

Current Upstream Model – 10 year to 100 year storm event

Plan

Profile

Summary

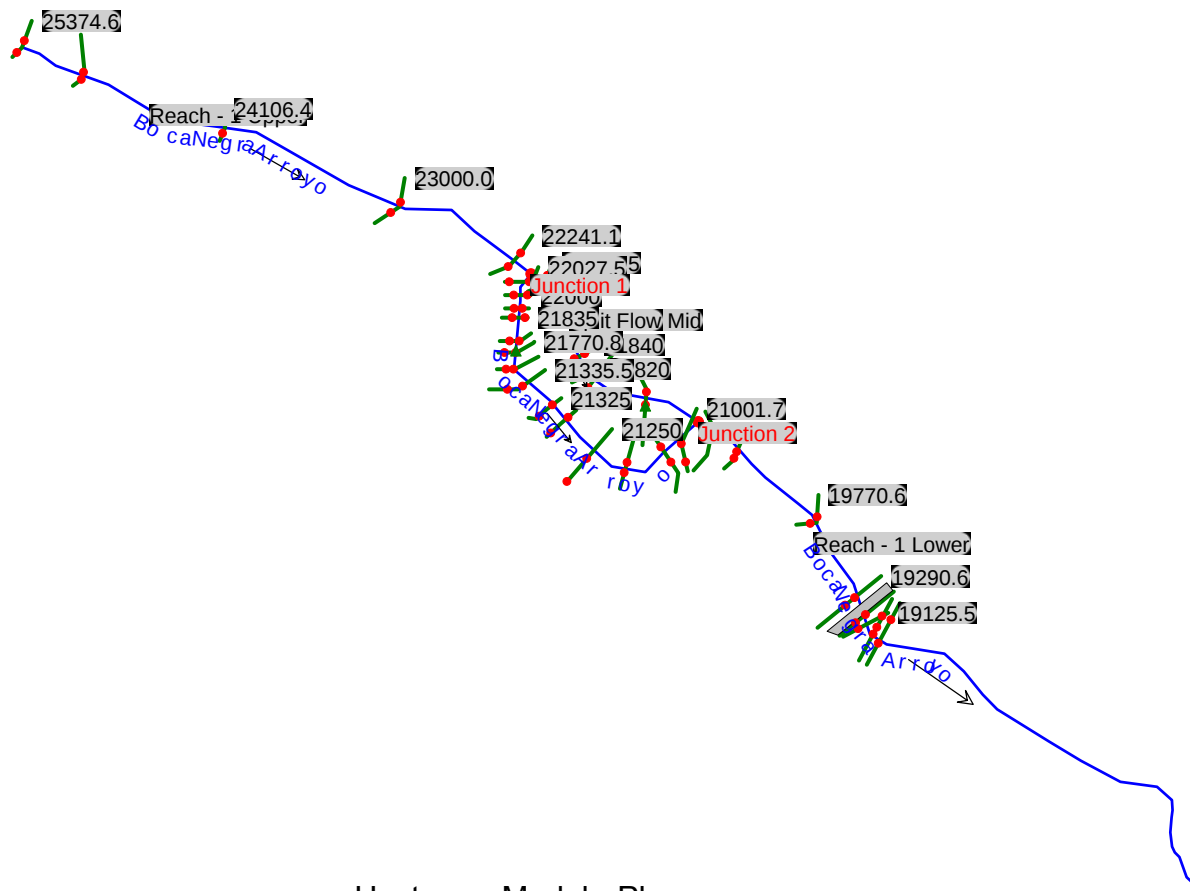
Cross Sections

Input/output Report

Hydraulics Model – HEC-RAS Analysis (CD)

Current Upstream Files

i.Project:	BNA Current Upstm BNACurrentUpstm.prj	
ii.Plan:	Current Upstream	BNACurrentUpstm.p06
iii.Geometry:	Current Upstream	BNACurrentUpstm.g05
iv.Flow:	Updated 2014	BNACurrentUpstm.f01

