEFF (X)	Q-A EQ. POWER (M)	PEAK FACTOR (k*)	ATT-KIN Q/I (Q*)	ATT-KIN COEFF (C)

ALTERNATE 1 STORM 50

1	1865	21	13.0	21	13.2	2.82	1.34	.012	.997	.76?
1	8345	88	12.5	76	12.9	2.93	1.31	.085	.873	.31
1	2025	29	12.3	28	12.4	2.82	1.34	.033	.976	.75?
1	1025	173	14.8	173	14.8	3.34	1.24	.002	1.000	1.00?
1	1170	219	13.2	219	13.2	3.56	1.21	.002	1.000	1.00?

1	1090	61	12.2	61	12.2	2.83	1.34	.014	1.000	1.00?
1	2515	87	12.2	83	12.3	2.92	1.31	.037	.953	.76?
1	2930	61	12.0	54	12.2	2.83	1.34	.086	.871	.67?

ALTERNATE 1 STORM 99

1	1865	29	13.0	29	13.2	2.82	1.34	.011	.995	.80?
1	8345	115	12.5	101	12.8	3.06	1.28	.087	.876	.31
1	2025	36	12.3	36	12.4	2.83	1.34	.030	.985	.78?
1	1025	314	14.1	314	14.1	3.50	1.22	.003	1.000	1.00?
1	1170	362	14.1	362	14.1	3.35	1.23	.003	1.000	1.00?

1	1090	79	12.2	79	12.2	2.89	1.32	.014	1.000	1.00?
1	2515	114	12.2	109	12.3	3.05	1.28	.038	.958	.76?
1	2930	77	12.0	67	12.2	2.88	1.32	.084	.869	.68?

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
STRUCTURE 1	.53					
ALTERNATE 1		46	76	90	130	237
XSECTION 1	.03					
ALTERNATE 1		14	29	42	55	69
XSECTION 3	.09					
ALTERNATE 1		17	40	58	77	100
XSECTION 4	.14					
ALTERNATE 1		18	43	65	88	115
XSECTION 5	.39					
ALTERNATE 1		37	83	123	162	209
XSECTION 6	.53					

ALTERNATE 1 47 107 160 212 275

XSECTION 7 .15

ALTERNATE 1 14 32 47 61 79

XSECTION 8 .68

ALTERNATE 1 60 104 131 171 311

XSECTION 9 .02

ALTERNATE 1 7 15 22 29 37

XSECTION 10 .71

ALTERNATE 1 61 106 133 173 315

XSECTION 12 .15

ALTERNATE 1 17 42 64 86 112

XSECTION 13 .86

ALTERNATE 1 72 134 178 219 362

XSECTION 15 .05

ALTERNATE 1 12 30 46 61 79

XSECTION 17 .03

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
XSECTION 17	.03					
ALTERNATE 1		5	14	22	29	38

XSECTION 18 .08

ALTERNATE 1 18 43 66 87 114

XSECTION 20 .03

ALTERNATE 1 17 34 49 62 78

XSECTION 22 .11

ALTERNATE 1 23 62 95 126 163

XSECTION 23 .97

ALTERNATE 1 78 146 199 256 376

XSECTION 24 .14

ALTERNATE 1 12 36 59 83 113

XSECTION 25 1.11

ALTERNATE 1 85 178 257 336 432

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS FUTURE WITH LARGE DETENTION SOY BEANS 2.04TEST

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 2.04TEST
FILES

INPUT = F:\NEVDTSOY.DAT , GIVEN DATA FILE
OUTPUT = F:\NEVDTSOY.OUT , DATED 01/15/**,01:47:03

FILES GENERATED - DATED 01/15/**,01:47:03

NONE!

JOB ENDED AT 01:47:03
*** TR-20 RUN COMPLETED ***

```
******************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****************

JOB TR-20                              SUMMARY
TITLE    NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY
TITLE    WATERSHED CONDITIONS FUTURE WITH LARGE DETENTION CORN
 2 XSECTN  001       1        101.5
 8              100.00    0.10      0.1
 8              100.50    4.86      1.5
 8              101.00    24.40     5.0
 8              101.50    65.72     10.5
 8              102.00    253.76    34.0
 8              102.50    452.93    52.5
 8              103.00    728.76    75.0
 9 ENDTBL
 3 STRUCT    01
 8              1000.0    0.00      0.000
 8              1001.0    17.3      0.006
 8              1002.0    34.7      0.029
 8              1003.0    40.3      0.082
 8              1004.0    44.5      0.168
 8              1005.0    49.0      0.293
 8              1006.0    53.1      0.516
 8              1007.0    56.4      0.857
 8              1008.0    60.0      1.279
 8              1009.0    63.4      1.778
 8              1010.0    66.2      2.354
 8              1012.0    72.3      3.778
 8              1014.0    77.5      5.653
 8              1016.0    82.4      7.753
 8              1018.0    87.3      10.25
 8              1020.0    91.7      13.18
 8              1022.0    95.9      16.55
 8              1023.0    98.0      18.38
 8              1024.0    250.      20.34
 9 ENDTBL
 6 RUNOFF 1 001      1 0.0517      70.0      1.78
 6 REACH  3 001   1   2 1865
 6 RUNOFF 1 003      3 0.0883      77.7      0.96
 6 ADDHYD 4 004   2 3 4
 6 REACH  3 001   4   5 8345
 6 RUNOFF 1 005      1 0.3948      78.1      2.91
 6 ADDHYD 4 006   1 5 6
 6 RESVOR 2    01 6   1
 6 RUNOFF 1 007      2 0.1488      78.9      2.89
 6 ADDHYD 4 008   1 2 6
 6 RUNOFF 1 009      1 0.0235      78.4      0.64
 6 REACH  3 001   1   4 2025
 6 ADDHYD 4 010   4 6 2
 6 REACH  3 001   2   3 1025
 6 RUNOFF 1 012      1 0.1545      74.9      1.67
```

```
 6 ADDHYD 4 013   1 3 4
 6 REACH  3 001   4   5 1170
 6 RUNOFF 1 015       1 0.0476       77.0       0.48
 6 REACH  3 001   1   2 1090
 6 RUNOFF 1 017       3 0.0308       73.1       0.72
 6 ADDHYD 4 018   2 3 4
 6 REACH  3 001   4   6 2515
 6 RUNOFF 1 020       1 0.0274       82.5       0.23


**********80-80 LIST OF INPUT DATA (CONTINUED)**********

 6 REACH  3 001   1   2 2930
 6 ADDHYD 4 022   2 6 1
 6 ADDHYD 4 023   1 5 3
 6 RUNOFF 1 024       2 0.1410       69.0       1.12
 6 ADDHYD 4 025   2 3 4
   ENDATA
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.        2.40       1.        2 2  01  02
   ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.        3.45       1.        2 2  01  10
   ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.        4.24       1.        2 2  01  25
   ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.        4.97       1.        2 2  01  50
   ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.        5.82       1.        2 2  01  99
   ENDCMP 1
   ENDJOB 2

**********END OF 80-80 LIST**********


TR20 ---------------------------------------------------------------------- SCS -
           NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY          VERSION
01/15/**     WATERSHED CONDITIONS FUTURE WITH LARGE DETENTION CORN      2.04TEST
01:47:33                  PASS   1   JOB NO.   1                  PAGE   1



EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
    STARTING TIME =   .00       RAIN DEPTH =  2.40       RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. = 1           STORM NO. = 2           RAIN TABLE NO. = 2
```

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   1

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 3.45   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =10   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   2

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 4.24   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =25   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   3

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 4.97   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =50   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   4

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 5.82   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =99   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   5

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 2.40 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 2, ARC 2							
MAIN TIME INCREMENT .100 HOURS							
ALTERNATE 1 STORM 2							
XSECTION 1	RUNOFF	.05	.41	---	13.20T	4T	80.0
XSECTION 1	REACH	.05	.41	100.36	13.39T	4T	80.0
XSECTION 3	RUNOFF	.09	.71	---	12.53	20	222.2
XSECTION 4	ADDHYD	.14	.60	---	12.56	21	150.0
XSECTION 1	REACH	.14	.60	100.81	13.05	17	121.4
XSECTION 5	RUNOFF	.39	.73	---	13.87	42	107.7
XSECTION 6	ADDHYD	.53	.69	---	13.68	54	101.9
STRUCTURE 1	RESVOR	.53	.69	1005.55	14.07	51	96.2

XSECTION 7 RUNOFF .15 .77 --- 13.85 17 113.3
XSECTION 8 ADDHYD .68 .71 --- 13.98 68 100.0

XSECTION 9 RUNOFF .02 .74 --- 12.30 7 350.0
XSECTION 1 REACH .02 .74 100.55 12.47 7 350.0
XSECTION 10 ADDHYD .71 .71 --- 13.95 69 97.2
XSECTION 1 REACH .71 .71 101.51 13.95 69 97.2
XSECTION 12 RUNOFF .15 .59 --- 13.04 19 126.7

XSECTION 13 ADDHYD .86 .69 --- 13.54 81 94.2
XSECTION 1 REACH .86 .69 101.54 13.54 81 94.2
XSECTION 15 RUNOFF .05 .68 --- 12.20 16 320.0
XSECTION 1 REACH .05 .68 100.79 12.31 16 320.0
XSECTION 17 RUNOFF .03 .52 --- 12.39 5 166.7

XSECTION 18 ADDHYD .08 .61 --- 12.32 21 262.5
XSECTION 1 REACH .08 .61 100.88 12.48 20 250.0
XSECTION 20 RUNOFF .03 .95 --- 12.04 20 666.7
XSECTION 1 REACH .03 .95 100.80 12.19 17 566.7
XSECTION 22 ADDHYD .11 .70 --- 12.36 29 263.6

XSECTION 23 ADDHYD .97 .69 --- 13.48 87 89.7
XSECTION 24 RUNOFF .14 .38 --- 12.73 12 85.7
XSECTION 25 ADDHYD 1.11 .65 --- 13.33 94 84.7

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	PEAK DISCHARGE RUNOFF AMOUNT (IN)	ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 3.45 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 10

XSECTION 1 RUNOFF .05 .98 --- 13.10 10 200.0
XSECTION 1 REACH .05 .98 100.64 13.25 10 200.0
XSECTION 3 RUNOFF .09 1.44 --- 12.49 43 477.8
XSECTION 4 ADDHYD .14 1.27 --- 12.54 48 342.9
XSECTION 1 REACH .14 1.27 101.20 12.88 41 292.9

XSECTION 5 RUNOFF .39 1.47 --- 13.80 90 230.8
XSECTION 6 ADDHYD .53 1.41 --- 13.54 116 218.9
STRUCTURE 1 RESVOR .53 1.42 1014.35 14.75 78 147.2
XSECTION 7 RUNOFF .15 1.52 --- 13.78 36 240.0
XSECTION 8 ADDHYD .68 1.44 --- 14.07 110 161.8

XSECTION 9 RUNOFF .02 1.49 --- 12.28 16 800.0
XSECTION 1 REACH .02 1.49 100.76 12.43 15 750.0
XSECTION 10 ADDHYD .71 1.44 --- 14.02 112 157.7
XSECTION 1 REACH .71 1.44 101.62 14.02 112 157.7
XSECTION 12 RUNOFF .15 1.26 --- 12.98 44 293.3

XSECTION 13 ADDHYD .86 1.41 --- 13.35 142 165.1
XSECTION 1 REACH .86 1.41 101.70 13.35 142 165.1
XSECTION 15 RUNOFF .05 1.39 --- 12.19 36 720.0
XSECTION 1 REACH .05 1.39 101.14 12.19 36 720.0
XSECTION 17 RUNOFF .03 1.15 --- 12.35 14 466.7

XSECTION 18 ADDHYD .08 1.30 --- 12.22 48 600.0
XSECTION 1 REACH .08 1.30 101.25 12.35 45 562.5
XSECTION 20 RUNOFF .03 1.78 --- 12.03 38 1266.7
XSECTION 1 REACH .03 1.78 101.10 12.17 33 1100.0

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 10

XSECTION 22 ADDHYD .11 1.42 --- 12.25 71 645.5
XSECTION 23 ADDHYD .97 1.41 --- 13.15 155 159.8
XSECTION 24 RUNOFF .14 .92 --- 12.65 36 257.1
XSECTION 25 ADDHYD 1.11 1.35 --- 12.67 188 169.4

RAINFALL OF 4.24 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 25

XSECTION	1	RUNOFF	.05	1.49	---	13.06	17	340.0
XSECTION	1	REACH	.05	1.49	100.80	13.20	17	340.0
XSECTION	3	RUNOFF	.09	2.05	---	12.49	63	700.0
XSECTION	4	ADDHYD	.14	1.85	---	12.54	71	507.1
XSECTION	1	REACH	.14	1.85	101.45	12.86	62	442.9
XSECTION	5	RUNOFF	.39	2.09	---	13.77	131	335.9
XSECTION	6	ADDHYD	.53	2.02	---	13.49	171	322.6
STRUCTURE	1	RESVOR	.53	2.03	1020.10	15.09	92	173.6
XSECTION	7	RUNOFF	.15	2.15	---	13.75	51	340.0
XSECTION	8	ADDHYD	.68	2.05	---	14.01	137	201.5
XSECTION	9	RUNOFF	.02	2.11	---	12.28	23	1150.0
XSECTION	1	REACH	.02	2.11	100.93	12.42	22	1100.0
XSECTION	10	ADDHYD	.71	2.05	---	13.98	140	197.2
XSECTION	1	REACH	.71	2.05	101.70	13.98	140	197.2
XSECTION	12	RUNOFF	.15	1.84	---	12.96	67	446.7
XSECTION	13	ADDHYD	.86	2.01	---	13.27	187	217.4
XSECTION	1	REACH	.86	2.01	101.82	13.27	187	217.4
XSECTION	15	RUNOFF	.05	2.00	---	12.18	52	1040.0
XSECTION	1	REACH	.05	2.00	101.34	12.18	52	1040.0
XSECTION	17	RUNOFF	.03	1.71	---	12.33	22	733.3
XSECTION	18	ADDHYD	.08	1.89	---	12.21	72	900.0
XSECTION	1	REACH	.08	1.89	101.51	12.34	69	862.5

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 25

XSECTION	20	RUNOFF	.03	2.45	---	12.02	53	1766.7
XSECTION	1	REACH	.03	2.45	101.27	12.16	46	1533.3
XSECTION	22	ADDHYD	.11	2.03	---	12.24	104	945.5
XSECTION	23	ADDHYD	.97	2.02	---	12.46	212	218.6
XSECTION	24	RUNOFF	.14	1.42	---	12.62	59	421.4

