APPENDIX C
FLATO/CUPRITE WASH DATA

Project: Cuprite HMS Model Simulation Run: 24-Hour SCS Type I

Start of Run: 06Oct2006, 12:00 Basin Model: Cuprite North
End of Run: 09Oct2006, 00:00 Meteorologic Model: 24-Hour
Compute Time: 24Jun2008, 10:43:34 Control Specifications: 24-Hour SCS Storm

Volume Units: AC-FT

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
CU1	0.6540	395.99	06Oct2006, 22:30	104.36
CU2	0.8140	378.83	06Oct2006, 22:42	114.09
CU3	0.4690	201.06	06Oct2006, 22:48	65.73
CU4	0.4460	245.65	06Oct2006, 22:24	62.51
CU5	0.8530	361.10	06Oct2006, 22:54	123.18
CU6	0.4710	204.51	06Oct2006, 22:48	66.90
CU7	0.6690	327.56	06Oct2006, 22:48	105.75
CU8	1.1900	468.90	06Oct2006, 23:06	177.56
CUJ1	1.4680	683.92	06Oct2006, 22:54	218.45
CUJ2	0.9150	321.13	06Oct2006, 22:48	128.24
R0CU1	0.6540	349.38	06Oct2006, 23:00	104.36
R0CU3	0.4690	188.92	06Oct2006, 23:12	65.73

Project: Cuprite HMS Model Simulation Run: 24-Hour SCS Type I

Start of Run: 06Oct2006, 12:00 Basin Model: Cuprite North
End of Run: 09Oct2006, 00:00 Meteorologic Model: 24-Hour
Compute Time: 24Jun2008, 10:43:34 Control Specifications: 24-Hour SCS Storm

Volume Units: IN

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CU1	0.6540	395.99	06Oct2006, 22:30	2.99
CU2	0.8140	378.83	06Oct2006, 22:42	2.63
CU3	0.4690	201.06	06Oct2006, 22:48	2.63
CU4	0.4460	245.65	06Oct2006, 22:24	2.63
CU5	0.8530	361.10	06Oct2006, 22:54	2.71
CU6	0.4710	204.51	06Oct2006, 22:48	2.66
CU7	0.6690	327.56	06Oct2006, 22:48	2.96
CU8	1.1900	468.90	06Oct2006, 23:06	2.80
CUJ1	1.4680	683.92	06Oct2006, 22:54	2.79
CUJ2	0.9150	321.13	06Oct2006, 22:48	2.63
R0CU1	0.6540	349.38	06Oct2006, 23:00	2.99
R0CU3	0.4690	188.92	06Oct2006, 23:12	2.63

Project: Cuprite HMS Model Simulation Run: Type II 3-Hour Storm

Start of Run: 06Oct2006, 12:00 Basin Model: Cuprite North
End of Run: 09Oct2006, 00:00 Meteorologic Model: Type II 3-Hour
Compute Time: 24Jun2008, 10:43:56 Control Specifications: Type II 3-Hour

Volume Units: AC-FT

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
CU1	0.6540	743.74	06Oct2006, 14:05	72.20
CU2	0.8140	674.63	06Oct2006, 14:15	76.30
CU3	0.4690	348.08	06Oct2006, 14:25	43.96
CU4	0.4460	458.49	06Oct2006, 14:05	41.81
CU5	0.8530	620.53	06Oct2006, 14:30	83.03
CU6	0.4710	354.49	06Oct2006, 14:25	44.90
CU7	0.6690	578.04	06Oct2006, 14:25	72.98
CU8	1.1900	784.82	06Oct2006, 14:40	120.70
CUJ1	1.4680	1236.16	06Oct2006, 14:30	148.51
CUJ2	0.9150	548.32	06Oct2006, 14:30	85.77
R0CU1	0.6540	649.00	06Oct2006, 14:35	72.20
R0CU3	0.4690	332.77	06Oct2006, 14:45	43.96

Project: Cuprite HMS Model Simulation Run: Type II 3-Hour Storm

Start of Run:	06Oct2006, 12:00	Basin Model:	Cuprite North
End of Run:	09Oct2006, 00:00	Meteorologic Model:	Type II 3-Hour
Compute Time:	24Jun2008, 10:43:56	Control Specifications:	Type II 3-Hour

Volume Units: IN

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CU1	0.6540	743.74	06Oct2006, 14:05	2.07
CU2	0.8140	674.63	06Oct2006, 14:15	1.76
CU3	0.4690	348.08	06Oct2006, 14:25	1.76
CU4	0.4460	458.49	06Oct2006, 14:05	1.76
CU5	0.8530	620.53	06Oct2006, 14:30	1.83
CU6	0.4710	354.49	06Oct2006, 14:25	1.79
CU7	0.6690	578.04	06Oct2006, 14:25	2.05
CU8	1.1900	784.82	06Oct2006, 14:40	1.90
CUJ1	1.4680	1236.16	06Oct2006, 14:30	1.90
CUJ2	0.9150	548.32	06Oct2006, 14:30	1.76
R0CU1	0.6540	649.00	06Oct2006, 14:35	2.07
R0CU3	0.4690	332.77	06Oct2006, 14:45	1.76

Project: Cuprite Watershed - Flato FLO Simulation Run: 24-Hour SCS Type I

Start of Run:	06Oct2006, 12:00	Basin Model:	Cuprite North
End of Run:	09Oct2006, 00:00	Meteorologic Model:	24-Hour
Compute Time:	06Mar2008, 10:32:00	Control Specifications:	24-Hour SCS Storm

Volume Units: AC-FT

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
CU1	0.6540	395.99	06Oct2006, 22:30	104.36
CU2	0.8140	378.83	06Oct2006, 22:42	114.09
CU3	0.4690	201.06	06Oct2006, 22:48	65.73
CU4	0.4460	245.65	06Oct2006, 22:24	62.51
CU5	0.8530	361.10	06Oct2006, 22:54	123.18
CU6	0.4710	204.51	06Oct2006, 22:48	66.90
CU7	0.6690	327.56	06Oct2006, 22:48	105.75
CU8	1.1900	468.90	06Oct2006, 23:06	177.56
CUJ1	1.4680	683.92	06Oct2006, 22:54	218.45
CUJ2	0.9150	333.05	06Oct2006, 22:36	128.24
R0CU1	0.6540	349.38	06Oct2006, 23:00	104.36
R0CU3	0.4690	167.30	06Oct2006, 23:12	65.73

CUPRITE NORTH WASH HYDROLOGIC PARAMETERS

Basin	D.A. (sq miles)	D.A. (acres)	CN	Tc (min)	T(lag)	Imp %
CU1	0.654	418.7	87	60.4	36.2	1.0
CU2	0.814	521.0	83	73.4	44.0	1.0
FLO2D AREAS						
CU3	0.469	300.3	83	85.2	51.1	1.0
CU4	0.446	285.2	83	54.0	32.4	1.0
CU5	0.853	546.2	83.9	92.2	55.3	1.0
CU6	0.471	301.6	83.4	85.6	51.4	1.0
CU7	0.669	428.3	86.7	86.1	51.7	1.0
CU8	1.190	761.7	84.9	111.2	66.7	1.0

Total A **5.566**

CUPRITE WASH SUBREACH DATA

Reach	Length (ft)	Qp (cfs)	Avg V (wted)	L/(V(min)*6)
R0CU1	10320	400	5.8	5
R0CU3	3800	200	2.9	4

CUPRITE WASH ROUTING REACH DATA

Q (cfs)	R0CU1 Storage (Acre-feet)	R0CU3 Storage (Acre-feet)
100	5.9	5.0
200	9.9	8.5
300	14.5	11.4
400	18.7	13.8
500	23.1	16.8
600	27.1	20.3
700	30.4	22.6
800	37.1	24.5
900	40.5	26.9
1000	43.7	28.9

CUPRITE
WATERSHED (NORTH)
TIME OF CONCENTRATION DATA

DA	Ovlnd S	Ovlnd n	SC L	SC S	Chnl A	Chnl P	Chnl L	Chnl S	Chnl n	A/P	Reach	Tc	T(lag)
CU1	0.280	0.3	1500	0.133	10.7	15.9	5100	0.044	0.050	0.7	1		
					16.7	21.4	3350	0.026	0.045	0.8	2		
					10.6	20.7	2300	0.026	0.040	0.5	3		
					15.0	17.4	2450	0.025	0.045	0.9	4	60.4	36.2
CU2	0.140	0.3	1020	0.069	34.4	44.1	3660	0.023	0.045	0.8	1		
					18.0	22.7	2100	0.028	0.045	0.8	2		
					31.1	29.8	2500	0.022	0.045	1.0	3		
					38.5	32.0	3250	0.017	0.040	1.2	4		
					10.0	20.0	3400	0.019	0.045	0.5	5	73.4	44.0
FLO2D AREAS													
CU3	0.030	0.15	2400	0.028	14.6	24.4	4400	0.023	0.040	0.6	1		
					10.0	20.0	3000	0.019	0.045	0.5	2		
					13.4	31.2	3900	0.016	0.040	0.4	3	85.2	51.1
CU4	0.030	0.15	3600	0.019	33.9	59.7	2850	0.016	0.045	0.6	1	54	32.4
CU5	0.025	0.15	3350	0.021	27.1	29.4	4700	0.014	0.035	0.9	1		
					10.0	20.0	5800	0.013	0.045	0.5	2	92.2	55.3
CU6	0.020	0.15	2200	0.014	46	63	5000	0.013	0.050	0.7	1		
					11	20	3750	0.014	0.045	0.6	2	85.6	51.4
CU7	0.013	0.15	2150	0.016	12.6	27.1	4000	0.012	0.045	0.5	1		
					21.1	26	4400	0.012	0.045	0.8	2	86.1	51.7
CU8	0.020	0.15	2600	0.017	9.7	27.9	5750	0.019	0.050	0.3	1		
					18.4	51.3	5000	0.011	0.050	0.4	2		
					22.4	48	5350	0.009	0.050	0.5	3	185.4	111.2

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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for CU1

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .28 ft/ft, n = .3, P(2yr/24hr) = 2.02 in
     Travel Time = 7.5 minutes

 Segment 2: CONCENTRATED FLOW
     L = 1500 ft, S = .133 ft/ft, UNPAVED surface
     Travel time = 4.2 minutes

 Segment 3: CHANNEL FLOW
     A = 10.7 ft^2, P = 15.9 ft, L = 5100 ft, S = .044 ft/ft, n = .05
     Travel Time = 17.7 minutes

 Segment 4: CHANNEL FLOW
     A = 16.7 ft^2, P = 21.4 ft, L = 3350 ft, S = .026 ft/ft, n = .045
     Travel Time = 12.3 minutes

 Segment 5: CHANNEL FLOW
     A = 10.6 ft^2, P = 20.7 ft, L = 2300 ft, S = .026 ft/ft, n = .04
     Travel Time = 10 minutes

 Segment 6: CHANNEL FLOW
     A = 15 ft^2, P = 17.4 ft, L = 2450 ft, S = .025 ft/ft, n = .045
     Travel Time = 8.6 minutes

TOTAL TRAVEL TIME = 60.4 min.
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*********************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*********************************************************************

SUMMARY for CU2

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .14 ft/ft, n = .3, P(2yr/24hr) = 2.02 in
     Travel Time = 9.9 minutes

 Segment 2: CONCENTRATED FLOW
     L = 1020 ft, S = .069 ft/ft, UNPAVED surface
     Travel time = 4 minutes

 Segment 3: CHANNEL FLOW
     A = 34.4 ft^2, P = 44.1 ft, L = 3660 ft, S = .023 ft/ft, n = .045
     Travel Time = 14.3 minutes

 Segment 4: CHANNEL FLOW
     A = 18 ft^2, P = 22.7 ft, L = 2100 ft, S = .028 ft/ft, n = .045
     Travel Time = 7.4 minutes

 Segment 5: CHANNEL FLOW
     A = 31.1 ft^2, P = 29.8 ft, L = 2500 ft, S = .022 ft/ft, n = .045
     Travel Time = 8.2 minutes

 Segment 6: CHANNEL FLOW
     A = 38.5 ft^2, P = 32 ft, L = 3250 ft, S = .017 ft/ft, n = .04
     Travel Time = 9.9 minutes

 Segment 7: CHANNEL FLOW
     A = 10 ft^2, P = 20 ft, L = 3400 ft, S = .019 ft/ft, n = .045
     Travel Time = 19.7 minutes

TOTAL TRAVEL TIME = 73.4 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
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SUMMARY for CU3

Segment 1: OVERLAND FLOW
L = 100 ft, S = .03 ft/ft, n = .15, P(2yr/24hr) = 2.02 in
Travel Time = 10.5 minutes

Segment 2: CONCENTRATED FLOW
L = 2400 ft, S = .028 ft/ft, UNPAVED surface
Travel time = 14.8 minutes

Segment 3: CHANNEL FLOW
A = 14.6 ft^2, P = 24.4 ft, L = 4400 ft, S = .023 ft/ft, n = .04
Travel Time = 18.3 minutes

Segment 4: CHANNEL FLOW
A = 10 ft^2, P = 20 ft, L = 3000 ft, S = .019 ft/ft, n = .045
Travel Time = 17.4 minutes

Segment 5: CHANNEL FLOW
A = 13.4 ft^2, P = 31.2 ft, L = 3900 ft, S = .016 ft/ft, n = .04
Travel Time = 24.2 minutes

TOTAL TRAVEL TIME = 85.2 min.

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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
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SUMMARY for CU4

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .03 ft/ft, n = .15, P(2yr/24hr) = 2.02 in
     Travel Time = 10.5 minutes

 Segment 2: CONCENTRATED FLOW
     L = 3600 ft, S = .019 ft/ft, UNPAVED surface
     Travel time = 27 minutes

 Segment 3: CHANNEL FLOW
     A = 33.9 ft^2, P = 59.7 ft, L = 2850 ft, S = .016 ft/ft, n = .045
     Travel Time = 16.5 minutes

TOTAL TRAVEL TIME = 54 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for CU5

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .025 ft/ft, n = .15, P(2yr/24hr) = 2.02 in
     Travel Time = 11.3 minutes

 Segment 2: CONCENTRATED FLOW
     L = 3350 ft, S = .021 ft/ft, UNPAVED surface
     Travel time = 23.9 minutes

 Segment 3: CHANNEL FLOW
     A = 27.1 ft^2, P = 29.4 ft, L = 4700 ft, S = .014 ft/ft, n = .035
     Travel Time = 16.4 minutes

 Segment 4: CHANNEL FLOW
     A = 10 ft^2, P = 20 ft, L = 5800 ft, S = .013 ft/ft, n = .045
     Travel Time = 40.7 minutes

TOTAL TRAVEL TIME = 92.2 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
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SUMMARY for CU6

Segment 1: OVERLAND FLOW
L = 100 ft, S = .02 ft/ft, n = .15, P(2yr/24hr) = 2.02 in
Travel Time = 12.3 minutes

Segment 2: CONCENTRATED FLOW
L = 2200 ft, S = .014 ft/ft, UNPAVED surface
Travel time = 19.2 minutes

Segment 3: CHANNEL FLOW
A = 46 ft^2, P = 63 ft, L = 5000 ft, S = .013 ft/ft, n = .05
Travel Time = 30.3 minutes

Segment 4: CHANNEL FLOW
A = 11 ft^2, P = 20 ft, L = 3750 ft, S = .014 ft/ft, n = .045
Travel Time = 23.8 minutes

TOTAL TRAVEL TIME = 85.6 min.