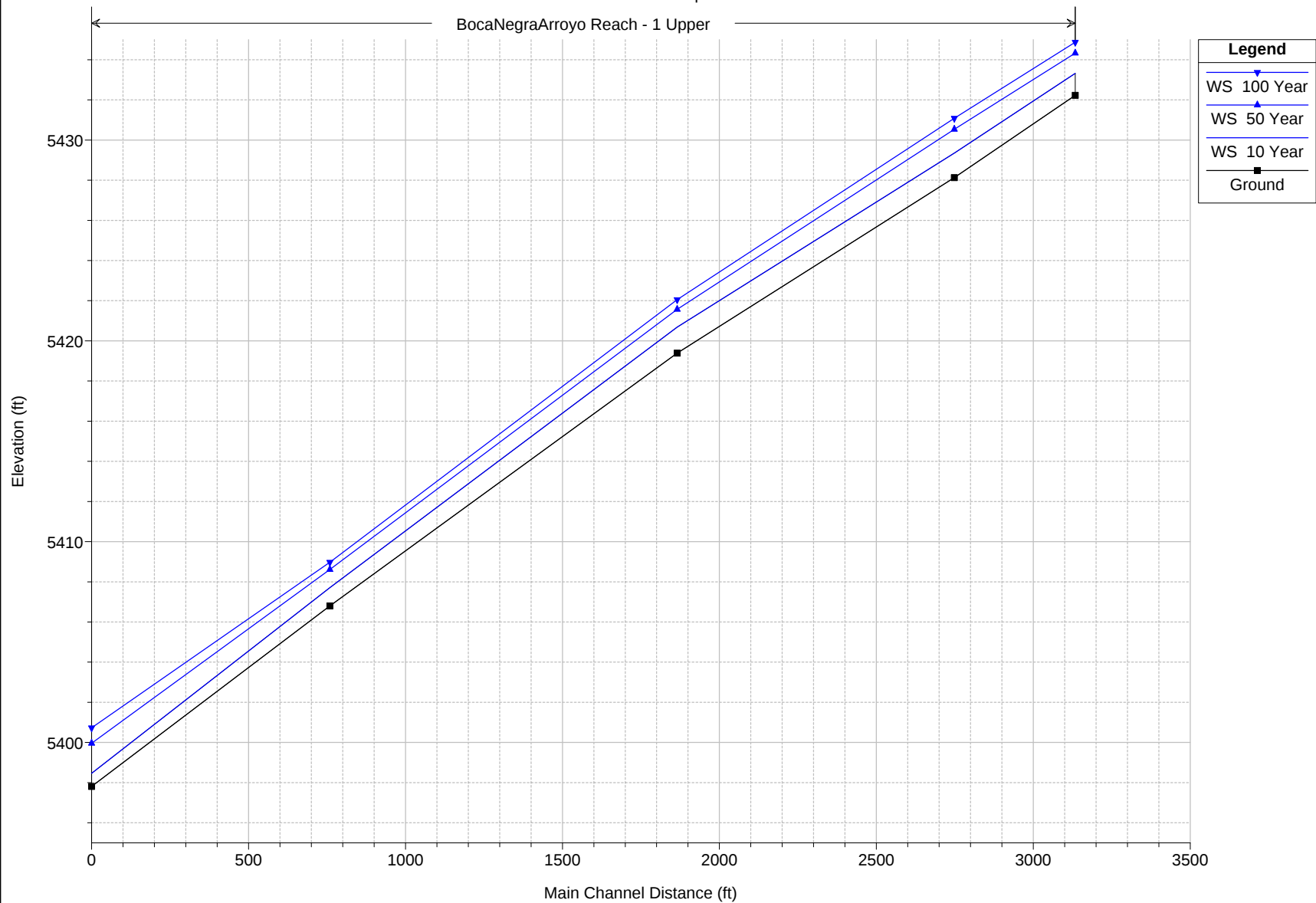


Upstream Model - Plan

BNA Current Upstm Plan: Current Upstream 1/7/2016

Geom: Current Upstream

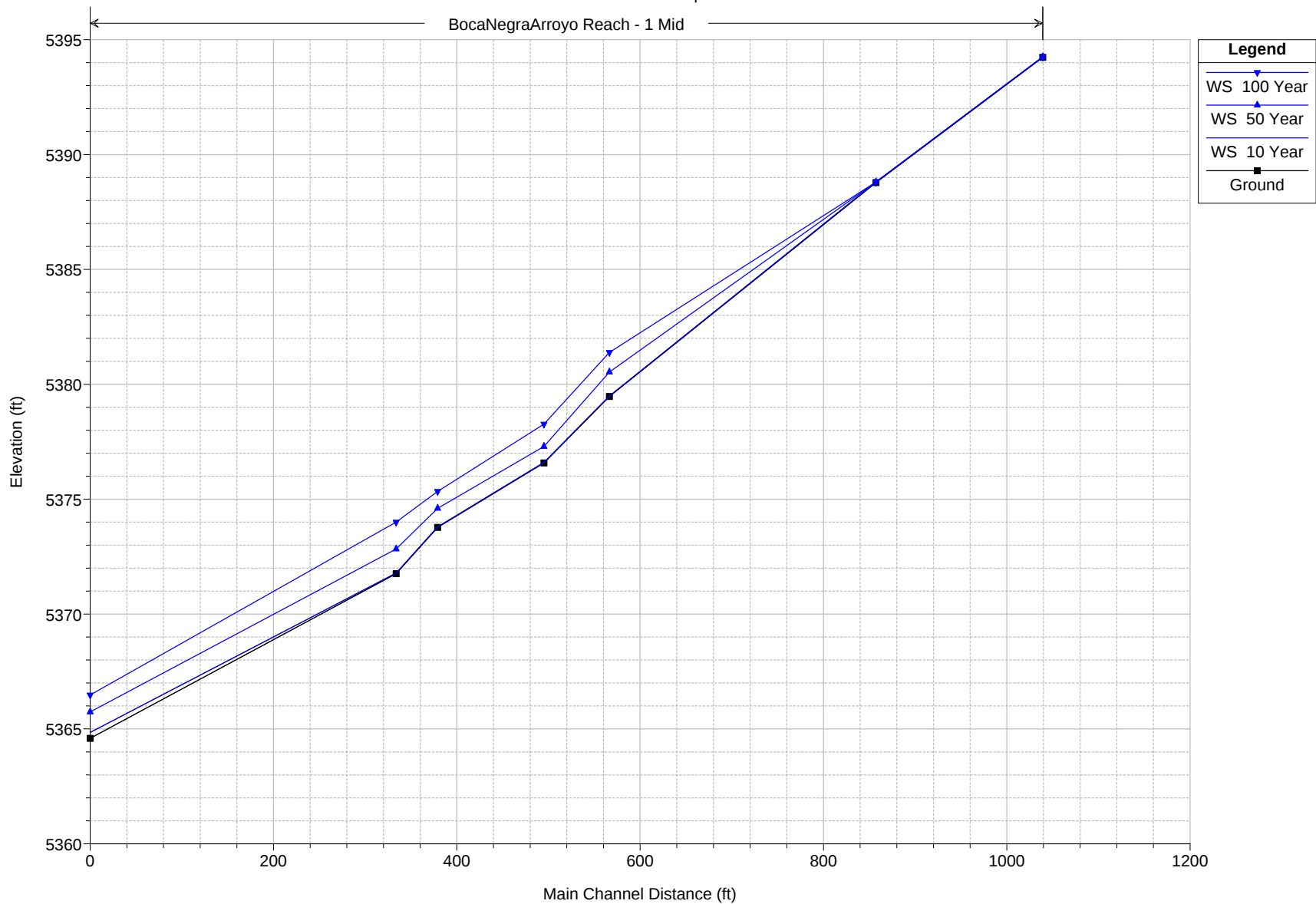
BocaNegraArroyo Reach - 1 Upper



BNA Current Upstm Plan: Current Upstream 1/7/2016

Geom: Current Upstream

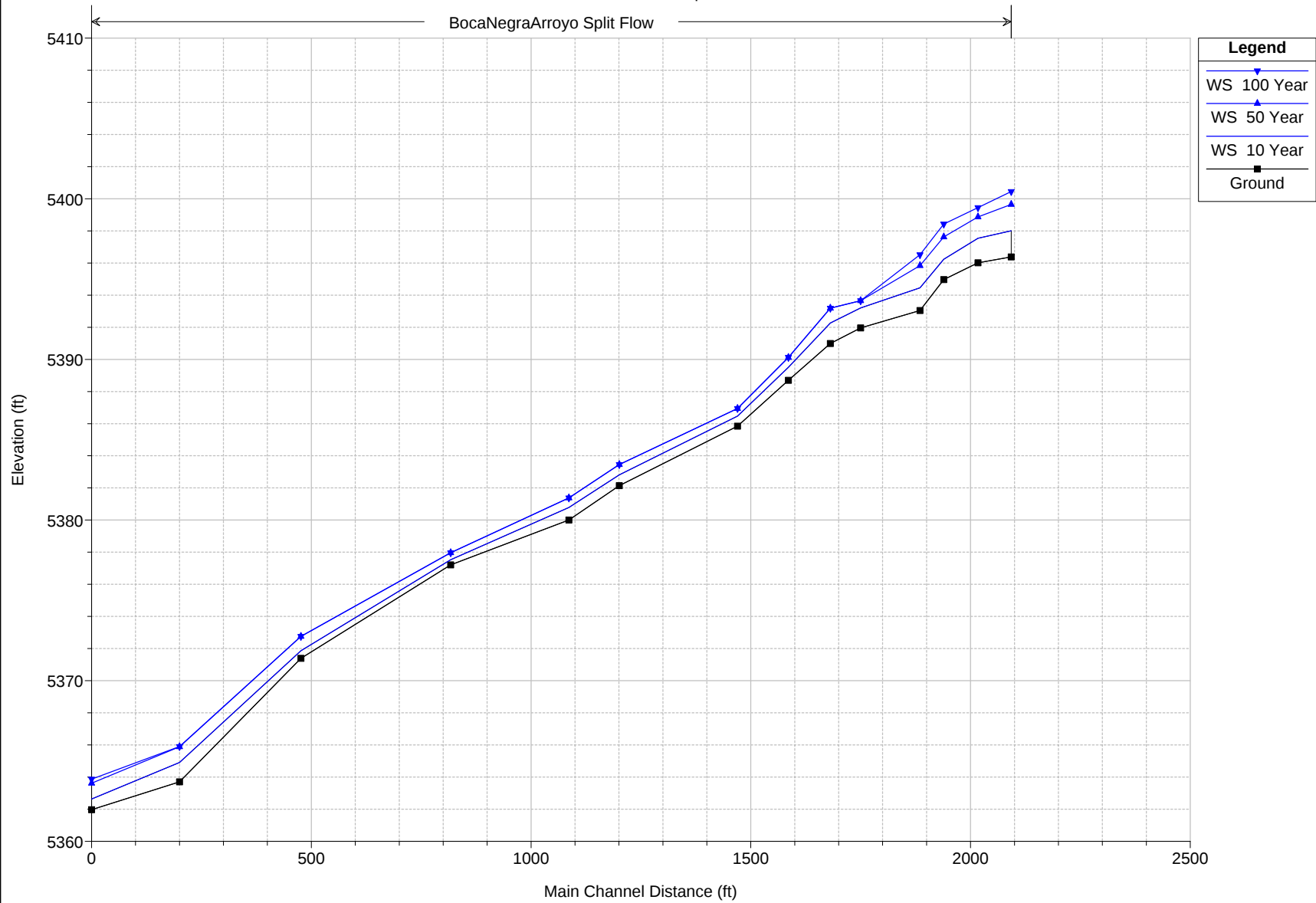
BocaNegraArroyo Reach - 1 Mid



BNA Current Upstm Plan: Current Upstream 1/7/2016

Geom: Current Upstream

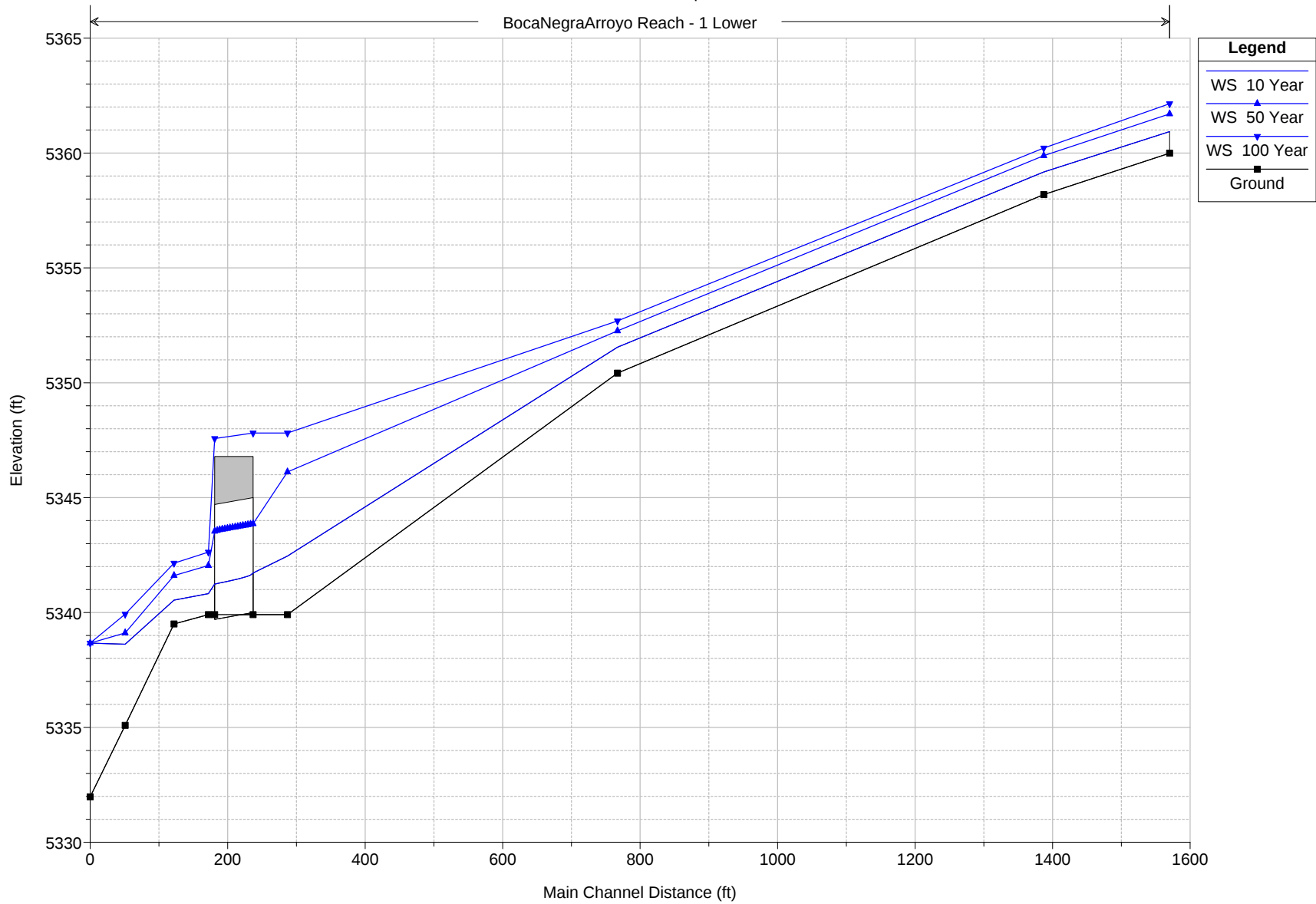
BocaNegraArroyo Split Flow



BNA Current Upstm Plan: Current Upstream 1/7/2016

Geom: Current Upstream

BocaNegraArroyo Reach - 1 Lower



HEC-RAS Plan: 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)	
Reach - 1 Upper	25374.6	10 Year	143.00	5432.23	5433.32		5433.45	0.006672	2.88	49.70	65.67	0.58
Reach - 1 Upper	25374.6	50 Year	709.00	5432.23	5434.33		5434.83	0.009891	5.68	125.53	83.71	0.80
Reach - 1 Upper	25374.6	100 Year	1175.00	5432.23	5434.87	5434.67	5435.60	0.010152	6.89	173.18	91.48	0.85
Reach - 1 Upper	24989.3	10 Year	143.00	5428.13	5429.35	5429.34	5429.65	0.015863	4.41	33.72	61.01	0.90
Reach - 1 Upper	24989.3	50 Year	709.00	5428.13	5430.53	5430.41	5431.08	0.009574	6.44	128.36	93.86	0.82
Reach - 1 Upper	24989.3	100 Year	1175.00	5428.13	5431.09	5430.97	5431.81	0.009555	7.60	183.48	106.39	0.85
Reach - 1 Upper	24106.4	10 Year	143.00	5419.39	5420.69	5420.44	5420.80	0.006836	2.78	51.48	73.08	0.58
Reach - 1 Upper	24106.4	50 Year	709.00	5419.39	5421.57	5421.41	5422.06	0.010892	5.67	126.70	96.08	0.83
Reach - 1 Upper	24106.4	100 Year	1175.00	5419.39	5422.05	5421.93	5422.78	0.011000	6.91	176.12	106.88	0.88
Reach - 1 Upper	23000.0	10 Year	143.00	5406.80	5407.71	5407.71	5407.97	0.023736	4.08	35.03	71.03	1.02
Reach - 1 Upper	23000.0	50 Year	709.00	5406.80	5408.61	5408.61	5409.06	0.012687	5.63	141.47	156.70	0.88
Reach - 1 Upper	23000.0	100 Year	1175.00	5406.80	5408.97	5408.97	5409.58	0.012903	6.70	200.30	171.05	0.92
Reach - 1 Upper	22241.1	10 Year	143.00	5397.81	5398.46	5398.46	5398.68	0.024199	3.74	38.19	89.42	1.01
Reach - 1 Upper	22241.1	50 Year	709.00	5397.81	5399.96		5400.16	0.003291	3.62	201.40	128.02	0.47
Reach - 1 Upper	22241.1	100 Year	1175.00	5397.81	5400.73		5400.98	0.002578	4.06	310.55	157.02	0.44
Reach - 1 Mid	22027.5	10 Year	0.01	5394.23	5394.25	5394.25	5394.25	0.008922	0.21	0.05	3.99	0.34
Reach - 1 Mid	22027.5	50 Year	0.01	5394.23	5394.25	5394.25	5394.25	0.008922	0.21	0.05	3.99	0.34
Reach - 1 Mid	22027.5	100 Year	0.01	5394.23	5394.25	5394.25	5394.25	0.008922	0.21	0.05	3.99	0.34
Reach - 1 Mid	21845.5	10 Year	0.01	5388.78	5388.81	5388.81	5388.81	0.001896	0.13	0.08	4.22	0.17
Reach - 1 Mid	21845.5	50 Year	0.01	5388.78	5388.81	5388.81	5388.81	0.001896	0.13	0.08	4.22	0.17
Reach - 1 Mid	21845.5	100 Year	0.01	5388.78	5388.80	5388.80	5388.80	0.005878	0.19	0.05	3.93	0.28
Reach - 1 Mid	21840	10 Year	0.01	5379.47	5379.49	5379.49	5379.49	0.001332	0.08	0.12	9.85	0.13
Reach - 1 Mid	21840	50 Year	113.00	5379.47	5380.53	5380.53	5380.75	0.017502	3.84	31.69	69.11	0.90
Reach - 1 Mid	21840	100 Year	612.00	5379.47	5381.39	5381.39	5381.97	0.015824	6.42	102.84	93.67	0.98
Reach - 1 Mid	21830	10 Year	0.01	5376.58	5376.60	5376.60	5376.60	0.001016	0.07	0.14	11.41	0.11
Reach - 1 Mid	21830	50 Year	113.00	5376.58	5377.29	5377.29	5377.54	0.022424	3.98	28.38	57.23	1.00
Reach - 1 Mid	21830	100 Year	612.00	5376.58	5378.27	5378.27	5378.89	0.014829	6.42	99.46	83.88	0.96
Reach - 1 Mid	21820	10 Year	0.01	5373.77	5373.80	5373.80	5373.80	0.003888	0.13	0.08	7.45	0.22
Reach - 1 Mid	21820	50 Year	113.00	5373.77	5374.60	5374.60	5374.81	0.017776	3.75	33.12	84.52	0.90
Reach - 1 Mid	21820	100 Year	612.00	5373.77	5375.34	5375.34	5375.82	0.015709	6.01	114.49	121.51	0.97

HEC-RAS Plan: 1 (Continued)

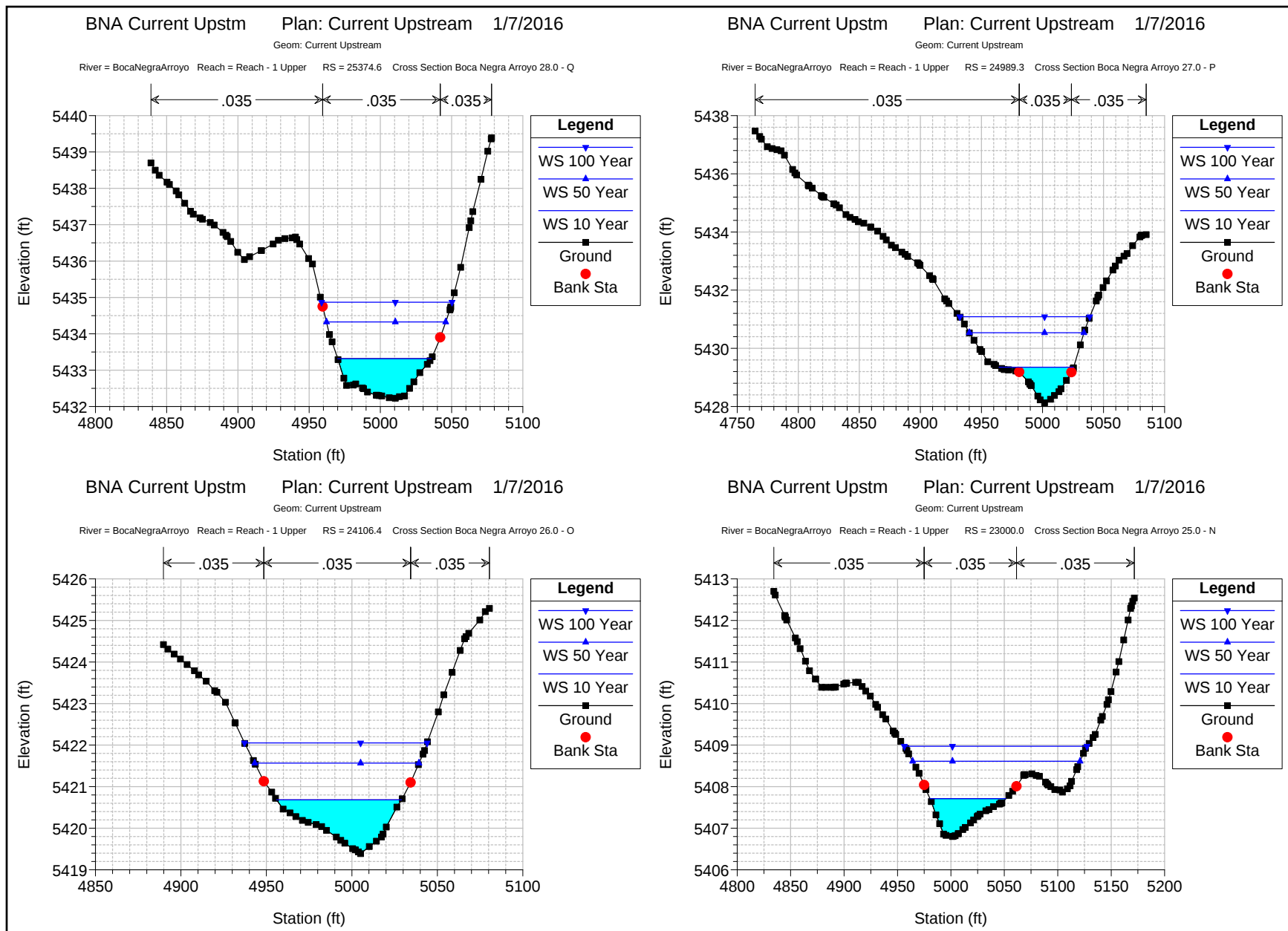
Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach - 1 Mid	21335.5	10 Year	0.01	5371.76	5371.79	5371.79	5371.79	0.003411	0.17	0.06	3.16	0.22
Reach - 1 Mid	21335.5	50 Year	113.00	5371.76	5372.83	5372.83	5373.13	0.021581	4.35	25.98	44.53	1.00
Reach - 1 Mid	21335.5	100 Year	612.00	5371.76	5374.00	5374.00	5374.51	0.018407	5.73	106.74	107.29	1.01
Reach - 1 Mid	21001.7	10 Year	0.01	5364.59	5364.85	5364.61	5364.85	0.000000	0.00	7.12	36.89	0.00
Reach - 1 Mid	21001.7	50 Year	113.00	5364.59	5365.74	5365.30	5365.83	0.003726	2.38	47.50	53.89	0.45
Reach - 1 Mid	21001.7	100 Year	612.00	5364.59	5366.48	5366.48	5367.17	0.015681	6.70	91.29	64.25	0.99
Split Flow	22027.5	10 Year	156.00	5396.38	5398.01		5398.05	0.001331	1.73	90.15	79.83	0.29
Split Flow	22027.5	50 Year	716.00	5396.38	5399.65		5399.77	0.001484	2.85	251.66	116.54	0.34
Split Flow	22027.5	100 Year	1185.00	5396.38	5400.45		5400.63	0.001476	3.41	352.96	140.41	0.35
Split Flow	22000	10 Year	156.00	5396.01	5397.54		5397.81	0.011487	4.17	37.45	42.63	0.78
Split Flow	22000	50 Year	716.00	5396.01	5398.87	5398.70	5399.48	0.011807	6.27	114.20	71.82	0.88
Split Flow	22000	100 Year	1185.00	5396.01	5399.45	5399.36	5400.31	0.011929	7.46	160.62	89.37	0.92
Split Flow	21840	10 Year	156.00	5394.97	5396.24	5396.24	5396.65	0.019381	5.14	30.34	37.28	1.00
Split Flow	21840	50 Year	716.00	5394.97	5397.62	5397.62	5398.50	0.012847	7.60	98.57	62.11	0.95
Split Flow	21840	100 Year	1185.00	5394.97	5398.43	5398.43	5399.45	0.009996	8.40	157.06	82.34	0.89
Split Flow	21835	10 Year	156.00	5393.04	5394.45	5394.45	5394.87	0.019402	5.20	29.98	36.16	1.01
Split Flow	21835	50 Year	716.00	5393.04	5395.84	5395.84	5396.64	0.015896	7.17	99.89	64.11	1.01
Split Flow	21835	100 Year	1185.00	5393.04	5396.52	5396.52	5397.53	0.014438	8.05	147.26	74.97	1.00
Split Flow	21800	10 Year	156.00	5391.96	5393.20		5393.30	0.005582	2.55	61.49	85.24	0.53
Split Flow	21800	50 Year	603.00	5391.96	5393.66	5393.66	5394.18	0.018357	5.60	103.50	100.47	1.00
Split Flow	21800	100 Year	603.00	5391.96	5393.66	5393.66	5394.18	0.018357	5.60	103.50	100.47	1.00
Split Flow	21770.8	10 Year	156.00	5390.99	5392.26	5392.26	5392.64	0.018894	4.90	31.84	107.99	0.98
Split Flow	21770.8	50 Year	603.00	5390.99	5393.19	5393.19	5393.30	0.003057	2.73	227.62	189.16	0.43
Split Flow	21770.8	100 Year	603.00	5390.99	5393.19	5393.19	5393.30	0.003057	2.73	227.62	189.16	0.43
Split Flow	21520.8	10 Year	156.00	5388.70	5389.51	5389.51	5389.72	0.022062	3.54	42.13	93.60	0.96
Split Flow	21520.8	50 Year	603.00	5388.70	5390.12	5390.12	5390.49	0.020557	4.62	123.72	172.28	1.00
Split Flow	21520.8	100 Year	603.00	5388.70	5390.13	5390.13	5390.49	0.020402	4.60	124.06	172.48	1.00
Split Flow	21335.5	10 Year	156.00	5385.84	5386.47		5386.55	0.008037	1.83	68.66	164.94	0.56
Split Flow	21335.5	50 Year	603.00	5385.84	5386.94	5386.81	5387.15	0.010796	3.57	166.00	237.09	0.74

