

PRELIMINARY DRAINAGE ANALYSIS

NOVEMBER 4, 2024

FOR

THE PADDOCK

RURAL RECREATIONAL VEHICLE RESORT

INCLUDED IN THIS SUBMITTAL:

1. STORMWATER DRAINAGE CRITERIA
2. PRELIMINARY DRAINAGE CALCULATIONS (FOR DISCUSSION PURPOSES ONLY)
3. PRELIMINARY DRAINAGE MODEL (FOR DISCUSSION PURPOSES ONLY)

Summary The stormwater drainage system will consist of two interconnected onsite wet detention ponds with outfall to canal C-51. The property is 47.02 acres in total and is located west of the turnpike.
Vertical Datum NAVD88
Project Area: 38.27 acres

A.	Design Criteria (Wet Detention Pond)			
	Quantity (SFWMD FRP Applicant Handbook Vol. II)			
1	Per Appendix A "SFWMD-Allowable Discharge Formulas", the allowable discharge to canal C-51 is as follows: C-51: 27 CSM Design Frequency: 10-YR 72 HR SFWMD Storm Event 27 CSM --> CFS = (Property Acreage*27)/640 = 1.984 cfs Proposed per drainage model: 1.980 cfs			
2	Quality (SFWMD FRP Applicant Handbook Vol. II) The greater of: i. The first 1" of runoff from the entire site ii. The amount of 2.5" X the percentage of imperviousness * The site discharges into an impaired waterbody and therefore will require 150% additional treatment iii. The wet detention pond shall not discharge more than 0.5 inch of the detained volume per day			
3	Design Storm Events Design Storm: 5YR-24HR Design Storm: 10YR-24HR Design Storm: 10YR-72HR Design Storm: 25YR-72HR Design Storm: 100YR-72HR (Zero Discharge)			
	Lowest pavement elevation for road or parking lot Lowest road centerline Max outfall discharge Minimum Perimeter Berm Minimum Finished Floor and Floodplain Perimeter Berm			Model Results: NAVD88 17.06' 17.22' 17.44' 17.63' 18.18'

Floodplain Calculations
Per SFWMD Design Example for Flood Plain Storage Compensation

Pre-Development Land Use	Site Area	Unit
Impervious		
Buildings	0	ac
Roads / Impervious	0	ac
Lakes (A _L)	2.5	ac
Pervious Landscape Area (A _p)	44.52	ac
Total Site Area (A _T)	47.02	ac

1	Determine site predevelopment 100-YR 72-HR storm runoff volume		
i.	Existing Average Site Grade:	16.2	NAVD88
ii.	Existing Seasonal High Water Table	14.75	NAVD88
iii.	Depth to Water Table:	1.45	ft
vi.	Moisture Storage Capacity (Uncom. S): Flatwoods From Appendix D-1 (SFWMD)	0.6	in.
100YR-72 HR			
	Rainfall (P) = 13 in	13	in
	S = 0.6 in	0.60	in
	Available Soil Storage = S x Pervious x (1/12)	2.23	ac-ft
	Site Wide Moisture Storage = available soil storage onsite / site area	0.57	in
	Q = (P - (0.2 x S)) ² / (P + (0.8 x S))	12.34	in
	V (runoff) = 12.34 in x 47.02 ac X 1 ft / 12 in	48.36	ac-ft
2	Determine site predevelopment storage available on site		
i.	Soil Storage Calcs		
	Wet Season Water Table / Control Elevation	14.75	ft
	Average Site Elevation (Pervious Landscaping)	16.2	ft
	Average Depth to Water Table (Pervious Landscaping)	1.45	ft
	Soil Storage Capability	Flatwoods	
	Uncomp S From Appendix D-1 (SFWMD)	0.6	in
	Available Storage Area (S x A _p x 1ft/12in)	2.23	ac-ft
ii.	Existing Floodplain Storage		
	Calculated in AutoCAD, comparing EG to 17.6' (NAVD)	53.91	ac-ft
	Convert to ac-ft		
	Total available existing storage:	56.14	ac-ft
	[Site Development Runoff Volume] - [Site Predevelopment Storage Available] = -7.77 ac-ft		
	The site is an "Importer" and must be divided into 2 sections.		
	Section 1 (Development Area) - must maintain the 100YR-72HR runoff volume for this development area		
	Section 2 (Undeveloped Storage Area) - must provide 7.77 ac-ft in the proposed storage area		

Post-Development Land Use	Site Area	Unit
Section 1 (Development Area)		
Impervious		
Buildings	0.53	ac
Roads / Impervious	19.73	ac
Lakes (A _L)	5.51	ac
Pervious Landscape Area (A _p)	12.5	ac
Total Site Area (A _T)	38.27	ac

1	Determine Section 1 (Development Area) 100-YR 72-HR storm runoff volume		
i.	Proposed Site Grade:	17.75	NAVD88
ii.	Existing Seasonal High Water Table	14.75	NAVD88
iii.	Depth to Water Table:	3	ft
vi.	Moisture Storage Capacity (Uncom. S): Flatwoods From Appendix D-1 (SFWMD)	4.05	in.
100YR-72 HR			
	Rainfall (P) = 13 in	13	in
	S = 4.05	4.05	in
	Available Soil Storage = S x Pervious x (1/12)	4.22	ac-ft
	Site Wide Moisture Storage = available soil storage onsite / site area	1.32	in
	Q = (P - (0.2 x S)) ² / (P + (0.8 x S))	11.54	in
	V (runoff) = 10.94 in x 47.02 ac X 1 ft / 12 in	36.79	ac-ft
2	Determine Section 1 (Development Area) proposed storage volume		
i.	Soil Storage Calcs		
	Wet Season Water Table / Control Elevation	14.75	ft
	Average Site Elevation (Pervious Landscaping)	17.5	ft
	Average Depth to Water Table (Pervious Landscaping)	2.75	ft
	Soil Storage Capability	Flatwoods	
	Comp S From Appendix D-1 (SFWMD)	4.05	in
	Available Storage Area (S x A _p x 1ft/12in)	4.22	ac-ft
ii.	Floodplain Storage		
	Development Area Contains the 100YR-72HR Runoff at a berm height of 18.18'	36.79	ac-ft
	Proposed Berm Height	18.35'	NAVD88

Post-Development Land Use	Site Area	Unit
Section 2 (Undeveloped Storage Area)		
Impervious		
Buildings	0	ac
Roads / Impervious	0	ac
Lakes (A _L)	0	ac
Pervious Landscape Area (A _p)	8.5	ac
Total Site Area (A _T)	8.5	ac

1	Determine Section 2 (Undeveloped Storage Area) proposed storage volume		
i.	Soil Storage Calcs		
	Wet Season Water Table / Control Elevation	14.75	ft
	Average Site Elevation (Pervious Landscaping)	16.2	ft
	Average Depth to Water Table (Pervious Landscaping)	1.45	ft
	Soil Storage Capability	Flatwoods	
	Uncomp S From Appendix D-1 (SFWMD)	0.6	in
	Overall Soil Storage: S=(Comp S) x (A _p /A _T)	0.60	in

Available Storage Area (S x A _p x 1ft/12in)	0.43	ac-ft
Floodplain Storage		
Calculated in AutoCAD, comparing EG of undeveloped area to 17.6' (NAVD)	9.69	ac-ft
Total Volume in Undeveloped Storage Area :	10.11	ac-ft
Storage needed to provide to the basin	7.77	ac-ft
Storage exceeds amount provided to basin:	2.34	ac-ft

B. Pre-Development Land Use, Soil Storage Calculations, and Curve Number

Land Use	Site Area	Unit
Impervious		
Buildings	0	ac
Roads / Impervious	0	ac
Lakes (A _L)	2.5	ac
Pervious Landscape Area (A _p)	44.52	ac
Total Site Area (A _T)	47.02	ac
Soil Storage Calcs		Unit
Wet Season Water Table / Control Elevation	14.75	ft
Average Site Elevation (Pervious Landscaping)	16.2	ft
Average Depth to Water Table (Pervious Landscaping)	1.45	ft
Soil Storage Capability	Flatwoods	
Uncomp S From Appendix D-1 (SFWMD)	0.6	in
Overall Soil Storage: S=(Comp S) x (A _p /A _T)	0.57	in
Available Storage Area (S x A _p x 1ft/12in)	2.23	ac-ft
Curve Number		
SCS Curve Number (CN) CN= 1000/(S+10)	94.62	

Post-Development Land Use, Soil Storage Calculations, and Curve Number

Land Use	Site Area	Unit
Impervious		
Buildings	0.53	ac
Roads, RV Pads, Sidewalks	19.73	ac
Lakes (A _L)	5.51	ac
Pervious Landscape Area (A _p)	12.5	ac
Total Site Area (A _T)	38.27	ac
Soil Storage Calcs		Unit
Wet Season Water Table / Control Elevation	14.75	ft
Average Site Elevation (Pervious Landscaping)	17.75	ft
Average Depth to Water Table (Pervious Landscaping)	.3	ft
Soil Storage Capability	Flatwoods	
Comp S From Appendix D-1 (SFWMD)	4.05	in
Overall Soil Storage: S=(Comp S) x (A _p /A _T)	1.32	in
Available Storage Area (S x A _p x 1ft/12in)	4.22	ac-ft
Curve Number		
SCS Curve Number (CN) CN= 1000/(S+10)	88.32	

C. Water Quality Calculations

1	Compute the first inch of runoff from the entire site	
i.	1.0 in x 38.27 ac x 1ft/12in =	3.19 ac-ft
2	Compute 2.5 inches times the percentage of imperviousness	
i.	Site area for water quality pervious/impervious calculations only: =Total Project - (Lake Area + Buildings) =38.28 ac - (5.45 ac + 0.49 ac)	32.23 ac
ii.	Impervious area for water quality pervious/impervious =site area for water quality - pervious =32.34 ac - 13.34 ac	19.73 ac
iii.	Percentage of imperviousness for water quality =(impervious area for water quality/site area for water quality) x 100% =(19.00 ac / 32.34 ac) x 100%	61.22 % impervious
iv.	For 2.5 inches times the percentage impervious: =2.5 in. x 58.77	1.530 in. to be treated
v.	Compute the volume required for water quality detention: =inches to be treated x (total site - lakes) =1.469 x (38.28 ac - 5.45ac) x (1 ft / 12 in)	4.18 ac-ft required detention storage
3	1st inch of runoff for the entire site= 2.5 inches times the percentage of imperviousness	3.19 ac-ft 4.18 ac-ft
i.	2.5 inches time the percentage impervious controls for water quality	
ii.	The site discharges into an impaired water body, therefore multiply required storage by 150%	6.27 ac-ft
4	Pretreatment 0.5 in x (total site - lake) = 0.5 x (38.28-5.45) x 1/12	1.37 ac-ft

D. Project storage / Volume Calculations

i.	Lake storage begins at the control elevation (seasonal high water elev.) 14.75'	
ii.	Area of developed site grading: =Total area - (lakes + buildings)	32.23 ac
	Equations $Q = (P - (0.2 \times S))^{1/2} / (P + (0.8 \times S))$ $S = (1000/CN) - 10$ $V(\text{ac-ft}) = (Q^* A)/12$	
i.	100YR-72 HR Rainfall (P) = 13 in S = 4.05 in Available Soil Storage = S x Pervious x (1/12) Site Wide Moisture Storage = available soil storage onsite / site area $Q = (P - (0.2 \times S))^{1/2} / (P + (0.8 \times S))$ $V(\text{runoff}) = 12.25 \text{ in} \times 38.27 \text{ ac} \times 1 \text{ ft} / 12 \text{ in}$	13 in 4.05 in 4.22 ac-ft 1.32 in 11.54 in 36.79 ac-ft
ii.	25YR-72 HR Rainfall (P) = 10.5 in S = 4.05 in Available Soil Storage = S x Pervious x (1/12) Site Wide Moisture Storage = available soil storage onsite / site area $Q = (P - (0.2 \times S))^{1/2} / (P + (0.8 \times S))$ $V(\text{runoff}) = 9.75 \text{ in} \times 38.27 \text{ ac} \times 1 \text{ ft} / 12 \text{ in}$	10.5 in 1.88 in 4.22 ac-ft 1.32 in 9.06 in 28.91 ac-ft
iii.	10YR-72 HR Rainfall (P) = 9 in S = 4.05 in Available Soil Storage = S x Pervious x (1/12) Site Wide Moisture Storage = available soil storage onsite / site area $Q = (P - (0.2 \times S))^{1/2} / (P + (0.8 \times S))$ $V(\text{runoff}) = 8.26 \text{ in} \times 38.27 \text{ ac} \times 1 \text{ ft} / 12 \text{ in}$	9 in 1.88 in 4.22 ac-ft 1.32 in 7.59 in 24.19 ac-ft
iv.	10YR-24 HR Rainfall (P) = 7.1 in S = 4.05 in Available Soil Storage = S x Pervious x (1/12) Site Wide Moisture Storage = available soil storage onsite / site area $Q = (P - (0.2 \times S))^{1/2} / (P + (0.8 \times S))$ $V(\text{runoff}) = 6.37 \text{ in} \times 38.27 \text{ ac} \times 1 \text{ ft} / 12 \text{ in}$	7.1 in 1.88 in 4.22 ac-ft 1.32 in 5.73 in 18.26 ac-ft
v.	5YR-24 HR Rainfall (P) = 6.2 in S = 4.05 in	6.2 in 1.88 in

