Hydraflow Hydrographs by Intelisolve

Friday, Jun 12 2009, 10:0 AM

### Hyd. No. 18

Post Bypass D-Basin2

Hydrograph type = SCS Runoff Storm frequency = 100 yrs

Drainage area = 10.380 acBasin Slope = 0.0 %

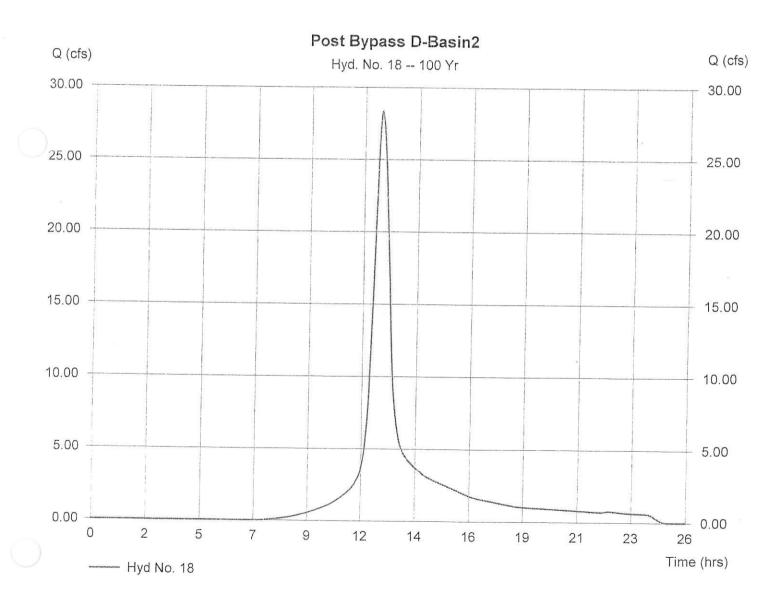
= 24 hrs

Tc method = USER Total precip. = 7.10 inStorm duration

Peak discharge = 28.36 cfsTime interval  $= 2 \min$ Curve number = 76 Hydraulic length = 0 ftTime of conc. (Tc) = 34.62 min

Distribution = Type III Shape factor = 484

Hydrograph Volume = 161,911 cuft



Hydraflow Hydrographs by Intelisolve

Friday, Jun 12 2009, 10:0 AM

Hyd. No. 19

Total Post to Evans

Hydrograph type = Combine Storm frequency = 100 yrs

Inflow hyds.

= 17, 18

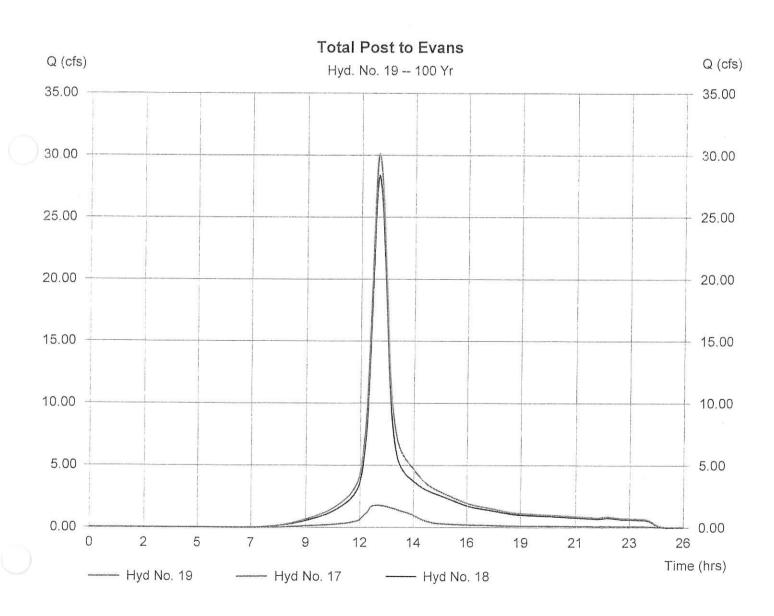
Peak discharge

= 30.14 cfs

Time interval

= 2 min

Hydrograph Volume = 182,939 cuft



Hydraflow Hydrographs by Intelisolve

Friday, Jun 12 2009, 10:0 AM

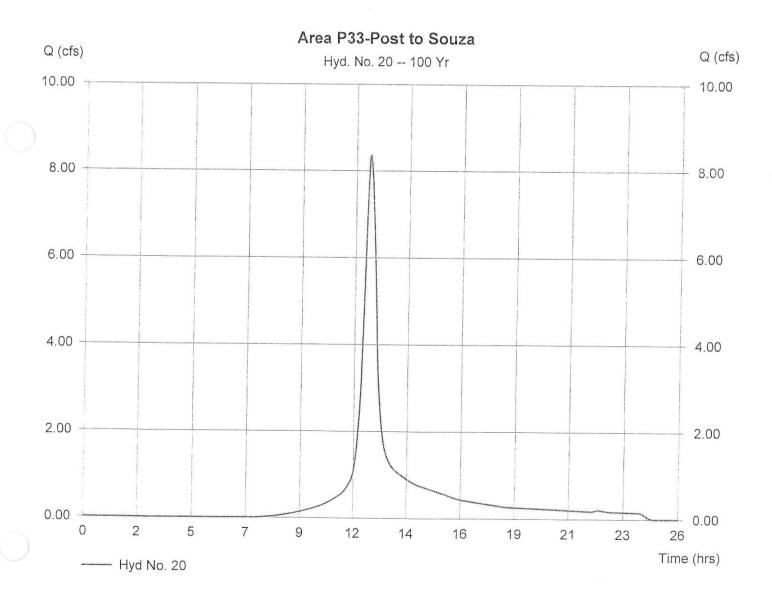
### Hyd. No. 20

Area P33-Post to Souza

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 2.720 ac
Basin Slope = 0.0 %
Tc method = USER
Total precip. = 7.10 in
Storm duration = 24 hrs