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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
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SUMMARY for CU7

Segment 1: OVERLAND FLOW
L = 100 ft, S = .013 ft/ft, n = .15, P(2yr/24hr) = 2.02 in
Travel Time = 14.7 minutes

Segment 2: CONCENTRATED FLOW
L = 2150 ft, S = .016 ft/ft, UNPAVED surface
Travel time = 17.6 minutes

Segment 3: CHANNEL FLOW
A = 12.6 ft^2, P = 27.1 ft, L = 4000 ft, S = .012 ft/ft, n = .045
Travel Time = 30.6 minutes

Segment 4: CHANNEL FLOW
A = 21.1 ft^2, P = 26 ft, L = 4400 ft, S = .012 ft/ft, n = .045
Travel Time = 23.2 minutes

TOTAL TRAVEL TIME = 86.1 min.

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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for CU8

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .02 ft/ft, n = .15, P(2yr/24hr) = 2.02 in
     Travel Time = 12.3 minutes

 Segment 2: CONCENTRATED FLOW
     L = 2600 ft, S = .017 ft/ft, UNPAVED surface
     Travel time = 20.6 minutes

 Segment 3: CHANNEL FLOW
     A = 9.7 ft^2, P = 27.9 ft, L = 5750 ft, S = .019 ft/ft, n = .05
     Travel Time = 47.2 minutes

 Segment 4: CHANNEL FLOW
     A = 18.4 ft^2, P = 51.3 ft, L = 5000 ft, S = .011 ft/ft, n = .05
     Travel Time = 52.8 minutes

 Segment 5: CHANNEL FLOW
     A = 22.4 ft^2, P = 48 ft, L = 5350 ft, S = .009 ft/ft, n = .05
     Travel Time = 52.4 minutes

TOTAL TRAVEL TIME = 185.4 min.
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Project: Flato 24-Hour HMS Model Simulation Run: 24-Hour SCS Type I

Start of Run: 06Oct2006, 12:00 Basin Model: Flato Wash
End of Run: 09Oct2006, 00:00 Meteorologic Model: 24 Hour
Compute Time: 24Jun2008, 10:32:48 Control Specifications: 24 hour Storm

Volume Units: AC-FT

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
2DSEC4	Not Specified	138.75	07Oct2006, 03:00	93.31
2DSEC5	23.8210	1410.74	07Oct2006, 02:00	1010.93
2DSEC6	Not Specified	587.43	07Oct2006, 02:00	263.44
FL1	3.4190	1693.73	06Oct2006, 23:00	606.17
FL10	0.1800	135.05	06Oct2006, 22:12	27.98
FL11	2.4260	1107.48	06Oct2006, 23:00	405.02
FL12	0.4480	318.52	06Oct2006, 22:18	69.65
FL13	1.7670	796.21	06Oct2006, 22:54	271.44
FL14	0.4380	183.08	06Oct2006, 23:00	65.75
FL15	1.7180	568.21	06Oct2006, 23:54	290.33
FL16	1.3340	394.42	07Oct2006, 00:12	216.65
FL17	1.2970	605.92	06Oct2006, 23:00	222.52
FL18	1.1600	433.74	06Oct2006, 23:30	193.07
FL19	1.3220	454.68	06Oct2006, 23:48	222.73
FL2	1.5880	744.41	06Oct2006, 22:54	251.75
FL20	1.8780	613.78	06Oct2006, 23:42	296.58
FL21	0.9100	317.96	06Oct2006, 23:24	141.10
FL3	3.4550	1550.45	06Oct2006, 23:12	612.55
FL4	0.4850	338.89	06Oct2006, 22:30	86.75
FL5	0.7960	472.48	06Oct2006, 22:30	125.17
FL6	1.3520	686.70	06Oct2006, 22:42	208.28
FL7	1.0320	707.61	06Oct2006, 22:30	191.76
FL8	1.1690	801.88	06Oct2006, 22:30	216.59
FL9	0.9170	381.25	06Oct2006, 23:00	143.78
J1	5.0070	2260.66	06Oct2006, 23:12	857.92

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
J10	2.8740	1237.39	06Oct2006, 23:06	474.67
J11	4.6410	1838.12	06Oct2006, 23:18	746.11
J12	19.0340	7473.71	06Oct2006, 23:36	3216.88
J13	23.8210	2105.86	07Oct2006, 02:00	1367.68
J14	24.9810	1824.93	07Oct2006, 03:36	1560.12
J15	26.3030	1978.82	07Oct2006, 03:30	1782.85
J16	28.1810	2141.40	07Oct2006, 04:06	2078.97
J17	29.0910	2193.32	07Oct2006, 04:36	2219.87
J2	3.9400	1699.69	06Oct2006, 23:12	699.31
J3	4.7360	1828.04	06Oct2006, 23:36	824.47
J4	9.7430	4060.57	06Oct2006, 23:18	1682.39
J5	2.2010	1478.74	06Oct2006, 22:36	408.35
J6	3.1180	1629.28	06Oct2006, 23:18	552.12
J7	11.0950	4298.62	06Oct2006, 23:36	1890.67
J8	14.2130	5798.47	06Oct2006, 23:30	2442.79
J9	14.3930	5768.47	06Oct2006, 23:42	2470.77
R0FL1	3.4190	1637.02	06Oct2006, 23:24	606.17
R0FL11	2.4260	1080.41	06Oct2006, 23:12	405.02
R0FL12	0.4480	281.99	06Oct2006, 22:36	69.65
R0FL3	3.4550	1529.21	06Oct2006, 23:18	612.55
R0FL4	0.4850	331.24	06Oct2006, 22:36	86.75
R0FL7	1.0320	700.10	06Oct2006, 22:36	191.76
R0FL8	1.1690	778.64	06Oct2006, 22:36	216.59
R0J10	2.8740	1206.00	06Oct2006, 23:30	474.67
R0J13	23.8210	1705.05	07Oct2006, 03:36	1367.05
R0J15	26.3030	1960.31	07Oct2006, 04:12	1782.39
R0J16	28.1810	2116.33	07Oct2006, 04:36	2078.77
R0J2	3.9400	1657.48	06Oct2006, 23:42	699.31
R0J4	9.7430	3973.04	06Oct2006, 23:42	1682.39
R0J5	2.2010	1265.46	06Oct2006, 23:18	408.35
R0J8	14.2130	5738.78	06Oct2006, 23:42	2442.79

Project: Flato 24-Hour HMS Model Simulation Run: 24-Hour SCS Type I

Start of Run: 06Oct2006, 12:00 Basin Model: Flato Wash
End of Run: 09Oct2006, 00:00 Meteorologic Model: 24 Hour
Compute Time: 24Jun2008, 10:09:18 Control Specifications: 24 hour Storm

Volume Units: IN

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
2DSEC4	Not Specified	138.75	07Oct2006, 03:00	
2DSEC5	23.8210	1410.74	07Oct2006, 02:00	0.80
2DSEC6	Not Specified	587.43	07Oct2006, 02:00	
FL1	3.4190	1693.73	06Oct2006, 23:00	3.32
FL10	0.1800	135.05	06Oct2006, 22:12	2.91
FL11	2.4260	1107.48	06Oct2006, 23:00	3.13
FL12	0.4480	318.52	06Oct2006, 22:18	2.91
FL13	1.7670	796.21	06Oct2006, 22:54	2.88
FL14	0.4380	183.08	06Oct2006, 23:00	2.81
FL15	1.7180	568.21	06Oct2006, 23:54	3.17
FL16	1.3340	394.42	07Oct2006, 00:12	3.05
FL17	1.2970	605.92	06Oct2006, 23:00	3.22
FL18	1.1600	433.74	06Oct2006, 23:30	3.12
FL19	1.3220	454.68	06Oct2006, 23:48	3.16
FL2	1.5880	744.41	06Oct2006, 22:54	2.97
FL20	1.8780	613.78	06Oct2006, 23:42	2.96
FL21	0.9100	317.96	06Oct2006, 23:24	2.91
FL3	3.4550	1550.45	06Oct2006, 23:12	3.32
FL4	0.4850	338.89	06Oct2006, 22:30	3.35
FL5	0.7960	472.48	06Oct2006, 22:30	2.95
FL6	1.3520	686.70	06Oct2006, 22:42	2.89
FL7	1.0320	707.61	06Oct2006, 22:30	3.48
FL8	1.1690	801.88	06Oct2006, 22:30	3.47
FL9	0.9170	381.25	06Oct2006, 23:00	2.94
J1	5.0070	2260.66	06Oct2006, 23:12	3.21

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
J10	2.8740	1237.39	06Oct2006, 23:06	3.10
J11	4.6410	1838.12	06Oct2006, 23:18	3.01
J12	19.0340	7473.71	06Oct2006, 23:36	3.17
J13	23.8210	2105.86	07Oct2006, 02:00	1.08
J14	24.9810	1824.93	07Oct2006, 03:36	1.17
J15	26.3030	1978.82	07Oct2006, 03:30	1.27
J16	28.1810	2141.40	07Oct2006, 04:06	1.38
J17	29.0910	2193.32	07Oct2006, 04:36	1.43
J2	3.9400	1699.69	06Oct2006, 23:12	3.33
J3	4.7360	1828.04	06Oct2006, 23:36	3.26
J4	9.7430	4060.57	06Oct2006, 23:18	3.24
J5	2.2010	1478.74	06Oct2006, 22:36	3.48
J6	3.1180	1629.28	06Oct2006, 23:18	3.32
J7	11.0950	4298.62	06Oct2006, 23:36	3.20
J8	14.2130	5798.47	06Oct2006, 23:30	3.22
J9	14.3930	5768.47	06Oct2006, 23:42	3.22
R0FL1	3.4190	1637.02	06Oct2006, 23:24	3.32
R0FL11	2.4260	1080.41	06Oct2006, 23:12	3.13
R0FL12	0.4480	281.99	06Oct2006, 22:36	2.91
R0FL3	3.4550	1529.21	06Oct2006, 23:18	3.32
R0FL4	0.4850	331.24	06Oct2006, 22:36	3.35
R0FL7	1.0320	700.10	06Oct2006, 22:36	3.48
R0FL8	1.1690	778.64	06Oct2006, 22:36	3.47
R0J10	2.8740	1206.00	06Oct2006, 23:30	3.10
R0J13	23.8210	1705.05	07Oct2006, 03:36	1.08
R0J15	26.3030	1960.31	07Oct2006, 04:12	1.27
R0J16	28.1810	2116.33	07Oct2006, 04:36	1.38
R0J2	3.9400	1657.48	06Oct2006, 23:42	3.33
R0J4	9.7430	3973.04	06Oct2006, 23:42	3.24
R0J5	2.2010	1265.46	06Oct2006, 23:18	3.48
R0J8	14.2130	5738.78	06Oct2006, 23:42	3.22

Project: Flato Type II 3-Hour HMS ModelSimulation Run: Type II 3-Hour Run

Start of Run: 06Oct2006, 12:00 Basin Model: Flato Wash
End of Run: 09Oct2006, 00:00 Meteorologic Model: Type II 3-Hour
Compute Time: 10Jul2008, 12:17:33 Control Specifications: Type II 3-Hour

Volume Units: AC-FT

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
2DSEC4	Not Specified	162.97	06Oct2006, 18:30	69.19
2DSEC5	23.8210	1886.91	06Oct2006, 17:30	744.27
2DSEC6	Not Specified	891.11	06Oct2006, 17:45	230.53
FL1	3.4190	2982.83	06Oct2006, 14:35	432.25
FL10	0.1800	279.18	06Oct2006, 13:50	19.30
FL11	2.4260	1912.80	06Oct2006, 14:35	284.45
FL12	0.4480	635.96	06Oct2006, 13:55	48.05
FL13	1.7670	1399.13	06Oct2006, 14:30	186.94
FL14	0.4380	315.52	06Oct2006, 14:35	44.97
FL15	1.7180	889.80	06Oct2006, 15:30	204.52
FL16	1.3340	600.75	06Oct2006, 15:45	151.10
FL17	1.2970	1051.52	06Oct2006, 14:40	157.36
FL18	1.1600	709.41	06Oct2006, 15:05	135.49
FL19	1.3220	722.38	06Oct2006, 15:20	156.78
FL2	1.5880	1311.72	06Oct2006, 14:30	174.58
FL20	1.8780	973.45	06Oct2006, 15:20	205.40
FL21	0.9100	519.02	06Oct2006, 15:05	97.37
FL3	3.4550	2644.84	06Oct2006, 14:45	436.80
FL4	0.4850	663.73	06Oct2006, 14:05	62.00
FL5	0.7960	896.95	06Oct2006, 14:05	86.79
FL6	1.3520	1260.71	06Oct2006, 14:15	143.86
FL7	1.0320	1370.60	06Oct2006, 14:05	138.40
FL8	1.1690	1553.65	06Oct2006, 14:05	156.20
FL9	0.9170	656.15	06Oct2006, 14:40	99.60
J1	5.0070	3922.60	06Oct2006, 14:50	606.83

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
J10	2.8740	2144.62	06Oct2006, 14:40	332.49
J11	4.6410	3148.21	06Oct2006, 14:50	519.44
J12	19.0340	12611.63	06Oct2006, 15:15	2269.23
J13	23.8210	2903.75	06Oct2006, 17:45	1043.99
J14	24.9810	2243.64	06Oct2006, 18:35	1179.47
J15	26.3030	2312.69	06Oct2006, 18:30	1336.26
J16	28.1810	2493.25	06Oct2006, 15:50	1541.65
J17	29.0910	2607.98	06Oct2006, 16:15	1639.02
J2	3.9400	2892.29	06Oct2006, 14:50	498.81
J3	4.7360	3084.59	06Oct2006, 15:05	585.60
J4	9.7430	6881.47	06Oct2006, 14:55	1192.43
J5	2.2010	2861.23	06Oct2006, 14:10	294.60
J6	3.1180	2875.80	06Oct2006, 14:55	394.19
J7	11.0950	7233.14	06Oct2006, 15:10	1336.29
J8	14.2130	9964.14	06Oct2006, 15:05	1730.49
J9	14.3930	9840.26	06Oct2006, 15:15	1749.79
R0FL1	3.4190	2861.84	06Oct2006, 14:55	432.25
R0FL11	2.4260	1886.56	06Oct2006, 14:45	284.45
R0FL12	0.4480	575.49	06Oct2006, 14:05	48.05
R0FL3	3.4550	2622.96	06Oct2006, 14:55	436.80
R0FL4	0.4850	653.54	06Oct2006, 14:05	62.00
R0FL7	1.0320	1337.10	06Oct2006, 14:15	138.40
R0FL8	1.1690	1529.86	06Oct2006, 14:10	156.20
R0J10	2.8740	2078.04	06Oct2006, 15:00	332.49
R0J13	23.8210	2211.38	06Oct2006, 18:35	1043.98
R0J15	26.3030	2270.44	06Oct2006, 19:15	1336.25
R0J16	28.1810	2363.92	06Oct2006, 16:20	1541.65
R0J2	3.9400	2830.65	06Oct2006, 15:10	498.81
R0J4	9.7430	6745.02	06Oct2006, 15:15	1192.43
R0J5	2.2010	2275.80	06Oct2006, 15:00	294.60
R0J8	14.2130	9809.66	06Oct2006, 15:15	1730.49

Project: Flato Type II 3-Hour HMS ModelSimulation Run: Type II 3-Hour Run

Start of Run:	06Oct2006, 12:00	Basin Model:	Flato Wash
End of Run:	09Oct2006, 00:00	Meteorologic Model:	Type II 3-Hour
Compute Time:	10Jul2008, 12:17:33	Control Specifications:	Type II 3-Hour