XSECTION 25 ADDHYD 1.11 1.94 --- 12.54 269 242.3

RAINFALL OF 4.97 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 50

XSECTION	1	RUNOFF	.05	2.01	---	13.04	23	460.0
XSECTION	1	REACH	.05	2.01	100.96	13.17	23	460.0
XSECTION	3	RUNOFF	.09	2.66	---	12.47	83	922.2
XSECTION	4	ADDHYD	.14	2.42	---	12.53	94	671.4
XSECTION	1	REACH	.14	2.42	101.54	12.84	82	585.7
XSECTION	5	RUNOFF	.39	2.69	---	13.75	171	438.5
XSECTION	6	ADDHYD	.53	2.62	---	13.46	224	422.6
STRUCTURE	1	RESVOR	.53	2.62	1023.39	14.61	157	296.2
XSECTION	7	RUNOFF	.15	2.77	---	13.73	66	440.0
XSECTION	8	ADDHYD	.68	2.65	---	14.56	208	305.9
XSECTION	9	RUNOFF	.02	2.72	---	12.27	29	1450.0
XSECTION	1	REACH	.02	2.72	101.05	12.40	29	1450.0
XSECTION	10	ADDHYD	.71	2.66	---	14.56	211	297.2
XSECTION	1	REACH	.71	2.66	101.89	14.56	211	297.2
XSECTION	12	RUNOFF	.15	2.42	---	12.94	89	593.3
XSECTION	13	ADDHYD	.86	2.61	---	14.54	239	277.9
XSECTION	1	REACH	.86	2.61	101.96	14.54	239	277.9
XSECTION	15	RUNOFF	.05	2.60	---	12.18	68	1360.0
XSECTION	1	REACH	.05	2.60	101.51	12.18	68	1360.0
XSECTION	17	RUNOFF	.03	2.26	---	12.33	29	966.7

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 50

XSECTION	18	ADDHYD	.08	2.46	---	12.21	94	1175.0

XSECTION 1 REACH .08 2.46 101.57 12.34 90 1125.0
XSECTION 20 RUNOFF .03 3.10 --- 12.02 67 2233.3
XSECTION 1 REACH .03 3.10 101.42 12.15 59 1966.7
XSECTION 22 ADDHYD .11 2.63 --- 12.24 136 1236.4

XSECTION 23 ADDHYD .97 2.62 --- 12.42 270 278.4
XSECTION 24 RUNOFF .14 1.94 --- 12.61 83 592.9
XSECTION 25 ADDHYD 1.11 2.53 --- 12.54 349 314.4

RAINFALL OF 5.82 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 99

XSECTION 1 RUNOFF .05 2.66 --- 13.02 31 620.0
XSECTION 1 REACH .05 2.66 101.08 13.15 31 620.0
XSECTION 3 RUNOFF .09 3.39 --- 12.47 105 1166.7
XSECTION 4 ADDHYD .14 3.12 --- 12.53 121 864.3
XSECTION 1 REACH .14 3.12 101.61 12.84 107 764.3

XSECTION 5 RUNOFF .39 3.43 --- 13.73 219 561.5
XSECTION 6 ADDHYD .53 3.35 --- 13.43 289 545.3
STRUCTURE 1 RESVOR .53 3.35 1024.03 14.09 254 479.2
XSECTION 7 RUNOFF .15 3.51 --- 13.71 85 566.7
XSECTION 8 ADDHYD .68 3.38 --- 14.06 334 491.2

XSECTION 9 RUNOFF .02 3.45 --- 12.27 37 1850.0
XSECTION 1 REACH .02 3.45 101.15 12.40 36 1800.0
XSECTION 10 ADDHYD .71 3.38 --- 14.05 338 476.1
XSECTION 1 REACH .71 3.38 102.21 14.05 338 476.1
XSECTION 12 RUNOFF .15 3.12 --- 12.93 117 780.0

XSECTION 13 ADDHYD .86 3.34 --- 14.01 390 453.5
XSECTION 1 REACH .86 3.34 102.34 14.01 390 453.5
XSECTION 15 RUNOFF .05 3.32 --- 12.17 87 1740.0

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 99

XSECTION	1	REACH	.05	3.32	101.56	12.17	87	1740.0
XSECTION	17	RUNOFF	.03	2.95	---	12.33	38	1266.7
XSECTION	18	ADDHYD	.08	3.17	---	12.20	121	1512.5
XSECTION	1	REACH	.08	3.17	101.64	12.33	117	1462.5
XSECTION	20	RUNOFF	.03	3.87	---	12.02	83	2766.7
XSECTION	1	REACH	.03	3.87	101.52	12.15	74	2466.7
XSECTION	22	ADDHYD	.11	3.35	---	12.23	174	1581.8
XSECTION	23	ADDHYD	.97	3.34	---	14.00	406	418.6
XSECTION	24	RUNOFF	.14	2.57	---	12.59	113	807.1
XSECTION	25	ADDHYD	1.11	3.24	---	12.51	446	401.8

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

			HYDROGRAPH INFORMATION				ROUTING PARAMETERS			
XSEC ID	REACH LENGTH (FT)	FLOOD PLAIN LENGTH (FT)	INFLOW PEAK (CFS)	INFLOW TIME (HR)	OUTFLOW PEAK (CFS)	OUTFLOW TIME (HR)	Q-A EQ. COEFF (X)	Q-A EQ. POWER (M)	PEAK FACTOR (k*)	ATT-KIN RATIO Q/I (Q*)	ATT-KIN COEFF (C)

BASEFLOW IS .0 CFS

ALTERNATE 1 STORM 2

1	1865		4	13.2	4	13.4	2.82	1.34	.016	.987	.56
1	8345		21	12.6	17	13.0	2.82	1.34	.108	.805	.24
1	2025		7	12.3	7	12.5	2.82	1.34	.047	.928	.60
1	1025		69	13.9	69	13.9	2.85	1.33	.002	1.000	1.00?
1	1170		81	13.5	81	13.5	2.90	1.31	.003	1.000	1.00?
1	1090		16	12.2	16	12.3	2.82	1.34	.020	.998	.99?
1	2515		21	12.3	20	12.5	2.82	1.34	.047	.915	.62
1	2930		20	12.0	17	12.2	2.82	1.34	.120	.848	.55

ALTERNATE 1 STORM 10

1	1865		10	13.1	10	13.2	2.82	1.34	.014	.989	.67?

1	8345	47	12.5	41	12.9	2.83	1.34	.091	.855	.29
1	2025	16	12.3	15	12.4	2.82	1.34	.039	.957	.68?
1	1025	112	14.0	112	14.0	3.05	1.28	.002	1.000	1.00?
1	1170	142	13.3	142	13.3	3.19	1.26	.003	1.000	1.00?
1	1090	36	12.2	36	12.2	2.83	1.34	.017	1.000	1.00?
1	2515	48	12.2	45	12.4	2.83	1.34	.039	.933	.71?
1	2930	38	12.0	33	12.2	2.83	1.34	.100	.862	.62

ALTERNATE 1 STORM 25

1	1865	17	13.1	17	13.2	2.82	1.34	.013	.996	.73?
1	8345	70	12.5	61	12.9	2.85	1.33	.084	.872	.31
1	2025	22	12.3	22	12.4	2.82	1.34	.035	.970	.73?
1	1025	140	14.0	140	14.0	3.18	1.26	.002	1.000	1.00?
1	1170	187	13.3	187	13.3	3.41	1.23	.002	1.000	1.00?
1	1090	52	12.2	52	12.2	2.83	1.34	.015	1.000	1.00?
1	2515	72	12.2	68	12.3	2.86	1.33	.037	.949	.75?
1	2930	52	12.0	45	12.2	2.83	1.34	.091	.867	.65

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

XSEC ID	REACH LENGTH (FT)	FLOOD PLAIN LENGTH (FT)	HYDROGRAPH INFORMATION INFLOW PEAK (CFS)	INFLOW TIME (HR)	OUTFLOW PEAK (CFS)	OUTFLOW TIME (HR)	ROUTING PARAMETERS Q-A EQ. COEFF (X)	Q-A EQ. POWER (M)	PEAK FACTOR (k*)	ATT-KIN RATIO Q/I (Q*)	ATT-KIN COEFF (C)
ALTERNATE 1 STORM 50											
1	1865		23	13.0	23	13.2	2.82	1.34	.012	.996	.77?
1	8345		94	12.5	82	12.8	2.96	1.30	.086	.873	.31
1	2025		29	12.3	29	12.4	2.82	1.34	.033	.980	.76?
1	1025		210	14.6	210	14.6	3.51	1.22	.002	1.000	1.00?
1	1170		238	14.5	238	14.5	3.64	1.20	.003	1.000	1.00?
1	1090		67	12.2	67	12.2	2.84	1.33	.014	1.000	1.00?
1	2515		93	12.2	89	12.3	2.96	1.30	.038	.956	.76?
1	2930		66	12.0	57	12.2	2.83	1.34	.084	.869	.68?

ALTERNATE 1 STORM 99

1	1865	31	13.0	31	13.1	2.82	1.34	.011	.994	.80?
1	8345	121	12.5	106	12.8	3.09	1.27	.087	.878	.31
1	2025	37	12.3	36	12.4	2.83	1.34	.030	.985	.78?
1	1025	337	14.1	337	14.1	3.43	1.23	.003	1.000	1.00?
1	1170	390	14.0	390	14.0	3.27	1.24	.003	1.000	1.00?
1	1090	86	12.2	86	12.2	2.92	1.31	.015	1.000	1.00?
1	2515	121	12.2	116	12.3	3.09	1.27	.039	.960	.76?
1	2930	82	12.0	71	12.2	2.90	1.31	.084	.867	.68?

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
STRUCTURE 1	.53					
ALTERNATE 1		51	78	92	157	254
XSECTION 1	.03					
ALTERNATE 1		17	33	46	59	74
XSECTION 3	.09					
ALTERNATE 1		20	43	63	83	105
XSECTION 4	.14					
ALTERNATE 1		21	48	71	94	121
XSECTION 5	.39					
ALTERNATE 1		42	90	131	171	219
XSECTION 6	.53					
ALTERNATE 1		54	116	171	224	289
XSECTION 7	.15					

```
--------------------------
  ALTERNATE   1             17       36       51       66       85

XSECTION   8        .68
--------------------------
  ALTERNATE   1             68      110      137      208      334

XSECTION   9        .02
--------------------------
  ALTERNATE   1              7       16       23       29       37

XSECTION  10        .71
--------------------------
  ALTERNATE   1             69      112      140      211      338

XSECTION  12        .15
--------------------------
  ALTERNATE   1             19       44       67       89      117

XSECTION  13        .86
--------------------------
  ALTERNATE   1             81      142      187      239      390

XSECTION  15        .05
--------------------------
  ALTERNATE   1             16       36       52       68       87

XSECTION  17        .03
--------------------------
```


SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

```
XSECTION/         DRAINAGE
STRUCTURE          AREA      STORM NUMBERS.....
  ID             (SQ MI)        2       10       25       50       99


XSECTION  17        .03
--------------------------
  ALTERNATE   1              5       14       22       29       38

XSECTION  18        .08
--------------------------
  ALTERNATE   1             21       48       72       94      121
```

```
XSECTION   20        .03
---------------------------
  ALTERNATE   1             20       38       53       67       83

XSECTION   22        .11
---------------------------
  ALTERNATE   1             29       71      104      136      174

XSECTION   23        .97
---------------------------
  ALTERNATE   1             87      155      212      270      406

XSECTION   24        .14
---------------------------
  ALTERNATE   1             12       36       59       83      113

XSECTION   25       1.11
---------------------------
  ALTERNATE   1             94      188      269      349      446


TR20 ---------------------------------------------------------------------- SCS -
           NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY         VERSION
01/15/**     WATERSHED CONDITIONS FUTURE WITH LARGE DETENTION CORN      2.04TEST



END OF  1 JOBS IN THIS RUN



                SCS  TR-20,  VERSION 2.04TEST
                             FILES

    INPUT  = F:\NEVDTCRN.DAT                    , GIVEN DATA FILE
    OUTPUT = F:\NEVDTCRN.OUT                      , DATED 01/15/**,01:47:33

          FILES GENERATED - DATED 01/15/**,01:47:33

                        NONE!



        TOTAL NUMBER OF WARNINGS =  26,  MESSAGES =   5
```

JOB ENDED AT 01:47:34
*** TR-20 RUN COMPLETED ***

**********80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY**********

```
JOB TR-20                              SUMMARY
TITLE    NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY
TITLE    WATERSHED CONDITIONS FUTURE WITH LARGE DETENTION HAY
 2 XSECTN  001       1         101.5
 8                100.00     0.10      0.1
 8                100.50     4.86      1.5
 8                101.00     24.40     5.0
 8                101.50     65.72     10.5
 8                102.00     253.76    34.0
 8                102.50     452.93    52.5
 8                103.00     728.76    75.0
 9 ENDTBL
 3 STRUCT     01
 8                1000.0     0.00      0.000
 8                1001.0     17.3      0.006
 8                1002.0     34.7      0.029
 8                1003.0     40.3      0.082
 8                1004.0     44.5      0.168
 8                1005.0     49.0      0.293
 8                1006.0     53.1      0.516
 8                1007.0     56.4      0.857
 8                1008.0     60.0      1.279
 8                1009.0     63.4      1.778
 8                1010.0     66.2      2.354
 8                1012.0     72.3      3.778
 8                1014.0     77.5      5.653
 8                1016.0     82.4      7.753
 8                1018.0     87.3      10.25
 8                1020.0     91.7      13.18
 8                1022.0     95.9      16.55
 8                1023.0     98.0      18.38
 8                1024.0     250.      20.34
 9 ENDTBL
 6 RUNOFF 1 001       1 0.0517      65.9       1.78
 6 REACH  3 001   1   2 1865
 6 RUNOFF 1 003       3 0.0883      73.0       0.96
 6 ADDHYD 4 004   2 3 4
 6 REACH  3 001   4   5 8345
 6 RUNOFF 1 005       1 0.3948      74.2       2.91
 6 ADDHYD 4 006   1 5 6
 6 RESVOR 2    01 6   1
 6 RUNOFF 1 007       2 0.1488      72.8       2.89
 6 ADDHYD 4 008   1 2 6
 6 RUNOFF 1 009       1 0.0235      76.5       0.64
 6 REACH  3 001   1   4 2025
 6 ADDHYD 4 010   4 6 2
```

```
 6 REACH  3 001   2   3 1025
 6 RUNOFF 1 012       1 0.1545       71.7        1.67
 6 ADDHYD 4 013   1 3 4
 6 REACH  3 001   4   5 1170
 6 RUNOFF 1 015       1 0.0476       69.2        0.48
 6 REACH  3 001   1   2 1090
 6 RUNOFF 1 017       3 0.0308       73.1        0.72
 6 ADDHYD 4 018   2 3 4
 6 REACH  3 001   4   6 2515
 6 RUNOFF 1 020       1 0.0274       75.9        0.23


**********80-80 LIST OF INPUT DATA (CONTINUED)**********

 6 REACH  3 001   1   2 2930
 6 ADDHYD 4 022   2 6 1
 6 ADDHYD 4 023   1 5 3
 6 RUNOFF 1 024       2 0.1410       69.0        1.12
 6 ADDHYD 4 025   2 3 4
   ENDATA
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.         2.40        1.          2 2  01  02
   ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.         3.45        1.          2 2  01  10
   ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.         4.24        1.          2 2  01  25
   ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.         4.97        1.          2 2  01  50
   ENDCMP 1
 7 INCREM 6           .1
 7 COMPUT 7 001   025   0.         5.82        1.          2 2  01  99
   ENDCMP 1
   ENDJOB 2

**********END OF 80-80 LIST**********


TR20 ---------------------------------------------------------------- SCS -
            NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY         VERSION
01/15/**      WATERSHED CONDITIONS FUTURE WITH LARGE DETENTION HAY      2.04TEST
03:15:34                  PASS   1   JOB NO.   1                   PAGE   1



EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


EXECUTIVE CONTROL  COMPUT    FROM XSECTION   1  TO XSECTION  25
    STARTING TIME =   .00       RAIN DEPTH =  2.40       RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. = 1           STORM NO. = 2           RAIN TABLE NO. = 2
```