Available Soil Storage = S x Pervious x (1/12)	4.22 ac-ft
Site Wide Moisture Storage = available soil storage onsite / site area	1.32 in
Q = (P - (0.2 x S)) / (P + (0.8 x S))	4.85 in
V(runoff) = 5.48 in x 38.27 ac x 1 ft / 12 in	15.48 ac-ft

E. **Stage-Storage**
 Assume: Stage storage = side slopes and vertical pond + site storage (parking lot + pervious: 38.27 ac)
 Assume: Site storage starting minimum elevation is 1' lower than minimum road centerline elevation
 V = Rectangular L = Triangular

Post Development Cumulative (ac-ft)							
	Stage (ft)	Lake (Bottom)	Lake (Sloped)	Buildings	Impervious Area	Pervious Area	Total Area
Area (Acres)		3.83	1.68	0.53	19.73	12.5	38.273
Storage Type		V	L	N/A	L	L	
Start (Ft)		5.25	14.75	N/A	17	16.75	
End (Ft)		17.5	17.5	N/A	20	20	
Elevation (Ft)		Storage (ac-ft)	Storage (ac-ft)	Storage (ac-ft)	Storage (ac-ft)	Storage (ac-ft)	Storage (ac-ft)
14.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.25	0.50	1.92	0.42	0.00	0.00	0.00	2.34
15.75	1.00	3.83	0.84	0.00	0.00	0.00	4.67
16.25	1.50	5.75	1.26	0.00	0.00	0.00	7.01
16.75	2.00	7.67	1.68	0.00	0.00	0.00	9.35
17.25	2.50	9.58	2.10	0.00	2.47	3.13	17.27
17.75	3.00	11.50	2.52	0.00	7.40	6.25	27.67
18.25	3.50	13.42	2.94	0.00	12.33	9.38	38.06
18.75	4.00	15.33	3.36	0.00	17.26	12.50	48.46
19.25	4.50	17.25	3.78	0.00	22.20	15.63	58.85
19.75	5.00	19.17	4.20	0.00	27.13	18.75	69.24

F. **Control Structure / Treatment Volume Calcs**

Total Treatment Volume=	6.03
Less Pretreatment	1.37
	4.67

Set the control weir crest to store the the required treatment volume= 4.67 ac-ft
 Must drawdown less than 1/2 of treatment volume within 24 hrs 2.33 ac-ft

	Stage	Storage (ac-ft)
Wet Season Water Table (NAVD88)	14.75	0
1/2 Treatment in 24hrs	15.23	2.33
	15.25	2.34
Treatment EL.	15.71	4.67
	15.75	4.67

3. PRELIMINARY DRAINAGE MODEL (FOR DISCUSSION PURPOSES ONLY)

The Paddock-10.28.24-Final

Prepared by Bove LLC

Printed 11/4/2024

HydroCAD® 10.20-5c s/n 13549 © 2023 HydroCAD Software Solutions LLC

Page 1

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	5YR-24HR	SFWMD 24-hr		Default	24.00	1	6.20	2
2	10YR-24HR	SFWMD 24-hr		Default	24.00	1	7.10	2
3	10YR-72HR	SFWMD 72-hr		Default	72.00	1	9.00	2
4	25YR-72HR	SFWMD 72-hr		Default	72.00	1	10.50	2
5	100YR-72HR	SFWMD 72-hr		Default	72.00	1	13.00	2

Summary for Pond 2P: Pond - The Paddock

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 38.270 ac, 0.00% Impervious, Inflow Depth = 4.82" for 5YR-24HR event
 Inflow = 174.66 cfs @ 11.90 hrs, Volume= 15.368 af
 Outflow = 1.16 cfs @ 24.16 hrs, Volume= 5.066 af, Atten= 99%, Lag= 735.5 min
 Primary = 1.16 cfs @ 24.16 hrs, Volume= 5.066 af

Routing by Stor-Ind method, Time Span= 1.00-74.00 hrs, dt= 0.05 hrs
 Peak Elev= 17.06' @ 24.16 hrs Storage= 14.287 af

Plug-Flow detention time= 1,850.8 min calculated for 5.063 af (33% of inflow)
 Center-of-Mass det. time= 1,700.6 min (2,486.1 - 785.4)

Volume	Invert	Avail.Storage	Storage Description
#1	14.75'	69.380 af	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (acre-feet)
14.75	0.000
15.25	2.340
15.75	4.670
16.25	7.010
16.75	9.350
17.25	17.300
17.75	27.710
18.25	38.130
18.75	48.550
19.25	58.960
19.75	69.380

Device	Routing	Invert	Outlet Devices
#1	Primary	14.75'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 0.00 0.50
#2	Primary	16.75'	0.5' long Sharp-Crested Rectangular Weir 0 End Contraction(s) 1.0' Crest Height
#3	Primary	18.00'	18.0" x 18.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate (56% open area) Limited to weir flow at low heads

Primary OutFlow Max=1.16 cfs @ 24.16 hrs HW=17.06' (Free Discharge)

1=Custom Weir/Orifice (Orifice Controls 0.86 cfs @ 6.90 fps)
 2=Sharp-Crested Rectangular Weir (Weir Controls 0.29 cfs @ 1.89 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Pond 2P: Pond - The Paddock