Volume Units: IN

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
2DSEC4	Not Specified	162.97	06Oct2006, 18:30	
2DSEC5	23.8210	1886.91	06Oct2006, 17:30	0.59
2DSEC6	Not Specified	891.11	06Oct2006, 17:45	
FL1	3.4190	2982.83	06Oct2006, 14:35	2.37
FL10	0.1800	279.18	06Oct2006, 13:50	2.01
FL11	2.4260	1912.80	06Oct2006, 14:35	2.20
FL12	0.4480	635.96	06Oct2006, 13:55	2.01
FL13	1.7670	1399.13	06Oct2006, 14:30	1.98
FL14	0.4380	315.52	06Oct2006, 14:35	1.92
FL15	1.7180	889.80	06Oct2006, 15:30	2.23
FL16	1.3340	600.75	06Oct2006, 15:45	2.12
FL17	1.2970	1051.52	06Oct2006, 14:40	2.27
FL18	1.1600	709.41	06Oct2006, 15:05	2.19
FL19	1.3220	722.38	06Oct2006, 15:20	2.22
FL2	1.5880	1311.72	06Oct2006, 14:30	2.06
FL20	1.8780	973.45	06Oct2006, 15:20	2.05
FL21	0.9100	519.02	06Oct2006, 15:05	2.01
FL3	3.4550	2644.84	06Oct2006, 14:45	2.37
FL4	0.4850	663.73	06Oct2006, 14:05	2.40
FL5	0.7960	896.95	06Oct2006, 14:05	2.04
FL6	1.3520	1260.71	06Oct2006, 14:15	2.00
FL7	1.0320	1370.60	06Oct2006, 14:05	2.51
FL8	1.1690	1553.65	06Oct2006, 14:05	2.51
FL9	0.9170	656.15	06Oct2006, 14:40	2.04
J1	5.0070	3922.60	06Oct2006, 14:50	2.27

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
J10	2.8740	2144.62	06Oct2006, 14:40	2.17
J11	4.6410	3148.21	06Oct2006, 14:50	2.10
J12	19.0340	12611.63	06Oct2006, 15:15	2.24
J13	23.8210	2903.75	06Oct2006, 17:45	0.82
J14	24.9810	2243.64	06Oct2006, 18:35	0.89
J15	26.3030	2312.69	06Oct2006, 18:30	0.95
J16	28.1810	2493.25	06Oct2006, 15:50	1.03
J17	29.0910	2607.98	06Oct2006, 16:15	1.06
J2	3.9400	2892.29	06Oct2006, 14:50	2.37
J3	4.7360	3084.59	06Oct2006, 15:05	2.32
J4	9.7430	6881.47	06Oct2006, 14:55	2.29
J5	2.2010	2861.23	06Oct2006, 14:10	2.51
J6	3.1180	2875.80	06Oct2006, 14:55	2.37
J7	11.0950	7233.14	06Oct2006, 15:10	2.26
J8	14.2130	9964.14	06Oct2006, 15:05	2.28
J9	14.3930	9840.26	06Oct2006, 15:15	2.28
R0FL1	3.4190	2861.84	06Oct2006, 14:55	2.37
R0FL11	2.4260	1886.56	06Oct2006, 14:45	2.20
R0FL12	0.4480	575.49	06Oct2006, 14:05	2.01
R0FL3	3.4550	2622.96	06Oct2006, 14:55	2.37
R0FL4	0.4850	653.54	06Oct2006, 14:05	2.40
R0FL7	1.0320	1337.10	06Oct2006, 14:15	2.51
R0FL8	1.1690	1529.86	06Oct2006, 14:10	2.51
R0J10	2.8740	2078.04	06Oct2006, 15:00	2.17
R0J13	23.8210	2211.38	06Oct2006, 18:35	0.82
R0J15	26.3030	2270.44	06Oct2006, 19:15	0.95
R0J16	28.1810	2363.92	06Oct2006, 16:20	1.03
R0J2	3.9400	2830.65	06Oct2006, 15:10	2.37
R0J4	9.7430	6745.02	06Oct2006, 15:15	2.29
R0J5	2.2010	2275.80	06Oct2006, 15:00	2.51
R0J8	14.2130	9809.66	06Oct2006, 15:15	2.28

FLATO WASH SUBREACH DATA

Reach	Length (ft)	Qp (cfs)	Avg V (fps)	L/(V(min)*6)	Modified
ROFL1	9315	1700	6.99	4	
ROFL3	2700	1600	7.99	1	
ROFL4	1615	340	6.65	1	
ROFL7	2610	700	7.86	1	
ROFL8	2165	800	6.20	1	
ROFL11	3505	1100	6.59	1	
ROFL12	3875	320	4.60	2	
ROJ2	6790	1700	5.32	4	
ROJ4	8715	4100	6.46	4	
ROJ5	13035	1500	6.64	5	
ROJ8	4800	5800	8.33	2	
ROJ10	11200	1200	5.94	5	
ROJ13	15385	2100	4.29	10	**(1)**
ROJ15	12820	2100	6.21	6	
ROJ16	3680	2100	5.95	2	

(1) - Subreach assumed as one subreach

FLATO WASH ROUTING REACH DATA

Q (cfs)	R0FL1 Storage (Acre-feet)	R0FL3 Storage (Acre-feet)
200	14.4	2.1
400	23.4	3.7
600	31.4	5.3
800	39.2	6.7
1000	46.2	8.5
1200	53.5	10.6
1400	60.1	13.0
1600	66.1	15.3
1700	69.3	16.2
1800	72.3	17.3
2000	78.0	19.0
2200	84.0	20.7
2400	89.8	21.5

Q (cfs)	R0FL4 Storage (Acre-feet)
30	0.5
60	0.9
90	1.3
120	1.6
150	1.8
180	2.1
210	2.4
240	2.6
270	2.8
350	3.4
450	4.1
600	5.1

Q (cfs)	R0FL7 Storage (Acre-feet)	R0FL8 Storage (Acre-feet)
100	1.6	2.3
200	2.5	3.5
300	3.4	4.5
400	4.1	5.5
500	4.9	6.5
600	5.5	7.3
700	6.1	8.2
800	6.7	9.1
900	7.2	9.8
1000	7.7	10.5
1100	8.28	11.2
1200	8.91	11.9
1300	9.57	12.6

Q (cfs)	R0FL11 Storage (Acre-feet)
200	3.7
300	5.2
400	6.7
500	7.9
600	9.5
700	11.0
1000	14.9
1100	16.3
1200	17.3
1300	18.4
1400	19.5
1500	20.4
1600	21.4

Q (cfs)	R0FL12 Storage (Acre-feet)
25	0.9
50	1.6
75	2.2
100	2.9
125	3.5
150	4.1
175	4.6
200	5.1
250	5.9
300	7.0
350	7.8
400	8.6

Q (cfs)	R0J2 Storage (Acre-feet)
200	13.3
400	23.6
600	34.6
800	41.9
1000	48.7
1200	55.5
1400	62.4
1600	68.0
1700	72.2
1800	76.9
2000	84.2
2200	90.3
2400	96.0

FLATO WASH ROUTING REACH DATA

Q (cfs)	R0J4 Storage (Acre-feet)
400	29.3
800	48.7
1200	65.5
1600	80.1
2000	94.4
2400	108.8
2800	121.2
3300	135.5
3700	146.4
4100	158.2
4800	176.1
5400	191.2

Q (cfs)	R0J5 Storage (Acre-feet)
200	17.5
400	29.4
600	41.1
800	52.1
1000	63.0
1100	69.2
1200	74.6
1300	79.9
1400	85.2
1600	95.1
1800	104.3
2000	113.6
2200	126.9

Q (cfs)	R0J8 Storage (Acre-feet)
600	17.9
1200	29.2
1800	43.3
2400	55.2
3000	66.5
3600	78.1
4200	87.7
4800	97.1
5400	105.9
6000	114.7
6600	123.5
7200	133.5
7600	139.6

Q (cfs)	R0J10 Storage (Acre-feet)
200	19.7
300	24.7
400	29.1
500	33.2
600	37.4
700	41.3
1000	52.0
1100	55.8
1200	59.0
1300	63.9
1400	67.2
1500	70.8
1600	73.9
1700	77.7

Q (cfs)	R0J13 Storage (Acre-feet)	R0J15 Storage (Acre-feet)	R0J16 Storage (Acre-feet)
400.0	58.6	38.6	14.9
600.0	81.3	53.2	20.1
800.0	102.4	66.8	27.3
1000.0	122.5	79.5	36.6
1200.0	141.5	91.7	45.8
1800.0	196.0	128.3	72.1
2000.0	213.2	139.7	79.8
2400.0	244.7	162.4	94.6
2600.0	259.8	173.9	104.0
2900.0	282.0	191.0	113.1

FLATO WATERSHED
TIME OF CONCENTRATION DATA

DA	Ovlnd S	Ovlnd n	SC L	SC S	Chnl A	Chnl P	Chnl L	Chnl S	Chnl n	A/P	Reach	Tc	T(lag)
FL1	0.250	0.4	545	0.244	8.6	8.7	2420	0.069	0.060	1.0	1		
					41.2	54.3	5190	0.035	0.060	0.8	2		
					65.2	90.4	4540	0.019	0.050	0.7	3		
					77.0	102.4	4930	0.013	0.050	0.8	4		
					53.7	36.5	4600	0.012	0.035	1.5	5	103.8	62.3
FL2	0.240	0.3	2040	0.040	14.1	15.0	3660	0.023	0.050	0.9	1		
					9.9	11.6	2720	0.019	0.050	0.9	2		
					9.5	10.2	3330	0.023	0.045	0.9	3		
					105.0	139.2	3180	0.011	0.045	0.8	4		
					38.3	43.7	4550	0.014	0.035	0.9	5	91.7	55.0
FL3	0.600	0.4	2300	0.391	11.0	10.6	2720	0.125	0.060	1.0	1		
					22.0	19.0	5680	0.063	0.060	1.2	2		
					22.1	19.1	4950	0.040	0.060	1.2	3		
					31.8	27.7	6125	0.026	0.050	1.1	4		
					35.0	35.1	5875	0.022	0.045	1.0	5		
					98.8	125.2	9000	0.023	0.050	0.8	6	122.7	73.6
FL4	0.070	0.3	850	0.055	12.0	14.8	3000	0.029	0.050	0.8	1		
					15.0	17.3	3300	0.015	0.050	0.9	2		
					36.6	49.1	2900	0.023	0.045	0.7	3	57.4	34.4
FL5	0.110	0.3	1620	0.035	6.8	9.1	1930	0.021	0.050	0.7	1		
					9.0	9.1	2920	0.020	0.045	1.0	2		
					17.6	17.0	2860	0.016	0.045	1.0	3		
					24.0	30.3	2640	0.018	0.035	0.8	4	59.2	35.5
FL6	0.030	0.15	1735	0.026	9.5	9.9	3150	0.023	0.050	1.0	1		
					10.1	13.9	3400	0.016	0.045	0.7	2		
					26.7	40.9	5000	0.012	0.035	0.7	3	73.8	44.3
FL7	0.200	0.4	1140	0.144	8.2	10.1	4200	0.047	0.060	0.8	1		
					27.8	31.5	3900	0.018	0.045	0.9	2		
					31.6	33.7	5350	0.021	0.045	0.9	3	63.9	38.3
FL8	0.400	0.4	970	0.194	17.5	18.4	2850	0.055	0.060	1.0	1		
					32.4	46.8	2250	0.037	0.050	0.7	2		
					16.9	16.9	4980	0.041	0.050	1.0	3		
					16.7	18.8	3750	0.030	0.045	0.9	4		
					8.8	8.8	3130	0.026	0.050	1.0	5	63.5	38.1
FL9	0.040	0.3	1750	0.047	14.4	15.7	2000	0.019	0.060	0.9	1		
					14.1	18.1	3800	0.022	0.050	0.8	2		
					29.2	34.8	3400	0.017	0.045	0.8	3		
					23.7	28.5	5900	0.018	0.045	0.8	4		
					36.6	37.5	4450	0.017	0.045	1.0	5	108.8	65.3
FL10	0.020	0.15	640	0.025	35.6	55.1	4400	0.013	0.035	0.6	1	36.5	21.9

FLATO WATERSHED
TIME OF CONCENTRATION DATA

DA	Ovlnd S	Ovlnd n	SC L	SC S	Chnl A	Chnl P	Chnl L	Chnl S	Chnl n	A/P	Reach	Tc	T(lag)
FL11	0.400	0.4	1800	0.209	31.4	31.3	1875	0.088	0.060	1.0	1		
					71.1	62.6	6525	0.050	0.060	1.1	2		
					16.8	39.1	4470	0.031	0.050	0.4	3		
					39.7	43.9	4170	0.029	0.050	0.9	4		
					57.2	55.4	7795	0.028	0.050	1.0	5		
					23.6	25.8	2000	0.027	0.050	0.9	6	106.6	64.0
FL12	0.040	0.30	1550	0.046	8.7	15.7	3200	0.032	0.045	0.6	1		
					33.7	33.8	2200	0.047	0.045	1.0	2	41.9	25.1
FL13	0.050	0.40	1220	0.039	38.1	32.6	3780	0.024	0.045	1.2	1		
					25.3	24.7	2250	0.019	0.045	1.0	2		
					14.8	18.9	3380	0.020	0.045	0.8	3		
					31.2	25.6	4060	0.019	0.045	1.2	4		
					58	80.7	3900	0.014	0.045	0.7	5	91.7	55.0
FL18	0.010	0.15	1100	0.013	7.2	32.2	1350	0.010	0.045	0.2	1		
					16.8	27	5150	0.008	0.050	0.6	2		
					79.3	138.6	3800	0.009	0.045	0.6	3		
					43.3	35.8	5650	0.007	0.045	1.2	4	147.9	88.7
FL19	0.020	0.15	3000	0.011	24.4	40.4	6840	0.008	0.050	0.6	1		
					30.9	39.2	4180	0.009	0.045	0.8	2		
					84	186.1	4040	0.007	0.050	0.5	3	173.4	104.0
FL20	0.020	0.15	3000	0.012	12	48.4	6000	0.009	0.050	0.2	1		
					51.6	56.1	3130	0.006	0.035	0.9	2		
					35.9	29.2	3600	0.006	0.045	1.2	3	167.1	100.3
FL21	0.020	0.15	2320	0.012	33	82.5	6200	0.009	0.045	0.4	1		
					29	105	2900	0.007	0.040	0.3	2		
					34.9	30	2700	0.006	0.035	1.2	3	143.5	86.1
FLO2D AREAS													
FL14	0.020	0.15	1580	0.023	21.1	31.2	3570	0.012	0.035	0.7	1		
					33.8	37	5350	0.013	0.045	0.9	2		
					31	70.6	4500	0.012	0.045	0.4	3	100.3	60.2
FL15	0.020	0.15	2820	0.006	11.3	16.6	3060	0.015	0.045	0.7	1		
					25.8	40.8	3820	0.014	0.045	0.6	2		
					28.1	47	6320	0.016	0.045	0.6	3		
					27.6	50.4	4790	0.008	0.045	0.5	4		
					13.5	36.9	3500	0.009	0.045	0.4	5	186.2	111.7
FL16	0.015	0.15	3210	0.015	12.4	33.4	4360	0.015	0.045	0.4	1		
					30	83.1	3650	0.014	0.050	0.4	2		
					12.2	42.4	5100	0.010	0.050	0.3	3		
					32.9	74.9	3550	0.009	0.045	0.4	4	207.4	124.4
FL17	0.010	0.15	3350	0.012	21.6	24.4	2800	0.008	0.045	0.9	1		
					28.5	42.3	6250	0.009	0.045	0.7	2	107.8	64.7

