

WATERSHED NORTH OF I-40 NO LONGER DRAINS INTO THE STUDY AREA DUE TO THE UNSER INTERCEPTOR



DEVEX - Option 1 Summary of Input and Output Parameters

Sub-basin	Area	Weighted Curve Number	Percent of Hydrologic Soil Group				Tc (mins)	Q100 (cfs)	cfs/acre	V100 (ac-ft)
			A	B	C	D				
A-1D	19.8	90	53	42	0	90	72.20	3.65	3.99	
A-2D	11.6	90	53	47	0	90	42.30	3.65	2.34	
A-3D	19.6	89	23	72	0	90	71.40	3.64	3.95	
C-1D	6.6	89	100	0	0	90	24.00	3.65	1.33	
C-2D.1	12.4	90	85	14	0	90	45.10	3.64	2.50	
C-2D.2	26.8	91	53	42	0	90	98.20	3.66	5.43	
D-1.1	0.6	87	37	63	0	90	2.10	3.78	0.10	
D-1.2	1.3	87	37	63	0	90	4.62	3.64	0.256	
LV-1	0.7	87	32	68	0	90	2.60	3.61	0.15	
LV-2	1.2	87	32	68	0	90	4.42	3.61	0.25	
O-1	2.9	66	72	27	0	0	1.00	0.35	0.08	
I40_1	7.4	89	0	100	0	90	21.90	2.97	1.49	
I40_2	4.0	89	0	100	0	90	14.40	3.64	0.80	
I40_3	2.1	89	0	100	0	90	7.55	3.64	0.42	
I40_4	2.0	83	100	0	0	90	7.03	3.56	0.39	

Summary of Pond Routings

Pond	Model Description	Design Volume (ac-ft)	100 Yr-24 Hr Peak Storage Volume (ac-ft)	100 Yr-24 Hr Inflow (cfs)	100 Yr-24 Hr Outflow (cfs)	Elevation of Emergency Spillway (ft)	100 Yr-24 Hr Peak Water Surface Elevation (ft)	Freeboard from Emergency Spillway (ft)	Available Storage (ac-ft)	Comments		
											a	b
Pond 4	DEVEX 2 Conditions Modeled with most current data using HEC-HMS	8.51	6.07	23.5	23.5	215.9	106.9	5155.1	5154.2	0.9	2.44	Watershed modeled as fully developed commercial/business site at 90% impervious, using latest NOAA 14 100-Yr-24hr rainfall depth of 2.52 in. Basin C-2D.2 drains to Pond 5 with existing outfall structure
Pond 5	"	4.73	1.59	5.4	5.4	98.2	78.4	5168.8	5164.86	3.9	3.14	
Pond 6	"	9.01	6.90	13.8	13.8	231.4	83.1	5177.9	5177.5	0.4	2.11	
Pond 4	DEVEX Option 1	8.51	4.93	23.5	23.5	147.1	96.4	5155.1	5153.33	1.8	3.58	Watershed modeled as fully developed commercial/business site at 90% impervious, using latest NOAA 14 100-Yr-24hr rainfall depth of 2.52 in. Basin C-2D.2 drains to Pond 5 with modified outfall restricting discharge using a 12" outlet pipe as principal spillway
Pond 5	DEVEX Option 1	4.73	3.14	5.43	5.4	98.2	10.5	5168.8	5167.66	1.1	1.59	
Pond 6	DEVEX Option 1	9.01	6.90	13.8	13.8	231.4	83.1	5177.9	5177.5	0.4	2.11	