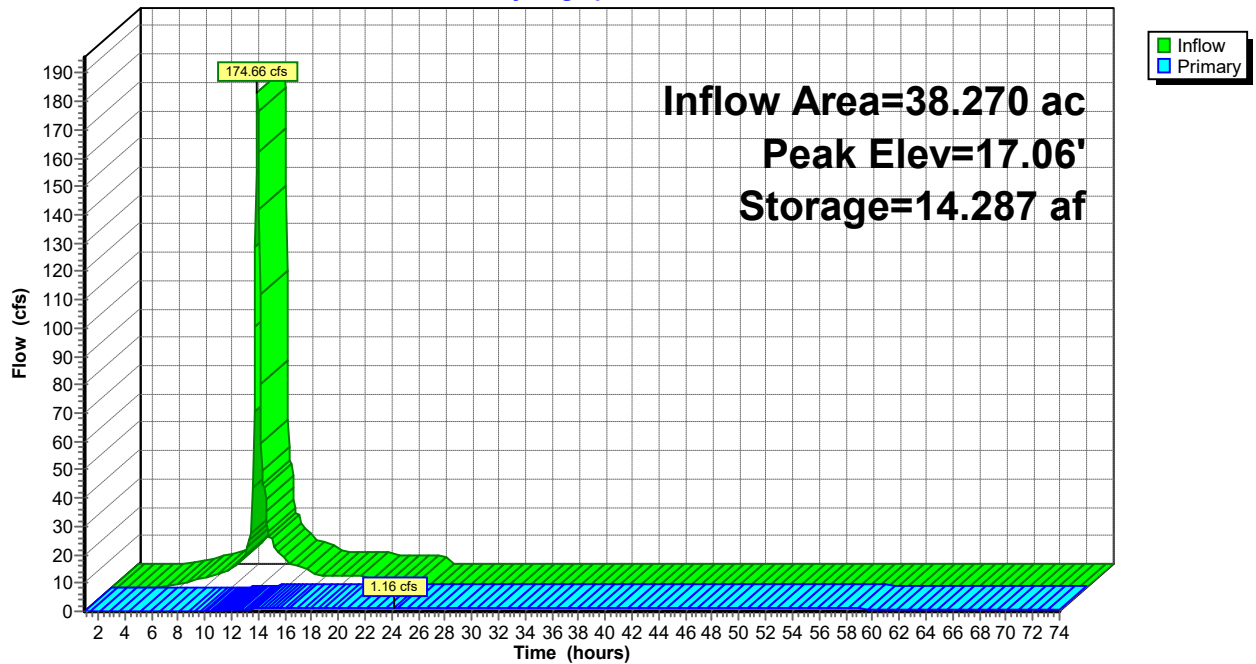
Orifice/Grate

Sharp-Crested Rectangular Weir

Custom Weir/Orifice

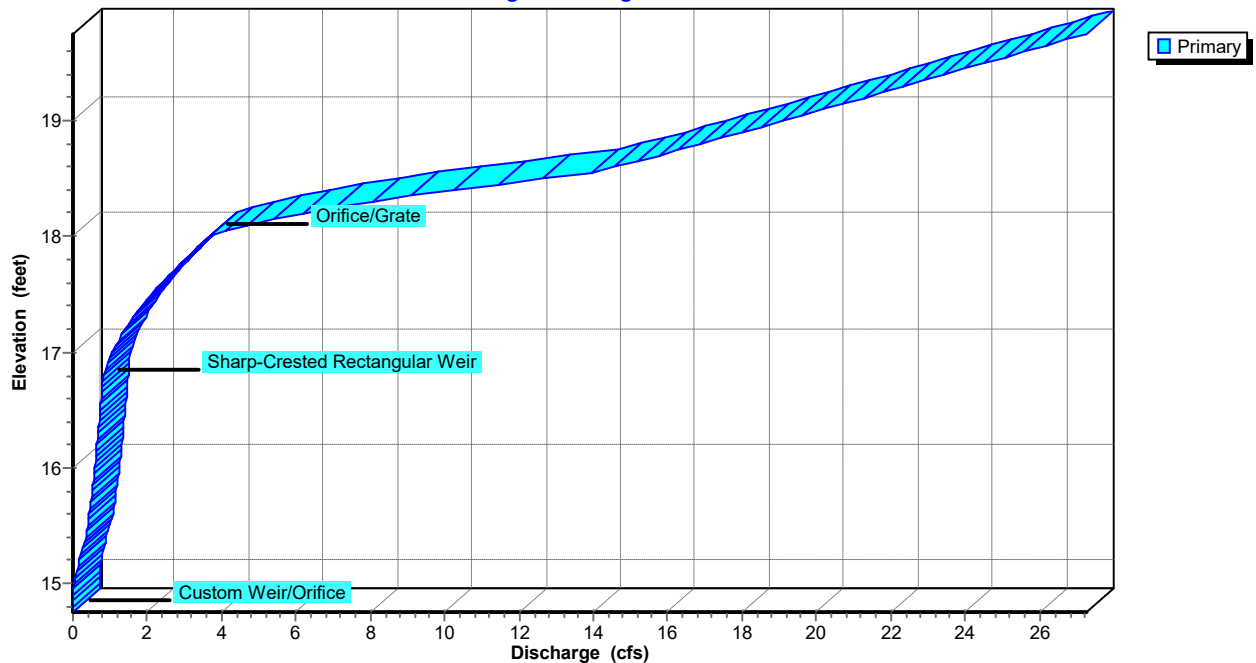
Pond 2P: Pond - The Paddock

Hydrograph

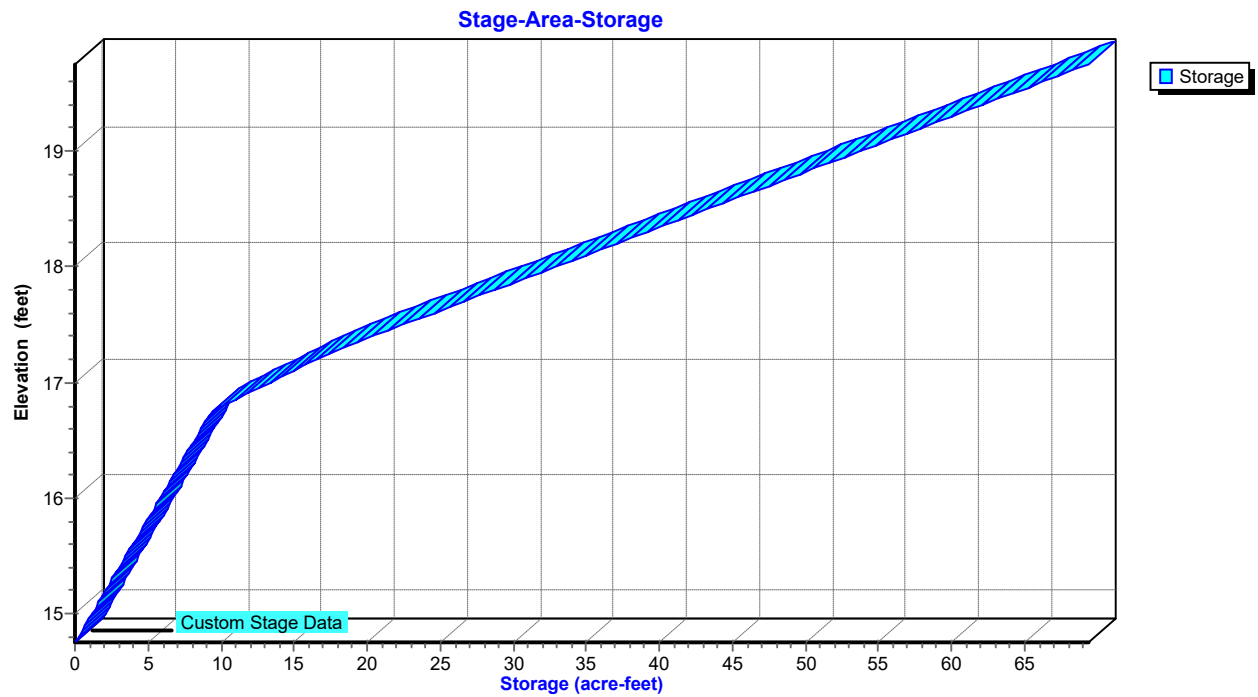


Pond 2P: Pond - The Paddock

Stage-Discharge



Pond 2P: Pond - The Paddock



Stage-Discharge for Pond 2P: Pond - The Paddock

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
14.75	0.00	17.60	2.39
14.80	0.00	17.65	2.53
14.85	0.00	17.70	2.68
14.90	0.01	17.75	2.84
14.95	0.02	17.80	3.00
15.00	0.04	17.85	3.16
15.05	0.06	17.90	3.33
15.10	0.09	17.95	3.50
15.15	0.13	18.00	3.68
15.20	0.18	18.05	4.09
15.25	0.23	18.10	4.67
15.30	0.27	18.15	5.39
15.35	0.31	18.20	6.20
15.40	0.34	18.25	7.10
15.45	0.37	18.30	8.08
15.50	0.39	18.35	9.13
15.55	0.42	18.40	10.25
15.60	0.44	18.45	11.43
15.65	0.46	18.50	12.67
15.70	0.48	18.55	13.96
15.75	0.50	18.60	14.59
15.80	0.52	18.65	15.17
15.85	0.54	18.70	15.75
15.90	0.55	18.75	16.31
15.95	0.57	18.80	16.88
16.00	0.59	18.85	17.43
16.05	0.60	18.90	17.99
16.10	0.62	18.95	18.54
16.15	0.63	19.00	19.09
16.20	0.65	19.05	19.63
16.25	0.66	19.10	20.18
16.30	0.68	19.15	20.72
16.35	0.69	19.20	21.26
16.40	0.70	19.25	21.81
16.45	0.72	19.30	22.35
16.50	0.73	19.35	22.89
16.55	0.74	19.40	23.43
16.60	0.76	19.45	23.98
16.65	0.77	19.50	24.52
16.70	0.78	19.55	25.07
16.75	0.79	19.60	25.62
16.80	0.82	19.65	26.17
16.85	0.87	19.70	26.72
16.90	0.92	19.75	27.27
16.95	0.99		
17.00	1.06		
17.05	1.14		
17.10	1.22		
17.15	1.32		
17.20	1.41		
17.25	1.52		
17.30	1.63		
17.35	1.74		
17.40	1.86		
17.45	1.98		
17.50	2.11		
17.55	2.25		

Stage-Area-Storage for Pond 2P: Pond - The Paddock

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
14.75	0.000	17.60	24.587
14.80	0.234	17.65	25.628
14.85	0.468	17.70	26.669
14.90	0.702	17.75	27.710
14.95	0.936	17.80	28.752
15.00	1.170	17.85	29.794
15.05	1.404	17.90	30.836
15.10	1.638	17.95	31.878
15.15	1.872	18.00	32.920
15.20	2.106	18.05	33.962
15.25	2.340	18.10	35.004
15.30	2.573	18.15	36.046
15.35	2.806	18.20	37.088
15.40	3.039	18.25	38.130
15.45	3.272	18.30	39.172
15.50	3.505	18.35	40.214
15.55	3.738	18.40	41.256
15.60	3.971	18.45	42.298
15.65	4.204	18.50	43.340
15.70	4.437	18.55	44.382
15.75	4.670	18.60	45.424
15.80	4.904	18.65	46.466
15.85	5.138	18.70	47.508
15.90	5.372	18.75	48.550
15.95	5.606	18.80	49.591
16.00	5.840	18.85	50.632
16.05	6.074	18.90	51.673
16.10	6.308	18.95	52.714
16.15	6.542	19.00	53.755
16.20	6.776	19.05	54.796
16.25	7.010	19.10	55.837
16.30	7.244	19.15	56.878
16.35	7.478	19.20	57.919
16.40	7.712	19.25	58.960
16.45	7.946	19.30	60.002
16.50	8.180	19.35	61.044
16.55	8.414	19.40	62.086
16.60	8.648	19.45	63.128
16.65	8.882	19.50	64.170
16.70	9.116	19.55	65.212
16.75	9.350	19.60	66.254
16.80	10.145	19.65	67.296
16.85	10.940	19.70	68.338
16.90	11.735	19.75	69.380
16.95	12.530		
17.00	13.325		
17.05	14.120		
17.10	14.915		
17.15	15.710		
17.20	16.505		
17.25	17.300		
17.30	18.341		
17.35	19.382		
17.40	20.423		
17.45	21.464		
17.50	22.505		
17.55	23.546		

Summary for Pond 2P: Pond - The Paddock

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 38.270 ac, 0.00% Impervious, Inflow Depth = 5.69" for 10YR-24HR event
 Inflow = 204.59 cfs @ 11.90 hrs, Volume= 18.148 af
 Outflow = 1.45 cfs @ 24.15 hrs, Volume= 6.127 af, Atten= 99%, Lag= 735.2 min
 Primary = 1.45 cfs @ 24.15 hrs, Volume= 6.127 af

Routing by Stor-Ind method, Time Span= 1.00-74.00 hrs, dt= 0.05 hrs
 Peak Elev= 17.22' @ 24.15 hrs Storage= 16.806 af

Plug-Flow detention time= 1,829.4 min calculated for 6.127 af (34% of inflow)
 Center-of-Mass det. time= 1,676.5 min (2,457.1 - 780.6)

Volume	Invert	Avail.Storage	Storage Description
#1	14.75'	69.380 af	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (acre-feet)
14.75	0.000
15.25	2.340
15.75	4.670
16.25	7.010
16.75	9.350
17.25	17.300
17.75	27.710
18.25	38.130
18.75	48.550
19.25	58.960
19.75	69.380

Device	Routing	Invert	Outlet Devices
#1	Primary	14.75'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 0.00 0.50
#2	Primary	16.75'	0.5' long Sharp-Crested Rectangular Weir 0 End Contraction(s) 1.0' Crest Height
#3	Primary	18.00'	18.0" x 18.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate (56% open area) Limited to weir flow at low heads

Primary OutFlow Max=1.45 cfs @ 24.15 hrs HW=17.22' (Free Discharge)

1=Custom Weir/Orifice (Orifice Controls 0.90 cfs @ 7.18 fps)
 2=Sharp-Crested Rectangular Weir (Weir Controls 0.56 cfs @ 2.37 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Pond 2P: Pond - The Paddock

