



DMP FOR THE TRAILS UNITS 1, 2 AND 3 FULLY DEVELOPED CONDITIONS PLATE 1 WAS ADOPTED ENTIRELY. ALL MODIFICATIONS MADE IN XPSWMM ARE SHOWN IN COLOR.

TABLE 1 Base Model Results															
Pond	Design Storage At Emergency Spillway	XPSWMM Pond Output Summary								AHYMO_97			Peak Outflow [a]		
		100 Yr-24 Hr Peak Storage	100 Yr-24 Hr Peak Storage	Elevation of Pond Bottom (NAVD 1929)	Elevation of Emergency Spillway (NAVD 1929)	Elevation of Top of Pond (NAVD 1929)	100 Yr-24Hr Peak Water Surface Elevation	Pond Depth	Depth of Water From Pond Bottom	100 Yr-24Hr Freeboard to Emergency Spillway	Peak Outflow	Outflow Restricted by Downstream Orifice		100 Yr-24 Hr Peak Storage [a]	Peak Water Surface Elevation [a]
		ac-ft	ft³	ac-ft	ft	ft	ft	ft	ft	ft	cfs			ac-ft	ft
Pond D	6.24	122165	2.80	5430.00	5436.85	5438.00	5433.90	8.00	3.9	2.9	15.7	Y	4.04	5435.03	19.7
POND F	11.76	344445	7.91	5415.08	5424.33	5425.00	5422.14	9.92	7.1	2.2	14.8	Y	10.4	5423.56	23.8
POND F5	1.40	22189	0.51	5421.00	5426.00	5427.00	5423.75	6.00	2.7	2.3	21.8	Y	1.38	5425.97	19.8
POND G	7.21	81108	1.86	5415.67	5422.50	5424.00	5419.05	8.33	3.4	3.4	17.6	Y	2.96	5419.84	24.6
POND H	3.02	134124	3.08	5418.65	5422.00	5423.00	5422.00	4.35	3.4	0.0	23.4	Y	2.87	5421.89	26.8
POND J	7.94	172482	3.960	5414.00	5417.00	5418.00	5416.08	4.00	2.1	0.9	26.7	Y	3.77	5415.66	32.4
POND K	14.84	357301	8.20	5404.85	5409.00	5410.00	5407.78	5.15	2.9	1.2	60.1	Y	8.39	5407.79	60.7

[a] Values based on the Amendment to the Trails Drainage Master Plan

TABLE 2 Proposed Scenario 1 Results																
Scenario S1 XPSWMM Pond Output Summary												AHYMO_97			Future Improvements	
Pond	Design Capacity At Emergency Spillway	100 Yr-24 Hr Peak Storage	100 Yr-24 Hr Peak Storage	Elevation of Pond Bottom (NAVD 1929)	Elevation of Emergency Spillway (NAVD 1929)	Elevation of Top of Pond (NAVD 1929)	100 Yr-24Hr Peak Water Surface Elevation	Pond Depth	Depth of Water From Pond Bottom	100 Yr-24Hr Freeboard to Emergency Spillway	Peak Outflow	Outflow Restricted by Downstream Orifice	100 Yr-24 Hr Peak Storage [a]	Peak Water Surface Elevation [a]		Peak Outflow [a]
	ac-ft	ft³/s	ac-ft	ft	ft	ft	ft	ft	ft	ft	cfs		ac-ft	ft	cfs	
Pond D	2.7	86472	1.99	5427.50	5433.50	5433.50	5432.24	6	4.7	1.3	28.9	N	4.04	5435.03	19.7	Pond size reduced from 6.26 ac-ft to 2.75 ac ft, orifice plate removed
POND F	11.76	396013	9.09	5415.08	5424.33	5425.00	5422.83	9.92	7.8	1.5	12.9	Y	10.4	5423.56	23.8	Orifice Area Increased from 1.63 to 2 ft²
POND F5	1.83	32949	0.76	5421	5427	5427	5424.46	6	3.5	2.5	58.5	N	1.38	5425.97	19.8	Pond Spillway assumed at 5427
POND G	7.21	176981	4.06	5415.67	5422.50	5424.00	5420.62	8.33	4.9	1.9	12.0	Y	2.96	5419.84	24.6	Orifice Area reduced from 1.75 to 1 ft²
POND H	3.02	130000	2.98	5418.65	5422.00	5423.00	5422.00	4.35	3.4	0.0	21.6	Y	2.87	5421.89	26.8	Orifice area = 1.14 ft² Per Bohannon Huston's plans
POND J	7.94	163081	3.74	5414.00	5417.00	5418.00	5416.00	4	2.0	1.0	30.1	Y	3.77	5415.66	32.39	Orifice area increased from 3.05 to 3.5 ft²
POND K	14.84	280338	6.44	5404.85	5409.00	5410.00	5407.39	5.15	2.5	1.6	60.7	Y	8.39	5407.79	60.7	Orifice area 4.96ft² (No Change)
* The first tract developed will be responsible for improvements to the pond																
[a] Values based on the Amendment to the Trails Drainage Master Plan																

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Table 3 Responsible Tracts for Facility Improvements				
Facility	Tract Responsible for Future	Flow Characteristics (cfs)	Future Improvements	Modifications to Orifice Plates
Pond D	Tract 1, Unit 2 (North of Pond D)	Qin = 102.5 Qout = 28.9	Regrading Pond D	Modeled without Orifice plate
Pond F**	Tract 9, Unit 3A or, Tract 2, Unit 2 or Tract 3, Unit 2*	Qin =144.3 Qout = 12.9	Inlet and outlet improvements, Overflow inlets	Orifice Area increased from 1.63 to 2 ft^2
Pond F-5	Future Pond	Qin = 78.5 Qout = 58.5	Pond to be constructed in the future	Pond Spillway assumed at 5427 based on existing grade
Pond G**	Tract 9, Unit 3A or, Tract 2, Unit 2, Tract 3, Unit 2 or Tract 1 Unit 2*	Qin = 84.3 Qout = 12.0	Inlet and outlet improvements, Overflow inlets	Orifice Area reduced from 1.75 to 1 ft^2
Pond H**	Tract 8, Unit 2	Qin = 110.6 Qout = 27.4	Inlet and outlet improvements, Overflow inlets	Orifice area 1.14ft^2. per BHI plans
Pond J	Tracts 1-4, Unit 4	Qin = 112.4 Qout = 30.1	Inlet and outlet improvements	Orifice area increased from 3.05 to 3.5 ft^2
Pond K	Tracts 1-4, Unit 4	Qin = 126.1 Qout = 60.7	Inlet and outlet improvements	Orifice area 4.96 ft^2

* The first tract developed will be responsible for pond improvements

** Any pond which requires an outlet or orifice restriction which is less than 24 inch diameter equivalent area will require a sluice gate type restriction plate or similar movable restriction to facilitate cleaning if orifice becomes blocked

LEGEND

AHYMO ID 23 LOCATION AND ID OF HYDROGRAPH ADDED INTO XPSWMM

ANALYSIS POINT FROM TEC DMP

EXISTING STORM DRAIN

ORIFICE PLATE

MODIFIED ORIFICE PLATE

BOUNDARY OF TRACT OS-3

FUTURE DEVELOPED STORM DRAIN

PROPOSED SMALLER POND D

AHYMO ID 303 LOCATION WHERE MULTIPLE PUNCH HYDS FROM TEC DPM WERE COMBINED AND ADDED INTO XPSWMM MODEL AS SINGLE HYDROGRAPH

THOMPSON
ENGINEERING
CONSULTANTS

DEVELOPED
CONDITIONS
PLATE 1