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   1

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 3.45   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =10   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   2

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 4.24   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =25   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   3

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 4.97   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =50   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   4

EXECUTIVE CONTROL INCREM   MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT   FROM XSECTION   1 TO XSECTION 25
   STARTING TIME =   .00   RAIN DEPTH = 5.82   RAIN DURATION = 1.00
   ANT. RUNOFF COND. = 2   MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. = 1   STORM NO. =99   RAIN TABLE NO. = 2

EXECUTIVE CONTROL ENDCMP   COMPUTATIONS COMPLETED FOR PASS   5

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 2.40 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 2, ARC 2							
MAIN TIME INCREMENT .100 HOURS							
ALTERNATE 1 STORM 2							
XSECTION 1	RUNOFF	.05	.28	---	13.31T	2T	40.0
XSECTION 1	REACH	.05	.28	100.21	13.51T	2T	40.0
XSECTION 3	RUNOFF	.09	.51	---	12.56	13	144.4
XSECTION 4	ADDHYD	.14	.43	---	12.60	13	92.9
XSECTION 1	REACH	.14	.43	100.64	13.03	10	71.4

XSECTION 5 RUNOFF .39 .56 --- 13.94 30 76.9
XSECTION 6 ADDHYD .53 .53 --- 13.79 37 69.8
STRUCTURE 1 RESVOR .53 .53 1002.46 13.90 37 69.8
XSECTION 7 RUNOFF .15 .51 --- 13.95 10 66.7
XSECTION 8 ADDHYD .68 .52 --- 13.91 47 69.1

XSECTION 9 RUNOFF .02 .66 --- 12.32 6 300.0
XSECTION 1 REACH .02 .65 100.52 12.49 6 300.0
XSECTION 10 ADDHYD .71 .53 --- 13.89 48 67.6
XSECTION 1 REACH .71 .53 101.29 13.89 48 67.6
XSECTION 12 RUNOFF .15 .47 --- 13.09 14 93.3

XSECTION 13 ADDHYD .86 .52 --- 13.65 58 67.4
XSECTION 1 REACH .86 .52 101.40 13.65 58 67.4
XSECTION 15 RUNOFF .05 .38 --- 12.24 7 140.0
XSECTION 1 REACH .05 .38 100.55 12.36 7 140.0
XSECTION 17 RUNOFF .03 .52 --- 12.39 5 166.7

XSECTION 18 ADDHYD .08 .44 --- 12.37 12 150.0
XSECTION 1 REACH .08 .43 100.66 12.54 11 137.5
XSECTION 20 RUNOFF .03 .63 --- 12.05 12 400.0
XSECTION 1 REACH .03 .63 100.62 12.31 10 333.3
XSECTION 22 ADDHYD .11 .49 --- 12.42 18 163.6

XSECTION 23 ADDHYD .97 .51 --- 13.38 63 64.9
XSECTION 24 RUNOFF .14 .38 --- 12.73 12 85.7
XSECTION 25 ADDHYD 1.11 .49 --- 13.29 70 63.1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 3.45 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 10

XSECTION 1 RUNOFF .05 .77 --- 13.14 7 140.0
XSECTION 1 REACH .05 .77 100.57 13.31 7 140.0
XSECTION 3 RUNOFF .09 1.15 --- 12.52 33 366.7

XSECTION 4 ADDHYD .14 1.01 --- 12.56 36 257.1
XSECTION 1 REACH .14 1.01 101.07 12.92 30 214.3

XSECTION 5 RUNOFF .39 1.22 --- 13.84 72 184.6
XSECTION 6 ADDHYD .53 1.16 --- 13.63 92 173.6
STRUCTURE 1 RESVOR .53 1.16 1011.36 14.61 70 132.1
XSECTION 7 RUNOFF .15 1.13 --- 13.84 25 166.7
XSECTION 8 ADDHYD .68 1.16 --- 14.18 93 136.8

XSECTION 9 RUNOFF .02 1.36 --- 12.29 14 700.0
XSECTION 1 REACH .02 1.36 100.72 12.43 14 700.0
XSECTION 10 ADDHYD .71 1.16 --- 14.14 95 133.8
XSECTION 1 REACH .71 1.16 101.58 14.14 95 133.8
XSECTION 12 RUNOFF .15 1.07 --- 13.00 36 240.0

XSECTION 13 ADDHYD .86 1.15 --- 13.41 119 138.4
XSECTION 1 REACH .86 1.15 101.64 13.41 119 138.4
XSECTION 15 RUNOFF .05 .93 --- 12.21 22 440.0
XSECTION 1 REACH .05 .93 100.93 12.21 22 440.0
XSECTION 17 RUNOFF .03 1.15 --- 12.35 14 466.7

XSECTION 18 ADDHYD .08 1.02 --- 12.24 34 425.0
XSECTION 1 REACH .08 1.02 101.10 12.40 33 412.5
XSECTION 20 RUNOFF .03 1.32 --- 12.04 28 933.3
XSECTION 1 REACH .03 1.32 100.98 12.18 23 766.7

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 10

XSECTION 22 ADDHYD .11 1.10 --- 12.29 49 445.5
XSECTION 23 ADDHYD .97 1.14 --- 13.25 129 133.0
XSECTION 24 RUNOFF .14 .92 --- 12.65 36 257.1
XSECTION 25 ADDHYD 1.11 1.11 --- 12.78 160 144.1

RAINFALL OF 4.24 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 25

XSECTION	1	RUNOFF	.05	1.23	---	13.09	13	260.0
XSECTION	1	REACH	.05	1.23	100.71	13.24	13	260.0
XSECTION	3	RUNOFF	.09	1.70	---	12.49	51	566.7
XSECTION	4	ADDHYD	.14	1.52	---	12.54	57	407.1
XSECTION	1	REACH	.14	1.52	101.29	12.88	49	350.0
XSECTION	5	RUNOFF	.39	1.79	---	13.80	110	282.1
XSECTION	6	ADDHYD	.53	1.72	---	13.55	141	266.0
STRUCTURE	1	RESVOR	.53	1.72	1017.20	14.96	85	160.4
XSECTION	7	RUNOFF	.15	1.69	---	13.80	39	260.0
XSECTION	8	ADDHYD	.68	1.71	---	14.12	119	175.0
XSECTION	9	RUNOFF	.02	1.96	---	12.29	21	1050.0
XSECTION	1	REACH	.02	1.96	100.89	12.42	20	1000.0
XSECTION	10	ADDHYD	.71	1.72	---	14.09	122	171.8
XSECTION	1	REACH	.71	1.72	101.65	14.09	122	171.8
XSECTION	12	RUNOFF	.15	1.61	---	12.97	57	380.0
XSECTION	13	ADDHYD	.86	1.70	---	13.31	162	188.4
XSECTION	1	REACH	.86	1.70	101.75	13.31	162	188.4
XSECTION	15	RUNOFF	.05	1.44	---	12.20	36	720.0
XSECTION	1	REACH	.05	1.44	101.14	12.20	36	720.0
XSECTION	17	RUNOFF	.03	1.71	---	12.33	22	733.3
XSECTION	18	ADDHYD	.08	1.54	---	12.23	56	700.0
XSECTION	1	REACH	.08	1.54	101.35	12.37	53	662.5

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 25

XSECTION	20	RUNOFF	.03	1.92	---	12.03	41	1366.7
XSECTION	1	REACH	.03	1.92	101.13	12.17	36	1200.0

XSECTION 22 ADDHYD .11 1.64 --- 12.27 79 718.2
XSECTION 23 ADDHYD .97 1.69 --- 12.61 179 184.5
XSECTION 24 RUNOFF .14 1.42 --- 12.62 59 421.4

XSECTION 25 ADDHYD 1.11 1.66 --- 12.62 238 214.4

RAINFALL OF 4.97 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 50

XSECTION 1 RUNOFF .05 1.70 --- 13.07 19 380.0
XSECTION 1 REACH .05 1.70 100.85 13.20 19 380.0
XSECTION 3 RUNOFF .09 2.25 --- 12.49 69 766.7
XSECTION 4 ADDHYD .14 2.05 --- 12.55 77 550.0
XSECTION 1 REACH .14 2.05 101.50 12.87 67 478.6

XSECTION 5 RUNOFF .39 2.36 --- 13.78 147 376.9
XSECTION 6 ADDHYD .53 2.28 --- 13.51 191 360.4
STRUCTURE 1 RESVOR .53 2.28 1021.97 15.25 96 181.1
XSECTION 7 RUNOFF .15 2.24 --- 13.77 53 353.3
XSECTION 8 ADDHYD .68 2.27 --- 14.05 142 208.8

XSECTION 9 RUNOFF .02 2.55 --- 12.27 27 1350.0
XSECTION 1 REACH .02 2.55 101.03 12.41 27 1350.0
XSECTION 10 ADDHYD .71 2.28 --- 13.99 145 204.2
XSECTION 1 REACH .71 2.28 101.71 13.99 145 204.2
XSECTION 12 RUNOFF .15 2.15 --- 12.96 78 520.0

XSECTION 13 ADDHYD .86 2.25 --- 13.24 202 234.9
XSECTION 1 REACH .86 2.25 101.86 13.24 202 234.9
XSECTION 15 RUNOFF .05 1.95 --- 12.19 50 1000.0
XSECTION 1 REACH .05 1.95 101.31 12.19 50 1000.0
XSECTION 17 RUNOFF .03 2.26 --- 12.33 29 966.7

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 1 STORM 50

XSECTION	18	ADDHYD	.08	2.07	---	12.22	76	950.0
XSECTION	1	REACH	.08	2.07	101.52	12.35	73	912.5
XSECTION	20	RUNOFF	.03	2.50	---	12.03	54	1800.0
XSECTION	1	REACH	.03	2.50	101.28	12.17	47	1566.7
XSECTION	22	ADDHYD	.11	2.18	---	12.25	107	972.7
XSECTION	23	ADDHYD	.97	2.25	---	12.50	231	238.1
XSECTION	24	RUNOFF	.14	1.94	---	12.61	83	592.9
XSECTION	25	ADDHYD	1.11	2.21	---	12.57	313	282.0

RAINFALL OF 5.82 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 1 STORM 99

XSECTION	1	RUNOFF	.05	2.30	---	13.04	26	520.0
XSECTION	1	REACH	.05	2.30	101.02	13.17	26	520.0
XSECTION	3	RUNOFF	.09	2.94	---	12.48	91	1011.1
XSECTION	4	ADDHYD	.14	2.70	---	12.54	104	742.9
XSECTION	1	REACH	.14	2.70	101.57	12.85	91	650.0
XSECTION	5	RUNOFF	.39	3.05	---	13.76	193	494.9
XSECTION	6	ADDHYD	.53	2.96	---	13.47	252	475.5
STRUCTURE	1	RESVOR	.53	2.96	1023.70	14.34	205	386.8
XSECTION	7	RUNOFF	.15	2.92	---	13.75	70	466.7
XSECTION	8	ADDHYD	.68	2.95	---	14.31	266	391.2
XSECTION	9	RUNOFF	.02	3.27	---	12.27	35	1750.0
XSECTION	1	REACH	.02	3.27	101.12	12.40	34	1700.0
XSECTION	10	ADDHYD	.71	2.96	---	14.31	270	380.3
XSECTION	1	REACH	.71	2.96	102.04	14.31	270	380.3
XSECTION	12	RUNOFF	.15	2.82	---	12.94	104	693.3
XSECTION	13	ADDHYD	.86	2.94	---	14.27	308	358.1
XSECTION	1	REACH	.86	2.94	102.14	14.27	308	358.1
XSECTION	15	RUNOFF	.05	2.59	---	12.18	67	1340.0

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA	RUNOFF AMOUNT	PEAK DISCHARGE ELEVATION	TIME	RATE	RATE

(SQ MI) (IN) (FT) (HR) (CFS) (CSM)

ALTERNATE 1 STORM 99

XSECTION	1	REACH	.05	2.59	101.50	12.18	67 1340.0
XSECTION	17	RUNOFF	.03	2.95	---	12.33	38 1266.7
XSECTION	18	ADDHYD	.08	2.73	---	12.22	101 1262.5
XSECTION	1	REACH	.08	2.73	101.59	12.35	98 1225.0
XSECTION	20	RUNOFF	.03	3.22	---	12.03	70 2333.3
XSECTION	1	REACH	.03	3.21	101.45	12.16	62 2066.7
XSECTION	22	ADDHYD	.11	2.85	---	12.24	144 1309.1
XSECTION	23	ADDHYD	.97	2.93	---	14.26	321 330.9
XSECTION	24	RUNOFF	.14	2.57	---	12.59	113 807.1
XSECTION	25	ADDHYD	1.11	2.88	---	12.54	407 366.7

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

			HYDROGRAPH INFORMATION				ROUTING PARAMETERS			
			FLOOD	INFLOW	OUTFLOW	Q-A EQ.	PEAK			ATT-
XSEC	REACH	PLAIN					LENGTH	RATIO		KIN
ID	LENGTH	LENGTH	PEAK	TIME	PEAK	TIME	COEFF	POWER	FACTOR	Q/I COEFF
	(FT)	(FT)	(CFS)	(HR)	(CFS)	(HR)	(X)	(M)	(k*)	(Q*) (C)

BASEFLOW IS .0 CFS

ALTERNATE 1 STORM 2

1	1865		2	13.3	2	13.5	2.82	1.34	.015	.984 .51
1	8345		13	12.6	10	13.0	2.82	1.34	.109	.777 .22
1	2025		6	12.3	6	12.5	2.82	1.34	.047	.928 .58
1	1025		48	13.9	48	13.9	2.83	1.34	.002	1.000 1.00?
1	1170		58	13.6	58	13.6	2.83	1.34	.002	1.000 1.00?
1	1090		7	12.2	7	12.4	2.82	1.34	.018	.974 .88?
1	2515		12	12.4	11	12.5	2.82	1.34	.042	.911 .56
1	2930		12	12.1	10	12.3	2.82	1.34	.124	.827 .50

ALTERNATE 1 STORM 10

1	1865	7	13.1	7	13.3	2.82	1.34	.014	.992	.64
1	8345	36	12.6	30	12.9	2.83	1.34	.093	.841	.27
1	2025	14	12.3	13	12.4	2.82	1.34	.040	.950	.67?
1	1025	95	14.1	95	14.1	2.96	1.30	.002	1.000	1.00?
1	1170	119	13.4	119	13.4	3.08	1.27	.002	1.000	1.00?
1	1090	22	12.2	22	12.2	2.82	1.34	.017	1.000	1.00?
1	2515	34	12.2	33	12.4	2.82	1.34	.038	.961	.67?
1	2930	27	12.0	23	12.2	2.82	1.34	.107	.863	.58

ALTERNATE 1 STORM 25

1	1865	13	13.1	13	13.2	2.82	1.34	.013	.992	.70?
1	8345	56	12.5	49	12.9	2.83	1.34	.084	.865	.30
1	2025	21	12.3	20	12.4	2.82	1.34	.036	.965	.72?
1	1025	122	14.1	122	14.1	3.09	1.27	.002	1.000	1.00?
1	1170	162	13.3	162	13.3	3.29	1.24	.002	1.000	1.00?
1	1090	36	12.2	36	12.2	2.83	1.34	.016	1.000	1.00?
1	2515	56	12.2	53	12.4	2.83	1.34	.036	.950	.73?
1	2930	40	12.0	35	12.2	2.83	1.34	.097	.875	.63

SUMMARY TABLE 2

MODIFIED ATT-KIN REACH ROUTING IN ORDER PERFORMED.
QUESTION MARK (?) AFTER: OUTFLOW PEAK - MAX. NUMBER ROUTING ITERATIONS USED;
LENGTH FACTOR - VALUE k* GREATER THAN 1.0;
ATT-KIN COEFF - VALUE C GREATER THAN 0.667.