Peak discharge = 8.361 cfs
Time interval = 2 min
Curve number = 75
Hydraulic length = 0 ft
Time of conc. (Tc) = 24.30 min
Distribution = Type III
Shape factor = 484

Hydrograph Volume = 41,187 cuft



Hydraflow Hydrographs by Intelisolve

Friday, Jun 12 2009, 10:0 AM

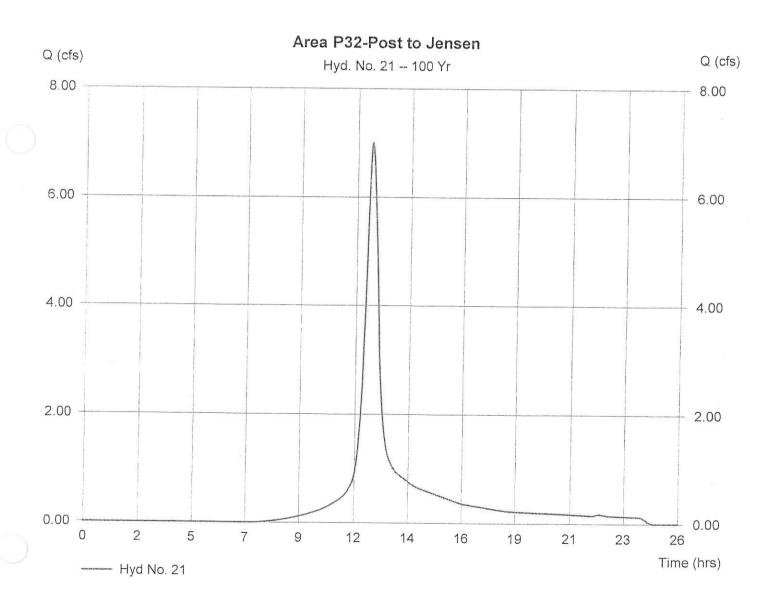
### Hyd. No. 21

Area P32-Post to Jensen

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 2.280 ac
Basin Slope = 0.0 %
Tc method = USER
Total precip. = 7.10 in
Storm duration = 24 hrs

Peak discharge = 7.009 cfs
Time interval = 2 min
Curve number = 75
Hydraulic length = 0 ft
Time of conc. (Tc) = 23.76 min
Distribution = Type III
Shape factor = 484

Hydrograph Volume = 34,525 cuft



Hydraflow Hydrographs by Intelisolve

Friday, Jun 12 2009, 10:0 AM

### Hyd. No. 22

Post to D-Basin3

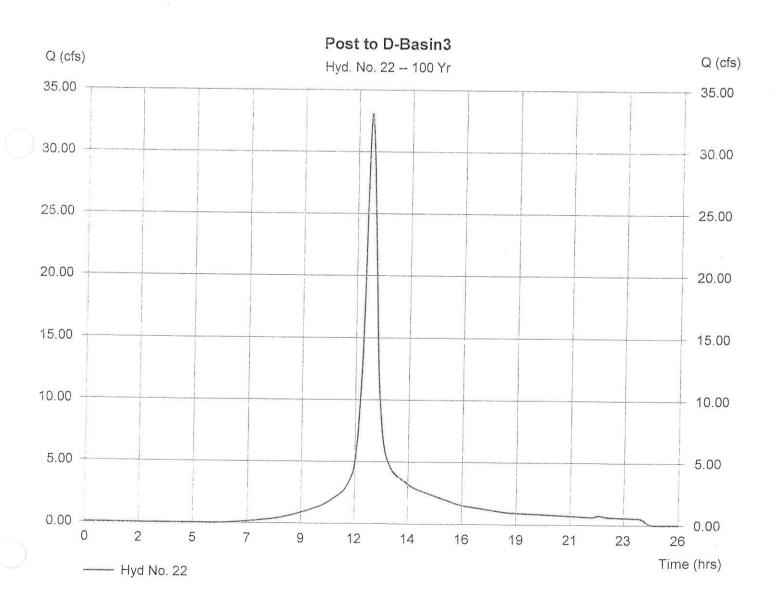
Hydrograph type = SCS Runoff Storm frequency = 100 yrs

Drainage area = 8.750 ac Basin Slope = 0.0 % Tc method = USFR

Tc method = USER Total precip. = 7.10 in Storm duration = 24 hrs Peak discharge = 33.09 cfs
Time interval = 2 min
Curve number = 81
Hydraulic length = 0 ft