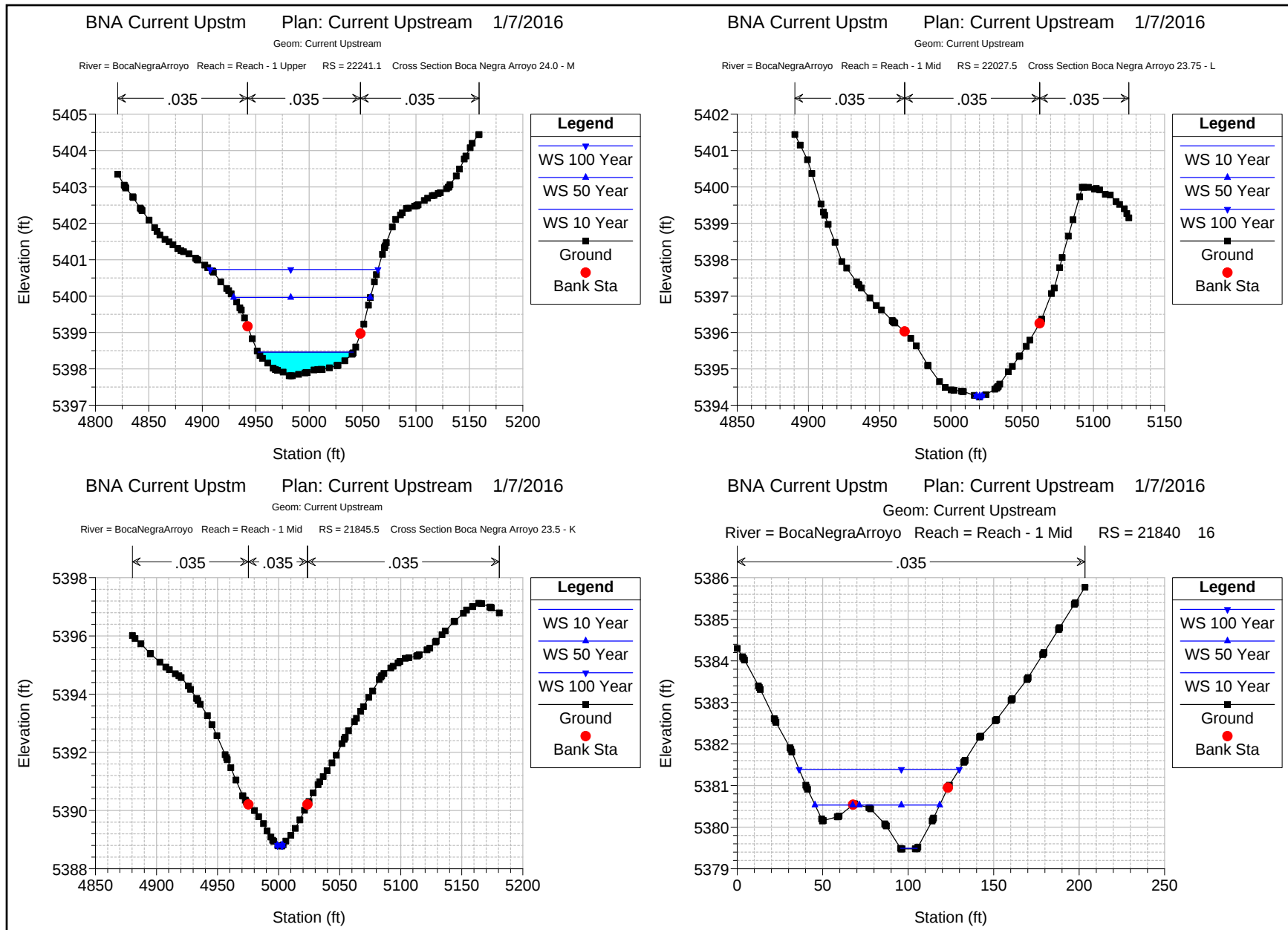
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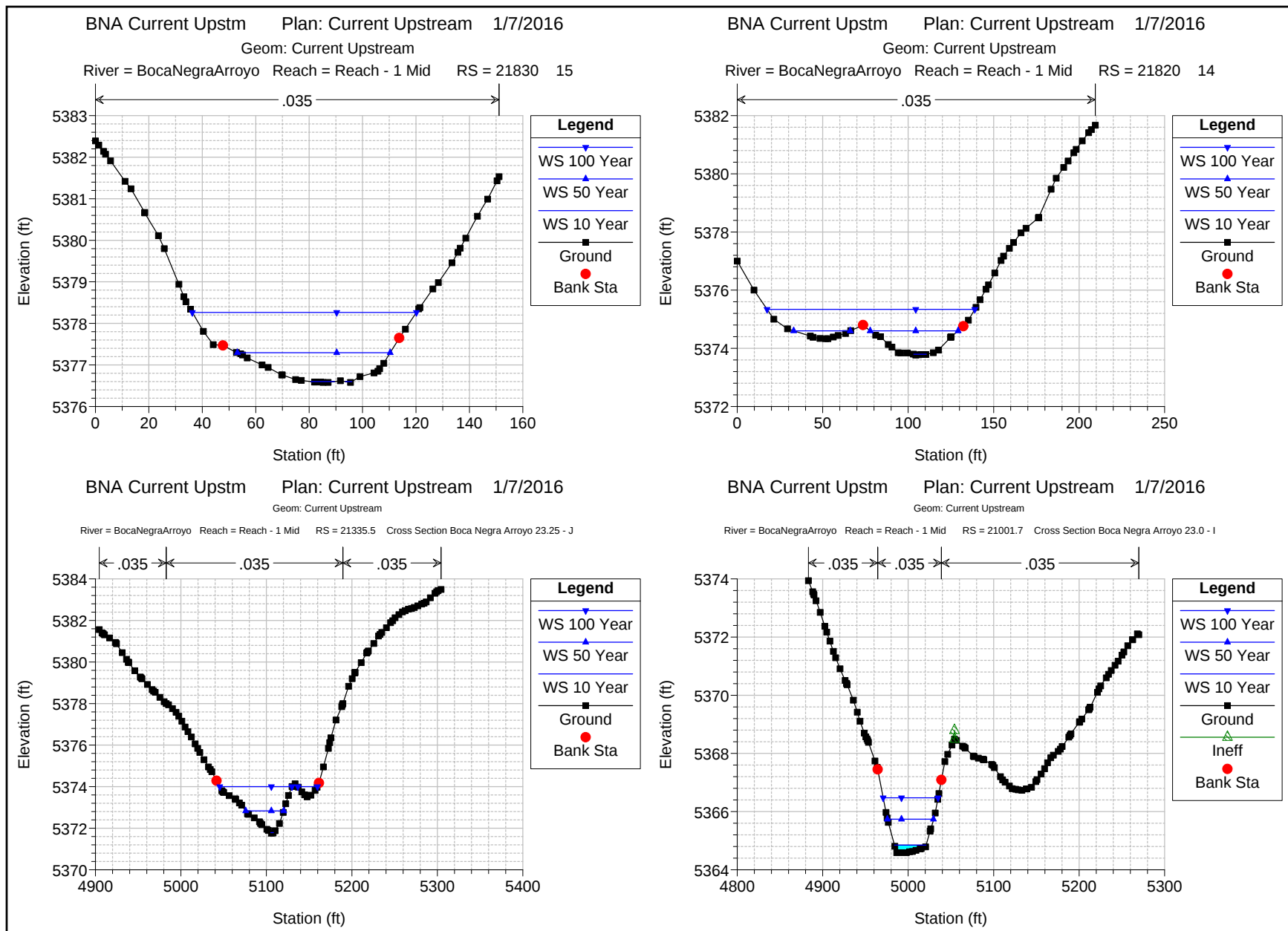
Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Split Flow	21335.5	100 Year	603.00	5385.84	5386.94		5387.15	0.010839	3.57	165.77	236.96	0.74
Split Flow	21325	10 Year	156.00	5382.14	5382.81	5382.81	5383.03	0.024948	3.74	41.70	101.98	1.02
Split Flow	21325	50 Year	603.00	5382.14	5383.46	5383.46	5383.85	0.013895	5.21	127.71	177.88	0.89
Split Flow	21325	100 Year	603.00	5382.14	5383.46	5383.46	5383.85	0.013895	5.21	127.71	177.88	0.89
Split Flow	21315	10 Year	156.00	5380.00	5380.79		5380.90	0.009653	2.73	57.07	107.56	0.66
Split Flow	21315	50 Year	603.00	5380.00	5381.38	5381.25	5381.73	0.012644	4.77	126.49	126.70	0.84
Split Flow	21315	100 Year	603.00	5380.00	5381.37	5381.25	5381.73	0.012718	4.78	126.25	126.63	0.84
Split Flow	21250	10 Year	156.00	5377.21	5377.53	5377.52	5377.65	0.015483	1.73	60.69	204.44	0.70
Split Flow	21250	50 Year	603.00	5377.21	5377.96	5377.90	5378.17	0.013590	3.08	170.99	293.50	0.77
Split Flow	21250	100 Year	603.00	5377.21	5377.97	5377.90	5378.17	0.013486	3.07	171.42	293.61	0.77
Split Flow	21200	10 Year	156.00	5371.39	5371.87	5371.87	5372.17	0.016536	2.61	37.21	62.07	0.80
Split Flow	21200	50 Year	603.00	5371.39	5372.76	5372.76	5373.22	0.015373	4.58	112.79	112.78	0.90
Split Flow	21200	100 Year	603.00	5371.39	5372.76	5372.76	5373.22	0.015498	4.59	112.40	112.52	0.90
Split Flow	21194.9	10 Year	156.00	5363.70	5364.91	5364.91	5365.26	0.020560	4.75	32.83	47.54	1.01
Split Flow	21194.9	50 Year	603.00	5363.70	5365.89	5365.89	5366.46	0.017995	6.03	99.98	91.61	1.02
Split Flow	21194.9	100 Year	603.00	5363.70	5365.90	5365.90	5366.46	0.017547	5.97	100.96	92.13	1.01
Split Flow	21001.7	10 Year	156.00	5361.97	5362.63		5362.69	0.002972	1.18	82.52	118.66	0.34
Split Flow	21001.7	50 Year	603.00	5361.97	5363.62		5363.73	0.002704	1.86	232.87	195.41	0.37
Split Flow	21001.7	100 Year	603.00	5361.97	5363.87		5363.94	0.001612	1.56	285.58	219.73	0.29
Reach - 1 Lower	20573.7	10 Year	152.00	5359.99	5360.94	5360.84	5361.10	0.009901	3.37	50.65	120.67	0.70
Reach - 1 Lower	20573.7	50 Year	718.00	5359.99	5361.70	5361.60	5362.08	0.010314	5.60	160.48	177.61	0.81
Reach - 1 Lower	20573.7	100 Year	1188.00	5359.99	5362.14	5362.06	5362.57	0.008756	6.14	251.26	221.14	0.78
Reach - 1 Lower	20390.6	10 Year	152.00	5358.19	5359.17		5359.32	0.009507	3.45	56.74	133.85	0.70
Reach - 1 Lower	20390.6	50 Year	718.00	5358.19	5359.88	5359.75	5360.23	0.009900	5.47	159.85	153.92	0.79
Reach - 1 Lower	20390.6	100 Year	1188.00	5358.19	5360.22	5360.11	5360.74	0.011394	6.72	212.50	162.22	0.88
Reach - 1 Lower	19770.6	10 Year	152.00	5350.42	5351.55	5351.55	5351.75	0.016403	3.67	44.71	110.80	0.87
Reach - 1 Lower	19770.6	50 Year	718.00	5350.42	5352.26	5352.26	5352.75	0.014940	6.06	135.71	146.98	0.95
Reach - 1 Lower	19770.6	100 Year	1188.00	5350.42	5352.69	5352.69	5353.28	0.012714	6.80	205.34	172.94	0.92
Reach - 1 Lower	19290.6	10 Year	152.00	5339.91	5342.46	5340.80	5342.47	0.000268	1.05	155.24	113.42	0.14

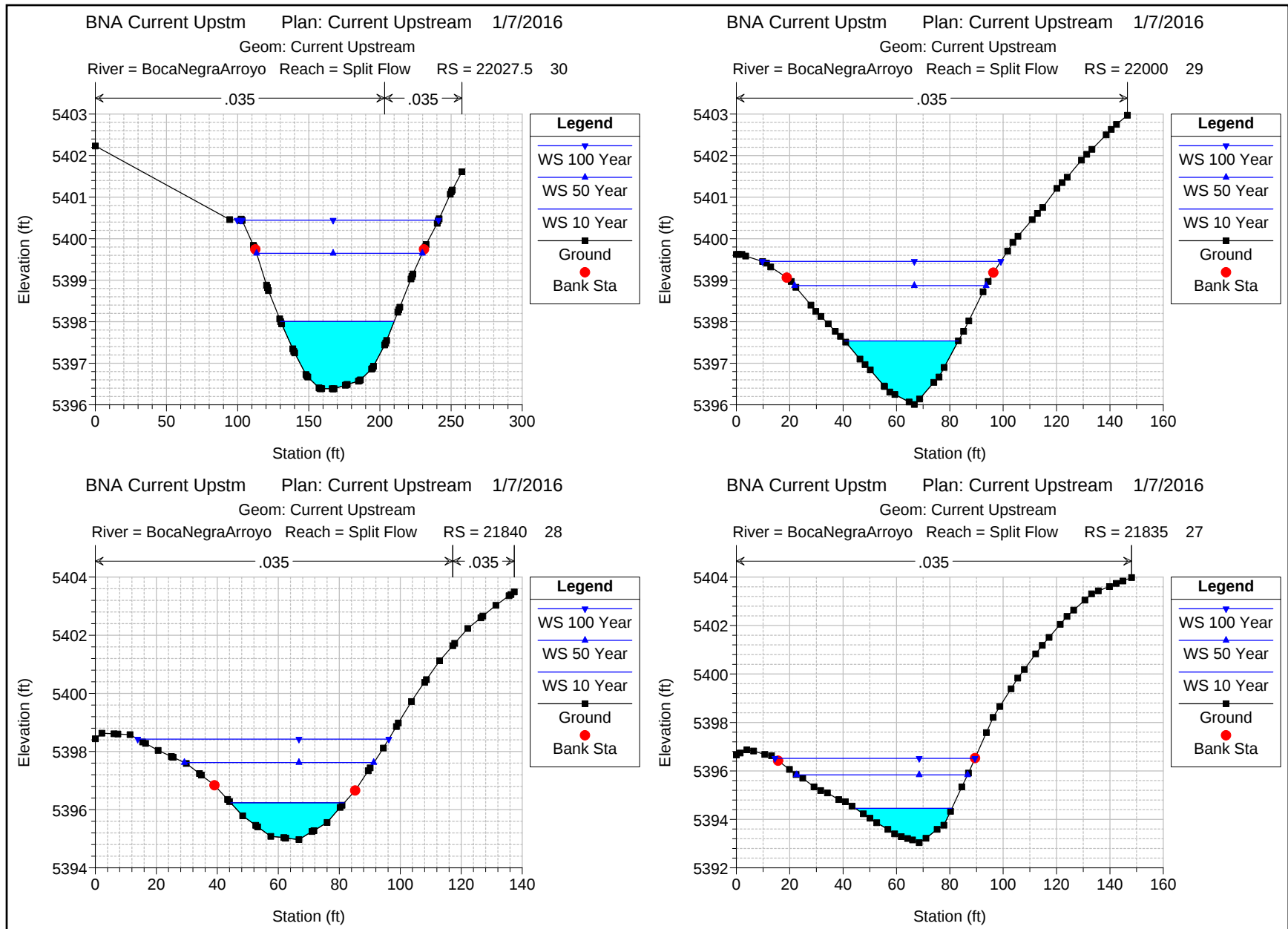
HEC-RAS Plan: 1 (Continued)

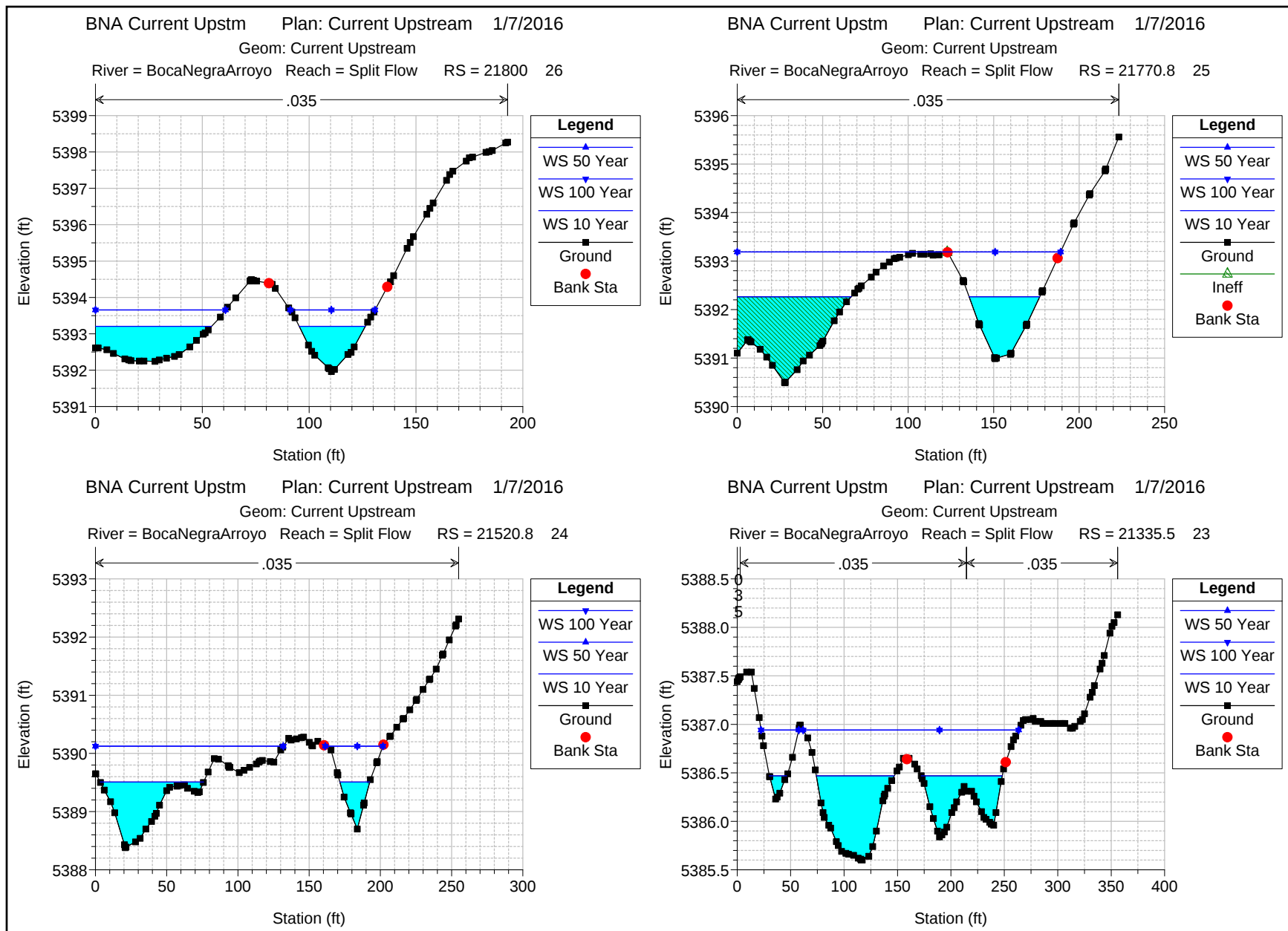
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach - 1 Lower	19290.6	50 Year	718.00	5339.91	5346.12	5342.05	5346.13	0.000063	1.05	915.87	304.61	0.08
Reach - 1 Lower	19290.6	100 Year	1188.00	5339.91	5347.81	5342.63	5347.82	0.000048	1.09	1541.12	433.22	0.07
Reach - 1 Lower	19200		Culvert									
Reach - 1 Lower	19175.6	10 Year	152.00	5339.91	5340.82	5340.80	5341.17	0.018354	4.68	32.45	44.06	0.96
Reach - 1 Lower	19175.6	50 Year	718.00	5339.91	5342.05	5342.05	5342.71	0.014589	6.57	112.59	93.96	0.96
Reach - 1 Lower	19175.6	100 Year	1188.00	5339.91	5342.63	5342.63	5343.43	0.011745	7.38	175.52	121.26	0.91
Reach - 1 Lower	19125.5	10 Year	152.00	5339.50	5340.54	5340.54	5340.85	0.002964	4.50	33.78	55.47	1.02
Reach - 1 Lower	19125.5	50 Year	718.00	5339.50	5341.61	5341.61	5342.23	0.001952	6.33	113.49	93.94	1.01
Reach - 1 Lower	19125.5	100 Year	1188.00	5339.50	5342.15	5342.15	5342.91	0.001821	6.99	169.86	113.51	1.01
Reach - 1 Lower	19054.6	10 Year	152.00	5335.09	5338.62		5338.69	0.001518	2.18	70.53	51.18	0.31
Reach - 1 Lower	19054.6	50 Year	718.00	5335.09	5339.11	5339.11	5340.01	0.013038	7.68	97.04	59.00	0.94
Reach - 1 Lower	19054.6	100 Year	1188.00	5335.09	5339.93	5339.93	5340.97	0.010152	8.47	156.31	81.35	0.88
Reach - 1 Lower	19003.57	10 Year	152.00	5331.98	5338.67	5332.71	5338.67	0.000003	0.21	739.07	151.76	0.02
Reach - 1 Lower	19003.57	50 Year	718.00	5331.98	5338.67	5333.72	5338.69	0.000064	0.97	739.07	151.76	0.08
Reach - 1 Lower	19003.57	100 Year	1188.00	5331.98	5338.67	5334.40	5338.71	0.000176	1.61	739.07	151.76	0.13