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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL1

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .25 ft/ft, n = .4, P(2yr/24hr) = 2.11 in
     Travel Time = 9.6 minutes

 Segment 2: CONCENTRATED FLOW
     L = 545 ft, S = .244 ft/ft, UNPAVED surface
     Travel time = 1.1 minutes

 Segment 3: CHANNEL FLOW
     A = 8.6 ft^2, P = 7.7 ft, L = 2420 ft, S = .069 ft/ft, n = .06
     Travel Time = 5.7 minutes

 Segment 4: CHANNEL FLOW
     A = 41.2 ft^2, P = 54.3 ft, L = 5190 ft, S = .035 ft/ft, n = .06
     Travel Time = 22.4 minutes

 Segment 5: CHANNEL FLOW
     A = 65.2 ft^2, P = 90.4 ft, L = 4540 ft, S = .019 ft/ft, n = .05
     Travel Time = 22.9 minutes

 Segment 6: CHANNEL FLOW
     A = 77 ft^2, P = 102.4 ft, L = 4930 ft, S = .013 ft/ft, n = .05
     Travel Time = 29.2 minutes

 Segment 7: CHANNEL FLOW
     A = 53.7 ft^2, P = 36.5 ft, L = 4600 ft, S = .012 ft/ft, n = .035
     Travel Time = 12.7 minutes

TOTAL TRAVEL TIME = 103.8 min.
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*********************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*********************************************************************

SUMMARY for FL2

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .24 ft/ft, n = .3, P(2yr/24hr) = 2.11 in
     Travel Time = 7.8 minutes

 Segment 2: CONCENTRATED FLOW
     L = 2040 ft, S = .04 ft/ft, UNPAVED surface
     Travel time = 10.5 minutes

 Segment 3: CHANNEL FLOW
     A = 14.1 ft^2, P = 15 ft, L = 3660 ft, S = .023 ft/ft, n = .05
     Travel Time = 14.1 minutes

 Segment 4: CHANNEL FLOW
     A = 9.9 ft^2, P = 11.6 ft, L = 2720 ft, S = .019 ft/ft, n = .05
     Travel Time = 12.3 minutes

 Segment 5: CHANNEL FLOW
     A = 9.5 ft^2, P = 10.2 ft, L = 3330 ft, S = .023 ft/ft, n = .045
     Travel Time = 11.6 minutes

 Segment 6: CHANNEL FLOW
     A = 105 ft^2, P = 139.2 ft, L = 3180 ft, S = .011 ft/ft, n = .045
     Travel Time = 18.4 minutes

 Segment 7: CHANNEL FLOW
     A = 36.3 ft^2, P = 43.7 ft, L = 4550 ft, S = .014 ft/ft, n = .035
     Travel Time = 17 minutes

TOTAL TRAVEL TIME = 91.7 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL3

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .6 ft/ft, n = .4, P(2yr/24hr) = 2.11 in
     Travel Time = 6.8 minutes

 Segment 2: CONCENTRATED FLOW
     L = 2300 ft, S = .39 ft/ft, UNPAVED surface
     Travel time = 3.8 minutes

 Segment 3: CHANNEL FLOW
     A = 11 ft^2, P = 10.6 ft, L = 2720 ft, S = .125 ft/ft, n = .06
     Travel Time = 5 minutes

 Segment 4: CHANNEL FLOW
     A = 22 ft^2, P = 19 ft, L = 5680 ft, S = .063 ft/ft, n = .06
     Travel Time = 13.8 minutes

 Segment 5: CHANNEL FLOW
     A = 22.1 ft^2, P = 19.1 ft, L = 4950 ft, S = .04 ft/ft, n = .06
     Travel Time = 15.1 minutes

 Segment 6: CHANNEL FLOW
     A = 31.8 ft^2, P = 27.7 ft, L = 6125 ft, S = .026 ft/ft, n = .05
     Travel Time = 19.4 minutes

 Segment 7: CHANNEL FLOW
     A = 35 ft^2, P = 35.1 ft, L = 5875 ft, S = .022 ft/ft, n = .045
     Travel Time = 20 minutes

 Segment 8: CHANNEL FLOW
     A = 98.8 ft^2, P = 125.2 ft, L = 9000 ft, S = .023 ft/ft, n = .05
     Travel Time = 38.9 minutes

TOTAL TRAVEL TIME = 122.7 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL4

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .07 ft/ft, n = .3, P(2yr/24hr) = 2.11 in
     Travel Time = 12.7 minutes

 Segment 2: CONCENTRATED FLOW
     L = 850 ft, S = .055 ft/ft, UNPAVED surface
     Travel time = 3.7 minutes

 Segment 3: CHANNEL FLOW
     A = 12 ft^2, P = 14.8 ft, L = 3000 ft, S = .029 ft/ft, n = .05
     Travel Time = 11.3 minutes

 Segment 4: CHANNEL FLOW
     A = 15 ft^2, P = 17.3 ft, L = 3300 ft, S = .015 ft/ft, n = .05
     Travel Time = 16.6 minutes

 Segment 5: CHANNEL FLOW
     A = 36.6 ft^2, P = 49.1 ft, L = 2900 ft, S = .023 ft/ft, n = .05
     Travel Time = 13 minutes

TOTAL TRAVEL TIME = 57.4 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
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SUMMARY for FL5

Segment 1: OVERLAND FLOW
L = 100 ft, S = .11 ft/ft, n = .3, P(2yr/24hr) = 2.11 in
Travel Time = 10.6 minutes

Segment 2: CONCENTRATED FLOW
L = 1620 ft, S = .035 ft/ft, UNPAVED surface
Travel time = 8.9 minutes

Segment 3: CHANNEL FLOW
A = 6.8 ft^2, P = 9.1 ft, L = 1930 ft, S = .021 ft/ft, n = .05
Travel Time = 9 minutes

Segment 4: CHANNEL FLOW
A = 9 ft^2, P = 9.1 ft, L = 2920 ft, S = .02 ft/ft, n = .045
Travel Time = 10.5 minutes

Segment 5: CHANNEL FLOW
A = 17.6 ft^2, P = 17 ft, L = 2860 ft, S = .016 ft/ft, n = .045
Travel Time = 11.1 minutes

Segment 6: CHANNEL FLOW
A = 24 ft^2, P = 30.3 ft, L = 2640 ft, S = .018 ft/ft, n = .035
Travel Time = 9 minutes

TOTAL TRAVEL TIME = 59.2 min.

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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL6

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .03 ft/ft, n = .15, P(2yr/24hr) = 2.11 in
     Travel Time = 10.3 minutes

 Segment 2: CONCENTRATED FLOW
     L = 1735 ft, S = .026 ft/ft, UNPAVED surface
     Travel time = 11.1 minutes

 Segment 3: CHANNEL FLOW
     A = 9.5 ft^2, P = 9.9 ft, L = 3150 ft, S = .023 ft/ft, n = .05
     Travel Time = 11.9 minutes

 Segment 4: CHANNEL FLOW
     A = 10.1 ft^2, P = 13.9 ft, L = 3400 ft, S = .016 ft/ft, n = .045
     Travel Time = 16.7 minutes

 Segment 5: CHANNEL FLOW
     A = 26.7 ft^2, P = 40.9 ft, L = 5000 ft, S = .012 ft/ft, n = .035
     Travel Time = 23.7 minutes

TOTAL TRAVEL TIME = 73.8 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL7

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .2 ft/ft, n = .4, P(2yr/24hr) = 2.11 in
     Travel Time = 10.5 minutes

 Segment 2: CONCENTRATED FLOW
     L = 1140 ft, S = .144 ft/ft, UNPAVED surface
     Travel time = 3.1 minutes

 Segment 3: CHANNEL FLOW
     A = 8.2 ft^2, P = 10.1 ft, L = 4200 ft, S = .047 ft/ft, n = .06
     Travel Time = 14.9 minutes

 Segment 4: CHANNEL FLOW
     A = 27.8 ft^2, P = 31.5 ft, L = 3900 ft, S = .018 ft/ft, n = .045
     Travel Time = 15.9 minutes

 Segment 5: CHANNEL FLOW
     A = 31.6 ft^2, P = 33.7 ft, L = 5350 ft, S = .021 ft/ft, n = .045
     Travel Time = 19.4 minutes

TOTAL TRAVEL TIME = 63.9 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL8

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .4 ft/ft, n = .4, P(2yr/24hr) = 2.11 in
     Travel Time = 8 minutes

 Segment 2: CONCENTRATED FLOW
     L = 970 ft, S = .194 ft/ft, UNPAVED surface
     Travel time = 2.3 minutes

 Segment 3: CHANNEL FLOW
     A = 17.5 ft^2, P = 18.4 ft, L = 2850 ft, S = .055 ft/ft, n = .06
     Travel Time = 8.4 minutes

 Segment 4: CHANNEL FLOW
     A = 32.4 ft^2, P = 46.8 ft, L = 2250 ft, S = .037 ft/ft, n = .05
     Travel Time = 8.4 minutes

 Segment 5: CHANNEL FLOW
     A = 16.9 ft^2, P = 16.9 ft, L = 4980 ft, S = .041 ft/ft, n = .05
     Travel Time = 13.8 minutes

 Segment 6: CHANNEL FLOW
     A = 16.7 ft^2, P = 18.8 ft, L = 3750 ft, S = .03 ft/ft, n = .045
     Travel Time = 11.8 minutes

 Segment 7: CHANNEL FLOW
     A = 8.8 ft^2, P = 8.8 ft, L = 3130 ft, S = .026 ft/ft, n = .05
     Travel Time = 10.9 minutes

TOTAL TRAVEL TIME = 63.5 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL9

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .04 ft/ft, n = .3, P(2yr/24hr) = 2.11 in
     Travel Time = 15.9 minutes

 Segment 2: CONCENTRATED FLOW
     L = 1750 ft, S = .047 ft/ft, UNPAVED surface
     Travel time = 8.3 minutes

 Segment 3: CHANNEL FLOW
     A = 14.4 ft^2, P = 15.7 ft, L = 2000 ft, S = .019 ft/ft, n = .06
     Travel Time = 10.3 minutes

 Segment 4: CHANNEL FLOW
     A = 14.1 ft^2, P = 18.1 ft, L = 3800 ft, S = .022 ft/ft, n = .05
     Travel Time = 16.9 minutes

 Segment 5: CHANNEL FLOW
     A = 29.2 ft^2, P = 34.8 ft, L = 3400 ft, S = .017 ft/ft, n = .045
     Travel Time = 14.8 minutes

 Segment 6: CHANNEL FLOW
     A = 23.7 ft^2, P = 28.5 ft, L = 5900 ft, S = .018 ft/ft, n = .045
     Travel Time = 25 minutes

 Segment 7: CHANNEL FLOW
     A = 36.6 ft^2, P = 37.5 ft, L = 4450 ft, S = .017 ft/ft, n = .045
     Travel Time = 17.5 minutes

TOTAL TRAVEL TIME = 108.8 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL10

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .02 ft/ft, n = .15, P(2yr/24hr) = 2.11 in
     Travel Time = 12.1 minutes

 Segment 2: CONCENTRATED FLOW
     L = 640 ft, S = .025 ft/ft, UNPAVED surface
     Travel time = 4.2 minutes

 Segment 3: CHANNEL FLOW
     A = 35.6 ft^2, P = 55.1 ft, L = 4400 ft, S = .013 ft/ft, n = .035
     Travel Time = 20.2 minutes

TOTAL TRAVEL TIME = 36.5 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL11

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .4 ft/ft, n = .4, P(2yr/24hr) = 2.11 in
     Travel Time = 8 minutes

 Segment 2: CONCENTRATED FLOW
     L = 1800 ft, S = .209 ft/ft, UNPAVED surface
     Travel time = 4.1 minutes

 Segment 3: CHANNEL FLOW
     A = 31.4 ft^2, P = 31.3 ft, L = 1875 ft, S = .088 ft/ft, n = .06
     Travel Time = 4.2 minutes

 Segment 4: CHANNEL FLOW
     A = 71.1 ft^2, P = 62.6 ft, L = 6525 ft, S = .05 ft/ft, n = .06
     Travel Time = 18 minutes

 Segment 5: CHANNEL FLOW
     A = 16.8 ft^2, P = 39.1 ft, L = 4470 ft, S = .031 ft/ft, n = .05
     Travel Time = 24.9 minutes

 Segment 6: CHANNEL FLOW
     A = 39.7 ft^2, P = 43.9 ft, L = 4170 ft, S = .029 ft/ft, n = .05
     Travel Time = 14.6 minutes

 Segment 7: CHANNEL FLOW
     A = 57.2 ft^2, P = 55.4 ft, L = 7795 ft, S = .028 ft/ft, n = .05
     Travel Time = 25.5 minutes

 Segment 8: CHANNEL FLOW
     A = 23.6 ft^2, P = 25.8 ft, L = 2000 ft, S = .027 ft/ft, n = .05
     Travel Time = 7.2 minutes

TOTAL TRAVEL TIME = 106.6 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL12

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .04 ft/ft, n = .3, P(2yr/24hr) = 2.11 in
     Travel Time = 15.9 minutes

 Segment 2: CONCENTRATED FLOW
     L = 1550 ft, S = .046 ft/ft, UNPAVED surface
     Travel time = 7.5 minutes

 Segment 3: CHANNEL FLOW
     A = 8.7 ft^2, P = 15.7 ft, L = 3200 ft, S = .032 ft/ft, n = .045
     Travel Time = 13.3 minutes

 Segment 4: CHANNEL FLOW
     A = 33.7 ft^2, P = 33.8 ft, L = 2200 ft, S = .047 ft/ft, n = .045
     Travel Time = 5.1 minutes

TOTAL TRAVEL TIME = 41.9 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL13

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .05 ft/ft, n = .4, P(2yr/24hr) = 2.11 in
     Travel Time = 18.3 minutes

 Segment 2: CONCENTRATED FLOW
     L = 1220 ft, S = .039 ft/ft, UNPAVED surface
     Travel time = 6.4 minutes

 Segment 3: CHANNEL FLOW
     A = 38.1 ft^2, P = 32.6 ft, L = 3780 ft, S = .024 ft/ft, n = .045
     Travel Time = 11.1 minutes

 Segment 4: CHANNEL FLOW
     A = 25.3 ft^2, P = 24.7 ft, L = 2250 ft, S = .019 ft/ft, n = .045
     Travel Time = 8.1 minutes

 Segment 5: CHANNEL FLOW
     A = 14.8 ft^2, P = 18.9 ft, L = 3380 ft, S = .02 ft/ft, n = .045
     Travel Time = 14.2 minutes

 Segment 6: CHANNEL FLOW
     A = 31.2 ft^2, P = 25.6 ft, L = 4060 ft, S = .019 ft/ft, n = .045
     Travel Time = 13 minutes

 Segment 7: CHANNEL FLOW
     A = 58 ft^2, P = 80.7 ft, L = 3900 ft, S = .014 ft/ft, n = .045
     Travel Time = 20.7 minutes

TOTAL TRAVEL TIME = 91.7 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
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SUMMARY for FL14

Segment 1: OVERLAND FLOW
L = 100 ft, S = .02 ft/ft, n = .15, P(2yr/24hr) = 2.11 in
Travel Time = 12.1 minutes

Segment 2: CONCENTRATED FLOW
L = 1580 ft, S = .023 ft/ft, UNPAVED surface
Travel time = 10.8 minutes

Segment 3: CHANNEL FLOW
A = 21.1 ft^2, P = 31.2 ft, L = 3570 ft, S = .012 ft/ft, n = .035
Travel Time = 16.6 minutes

Segment 4: CHANNEL FLOW
A = 33.8 ft^2, P = 37 ft, L = 5350 ft, S = .013 ft/ft, n = .045
Travel Time = 25.1 minutes

Segment 5: CHANNEL FLOW
A = 31 ft^2, P = 70.6 ft, L = 4500 ft, S = .012 ft/ft, n = .045
Travel Time = 35.8 minutes

TOTAL TRAVEL TIME = 100.3 min.