ALTERNATE 1 STORM 50

XSEC ID	REACH LENGTH (FT)	PLAIN LENGTH (FT)	HYDROGRAPH INFLOW FLOOD PEAK (CFS)	HYDROGRAPH INFLOW TIME PEAK (HR)	HYDROGRAPH OUTFLOW PEAK (CFS)	HYDROGRAPH OUTFLOW TIME PEAK (HR)	ROUTING PARAMETERS Q-A EQ. COEFF (X)	ROUTING PARAMETERS Q-A EQ. POWER (M)	ROUTING PARAMETERS ATT-KIN FACTOR (k*)	ROUTING PARAMETERS PEAK RATIO Q/I (Q*)	ROUTING PARAMETERS ATT-KIN COEFF (C)
1	1865		19	13.1	19	13.2	2.82	1.34	.012	.996	.74?
1	8345		77	12.5	67	12.9	2.88	1.32	.082	.876	.31
1	2025		27	12.3	27	12.4	2.82	1.34	.033	.977	.75?
1	1025		145	14.0	145	14.0	3.20	1.25	.002	1.000	1.00?
1	1170		201	13.2	201	13.2	3.47	1.22	.002	1.000	1.00?
1	1090		50	12.2	50	12.2	2.83	1.34	.015	1.000	1.00?

1	2515	76	12.2	72	12.4	2.88	1.32	.035	.948	.75?
1	2930	53	12.0	46	12.2	2.83	1.34	.089	.878	.66

ALTERNATE 1 STORM 99

1	1865	26	13.0	26	13.2	2.82	1.34	.011	.997	.78?
1	8345	103	12.5	90	12.9	3.00	1.29	.085	.876	.31
1	2025	35	12.3	34	12.4	2.83	1.34	.031	.983	.78?
1	1025	269	14.3	269	14.3	3.65	1.20	.003	1.000	1.00?
1	1170	308	14.3	308	14.3	3.52	1.22	.003	1.000	1.00?
1	1090	67	12.2	67	12.2	2.84	1.34	.014	1.000	1.00?
1	2515	101	12.2	96	12.3	2.99	1.29	.037	.952	.76?
1	2930	69	12.0	60	12.2	2.84	1.33	.084	.876	.68?

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
STRUCTURE 1	.53					
ALTERNATE 1		37	70	85	96	205
XSECTION 1	.03					
ALTERNATE 1		10	23	36	47	62
XSECTION 3	.09					
ALTERNATE 1		13	33	51	69	91
XSECTION 4	.14					
ALTERNATE 1		13	36	57	77	104
XSECTION 5	.39					
ALTERNATE 1		30	72	110	147	193
XSECTION 6	.53					

ALTERNATE	1	37	92	141	191	252

XSECTION 7 .15

ALTERNATE	1	10	25	39	53	70

XSECTION 8 .68

ALTERNATE	1	47	93	119	142	266

XSECTION 9 .02

ALTERNATE	1	6	14	21	27	35

XSECTION 10 .71

ALTERNATE	1	48	95	122	145	270

XSECTION 12 .15

ALTERNATE	1	14	36	57	78	104

XSECTION 13 .86

ALTERNATE	1	58	119	162	202	308

XSECTION 15 .05

ALTERNATE	1	7	22	36	50	67

XSECTION 17 .03

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 2	10	25	50	99
XSECTION 17	.03					
ALTERNATE	1	5	14	22	29	38

XSECTION 18 .08

ALTERNATE 1 12 34 56 76 101

XSECTION 20 .03

ALTERNATE 1 12 28 41 54 70

XSECTION 22 .11

ALTERNATE 1 18 49 79 107 144

XSECTION 23 .97

ALTERNATE 1 63 129 179 231 321

XSECTION 24 .14

ALTERNATE 1 12 36 59 83 113

XSECTION 25 1.11

ALTERNATE 1 70 160 238 313 407

TR20 ---------- SCS -
NORTH EAGLE VILLAGE ROAD BISHOP BROOK TRIBUTARY VERSION
01/15/** WATERSHED CONDITIONS FUTURE WITH LARGE DETENTION HAY 2.04TEST

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 2.04TEST
FILES

INPUT = F:\NEVDTHAY.DAT , GIVEN DATA FILE
OUTPUT = F:\NEVDTHAY.OUT , DATED 01/15/**,03:15:34

FILES GENERATED - DATED 01/15/**,03:15:34

NONE!

JOB ENDED AT 03:15:34
*** TR-20 RUN COMPLETED ***

FEMA RUNOFF CALCULATIONS

National Flood Hazard Layer FIRMette

FEMA

75°57'16"W 43°1'12"N



75°56'39"W 43°0'46"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

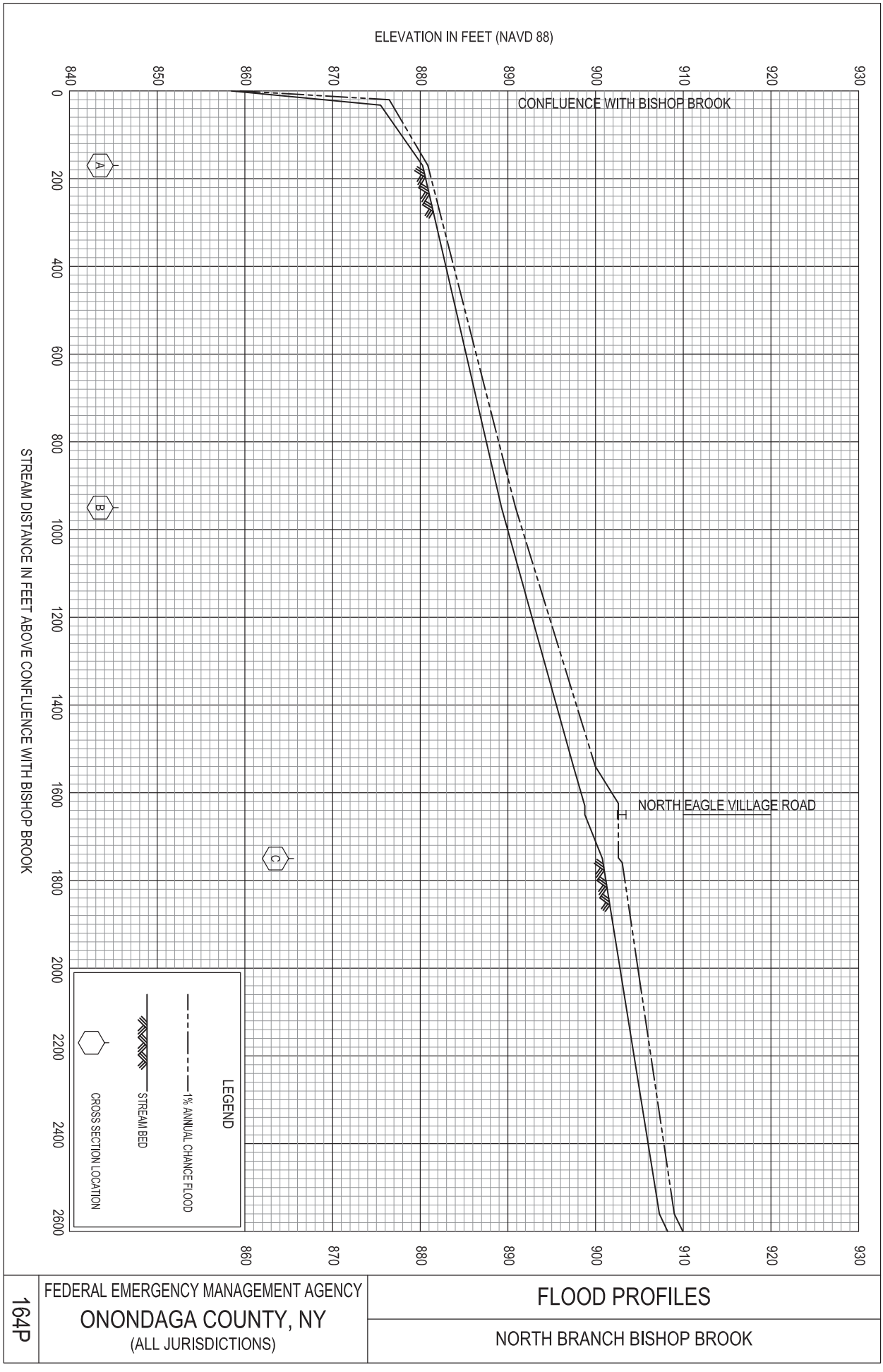
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/18/2025 at 7:29 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



164P

FEDERAL EMERGENCY MANAGEMENT AGENCY

ONONDAGA COUNTY, NY

(ALL JURISDICTIONS)

FLOOD PROFILES

NORTH BRANCH BISHOP BROOK

TABLE 5 - SUMMARY OF DISCHARGES - continued

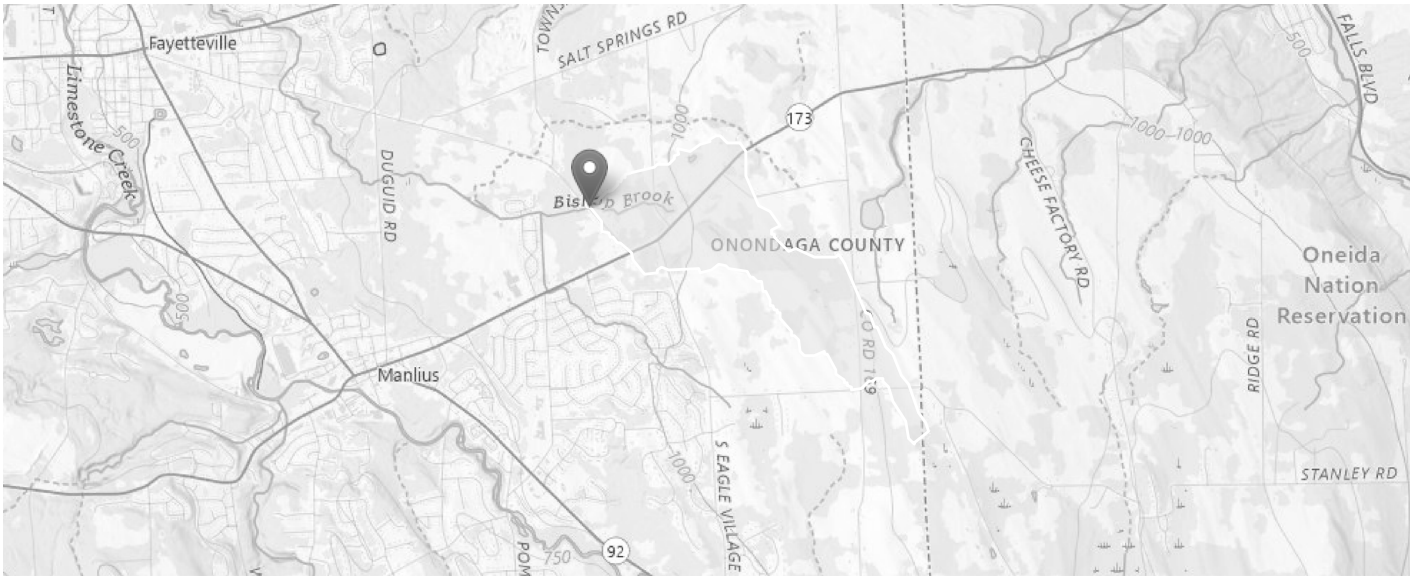
FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-percent chance	2-percent chance	1-percent chance	0.2 percent chance
NORTH BRANCH BISHOP BROOK					
At confluence with South Branch Bishop Brook	1.21	*	*	284	*
Upstream of confluence of Unnamed Tributary	0.63	*	*	174	*
Upstream of confluence with Eagle Brook	0.25	*	*	87	*
NORTH BRANCH LEY CREEK					
Confluence with South Branch Ley Creek	10.1	690	890	1,010	1,160
Town of DeWitt eastern boundary	2.6	100	143	1,70	206
NORTH BRANCH PINE GROVE BROOK					
At downstream study limit	0.35	*	*	80	*
Below Vernon Road	0.20	*	*	68	*
Above Elwood Road	0.14	*	*	52	*
Above Hyacinth Lane	0.06	*	*	28	*
OLD ERIE CANAL	5.2	260	260	260	260
ONEIDA RIVER					
At confluence with Seneca River	1,527	11,229	13,351	14,304	16,090
At Oneida Lake Outlet/Town of Clay corporate Limits	1,381	10,363	12,321	13,201	14,850
ONONDAGA CREEK					
At USGS Gage 04240010 on Spencer Street	110.80	3,000	4,000	4,300	5,300

* Not computed

STREAMSTATS RUNOFF CALCULATIONS

StreamStats Report

Region ID: NY
Workspace ID: NY20250929161124408000
Clicked Point (Latitude, Longitude): 43.01602, -75.95104
Time: 2025-09-29 12:11:46 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.08	square miles
EL1200	Percentage of basin at or above 1200 ft elevation	15.4	percent
MAR	Mean annual runoff for the period of record in inches	21	inches
SLOPERATIO	Ratio of main channel slope to basin slope as defined in SIR 2006-5112	0.51	dimensionless
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	0	percent