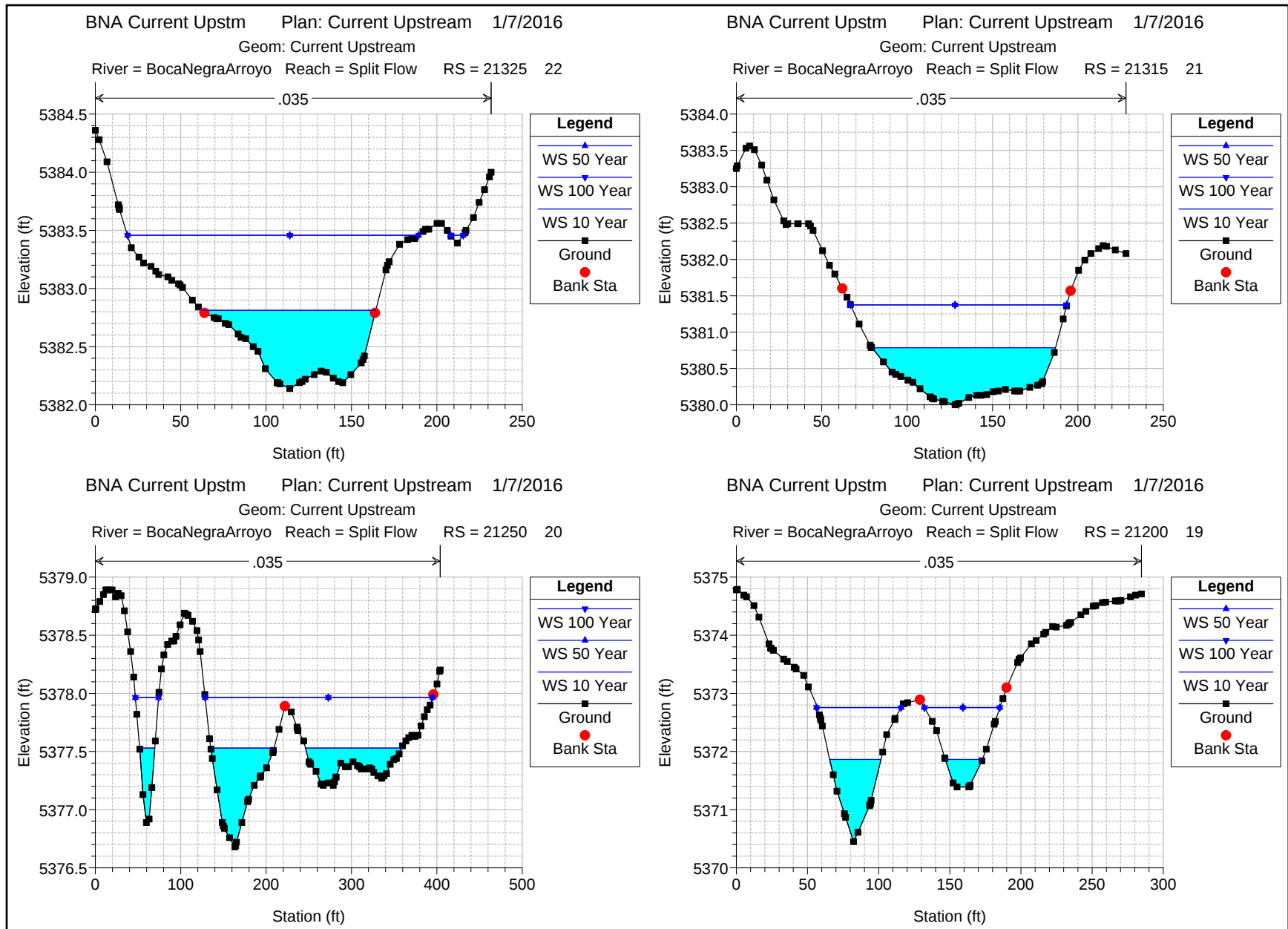


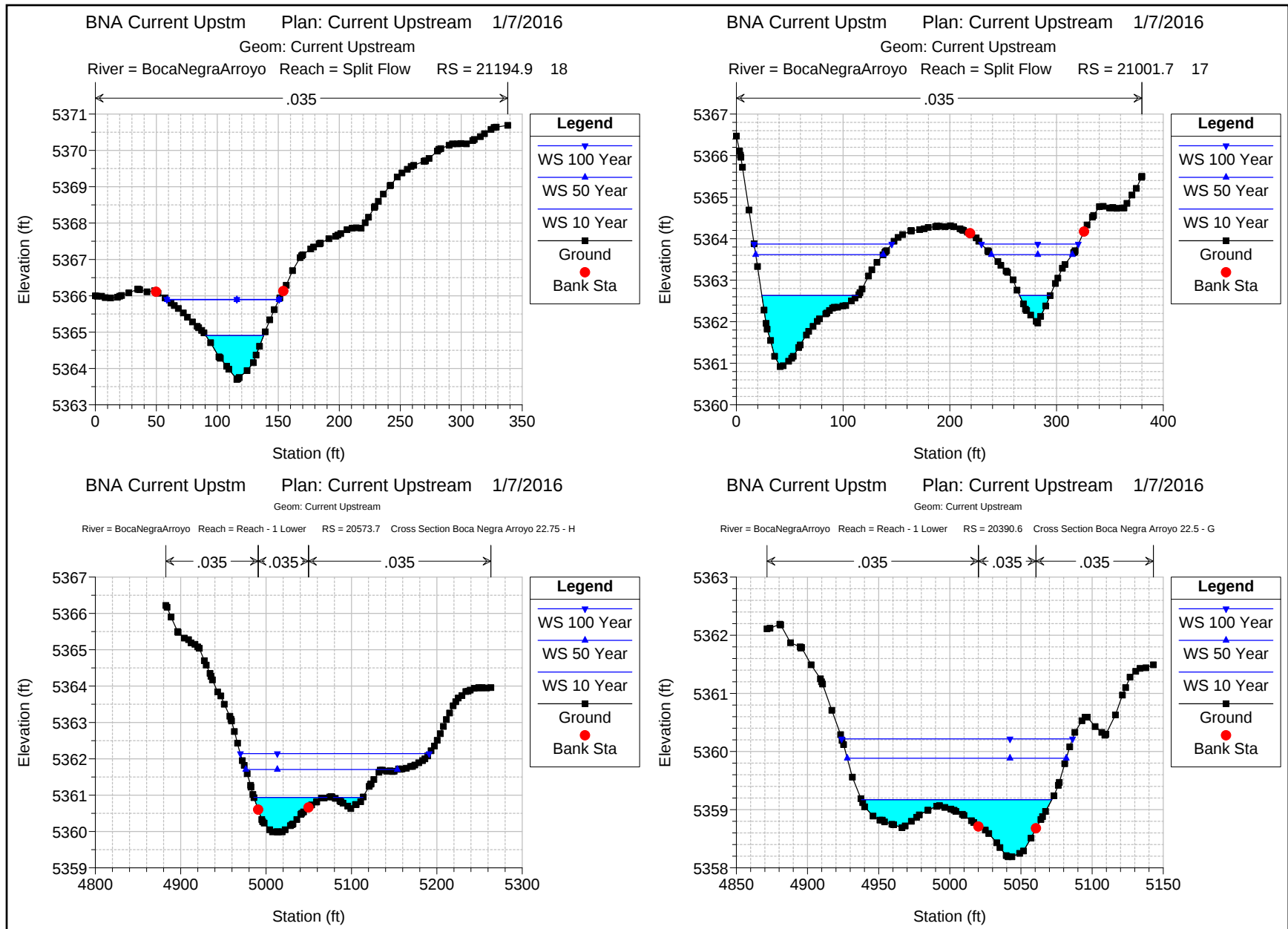


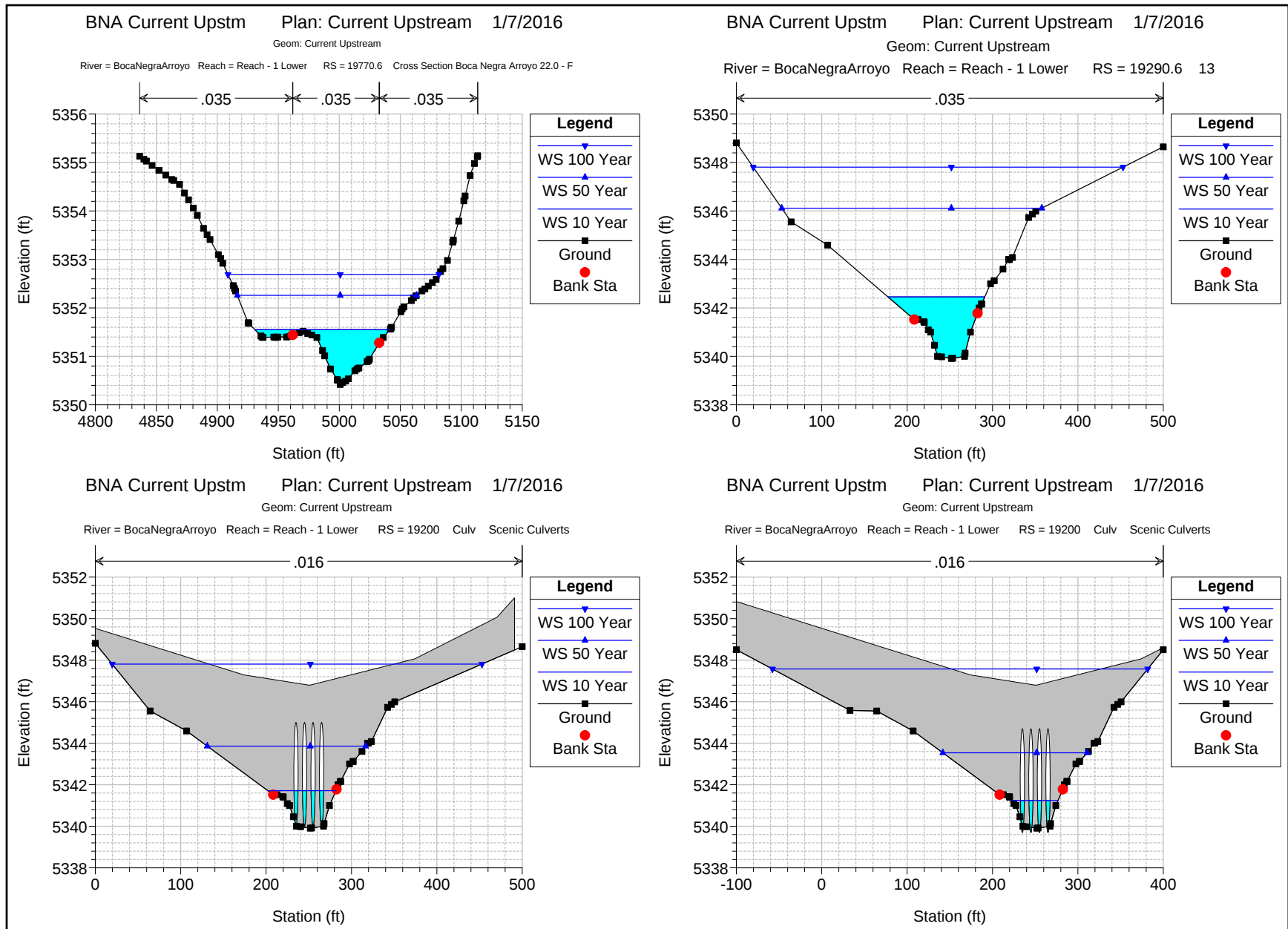


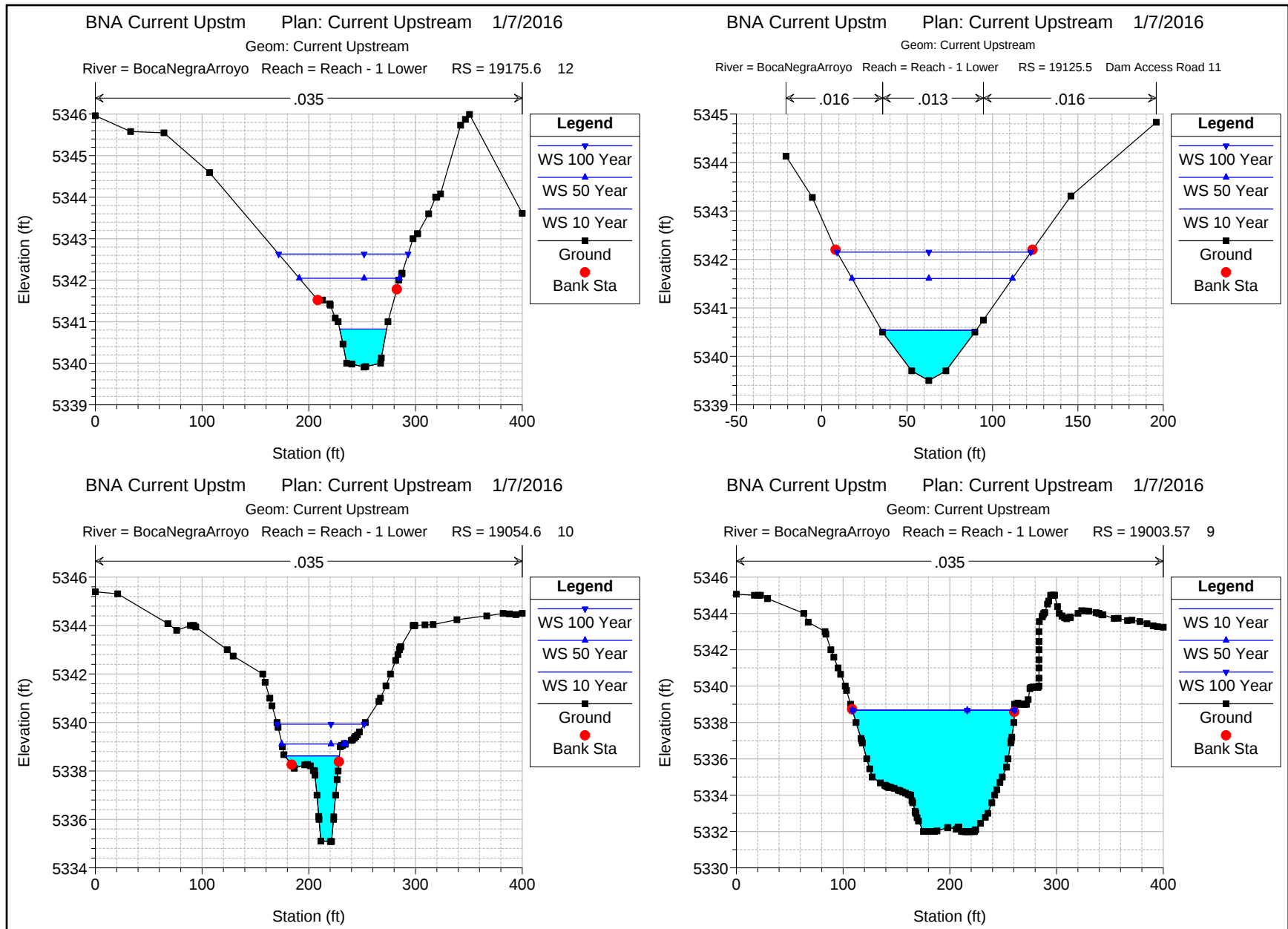












BNACurrentUpstm.rep

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X   X   XXXXXX   XXXX   XXXX   XX   XXXX
X   X   X       X   X   X   X   X   X
X   X   X       X   X   X   X   X   X
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PROJECT DATA