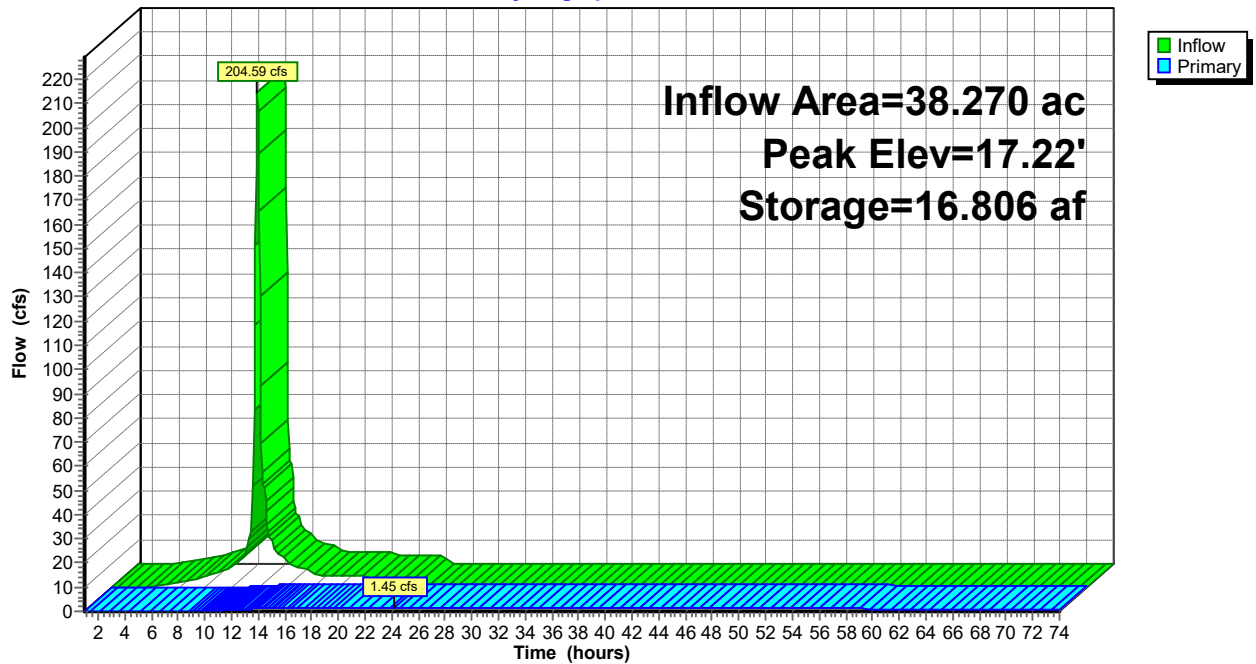
Orifice/Grate

Sharp-Crested Rectangular Weir

Custom Weir/Orifice

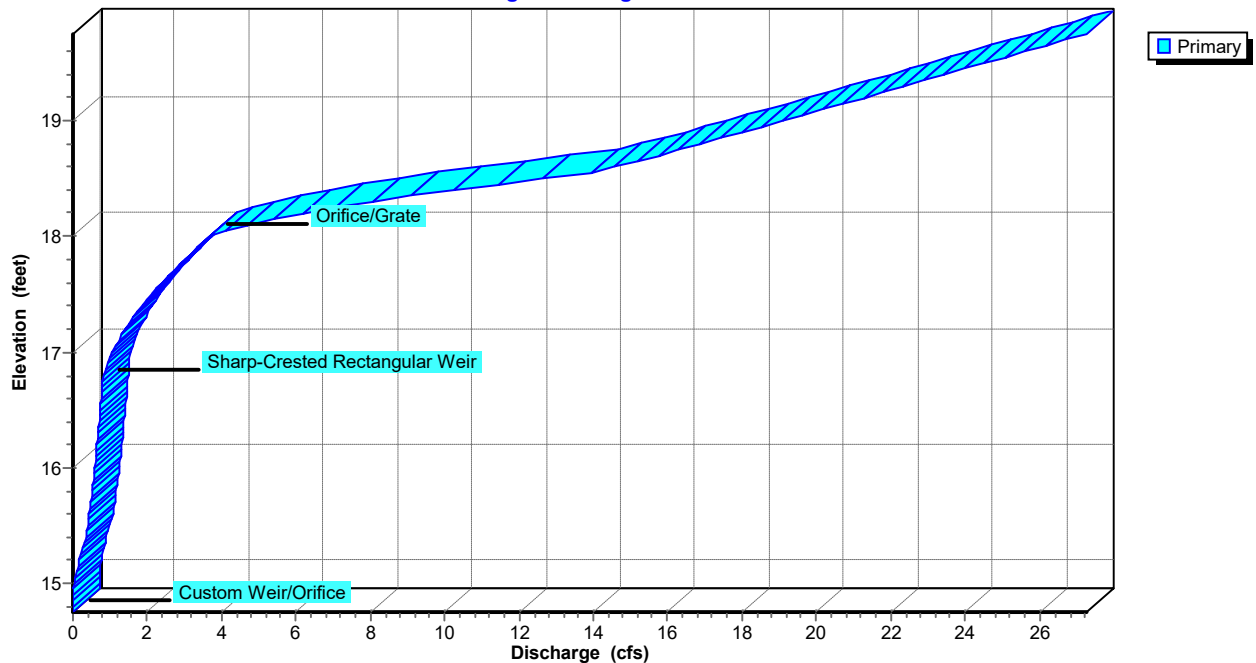
Pond 2P: Pond - The Paddock

Hydrograph

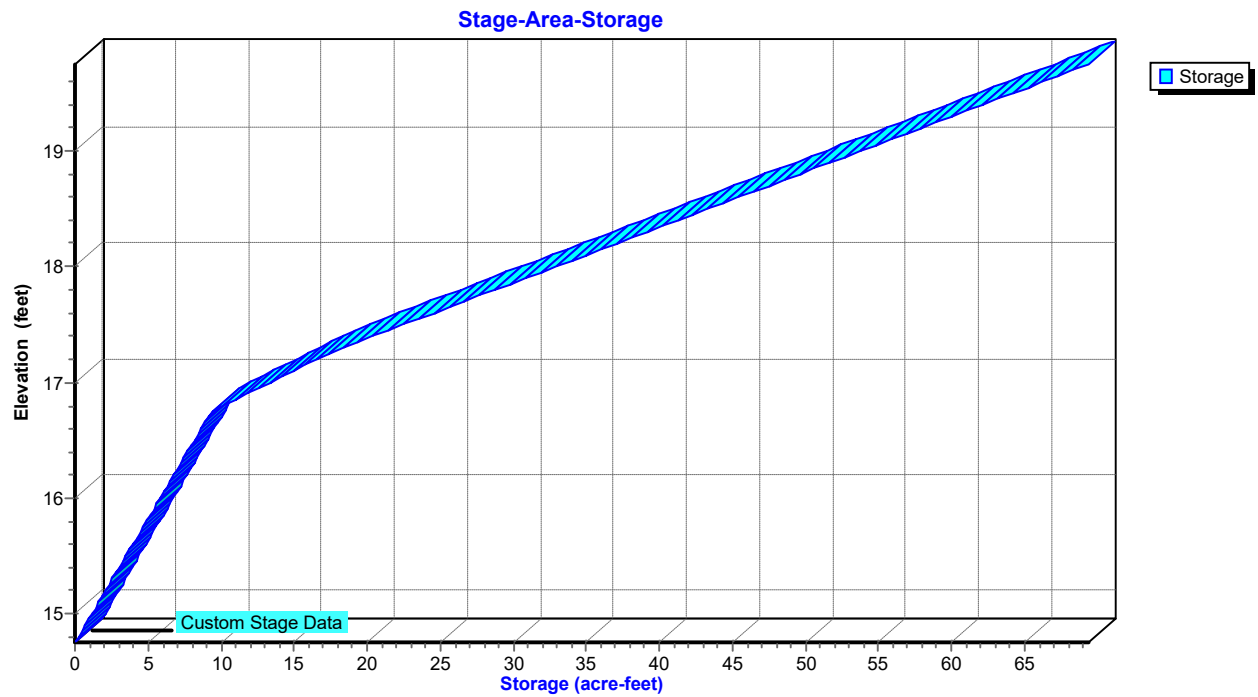


Pond 2P: Pond - The Paddock

Stage-Discharge



Pond 2P: Pond - The Paddock



Stage-Discharge for Pond 2P: Pond - The Paddock

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
14.75	0.00	17.60	2.39
14.80	0.00	17.65	2.53
14.85	0.00	17.70	2.68
14.90	0.01	17.75	2.84
14.95	0.02	17.80	3.00
15.00	0.04	17.85	3.16
15.05	0.06	17.90	3.33
15.10	0.09	17.95	3.50
15.15	0.13	18.00	3.68
15.20	0.18	18.05	4.09
15.25	0.23	18.10	4.67
15.30	0.27	18.15	5.39
15.35	0.31	18.20	6.20
15.40	0.34	18.25	7.10
15.45	0.37	18.30	8.08
15.50	0.39	18.35	9.13
15.55	0.42	18.40	10.25
15.60	0.44	18.45	11.43
15.65	0.46	18.50	12.67
15.70	0.48	18.55	13.96
15.75	0.50	18.60	14.59
15.80	0.52	18.65	15.17
15.85	0.54	18.70	15.75
15.90	0.55	18.75	16.31
15.95	0.57	18.80	16.88
16.00	0.59	18.85	17.43
16.05	0.60	18.90	17.99
16.10	0.62	18.95	18.54
16.15	0.63	19.00	19.09
16.20	0.65	19.05	19.63
16.25	0.66	19.10	20.18
16.30	0.68	19.15	20.72
16.35	0.69	19.20	21.26
16.40	0.70	19.25	21.81
16.45	0.72	19.30	22.35
16.50	0.73	19.35	22.89
16.55	0.74	19.40	23.43
16.60	0.76	19.45	23.98
16.65	0.77	19.50	24.52
16.70	0.78	19.55	25.07
16.75	0.79	19.60	25.62
16.80	0.82	19.65	26.17
16.85	0.87	19.70	26.72
16.90	0.92	19.75	27.27
16.95	0.99		
17.00	1.06		
17.05	1.14		
17.10	1.22		
17.15	1.32		
17.20	1.41		
17.25	1.52		
17.30	1.63		
17.35	1.74		
17.40	1.86		
17.45	1.98		
17.50	2.11		
17.55	2.25		

Stage-Area-Storage for Pond 2P: Pond - The Paddock

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
14.75	0.000	17.60	24.587
14.80	0.234	17.65	25.628
14.85	0.468	17.70	26.669
14.90	0.702	17.75	27.710
14.95	0.936	17.80	28.752
15.00	1.170	17.85	29.794
15.05	1.404	17.90	30.836
15.10	1.638	17.95	31.878
15.15	1.872	18.00	32.920
15.20	2.106	18.05	33.962
15.25	2.340	18.10	35.004
15.30	2.573	18.15	36.046
15.35	2.806	18.20	37.088
15.40	3.039	18.25	38.130
15.45	3.272	18.30	39.172
15.50	3.505	18.35	40.214
15.55	3.738	18.40	41.256
15.60	3.971	18.45	42.298
15.65	4.204	18.50	43.340
15.70	4.437	18.55	44.382
15.75	4.670	18.60	45.424
15.80	4.904	18.65	46.466
15.85	5.138	18.70	47.508
15.90	5.372	18.75	48.550
15.95	5.606	18.80	49.591
16.00	5.840	18.85	50.632
16.05	6.074	18.90	51.673
16.10	6.308	18.95	52.714
16.15	6.542	19.00	53.755
16.20	6.776	19.05	54.796
16.25	7.010	19.10	55.837
16.30	7.244	19.15	56.878
16.35	7.478	19.20	57.919
16.40	7.712	19.25	58.960
16.45	7.946	19.30	60.002
16.50	8.180	19.35	61.044
16.55	8.414	19.40	62.086
16.60	8.648	19.45	63.128
16.65	8.882	19.50	64.170
16.70	9.116	19.55	65.212
16.75	9.350	19.60	66.254
16.80	10.145	19.65	67.296
16.85	10.940	19.70	68.338
16.90	11.735	19.75	69.380
16.95	12.530		
17.00	13.325		
17.05	14.120		
17.10	14.915		
17.15	15.710		
17.20	16.505		
17.25	17.300		
17.30	18.341		
17.35	19.382		
17.40	20.423		
17.45	21.464		
17.50	22.505		
17.55	23.546		

Summary for Pond 2P: Pond - The Paddock

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 38.270 ac, 0.00% Impervious, Inflow Depth = 7.55" for 10YR-72HR event
 Inflow = 201.16 cfs @ 59.89 hrs, Volume= 24.081 af
 Outflow = 1.96 cfs @ 72.13 hrs, Volume= 3.072 af, Atten= 99%, Lag= 734.0 min
 Primary = 1.96 cfs @ 72.13 hrs, Volume= 3.072 af

Routing by Stor-Ind method, Time Span= 1.00-74.00 hrs, dt= 0.05 hrs
 Peak Elev= 17.44' @ 72.13 hrs Storage= 21.303 af

Plug-Flow detention time= 1,919.2 min calculated for 3.070 af (13% of inflow)
 Center-of-Mass det. time= 362.1 min (3,696.5 - 3,334.5)

Volume	Invert	Avail.Storage	Storage Description
#1	14.75'	69.380 af	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (acre-feet)
14.75	0.000
15.25	2.340
15.75	4.670
16.25	7.010
16.75	9.350
17.25	17.300
17.75	27.710
18.25	38.130
18.75	48.550
19.25	58.960
19.75	69.380

Device	Routing	Invert	Outlet Devices
#1	Primary	14.75'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 0.00 0.50
#2	Primary	16.75'	0.5' long Sharp-Crested Rectangular Weir 0 End Contraction(s) 1.0' Crest Height
#3	Primary	18.00'	18.0" x 18.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate (56% open area) Limited to weir flow at low heads

Primary OutFlow Max=1.96 cfs @ 72.13 hrs HW=17.44' (Free Discharge)

1=Custom Weir/Orifice (Orifice Controls 0.94 cfs @ 7.54 fps)
 2=Sharp-Crested Rectangular Weir (Weir Controls 1.02 cfs @ 2.95 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Pond 2P: Pond - The Paddock