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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL15

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .02 ft/ft, n = .15, P(2yr/24hr) = 2.11 in
     Travel Time = 12.1 minutes

 Segment 2: CONCENTRATED FLOW
     L = 2820 ft, S = .015 ft/ft, UNPAVED surface
     Travel time = 23.8 minutes

 Segment 3: CHANNEL FLOW
     A = 11.3 ft^2, P = 16.6 ft, L = 3060 ft, S = .015 ft/ft, n = .045
     Travel Time = 16.3 minutes

 Segment 4: CHANNEL FLOW
     A = 25.8 ft^2, P = 40.8 ft, L = 3820 ft, S = .014 ft/ft, n = .045
     Travel Time = 22.1 minutes

 Segment 5: CHANNEL FLOW
     A = 28.1 ft^2, P = 47 ft, L = 6320 ft, S = .016 ft/ft, n = .045
     Travel Time = 35.4 minutes

 Segment 6: CHANNEL FLOW
     A = 27.6 ft^2, P = 50.4 ft, L = 4790 ft, S = .008 ft/ft, n = .045
     Travel Time = 40.3 minutes

 Segment 7: CHANNEL FLOW
     A = 13.5 ft^2, P = 36.9 ft, L = 3500 ft, S = .009 ft/ft, n = .045
     Travel Time = 36.3 minutes

TOTAL TRAVEL TIME = 186.2 min.
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*********************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*********************************************************************

SUMMARY for FL16

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .015 ft/ft, n = .15, P(2yr/24hr) = 2.11 in
     Travel Time = 13.5 minutes

 Segment 2: CONCENTRATED FLOW
     L = 3210 ft, S = .015 ft/ft, UNPAVED surface
     Travel time = 27.1 minutes

 Segment 3: CHANNEL FLOW
     A = 12.4 ft^2, P = 33.4 ft, L = 4360 ft, S = .015 ft/ft, n = .045
     Travel Time = 34.7 minutes

 Segment 4: CHANNEL FLOW
     A = 30 ft^2, P = 83.1 ft, L = 3650 ft, S = .014 ft/ft, n = .05
     Travel Time = 34 minutes

 Segment 5: CHANNEL FLOW
     A = 12.2 ft^2, P = 42.4 ft, L = 5100 ft, S = .01 ft/ft, n = .05
     Travel Time = 65.5 minutes

 Segment 6: CHANNEL FLOW
     A = 32.9 ft^2, P = 74.9 ft, L = 3550 ft, S = .009 ft/ft, n = .045
     Travel Time = 32.6 minutes

TOTAL TRAVEL TIME = 207.4 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL17

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .01 ft/ft, n = .15, P(2yr/24hr) = 2.11 in
     Travel Time = 15.9 minutes

 Segment 2: CONCENTRATED FLOW
     L = 3350 ft, S = .012 ft/ft, UNPAVED surface
     Travel time = 31.6 minutes

 Segment 3: CHANNEL FLOW
     A = 21.6 ft^2, P = 24.4 ft, L = 2800 ft, S = .008 ft/ft, n = .045
     Travel Time = 17.1 minutes

 Segment 4: CHANNEL FLOW
     A = 28.5 ft^2, P = 42.3 ft, L = 6250 ft, S = .009 ft/ft, n = .045
     Travel Time = 43.2 minutes

TOTAL TRAVEL TIME = 107.8 min.
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*****************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
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SUMMARY for FL18

Segment 1: OVERLAND FLOW
L = 100 ft, S = .01 ft/ft, n = .15, P(2yr/24hr) = 2.11 in
Travel Time = 15.9 minutes

Segment 2: CONCENTRATED FLOW
L = 1100 ft, S = .0125 ft/ft, UNPAVED surface
Travel time = 10.2 minutes

Segment 3: CHANNEL FLOW
A = 7.2 ft^2, P = 32.2 ft, L = 1350 ft, S = .01 ft/ft, n = .045
Travel Time = 18.5 minutes

Segment 4: CHANNEL FLOW
A = 16.8 ft^2, P = 27 ft, L = 5150 ft, S = .008 ft/ft, n = .05
Travel Time = 44.2 minutes

Segment 5: CHANNEL FLOW
A = 79.3 ft^2, P = 138.6 ft, L = 3800 ft, S = .009 ft/ft, n = .045
Travel Time = 29.3 minutes

Segment 6: CHANNEL FLOW
A = 43.3 ft^2, P = 35.8 ft, L = 5650 ft, S = .007 ft/ft, n = .045
Travel Time = 29.9 minutes

TOTAL TRAVEL TIME = 147.9 min.

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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL19

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .02 ft/ft, n = .15, P(2yr/24hr) = 2.11 in
     Travel Time = 12.1 minutes

 Segment 2: CONCENTRATED FLOW
     L = 3000 ft, S = .011 ft/ft, UNPAVED surface
     Travel time = 29.5 minutes

 Segment 3: CHANNEL FLOW
     A = 24.4 ft^2, P = 40.4 ft, L = 6840 ft, S = .008 ft/ft, n = .05
     Travel Time = 59.9 minutes

 Segment 4: CHANNEL FLOW
     A = 30.9 ft^2, P = 39.2 ft, L = 4180 ft, S = .009 ft/ft, n = .045
     Travel Time = 26 minutes

 Segment 5: CHANNEL FLOW
     A = 84 ft^2, P = 186.1 ft, L = 4040 ft, S = .007 ft/ft, n = .05
     Travel Time = 45.9 minutes

TOTAL TRAVEL TIME = 173.4 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL20

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .02 ft/ft, n = .15, P(2yr/24hr) = 2.11 in
     Travel Time = 12.1 minutes

 Segment 2: CONCENTRATED FLOW
     L = 3000 ft, S = .012 ft/ft, UNPAVED surface
     Travel time = 28.3 minutes

 Segment 3: CHANNEL FLOW
     A = 12 ft^2, P = 48.4 ft, L = 6000 ft, S = .009 ft/ft, n = .05
     Travel Time = 89.7 minutes

 Segment 4: CHANNEL FLOW
     A = 51.6 ft^2, P = 56.1 ft, L = 3130 ft, S = .006 ft/ft, n = .035
     Travel Time = 16.7 minutes

 Segment 5: CHANNEL FLOW
     A = 35.9 ft^2, P = 29.2 ft, L = 3600 ft, S = .006 ft/ft, n = .045
     Travel Time = 20.4 minutes

TOTAL TRAVEL TIME = 167.1 min.
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*******************************************************************
* TRAVEL TIME CALCULATIONS - SCS Segmental Approach, TR-55 (1986) *
*******************************************************************

SUMMARY for FL21

Segment 1: OVERLAND FLOW
     L = 100 ft, S = .02 ft/ft, n = .15, P(2yr/24hr) = 2.11 in
     Travel Time = 12.1 minutes

 Segment 2: CONCENTRATED FLOW
     L = 2320 ft, S = .012 ft/ft, UNPAVED surface
     Travel time = 21.9 minutes

 Segment 3: CHANNEL FLOW
     A = 33 ft^2, P = 82.5 ft, L = 6200 ft, S = .009 ft/ft, n = .045
     Travel Time = 60.6 minutes

 Segment 4: CHANNEL FLOW
     A = 29 ft^2, P = 105 ft, L = 2900 ft, S = .007 ft/ft, n = .04
     Travel Time = 36.6 minutes

 Segment 5: CHANNEL FLOW
     A = 34.9 ft^2, P = 30 ft, L = 2700 ft, S = .006 ft/ft, n = .035
     Travel Time = 12.3 minutes

TOTAL TRAVEL TIME = 143.5 min.
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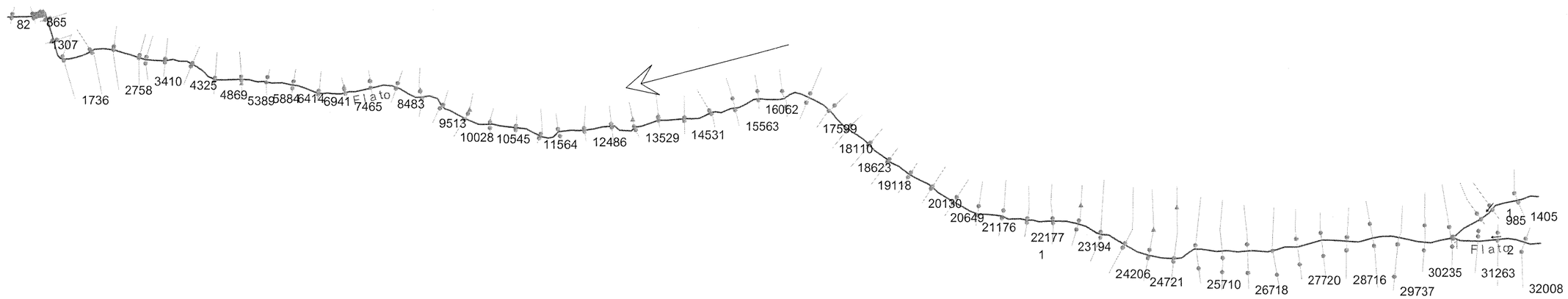


FLATO WASH
DOWNSTREAM OF FLOOD AREA
HEC-RAS SCHEMATIC

HEC-RAS Plan: flato Profile: PF 1

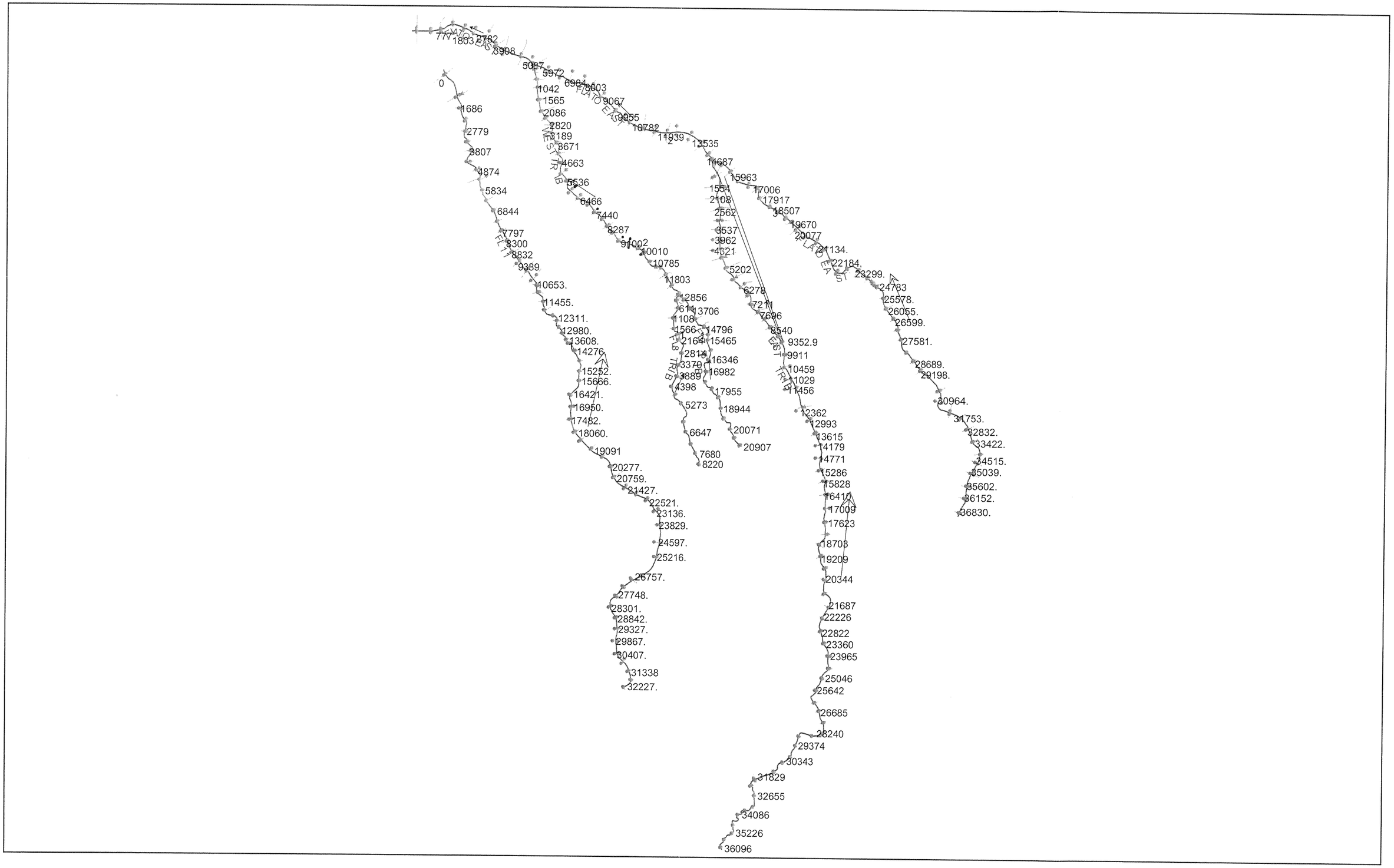
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Flatotrib	1	1405	PF 1	600.00	2838.94	2840.92	2840.92	2841.27	0.036051	4.79	125.38	187.83	1.03
Flatotrib	1	985	PF 1	600.00	2833.59	2836.73	2836.25	2836.85	0.004669	3.00	266.72	421.64	0.43
Flatotrib	1	650	PF 1	600.00	2831.85	2833.51	2833.51	2833.78	0.024985	4.48	154.47	305.33	0.89
Flato	2	32008	PF 1	1525.00	2838.20	2840.45	2840.45	2840.85	0.028311	5.30	307.18	414.54	0.97
Flato	2	31658	PF 1	1525.00	2833.25	2836.39		2836.55	0.004680	3.58	542.30	544.96	0.45
Flato	2	31263	PF 1	1525.00	2831.14	2832.74	2832.68	2832.97	0.020404	4.74	411.86	636.14	0.83
Flato	1	30763	PF 1	2100.00	2825.80	2828.59		2828.71	0.005334	2.98	806.08	784.95	0.45
Flato	1	30235	PF 1	2100.00	2822.91	2824.39	2824.16	2824.55	0.013882	3.15	656.29	805.22	0.60
Flato	1	29737	PF 1	2100.00	2818.78	2820.44	2819.93	2820.52	0.005309	2.39	956.65	1081.96	0.39
Flato	1	29229	PF 1	2100.00	2815.61	2816.95	2816.69	2817.04	0.009472	2.66	875.71	1333.45	0.50
Flato	1	28716	PF 1	2100.00	2811.41	2813.11		2813.19	0.005824	2.41	955.44	1148.65	0.41
Flato	1	28224	PF 1	2100.00	2807.27	2808.84	2808.66	2809.00	0.013677	3.44	692.22	1071.17	0.66
Flato	1	27720	PF 1	2100.00	2803.41	2805.17	2804.76	2805.24	0.004673	2.37	979.59	1088.50	0.40
Flato	1	27217	PF 1	2100.00	2799.48	2800.93	2800.84	2801.10	0.021050	3.65	636.65	1179.27	0.79
Flato	1	26718	PF 1	2100.00	2794.74	2796.45		2796.52	0.004780	1.90	1016.88	1276.45	0.38
Flato	1	26224	PF 1	2100.00	2790.71	2791.92	2791.80	2792.09	0.022148	3.50	639.06	1243.26	0.80
Flato	1	25710	PF 1	2100.00	2784.00	2787.60	2786.66	2787.70	0.004994	2.93	905.94	1089.13	0.44
Flato	1	25218	PF 1	2100.00	2780.09	2784.02	2784.02	2784.33	0.010671	6.00	613.72	951.43	0.69
Flato	1	24721	PF 1	2100.00	2775.32	2779.33	2778.66	2779.61	0.006325	4.61	541.30	391.14	0.53
Flato	1	24206	PF 1	2100.00	2771.88	2775.20	2774.96	2775.64	0.010401	6.07	461.36	411.72	0.69
Flato	1	23696	PF 1	2100.00	2767.19	2771.18	2770.57	2771.54	0.006168	5.26	524.91	489.80	0.54
Flato	1	23194	PF 1	2100.00	2763.68	2767.42	2766.99	2767.80	0.009262	5.11	448.36	329.80	0.63
Flato	1	22697	PF 1	2100.00	2759.24	2763.00	2762.63	2763.22	0.008265	4.65	610.99	577.37	0.59
Flato	1	22177	PF 1	2100.00	2753.55	2758.33	2758.33	2758.82	0.009477	6.45	486.96	521.89	0.67
Flato	1	21668	PF 1	2100.00	2749.69	2754.74	2753.99	2754.93	0.004523	3.92	652.70	425.31	0.45
Flato	1	21176	PF 1	2100.00	2745.59	2749.67	2749.67	2750.33	0.028340	6.99	330.34	299.61	1.03
Flato	1	20649	PF 1	2100.00	2739.33	2745.21		2745.54	0.004103	4.62	468.66	196.25	0.45
Flato	1	20130	PF 1	2100.00	2738.64	2742.49	2742.15	2742.75	0.007196	5.46	574.74	431.19	0.58
Flato	1	19622	PF 1	2100.00	2734.52	2738.77	2738.05	2739.22	0.006673	5.61	445.75	290.80	0.57
Flato	1	19118	PF 1	2100.00	2731.07	2736.01		2736.26	0.005003	5.01	629.80	448.60	0.50
Flato	1	18623	PF 1	2100.00	2728.37	2732.60		2732.95	0.009112	5.91	514.70	440.35	0.65
Flato	1	18110	PF 1	2100.00	2726.40	2729.39		2729.55	0.004924	3.74	686.54	478.49	0.46
Flato	1	17599	PF 1	2100.00	2723.96	2726.14		2726.33	0.008472	3.12	616.16	540.50	0.54
Flato	1	17113	PF 1	2100.00	2721.48	2723.40	2722.76	2723.49	0.004572	2.45	851.10	667.43	0.37
Flato	1	16601	PF 1	2100.00	2718.82	2720.57	2720.09	2720.68	0.005963	2.40	812.49	759.35	0.44
Flato	1	16062	PF 1	2100.00	2715.06	2717.52		2717.65	0.005826	2.87	766.28	641.57	0.46
Flato	1	15563	PF 1	2100.00	2711.54	2713.87	2713.48	2714.03	0.008932	3.67	671.53	666.02	0.57
Flato	1	15069	PF 1	2100.00	2706.78	2710.16	2709.74	2710.29	0.006002	3.68	760.50	729.18	0.49
Flato	1	14531	PF 1	2100.00	2697.07	2705.36	2703.96	2706.48	0.009325	8.49	253.35	96.67	0.70
Flato	1	14022	PF 1	2100.00	2692.69	2701.13	2699.55	2702.11	0.007796	8.00	270.74	230.79	0.64