Time of conc. (Tc) = 20.82 min
Distribution = Type III
Shape factor = 484

Hydrograph Volume = 158,355 cuft



Hydraflow Hydrographs by Intelisolve

Friday, Jun 12 2009, 10:0 AM

### Hyd. No. 23

Outflow D-Basin3

Hydrograph type = Reservoir Storm frequency = 100 yrs Inflow hyd. No. = 22

Reservoir name

= D-Basin3

Peak discharge

= 3.253 cfs

Time interval

= 2 min

Max. Elevation

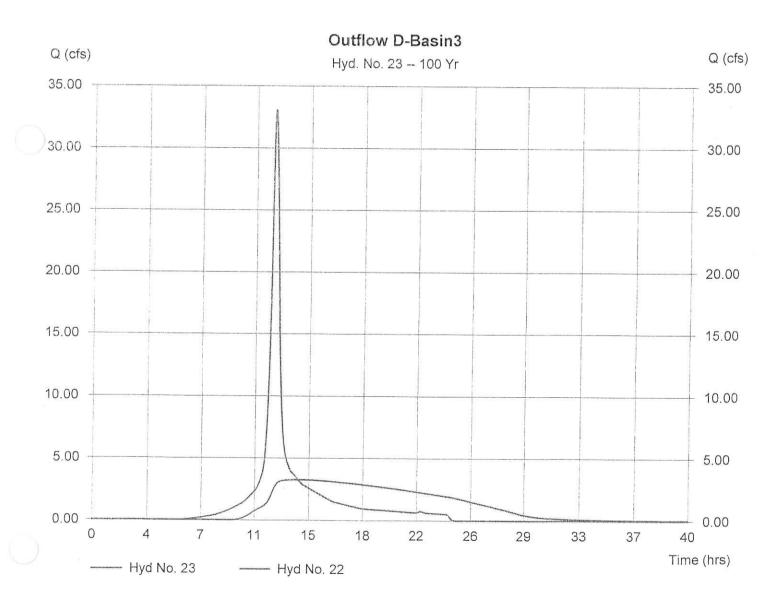
 $= 340.58 \, \text{ft}$ 

Max. Storage

= 88,504 cuft

Storage Indication method used.

Hydrograph Volume = 154,275 cuft



### **Pond Report**

Hydraflow Hydrographs by Intelisolve

Friday, Jun 12 2009, 10:0 AM

### Pond No. 3 - D-Basin3

### Pond Data

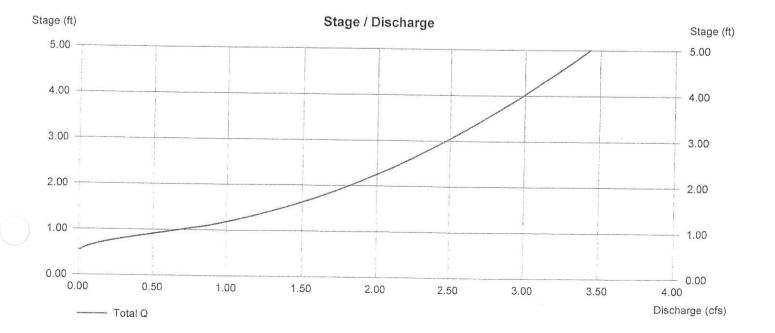
Pond storage is based on known contour areas. Average end area method used.

### Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	336.00	5,355	0	0
0.50	336.50	10,675	4,008	4,008
1.00	337.00	15,995	6,668	10,675
2.00 3.00	338.00	20,015	18,005	28,680
4.00	339.00	22,085	21,050	49,730
5.00	340.00 341.00	24,700 28,345	23,393 26,523	73,123 99,645

Culvert / Orifice Structures			Weir Struct	Weir Structures						
	[A]	[B]	[C]	[D]		[A]	[B]	[C]	[D]	
Rise (in)	= 8.00	0.00	0.00	0.00	Crest Len (ft)	= 0.00	0.00	0.00	0.00	
Span (in)	= 8.00	0.00	0.00	0.00	Crest El. (ft)	= 0.00	0.00	0.00	0.00	
No. Barrels	= 1	0	0	0	Weir Coeff.	= 0.00	0.00	0.00	0.00	
Invert El. (ft)	= 336.50	0.00	0.00	0.00	Weir Type	=				
Length (ft)	= 0.00	0.00	0.00	0.00	Multi-Stage	= No	No	No	No	
Slope (%)	= 0.00	0.00	0.00	0.00			110	140	140	
N-Value	= .013	.000	.000	.000						
Orif. Coeff.	= 0.60	0.00	0.00	0.00						
Multi-Stage	= n/a	No	No	No	Exfiltration = 0	0.000 in/hr (Co	ontour) Ta	ilwater Ele	ev. = 0.00 ft	

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control.



Hydraflow Hydrographs by Intelisolve

Friday, Jun 12 2009, 10:0 AM

### Hyd. No. 24

Post Bypass D-Basin3

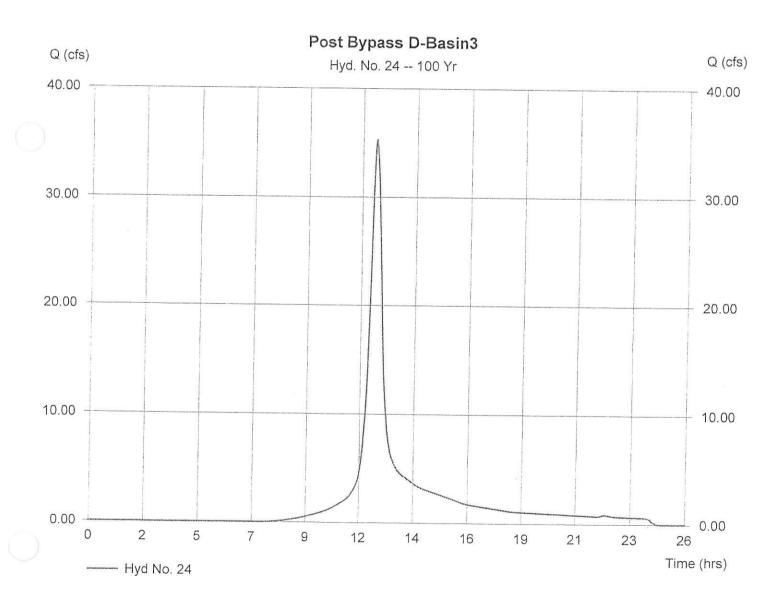
Hydrograph type = SCS Runoff Storm frequency = 100 yrs Drainage area = 10.940 ac