Peak-Flow Statistics

Peak-Flow Statistics Parameters [2006 Full Region 6]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.08	square miles	0.58	2467
EL1200	Percentage of Basin Above 1200 ft	15.4	percent	0	100
MAR	Mean Annual Runoff in inches	21	inches	9.49	22.77
SLOPERATIO	Slope Ratio NY	0.51	dimensionless	0.019	0.698
STORAGE	Percent Storage	0	percent	0	5.98

Peak-Flow Statistics Flow Report [2006 Full Region 6]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp	Equiv. Yrs.
80-percent AEP flood	80	ft^3/s	34.7	34.7	2.3
66.7-percent AEP flood	98.9	ft^3/s	33.3	33.3	2
50-percent AEP flood	123	ft^3/s	32.3	32.3	1.9
20-percent AEP flood	181	ft^3/s	32.2	32.2	2.4
10-percent AEP flood	218	ft^3/s	32.9	32.9	3.1
4-percent AEP flood	265	ft^3/s	34.4	34.4	3.9
2-percent AEP flood	298	ft^3/s	35.8	35.8	4.5
1-percent AEP flood	331	ft^3/s	37.2	37.2	4.9
0.5-percent AEP flood	364	ft^3/s	39	39	5.2
0.2-percent AEP flood	407	ft^3/s	41.4	41.4	5.5

Peak-Flow Statistics Citations

Lumia, Richard, Freehafer, D.A., and Smith, M.J.,2006, Magnitude and Frequency of Floods in New York: U.S. Geological Survey Scientific Investigations Report 2006–5112, 152 p. (http://pubs.usgs.gov/sir/2006/5112/)

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Application Version: 4.29.3
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

NORTH EAGLE VILLAGE ROAD CULVERT CAPACITY CALCULATIONS

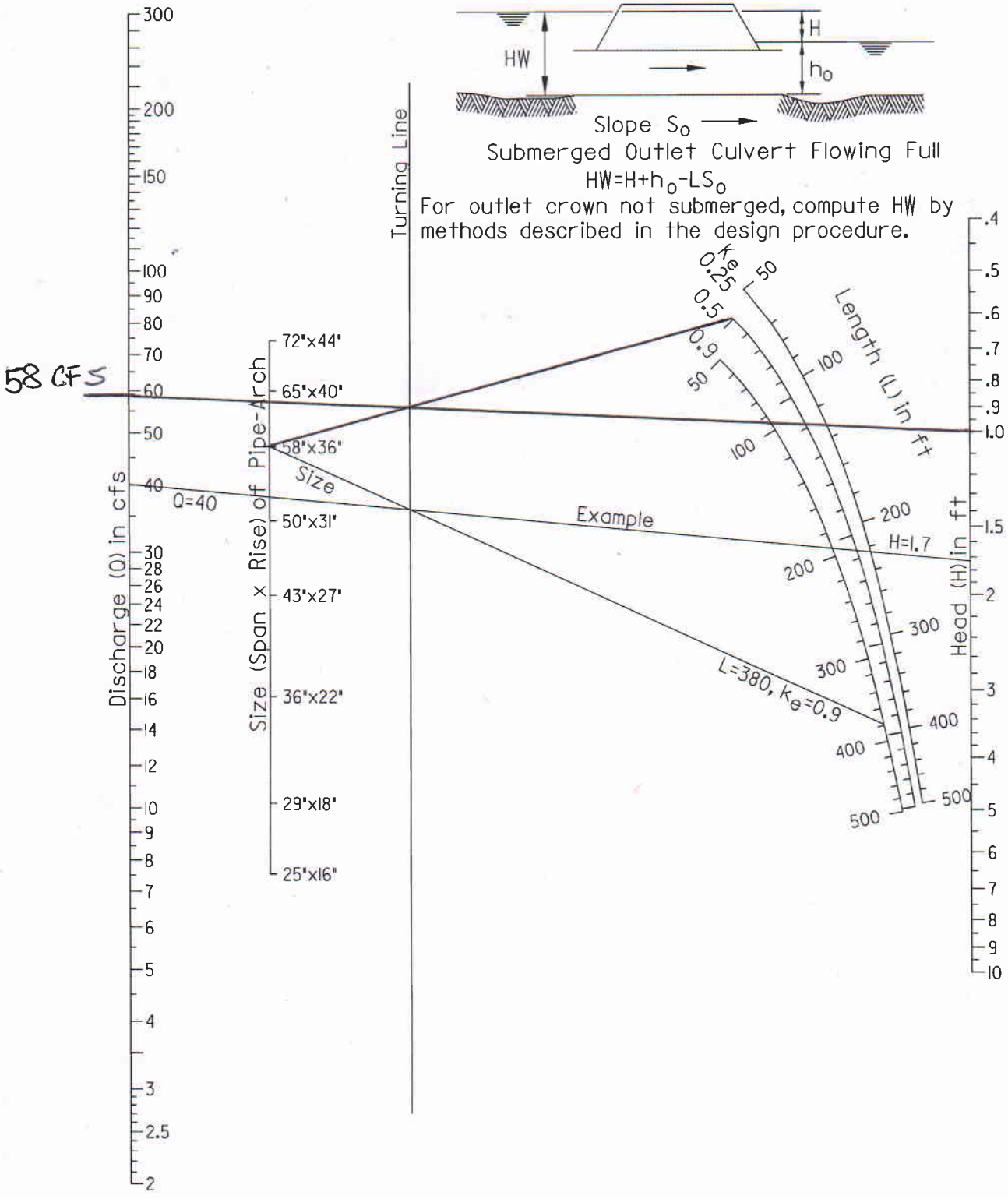
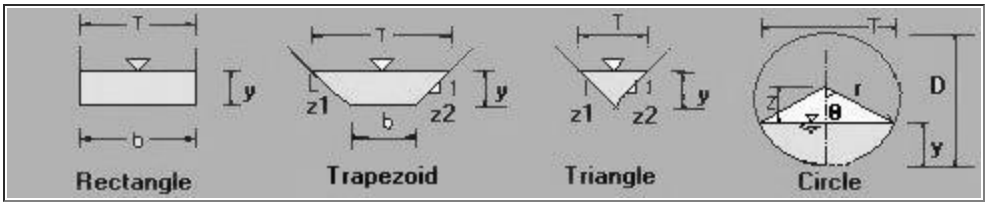


Exhibit F.24 Head for Standard CMP-Arch Culverts Flowing Full (n=0.024)
(Source: Reference F.1)

NORTH EAGLE VILLAGE ROAD CULVERT CHANNEL CAPACITY CALCULATIONS

The open channel flow calculator

Select Channel Type: Trapezoid



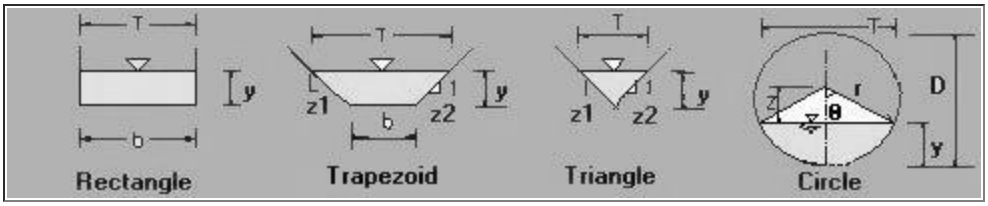
Velocity(V)&Discharge(Q) | Select unit system: Feet(ft)

Channel slope: .008 ft/ft	Water depth(y): 3 ft	Bottom width(b) 2 ft
Flow velocity 5.1009 ft/s	LeftSlope (z_1): 2 to 1 (H:V)	RightSlope (z_2): 2 to 1 (H:V)
Flow discharge 122.4219 ft^3/s	Input n value .035 or select n	
Calculate!	Status: Calculation finished	Reset
Wetted perimeter 15.42 ft	Flow area 24 ft^2	Top width(T) 14 ft
Specific energy 3.4 ft	Froude number 0.69	Flow status Subcritical flow
Critical depth 2.53 ft	Critical slope 0.0177 ft/ft	Velocity head 0.4 ft

Copyright 2007 (updated) by Dr. Xing Fang (xing.fang@auburn.edu), Department of Civil and Environmental Engineering, Auburn University, Alabama, USA.

The open channel flow calculator

Select Channel Type: Trapezoid



Velocity(V)&Discharge(Q) | Select unit system: Feet(ft)

Channel slope: .01 ft/ft	Water depth(y): 2 ft	Bottom width(b) 8 ft
Flow velocity 5.2014 ft/s	LeftSlope (z_1): 3 to 1 (H:V)	RightSlope (z_2): 3 to 1 (H:V)
Flow discharge 145.6397 ft^3/s	Input n value .035 or select n	
Calculate!	Status: Calculation finished	Reset
Wetted perimeter 20.65 ft	Flow area 28 ft^2	Top width(T) 20 ft
Specific energy 2.42 ft	Froude number 0.77	Flow status Subcritical flow
Critical depth 1.74 ft	Critical slope 0.0173 ft/ft	Velocity head 0.42 ft

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NORTH EAGLE VILLAGE ROAD DRAINAGE STUDY

Town of Manlius

MILLER ENGINEERS

PROJECT DESCRIPTION

- Residents along North Eagle Village Road have reported more frequent and severe flooding in recent years, primarily from Bishops Brook
- Bishops Brook watershed, east of the crossing at North Eagle Village Road, is 714.28 acres in size
- Recent upstream development may have increased stormwater runoff
- The Town of Manlius seeks to identify the cause(s) of the increased flooding and evaluate potential mitigation options
  - Potentially establish a drainage district to implement improvements benefiting the affected properties

PROJECT AUTHORIZATION

- This watershed study and runoff analysis has been authorized by and prepared for the Town of Manlius (Town) by Miller Engineers (Miller)
  - In accordance with the Town's request for a watershed drainage study of the North Branch Bishop Brook at the crossing of North Eagle Village Road on June 12, 2024.

PROJECT TEAM

Doug Miller, P.E.

Miller Engineers

Tom Piascik, P.E.

Piascik Engineering

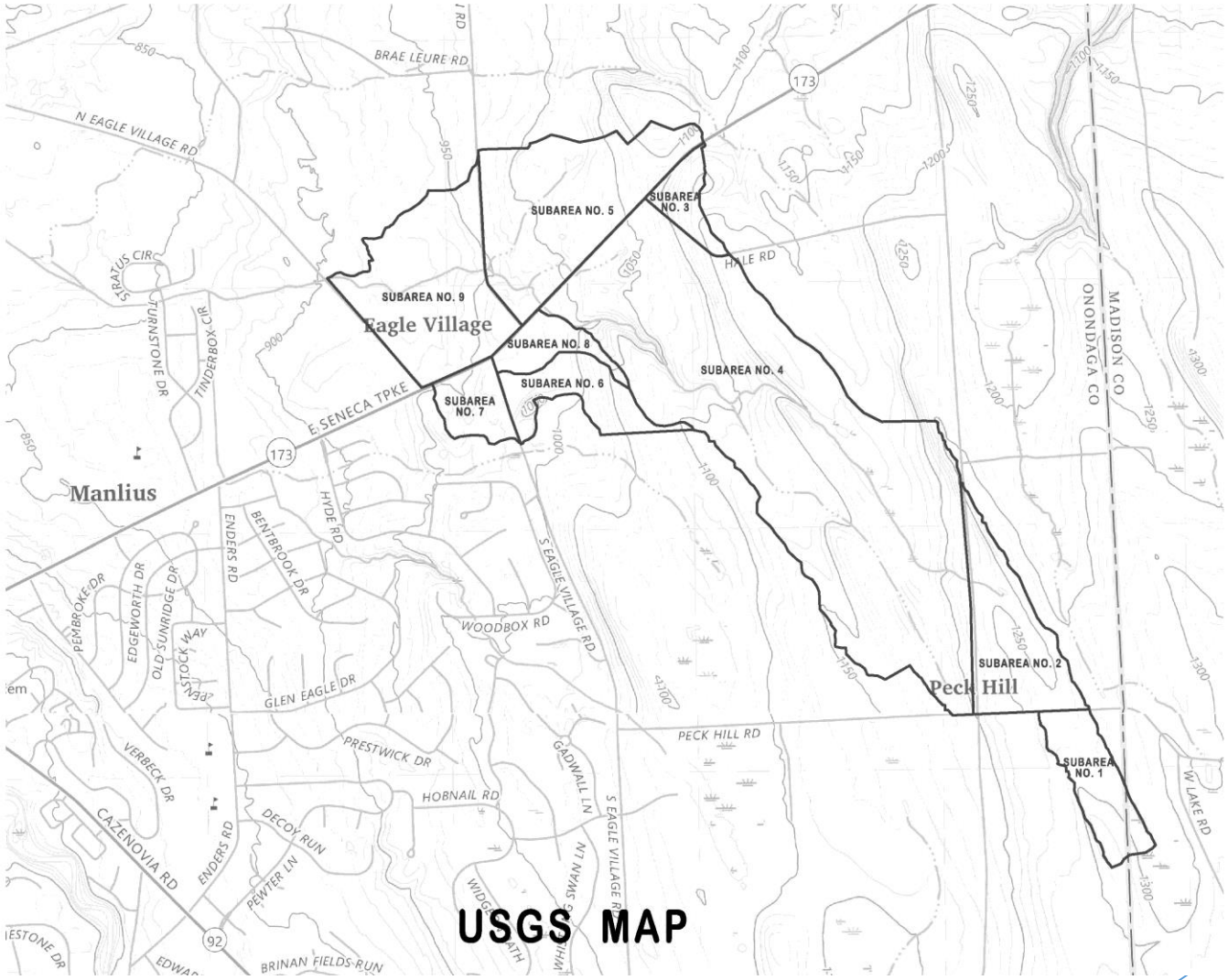
Greg Nelson, P.E.

Nelson Engineering

STUDY OBJECTIVES

- The purpose of this study is to:
  - Meet the Town of Manlius' request to determine impacts of recent development within the watershed related to new projects tributary to North Eagle Village Road
  - Analysis of the capacity of the existing overland drainageways and culvert located at North Eagle Village Road
  - Analysis of potential stormwater management improvements to reduce peak stormwater flows to North Eagle Village Road
  - Recommendations of future watershed planning for North Branch Bishop Brook within the Town of Manlius.