Project Title: BNA Current Upstm
Project File : BNACurrentUpstm.prj
Run Date and Time: 1/7/2016 9:32:07 AM

Project in English units

Project Description:

####(Watershed Name)####

BOCA NEGRA ARROYO

HCFCU Unit X###-##-##

(Flood

Hazard, Floodway) Model

10, 2, 1, 0.2% Event

Filename:

N:\Files\BernalilloCo\13_FEMA\Hydraulic Model\Boca Negra
Arroyo\Simulations\Boca Negra Arroyo.prj

Prepared by: _____ Date: _____

Reviewed by: _____ Date: _____

STATUS (Draft RAS,
SVSQ, FINAL)

PLAN DATA

Plan Title: Current Upstream

Plan File : t:\Projects\321807802\Eng\2012 Final Plans_Specifications_Estimate_Reports\2014 Final Construction
Acceptance Reports\H&H\LOMR - RAS\BNACurrentUpstm.p06

Geometry Title: Current Upstream

Geometry File : t:\Projects\321807802\Eng\2012 Final Plans_Specifications_Estimate_Reports\2014 Final
Construction Acceptance Reports\H&H\LOMR - RAS\BNACurrentUpstm.g05

Flow Title : Updated 2014

Flow File : t:\Projects\321807802\Eng\2012 Final Plans_Specifications_Estimate_Reports\2014 Final
Construction Acceptance Reports\H&H\LOMR - RAS\BNACurrentUpstm.f01

Plan Summary Information:

Number of:	Cross Sections =	34	Multiple Openings =	0
	Culverts =	1	Inline Structures =	0
	Bridges =	0	Lateral Structures =	0

Computational Information

Water surface calculation tolerance =	0.01
Critical depth calculation tolerance =	0.01
Maximum number of iterations =	20
Maximum difference tolerance =	0.3
Flow tolerance factor =	0.001

Computation Options

Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: Updated 2014

Flow File : t:\Projects\321807802\Eng\2012 Final Plans_Specifications_Estimate_Reports\2014 Final Construction
Acceptance Reports\H&H\LOMR - RAS\BNACurrentUpstm.f01

Flow Data (cfs)

BNACurrentUpstm.rep

River	Reach	RS	10 Year	50 Year	100 Year
BocaNegraArroyo	Reach - 1 Upper	25374.6	143	709	1175
BocaNegraArroyo	Reach - 1 Mid	22027.5	.01	.01	.01
BocaNegraArroyo	Reach - 1 Mid	21840	.01	113	612
BocaNegraArroyo	Split Flow	22027.5	156	716	1185
BocaNegraArroyo	Split Flow	21800	156	603	603
BocaNegraArroyo	Reach - 1 Lower	20573.7	152	718	1188

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
BocaNegraArroyo	Reach - 1 Lower	10 Year		Known WS = 5338.67

GEOMETRY DATA

Geometry Title: Current Upstream

Geometry File : t:\Projects\X321807802\Eng\2012 Final Plans_Specifications_Estimate_Reports\2014 Final Construction Acceptance Reports\H&H\LOMR - RAS\BNACurrentUpstm.g05

Reach Connection Table

River	Reach	Upstream Boundary	Downstream Boundary
BocaNegraArroyo	Reach - 1 Upper		Junction 1
BocaNegraArroyo	Reach - 1 Mid	Junction 1	Junction 2
BocaNegraArroyo	Split Flow	Junction 1	Junction 2
BocaNegraArroyo	Reach - 1 Lower	Junction 2	

JUNCTION INFORMATION

Name: Junction 1

Description:

Energy computation Method

Length across Junction		Tributary		Length	Angle
River	Reach	River	Reach		
BocaNegraArroyo	Reach - 1 Upper	to BocaNegraArroyo	Reach - 1 Mid	213.6	
BocaNegraArroyo	Reach - 1 Upper	to BocaNegraArroyo	Split Flow	173	

Name: Junction 2

Description:

Energy computation Method

Length across Junction		Tributary		Length	Angle
River	Reach	River	Reach		
BocaNegraArroyo	Reach - 1 Mid	to BocaNegraArroyo	Reach - 1 Lower	428	
BocaNegraArroyo	Split Flow	to BocaNegraArroyo	Reach - 1 Lower	321	

CROSS SECTION

RIVER: BocaNegraArroyo

REACH: Reach - 1 Upper RS: 25374.6

INPUT

Description: Cross Section Boca Negra Arroyo 28.0 - Q

Station Elevation Data		num=		71							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
4839	5438.7	4841.95	5438.5	4844.7	5438.36	4850.23	5438.17	4851.86	5438.11		
4856.66	5437.93	4858.5	5437.82	4862.65	5437.59	4866.78	5437.37	4868.62	5437.29		
4873.39	5437.19	4875.06	5437.15	4880.58	5437.06	4883.34	5436.99	4889.55	5436.79		
4891.62	5436.71	4892.54	5436.67	4894.92	5436.54	4899.9	5436.24	4904.5	5436.04		
4908.18	5436.12	4916.45	5436.29	4916.46	5436.29	4924.73	5436.47	4928.41	5436.57		
4933.01	5436.62	4937.99	5436.64	4940.37	5436.66	4941.29	5436.59	4943.35	5436.47		
4949.57	5436.07	4952.33	5435.92	4957.85	5435.01	4959.52	5434.75	4964.29	5433.98		
4966.13	5433.78	4970.25	5433.29	4974.4	5432.78	4976.25	5432.58	4981.05	5432.59		
4982.68	5432.62	4987.45	5432.51	4988.21	5432.49	4990.96	5432.4	4997.15	5432.31		
4997.8	5432.31	4999.05	5432.3	5000.96	5432.29	5006.21	5432.24	5010.47	5432.23		
5013.37	5432.27	5016.93	5432.29	5020.53	5432.5	5023.46	5432.68	5027.69	5432.93		
5032.9	5433.16	5034.85	5433.26	5036.44	5433.37	5042.01	5433.9	5048.87	5434.66		
5049.18	5434.7	5049.43	5434.74	5051.87	5435.13	5056.34	5435.83	5062.41	5436.92		
5063.5	5437.11	5064.84	5437.36	5070.66	5438.25	5075.4	5439.02	5077.82	5439.36		
5078.02	5439.39										

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
4839	.035	4959.52	.035	5042.01	.035

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	4959.52	5042.01	385.3	385.3	385.3	.1		.3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Reach - 1 Upper RS: 24989.3

INPUT

Description: Cross Section Boca Negra Arroyo 27.0 - P

Station Elevation Data		num= 96		Sta		Elev		Sta		Elev		Sta		Elev	
4764.7	5437.47	4768.41	5437.28	4769.76	5437.19	4774.65	5436.93	4778.51	5436.87						
4782.55	5436.83	4785.93	5436.79	4788.61	5436.64	4795.33	5436.15	4797.22	5436.03						
4798.71	5435.96	4808.12	5435.61	4808.5	5435.59	4808.8	5435.58	4811.38	5435.51						
4818.9	5435.25	4819.79	5435.21	4820.91	5435.19	4829	5434.97	4831.07	5434.93						
4833.69	5434.83	4839.1	5434.6	4842.36	5434.5	4846.48	5434.43	4849.2	5434.35						
4853.64	5434.3	4859.27	5434.17	4859.3	5434.16	4864.93	5434.03	4869.4	5433.85						
4872.06	5433.73	4876.21	5433.55	4879.5	5433.46	4884.84	5433.31	4887.5	5433.23						
4889.6	5433.16	4897.63	5432.94	4898.78	5432.9	4899.7	5432.85	4907.47	5432.5						
4909.8	5432.4	4910.07	5432.38	4910.42	5432.37	4919.9	5431.7	4921.36	5431.63						
4923.2	5431.54	4929.99	5431.2	4932.64	5431.07	4935.99	5430.84	4940.09	5430.53						
4943.93	5430.28	4948.78	5429.96	4950.19	5429.89	4955.21	5429.54	4960.29	5429.45						
4961.56	5429.41	4966.5	5429.31	4968.63	5429.27	4971.93	5429.26	4972.45	5429.26						
4978.17	5429.22	4980.99	5429.19	4988.45	5428.85	4989.52	5428.79	4989.93	5428.76						
4990.83	5428.72	4996.15	5428.36	4998.06	5428.23	5001.69	5428.13	5006.6	5428.25						
5009.73	5428.38	5013.45	5428.51	5015.13	5428.61	5019.59	5428.9	5023.67	5429.18						
5025.04	5429.3	5025.35	5429.33	5031.03	5430.12	5034.57	5430.63	5038.17	5431.03						
5044	5431.63	5045.31	5431.76	5046.12	5431.83	5049.54	5432.09	5052.45	5432.32						
5057.67	5432.69	5059.58	5432.83	5062.69	5433.03	5066.72	5433.17	5069.22	5433.26						
5073.86	5433.53	5079.78	5433.83	5080.76	5433.88	5081	5433.89	5081.37	5433.89						
5084.93	5433.91														

Manning's n Values		num= 3		Sta		n Val	
4764.7	.035	4980.99	.035	5023.67	.035		

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
4980.99	5023.67		882.9	882.9	882.9	.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Reach - 1 Upper RS: 24106.4

INPUT

Description: Cross Section Boca Negra Arroyo 26.0 - 0

Station Elevation Data		num= 56		Sta		Elev		Sta		Elev		Sta		Elev	
4889.8	5424.42	4892.33	5424.31	4896.03	5424.19	4899.68	5424.07	4903.57	5423.94						
4907.9	5423.79	4910.36	5423.69	4914.81	5423.54	4919.76	5423.31	4921.04	5423.27						
4926.06	5423.03	4931.62	5422.54	4931.73	5422.53	4937.3	5422.04	4942.41	5421.63						
4943.49	5421.54	4948.54	5421.13	4953.1	5420.87	4955.35	5420.72	4959.79	5420.46						
4963.78	5420.37	4967.22	5420.28	4971.03	5420.19	4974.47	5420.14	4979.08	5420.09						
4982.27	5420.04	4985.15	5419.95	4990.95	5419.79	4993.52	5419.71	4995.83	5419.64						
5000.47	5419.51	5002.06	5419.48	5003.76	5419.43	5005.11	5419.39	5010.15	5419.56						
5014.35	5419.69	5017.27	5419.79	5018.23	5419.86	5020.14	5420.03	5026.32	5420.51						
5029.43	5420.71	5034.4	5421.1	5038.86	5421.53	5041.58	5421.78	5042.48	5421.87						
5044.27	5422.08	5050.57	5422.8	5053.74	5423.21	5058.65	5423.75	5063.36	5424.28						
5065.9	5424.56	5066.74	5424.61	5068.4	5424.69	5074.82	5425.01	5078.06	5425.21						
5080.45	5425.29														

Manning's n Values		num= 3		Sta		n Val	
4889.8	.035	4948.54	.035	5034.4	.035		

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
4948.54	5034.4		1106.4	1106.4	1106.4	.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Reach - 1 Upper RS: 23000.0

INPUT

Description: Cross Section Boca Negra Arroyo 25.0 - N

Station Elevation Data		num= 106		Sta		Elev		Sta		Elev		Sta		Elev	
4834.3	5412.7	4835.65	5412.61	4844.38	5412.12	4844.78	5412.09	4845.05	5412.08						
4846.28	5412.01	4854.44	5411.58	4856.19	5411.49	4858.88	5411.32	4863.84	5411.02						
4867.59	5410.79	4873.24	5410.59	4873.39	5410.59	4879	5410.39	4882.63	5410.39						
4887.89	5410.39	4890.4	5410.39	4892.03	5410.4	4899.65	5410.47	4901.43	5410.49						
4901.81	5410.49	4902.4	5410.49	4910.82	5410.51	4913.21	5410.51	4916.9	5410.41						
4920.22	5410.3	4924.62	5410.18	4929.62	5409.98	4931.4	5409.91	4936.02	5409.73						
4939.01	5409.63	4945.91	5409.34	4947.43	5409.29	4948.41	5409.26	4953.01	5409.09						
4957.81	5408.92	4958.83	5408.87	4960.41	5408.79	4967.2	5408.47	4970.24	5408.32						
4974.92	5408.04	4976.6	5407.93	4981.64	5407.64	4986	5407.32	4989.42	5407.11						
4993.05	5406.86	4995.39	5406.83	5001.4	5406.8	5002.43	5406.81	5003.99	5406.82						
5006.86	5406.87	5006.89	5406.87	5011.16	5406.97	5013.48	5407.02	5018.33	5407.13						
5021.29	5407.2	5024.54	5407.28	5025.5	5407.3	5027.28	5407.34	5032.67	5407.42						
5035.59	5407.45	5039.84	5407.52	5045.38	5407.58	5046.64	5407.6	5047.01	5407.6						
5047.7	5407.61	5054.18	5407.79	5057.69	5407.89	5061.35	5408.01	5068.12	5408.27						
5068.52	5408.29	5068.74	5408.29	5069.47	5408.29	5075.7	5408.31	5079.79	5408.27						
5082.87	5408.25	5088.54	5408.11	5090.04	5408.07	5090.84	5408.04	5093.55	5408						

BNACurrentUpstm.rep
5097.21 5407.93 5101.89 5407.92 5104.38 5407.87 5108.97 5407.95 5111.55 5408.02
5112.95 5408.13 5117.64 5408.41 5118.72 5408.48 5124 5408.8 5125.89 5408.92
5129.39 5409.04 5133.06 5409.18 5135.05 5409.26 5140.23 5409.6 5141.73 5409.69
5146.1 5409.98 5147.4 5410.09 5149.81 5410.29 5154.57 5410.76 5157.15 5411.01
5161.74 5411.53 5165.81 5412.01 5168.2 5412.29 5168.91 5412.35 5170.23 5412.46
5171.65 5412.54

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
4834.3 .035 4974.92 .035 5061.35 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
4974.92 5061.35 758.9 758.9 758.9 .1 .3

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Reach - 1 Upper RS: 22241.1

INPUT

Description: Cross Section Boca Negra Arroyo 24.0 - M

Station Elevation Data num= 106
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
4820.81 5403.35 4826.92 5403.05 4827.77 5403 4828.45 5402.97 4834.88 5402.73
4835.23 5402.71 4841.93 5402.42 4842.68 5402.39 4843.61 5402.35 4850.14 5402.09
4855.42 5401.88 4857.6 5401.78 4860.3 5401.68 4865.05 5401.56 4868.9 5401.49
4872.51 5401.41 4876.98 5401.31 4879.97 5401.25 4882.38 5401.22 4887.43 5401.16
4893.67 5401.04 4894.88 5401.01 4895.86 5400.99 4902.34 5400.85 4905.09 5400.78
4909.35 5400.69 4909.8 5400.68 4910.36 5400.66 4917.26 5400.39 4922.83 5400.21
4924.71 5400.15 4927.05 5400.06 4932.17 5399.84 4935.12 5399.68 4936.44 5399.62
4939.49 5399.4 4942.34 5399.17 4946.71 5398.83 4951.4 5398.49 4953.94 5398.37
4956.32 5398.29 4961.17 5398.16 4966.35 5398.02 4968.39 5397.98 4970.3 5397.96
4975.62 5397.91 4981.31 5397.81 4982.84 5397.81 4984.28 5397.81 4990.07 5397.85
4996.26 5397.89 4997.29 5397.9 4998.26 5397.9 5004.52 5397.97 5008.04 5397.98
5011.21 5397.99 5011.74 5397.98 5012.24 5397.98 5018.97 5398.03 5026.17 5398.09
5026.2 5398.09 5026.22 5398.09 5026.99 5398.1 5033.42 5398.22 5040.2 5398.4
5040.65 5398.42 5041.12 5398.44 5043.57 5398.6 5048.02 5398.97 5051.13 5399.23
5055.49 5399.75 5057.32 5399.96 5061.08 5400.39 5062.97 5400.59 5068.64 5401.15
5070.44 5401.33 5071.04 5401.38 5072.22 5401.47 5077.91 5401.9 5080.99 5402.11
5085.39 5402.23 5087.12 5402.29 5090.94 5402.41 5092.86 5402.42 5098.63 5402.47
5100.33 5402.48 5100.9 5402.49 5102.02 5402.51 5107.8 5402.63 5110.85 5402.69
5115.28 5402.76 5116.92 5402.77 5120.8 5402.82 5122.75 5402.84 5128.61 5402.95
5130.22 5402.99 5130.76 5403 5131.82 5403.06 5137.7 5403.3 5140.71 5403.49
5145.17 5403.77 5146.72 5403.85 5150.67 5404.08 5152.64 5404.2 5158.6 5404.43
5159.07 5404.44

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
4820.81 .035 4942.34 .035 5048.02 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
4942.34 5048.02 0 0 0 .1 .3