FLATO WASH DOWNSTREAM
EXISTING CONDITIONS
1/2

HEC-RAS Plan: flato Profile: PF 1 (Continued)

River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Flato	1	13529	PF 1	2100.00	2689.21	2697.47	2695.82	2698.40	0.007224	7.73	271.57	120.13	0.62
Flato	1	13022	PF 1	2100.00	2685.13	2694.69		2695.43	0.004663	6.92	303.67	52.48	0.51
Flato	1	12486	PF 1	2100.00	2682.02	2688.62	2688.62	2690.76	0.020054	11.73	179.00	42.55	1.01
Flato	1	11977	PF 1	2100.00	2678.79	2685.07		2685.43	0.003313	4.84	433.70	105.30	0.42
Flato	1	11564	PF 1	2100.00	2675.05	2682.91		2683.66	0.005503	6.95	302.23	60.78	0.55
Flato	1	11062	PF 1	2100.00	2671.01	2677.60		2679.24	0.015336	10.30	203.85	48.83	0.89
Flato	1	10545	PF 1	2100.00	2667.84	2674.28	2672.58	2674.81	0.004828	5.88	357.15	99.54	0.51
Flato	1	10028	PF 1	2100.00	2664.40	2668.79	2668.79	2670.16	0.020896	9.41	223.06	103.43	0.99
Flato	1	9513	PF 1	2100.00	2661.48	2666.79		2666.95	0.001891	3.03	657.41	196.53	0.30
Flato	1	9023	PF 1	2100.00	2658.24	2665.18	2663.12	2665.58	0.003888	5.06	414.81	153.48	0.45
Flato	1	8483	PF 1	2100.00	2655.34	2659.97	2659.97	2661.37	0.021204	9.49	221.42	82.68	1.00
Flato	1	7981	PF 1	2100.00	2651.90	2658.15	2655.75	2658.31	0.001579	3.35	677.11	234.91	0.29
Flato	1	7465	PF 1	2100.00	2648.91	2656.58	2654.39	2657.04	0.004083	5.53	411.44	246.72	0.47
Flato	1	6941	PF 1	2100.00	2645.94	2652.31	2652.31	2653.43	0.013311	8.62	267.49	155.54	0.82
Flato	1	6414	PF 1	2100.00	2643.01	2648.44		2648.83	0.004818	5.01	418.78	128.78	0.49
Flato	1	5884	PF 1	2100.00	2639.84	2646.07		2646.39	0.004365	4.88	509.46	254.24	0.47
Flato	1	5389	PF 1	2100.00	2636.26	2642.24	2642.24	2643.06	0.011174	7.59	330.91	236.12	0.74
Flato	1	4869	PF 1	2100.00	2633.50	2638.80	2638.42	2638.97	0.005069	4.47	736.97	624.87	0.48
Flato	1	4325	PF 1	2100.00	2629.57	2635.39		2635.69	0.007219	5.45	554.26	450.28	0.58
Flato	1	3782	PF 1	2100.00	2625.45	2631.45		2631.92	0.007269	6.25	458.42	388.23	0.60
Flato	1	3410	PF 1	2200.00	2623.01	2629.01		2629.29	0.007032	4.80	561.90	423.72	0.56
Flato	1	3274	PF 1	2200.00	2622.25	2627.75	2627.75	2628.21	0.008301	6.91	669.65	671.68	0.65
Flato	1	2758	PF 1	2200.00	2619.58	2624.11	2623.96	2624.36	0.006821	5.48	856.18	847.78	0.57
Flato	1	2308	PF 1	2200.00	2616.36	2619.74	2619.74	2620.29	0.013996	7.12	521.79	550.43	0.80
Flato	1	1736	PF 1	2200.00	2611.39	2618.21		2618.23	0.000748	2.06	2210.01	1264.03	0.19
Flato	1	1307	PF 1	2200.00	2608.92	2617.07	2614.51	2617.42	0.003043	4.92	571.13	416.34	0.41
Flato	1	865	PF 1	2200.00	2607.41	2615.32	2613.29	2615.71	0.003640	5.15	548.63	364.12	0.44
Flato	1	708	PF 1	2200.00	2605.45	2614.28	2611.71	2615.09	0.002468	7.24	303.89	102.15	0.49
Flato	1	689.5		Bridge									
Flato	1	676	PF 1	2200.00	2605.31	2614.03	2610.73	2614.74	0.001861	6.72	327.31	95.80	0.43
Flato	1	648	PF 1	2200.00	2605.32	2614.17	2610.53	2614.62	0.001167	5.59	439.16	112.20	0.35
Flato	1	624	PF 1	2200.00	2605.17	2613.96	2610.21	2614.54	0.001414	6.15	359.70	83.44	0.38
Flato	1	599.5		Culvert									
Flato	1	565	PF 1	2200.00	2604.60	2609.16	2609.16	2611.19	0.004231	11.43	192.52	47.98	1.01
Flato	1	496	PF 1	2200.00	2592.52	2606.94		2607.11	0.000589	3.34	659.39	69.91	0.19
Flato	1	82	PF 1	2200.00	2595.56	2606.00	2602.90	2606.58	0.003452	6.11	360.10	66.53	0.44

FLATO WASH DOWNSTREAM
EXISTING CONDITIONS
2/2



FLATO WASH
UPSTREAM OF FLO2D AREA
HEC-RAS SCHEMATIC

HEC-RAS Plan: 100yr Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
2	14687	PF 1	4060.00	3490.57	3493.75	3493.47	3494.24	0.013417	6.31	752.68	477.25	0.76
2	14150	PF 1	4060.00	3482.00	3485.45	3485.26	3486.13	0.017069	6.66	618.73	346.94	0.85
2	13535	PF 1	4060.00	3474.00	3478.03		3478.44	0.009431	5.24	804.67	424.24	0.64
2	12855	PF 1	4060.00	3464.00	3467.90	3467.88	3468.62	0.025142	6.78	599.12	405.88	0.98
2	12451	PF 1	4060.00	3458.00	3462.56	3461.93	3463.06	0.008530	5.79	770.88	460.96	0.63
2	11939	PF 1	4060.00	3452.00	3455.47	3455.47	3456.38	0.021814	7.81	548.26	319.46	0.97
2	11394	PF 1	4060.00	3444.01	3448.26	3448.26	3448.78	0.008848	7.64	919.83	720.21	0.75
2	10782	PF 1	4060.00	3436.00	3440.10	3439.66	3440.59	0.007973	7.38	776.38	372.03	0.71
2	10421	PF 1	4180.00	3432.00	3435.77	3435.57	3436.59	0.016608	7.68	591.70	292.44	0.87
2	9955	PF 1	4180.00	3428.00	3430.71	3429.91	3431.05	0.008719	5.55	909.62	506.64	0.62
2	9067	PF 1	4180.00	3416.00	3419.19	3419.15	3419.96	0.019342	7.40	614.86	370.14	0.91
2	8507	PF 1	4180.00	3408.00	3411.03		3411.58	0.011802	6.64	749.18	431.95	0.74
2	8003	PF 1	4300.00	3401.52	3404.05	3403.82	3404.60	0.016284	5.92	726.20	435.74	0.81
2	7459	PF 1	4300.00	3394.00	3396.66	3396.28	3397.09	0.011742	5.28	822.62	482.18	0.69
2	6984	PF 1	4300.00	3388.00	3389.94	3389.73	3390.56	0.016208	6.35	686.96	399.54	0.82
2	6412	PF 1	4300.00	3380.00	3383.51	3382.91	3383.98	0.008453	5.70	819.05	425.88	0.63
2	5972	PF 1	4300.00	3374.00	3379.87		3380.34	0.008057	5.64	813.67	387.54	0.61
1	5535	PF 1	5800.00	3371.06	3374.53	3374.27	3375.29	0.015770	6.97	834.81	393.31	0.83
1	5087	PF 1	5800.00	3362.00	3367.56	3367.56	3368.52	0.013852	9.07	816.23	404.21	0.84
1	4341	PF 1	5800.00	3352.00	3355.87	3355.32	3356.27	0.007367	5.48	1209.86	604.32	0.59
1	3908	PF 1	5800.00	3344.00	3350.12	3350.12	3352.01	0.014348	11.73	583.54	188.61	0.91
1	3336	PF 1	5800.00	3337.14	3341.72	3341.27	3342.34	0.011728	6.34	932.18	414.00	0.73
1	2782	PF 1	5800.00	3330.00	3335.06	3334.57	3335.84	0.011596	7.11	828.10	319.30	0.74
1	2323	PF 1	5800.00	3325.35	3329.40	3329.34	3330.27	0.012743	8.32	844.56	422.34	0.87
1	1803	PF 1	5800.00	3318.00	3323.30	3323.30	3324.38	0.010393	9.57	803.01	336.87	0.84
1	1217	PF 1	5800.00	3310.00	3315.78	3315.49	3316.80	0.008864	8.65	786.81	286.25	0.77
1	777	PF 1	5800.00	3306.00	3310.34	3310.34	3311.88	0.014350	9.96	595.15	226.92	0.96
1	184	PF 1	7470.00	3298.26	3304.01	3304.01	3304.62	0.005882	7.89	1588.51	906.13	0.65

FLATO - MAIN CHANNEL
REACHES 1/2

HEC-RAS Plan: 100yr River: WEST TRIB Reach: 2 Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
2	12856	PF 1	2860.00	3594.50	3598.04		3598.82	0.012504	7.44	427.02	198.03	0.77
2	12349	PF 1	2860.00	3588.00	3591.60	3591.60	3592.49	0.012507	8.41	436.76	246.93	0.80
2	11803	PF 1	2860.00	3577.00	3581.41	3581.41	3582.09	0.010962	8.73	640.61	433.62	0.83
2	11416	PF 1	2860.00	3572.00	3575.32	3575.32	3576.15	0.017810	8.83	422.27	241.31	0.92
2	11193	PF 1	2860.00	3566.00	3570.93	3570.93	3571.91	0.013204	9.64	392.84	232.94	0.91
2	10785	PF 1	2860.00	3558.67	3564.47	3564.47	3565.41	0.009203	9.44	453.43	224.17	0.79
2	10358	PF 1	2860.00	3552.40	3556.33	3556.33	3557.13	0.015650	7.39	430.19	285.14	0.84
2	10010	PF 1	2860.00	3546.00	3549.21	3549.21	3550.24	0.018472	8.42	368.08	187.68	0.92
2	9581	PF 1	2860.00	3537.38	3539.96	3539.64	3540.60	0.013558	6.79	448.98	250.46	0.78
2	9100	PF 1	2860.00	3528.00	3532.52	3532.52	3533.65	0.016562	10.08	361.39	154.84	0.92
2	8672	PF 1	2860.00	3520.91	3524.63	3524.56	3525.27	0.014442	7.51	495.92	324.57	0.82
2	8287	PF 1	2860.00	3515.15	3518.08	3518.08	3519.00	0.018495	8.01	405.81	243.08	0.91
2	7907	PF 1	2860.00	3508.00	3511.14	3511.05	3511.87	0.013925	7.64	450.76	245.71	0.81
2	7440	PF 1	2860.00	3500.00	3502.84	3502.84	3503.82	0.021530	8.80	369.28	187.95	0.99
2	6994	PF 1	2860.00	3492.00	3494.19	3493.96	3494.75	0.016267	6.27	478.61	285.79	0.82
2	6466	PF 1	2860.00	3482.00	3483.99	3483.99	3484.68	0.023138	6.32	437.92	310.82	0.94
2	6028	PF 1	2860.00	3474.00	3476.43		3476.91	0.012728	5.78	537.61	350.92	0.73
2	5536	PF 1	2860.00	3466.00	3468.24	3468.24	3468.98	0.022734	7.76	425.18	280.35	0.98
2	5124	PF 1	2860.00	3458.00	3461.56	3461.17	3462.02	0.012534	5.46	523.81	291.17	0.72
2	4663	PF 1	2860.00	3451.00	3454.69	3454.69	3455.51	0.015748	7.39	434.30	321.55	0.84
2	4195	PF 1	2860.00	3444.00	3447.07	3447.07	3447.88	0.016940	8.66	438.88	272.24	0.90
2	3671	PF 1	2860.00	3434.00	3439.02	3439.02	3440.28	0.009763	10.31	419.39	169.82	0.83
2	3189	PF 1	2860.00	3425.05	3430.34	3430.34	3431.13	0.008919	8.83	505.42	294.65	0.77
2	2820	PF 1	2860.00	3419.00	3423.11	3423.11	3423.82	0.013989	9.01	493.02	318.22	0.91
2	2435	PF 1	2860.00	3412.00	3417.06	3416.48	3417.96	0.012314	7.64	379.27	158.79	0.77
2	2086	PF 1	2860.00	3406.55	3411.36	3411.36	3412.90	0.016883	10.09	299.20	109.51	0.93
2	1565	PF 1	2860.00	3398.22	3403.73	3403.73	3404.31	0.005751	6.63	636.49	642.21	0.61
2	1042	PF 1	2860.00	3391.00	3393.81	3393.81	3394.35	0.012739	7.10	566.70	485.85	0.93
2	670	PF 1	2860.00	3386.00	3388.07	3387.92	3388.57	0.015287	7.50	541.58	415.89	1.01