PROJECT LIMITS



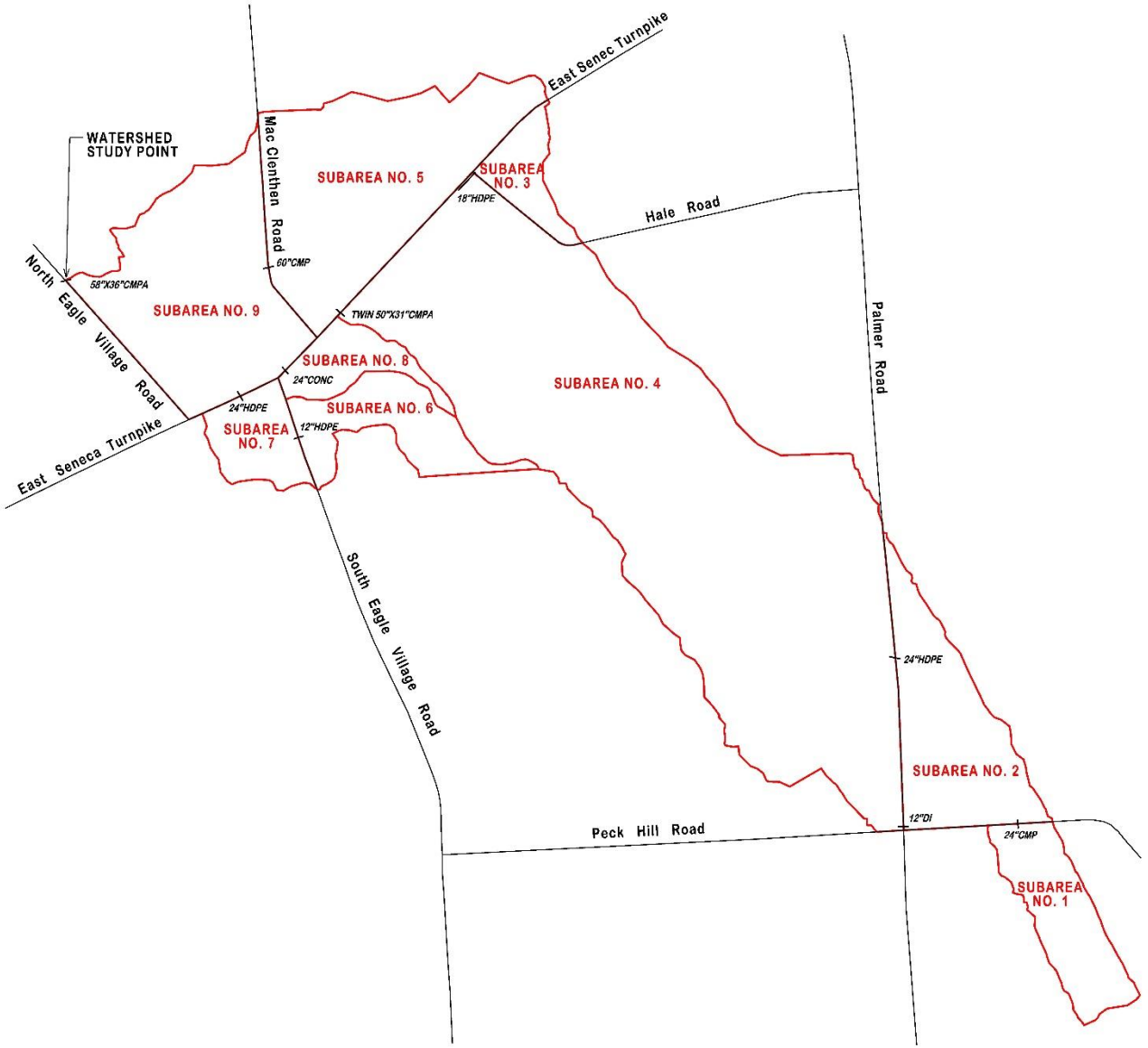
DESIGN STANDARDS

- United States Geological Survey (USGS) mapping.
- United States Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS) Web Soil Survey
- United States Department of Agriculture (USDA)– Natural Resources Conservation Service (NRCS) - Technical Release 55 (NRCS TR-55) "Urban Hydrology for Small Watersheds"
- United States Department of Agriculture (USDA)– Natural Resources Conservation Service (NRCS) - Technical Release 20 (NRCS TR-20) "Computer Program for Project Formulation Hydrology" WinTR-20 Version 1.11.11
- Cornell University Web Based Application – "Extreme Precipitation in New York and New England"
- New York State Department of Environmental Conservation (NYSDEC) "Guidelines form Design of Dams" dated January, 1989

KEY POINTS OF ANALYSIS

Table 3. Key Points of Analysis – 2015/2025 Conditions

Sub-Area No.	***Section ID***	***Location***	***Culvert Size***
1	001	Peck Hill Road	24” Dia CMP
1 – 2	004	Palmer Road	12” Dia DI and 24” Dia HDPE Pipe
1 – 3	006	Hale Road	18” DIA HDPE Pipe
1 – 4	010	East Seneca Turnpike	Twin 50”x31” CMPA
1 – 5	013	Mac Clenthen Road	60” DIA CMP
6	015	South Eagle Village Road	12” Dia HDPE Pipe
6 – 7	018	East Seneca Turnpike	24” Dia HDPE Pipe
8	020	East Seneca Turnpike	24” Dia Concrete Pipe
1 – 9	025	North Eagle Village Road	58”x36” CMPA



EXISTING CULVERTS / KEY POINTS OF ANALYSIS



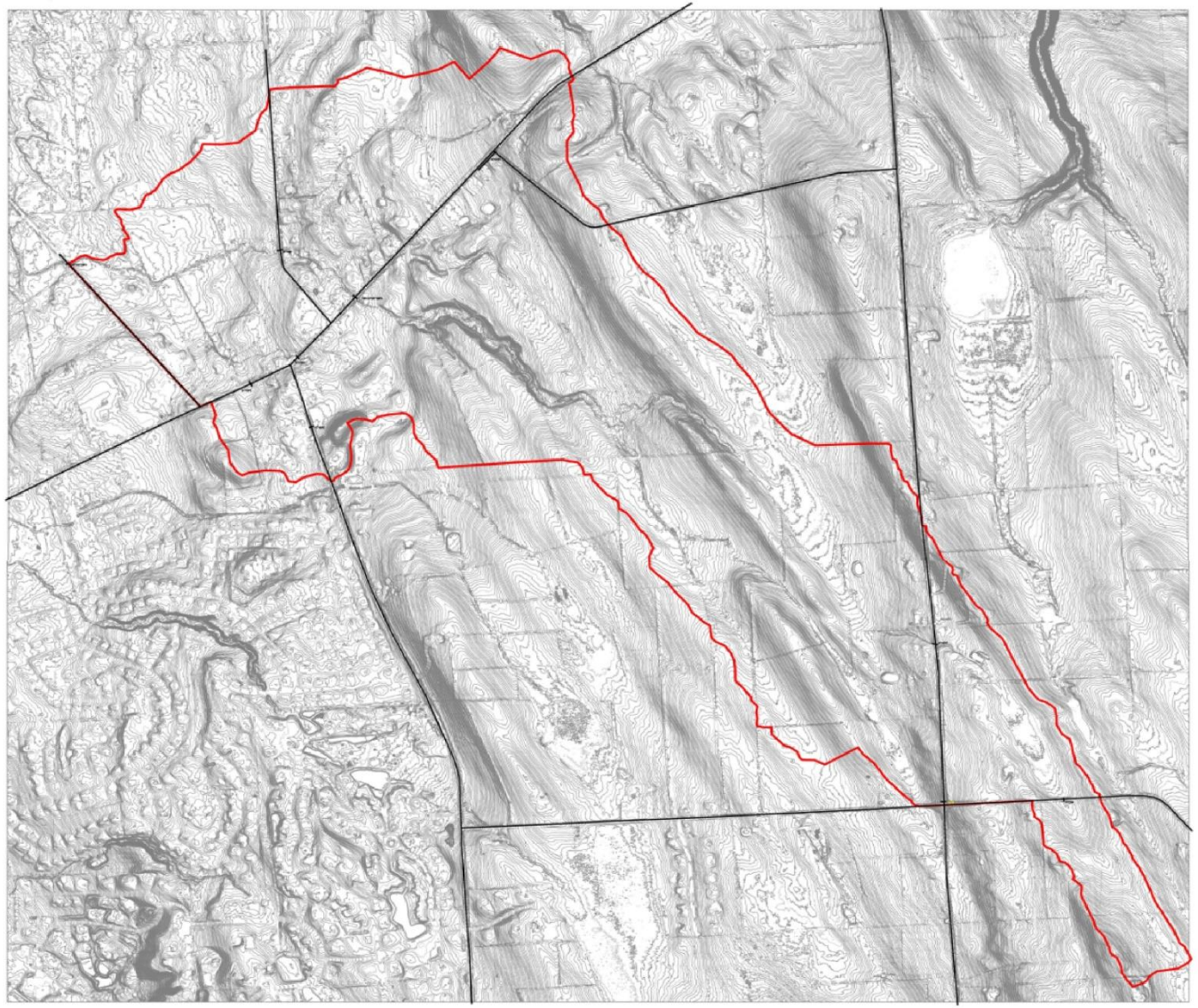
2015 AERIAL PHOTOGRAPH

MILLER ENGINEERS



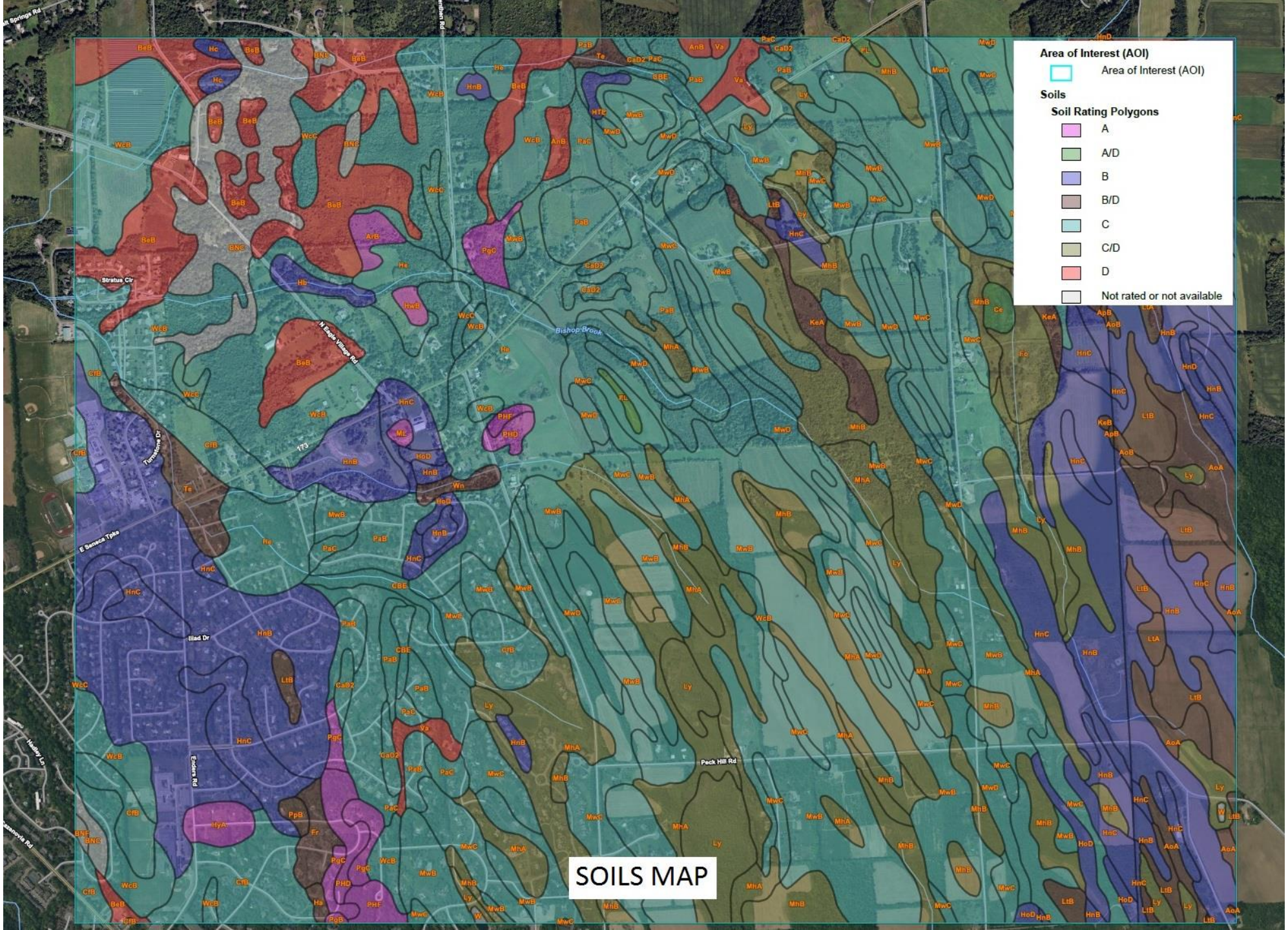
2022 AERIAL PHOTOGRAPH

MILLER ENGINEERS



CONTOUR MAP

MILLER ENGINEERS

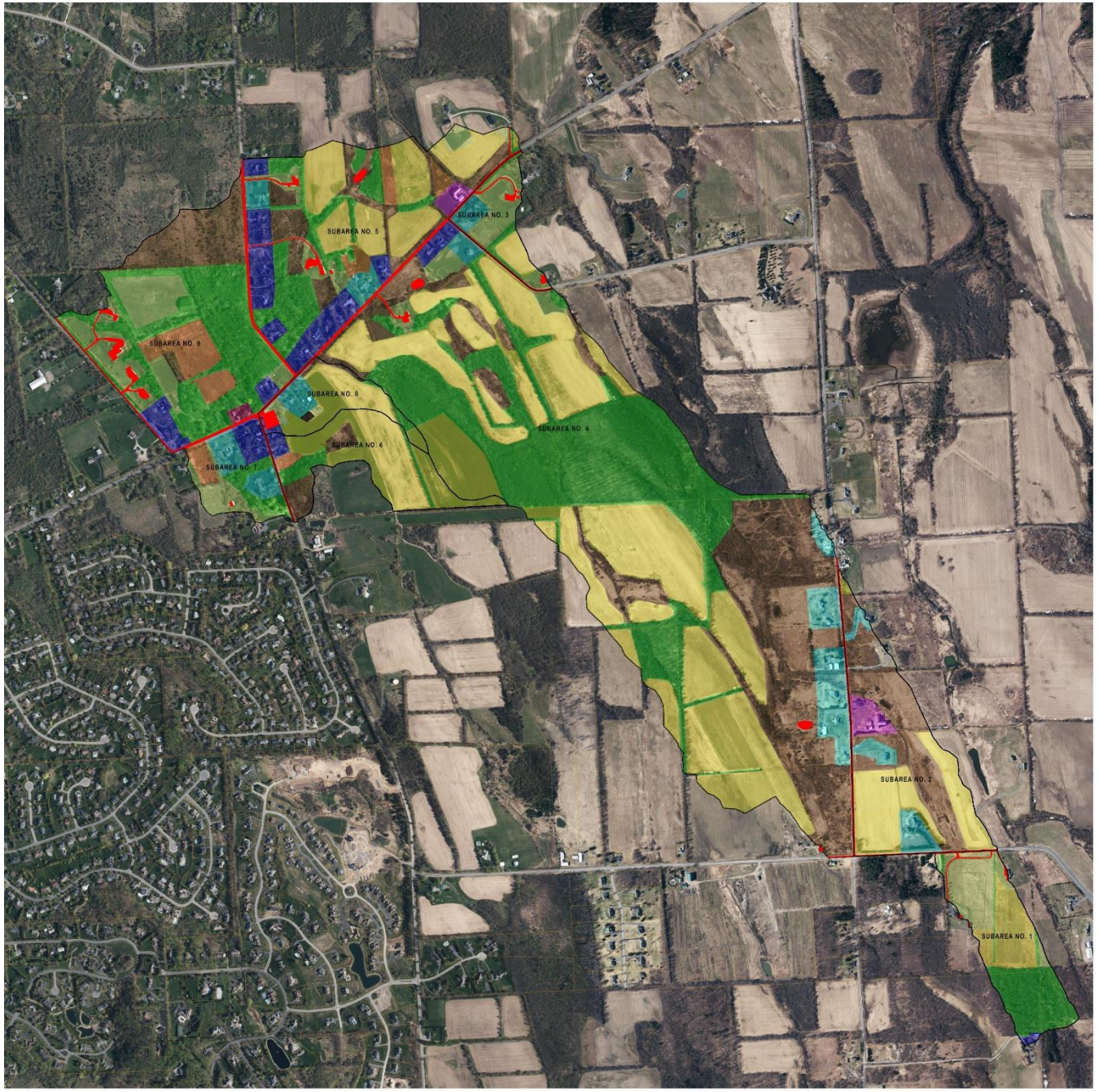

Area of Interest (AOI)
Area of Interest (AOI)
Soils
Soil Rating Polygons
A
A/D
B
B/D
C
C/D
D
Not rated or not available
Bishop Brook
Stratus Cir
N Eagle Village Rd
Turnstone Dr
E Seneca Tpke
Iliad Dr
Enders Rd
Peck Hill Rd
Hedley Ln
173
SOILS MAP