Basin Slope = 0.0 %
Tc method = USER
Total precip. = 7.10 in
Storm duration = 24 hrs

Peak discharge = 35.28 cfs
Time interval = 2 min
Curve number = 74
Hydraulic length = 0 ft
Time of conc. (Tc) = 20.90 min
Distribution = Type III

Shape factor = 484

Hydrograph Volume = 166,915 cuft



Hydraflow Hydrographs by Intelisolve

Friday, Jun 12 2009, 10:0 AM

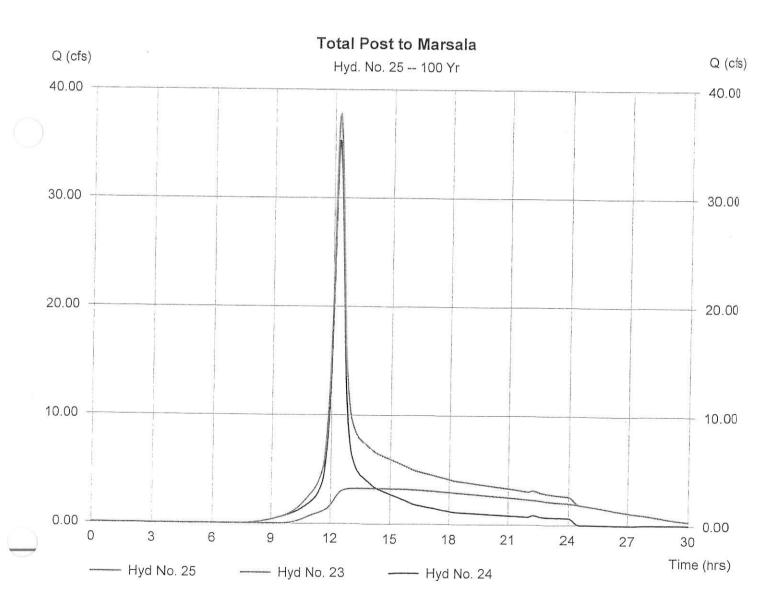
### Hyd. No. 25

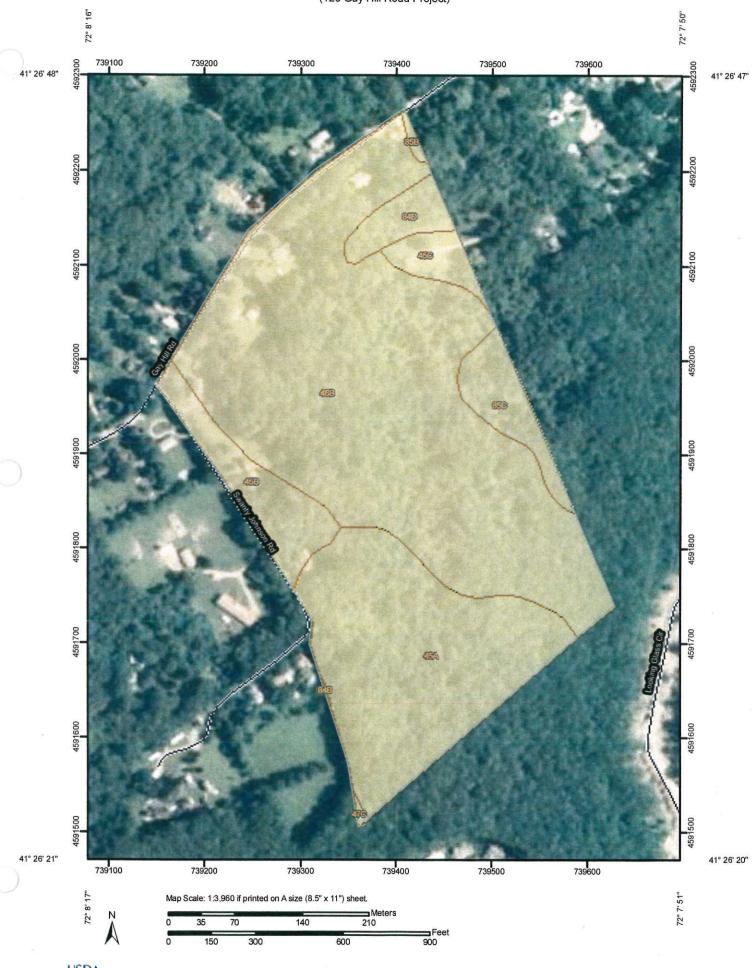
Total Post to Marsala

Hydrograph type = Combine Storm frequency = 100 yrs Inflow hyds. = 23, 24

Peak discharge = 37.75 cfs Time interval = 2 min

Hydrograph Volume = 321,189 cuft





# MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Units

Soil Ratings

B/D

Not rated or not available

Cities Political Features 0

Nater Features

Oceans

Streams and Canals

## **Fransportation**

Rails ŧ

Interstate Highways ?