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Reach - 1 Mid RS: 22027.5

INPUT

Description: Cross Section Boca Negra Arroyo 23.75 - L

Station Elevation Data num= 76
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
4890.5 5401.44 4894.23 5401.15 4899.28 5400.75 4902.37 5400.37 4908.78 5399.53
4910.52 5399.31 4911.36 5399.22 4913.78 5398.97 4918.67 5398.48 4923.45 5397.95
4926.82 5397.77 4933.78 5397.39 4934.96 5397.33 4935.54 5397.3 4937.18 5397.22
4943.11 5396.95 4947.62 5396.74 4951.26 5396.62 4958.78 5396.33 4959.41 5396.3
4959.71 5396.29 4960.59 5396.26 4967.55 5396.03 4971.8 5395.84 4975.7 5395.63
4983.78 5395.1 4983.85 5395.09 4983.89 5395.09 4983.99 5395.08 4992 5394.65
4995.97 5394.49 5000.14 5394.42 5002.14 5394.41 5007.39 5394.39 5008.06 5394.38
5008.29 5394.38 5008.77 5394.38 5016.44 5394.27 5020.15 5394.23 5024.59 5394.29
5030.8 5394.44 5032.23 5394.47 5032.73 5394.5 5032.96 5394.51 5033.28 5394.52
5034.26 5394.58 5040.31 5394.92 5043.1 5395.07 5047.87 5395.34 5048.29 5395.36
5052.93 5395.62 5055.43 5395.79 5062.32 5396.25 5062.75 5396.27 5062.99 5396.3
5063.77 5396.37 5070.54 5397.07 5072.58 5397.22 5076.34 5397.78 5078.1 5398.06
5082.4 5398.65 5085.66 5399.1 5090.37 5399.73 5092.22 5399.99 5093.22 5399.99
5096.55 5399.99 5100.78 5399.94 5102.05 5399.96 5104.4 5399.92 5108.34 5399.8
5111.87 5399.78 5115.9 5399.6 5118.42 5399.52 5121.69 5399.4 5123.46 5399.27
5124.92 5399.15

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
4890.5 .035 4967.55 .035 5062.32 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
4967.55 5062.32 182 182 182 .1 .3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Reach - 1 Mid RS: 21845.5

INPUT

Description: Cross Section Boca Negra Arroyo 23.5 - K

Station	Elevation	Data	num=	99	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
4880.3	5396.01	4882.41	5395.91	4887.22	5395.73	4894.99	5395.39	4895	5395.39			
4895.01	5395.39	4902.79	5395.1	4907.6	5394.93	4910.58	5394.84	4915.41	5394.7			
4918.37	5394.63	4920.19	5394.57	4926.16	5394.28	4927.91	5394.16	4932.79	5393.85			
4933.94	5393.78	4935.81	5393.65	4941.73	5393.26	4945.38	5392.95	4949.52	5392.57			
4956.21	5391.92	4957.31	5391.82	4957.98	5391.75	4960.83	5391.47	4965.09	5391.05			
4970.58	5390.51	4970.7	5390.5	4972.78	5390.36	4973.6	5390.3	4975.28	5390.21			
4980.22	5390	4983.61	5389.79	4987.66	5389.55	4990.59	5389.3	4993.63	5389.09			
4995.1	5388.98	4996.09	5388.94	4999.37	5388.79	5002.54	5388.78	5003.64	5388.82			
5005.9	5388.95	5009.98	5389.15	5013.66	5389.39	5017.42	5389.68	5021.21	5390.01			
5023.67	5390.21	5024.86	5390.31	5028.32	5390.61	5032.3	5390.89	5033.68	5390.99			
5036.52	5391.17	5039.74	5391.37	5043.7	5391.64	5047.18	5391.9	5051.83	5392.3			
5053.71	5392.45	5054.62	5392.52	5057.26	5392.74	5062.06	5393.05	5063.72	5393.17			
5067.14	5393.41	5069.5	5393.57	5073.74	5393.89	5076.94	5394.11	5082.45	5394.5			
5083.75	5394.59	5084.38	5394.63	5086.21	5394.71	5091.82	5394.9	5093.77	5394.96			
5097.76	5395.07	5099.26	5395.12	5103.78	5395.23	5106.7	5395.25	5113.07	5395.31			
5113.79	5395.32	5114.14	5395.33	5115.16	5395.36	5121.58	5395.52	5123.81	5395.58			
5128.38	5395.79	5129.02	5395.82	5133.82	5396.04	5136.46	5396.17	5143.69	5396.49			
5143.83	5396.5	5143.9	5396.5	5144.1	5396.5	5151.34	5396.78	5153.85	5396.89			
5158.78	5397.01	5159	5397.01	5163.86	5397.12	5166.22	5397.11	5173.05	5396.99			
5173.66	5396.98	5173.88	5396.98	5174.31	5396.96	5180.71	5396.79					

Manning's n Values num= 3
 Sta n Val Sta n Val
 4880.3 .035 4975.28 .035 5023.67 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 4975.28 5023.67 290.81 290.81 290.81 .1 .3

CROSS SECTION

RIVER: BocaNegraArroyo

REACH: Reach - 1 Mid RS: 21840

INPUT

Description: 16

Station	Elevation	Data	num=	69	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5384.3	3.12999	5384.13	699997	5384.064	259995	5384.02	12.37	5383.4			
12.92	5383.36	13.48	5383.31	21.61	5382.6122	14999	5382.57	22.69	5382.52			
30.84999	5381.9131	37999	5381.87	31.91	5381.81	40.09	5381.01	40.61	5380.96			
41.12999	5380.91	49.33	5380.2	49.84	5380.1550	34999	5380.1658	56999	5380.25			
59.06999	5380.2559	56999	5380.27	67.81	5380.54	68.3	5380.5668	78999	5380.56			
77.05	5380.47	77.53	5380.4778	00999	5380.4486	28999	5380.0886	75999	5380.05			
87.21999	5380.03	95.53	5379.49	95.99	5379.4796	43999	5379.48	104.12	5379.48			
104.77	5379.48	105.21	5379.48	105.66	5379.52	114.01	5380.15	114.44	5380.18			
114.88	5380.22	123.25	5380.95	123.67	5380.98	124.1	5381.01	132.48	5381.56			
132.9	5381.58	133.32	5381.61	141.72	5382.16	142.13	5382.18	142.54	5382.19			
150.96	5382.56	151.36	5382.57	151.75	5382.59	160.2	5383.05	160.59	5383.07			
160.97	5383.09	169.44	5383.55	169.82	5383.57	170.19	5383.6	178.68	5384.15			
179.05	5384.17	179.41	5384.2	187.92	5384.75	188.28	5384.75	188.63	5384.8			
197.16	5385.36	197.5	5385.38	197.85	5385.4	203.45	5385.77					

Manning's n Values num= 1
 Sta n Val
 0 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 67.81 123.25 71.4 71.4 71.4 .1 .3

CROSS SECTION

RIVER: BocaNegraArroyo

REACH: Reach - 1 Mid RS: 21830

INPUT

Description: 15

Station	Elevation	Data	num=	54	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5382.391	240005	5382.29	3.01001	5382.143	770004	5382.075	660004	5381.91			
11.10001	5381.4213	29001	5381.24	18.41	5380.6718	43001	5380.6623	56001	5380.11			
25.76001	5379.8	31.23	5378.94	33.09	5378.64	33.84	5378.52	35.59	5378.34			
40.42001	5377.8144	11001	5377.4947	75001	5377.4752	76001	5377.3	54.38	5377.27			
55.08001	5377.24	56.8	5377.1762	40001	5377	64.66	5376.94	69.73	5376.76			
69.94	5376.7674	93001	5376.6577	06001	5376.6382	01001	5376.5982	36001	5376.59			
84.39001	5376.59	85.2	5376.58	87.11	5376.58	91.72	5376.6295	48001	5376.58			
99.05	5376.72	104.29	5376.81	105.75	5376.85	106.38	5376.91	107.93	5377.04			
113.71	5377.65	116.03	5377.86	121.03	5378.35	121.46	5378.38	126.3	5378.83			
128.36	5378.98	133.5	5379.46	135.69	5379.71	136.57	5379.81	138.64	5380.05			
143.02	5380.58	146.85	5380.99	150.35	5381.43	151.1	5381.53					

Manning's n Values num= 1
 Sta n Val

0 .035

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
47.75001	113.71		115.95	115.95		115.95		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Reach - 1 Mid RS: 21820

INPUT

Description: 14

Station	Elevation	Data	num=	62									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5377	9.8	5376	21.4	5375	29.39	5374.67	42.77	5374.42				
44.38	5374.38	48.39	5374.34	51.71	5374.33	53.04	5374.33	56.17	5374.39				
59.04	5374.44	63.32	5374.51	66.37	5374.61	73.34	5374.79	73.59	5374.8				
73.69	5374.79	73.95	5374.78	81.02	5374.45	83.86	5374.4	88.35	5374.13				
90.52	5374.04	94.14	5373.85	95.68	5373.84	99.52	5373.84	103.01	5373.8				
104.41	5373.77	106.14	5373.78	107.7	5373.79	110.34	5373.79	114.68	5373.85				
117.67	5373.94	124.87	5374.38	124.96	5374.39	125	5374.39	125.09	5374.39				
132.32	5374.76	135.23	5374.97	139.65	5375.41	142.05	5375.67	145.51	5376.03				
146.98	5376.18	150.66	5376.59	154.31	5377.02	155.78	5377.17	159.22	5377.44				
161.64	5377.64	166.05	5377.97	168.97	5378.13	176.22	5378.49	176.3	5378.49				
176.33	5378.49	176.4	5378.5	183.63	5379.47	186.6	5379.85	190.95	5380.22				
193.57	5380.44	196.87	5380.72	198.28	5380.84	201.79	5381.13	205.61	5381.41				
207.15	5381.52	209.44	5381.67										

Manning's n Values num= 1
 Sta n Val
 0 .035

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
73.59	132.32		45.3	45.3		45.3		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Reach - 1 Mid RS: 21335.5

INPUT

Description: Cross Section Boca Negra Arroyo 23.25 - J

Station	Elevation	Data	num=	115									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
4904.44	5381.56	4907.59	5381.4	4909.19	5381.36	4910.62	5381.31	4916.55	5381.16				
4923.18	5380.94	4923.91	5380.92	4924.56	5380.88	4931.27	5380.45	4936.31	5380.13				
4938.5	5379.99	4938.63	5379.98	4938.76	5379.97	4945.98	5379.58	4952.44	5379.28				
4953.34	5379.24	4954.35	5379.19	4960.7	5378.92	4966.38	5378.67	4968.06	5378.6				
4969.93	5378.54	4975.42	5378.3	4980.32	5378.09	4982.78	5378	4985.52	5377.94				
4990.13	5377.76	4994.26	5377.58	4997.49	5377.39	5001.1	5377.15	5004.85	5376.87				
5008.2	5376.65	5012.21	5376.39	5016.69	5376.06	5019.57	5375.84	5022.14	5375.65				
5026.93	5375.3	5032.27	5374.95	5034.28	5374.83	5036.08	5374.72	5041.64	5374.29				
5047.86	5373.81	5049	5373.75	5050.02	5373.72	5056.36	5373.57	5063.45	5373.41				
5063.72	5373.4	5063.96	5373.39	5068.34	5373.22	5071.08	5373.11	5077.9	5372.7				
5078.44	5372.68	5079.03	5372.67	5085.79	5372.5	5091.84	5372.31	5093.15	5372.23				
5094.62	5372.17	5100.51	5371.95	5102.29	5371.89	5105.78	5371.76	5107.87	5371.77				
5110.2	5371.88	5115.23	5372.23	5119.72	5372.76	5122.59	5373.18	5125.79	5373.58				
5129.94	5374.01	5133.66	5374.14	5137.3	5373.98	5141.37	5373.75	5144.66	5373.61				
5147.6	5373.51	5152.02	5373.59	5156.96	5373.82	5159.38	5373.97	5161.54	5374.18				
5166.74	5374.95	5172.54	5375.84	5174.09	5376.12	5175.48	5376.35	5181.45	5377.21				
5188.13	5377.85	5188.81	5377.93	5189.42	5378	5196.17	5378.83	5200.37	5379.2				
5203.36	5379.47	5203.53	5379.49	5203.71	5379.5	5210.89	5379.97	5217.3	5380.43				
5218.24	5380.48	5219.3	5380.53	5225.6	5380.89	5231.24	5381.25	5232.96	5381.33				
5234.89	5381.42	5240.32	5381.65	5245.18	5381.89	5247.68	5381.99	5250.47	5382.13				
5255.04	5382.28	5259.12	5382.41	5262.4	5382.47	5266.06	5382.54	5269.75	5382.57				
5273.06	5382.62	5277.11	5382.7	5281.64	5382.79	5284.47	5382.83	5287	5382.89				
5291.83	5383.09	5297.23	5383.31	5299.19	5383.38	5300.94	5383.44	5304.37	5383.49				

Manning's n Values num= 3
 Sta n Val Sta n Val
 4904.44 .035 4982.78 .035 5189.42 .035

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
5041.64	5161.54		333.8	333.8		333.8		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Reach - 1 Mid RS: 21001.7

INPUT

Description: Cross Section Boca Negra Arroyo 23.0 - I

Station	Elevation	Data	num=	112									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
4883.3	5373.94	4888.36	5373.56	4889.24	5373.49	4889.79	5373.45	4892.23	5373.25				
4897	5372.85	4902.44	5372.37	4904.76	5372.17	4908.46	5371.86	4912.53	5371.51				
4915.08	5371.29	4920.29	5370.91	4926.29	5370.51	4927.72	5370.41	4928.05	5370.39				
4928.57	5370.36	4935.81	5369.83	4940.37	5369.42	4943.57	5369.11	4948.67	5368.7				

BNACurrentUpstm.rep

4950.46	5368.57	4951.86	5368.5	4952.73	5368.44	4953.46	5368.38	4961.22	5367.74
4963.76	5367.52	4964	5367.49	4964.29	5367.45	4974.07	5365.97	4975.27	5365.78
4976.71	5365.63	4984.37	5364.81	4986.53	5364.59	4989.13	5364.59	4994.68	5364.59
4997.8	5364.59	5001.56	5364.62	5004.99	5364.63	5009.06	5364.67	5013.98	5364.72
5015.29	5364.73	5020.33	5364.79	5025.6	5365.33	5026.4	5365.41	5031.6	5365.95
5034.62	5366.42	5035.9	5366.62	5038.83	5367.09	5042.86	5367.72	5046.21	5367.97
5051.25	5368.29	5054.13	5368.49	5056.51	5368.45	5063.67	5368.25	5065.39	5368.22
5066.82	5368.18	5076.1	5367.91	5076.66	5367.9	5077.13	5367.89	5082.12	5367.84
5087.43	5367.8	5087.93	5367.79	5088.52	5367.78	5097.74	5367.62	5099.19	5367.59
5100.95	5367.51	5108.04	5367.2	5110.46	5367.09	5113.37	5367.01	5118.35	5366.88
5121.72	5366.79	5125.79	5366.77	5128.65	5366.75	5132.99	5366.73	5138.22	5366.78
5138.96	5366.78	5144.26	5366.84	5149.26	5367.03	5150.64	5367.1	5155.52	5367.29
5159.57	5367.47	5163.06	5367.68	5166.79	5367.85	5169.88	5367.94	5175.49	5368.07
5178.05	5368.15	5180.18	5368.24	5187.91	5368.56	5189.32	5368.62	5190.49	5368.67
5200.33	5369.07	5200.58	5369.08	5200.79	5369.09	5203.03	5369.18	5211.1	5369.5
5211.85	5369.53	5212.76	5369.59	5221.4	5370.1	5223.12	5370.22	5225.18	5370.32
5231.71	5370.6	5234.38	5370.72	5237.6	5370.85	5242.02	5371.03	5245.65	5371.17
5250.03	5371.38	5252.32	5371.49	5256.91	5371.7	5262.45	5371.91	5262.63	5371.91
5268.18	5372.11	5269.85	5372.08						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
4883.3	.035	4964.29	.035	5038.83	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

4964.29	5038.83	0	0	0	.1	.3
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Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
5054.13	5269.85	5368.79	F

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Split Flow RS: 22027.5

INPUT

Description: 30

Station	Elevation	Data	num=	55	Sta	Elev	Sta	Elev	Sta	Elev
0	5402.23	94.42	5400.46	101.84	5400.44	102.51	5400.47	103.18	5400.44	
111.07	5399.84	111.74	5399.8	112.42	5399.74	120.29	5398.88	120.97	5398.82	
121.64	5398.75	129.52	5398.07	130.2	5398	130.87	5397.95	138.75	5397.35	
139.42	5397.29	140.1	5397.25	147.98	5396.73	148.65	5396.69	149.33	5396.67	
157.2	5396.41	157.88	5396.39	158.56	5396.39	159.11	5396.39	166.43	5396.39	
167.11	5396.38	167.79	5396.39	175.66	5396.47	176.34	5396.48	177.03	5396.49	
184.88	5396.57	185.57	5396.58	186.26	5396.6	194.11	5396.86	194.8	5396.88	
195.49	5396.93	203.34	5397.44	204.03	5397.49	204.72	5397.55	212.56	5398.23	
213.26	5398.29	213.95	5398.35	221.79	5399.03	222.49	5399.09	223.18	5399.15	
231.02	5399.74	231.72	5399.8	232.41	5399.86	240.25	5400.37	240.94	5400.43	
241.64	5400.48	249.47	5401.07	250.17	5401.13	250.87	5401.17	257.62	5401.61	

Manning's n Values num= 2

Sta	n Val	Sta	n Val
0	.035	203.34	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