HYDROLOGIC SOILS TYPE

- Watershed soils consist of:
  - Type “A”,
  - Type “B”,
  - Type “C” ,
  - Type “C/D”, and
  - Type “D” hydrologic group soils
- The major soil types within the North Branch Bishop Brook watershed are Mohawk silt loam, Manheim silt loam, Herkimer silt loam and Wassaic silt loam.
- The largest contributing soil hydrologic group is Type “C” Soil, which is moderately poor draining.

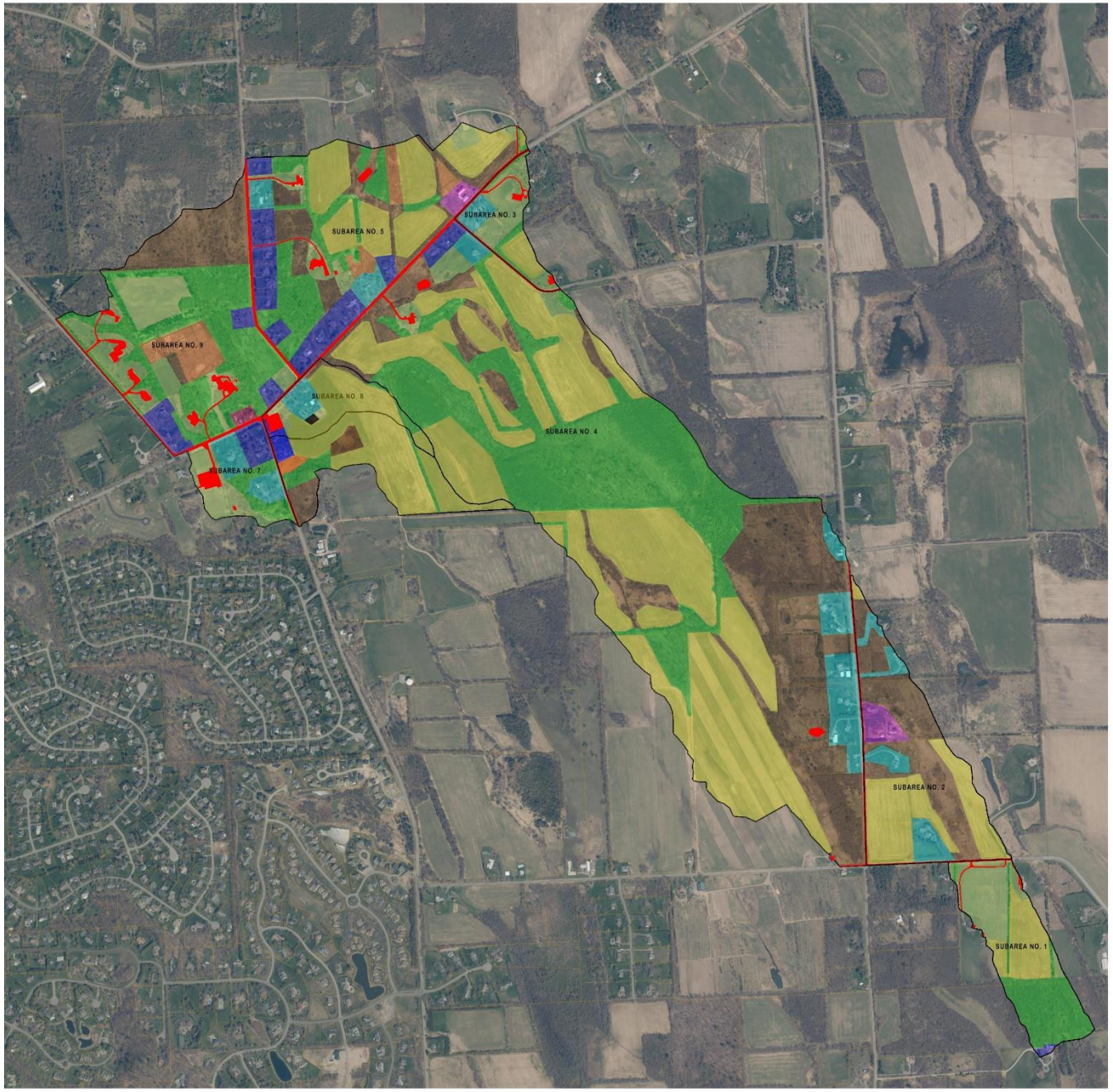
HYDROLOGIC SOILS TYPE (CONT.)

- Group A - Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.
- Group B - Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.
- Group C - Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.
- Group D - Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.



PASTURE
LAWN
BRUSH
WOODS
MEADOW
AG - SOY BEANS
FARMSTEAD
2 ACRES RESIDENTIAL
1 ACRES RESIDENTIAL
1/2 ACRES RESIDENTIAL
BARE GROUND
IMPERVIOUS

2015 LAND USE MAP



PASTURE
LAWN
BRUSH
WOODS
MEADOW
AG - SOY BEANS
FARMSTEAD
2 ACRES RESIDENTIAL
1 ACRES RESIDENTIAL
1/2 ACRES RESIDENTIAL
BARE GROUND
IMPERVIOUS

2025 LAND USE MAP

MILLER ENGINEERS

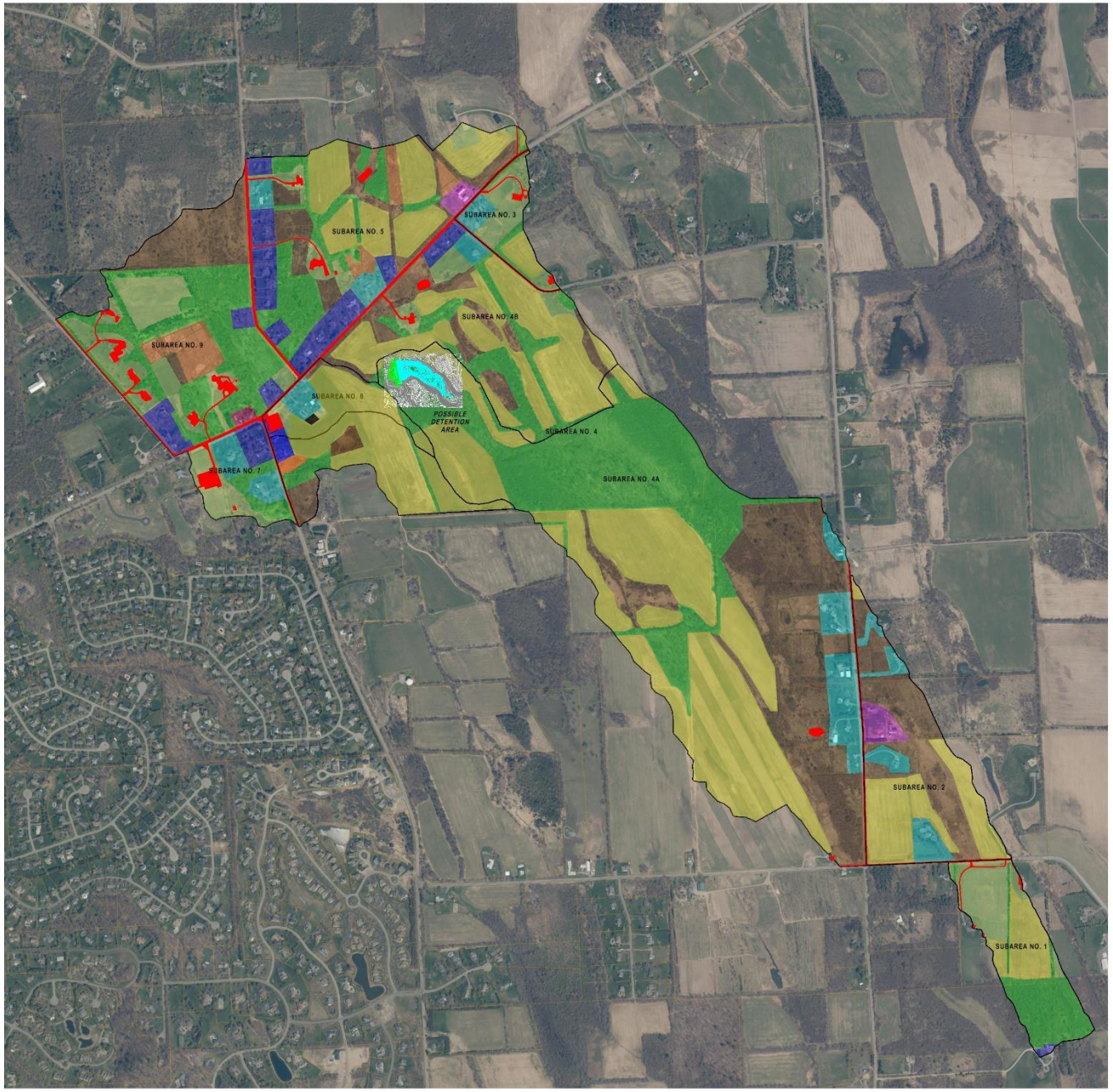
LAND USE CHANGE SUMMARY

- From 2015 to 2025 a total of six (6) land use changes were identified within the watershed and include:
  - Tax Parcel 115.-05-07.4, 8400 East Seneca Turnpike, Large Barn Facility
  - Tax Parcel 0.99.-02-14.5, 8401 East Seneca Turnpike, Large Single Family Home Complex
  - Tax Parcel 0.99.-02-14.3, 8421 East Seneca Turnpike, Large Single Family Home Complex
  - Tax Parcel 0.99.-02-10.4, 5005 Mac Clenthen Road, Single Family Home
  - Tax Parcel 116.-01-02.1, Peck Hill Road, Loss of Brush and Woods to Tilled Land
  - Tax Parcel 116.-01-01.0, Peck Hill Road, Loss of Brush to Tilled Land

AGRICULTURAL LAND USE IMPACTS

Table 5. Sub-Area Watershed 2025 Characteristics Summary

	Agricultural Tilled Soils – Soy Beans			Agricultural Tilled Soils – Corn			Agricultural Tilled Soils – Hay		
Sub-Area No.	CN	Tc (Hrs.)	Area (Acres)	CN	Tc (Hrs.)	Area (Acres)	CN	Tc (Hrs.)	Area (Acres)
1	68.5	1.78	33.09	70.0	1.78	33.09	65.9	1.78	33.09
2	76.0	0.96	56.48	77.7	0.96	56.48	73.0	0.96	56.48
3	77.7	0.64	15.01	78.4	0.64	15.01	76.5	0.64	15.01
4	76.7	2.93	352.88	78.3	2.93	352.88	73.8	2.93	352.88
5	73.8	1.67	98.88	74.9	1.67	98.88	71.7	1.67	98.88
6	74.1	0.48	30.49	77.0	0.48	30.49	69.2	0.48	30.49
7	73.1	0.72	19.70	73.1	0.72	19.70	73.1	0.72	19.70
8	80.1	0.23	17.52	82.5	0.23	17.52	75.9	0.23	17.52
9	69.0	1.12	90.23	69.0	1.12	90.23	69.0	1.12	90.23
Overall	**74.8**	-	**714.28**	**76.1**	-	**714.28**	**72.4**	-	**714.28**



PASTURE
LAWN
BRUSH
WOODS
MEADOW
AG - SOY BEANS
FARMSTEAD
2 ACRES RESIDENTIAL
1 ACRES RESIDENTIAL
1/2 ACRES RESIDENTIAL
BARE GROUND
IMPERVIOUS

FUTURE LAND USE MAP

2015 RUNOFF CALCULATIONS

Table 4. Point of Analysis – Calculated Runoff Rates (CFS) 2015 Conditions

Section ID	2-Year Storm		10-Year Storm		25-Year Storm		50-Year Storm		100-Year Storm	
	Soy	Corn	Soy	Corn	Soy	Corn	Soy	Corn	Soy	Corn
001	14	17	29	33	42	46	55	59	69	74
004	18	21	43	48	65	71	88	84	115	121
006	7	7	15	16	22	23	29	29	37	37
010	62	70	140	153	209	224	276	293	358	377
013	74	84	173	188	259	278	345	366	450	472
015	12	16	30	36	46	52	61	68	79	87
018	16	20	41	46	63	69	84	91	110	118
020	17	20	34	38	49	53	62	67	78	83
025	86	97	205	221	312	331	420	441	552	576

