

Quick TR-55 Version: 5.46 S/N:

Return Frequency: 1 year

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-24-2013 07:57:01

Watershed file: --> K:\04000\04476\0447601\PRJ\PONDEPACK\WYND5 .MOP

Hydrograph file: --> K:\04000\04476\0447601\PRJ\PONDEPACK\W3IN001.HYD

Wynds of Liberty
Section 3

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
	76.46	72.0	0.50	0.00	2.50	0.53	I.31 .31

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 76.46 acres or 0.11947 sq.mi
Peak discharge = 27 cfs

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
	27	12.4
Composite Watershed	27	12.4

Quick TR-55 Version: 5.46 S/N:

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-24-2013 07:57:01

Watershed file: --> K:\04000\04476\0447601\PRJ\PONDPACK\WYND5 .MOP

Hydrograph file: --> K:\04000\04476\0447601\PRJ\PONDPACK\W3IN010.HYD

Wynds of Liberty
Section 3

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
	76.46	72.0	0.50	0.00	4.10	1.53	1.19 .19

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 76.46 acres or 0.11947 sq.mi
Peak discharge = 89 cfs

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
	89	12.4
Composite Watershed	89	12.4

Quick TR-55 Version: 5.46 S/N:

Return Frequency: 25 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-24-2013 07:57:01

Watershed file: --> K:\04000\04476\0447601\PRJ\PONDPACK\WYND5 .MOP

Hydrograph file: --> K:\04000\04476\0447601\PRJ\PONDPACK\W3IN025.HYD

Wynds of Liberty
Section 3

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
	76.46	72.0	0.50	0.00	4.70	1.97	1.17 .17

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 76.46 acres or 0.11947 sq.mi
Peak discharge = 117 cfs

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
	117	12.4
Composite Watershed	117	12.4

Quick TR-55 Version: 5.46 S/N:

Return Frequency: 50 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-24-2013 07:57:01

Watershed file: --> K:\04000\04476\0447601\PRJ\PONDPACK\WYND5 .MOP

Hydrograph file: --> K:\04000\04476\0447601\PRJ\PONDPACK\W3IN050.HYD

Wynds of Liberty
Section 3

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
	76.46	72.0	0.50	0.00	5.20	2.35	1.15 .15

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 76.46 acres or 0.11947 sq.mi

Peak discharge = 142 cfs

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
	142	12.4
Composite Watershed	142	12.4

Quick TR-55 Version: 5.46 S/N:

Return Frequency: 100 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-24-2013 07:57:01

Watershed file: --> K:\04000\04476\0447601\PRJ\PONDPACK\WYND5 .MOP

Hydrograph file: --> K:\04000\04476\0447601\PRJ\PONDPACK\W3IN100.HYD

Wynds of Liberty
Section 3

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
	76.46	72.0	0.50	0.00	5.80	2.83	1.13 .13

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 76.46 acres or 0.11947 sq.mi
Peak discharge = 174 cfs

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
	174	12.4
Composite Watershed	174	12.4

POND-2 Version: 5.21

S/N:

Wynds of Liberty
Section 3
Stage vs Storage

CALCULATED 06-24-2013 08:09:03

DISK FILE: k:\04000\04476\0447601\prj\pondpack\WYNDS .VOL

Planimeter scale: 1 inch = 1 ft.

Elevation (ft)	Planimeter (sq.in.)	Area (sq.ft)	A1+A2+sq.r(A1*A2) (sq.ft)	* Volume (cubic-ft)	Volume Sum (cubic-ft)
794.70	0.00	0	0	0	0
796.00	4,625.00	4,625	4,625	2,004	2,004
798.00	30,900.00	30,900	47,480	31,653	33,657
800.00	46,300.00	46,300	115,024	76,683	110,340
801.50	53,775.00	53,775	149,973	74,986	185,326
802.50	57,225.00	57,225	166,473	55,491	240,817
803.50	60,675.00	60,675	176,825	58,942	299,759

$$IA = (\text{sq.r}(\text{Area1}) + ((E_i - E_1) / (E_2 - E_1)) * (\text{sq.r}(\text{Area2}) - \text{sq.r}(\text{Area1})))^2$$

where: E1, E2 = Closest two elevations with planimeter data
Ei = Elevation at which to interpolate area
Area1, Area2 = Areas computed for E1, E2, respectively
IA = Interpolated area for Ei

* Incremental volume computed by the Conic Method for Reservoir Volumes.

$$\text{Volume} = (1/3) * (EL2 - EL1) * (\text{Area1} + \text{Area2} + \text{sq.r}(\text{Area1} * \text{Area2}))$$

where: EL1, EL2 = Lower and upper elevations of the increment
Area1, Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

Outlet Structure File: WYNDS .STR

POND-2 Version: 5.21

S/N:

Date Executed:

Time Executed:

Outlet Structure File: k:\04000\04476\0447601\prj\pondpack\WYNDS .STR

Planimeter Input File: k:\04000\04476\0447601\prj\pondpack\WYNDS .VOL

Rating Table Output File: k:\04000\04476\0447601\prj\pondpack\WYNDS .PND

Min. Elev.(ft) = 794.7 Max. Elev.(ft) = 803.5 Incr.(ft) = .5

Additional elevations (ft) to be included in table:

* * * * *

Stage vs Discharge

SYSTEM CONNECTIVITY

Structure	No.	Q Table	Q Table
-----	---	-----	-----
TABLE	1	->	1 Table from Bayer Becker Report
TABLE	2	->	2 Table from Bayer Becker Report

Outflow rating table summary was stored in file:

k:\04000\04476\0447601\prj\pondpack\WYNDS .PND

Outlet Structure File: WYNDS .STR

POND-2 Version: 5.21

S/N:

Date Executed:

Time Executed:

***** COMPOSITE OUTFLOW SUMMARY ****

Elevation (ft)	Q (cfs)	Contributing Structures
-----	-----	-----
794.70	0.0	1
795.20	1.6	1
795.70	6.1	1
796.20	13.0	1
796.70	21.7	1
797.20	31.3	1
797.70	41.6	1
798.20	51.9	1
798.70	61.8	1
799.20	70.9	1
799.70	78.6	2
800.20	85.8	2
800.70	92.3	2
801.20	107.3	2
801.70	166.6	2
802.20	259.7	2
802.70	387.3	2
803.20	554.1	2
803.50	672.9	2

POND-2 Version: 5.21 S/N:

EXECUTED: 06-24-2013 08:33:38

Return Freq: 1 year

***** SUMMARY OF ROUTING COMPUTATIONS *****

Pond File: k:\04000\04476\0447601\prj\pondpack\WYND .PND
Inflow Hydrograph: k:\04000\04476\0447601\prj\pondpack\W3IN001 .HYD
Outflow Hydrograph: k:\04000\04476\0447601\prj\pondpack\WYND001.HYD

Starting Pond W.S. Elevation = 794.70 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow	=	27.00 cfs
Peak Outflow	=	23.72 cfs
Peak Elevation	=	796.81 ft

***** Summary of Approximate Peak Storage *****

Initial Storage	=	0 cu-ft
Peak Storage From Storm	=	8,872 cu-ft

Total Storage in Pond	=	8,872 cu-ft

POND-2 Version: 5.21 S/N:

EXECUTED: 06-24-2013 08:33:38

Return Freq: 10 years

***** SUMMARY OF ROUTING COMPUTATIONS *****

Pond File: k:\04000\04476\0447601\prj\pondpack\WYNDS .PND
Inflow Hydrograph: k:\04000\04476\0447601\prj\pondpack\W3IN010 .HYD
Outflow Hydrograph: k:\04000\04476\0447601\prj\pondpack\WYNDS010.HYD

Starting Pond W.S. Elevation = 794.70 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow	=	89.00 cfs
Peak Outflow	=	60.67 cfs
Peak Elevation	=	798.64 ft

***** Summary of Approximate Peak Storage *****

Initial Storage	=	0 cu-ft
Peak Storage From Storm	=	55,078 cu-ft

Total Storage in Pond	=	55,078 cu-ft

POND-2 Version: 5.21 S/N:

EXECUTED: 06-24-2013 08:33:38

Return Freq: 25 years

***** SUMMARY OF ROUTING COMPUTATIONS *****

Pond File: k:\04000\04476\0447601\prj\pondpack\WYNDS .PND
Inflow Hydrograph: k:\04000\04476\0447601\prj\pondpack\W3IN025 .HYD
Outflow Hydrograph: k:\04000\04476\0447601\prj\pondpack\WYNDS025.HYD

Starting Pond W.S. Elevation = 794.70 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow	=	117.00 cfs
Peak Outflow	=	73.54 cfs
Peak Elevation	=	799.37 ft

***** Summary of Approximate Peak Storage *****

Initial Storage	=	0 cu-ft
Peak Storage From Storm	=	83,118 cu-ft

Total Storage in Pond	=	83,118 cu-ft

POND-2 Version: 5.21 S/N:

EXECUTED: 06-24-2013 08:33:38

Return Freq: 50 years

***** SUMMARY OF ROUTING COMPUTATIONS *****

Pond File: k:\04000\04476\0447601\prj\pondpack\WYNDS .PND
Inflow Hydrograph: k:\04000\04476\0447601\prj\pondpack\W3IN050 .HYD
Outflow Hydrograph: k:\04000\04476\0447601\prj\pondpack\WYNDS550.HYD

Starting Pond W.S. Elevation = 794.70 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 142.00 cfs
Peak Outflow = 83.20 cfs
Peak Elevation = 800.02 ft

***** Summary of Approximate Peak Storage *****

Initial Storage = 0 cu-ft
Peak Storage From Storm = 111,432 cu-ft

Total Storage in Pond = 111,432 cu-ft

POND-2 Version: 5.21 S/N:

EXECUTED: 06-24-2013 08:33:38

Return Freq: 100 years

***** SUMMARY OF ROUTING COMPUTATIONS *****

Pond File: k:\04000\04476\0447601\prj\pondpack\WYNDS .PND
Inflow Hydrograph: k:\04000\04476\0447601\prj\pondpack\W3IN100 .HYD
Outflow Hydrograph: k:\04000\04476\0447601\prj\pondpack\WYNDS100.HYD

Starting Pond W.S. Elevation = 794.70 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 174.00 cfs
Peak Outflow = 96.01 cfs
Peak Elevation = 800.82 ft

***** Summary of Approximate Peak Storage *****

Initial Storage = 0 cu-ft
Peak Storage From Storm = 150,238 cu-ft

Total Storage in Pond = 150,238 cu-ft