FLATO
DOWNSTREAM REACH
FL 7 / FL 8

HEC-RAS Plan: 100yr River: FLATO EAST Reach: 3 Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
3	36830.	PF 1	1300.00	3786.00	3788.25	3788.25	3788.80	0.018901	6.59	243.57	238.81	0.88
3	36152.	PF 1	1300.00	3774.00	3775.81	3775.81	3776.18	0.015493	5.47	319.92	444.40	0.78
3	35602.	PF 1	1300.00	3764.00	3765.13	3764.80	3765.35	0.011997	2.87	352.67	353.57	0.60
3	35039.	PF 1	1300.00	3754.00	3755.05	3755.05	3755.46	0.030168	5.41	257.38	315.45	1.00
3	34515.	PF 1	1300.00	3744.00	3746.32	3746.07	3746.62	0.008650	4.62	334.28	354.10	0.60
3	34091.	PF 1	2450.00	3736.00	3740.47	3740.47	3741.51	0.014838	9.42	377.44	245.65	0.87
3	33422.	PF 1	2450.00	3728.00	3731.59		3732.20	0.011680	7.52	475.00	284.68	0.76
3	32832.	PF 1	2450.00	3720.00	3723.51	3723.51	3724.11	0.016372	7.99	483.28	362.01	0.87
3	32276.	PF 1	2450.00	3714.66	3717.47	3717.05	3717.75	0.007540	4.94	647.72	416.35	0.58
3	31753.	PF 1	2450.00	3708.73	3710.32	3710.32	3710.77	0.028118	6.54	504.55	556.09	1.02
3	30964.	PF 1	2450.00	3696.00	3700.07	3699.07	3700.29	0.004260	3.70	664.32	327.99	0.43
3	30428.	PF 1	2450.00	3693.20	3695.21	3695.21	3695.84	0.021440	6.84	409.71	333.98	0.93
3	29198.	PF 1	2900.00	3667.70	3672.95	3672.42	3674.08	0.012248	8.58	343.06	106.36	0.79
3	28689.	PF 1	2900.00	3659.50	3666.42	3666.42	3667.87	0.012058	9.94	329.79	128.63	0.81
3	28213.	PF 1	2900.00	3653.00	3659.67	3659.67	3660.85	0.008287	10.18	411.52	163.07	0.78
3	27581.	PF 1	2900.00	3645.00	3651.65	3651.65	3653.54	0.008206	11.38	291.68	91.67	0.88
3	27138.	PF 1	2900.00	3641.10	3646.43	3646.09	3647.43	0.007471	8.47	404.72	152.35	0.72
3	26599.	PF 1	2900.00	3633.00	3639.42	3639.42	3641.73	0.015143	12.21	237.44	51.54	1.00
3	26055.	PF 1	2900.00	3626.75	3633.04	3633.04	3634.67	0.007813	10.41	316.80	131.22	0.84
3	25578.	PF 1	2900.00	3623.30	3628.38	3628.38	3629.54	0.006634	9.31	410.00	213.65	0.78
3	24963.	PF 1	2900.00	3616.50	3622.66		3623.43	0.004476	7.19	447.62	162.22	0.57
3	24783	PF 1	2900.00	3614.00	3622.86	3617.38	3623.07	0.000471	3.68	807.53	193.22	0.22
3	24728		Culvert									
3	24673	PF 1	2900.00	3612.00	3616.56	3615.43	3617.39	0.006138	7.31	396.70	100.75	0.62
3	24404.	PF 1	2900.00	3608.40	3613.25	3613.25	3615.12	0.011117	11.00	267.88	76.12	0.98
3	23890.	PF 1	2900.00	3601.00	3606.13	3606.13	3606.91	0.007571	8.31	516.90	290.26	0.79
3	23299.	PF 1	2900.00	3594.75	3598.62	3598.62	3599.57	0.012671	9.36	424.73	211.80	0.89
3	22764.	PF 1	2980.00	3589.00	3592.91	3592.11	3593.39	0.007020	5.69	541.01	202.57	0.58
3	22184.	PF 1	2980.00	3582.00	3585.37	3585.37	3586.68	0.021999	9.19	324.12	125.50	1.01
3	21624.	PF 1	2980.00	3574.97	3578.30	3577.77	3578.96	0.008882	6.49	459.38	180.90	0.72
3	21134.	PF 1	2980.00	3570.95	3574.22	3573.47	3574.74	0.008186	5.76	525.94	247.09	0.62
3	20587.	PF 1	2980.00	3565.00	3567.60	3567.60	3568.65	0.015689	8.44	379.16	192.19	0.95
3	20077	PF 1	3450.00	3560.00	3567.48	3562.77	3567.55	0.000286	2.14	1646.18	561.58	0.15
3	19670	PF 1	3450.00	3560.00	3564.83	3564.83	3566.99	0.011719	11.79	292.73	68.59	1.01
3	19368	PF 1	3450.00	3542.00	3548.87		3549.76	0.006189	7.58	455.37	107.10	0.65
3	18950	PF 1	3450.00	3538.00	3545.05	3545.05	3546.60	0.009033	10.38	395.65	157.43	0.80
3	18507	PF 1	3450.00	3532.03	3540.33	3540.33	3541.37	0.006401	8.77	533.31	326.82	0.68
3	17917	PF 1	3450.00	3528.00	3533.87		3534.42	0.009019	7.64	730.87	388.80	0.67
3	17433	PF 1	3450.00	3524.00	3527.90	3527.90	3528.73	0.016832	9.08	516.41	301.41	0.98

FLATO - MAIN CHANNEL
REACH 3
1/2

HEC-RAS Plan: 100yr River: FLATO EAST Reach: 3 Profile: PF 1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
3	17006	PF 1	3900.00	3518.00	3522.60	3522.05	3523.29	0.009917	6.87	601.41	232.18	0.69
3	16508	PF 1	3900.00	3512.00	3515.75	3515.54	3516.73	0.018078	7.95	490.60	201.97	0.90
3	15963	PF 1	3900.00	3506.00	3509.93	3509.67	3510.43	0.007607	7.23	795.14	427.01	0.70
3	15468	PF 1	4059.82	3500.70	3504.09	3503.99	3505.33	0.014439	9.68	545.70	353.80	0.95

FLATO MAIN CHANNEL
2/2

HEC-RAS Plan: 100yr River: EAST TRIB Reach: 1 Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
1	36096	PF 1	1200.00	4346.00	4349.56	4349.56	4351.02	0.028554	9.80	125.83	44.56	0.97
1	35677	PF 1	1200.00	4328.00	4333.75	4333.75	4335.87	0.027517	11.81	104.99	25.98	0.96
1	35226	PF 1	1200.00	4312.00	4318.45	4318.45	4320.51	0.030103	11.54	105.34	27.29	0.98
1	34817	PF 1	1200.00	4294.00	4299.48	4299.48	4301.10	0.023814	10.37	121.59	39.64	0.90
1	34086	PF 1	1200.00	4269.37	4272.99	4272.99	4274.21	0.026534	9.88	141.36	57.22	0.94
1	33617	PF 1	1200.00	4248.00	4252.14	4252.14	4253.81	0.026230	10.53	118.45	36.43	0.94
1	33206	PF 1	1200.00	4228.00	4233.14	4233.14	4235.13	0.024648	11.62	109.98	28.73	0.93
1	32655	PF 1	1200.00	4208.00	4211.64	4211.64	4213.20	0.025788	10.01	120.53	40.42	0.99
1	32174	PF 1	1200.00	4198.00	4201.46		4201.84	0.005999	4.94	244.94	80.45	0.49
1	31829	PF 1	2400.00	4194.60	4197.00	4197.00	4197.88	0.017475	7.86	332.05	190.66	0.97
1	30945	PF 1	2400.00	4154.56	4159.36	4159.36	4161.18	0.021229	10.91	226.55	66.68	0.95
1	30343	PF 1	2400.00	4135.02	4139.66	4139.66	4141.51	0.021557	11.03	224.15	62.46	0.96
1	29914	PF 1	2400.00	4120.00	4125.64	4125.64	4127.82	0.019214	12.15	210.25	50.31	0.94
1	29374	PF 1	2400.00	4104.52	4110.63	4110.63	4113.08	0.020199	12.72	196.20	42.36	0.96
1	28933	PF 1	2400.00	4094.00	4099.39	4099.38	4101.48	0.020938	11.66	211.22	54.23	0.95
1	28240	PF 1	2400.00	4080.00	4086.21	4086.21	4088.34	0.017233	12.41	223.36	55.12	0.90
1	27781	PF 1	2400.00	4072.00	4078.58	4078.58	4080.28	0.014534	10.85	259.04	91.78	0.82
1	27236	PF 1	2400.00	4062.00	4066.56	4066.56	4068.04	0.017643	10.25	268.96	102.42	0.88
1	26685	PF 1	2400.00	4050.00	4056.50	4056.18	4057.67	0.013378	9.05	298.89	97.02	0.76
1	26272	PF 1	2400.00	4044.53	4049.61	4049.61	4051.07	0.019197	10.19	269.71	100.11	0.91
1	25642	PF 1	2400.00	4028.00	4033.08	4033.08	4034.52	0.021680	9.74	260.35	107.26	0.93
1	25046	PF 1	2400.00	4016.00	4020.25	4020.15	4020.88	0.017931	7.43	418.10	249.31	0.82
1	24505	PF 1	2400.00	4005.80	4009.09	4009.09	4010.15	0.021236	8.58	311.10	150.70	0.90
1	23965	PF 1	2400.00	3994.00	3997.18	3996.96	3998.04	0.019588	7.55	327.31	146.54	0.85
1	23360	PF 1	2400.00	3982.00	3985.94	3985.73	3986.77	0.017542	8.06	361.62	179.09	0.83
1	22822	PF 1	2650.00	3972.00	3973.99	3973.87	3974.61	0.027445	6.84	423.55	271.89	0.94
1	22226	PF 1	2650.00	3958.00	3961.79	3961.79	3962.59	0.018557	8.97	429.83	242.33	0.87
1	21687	PF 1	2650.00	3946.70	3949.83	3949.72	3950.40	0.021034	8.33	477.23	310.74	0.89
1	20936	PF 1	2650.00	3930.77	3933.73	3933.73	3934.72	0.025068	8.86	351.62	175.74	0.97
1	20344	PF 1	2650.00	3916.63	3919.66	3919.33	3920.41	0.016116	7.31	398.11	175.84	0.78
1	19809	PF 1	2650.00	3906.00	3908.87	3908.86	3909.98	0.024148	8.56	323.14	154.00	0.95
1	19209	PF 1	2650.00	3892.00	3895.10	3895.10	3896.21	0.021985	8.74	331.08	149.81	0.92
1	18703	PF 1	2650.00	3880.00	3883.97	3883.97	3884.89	0.020736	9.28	390.95	206.85	0.91
1	18148	PF 1	2650.00	3866.00	3869.96	3869.96	3871.02	0.018955	9.15	367.75	195.58	0.88
1	17623	PF 1	2650.00	3855.81	3857.82	3857.62	3858.40	0.024223	6.35	437.00	265.88	0.88
1	17009	PF 1	2650.00	3842.00	3844.08	3843.90	3844.76	0.021097	6.67	407.74	229.86	0.85
1	16410	PF 1	2650.00	3828.00	3830.98	3830.78	3831.45	0.023292	5.80	487.49	344.36	0.85
1	15828	PF 1	2650.00	3814.50	3817.41	3817.41	3818.01	0.023565	6.85	456.69	352.26	0.88
1	15286	PF 1	2650.00	3801.75	3804.08	3803.92	3804.56	0.022252	5.84	497.80	420.95	0.84

FLATO
FC3 REACH 1/2

HEC-RAS Plan: 100yr River: EAST TRIB Reach: 1 Profile: PF 1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
1	14771	PF 1	2650.00	3789.51	3791.75	3791.65	3792.39	0.025822	6.40	416.12	274.24	0.90
1	14179	PF 1	2650.00	3776.00	3778.48	3778.24	3779.05	0.019743	6.07	438.29	256.82	0.81
1	13615	PF 1	2650.00	3763.31	3766.61	3766.61	3767.58	0.021151	8.29	361.37	195.84	0.90
1	12993	PF 1	2650.00	3748.00	3753.14	3752.99	3753.88	0.018549	6.93	388.97	265.46	0.88
1	12362	PF 1	2650.00	3738.00	3739.54	3739.54	3740.10	0.025825	6.05	446.04	677.85	0.97
1	11456	PF 1	2650.00	3710.00	3715.22	3715.09	3715.66	0.021880	5.36	498.30	440.95	0.88
1	11029	PF 1	2650.00	3702.00	3706.17	3706.17	3706.75	0.019884	6.23	460.45	465.13	0.88
1	10459	PF 1	2650.00	3690.00	3692.57	3692.57	3693.24	0.026339	6.61	406.80	321.60	0.99
1	9911	PF 1	2650.00	3678.00	3681.77	3681.77	3682.69	0.011032	8.23	400.33	234.50	0.83
1	9353	PF 1	2650.00	3666.85	3670.85	3670.85	3671.53	0.003027	7.44	628.18	481.54	0.71
1	9352.9		Lat Struct									
1	9053	PF 1	2305.13	3659.50	3663.85	3663.85	3664.41	0.005535	7.65	573.46	456.65	0.69
1	8540	PF 1	2109.53	3648.05	3651.81	3651.81	3652.62	0.009530	7.98	408.29	295.53	0.86
1	8113	PF 1	2109.53	3639.00	3642.40	3642.40	3643.24	0.012116	8.28	316.90	203.08	0.95
1	7696	PF 1	2109.53	3630.00	3633.31	3633.31	3634.32	0.013078	9.05	288.84	145.10	0.99
1	7211	PF 1	2349.53	3620.00	3624.05	3624.05	3625.34	0.017659	9.12	257.77	102.84	1.01
1	6728	PF 1	2349.53	3612.00	3614.34	3614.31	3614.87	0.016225	6.42	437.12	340.44	0.82
1	6278	PF 1	2349.53	3602.00	3605.53	3605.53	3606.19	0.022691	6.55	367.58	286.15	0.94
1	5822	PF 1	2349.53	3591.10	3596.69	3596.69	3597.40	0.012567	7.62	400.91	286.91	0.77
1	5202	PF 1	2349.53	3581.00	3585.29	3585.29	3585.95	0.014767	7.38	410.89	293.25	0.82
1	4711	PF 1	2349.53	3571.00	3575.22	3575.22	3575.42	0.010571	4.56	669.27	652.85	0.64
1	4321	PF 1	2349.53	3562.00	3567.43	3567.19	3567.89	0.017106	5.45	435.31	634.57	0.80
1	3962	PF 1	2459.53	3554.00	3560.12		3560.49	0.024826	4.90	507.24	462.20	0.77
1	3537	PF 1	2459.53	3550.00	3553.17	3552.86	3553.53	0.011534	5.09	545.23	442.24	0.68
1	3088	PF 1	2459.53	3544.00	3545.67	3545.67	3546.35	0.023878	6.78	377.96	274.83	0.96
1	2562	PF 1	2459.53	3534.00	3536.50	3536.44	3536.87	0.009716	5.60	677.52	733.84	0.66
1	2108	PF 1	2459.53	3526.00	3527.57	3527.57	3528.00	0.056582	6.30	484.22	641.53	1.31
1	1554	PF 1	2559.53	3516.00	3518.26	3518.26	3518.63	0.002117	1.89	589.73	822.36	0.28
1	1006	PF 1	2559.53	3508.00	3510.16	3510.10	3510.59	0.022713	5.82	497.70	508.09	0.91