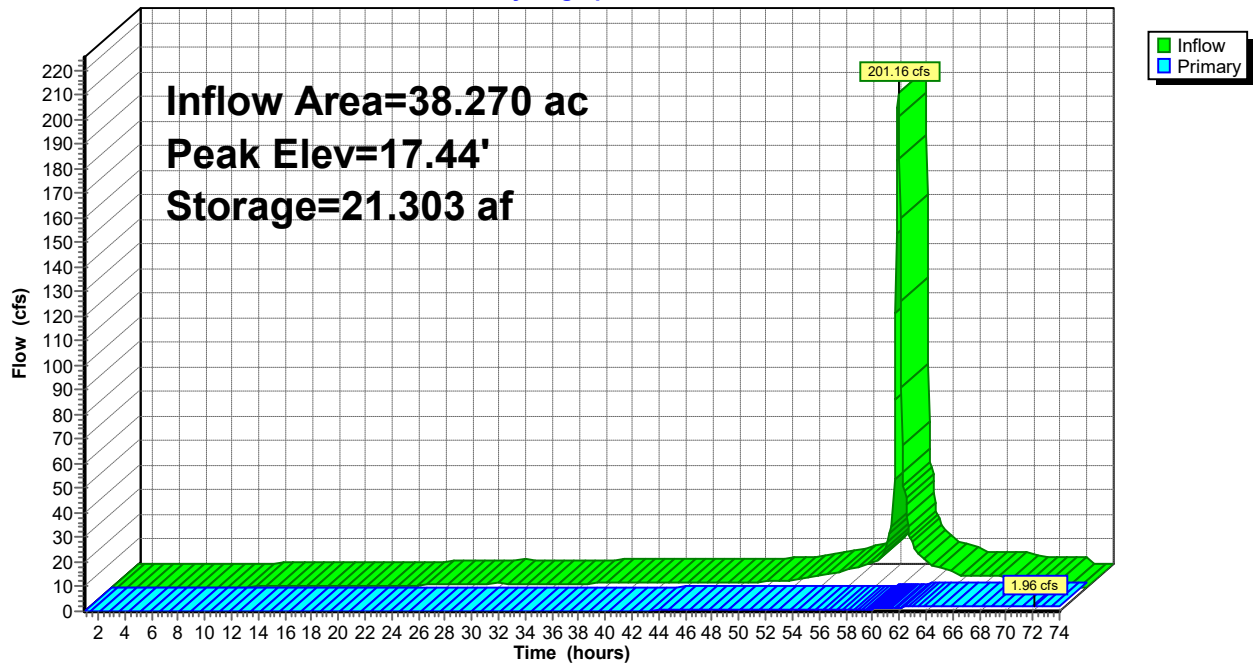
Orifice/Grate

Sharp-Crested Rectangular Weir

Custom Weir/Orifice

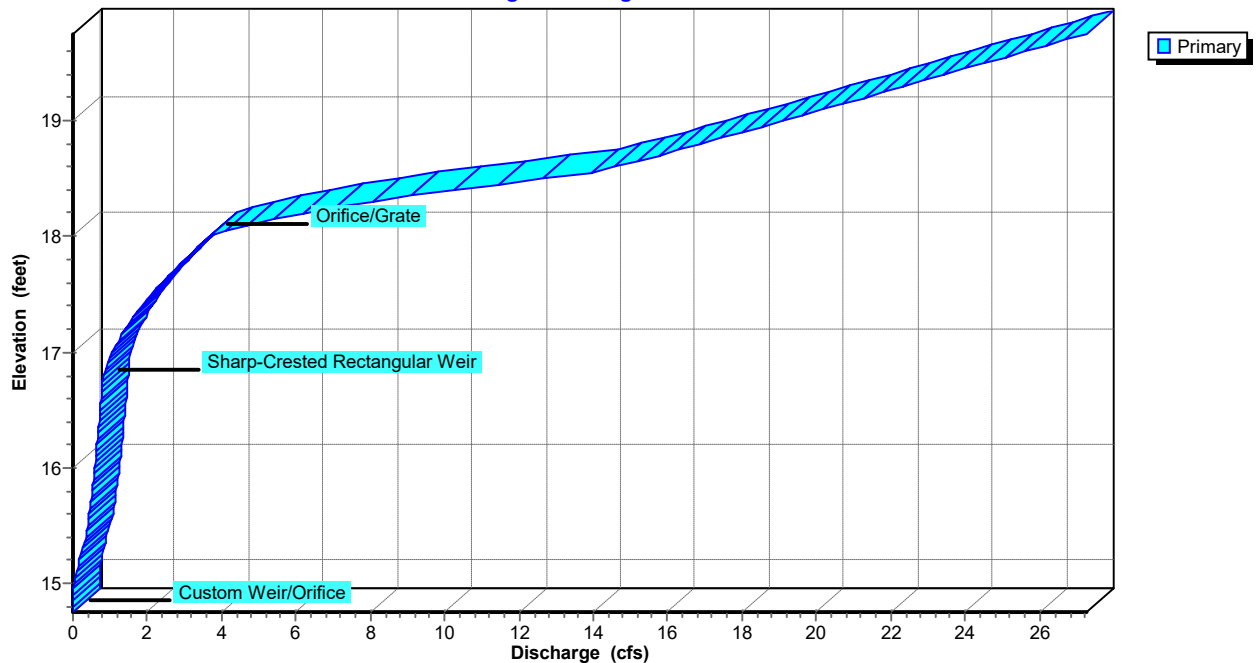
Pond 2P: Pond - The Paddock

Hydrograph

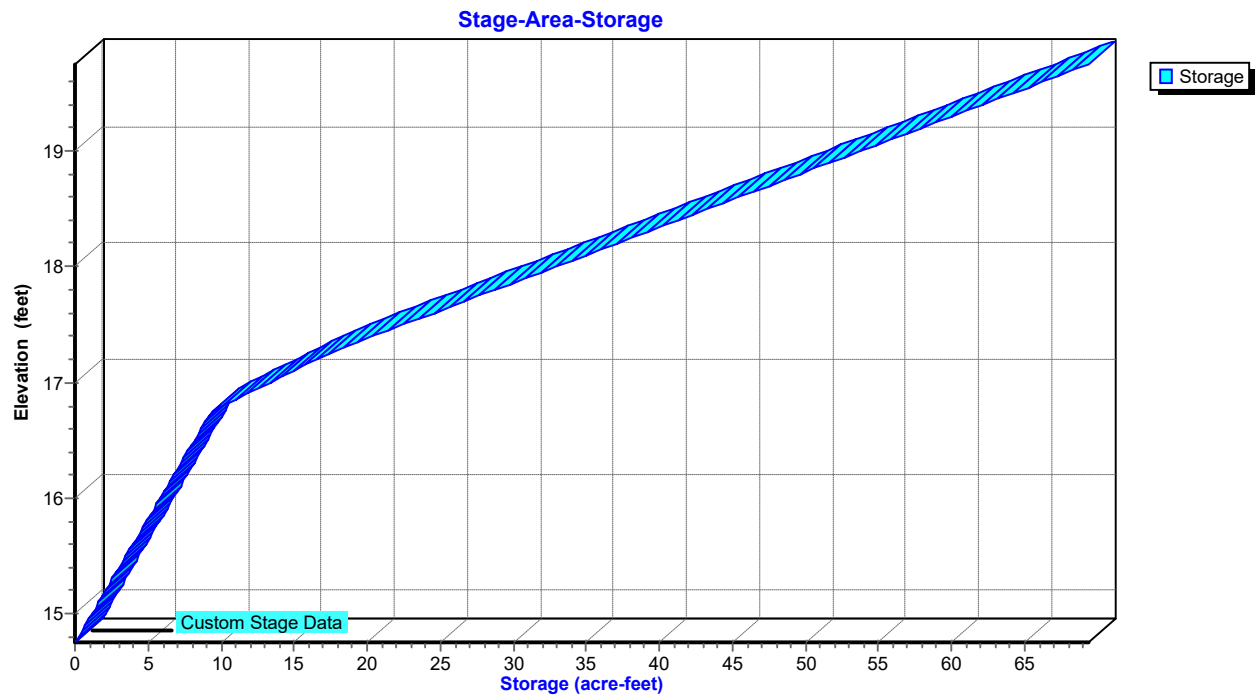


Pond 2P: Pond - The Paddock

Stage-Discharge



Pond 2P: Pond - The Paddock



Stage-Discharge for Pond 2P: Pond - The Paddock

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
14.75	0.00	17.60	2.39
14.80	0.00	17.65	2.53
14.85	0.00	17.70	2.68
14.90	0.01	17.75	2.84
14.95	0.02	17.80	3.00
15.00	0.04	17.85	3.16
15.05	0.06	17.90	3.33
15.10	0.09	17.95	3.50
15.15	0.13	18.00	3.68
15.20	0.18	18.05	4.09
15.25	0.23	18.10	4.67
15.30	0.27	18.15	5.39
15.35	0.31	18.20	6.20
15.40	0.34	18.25	7.10
15.45	0.37	18.30	8.08
15.50	0.39	18.35	9.13
15.55	0.42	18.40	10.25
15.60	0.44	18.45	11.43
15.65	0.46	18.50	12.67
15.70	0.48	18.55	13.96
15.75	0.50	18.60	14.59
15.80	0.52	18.65	15.17
15.85	0.54	18.70	15.75
15.90	0.55	18.75	16.31
15.95	0.57	18.80	16.88
16.00	0.59	18.85	17.43
16.05	0.60	18.90	17.99
16.10	0.62	18.95	18.54
16.15	0.63	19.00	19.09
16.20	0.65	19.05	19.63
16.25	0.66	19.10	20.18
16.30	0.68	19.15	20.72
16.35	0.69	19.20	21.26
16.40	0.70	19.25	21.81
16.45	0.72	19.30	22.35
16.50	0.73	19.35	22.89
16.55	0.74	19.40	23.43
16.60	0.76	19.45	23.98
16.65	0.77	19.50	24.52
16.70	0.78	19.55	25.07
16.75	0.79	19.60	25.62
16.80	0.82	19.65	26.17
16.85	0.87	19.70	26.72
16.90	0.92	19.75	27.27
16.95	0.99		
17.00	1.06		
17.05	1.14		
17.10	1.22		
17.15	1.32		
17.20	1.41		
17.25	1.52		
17.30	1.63		
17.35	1.74		
17.40	1.86		
17.45	1.98		
17.50	2.11		
17.55	2.25		

Stage-Area-Storage for Pond 2P: Pond - The Paddock

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
14.75	0.000	17.60	24.587
14.80	0.234	17.65	25.628
14.85	0.468	17.70	26.669
14.90	0.702	17.75	27.710
14.95	0.936	17.80	28.752
15.00	1.170	17.85	29.794
15.05	1.404	17.90	30.836
15.10	1.638	17.95	31.878
15.15	1.872	18.00	32.920
15.20	2.106	18.05	33.962
15.25	2.340	18.10	35.004
15.30	2.573	18.15	36.046
15.35	2.806	18.20	37.088
15.40	3.039	18.25	38.130
15.45	3.272	18.30	39.172
15.50	3.505	18.35	40.214
15.55	3.738	18.40	41.256
15.60	3.971	18.45	42.298
15.65	4.204	18.50	43.340
15.70	4.437	18.55	44.382
15.75	4.670	18.60	45.424
15.80	4.904	18.65	46.466
15.85	5.138	18.70	47.508
15.90	5.372	18.75	48.550
15.95	5.606	18.80	49.591
16.00	5.840	18.85	50.632
16.05	6.074	18.90	51.673
16.10	6.308	18.95	52.714
16.15	6.542	19.00	53.755
16.20	6.776	19.05	54.796
16.25	7.010	19.10	55.837
16.30	7.244	19.15	56.878
16.35	7.478	19.20	57.919
16.40	7.712	19.25	58.960
16.45	7.946	19.30	60.002
16.50	8.180	19.35	61.044
16.55	8.414	19.40	62.086
16.60	8.648	19.45	63.128
16.65	8.882	19.50	64.170
16.70	9.116	19.55	65.212
16.75	9.350	19.60	66.254
16.80	10.145	19.65	67.296
16.85	10.940	19.70	68.338
16.90	11.735	19.75	69.380
16.95	12.530		
17.00	13.325		
17.05	14.120		
17.10	14.915		
17.15	15.710		
17.20	16.505		
17.25	17.300		
17.30	18.341		
17.35	19.382		
17.40	20.423		
17.45	21.464		
17.50	22.505		
17.55	23.546		

Summary for Pond 2P: Pond - The Paddock

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 38.270 ac, 0.00% Impervious, Inflow Depth = 9.03" for 25YR-72HR event
 Inflow = 237.05 cfs @ 59.89 hrs, Volume= 28.792 af
 Outflow = 2.48 cfs @ 72.12 hrs, Volume= 3.890 af, Atten= 99%, Lag= 733.5 min
 Primary = 2.48 cfs @ 72.12 hrs, Volume= 3.890 af

Routing by Stor-Ind method, Time Span= 1.00-74.00 hrs, dt= 0.05 hrs
 Peak Elev= 17.63' @ 72.12 hrs Storage= 25.273 af

Plug-Flow detention time= 1,939.3 min calculated for 3.890 af (14% of inflow)
 Center-of-Mass det. time= 362.2 min (3,672.9 - 3,310.7)

Volume	Invert	Avail.Storage	Storage Description
#1	14.75'	69.380 af	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (acre-feet)
14.75	0.000
15.25	2.340
15.75	4.670
16.25	7.010
16.75	9.350
17.25	17.300
17.75	27.710
18.25	38.130
18.75	48.550
19.25	58.960
19.75	69.380

Device	Routing	Invert	Outlet Devices
#1	Primary	14.75'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 0.00 0.50
#2	Primary	16.75'	0.5' long Sharp-Crested Rectangular Weir 0 End Contraction(s) 1.0' Crest Height
#3	Primary	18.00'	18.0" x 18.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate (56% open area) Limited to weir flow at low heads

Primary OutFlow Max=2.48 cfs @ 72.12 hrs HW=17.63' (Free Discharge)

1=Custom Weir/Orifice (Orifice Controls 0.98 cfs @ 7.84 fps)
 2=Sharp-Crested Rectangular Weir (Weir Controls 1.50 cfs @ 3.40 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Pond 2P: Pond - The Paddock