Major Roads US Routes

Local Roads ?

# MAP INFORMATION

Map Scale: 1:3,960 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for accurate map

measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov UTM Zone 18N NAD83 Coordinate System: This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

State of Connecticut Soil Survey Area:

Version 6, Mar 22, 2007 Survey Area Data: Date(s) aerial images were photographed: 7/17/2006

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

### Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI	
45A	Woodbridge fine sandy loam, 0 to 3 percent slopes	С	11.7	25.8%	
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	С	2.8	6.1%	
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	С	1.0	2.2%	
46B	Woodbridge fine sandy loam, 2 to 8 percent slopes, very stony	С	26.6	58.7%	
47C	Woodbridge fine sandy loam, 2 to 15 percent slopes, extremely stony	С	0.1	0.2%	
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	С	0.0	0.0%	
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	С	1.2	2.7%	
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	С	0.1	0.3%	
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	С	1.8	4.0%	
Totals for Area of In	terest	i	45.2	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: Lower

### Map Unit Description (Brief)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the selected area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit. A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The "Map Unit Description (Brief)" report gives a brief, general description of the major soils that occur in a map unit. Descriptions of nonsoil (miscellaneous areas) and minor map unit components may or may not be included. This description is written by the local soil scientists responsible for the respective soil survey area data. A more detailed description can be generated by the "Map Unit Description" report.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

### Report—Map Unit Description (Brief)

### State of Connecticut

Description Category: SOI

Map Unit: 45A—Woodbridge fine sandy loam, 0 to 3 percent slopes

Woodbridge Fine Sandy Loam, 0 To 3 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Woodbridge soils. 20 percent minor components. Woodbridge soils This component occurs on upland drumlin and hill landforms. The parent material consists of lodgement till derived from schist, granite, and gneiss. The slope ranges from 0 to 3 percent and the runoff class is low. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is moderately well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.9 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2w Typical Profile: 0 to 7 inches; fine sandy loam 7 to 18 inches; fine sandy loam 18 to 26 inches; fine sandy loam 26 to 30 inches; fine sandy loam 30 to 43 inches; gravelly fine sandy loam 43 to 65 inches; gravelly fine sandy loam

Map Unit: 45B-Woodbridge fine sandy loam, 3 to 8 percent slopes

Woodbridge Fine Sandy Loam, 3 To 8 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Woodbridge soils. 20 percent minor components. Woodbridge soils This component occurs on upland drumlin and hill landforms. The parent material consists of lodgement till derived from schist, granite, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is moderately well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.9 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2w Typical Profile: 0 to 7 inches; fine sandy loam 7 to 18 inches; fine sandy loam 18 to 26 inches; fine sandy loam 26 to 30 inches; fine sandy loam 30 to 43 inches; gravelly fine sandy loam 43 to 65 inches; gravelly fine sandy loam

Map Unit: 45C—Woodbridge fine sandy loam, 8 to 15 percent slopes

Woodbridge Fine Sandy Loam, 8 To 15 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Woodbridge soils. 20 percent minor components. Woodbridge soils This component occurs on upland drumlin and hill landforms. The parent material consists of lodgement till derived from schist, granite, and gneiss. The slope ranges from 8 to 15 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is moderately well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.9 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 3e Typical Profile: 0 to 7 inches; fine sandy loam 7 to 18 inches; fine sandy loam 18 to 26 inches; fine sandy loam 26 to 30 inches; fine sandy loam 30 to 43 inches; gravelly fine sandy loam 43 to 65 inches; gravelly fine sandy loam

Map Unit: 46B-Woodbridge fine sandy loam, 2 to 8 percent slopes, very stony

Woodbridge Fine Sandy Loam, 2 To 8 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Woodbridge soils. 20 percent minor components. Woodbridge soils This component occurs on upland drumlin and hill landforms. The parent material consists of lodgement till derived from schist, granite, and gneiss. The slope ranges from 2 to 8 percent and the runoff class is low. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is moderately well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.9 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 7 inches; fine sandy loam 7 to 18 inches; fine sandy loam 18 to 26 inches; fine sandy loam 26 to 30 inches; fine sandy loam 30 to 43 inches; gravelly fine sandy loam 43 to 65 inches; gravelly fine sandy loam

Map Unit: 47C—Woodbridge fine sandy loam, 2 to 15 percent slopes, extremely stony

Woodbridge Fine Sandy Loam, 2 To 15 Percent Slopes, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Woodbridge soils. 20 percent minor components. Woodbridge soils This component occurs on upland drumlin and hill landforms. The parent material consists of lodgement till derived from schist, granite, and gneiss. The slope ranges from 2 to 15 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is moderately well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.9 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 7 inches; fine sandy loam 7 to 18 inches; fine sandy loam 18 to 26 inches; fine sandy loam 26 to 30 inches; fine sandy loam 30 to 43 inches; gravelly fine sandy loam 43 to 65 inches; gravelly fine sandy loam

Map Unit: 84B-Paxton and Montauk fine sandy loams, 3 to 8 percent slopes

Paxton And Montauk Fine Sandy Loams, 3 To 8 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 50 inches (889 to 1270) millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 3 to 8 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