DEVEX CONDITIONS HEC-HMS INPUT PARAMETERS

Sub-basin	Sub-basin Area	Number of Reaches	Time of Concentration (Tc) Data										Log Time Results		Tc and Tp Results							
			L	Loa	So	Kt	K	Top Elevation	Bottom Elevation	Length	Slope	K ₁	K ₂	Elevation at lower end of water course	Length	Slope	K ₁	K ₂	Hours	Hours		
A-1D	19.78	0.0001	2	1.000	NA	0.000	1.000	0.000	5200	400	1.0	1.0	5170	1.242	0.000	0.000	0.000	0.000	0.000	0.000	90	90
A-2D	11.59	0.0001	2	1.000	NA	0.000	1.000	0.000	5200	400	1.0	1.0	5167	0.986	0.000	0.000	0.000	0.000	0.000	0.000	90	90
A-3D	19.60	0.0007	2	1.000	NA	0.000	1.000	0.000	5200	400	1.0	1.0	5165	0.908	0.000	0.000	0.000	0.000	0.000	0.000	90	90
C-1D	6.58	0.0003	2	1.000	NA	0.000	1.000	0.000	5200	400	1.0	1.0	5220	0.432	0.000	0.000	0.000	0.000	0.000	0.000	90	90
C-2D.1	12.39	0.0008	2	1.000	NA	0.000	1.000	0.000	5200	400	1.0	1.0	5188	0.861	0.000	0.000	0.000	0.000	0.000	0.000	90	90
C-2D.2	26.80	0.0005	2	1.000	NA	0.000	1.000	0.000	5200	400	1.0	1.0	5170	1.144	0.000	0.000	0.000	0.000	0.000	0.000	90	90
D-1.1	0.556	0.0006	2	1.000	NA	0.000	1.000	0.000	5200	400	1.0	1.0	5206	0.000	0.000	0.000	0.000	0.000	0.000	0.000	90	90
D-1.2	1.268	0.0000	2	1.000	NA	0.000	1.000	0.000	5200	400	1.0	1.0	5196	0.553	0.000	0.000	0.000	0.000	0.000	0.000	90	90
LV-1	0.721	0.0011	2	1.000	NA	0.000	1.000	0.000	5200	400	1.0	1.0	5196	0.207	0.000	0.000	0.000	0.000	0.000	0.000	90	90
LV-2	1.225	0.0019	2	1.000	NA	0.000	1.000	0.000	5200	400	1.0	1.0	5162	1.470	0.000	0.000	0.000	0.000	0.000	0.000	90	90
O-1	2.882	0.0005	2	1.000	NA	0.000	1.000	0.000	5200	400	1.0	1.0	5164	0.967	0.000	0.000	0.000	0.000	0.000	0.000	90	90
I40_1	7.364	0.0015	2	1.475	NA	0.000	1.000	0.000	5200	400	0.7	0.7	5200	1079	0.000	0.000	0.000	0.000	0.000	0.000	90	90
I40_2	3.956	0.0002	2	1.000	NA	0.000	1.000	0.000	5200	400	0.7	0.7	5234	406	0.000	0.000	0.000	0.000	0.000	0.000	90	90
I40_3	2.076	0.0002	2	1.000	NA	0.000	1.000	0.000	5200	400	0.7	0.7	5227	9	0.000	0.000	0.000	0.000	0.000	0.000	90	90
I40_4	1.974	0.0001	1	1.000	NA	0.000	1.000	0.000	5200	400	0.7	0.7	5221	341	0.000	0.000	0.000	0.000	0.000	0.000	90	90

LEGEND

- SUBBASIN BOUNDARY
- LONGEST FLOWPATH FOR Tc
- A-2D SUBBASIN ID
- AP-1 ANALYSIS POINT
- FLOW DIRECTION
- I40 MEDIAN DROP INLETS

EX POND 6 RATING CURVE

Elevation (ft.)	Storage (ac-ft)	Discharge (cfs)
5170	0	0
5148	0.14	4
5172	0.83	6.2
5173	1.77	7.9
5174	2.79	9.2
5175	3.87	10.4
5176	5.04	11.5
5177	6.27	12.5
5178	7.46	13.5
5179	9.01	14.5

DATA FROM MASTER DRAINAGE PLAN FOR THE WEST SIDE TRANSIT FACILITY

EX POND 4 RATING CURVE

Elevation (ft.)	Storage (ac-ft)	Discharge (cfs)
5147	0	0
5148	0.08	0
5149	0.51	3
5150	1.3	5.7
5151	2.29	7.5
5151.9	3.26	8.7
5152	3.37	11.7
5152.5	3.94	50.6
5153	4.52	92.5
5154	5.76	104.3
5155	7.18	115.9
5156	8.51	124.6

DATA FROM MASTER DRAINAGE PLAN FOR THE WEST SIDE TRANSIT FACILITY

EX POND 5 RATING CURVE

Elevation (ft.)	Storage (ac-ft)	Discharge (cfs)
5160	0	0
5161	0.02	4
5162	0.37	6.5
5163	0.76	8.2
5164	1.19	9.7
5164.5	1.42	41.6
5164	1.19	7.6
5164.5	1.42	8.0
5165	1.56	8.5
5165.5	1.89	8.9
5166	2.12	9.3
5167	2.74	132.6
5168	3.35	146.8
5168.8	3.87	157.2
5169	4.01	160
5170	4.73	172

DATA FROM MASTER DRAINAGE PLAN FOR THE WEST SIDE TRANSIT FACILITY

DEVEX Option 1 POND 5 RATING CURVE WITH 12 IN. ORIFICE

Elevation (ft.)	Storage (ac-ft)	Discharge (cfs)
5160	0	0
5161	0.02	3.8
5162	0.37	5.3
5163	0.76	6.5
5164	1.19	7.6
5164.5	1.42	8.0
5165	1.56	8.5
5165.5	1.89	8.9
5166	2.12	9.3
5167	2.74	10.0
5168	3.35	10.7
5168.8	3.87	11.2
5169	4.01	11.3
5170	4.73	12.0

DATA FROM MASTER DRAINAGE PLAN FOR THE WEST SIDE TRANSIT FACILITY
DISCHARGE BASED ON ORIFICE EOM. SEE APPENDIX B.4 FOR COMPUTATION

EASTERLING CONSULTANTS

I-40 SOUTH AND UNSER DIVERSION MINI DMP PLATE 2

FINAL DEVELOPED CONDITIONS DRAINAGE BASIN MAP
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