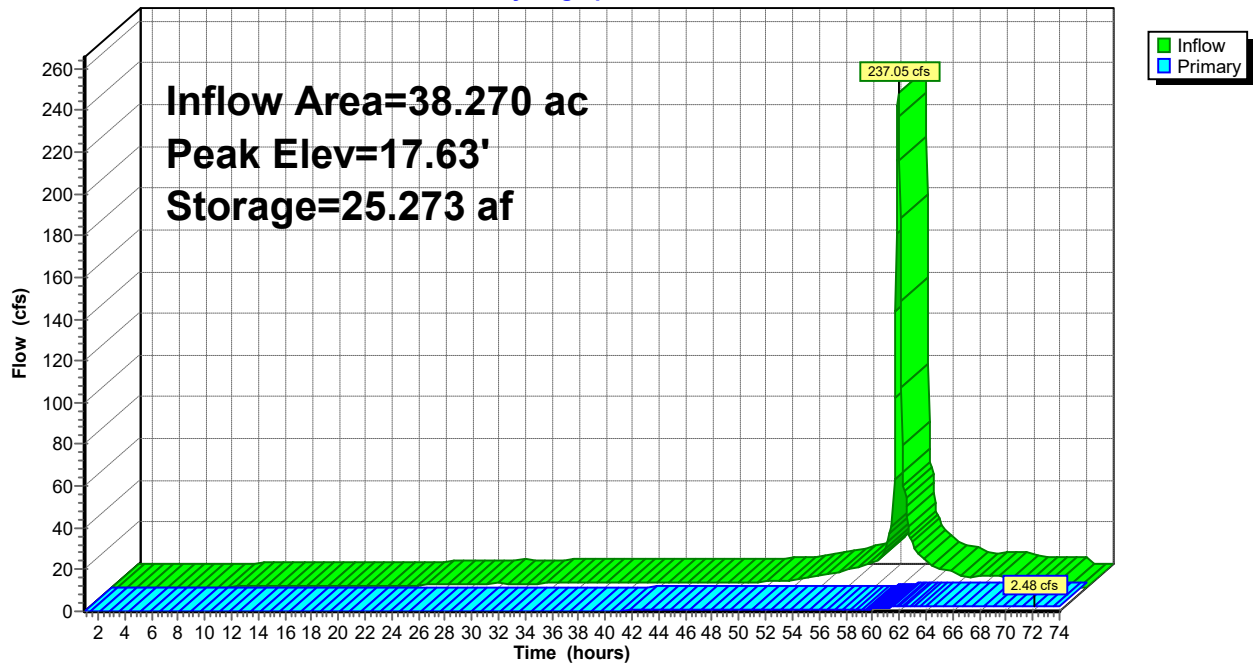
Orifice/Grate

Sharp-Crested Rectangular Weir

Custom Weir/Orifice

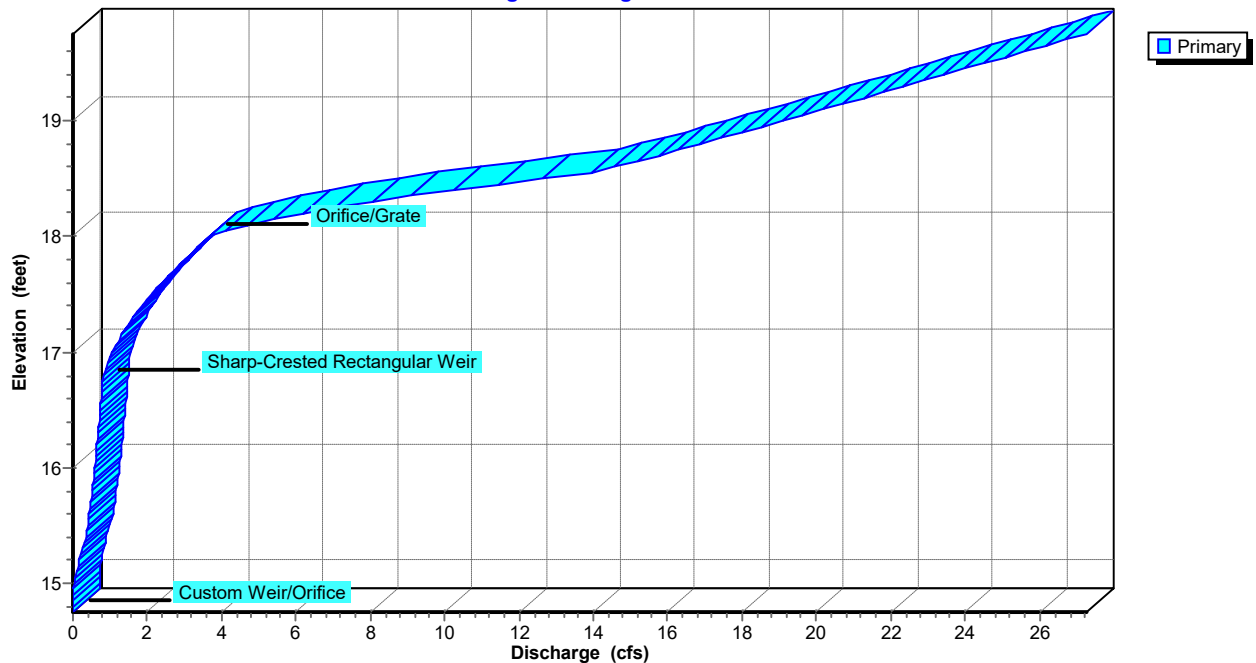
Pond 2P: Pond - The Paddock

Hydrograph

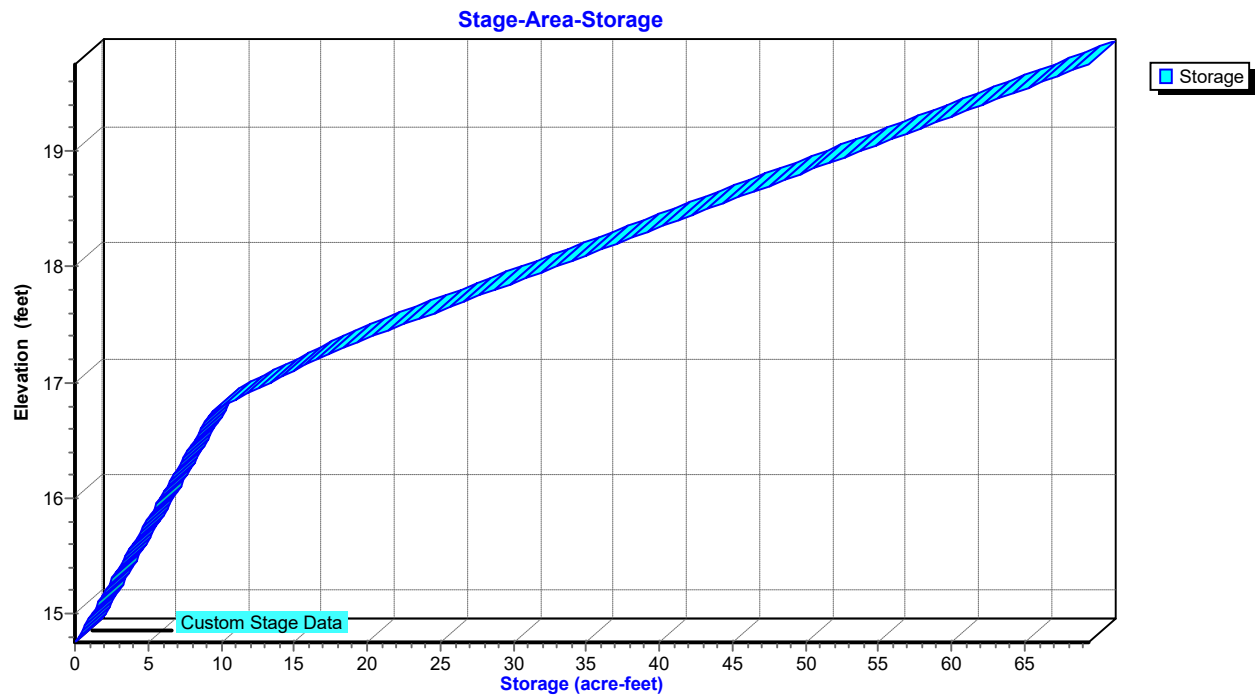


Pond 2P: Pond - The Paddock

Stage-Discharge



Pond 2P: Pond - The Paddock



Stage-Discharge for Pond 2P: Pond - The Paddock

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
14.75	0.00	17.60	2.39
14.80	0.00	17.65	2.53
14.85	0.00	17.70	2.68
14.90	0.01	17.75	2.84
14.95	0.02	17.80	3.00
15.00	0.04	17.85	3.16
15.05	0.06	17.90	3.33
15.10	0.09	17.95	3.50
15.15	0.13	18.00	3.68
15.20	0.18	18.05	4.09
15.25	0.23	18.10	4.67
15.30	0.27	18.15	5.39
15.35	0.31	18.20	6.20
15.40	0.34	18.25	7.10
15.45	0.37	18.30	8.08
15.50	0.39	18.35	9.13
15.55	0.42	18.40	10.25
15.60	0.44	18.45	11.43
15.65	0.46	18.50	12.67
15.70	0.48	18.55	13.96
15.75	0.50	18.60	14.59
15.80	0.52	18.65	15.17
15.85	0.54	18.70	15.75
15.90	0.55	18.75	16.31
15.95	0.57	18.80	16.88
16.00	0.59	18.85	17.43
16.05	0.60	18.90	17.99
16.10	0.62	18.95	18.54
16.15	0.63	19.00	19.09
16.20	0.65	19.05	19.63
16.25	0.66	19.10	20.18
16.30	0.68	19.15	20.72
16.35	0.69	19.20	21.26
16.40	0.70	19.25	21.81
16.45	0.72	19.30	22.35
16.50	0.73	19.35	22.89
16.55	0.74	19.40	23.43
16.60	0.76	19.45	23.98
16.65	0.77	19.50	24.52
16.70	0.78	19.55	25.07
16.75	0.79	19.60	25.62
16.80	0.82	19.65	26.17
16.85	0.87	19.70	26.72
16.90	0.92	19.75	27.27
16.95	0.99		
17.00	1.06		
17.05	1.14		
17.10	1.22		
17.15	1.32		
17.20	1.41		
17.25	1.52		
17.30	1.63		
17.35	1.74		
17.40	1.86		
17.45	1.98		
17.50	2.11		
17.55	2.25		

Stage-Area-Storage for Pond 2P: Pond - The Paddock

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
14.75	0.000	17.60	24.587
14.80	0.234	17.65	25.628
14.85	0.468	17.70	26.669
14.90	0.702	17.75	27.710
14.95	0.936	17.80	28.752
15.00	1.170	17.85	29.794
15.05	1.404	17.90	30.836
15.10	1.638	17.95	31.878
15.15	1.872	18.00	32.920
15.20	2.106	18.05	33.962
15.25	2.340	18.10	35.004
15.30	2.573	18.15	36.046
15.35	2.806	18.20	37.088
15.40	3.039	18.25	38.130
15.45	3.272	18.30	39.172
15.50	3.505	18.35	40.214
15.55	3.738	18.40	41.256
15.60	3.971	18.45	42.298
15.65	4.204	18.50	43.340
15.70	4.437	18.55	44.382
15.75	4.670	18.60	45.424
15.80	4.904	18.65	46.466
15.85	5.138	18.70	47.508
15.90	5.372	18.75	48.550
15.95	5.606	18.80	49.591
16.00	5.840	18.85	50.632
16.05	6.074	18.90	51.673
16.10	6.308	18.95	52.714
16.15	6.542	19.00	53.755
16.20	6.776	19.05	54.796
16.25	7.010	19.10	55.837
16.30	7.244	19.15	56.878
16.35	7.478	19.20	57.919
16.40	7.712	19.25	58.960
16.45	7.946	19.30	60.002
16.50	8.180	19.35	61.044
16.55	8.414	19.40	62.086
16.60	8.648	19.45	63.128
16.65	8.882	19.50	64.170
16.70	9.116	19.55	65.212
16.75	9.350	19.60	66.254
16.80	10.145	19.65	67.296
16.85	10.940	19.70	68.338
16.90	11.735	19.75	69.380
16.95	12.530		
17.00	13.325		
17.05	14.120		
17.10	14.915		
17.15	15.710		
17.20	16.505		
17.25	17.300		
17.30	18.341		
17.35	19.382		
17.40	20.423		
17.45	21.464		
17.50	22.505		
17.55	23.546		

Summary for Pond 2P: Pond - The Paddock

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 38.270 ac, 0.00% Impervious, Inflow Depth = 11.50" for 100YR-72HR event
 Inflow = 296.54 cfs @ 59.89 hrs, Volume= 36.679 af
 Outflow = 3.49 cfs @ 72.10 hrs, Volume= 5.402 af, Atten= 99%, Lag= 732.4 min
 Primary = 3.49 cfs @ 72.10 hrs, Volume= 5.402 af

Routing by Stor-Ind method, Time Span= 1.00-74.00 hrs, dt= 0.05 hrs
 Peak Elev= 17.95' @ 72.10 hrs Storage= 31.800 af

Plug-Flow detention time= 1,969.4 min calculated for 5.399 af (15% of inflow)
 Center-of-Mass det. time= 381.2 min (3,660.9 - 3,279.7)

Volume	Invert	Avail.Storage	Storage Description
#1	14.75'	69.380 af	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (acre-feet)
14.75	0.000
15.25	2.340
15.75	4.670
16.25	7.010
16.75	9.350
17.25	17.300
17.75	27.710
18.25	38.130
18.75	48.550
19.25	58.960
19.75	69.380

Device	Routing	Invert	Outlet Devices
#1	Primary	14.75'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 0.00 0.50
#2	Primary	16.75'	0.5' long Sharp-Crested Rectangular Weir 0 End Contraction(s) 1.0' Crest Height
#3	Primary	18.00'	18.0" x 18.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate (56% open area) Limited to weir flow at low heads

Primary OutFlow Max=3.49 cfs @ 72.10 hrs HW=17.95' (Free Discharge)