Map Unit: 84D—Paxton and Montauk fine sandy loams, 15 to 25 percent slopes

Paxton And Montauk Fine Sandy Loams, 15 To 25 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 50 inches (889 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 15 to 25 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 4e Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 15 to 25 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 4e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

**Map Unit:** 85B—Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony

Paxton And Montauk Fine Sandy Loams, 3 To 8 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 56 inches(889 to 1422 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 3 to 8 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

**Map Unit:** 85C—Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony

Paxton And Montauk Fine Sandy Loams, 8 To 15 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 56 inches (889 to 1422 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils, 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 8 to 15 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

#### **Data Source Information**

Soil Survey Area: State of Connecticut Survey Area Data: Version 6, Mar 22, 2007

### Gay Hill Road Pre-Development flow to Gay Hill Road New London County, Connecticut

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)
E-1 SHEET SHALLOW CHANNEL	100 480 780	0.0200 0.0200 0.0490	0.240 0.050 0.200	16.50	16.50	1.654	0.231 0.058 0.131
				Ti	me of Conce	ntration =	0.420

### Gay Hill Road Pre-Development flow to Gay Hill Road New London County, Connecticut

Sub-Ar Identif			Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
E-1	Paved; curbs and storm sewers Residential districts (1 acre)		C C	.05 3.63	98 79
	Woods	(fair	) C	4.32	73
	Total Area / Weighted Curve Number			8	76
				=	==

### Gay Hill Road Post-Development Flow to Gay Hill Road New London County, Connecticut

#### Sub-Area Time of Concentration Details

Sub-Area Identifier/	Length	Slope	Mannings's n	Area	Perimeter		
P-7 User-provide							0.100
obol provid				Tim	e of Concen		
P-6 User-provide	ed						0.100
				Tim	e of Concen		0.100
P-5A User-provide	ed						0.100
				Tim	e of Concen		
P-5							
User-provide	ed			Tim	e of Concen	tration	0.100
P-4							=======
User-provide	ed						0.100
				Tim	e of Concen		0.100
P-2 User-provide	ed						0.100
				Tim	e of Concen		0.100
P-3 User-provide	ad						0.100
oser provid	εα			Tim	e of Concen		0.100
P-26							
User-provide	ed						0.300
				Tim	e of Concen		0.300
P-27 SHEET SHALLOW CHANNEL	100 200 860	0.0200 0.0300 0.0300	0.240 0.050 0.200	16.50	16.50	1.291	0.231 0.020 0.185
				Tim	e of Concen		.436

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WinTR-55, Version 1.00.08 Page 1

### Gay Hill Road Post-Development Flow to Gay Hill Road New London County, Connecticut

Sub-Area Identifie			Hydrologic Soil Group	Area (ac)	Curve Number
P-7	Paved; curbs and storm sewers		C	.06	98
	Total Area / Weighted Curve Number			.06	98 ==
P-6	Paved; curbs and storm sewers		C	.08	98
	Total Area / Weighted Curve Number			.08	98 ==
P-5A	Paved; curbs and storm sewers		C	.05	98
	Total Area / Weighted Curve Number			.05	98 ==
P-5	Open space; grass cover > 75% Paved; curbs and storm sewers	(good	) C	.02	74 98
	Total Area / Weighted Curve Number			.07	91 ==
P-4	Paved; curbs and storm sewers		С	.09	98
	Total Area / Weighted Curve Number			.09	98 ==
P-2	Open space; grass cover > 75% Paved; curbs and storm sewers	(good	) C	.1	74 98
	Total Area / Weighted Curve Number			.18	85 ==
P-3	Paved; curbs and storm sewers		С	.08	98
	Total Area / Weighted Curve Number			.08	98 ==
P-26	Open space; grass cover > 75% Paved; curbs and storm sewers Woods	(good (fair	С	.5 .05 .65	74 98 73
	Total Area / Weighted Curve Number			1.2	74 ==
P-27	Open space; grass cover > 75% Paved; curbs and storm sewers Residential districts (1 acre) Woods	(good	C C	1.8 .1 3 1.53	74 98 79 73
	Total Area / Weighted Curve Number			6.43	76 ==

### Gay Hill Road Pre Development Flow to Videll Property New London County, Connecticut

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)
E-2							
SHEET	100	0.0200	0.400				0.347
SHALLOW	440	0.0860	0.050				0.026
				Ti	me of Conce	ntration	0.373
						=	

### Gay Hill Road Pre Development Flow to Videll Property New London County, Connecticut

Sub-A: Identi:			Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
E-2	Woods	(fair	) C	2.49	73
	Total Area / Weighted Curve Number			2.49	73
				====	222 222

### Gay Hill Road Post Development Flow to Videll Property New London County, Connecticut

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)
E-2							
SHEET	100	0.0200	0.400				0.347
SHALLOW	440	0.0860	0.050				0.026
				Ti	me of Conce	ntration =	.373

### Gay Hill Road Post Development Flow to Videll Property New London County, Connecticut

Sub-Ar Identif	, <del></del>	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number	
E-2	Open space; grass cover > 75% (good Paved parking lots, roofs, driveways Woods (fai	C	1.2 .3 .11	74 98 73	
	Total Area / Weighted Curve Number		1.61	78 ==	

### Gay Hill Road Pre-Development Flow to Champion Property New London County, Connecticut

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)
E-3							
SHEET	100	0.0200	0.400				0.347
SHALLOW	540	0.0940	0.050				0.030
				Ti	me of Conce	ntration	.377