112.42	231.02	75.7	75.7	75.7	.1	.3
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CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Split Flow RS: 22000

INPUT

Description: 29

Station	Elevation	Data	num=	52	Sta	Elev	Sta	Elev	Sta	Elev
0	5399.62	7599945	5399.622	.089996	5399.623	470001	5399.589	820007	5399.45	
11.32001	5399.41	12.87	5399.32	18.89	5399.06	20.55	5398.97	22.28	5398.83	
27.96	5398.4	29.78	5398.25	31.68	5398.13	34.42	5397.95	37.07	5397.77	
39.01	5397.65	40.96	5397.51	46.3	5397.148	24001	5396.97	50.19	5396.84	
55.4	5396.45	55.53	5396.44	57.47	5396.31	59.42	5396.25	64.76	5396.07	
66.7	5396.01	68.64	5396.1473	.99001	5396.54	75.93	5396.67	77.87	5396.9	
83.21001	5397.54	85.16	5397.7787	1.0001	5398.02	92.44	5398.72	94.39	5398.97	
96.33	5399.18	101.67	5399.7	103.62	5399.91	105.56	5400.06	110.9	5400.46	
112.85	5400.61	114.79	5400.75	120.13	5401.21	122.07	5401.35	124.02	5401.48	
129.36	5401.89	131.3	5402.03	133.25	5402.15	138.59	5402.5	140.53	5402.63	
142.48	5402.75	146.58	5402.97							

Manning's n Values num= 1

Sta	n Val
0	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

18.89	96.33	77.63	77.63	77.63	.1	.3
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CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Split Flow RS: 21840

INPUT

Description: 28

[illegible]

Manning's	n	Values		num=
Sta	n	Val	Sta	n Val
0	.035	117.21		.035

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	39.07001	85.22		54.1	54.1	54.1		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Split Flow RS: 21835

INPUT

Description: 27

[illegible]

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Manning's n Values      num=      1
Sta      n Val
0      .035
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Bank Sta:	Left	Right	Lengths:		Left Channel	Right	Coeff Contr.	Expan.
	15.66	89.49	135.23	135.23	135.23		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Split Flow RS: 21800

INPUT

Description: 26

Station	Elevation	Data	num=	66					
Sta	Elev	Sta	Elev	Sta Elev Sta Elev Sta Elev					
0	5392.611	259995	5392.615	330002 5392.568	.410004 5392.4613	740001 5392.31			
15.56	5392.28	16.61	5392.26	20.53	5392.2522	710001 5392.25	27.89	5392.24	
29.86	5392.28	33.27	5392.3337	.009999	5392.38	39.17	5392.43	44.16	5392.24
47.25	5392.8250	.460001	5392.99	51.31	5393.03	52.8	5393.11	58.47	5393.46
61.740001	5393.73	65.62	5393.99	72.33	5394.45	72.77	5394.48	73.02	5394.49
73.98	5394.47	75.43	5394.45	81.22	5394.39	82.69	5394.36	84.16	5394.25
90.45	5393.71	91.92	5393.6	93.39	5393.44	99.68	5392.69	101.15	5392.52
102.61	5392.41	108.91	5392.07	109.32	5392.04	110.38	5391.96	111.84	5392.02
118.14	5392.43	119.61	5392.49	121.07	5392.64	127.37	5393.32	128.83	5393.46
130.3	5393.6	136.6	5394.29	138.06	5394.43	139.53	5394.6	145.83	5395.35
147.29	5395.51	148.76	5395.67	155.05	5396.29	156.52	5396.45	157.99	5396.6
164.28	5397.22	165.75	5397.38	167.22	5397.47	173.51	5397.75	174.98	5397.84
176.45	5397.86	182.74	5397.99	184.21	5398.01	185.68	5398.04	191.97	5398.25
192.86	5398.27								

Manning's n	Values	num=	1
Sta	n Val		
0	.035		

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	81.22	136.6		68.96	68.96	68.96		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Split Flow RS: 21770.8

BNACurrentUpstm.rep

INPUT

Description: 25

Station	Elevation	Data	num=	77	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5391.16	.020004	5391.376	179993	5391.386	300003	5391.387	349991	5391.35			
8.050003	5391.33	13.39	5391.18	17.25	5391.02	20.61	5390.85	27.69	5390.5			
27.84	5390.49	27.91	5390.49	28.11	5390.535	.06999	5390.7638	.56999	5390.94			
42.3	5391.0648	.39999	5391.26	49.23	5391.29	49.53	5391.3150	.14999	5391.35			
56.75	5391.77	59.89	5391.95	63.98	5392.16	68.69	5392.34	70.55	5392.42			
71.20999	5392.4472	.59999	5392.49	78.44	5392.6781	.20999	5392.77	85.66	5392.9			
88.98999	5392.98	91.87	5393.05	92.89	5393.06	95.05	5393.08	100.12	5393.13			
102.52	5393.16	107.35	5393.14	109.28	5393.14	113.18	5393.15	114.57	5393.12			
117.5	5393.13	118.02	5393.13	122.85	5393.18	123.06	5393.18	123.27	5393.17			
132.08	5392.6	132.29	5392.59	132.5	5392.57	141.31	5391.71	141.52	5391.69			
141.73	5391.68	150.54	5391.01	150.75	5390.99	150.96	5390.99	151.64	5391			
159.76	5391.08	159.98	5391.08	160.19	5391.1	168.99	5391.67	169.21	5391.68			
169.42	5391.7	178.22	5392.36	178.44	5392.38	178.65	5392.39	187.45	5393.06			
187.66	5393.08	187.88	5393.09	196.68	5393.76	196.89	5393.77	197.11	5393.79			
205.91	5394.36	206.12	5394.38	206.34	5394.39	215.14	5394.86	215.35	5394.88			
215.56	5394.9	223.2	5395.56									

Manning's n Values

num= 1

Sta	n Val
0	.035

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
123.06	187.45		95.48	95.48	95.48		.1	.3	

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
0	122.85	5393.18	F

CROSS SECTION

RIVER: BocaNegraArroyo

REACH: Split Flow RS: 21520.8

INPUT

Description: 24

Station	Elevation	Data	num=	89	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5389.65	.230011	5389.653	520004	5389.56	190002	5389.3710	.60001	5389.17			
13.49001	5388.9820	.34001	5388.4320	.79001	5388.39	20.97	5388.3821	.43001	5388.39			
28.09001	5388.4831	.34001	5388.54	35.38	5388.739	.35001	5388.83	41.72	5388.92			
42.68001	5388.97	44.97	5389.1149	.98001	5389.3652	.09001	5389.4257	.26001	5389.44			
57.28	5389.44	58.97	5389.4562	.49001	5389.46	64.55	5389.469	.29001	5389.35			
71.83	5389.33	72.94	5389.34	75.77	5389.579	.10001	5389.68	83.39	5389.91			
86.38	5389.993	.20001	5389.7993	.65001	5389.7793	.85001	5389.7694	.35001	5389.76			
100.93	5389.67	104.3	5389.71	108.2	5389.76	112.92	5389.82	114.76	5389.85			
115.47	5389.87	117.12	5389.88	122.75	5389.86	125.21	5389.85	130.02	5390.06			
131.49	5390.11	135.66	5390.26	137.3	5390.23	141.04	5390.25	144.57	5390.27			
146.12	5390.28	150.06	5390.19	151.85	5390.14	152.43	5390.13	156.09	5390.21			
160.48	5390.14	160.92	5390.13	165.31	5390.06	169.71	5389.67	170.15	5389.63			
174.54	5389.25	178.94	5388.98	179.38	5388.97	179.45	5388.96	183.77	5388.7			
188.17	5389.11	188.6	5389.15	193	5389.55	197.4	5389.84	197.83	5389.86			
202.23	5390.15	206.63	5390.29	207.06	5390.3	211.46	5390.45	215.86	5390.59			
216.29	5390.6	220.69	5390.75	225.09	5390.91	225.52	5390.93	229.92	5391.1			
234.32	5391.27	234.75	5391.28	239.15	5391.45	243.54	5391.69	243.98	5391.71			
248.38	5391.95	252.77	5392.19	253.21	5392.21	254.99	5392.31					

Manning's n Values

num= 1

Sta	n Val
0	.035

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
160.48	202.23		115.6	115.6	115.6		.1	.3	

CROSS SECTION

RIVER: BocaNegraArroyo

REACH: Split Flow RS: 21335.5

INPUT

Description: 23

Station	Elevation	Data	num=	120	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5387.44	.9900208	5387.46	1.27002	5387.471	.660004	5387.481	.890015	5387.48			
2.77002	5387.498	.800018	5387.5413	.24002	5387.5415	.95001	5387.3720	.55002	5387.07			
23.10001	5386.8824	.60001	5386.7830	.24002	5386.4630	.39001	5386.4635	.95001	5386.23			
37.39001	5386.25	39.84	5386.2944	.54001	5386.4347	.30002	5386.4951	.67999	5386.66			
58	5386.96	58.66	5386.9958	.83002	5386.99	59.12	5386.9965	.98001	5386.86			
70.01001	5386.71	73.12	5386.5378	.39999	5386.1980	.27002	5386.09	81.37	5386.04			
85.62	5385.9687	.42001	5385.93	92.72	5385.79	94.56	5385.75	97.69	5385.69			
101.71	5385.67	104.08	5385.66	108.85	5385.65	113.23	5385.62	115.43	5385.61			
116	5385.6	116.97	5385.6	123.15	5385.64	126.79	5385.74	130.29	5385.9			
136.25	5386.21	137.44	5386.26	138.14	5386.28	140.84	5386.34	144.59	5386.42			
149.49	5386.52	151.73	5386.56	155.54	5386.65	158.88	5386.64	160.85	5386.65			
166.03	5386.59	168.46	5386.54	172.2	5386.47	173.17	5386.44	174.82	5386.39			
180.32	5386.15	183.56	5386.03	187.47	5385.9	189.3	5385.84	191.57	5385.86			

BNACurrentUpstm.rep											
193.86	5385.89	196.14	5385.94	200.82	5386.09	203.09	5386.14	205.35	5386.2		
210.07	5386.3	212.32	5386.36	214.56	5386.31	219.32	5386.31	221.55	5386.26		
223.77	5386.2	228.57	5386.1	230.78	5386.04	232.98	5386.02	236.3	5385.99		
237.82	5385.97	240.01	5385.96	242.19	5386.09	247.07	5386.41	249.24	5386.54		
251.4	5386.61	256.32	5386.77	258.47	5386.84	260.61	5386.88	265.57	5386.99		
267.7	5387.04	269.82	5387.05	274.82	5387.05	276.92	5387.06	279.02	5387.03		
284.06	5387.03	286.15	5387.01	288.23	5387.01	293.31	5387.01	295.38	5387.01		
297.44	5387.01	302.56	5387.01	304.61	5387.01	306.65	5387.01	311.81	5386.96		
313.84	5386.96	315.86	5386.98	321.06	5387.03	323.07	5387.05	325.07	5387.11		
330.31	5387.28	332.3	5387.33	334.28	5387.4	339.56	5387.57	341.53	5387.63		
343.49	5387.71	348.81	5387.94	350.76	5388.01	352.7	5388.05	356.1	5388.13		

Manning's n Values				num= 3			
Sta	n	Val	Sta	n	Val	Sta	n
0	.035	2.77002	.035	214.56	.035		

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	158.88	251.4		268.96	268.96		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Split Flow RS: 21325

INPUT
 Description: 22
 Station Elevation Data num= 75

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5384.362	229996	5384.286	819992	5384.091	342999	5383.72	13.86	5383.7
13.95999	5383.69	14.11	5383.68	21.09	5383.35	25.48	5383.27	28.23	5383.22
32.59	5383.19	35.36	5383.15	37.11	5383.12	42.5	5383.144	76999	5383.07
48.73	5383.044	62999	5383.03	51.06	5383.015	676999	5382.960	34999	5382.84
63.9	5382.796	953999	5382.757	103999	5382.74	71.98	5382.74	76.12	5382.7
78.17	5382.698	359999	5382.61	85.31	5382.588	88.01999	5382.579	243999	5382.5
95.23	5382.46	99.58	5382.31	106.49	5382.19	106.71	5382.19	106.75	5382.19
106.86	5382.19	108.02	5382.18	113.86	5382.14	119.53	5382.19	121.01	5382.2
122.91	5382.22	128.15	5382.26	132.2	5382.29	135.3	5382.28	139.31	5382.23
142.45	5382.2	144.87	5382.19	149.59	5382.26	155.7	5382.36	156.74	5382.39
157.54	5382.42	163.82	5382.79	163.89	5382.79	170.22	5383.16	171.03	5383.2
172.09	5383.23	178.18	5383.38	182.89	5383.42	185.33	5383.43	187.1	5383.43
191.89	5383.49	193.35	5383.51	195.28	5383.51	200.11	5383.56	202.71	5383.56
206.15	5383.5	208.32	5383.45	212.07	5383.39	216.54	5383.48	217.02	5383.5
221.43	5383.61	224.76	5383.74	227.9	5383.85	230.79	5383.96	231.76	5384

Manning's n Values				num= 1			
Sta	n	Val	Sta	n	Val	Sta	n
0	.035						

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	63.9	163.82		114.8	114.8		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Split Flow RS: 21315

INPUT
 Description: 21
 Station Elevation Data num= 70

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5383.25	5599976	5383.295	639999	5383.537	699997	5383.56	10.58	5383.51
14.83	5383.3	17.86	5383.09	21.97	5382.82	27.73001	5382.53	29.10001	5382.48
30.07001	5382.49	35.89	5382.49	36.23001	5382.49	42.29001	5382.49	43.37001	5382.46
44.88	5382.4	50.5	5382.12	54.51001	5381.92	57.63	5381.8	62.02	5381.6
64.77	5381.48	66.72	5381.38	71.90001	5381.11	78.35001	5380.82	78.94	5380.79
79.03	5380.79	79.17	5380.79	86.17	5380.59	91.15001	5380.45	93.3	5380.42
96.32001	5380.39	100.43	5380.34	103.37	5380.31	107.57	5380.22	113.46	5380.11
114.7	5380.09	115.58	5380.08	120.82	5380.05	121.3	5380.04	121.83	5380.04
128.04	5380	128.98	5380.01	130.2	5380.02	136.13	5380.1	140.71	5380.13
143.28	5380.13	146.6	5380.14	150.42	5380.18	153.38	5380.19	157.57	5380.21
162.99	5380.19	164.72	5380.19	166.05	5380.19	171.86	5380.24	176.48	5380.27
178.72	5380.29	179.01	5380.3	179.38	5380.32	186.16	5380.72	191.39	5381.18
193.3	5381.36	195.78	5381.57	200.45	5381.85	204.07	5381.99	207.6	5382.08
212.17	5382.15	214.75	5382.19	216.74	5382.18	221.89	5382.13	228.16	5382.08

Manning's n Values				num= 1			
Sta	n	Val	Sta	n	Val	Sta	n
0	.035						

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	62.02	195.78		268.94	268.94		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Split Flow RS: 21250

INPUT

Description: 20

Station	Elevation	Data	num=	116							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5378.72	5499878	5378.735	089996	5378.799	440002	5378.8512	32999	5378.89		
15.35999	5378.8919	57001	5378.8923	60999	5378.83	26.81	5378.86	30.16	5378.84		
34.04999	5378.71	37.78	5378.5341	29001	5378.3644	.95999	5378.14	48.53	5377.82		
51.94998	5377.5255	76999	5377.1359	76999	5376.8963	.01001	5376.92	66.12	5377.19		
70.25	5377.5974	57001	5378.0177	48999	5378.2180	.29001	5378.3384	.72998	5378.42		
89.37	5378.45	91.97	5378.45	94.47	5378.4999	.20999	5378.59	104.17	5378.69		
106.45	5378.68	108.64	5378.67	113.69	5378.62	118.98	5378.54	120.93	5378.46		
122.81	5378.36	128.17	5377.99	133.78	5377.61	135.41	5377.52	136.98	5377.44		
142.65	5377.17	148.58	5376.89	149.89	5376.86	151.15	5376.84	157.13	5376.76		
163.39	5376.68	164.37	5376.69	165.32	5376.72	171.61	5376.89	178.19	5377.07		
178.85	5377.08	179.49	5377.09	186.09	5377.21	192.99	5377.28	193.33	5377.28		
193.66	5377.29	200.57	5377.36	207.8	5377.49	207.81	5377.49	207.83	5377.49		
208.59	5377.51	215.05	5377.69	222	5377.89	222.29	5377.89	222.6	5377.89		
229.53	5377.84	236.17	5377.71	236.77	5377.69	237.4	5377.68	244.01	5377.59		
250.34	5377.41	251.25	5377.4	252.21	5377.39	258.49	5377.33	264.51	5377.22		
265.73	5377.22	267.01	5377.21	272.97	5377.23	278.68	5377.21	280.21	5377.24		
281.81	5377.28	281.95	5377.28	287.45	5377.4	292.85	5377.37	294.69	5377.37		
296.61	5377.37	301.93	5377.41	307.02	5377.38	309.17	5377.37	311.42	5377.35		
316.41	5377.35	321.19	5377.36	323.65	5377.35	326.22	5377.32	330.89	5377.29		
335.37	5377.27	338.13	5377.29	341.02	5377.31	345.37	5377.39	349.54	5377.43		
352.61	5377.44	355.83	5377.48	359.85	5377.55	363.71	5377.59	367.09	5377.62		
370.63	5377.64	374.33	5377.63	377.88	5377.64	381.57	5377.72	385.43	5377.8		
388.81	5377.86	392.05	5377.9	396.05	5377.99	400.23	5378.08	403.29	5378.19		
403.87	5378.2										