1=Custom Weir/Orifice (Orifice Controls 1.04 cfs @ 8.31 fps)
 2=Sharp-Crested Rectangular Weir (Weir Controls 2.45 cfs @ 4.10 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Pond 2P: Pond - The Paddock

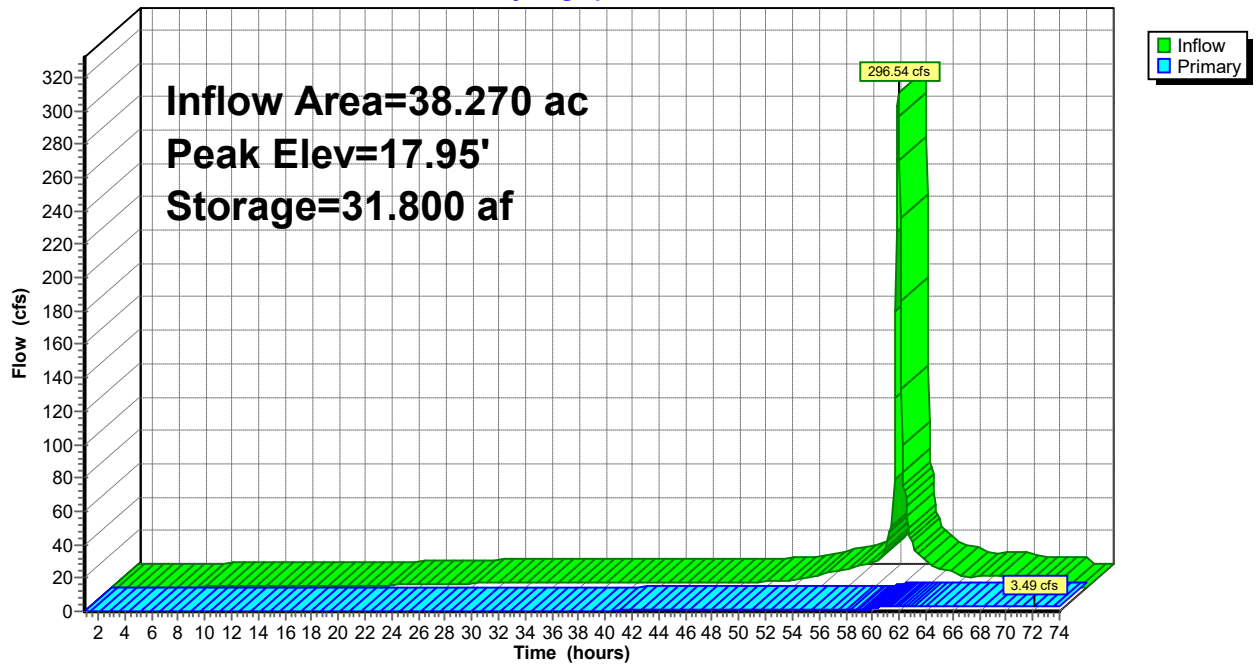
Orifice/Grate

Sharp-Crested Rectangular Weir

Custom Weir/Orifice

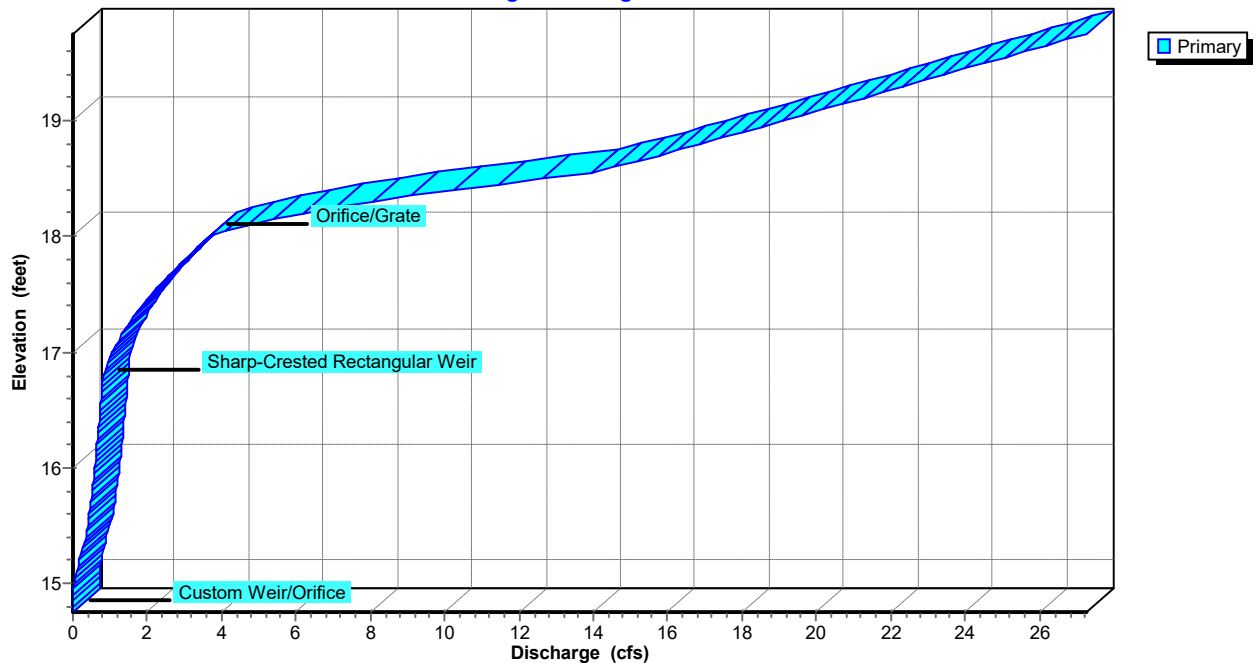
Pond 2P: Pond - The Paddock

Hydrograph

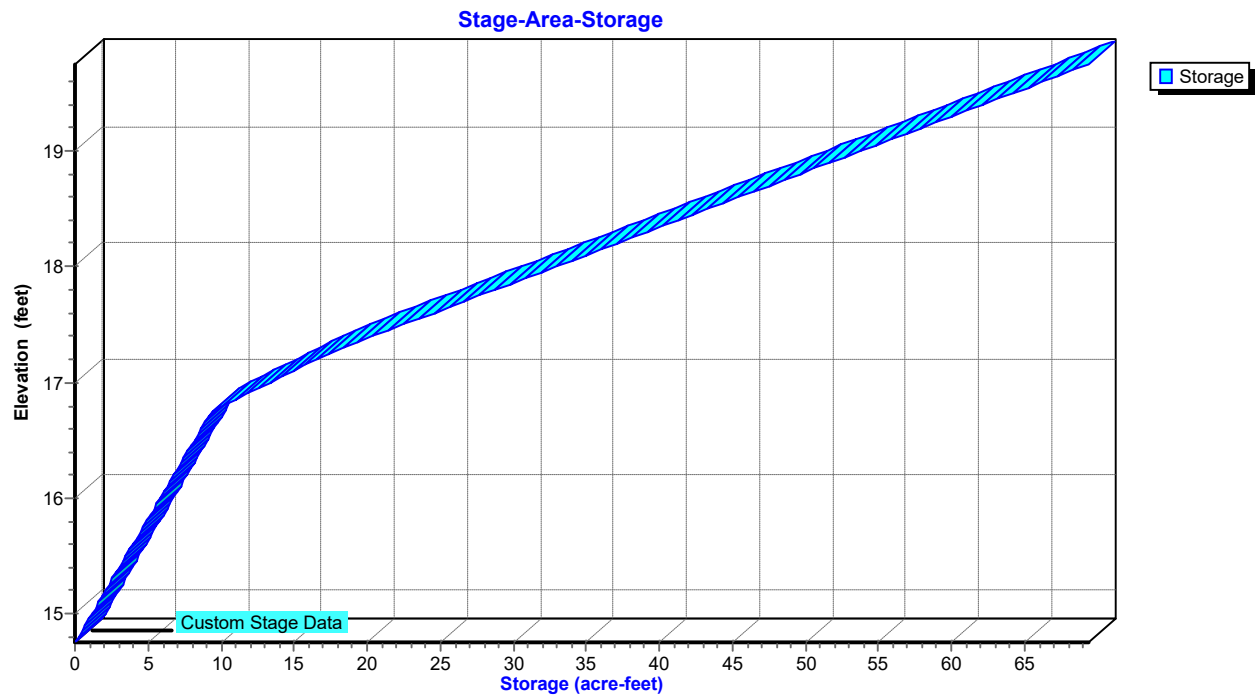


Pond 2P: Pond - The Paddock

Stage-Discharge



Pond 2P: Pond - The Paddock



Stage-Discharge for Pond 2P: Pond - The Paddock

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
14.75	0.00	17.60	2.39
14.80	0.00	17.65	2.53
14.85	0.00	17.70	2.68
14.90	0.01	17.75	2.84
14.95	0.02	17.80	3.00
15.00	0.04	17.85	3.16
15.05	0.06	17.90	3.33
15.10	0.09	17.95	3.50
15.15	0.13	18.00	3.68
15.20	0.18	18.05	4.09
15.25	0.23	18.10	4.67
15.30	0.27	18.15	5.39
15.35	0.31	18.20	6.20
15.40	0.34	18.25	7.10
15.45	0.37	18.30	8.08
15.50	0.39	18.35	9.13
15.55	0.42	18.40	10.25
15.60	0.44	18.45	11.43
15.65	0.46	18.50	12.67
15.70	0.48	18.55	13.96
15.75	0.50	18.60	14.59
15.80	0.52	18.65	15.17
15.85	0.54	18.70	15.75
15.90	0.55	18.75	16.31
15.95	0.57	18.80	16.88
16.00	0.59	18.85	17.43
16.05	0.60	18.90	17.99
16.10	0.62	18.95	18.54
16.15	0.63	19.00	19.09
16.20	0.65	19.05	19.63
16.25	0.66	19.10	20.18
16.30	0.68	19.15	20.72
16.35	0.69	19.20	21.26
16.40	0.70	19.25	21.81
16.45	0.72	19.30	22.35
16.50	0.73	19.35	22.89
16.55	0.74	19.40	23.43
16.60	0.76	19.45	23.98
16.65	0.77	19.50	24.52
16.70	0.78	19.55	25.07
16.75	0.79	19.60	25.62
16.80	0.82	19.65	26.17
16.85	0.87	19.70	26.72
16.90	0.92	19.75	27.27
16.95	0.99		
17.00	1.06		
17.05	1.14		
17.10	1.22		
17.15	1.32		
17.20	1.41		
17.25	1.52		
17.30	1.63		
17.35	1.74		
17.40	1.86		
17.45	1.98		
17.50	2.11		
17.55	2.25		

Stage-Area-Storage for Pond 2P: Pond - The Paddock

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
14.75	0.000	17.60	24.587
14.80	0.234	17.65	25.628
14.85	0.468	17.70	26.669
14.90	0.702	17.75	27.710
14.95	0.936	17.80	28.752
15.00	1.170	17.85	29.794
15.05	1.404	17.90	30.836
15.10	1.638	17.95	31.878
15.15	1.872	18.00	32.920
15.20	2.106	18.05	33.962
15.25	2.340	18.10	35.004
15.30	2.573	18.15	36.046
15.35	2.806	18.20	37.088
15.40	3.039	18.25	38.130
15.45	3.272	18.30	39.172
15.50	3.505	18.35	40.214
15.55	3.738	18.40	41.256
15.60	3.971	18.45	42.298
15.65	4.204	18.50	43.340
15.70	4.437	18.55	44.382
15.75	4.670	18.60	45.424
15.80	4.904	18.65	46.466
15.85	5.138	18.70	47.508
15.90	5.372	18.75	48.550
15.95	5.606	18.80	49.591
16.00	5.840	18.85	50.632
16.05	6.074	18.90	51.673
16.10	6.308	18.95	52.714
16.15	6.542	19.00	53.755
16.20	6.776	19.05	54.796
16.25	7.010	19.10	55.837
16.30	7.244	19.15	56.878
16.35	7.478	19.20	57.919
16.40	7.712	19.25	58.960
16.45	7.946	19.30	60.002
16.50	8.180	19.35	61.044
16.55	8.414	19.40	62.086
16.60	8.648	19.45	63.128
16.65	8.882	19.50	64.170
16.70	9.116	19.55	65.212
16.75	9.350	19.60	66.254
16.80	10.145	19.65	67.296
16.85	10.940	19.70	68.338
16.90	11.735	19.75	69.380
16.95	12.530		
17.00	13.325		
17.05	14.120		
17.10	14.915		
17.15	15.710		
17.20	16.505		
17.25	17.300		
17.30	18.341		
17.35	19.382		
17.40	20.423		
17.45	21.464		
17.50	22.505		
17.55	23.546		