2025 RUNOFF CALCULATIONS

Point of Analysis – Calculated Runoff Rates (CFS) 2025 Conditions

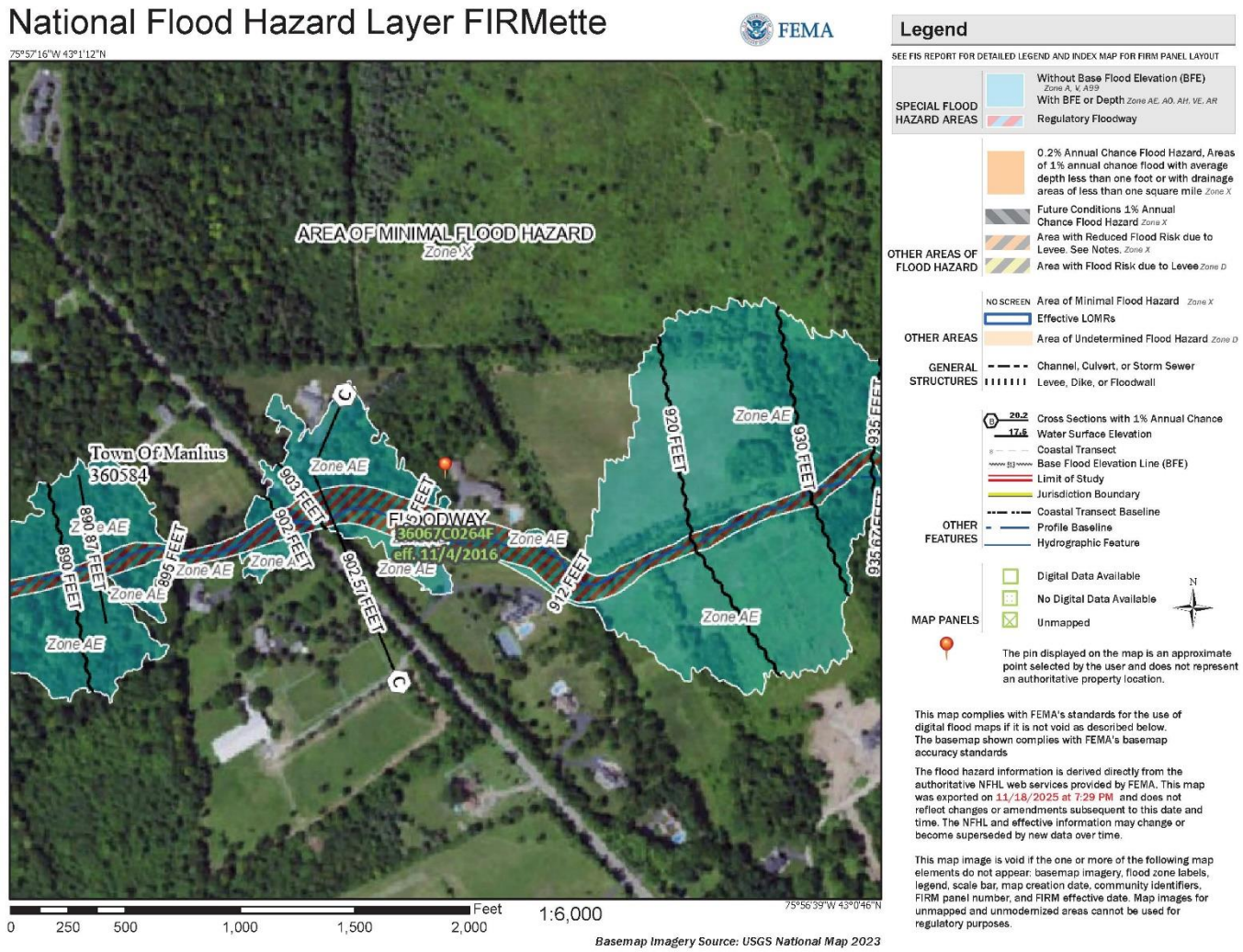
Section ID	2-Year Storm			10-Year Storm			25-Year Storm			50-Year Storm			100-Year Storm		
	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay
001	14	17	10	29	33	23	42	46	36	55	59	47	69	74	62
004	18	21	13	43	48	36	65	71	57	88	94	77	115	121	104
006	7	7	6	15	16	14	22	23	21	29	29	27	37	37	35
010	63	71	49	142	155	121	210	226	184	278	295	248	360	379	327
013	75	85	58	174	190	149	261	279	229	347	367	310	451	474	411
015	12	16	7	30	36	22	46	52	36	61	68	50	79	87	67
018	18	21	12	43	48	34	66	72	56	87	94	76	114	121	101
020	17	20	12	34	38	28	49	53	41	62	67	54	78	83	70
025	88	99	70	207	224	180	316	335	282	424	446	386	557	581	514

FUTURE RUNOFF CALCULATIONS

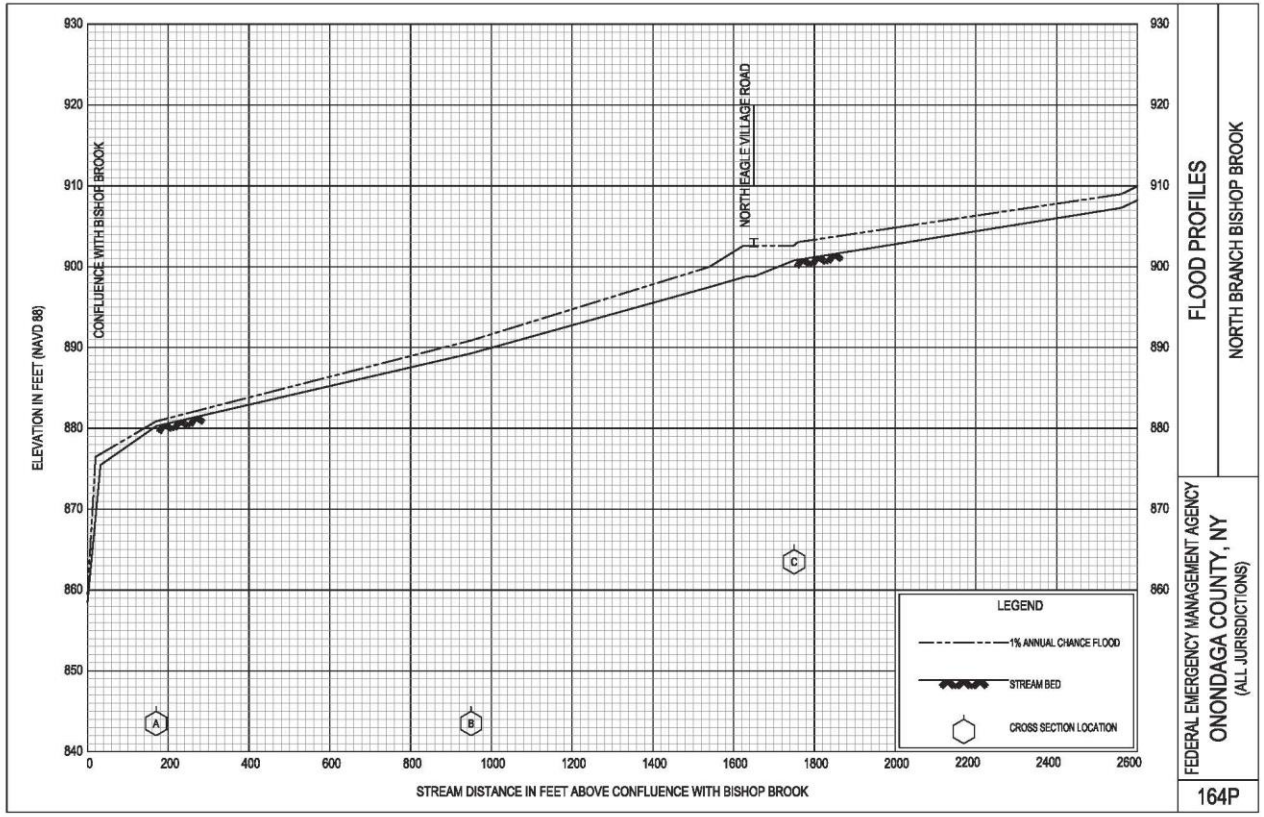
Point of Analysis – Calculated Runoff Rates (CFS) Future Improvements

Section ID	2-Year Storm			10-Year Storm			25-Year Storm			50-Year Storm			100-Year Storm		
	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay	Soy	Corn	Hay
001	14	17	10	29	33	23	42	46	36	55	59	47	69	74	62
004	18	21	13	43	48	36	65	71	57	88	94	77	115	121	104
RES 01	46	51	37	76	78	70	90	92	85	130	157	96	237	254	205
009	7	7	6	15	16	14	22	23	21	29	29	27	37	37	35
010	61	69	48	106	112	95	133	140	122	173	211	145	315	338	270
013	72	81	58	134	142	119	178	187	162	219	239	202	362	390	308
015	12	16	7	30	36	22	46	52	36	61	68	50	79	87	67
018	18	21	12	43	48	34	66	72	56	87	94	76	114	121	101
020	17	20	12	34	38	28	49	53	41	62	67	54	78	83	70
025	85	94	70	178	188	160	257	269	238	336	349	313	432	446	407

FEMA RUNOFF CALCULATIONS



FEMA RUNOFF CALCULATIONS (CONT.)



FEMA RUNOFF CALCULATIONS (CONT.)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-percent chance	2-percent chance	1-percent chance	0.2 percent chance
NORTH BRANCH BISHOP BROOK					
At confluence with South Branch Bishop Brook	1.21	*	*	284	*
Upstream of confluence of Unnamed Tributary	0.63	*	*	174	*
Upstream of confluence with Eagle Brook	0.25	*	*	87	*
NORTH BRANCH LEY CREEK					
Confluence with South Branch Ley Creek	10.1	690	890	1,010	1,160
Town of DeWitt eastern boundary	2.6	100	143	1,70	206
NORTH BRANCH PINE GROVE BROOK					
At downstream study limit	0.35	*	*	80	*
Below Vernon Road	0.20	*	*	68	*
Above Elwood Road	0.14	*	*	52	*
Above Hyacinth Lane	0.06	*	*	28	*
OLD ERIE CANAL	5.2	260	260	260	260
ONEIDA RIVER					
At confluence with Seneca River	1,527	11,229	13,351	14,304	16,090
At Oneida Lake Outlet/Town of Clay corporate Limits	1,381	10,363	12,321	13,201	14,850
ONONDAGA CREEK					
At USGS Gage 04240010 on Spencer Street	110.80	3,000	4,000	4,300	5,300

* Not computed

STREAMSTATS CALCULATIONS

StreamStats Report

Region ID: NY
Workspace ID: NY20250929161124408000
Clicked Point (Latitude, Longitude): 43.01602, -75.95104
Time: 2025-09-29 12:11:46 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.08	square miles
EL1200	Percentage of basin at or above 1200 ft elevation	15.4	percent
MAR	Mean annual runoff for the period of record in inches	21	inches
SLOPERATIO	Ratio of main channel slope to basin slope as defined in SIR 2006-5112	0.51	dimensionless
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	0	percent

Peak-Flow Statistics

Peak-Flow Statistics Parameters [2006 Full Region 6]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.08	square miles	0.58	2467
EL1200	Percentage of Basin Above 1200 ft	15.4	percent	0	100
MAR	Mean Annual Runoff in Inches	21	inches	9.49	22.77
SLOPERATIO	Slope Ratio NY	0.51	dimensionless	0.019	0.698
STORAGE	Percent Storage	0	percent	0	5.98

Peak-Flow Statistics Flow Report [2006 Full Region 6]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp	Equiv. Yrs.
80-percent AEP flood	80	ft^3/s	34.7	34.7	2.3
66.7-percent AEP flood	98.9	ft^3/s	33.3	33.3	2
50-percent AEP flood	123	ft^3/s	32.3	32.3	1.9
20-percent AEP flood	181	ft^3/s	32.2	32.2	2.4
10-percent AEP flood	218	ft^3/s	32.9	32.9	3.1
4-percent AEP flood	265	ft^3/s	34.4	34.4	3.9
2-percent AEP flood	298	ft^3/s	35.8	35.8	4.5
1-percent AEP flood	331	ft^3/s	37.2	37.2	4.9
0.5-percent AEP flood	364	ft^3/s	39	39	5.2
0.2-percent AEP flood	407	ft^3/s	41.4	41.4	5.5

Peak-Flow Statistics Citations

Lumia, Richard, Freehafer, D.A., and Smith, M.J.,2006, Magnitude and Frequency of Floods in New York: U.S. Geological Survey Scientific Investigations Report 2006–5112, 152 p. (http://pubs.usgs.gov/sir/2006/5112/)

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Application Version: 4.29.3
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

CULVERT AND CHANNEL CAPACITIES

- North Eagle Village Road – 58”x36” CMPA Culvert
  - Culvert Capacity: 58 CFS capacity before overtopping
  - Upstream Channel Capacity: 145 CFS
  - Downstream Channel Capacity: 122 CFS
  - 2-Year Frequency Storm Flow Rate: 88 CFS
- Based upon runoff calculations, the existing North Eagle village Road Culvert cannot accommodate a 2-year frequency storm.
- Additionally, due to the nature of the road slope and property elevations east of the North Eagle Village Road, an overland flood route exists along the eastern portion of North Eagle Village Road prior to the culvert reaching full flow capacity.

CONCLUSIONS

- Peak runoff rates in the watershed calculated to be 557 CFS for a 100-year frequency storm event
- Overall watershed development since 2015 has caused less than a 1% increase in flow, which is not a major contributor to flooding.
- Agricultural land use type has a greater impact on runoff than recent minor development.
- Localized development upstream of the 24” culvert at East Seneca Turnpike increased runoff for smaller storms, with noticeable downstream effects. Calculated flow rates increased at this location approximately 13% in a 2-year frequency storm due to the installation of an asphalt parking area and large barn facility. The percent increase at this location was only 2% for a 100-year frequency storm, which is minor. An increase in runoff for lower rainfall totals would be expected as any impervious area increase would provide runoff for even common everyday events. We anticipate runoff at this location from minor rainfall totals would be observable to those downstream within the outfall channel section

CONCLUSIONS (CONT.)

- Opportunities for stormwater detention are limited due to steep slopes and private property ownership.
  - A large dry detention basin combined with changes in agricultural land cover could significantly reduce peak flows.
  - Detention basins are more effective for large storms than frequent, smaller storms and would require NYSDEC permitting.
- The North Eagle Village Road culvert and drainage channels are undersized and cannot handle even a 2-year storm.
  - Road overtopping and adjacent land flooding occur frequently, especially during moderate to severe storms.
  - Floodwaters typically travel overland east of North Eagle Village Road before returning to Bishops Brook.

RECOMMENDATIONS

- Several options to consider in an attempt to improve the stormwater impacts upon North Eagle Village Road and the adjacent properties. Options include:
  - Enforcement of current Town and State Laws, Special Regulation adoptions within the watershed,
  - Public outreach with current property owners on ways to reduce landowner impacts from stormwater discharges,
  - Infrastructure improvement projects, including:
    - Construction of a large dry detention basin south of East Seneca Turnpike,
    - Construction of an improved designated flood route along the east side of North Eagle Village Road and north of the Falcon View subdivision, and
  - Creation of a Drainage District for the entire Bishop Brook watershed to generate funding for overall watershed improvements.

QUESTIONS