#### Gay Hill Road Pre-Development Flow to Champion Property New London County, Connecticut

Sub-Are Identifi			Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
E-3	Woods	(fair)	) C	.95	73
	Total Area / Weighted Curve Number			.95	73
					==

### Gay Hill Road Post-Development Flow to Champion Property New London County, Connecticut

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)
P-36							
SHEET	100	0.0200	0.400				0.347
SHALLOW	540	0.0940	0.050				0.030
				Ti	me of Conce	ntration =	.377

### Gay Hill Road Post-Development Flow to Champion Property New London County, Connecticut

Sub-Area Identifie		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
P-36	Paved parking lots, roofs, driveways	ood) C C ir) C	.25 .08 .53	74 98 73
	Total Area / Weighted Curve Number		.86	76 ==

### Gay Hill Road Pre-Development Flow to Fernandez Property New London County, Connecticut

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)
E-4							
SHEET	100	0.0600	0.400				0.224
SHALLOW	390	0.0920	0.050				0.022
				Ti	me of Conce	ntration	.246

### Gay Hill Road Pre-Development Flow to Fernandez Property New London County, Connecticut

Sub-A Identi	fier Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
E-4	Woods	(fair		.69	73
	Total Area / Weighted Curve Number			.69	73
				===	==

### Gay Hill Road Post-Development Flow to Fernandez Property New London County, Connecticut

Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
100	0.0600	0.400				0.224
390	0.0920	0.050				0.022
			Ti	me of Conce	ntration	.246
	Length (ft) 	Length Slope (ft) (ft/ft)	Length Slope n (ft) (ft/ft)  100 0.0600 0.400	Length Slope n Area (ft) (ft/ft) (sq ft)  100 0.0600 0.400 390 0.0920 0.050	Length Slope n Area Perimeter (ft) (ft/ft) (sq ft) (ft)  100 0.0600 0.400 390 0.0920 0.050	Length Slope n Area Perimeter Velocity (ft) (ft/ft) (sq ft) (ft) (ft/sec)

## Gay Hill Road Post-Development Flow to Fernandez Property New London County, Connecticut

Sub-Area Identifie			Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
P-35	Paved parking lots, roofs, driveways	good) fair)	C C	.25 .08 .27	74 98 73
	Total Area / Weighted Curve Number			.6	77 ==

### Gay Hill Road Pre-Development Flow to Evans Property New London County, Connecticut

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)
E-8 SHEET SHALLOW CHANNEL	100 200 1150	0.0100 0.0300 0.0450	0.400 0.050 0.200	11.50	11.50	1.581	0.458 0.020 0.202
				Ti	me of Conce	ntration =	.68

### Gay Hill Road Pre-Development Flow to Evans Property New London County, Connecticut

Sub-Are Identifi			Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
E-8	Paved; curbs and storm sewers		С	.1	98
	Residential districts (1 acre)		C	2.32	79
	Woods (	fair)	С	10.77	73
	Total Area / Weighted Curve Number			13.19	74
					==

## Gay Hill Road Post Development Flow to Evans Property New London County, Connecticut

Sub-Area Identifier/	Length (ft)	Slope (ft/ft)	Mannings's n	Area (sq ft)	Perimeter (ft)	Velocity (ft/sec)	(hr)
P-28 SHEET SHALLOW	100 200	0.0100	0.400		26.00		0.458 0.024 0.095
				Ti	me of Conce		.577
P-34 SHEET SHALLOW CHANNEL	200	0.0300		11.50	1.50	55.556	0.458 0.020 0.004
				Ti	me of Conce		.482
P-38 User-provid	ied			Ti	me of Conce		0.100
P-23 User-provid	ded			Ψi	me of Conce		0.100
P-24				11	me or conce		======
User-provid	ded			Ti	me of Concer		0.100
P-25 User-provio	ded						0.100
				Ti	me of Conce		0.100

## Gay Hill Road Post Development Flow to Evans Property New London County, Connecticut

Sub-Area Identifie	r Land Use		Hydrologic Soil Group		Curve Number
P-28	Open space; grass cover > 75% (c) Paved parking lots, roofs, driveways Residential districts (1 acre) Woods (f	good) fair)	C C	.5 .1 1.45 1.98	74 98 79 73
	Total Area / Weighted Curve Number			4.03	76 ==
P-34	Open space; grass cover > 75% (grass cover > 75%) Paved parking lots, roofs, driveways Woods (f		C	2.6 .65 3.1	74 98 73
	Total Area / Weighted Curve Number			6.35	76 ==
P-38	Open space; grass cover 50% to 75% (f	Eair)	С	.1	79
	Total Area / Weighted Curve Number			.1	79 ==
P-23	Open space; grass cover > 75% (graved parking lots, roofs, driveways		C	.16	74 98
	Total Area / Weighted Curve Number			.25	83 ==
P-24	Open space; grass cover > 75% (g Paved parking lots, roofs, driveways	good)	C	.5	74 98
	Total Area / Weighted Curve Number			.59 ===	78 ==
P-25	Open space; grass cover > 75% (g Paved parking lots, roofs, driveways		C C	.1	74 98
	Total Area / Weighted Curve Number			.31	90

### Gay Hill Road Pre-Development Flow to Souza Property New London County, Connecticut

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)
E-6							
SHEET	100	0.0200	0.400				0.347
SHALLOW	660	0.0380	0.050				0.058
				Ti	me of Concer	ntration	.405