FL3 2/2

HEC-RAS Plan: 100yr River: FL7 TRIB Reach: 1 Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
1	20907	PF 1	1000.00	3749.85	3752.21	3752.21	3753.06	0.016459	7.57	140.94	85.30	0.94
1	20496	PF 1	1000.00	3740.00	3743.54	3743.37	3744.44	0.014828	7.61	131.52	61.07	0.90
1	20071	PF 1	1000.00	3734.00	3737.72	3737.72	3738.76	0.012129	8.66	142.99	91.63	0.86
1	19414	PF 1	1000.00	3722.00	3724.66	3724.66	3725.48	0.014516	7.54	151.62	106.15	0.90
1	18944	PF 1	1000.00	3714.00	3716.40	3716.33	3717.08	0.019533	7.71	154.36	101.33	1.01
1	18450	PF 1	1000.00	3705.48	3707.07	3707.07	3707.72	0.019462	7.03	164.12	129.49	0.99
1	17955	PF 1	1000.00	3694.01	3695.96	3695.96	3696.68	0.017559	7.08	156.38	114.94	0.95
1	17499	PF 1	1000.00	3682.57	3686.13	3686.13	3687.24	0.013861	8.93	130.79	65.02	0.92
1	16982	PF 1	1370.00	3674.00	3676.64	3676.64	3677.67	0.015910	8.22	173.48	93.81	0.95
1	16346	PF 1	1370.00	3662.00	3664.44		3664.99	0.008101	6.00	235.87	107.14	0.68
1	15920	PF 1	1370.00	3657.00	3659.34	3659.34	3660.19	0.016922	8.33	197.98	114.44	0.97
1	15465	PF 1	1370.00	3636.00	3642.48		3643.42	0.006626	7.86	182.27	59.99	0.65
1	15224	PF 1	1370.00	3634.00	3639.22	3639.22	3640.94	0.016873	10.53	130.13	38.43	1.01
1	14796	PF 1	1370.00	3624.00	3630.53	3630.53	3632.43	0.016989	11.06	123.85	43.16	1.00
1	14257	PF 1	1370.00	3616.00	3621.74	3621.74	3623.33	0.014668	10.37	140.61	45.02	0.95
1	13706	PF 1	1370.00	3606.00	3611.05	3610.59	3612.10	0.009833	8.31	174.45	72.64	0.78
1	13224	PF 1	1370.00	3600.00	3604.01	3604.01	3605.17	0.022895	8.64	158.56	68.76	1.00

FLATO
FL7 REACH

HEC-RAS Plan: 100yr River: FL8 TRIB Reach: 1 Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
1	8220	PF 1	1300.00	3780.00	3783.46	3783.46	3784.73	0.018118	9.20	149.71	63.70	0.93
1	7680	PF 1	1300.00	3758.00	3762.97	3762.97	3765.16	0.018139	12.02	113.10	27.12	0.97
1	7240	PF 1	1300.00	3750.00	3753.78	3753.78	3755.23	0.017778	9.84	139.47	51.44	0.94
1	6647	PF 1	1550.00	3738.00	3742.06	3741.99	3743.44	0.016053	10.27	174.47	61.85	0.92
1	6211	PF 1	1550.00	3731.60	3733.79	3733.79	3734.58	0.025421	7.49	218.36	141.54	1.01
1	5273	PF 1	1550.00	3706.00	3709.40	3709.40	3710.81	0.018193	9.69	169.06	63.40	0.95
1	4761	PF 1	1550.00	3694.00	3696.88	3696.88	3697.76	0.017819	8.56	224.61	129.51	0.92
1	4398	PF 1	1550.00	3686.00	3689.83	3689.83	3690.98	0.017041	9.60	192.12	81.85	0.92
1	3889	PF 1	1550.00	3676.00	3678.88	3678.85	3679.89	0.021828	8.08	194.13	95.25	0.97
1	3370	PF 1	1550.00	3666.00	3668.39	3668.39	3669.12	0.019554	7.37	239.65	165.56	0.91
1	2814	PF 1	1550.00	3654.00	3656.49	3656.49	3657.28	0.019347	7.73	231.20	146.07	0.92
1	2164	PF 1	1550.00	3636.00	3638.68	3638.68	3639.66	0.021407	7.97	200.04	110.22	0.96
1	1915	PF 1	1550.00	3630.45	3632.89	3632.74	3633.54	0.017946	6.52	242.82	148.69	0.86
1	1566	PF 1	1550.00	3624.00	3627.51	3627.51	3628.23	0.013425	7.73	261.51	256.58	0.80
1	1108	PF 1	1550.00	3615.89	3618.22	3618.22	3618.97	0.019796	7.52	239.71	168.18	0.92
1	611	PF 1	1550.00	3604.00	3608.60	3608.42	3609.83	0.016575	8.93	177.20	71.32	0.89
1	269	PF 1	1550.00	3600.00	3602.89	3602.89	3603.61	0.018977	7.24	244.00	171.11	0.90

FLATO
FL8 REACH

HEC-RAS Plan: 100yr River: FL11 Reach: 1 Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
1	32227.	PF 1	1300.00	4152.96	4155.51	4155.51	4156.39	0.025967	8.00	174.21	100.73	0.96
1	31733.	PF 1	1300.00	4132.95	4135.50	4135.50	4136.51	0.026987	8.26	162.74	81.06	0.98
1	31338	PF 1	1300.00	4118.64	4121.15	4121.15	4121.87	0.024570	7.42	196.38	131.35	0.92
1	30838.	PF 1	1300.00	4102.00	4104.49	4104.47	4104.94	0.035304	5.40	239.64	253.39	0.98
1	30407.	PF 1	1300.00	4087.70	4089.47	4089.47	4090.00	0.034116	5.91	225.14	222.47	0.99
1	29867.	PF 1	1300.00	4068.21	4069.68	4069.64	4070.17	0.033302	5.63	231.00	218.48	0.96
1	29327.	PF 1	1300.00	4049.70	4051.57	4051.57	4052.30	0.032765	6.88	189.02	130.45	1.01
1	28842.	PF 1	1300.00	4033.19	4035.17	4035.17	4035.94	0.032495	7.03	184.91	122.61	1.01
1	28301.	PF 1	1300.00	4014.68	4016.59	4016.59	4017.29	0.033787	6.70	194.07	142.77	1.01
1	27748.	PF 1	1300.00	3996.26	3998.51	3998.48	3999.29	0.028427	7.13	183.46	110.80	0.96
1	27232.	PF 1	1300.00	3980.94	3983.16	3983.16	3984.01	0.030960	7.42	175.26	103.25	1.00
1	26757.	PF 1	1900.00	3966.10	3968.35	3968.35	3968.95	0.023532	7.03	316.94	266.55	0.97
1	26276.	PF 1	1900.00	3950.49	3953.23	3953.23	3953.96	0.020156	7.44	296.12	208.63	0.92
1	25216.	PF 1	1900.00	3921.79	3924.00	3924.00	3924.74	0.020264	7.08	291.55	219.99	0.92
1	24597.	PF 1	1900.00	3904.02	3905.79	3905.79	3906.25	0.031134	5.61	346.92	381.64	1.02
1	23829.	PF 1	1900.00	3878.00	3881.80	3881.80	3882.66	0.024968	7.45	255.15	148.62	1.00
1	23136.	PF 1	1900.00	3860.00	3862.41	3862.41	3862.96	0.027975	5.80	320.23	289.37	0.98
1	22521.	PF 1	1900.00	3842.24	3844.78	3844.78	3845.57	0.024226	7.15	270.96	180.25	0.98
1	22001.	PF 1	1900.00	3826.00	3828.95	3828.95	3829.73	0.017590	7.50	289.64	186.12	0.88
1	21427.	PF 1	1900.00	3809.20	3811.69	3811.69	3812.32	0.021100	6.53	299.44	244.00	0.91
1	20759.	PF 1	1900.00	3790.00	3792.82	3792.82	3793.44	0.022551	7.20	308.30	228.06	0.96
1	20277.	PF 1	1900.00	3776.00	3779.51	3779.51	3780.64	0.022540	8.53	223.02	99.77	1.00
1	19683.	PF 1	1900.00	3759.68	3762.96	3762.96	3763.95	0.017072	8.48	257.51	139.49	0.90
1	19091	PF 1	1900.00	3741.65	3744.95	3744.95	3745.63	0.013320	7.41	336.41	249.47	0.79
1	18500.	PF 1	1900.00	3724.00	3726.55	3726.55	3727.40	0.020597	7.71	266.56	158.04	0.94
1	18060.	PF 1	1900.00	3711.54	3714.66	3714.66	3715.75	0.023235	8.39	226.58	103.96	1.00
1	17482.	PF 1	1900.00	3696.00	3699.71	3699.71	3700.36	0.014895	6.96	333.31	270.07	0.81
1	16950.	PF 1	1900.00	3680.00	3682.46	3682.46	3683.31	0.024777	7.42	257.27	160.14	1.00
1	16421.	PF 1	1900.00	3666.00	3668.78	3668.78	3669.92	0.022999	8.58	221.46	98.26	1.01
1	15666.	PF 1	1900.00	3645.23	3651.23	3651.23	3652.83	0.018113	10.21	191.84	65.05	0.95
1	15252.	PF 1	1900.00	3630.17	3636.24	3636.24	3637.86	0.015109	10.60	199.09	66.13	0.90
1	14781.	PF 1	1900.00	3616.00	3622.54	3622.54	3624.19	0.013986	10.78	201.13	66.57	0.87
1	14276.	PF 1	1900.00	3604.00	3608.79	3608.45	3609.95	0.014696	8.66	221.68	74.80	0.85
1	13826.	PF 1	1900.00	3599.05	3601.46	3601.46	3602.23	0.019669	7.63	290.49	196.47	0.92
1	13608.	PF 1	1900.00	3590.00	3595.47	3595.47	3596.64	0.017905	9.93	229.15	92.64	0.93
1	13282.	PF 1	1900.00	3580.00	3586.24	3586.24	3587.10	0.010279	8.79	310.19	164.14	0.74
1	12980.	PF 1	1900.00	3574.00	3579.16	3579.16	3579.99	0.013329	8.74	300.78	177.63	0.82
1	12651.	PF 1	1900.00	3568.00	3572.00	3572.00	3572.94	0.018573	9.99	284.42	184.47	0.96
1	12311.	PF 1	1900.00	3560.00	3565.33	3565.33	3566.12	0.012935	8.55	314.63	193.42	0.80

FLATO
FL11 REACH 1/2

HEC-RAS Plan: 100yr River: FL11 Reach: 1 Profile: PF 1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
1	11830.	PF 1	1900.00	3551.75	3554.35	3554.35	3555.08	0.020101	8.03	296.74	202.31	0.94
1	11455.	PF 1	1900.00	3542.00	3546.61	3546.61	3547.30	0.012349	8.27	340.49	228.61	0.78
1	10960.	PF 1	1900.00	3534.35	3537.33	3537.33	3538.19	0.011813	7.84	287.86	189.99	0.93
1	10653.	PF 1	1900.00	3526.00	3529.65	3529.65	3530.27	0.021947	7.31	314.17	241.33	0.95
1	10321.	PF 1	1900.00	3520.00	3522.14	3522.04	3522.53	0.022017	5.10	379.56	389.30	0.87
1	9859.	PF 1	2150.00	3510.00	3512.18	3512.18	3512.68	0.019819	6.38	407.06	447.04	0.89
1	9339	PF 1	2150.00	3498.23	3500.81	3500.79	3501.32	0.020273	6.16	407.81	400.67	0.89
1	8832	PF 1	2150.00	3488.00	3489.38	3489.38	3489.96	0.024616	6.01	362.35	308.42	0.95
1	8300	PF 1	2150.00	3476.92	3479.86	3479.86	3480.51	0.012714	7.59	401.46	319.74	0.86
1	7797	PF 1	2150.00	3466.15	3469.04	3469.04	3469.62	0.013071	6.81	409.13	324.97	0.77
1	7353	PF 1	2150.00	3455.18	3460.26	3460.26	3460.81	0.005940	7.56	502.63	392.06	0.70
1	6844	PF 1	2150.00	3447.00	3450.90	3450.90	3452.08	0.010072	8.81	264.32	143.23	0.90
1	6333	PF 1	2150.00	3434.00	3439.21	3439.21	3440.71	0.010426	10.32	239.08	86.90	0.94
1	5834	PF 1	2150.00	3423.35	3428.24	3428.24	3429.40	0.008764	9.99	294.93	127.95	0.88
1	5347	PF 1	2650.00	3410.00	3412.94		3413.35	0.012162	5.13	516.77	308.76	0.70
1	4874	PF 1	2650.00	3402.00	3404.59	3404.59	3405.56	0.023208	7.91	337.92	182.34	0.99
1	4325	PF 1	2650.00	3390.00	3394.27	3393.60	3394.83	0.009290	6.00	442.60	175.82	0.66
1	3807	PF 1	2650.00	3384.00	3388.36	3387.89	3389.27	0.012394	7.66	348.75	329.35	0.78
1	3291	PF 1	2650.00	3376.00	3379.57	3379.57	3380.92	0.021714	9.34	283.71	105.86	1.01
1	2779	PF 1	2650.00	3366.00	3371.61	3371.22	3372.90	0.011620	9.32	304.80	99.16	0.79
1	2243	PF 1	3150.00	3360.00	3363.44	3363.35	3364.80	0.019303	9.35	336.97	115.18	0.96
1	1686	PF 1	3150.00	3351.80	3354.90	3354.61	3355.77	0.013364	7.65	436.86	190.03	0.80
1	1137	PF 1	3150.00	3344.35	3347.66	3347.56	3348.11	0.014204	5.84	647.31	623.69	0.77
1	0	PF 1	3150.00	3326.00	3329.77	3329.77	3330.19	0.018025	6.41	671.46	719.92	0.85

FL11 2/2