The Paddock-10.28.24-Final

Prepared by Bove LLC

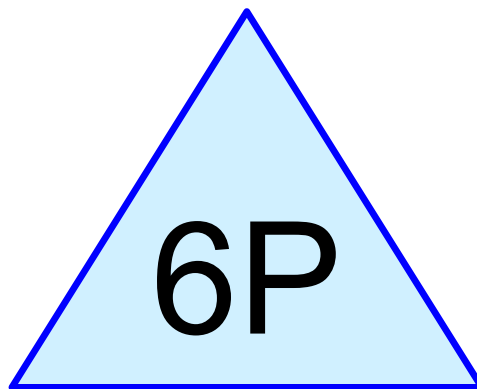
Printed 11/4/2024

HydroCAD® 10.20-5c s/n 13549 © 2023 HydroCAD Software Solutions LLC

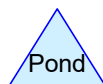
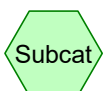
Page 1

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	100YR-72HR	SFWMD 72-hr		Default	72.00	1	13.00	2



100YR-72HR (Zero
Discharge)



Routing Diagram for The Paddock-10.28.24-Final
Prepared by Bove LLC, Printed 11/4/2024
HydroCAD® 10.20-5c s/n 13549 © 2023 HydroCAD Software Solutions LLC

The Paddock-10.28.24-Final

Prepared by Bove LLC

Printed 11/4/2024

HydroCAD® 10.20-5c s/n 13549 © 2023 HydroCAD Software Solutions LLC

Page 2

Rainfall Events Listing (selected events)

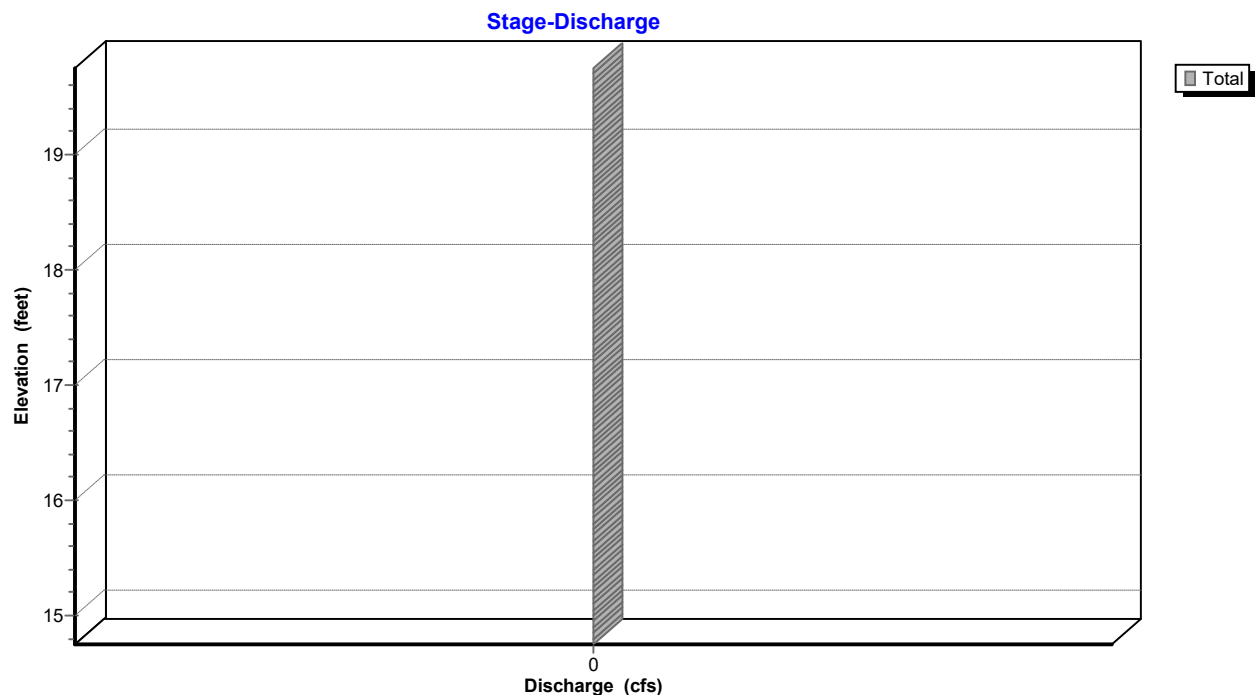
Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	100YR-72HR	SFWMD 72-hr		Default	72.00	1	13.00	2

Summary for Pond 6P: 100YR-72HR (Zero Discharge)

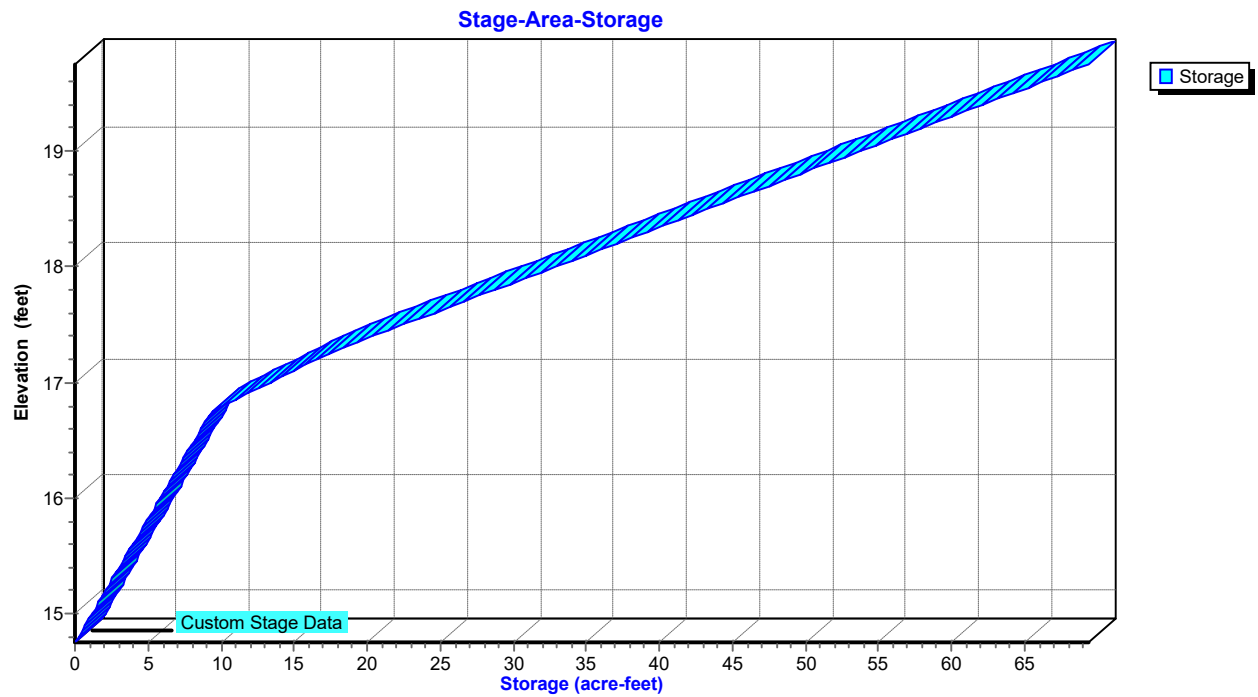
[43] Hint: Has no inflow (Outflow=Zero)

Volume	Invert	Avail.Storage	Storage Description
#1	14.75'	69.380 af	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (acre-feet)
14.75	0.000
15.25	2.340
15.75	4.670
16.25	7.010
16.75	9.350
17.25	17.300
17.75	27.710
18.25	38.130
18.75	48.550
19.25	58.960
19.75	69.380

Pond 6P: 100YR-72HR (Zero Discharge)**Pond 6P: 100YR-72HR (Zero Discharge)**

Pond 6P: 100YR-72HR (Zero Discharge)



Stage-Discharge for Pond 6P: 100YR-72HR (Zero Discharge)

Elevation (feet)	Discharge (cfs)	Elevation (feet)	Discharge (cfs)
14.75	0.00	17.60	0.00
14.80	0.00	17.65	0.00
14.85	0.00	17.70	0.00
14.90	0.00	17.75	0.00
14.95	0.00	17.80	0.00
15.00	0.00	17.85	0.00
15.05	0.00	17.90	0.00
15.10	0.00	17.95	0.00
15.15	0.00	18.00	0.00
15.20	0.00	18.05	0.00
15.25	0.00	18.10	0.00
15.30	0.00	18.15	0.00
15.35	0.00	18.20	0.00
15.40	0.00	18.25	0.00
15.45	0.00	18.30	0.00
15.50	0.00	18.35	0.00
15.55	0.00	18.40	0.00
15.60	0.00	18.45	0.00
15.65	0.00	18.50	0.00
15.70	0.00	18.55	0.00
15.75	0.00	18.60	0.00
15.80	0.00	18.65	0.00
15.85	0.00	18.70	0.00
15.90	0.00	18.75	0.00
15.95	0.00	18.80	0.00
16.00	0.00	18.85	0.00
16.05	0.00	18.90	0.00
16.10	0.00	18.95	0.00
16.15	0.00	19.00	0.00
16.20	0.00	19.05	0.00
16.25	0.00	19.10	0.00
16.30	0.00	19.15	0.00
16.35	0.00	19.20	0.00
16.40	0.00	19.25	0.00
16.45	0.00	19.30	0.00
16.50	0.00	19.35	0.00
16.55	0.00	19.40	0.00
16.60	0.00	19.45	0.00
16.65	0.00	19.50	0.00
16.70	0.00	19.55	0.00
16.75	0.00	19.60	0.00
16.80	0.00	19.65	0.00
16.85	0.00	19.70	0.00
16.90	0.00	19.75	0.00
16.95	0.00		
17.00	0.00		
17.05	0.00		
17.10	0.00		
17.15	0.00		
17.20	0.00		
17.25	0.00		
17.30	0.00		
17.35	0.00		
17.40	0.00		
17.45	0.00		
17.50	0.00		
17.55	0.00		

Stage-Area-Storage for Pond 6P: 100YR-72HR (Zero Discharge)

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
14.75	0.000	17.60	24.587
14.80	0.234	17.65	25.628
14.85	0.468	17.70	26.669
14.90	0.702	17.75	27.710
14.95	0.936	17.80	28.752
15.00	1.170	17.85	29.794
15.05	1.404	17.90	30.836
15.10	1.638	17.95	31.878
15.15	1.872	18.00	32.920
15.20	2.106	18.05	33.962
15.25	2.340	18.10	35.004
15.30	2.573	18.15	36.046
15.35	2.806	18.20	37.088
15.40	3.039	18.25	38.130
15.45	3.272	18.30	39.172
15.50	3.505	18.35	40.214
15.55	3.738	18.40	41.256
15.60	3.971	18.45	42.298
15.65	4.204	18.50	43.340
15.70	4.437	18.55	44.382
15.75	4.670	18.60	45.424
15.80	4.904	18.65	46.466
15.85	5.138	18.70	47.508
15.90	5.372	18.75	48.550
15.95	5.606	18.80	49.591
16.00	5.840	18.85	50.632
16.05	6.074	18.90	51.673
16.10	6.308	18.95	52.714
16.15	6.542	19.00	53.755
16.20	6.776	19.05	54.796
16.25	7.010	19.10	55.837
16.30	7.244	19.15	56.878
16.35	7.478	19.20	57.919
16.40	7.712	19.25	58.960
16.45	7.946	19.30	60.002
16.50	8.180	19.35	61.044
16.55	8.414	19.40	62.086
16.60	8.648	19.45	63.128
16.65	8.882	19.50	64.170
16.70	9.116	19.55	65.212
16.75	9.350	19.60	66.254
16.80	10.145	19.65	67.296
16.85	10.940	19.70	68.338
16.90	11.735	19.75	69.380
16.95	12.530		
17.00	13.325		
17.05	14.120		
17.10	14.915		
17.15	15.710		
17.20	16.505		
17.25	17.300		
17.30	18.341		
17.35	19.382		
17.40	20.423		
17.45	21.464		
17.50	22.505		
17.55	23.546		

Summary for Pond 6P: 100YR-72HR (Zero Discharge)

[43] Hint: Has no inflow (Outflow=Zero)

Volume	Invert	Avail.Storage	Storage Description
#1	14.75'	69.380 af	Custom Stage Data Listed below
Elevation (feet)	Cum.Store (acre-feet)		
14.75	0.000		
15.25	2.340		
15.75	4.670		
16.25	7.010		
16.75	9.350		
17.25	17.300		
17.75	27.710		
18.25	38.130		
18.75	48.550		
19.25	58.960		
19.75	69.380		