### Gay Hill Road Pre-Development Flow to Souza Property New London County, Connecticut

Sub-An Identii			Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
E-6	Woods	(fair	) C	3.41	73
	Total Area / Weighted Curve Number			3.41	73
				====	==

### Gay Hill Road Post-Development Flow to Souza Property New London County, Connecticut

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)
P-33							
SHEET	100	0.0200	0.400				0.347
SHALLOW	660	0.0380	0.050				0.058
				Ti	me of Concer	ntration =	.405

## Gay Hill Road Post-Development Flow to Souza Property New London County, Connecticut

Sub-Ar Identif	(A) A CONTRACTOR OF THE CONTRA	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
P-33	Open space; grass cover > 75% (good Paved parking lots, roofs, driveways	C	1.2	74 98
	Woods (fair Total Area / Weighted Curve Number	·) C	1.37 2.72	73 75
				===

### Gay Hill Road Pre-Development Flow to Jensen Property New London County, Connecticut

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)
E-7							
SHEET	100	0.0200	0.400				0.347
SHALLOW	580	0.0410	0.050				0.049
				Ti	me of Conce	ntration =	.396

### Gay Hill Road Pre-Development Flow to Jensen Property New London County, Connecticut

Sub-Ar Identif			Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
E-7	Woods	(fair)	С	2.42	73
	Total Area / Weighted Curve Number			2.42	73

### Gay Hill Road Post-Development Flow to Jensen Property New London County, Connecticut

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)
P-32							
SHEET	1.00	0.0200	0.400				0.347
SHALLOW	580	0.0410	0.050				0.049
				Tí	me of Conce	ntration	.396

## Gay Hill Road Post-Development Flow to Jensen Property New London County, Connecticut

### Sub-Area Land Use and Curve Number Details

Sub-Area Identifie			Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
P-32	Open space; grass cover > 75% Paved parking lots, roofs, driveways Woods	(good)	C C C	1.2 .15 .93	74 98 73
	Total Area / Weighted Curve Number			2.28	75 ==

Page 1

# Gay Hill Road Pre-Development Flow to Marsala Property New London County, Connecticut

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)
E-8 SHEET SHALLOW CHANNEL	100 520 550	0.0150 0.0200 0.0280	0.400 0.050 0.200	50.00	50.00	1.242	0.390 0.063 0.123
				Ti	me of Conce	ntration =	.576

## Gay Hill Road Pre-Development Flow to Marsala Property New London County, Connecticut

Sub-Area Identifie			Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
E-8	Paved; curbs and storm sewers Residential districts (1 acre) Woods	(fair)	C C	.2 2.98 12.95	98 79 73
	Total Area / Weighted Curve Number			16.13	7 4 ==

### Gay Hill Road Post-Development Flow to Marsala Property New London County, Connecticut

Sub-Area Identifier/	Length (ft)	Slope (ft/ft)	Mannings's n	Area P (sq ft)	Wetted erimeter Velocit (ft) (ft/sec	Travel Time (hr)
P-29 User-provid						0.100
				Time	of Concentration	0.100
P-30 SHEET SHALLOW CHANNEL	100 650 50	0.0150 0.0200 0.0280	0.240 0.050 0.200	50.00	50.00 1.263	0.259 0.079 0.011
				Time	of Concentration	0.349
P-31 User-provid	ed					0.200
				Time	of Concentration	0.200
P-7B SHEET SHALLOW CHANNEL	430	0.0400			1.77 6.944	
				Time	of Concentration	0.347
P-9 User-provid	ed					0.347
				Time	of Concentration	0.347
P-7thru21 User-provid	ed					0.100
				Time	of Concentration	0.100
P-31A User-provid	ed					0.100
				Time	of Concentration	0.100

## Gay Hill Road Post-Development Flow to Marsala Property New London County, Connecticut

Sub-Area Identifie			Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
P-29	Open space; grass cover > 75% Residential districts (1 acre) Woods	(good	C	.1 .25 .47	74 79 73
	Total Area / Weighted Curve Number			.82	75 ==
P-30	Open space; grass cover > 75% Paved parking lots, roofs, driveway: Residential districts (1 acre) Woods	(good s (fair	C	.8 .25 1.24 7.83	74 98 79 73
	Total Area / Weighted Curve Number			10.12	74 ==
P-31	Open space; grass cover > 75% Paved parking lots, roofs, driveways Woods	(good) s (fair	C	1.24 .13 .41	74 98 73
	Total Area / Weighted Curve Number			1.78	76 ==
P-7B	Open space; grass cover > 75% Paved parking lots, roofs, driveways Residential districts (1 acre)	(good)	) C C C	.59 .17 .6	74 98 79
	Total Area / Weighted Curve Number			1.36	79 ==
P-9	Open space; grass cover 50% to 75% Paved parking lots, roofs, driveways Residential districts (1 acre)		) C C	.39 .13 .84	79 98 79
	Total Area / Weighted Curve Number			1.36	81 ==
P-7thru21	Open space; grass cover > 75% Paved parking lots, roofs, driveways	(good	) C C	1.6 1.55	74 98
	Total Area / Weighted Curve Number			3.15	8 6 ==
P-31A	Open space; grass cover > 75% Paved parking lots, roofs, driveway:	(good	) C C	.1	74 98
	Total Area / Weighted Curve Number			1.1	76 ==