Manning's n Values

num= 1

Sta n Val
0 .035

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	222	396.05		340.84	340.84	340.84		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo

REACH: Split Flow

RS: 21200

INPUT

Description: 19

Station	Elevation	Data	num=	84							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5374.78	6799927	5374.795	279999	5374.697	119995	5374.66	12.34	5374.51		
15.82001	5374.3122	94998	5373.85	24	5373.78	24.53	5373.77	26.06	5373.74		
33.23	5373.59	35.67	5373.5540	60999	5373.4541	.92999	5373.4247	.32999	5373.31		
50.64	5373.11	58.28	5372.6358	98999	5372.58	59.34	5372.54	60.37	5372.44		
68.04999	5371.670	65999	5371.32	75.95	5370.93	76.75	5370.8782	.31999	5370.45		
85.45999	5370.61	93.62	5371.07	93.98	5371.0994	.15999	5371.194	.68999	5371.16		
102.87	5371.99	105.64	5372.29	111.28	5372.55	111.57	5372.57	117.31	5372.82		
120.27	5372.84	128.95	5372.89	128.97	5372.89	128.98	5372.89	129	5372.89		
137.68	5372.52	140.63	5372.36	146.39	5371.89	146.62	5371.88	152.3	5371.46		
155.09	5371.39	163.32	5371.39	163.8	5371.4	163.96	5371.4	164.17	5371.41		
164.29	5371.42	172.5	5371.84	175.62	5372.04	181.21	5372.47	181.95	5372.52		
187.28	5372.91	189.91	5373.1	197.64	5373.53	198.61	5373.58	198.95	5373.59		
199.62	5373.61	207.32	5373.85	210.61	5373.91	216.02	5374.02	217.29	5374.05		
222.27	5374.15	224.73	5374.14	231.95	5374.17	233.43	5374.19	233.94	5374.21		
234.96	5374.22	242.14	5374.35	245.6	5374.41	250.84	5374.5	252.62	5374.51		
257.26	5374.56	259.54	5374.57	266.27	5374.59	268.25	5374.59	268.92	5374.59		
270.29	5374.6	276.95	5374.66	280.59	5374.69	284.68	5374.71				

Manning's n Values

num= 1

Sta n Val
0 .035

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	128.95	189.91		276.3	276.3	276.3		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo

REACH: Split Flow

RS: 21194.9

INPUT

Description: 18

Station	Elevation	Data	num=	97							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	53661.440002	5365.995	089996	5365.998	049988	5365.9512	54001	5365.94			
18.09	5365.96	20	5365.9921	54001	5366.0127	.44998	5366.0834	.73999	5366.18		
34.89999	5366.1835	04001	5366.1836	35001	5366.1742	.35999	5366.1148	54001	5366.14		
49.81	5366.11	51.38	5366.0757	26999	5365.94	62.03	5365.8	64.72	5365.73		
68.03	5365.6572	16998	5365.53	75.53	5365.41	79.63	5365.2883	54999	5365.16		
84.67999	5365.1287	07999	5365.05	89.03	5364.9894	.53999	5364.71	101.33	5364.32		
101.99	5364.3	102.52	5364.28	107.62	5364.06	109.44	5363.98	116.02	5363.7		
116.9	5363.72	117.98	5363.75	124.35	5363.94	129.52	5364.16	131.81	5364.37		
134.63	5364.61	139.26	5365.01	143.01	5365.34	146.71	5365.62	151.28	5365.94		
154.17	5366.13	156.51	5366.29	161.62	5366.69	167.93	5367.05	169.08	5367.1		
170	5367.13	176.53	5367.29	178.89	5367.34	183.5	5367.43	183.98	5367.43		

BNACurrentUpstm.rep									
184.58	5367.45	191.44	5367.57	197	5367.64	198.89	5367.67	201.23	5367.71
206.35	5367.82	210.49	5367.86	213.8	5367.87	217.88	5367.86	221.25	5368.01
223.99	5368.16	228.71	5368.43	229.21	5368.46	232.05	5368.6	236.17	5368.8
241.71	5369.03	242.02	5369.04	247.51	5369.27	251.38	5369.38	255.76	5369.48
258.86	5369.56	261.05	5369.59	269.49	5369.7	270.21	5369.71	270.71	5369.71
273.6	5369.78	280.38	5369.98	281.56	5370.03	283.23	5370.05	290.04	5370.14
292.9	5370.18	296.97	5370.18	299.71	5370.19	304.25	5370.18	309.38	5370.27
310.7	5370.3	315.6	5370.38	319.04	5370.46	324.44	5370.58	326.95	5370.63
328.71	5370.64	338.15	5370.69						

Manning's n Values num= 1
Sta n Val
0 .035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	49.81	154.17		200 200	200		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Split Flow RS: 21001.7

INPUT

Description: 17
Station Elevation Data num= 114

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5366.47	3.02002	5366.113	820007	5366.01	4.25	5365.965	660004	5365.72
11.82	5364.6916	52002	5363.88	19.81	5363.33	25.97	5362.28	27.81	5361.96
28.79001	5361.8232	02002	5361.5535	80002	5361.17	41.06	5360.9243	80002	5360.94
48.93002	5361.0551	79001	5361.1253	32001	5361.1758	37003	5361.3859	79001	5361.44
65.59003	5361.68	67.78	5361.77	71.88	5361.89	75.78	5362.0177	86002	5362.07
83.77002	5362.19	84.72	5362.21	87.22	5362.27	90.13	5362.3391	77002	5362.35
94.84003	5362.3599	76001	5362.38	102.4	5362.39	107.76	5362.5	111.07	5362.57
114.67	5362.65	115.76	5362.7	117.8	5362.79	123.75	5363.1	126.93	5363.25
131.75	5363.43	137.42	5363.61	139.2	5363.67	139.74	5363.69	140.75	5363.71
147.74	5363.94	151.47	5364.03	155.73	5364.1	163.71	5364.19	163.73	5364.19
163.74	5364.19	163.78	5364.19	171.72	5364.22	176.01	5364.24	179.72	5364.27
186.66	5364.29	187.71	5364.3	188.27	5364.3	190.13	5364.3	195.71	5364.29
200.54	5364.31	203.7	5364.29	209.62	5364.24	211.7	5364.21	212.81	5364.2
216.48	5364.16	219	5364.13	220.41	5364.1	224.72	5364.02	227.11	5363.94
235.47	5363.71	236.08	5363.69	236.26	5363.69	236.58	5363.68	245.05	5363.45
247.8	5363.36	252.75	5363.22	254.02	5363.19	259.34	5363.01	262.99	5362.76
268.91	5362.43	270.88	5362.3	271.97	5362.27	275.77	5362.16	280.94	5362.01
282.42	5361.97	285.08	5362.13	289.91	5362.38	293.96	5362.63	298.88	5362.92
301.25	5363.05	305.5	5363.29	307.85	5363.38	316.07	5363.66	316.82	5363.68
317.04	5363.68	317.42	5363.71	325.79	5364.17	328.58	5364.33	333.59	5364.52
334.76	5364.56	340.12	5364.77	343.73	5364.78	349.76	5364.74	351.66	5364.74
352.71	5364.75	356.38	5364.73	361.68	5364.74	363.19	5364.74	365.93	5364.85
370.65	5365.05	374.73	5365.21	379.62	5365.48	379.95	5365.5		

Manning's n Values num= 1
Sta n Val
0 .035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	219	325.79		130 130	130		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Reach - 1 Lower RS: 20573.7

INPUT

Description: Cross Section Boca Negra Arroyo 22.75 - H
Station Elevation Data num= 112

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
4882.6	5366.22	4883.94	5366.17	4888.67	5365.9	4896.32	5365.5	4896.46	5365.49
4896.54	5365.49	4896.9	5365.48	4904.24	5365.32	4909.14	5365.28	4912.03	5365.19
4916.71	5365.15	4919.82	5365.08	4921.74	5365.04	4927.6	5364.7	4929.87	5364.58
4934.33	5364.35	4935.39	5364.27	4937.09	5364.17	4943.17	5363.84	4946.93	5363.73
4950.96	5363.5	4957.48	5363.17	4958.75	5363.09	4959.53	5363.04	4962.85	5362.75
4966.53	5362.43	4972.13	5361.95	4974.32	5361.82	4977.87	5361.59	4981.89	5361.27
4982.32	5361.22	4984.47	5361.02	4985.75	5360.93	4990.78	5360.6	4994.9	5360.33
4995.95	5360.27	4997.71	5360.23	5004.05	5360.05	5007.42	5359.99	5013.1	5359.99
5013.2	5359.99	5014.7	5359.99	5018.9	5359.99	5022.35	5360.05	5028.49	5360.16
5030.38	5360.19	5031.5	5360.21	5035.9	5360.33	5040.65	5360.47	5041.85	5360.5
5043.88	5360.54	5049.79	5360.66	5053.33	5360.73	5058.94	5360.81	5059.27	5360.82
5064.8	5360.92	5068.09	5360.92	5074.66	5360.95	5076.28	5360.96	5077.24	5360.95
5081.02	5360.91	5086.39	5360.84	5087.75	5360.82	5090.05	5360.78	5095.54	5360.7
5099.23	5360.63	5104.69	5360.74	5105.44	5360.74	5110.71	5360.82	5113.84	5360.95
5120.83	5361.24	5122.18	5361.3	5122.99	5361.31	5126.15	5361.43	5132.13	5361.63
5133.66	5361.69	5136.22	5361.69	5141.28	5361.66	5145.13	5361.67	5147.97	5361.65
5149.91	5361.66	5155.18	5361.72	5157.14	5361.71	5159.23	5361.72	5164.36	5361.74
5169.16	5361.79	5171.59	5361.79	5174.19	5361.83	5178.81	5361.89	5183.14	5361.95
5186.04	5362	5189.15	5362.08	5193.27	5362.22	5197.11	5362.35	5200.49	5362.51
5204.1	5362.69	5207.72	5362.89	5211.09	5363.08	5214.94	5363.26	5219.06	5363.46
5222.17	5363.57	5225.07	5363.67	5229.39	5363.74	5234.02	5363.85	5236.62	5363.86
5239.04	5363.89	5243.84	5363.94	5248.98	5363.96	5251.07	5363.95	5253.02	5363.96
5258.29	5363.95	5263.23	5363.96						

BNACurrentUpstm.rep

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
4882.6 .035 4990.78 .035 5049.79 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
4990.78 5049.79 183.1 183.1 183.1 .1 .3

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Reach - 1 Lower RS: 20390.6

INPUT

Description: Cross Section Boca Negra Arroyo 22.5 - G

Station Elevation Data num= 81
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
4871.5 5362.11 4873.57 5362.12 4880.55 5362.19 4880.81 5362.18 4881.09 5362.18
4888.06 5361.87 4894.79 5361.8 4895.3 5361.78 4895.84 5361.79 4902.55 5361.49
4909.03 5361.25 4909.79 5361.2 4910.59 5361.16 4917.04 5360.71 4923.27 5360.29
4924.29 5360.19 4925.33 5360.12 4931.53 5359.56 4937.52 5359.19 4938.78 5359.12
4940.08 5359.05 4946.02 5358.89 4950.87 5358.82 4952.52 5358.82 4954.15 5358.79
4959.26 5358.75 4960.57 5358.74 4966.36 5358.69 4968.61 5358.72 4972.96 5358.8
4976.65 5358.87 4978.56 5358.91 4984.59 5358.99 4984.69 5358.99 4990.77 5359.06
4992.74 5359.07 4996.53 5359.04 5000.78 5359.01 5002.98 5358.99 5004.29 5358.97
5008.82 5358.92 5009.91 5358.9 5015.19 5358.81 5016.86 5358.78 5020.1 5358.71
5024.91 5358.65 5027.39 5358.59 5032.95 5358.43 5035.23 5358.35 5039.6 5358.21
5040.99 5358.19 5043.67 5358.19 5049.03 5358.25 5051.81 5358.29 5057.07 5358.51
5060.56 5358.68 5064.02 5358.83 5065.12 5358.88 5067.24 5358.97 5073.16 5359.24
5076.23 5359.42 5076.96 5359.47 5080.72 5359.79 5084.22 5360.08 5087.86 5360.33
5092.83 5360.53 5095 5360.59 5096.58 5360.59 5102.13 5360.43 5106.79 5360.33
5108.94 5360.28 5109.27 5360.29 5109.73 5360.3 5116.41 5360.63 5121.29 5360.97
5123.54 5361.1 5126.62 5361.28 5130.68 5361.38 5133.65 5361.43 5137.82 5361.44
5143.07 5361.49

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
4871.5 .035 5020.1 .035 5060.56 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
5020.1 5060.56 620 620 620 .1 .3

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Reach - 1 Lower RS: 19770.6

INPUT

Description: Cross Section Boca Negra Arroyo 22.0 - F

Station Elevation Data num= 86
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
4836.3 5355.13 4839.83 5355.07 4841.82 5355.03 4846.53 5354.94 4852.04 5354.84
4852.26 5354.84 4857.78 5354.74 4862.7 5354.65 4864.24 5354.63 4869.04 5354.55
4873.14 5354.37 4876.45 5354.23 4880.3 5354.06 4883.59 5353.91 4888.66 5353.64
4891.55 5353.51 4894.03 5353.41 4900.86 5353.1 4902.81 5353.02 4904.47 5352.92
4913.07 5352.46 4914.06 5352.4 4914.91 5352.35 4925.28 5351.69 4925.32 5351.69
4925.36 5351.69 4925.82 5351.68 4935.8 5351.42 4936.58 5351.4 4937.49 5351.39
4946.24 5351.4 4947.83 5351.39 4949.69 5351.4 4956.68 5351.4 4959.09 5351.41
4961.9 5351.44 4967.13 5351.49 4970.34 5351.52 4974.11 5351.47 4977.57 5351.44
4981.6 5351.39 4986.31 5351.12 4988.01 5351.01 4992.86 5350.74 4998.46 5350.52
4998.52 5350.51 5000.82 5350.42 5002.71 5350.46 5005.28 5350.49 5007.48 5350.54
5012.75 5350.7 5014.55 5350.74 5016.08 5350.76 5022.79 5350.89 5023.82 5350.91
5024.69 5350.94 5032.84 5351.28 5033.08 5351.29 5033.3 5351.3 5036.05 5351.39
5041.9 5351.56 5042.35 5351.58 5042.88 5351.6 5050.51 5351.92 5051.62 5351.98
5052.92 5352.02 5059.12 5352.15 5060.89 5352.21 5062.97 5352.25 5067.72 5352.35
5070.16 5352.39 5073.01 5352.45 5076.33 5352.52 5079.43 5352.59 5083.05 5352.75
5084.94 5352.81 5088.7 5352.98 5093.1 5353.36 5093.54 5353.4 5097.97 5353.79
5102.15 5354.21 5103.14 5354.31 5107.24 5354.73 5110.76 5354.98 5113.18 5355.12
5113.51 5355.14

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
4836.3 .035 4961.9 .035 5032.84 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
4961.9 5032.84 480 480 480 .1 .3

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Reach - 1 Lower RS: 19290.6

INPUT

Description: 13

Station Elevation Data num= 33
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
0 5348.8164.29999 5345.55 106.99 5344.59 208.45 5341.52 212.88 5341.52
219.55 5341.43 220.08 5341.4 224.79 5341.09 227.42 5341 231.98 5340.46
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235.53	5340	240.35	5339.98	251.78	5339.91	253.38	5339.92	267.29	5340
267.99	5340.13	274.23	5341	282.53	5341.78	284.17	5342	286.98	5342.15
287.4	5342.17	297.64	5343	301.86	5343.12	301.95	5343.12	312.36	5343.6
318.87	5344	319.07	5344	319.86	5344	323.45	5344.08	342.32	5345.73
346.74	5345.87	350.63	5345.99	500	5348.65				

Manning's n Values num= 1
Sta n Val
0 .035

Bank	Sta: Left	Right	Lengths: Left	Channel Right	Coeff	Contr.	Expan.
	208.45	282.53	115	115		.3	.5

CULVERT

RIVER: BocaNegraArroyo
REACH: Reach - 1 Lower RS: 19200

INPUT

Description: Scenic Culverts

Distance from Upstream XS = 50

Deck/Roadway Width = 56

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num=	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
6	-176	5351.8		174	5347.29		251	5346.79	
	374	5348.06		470.4	5350.06		491	5351	

Upstream Bridge Cross Section Data

Station	Elevation	Data	num=	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5348.81		33	64.3	5345.55	106.99	5344.59	208.45	5341.52	212.88	5341.52		
219.55	5341.43			220.08	5341.4	224.79	5341.09	227.42	5341	231.98	5340.46		
235.53	5340			240.35	5339.98	251.78	5339.91	253.38	5339.92	267.29	5340		
267.99	5340.13			274.23	5341	282.53	5341.78	284.17	5342	286.98	5342.15		
287.4	5342.17			297.64	5343	301.86	5343.12	301.95	5343.12	312.36	5343.6		
318.87	5344			319.07	5344	319.86	5344	323.45	5344.08	342.32	5345.73		
346.74	5345.87			350.63	5345.99	500	5348.65						

Manning's n Values num= 1
Sta n Val
0 .016

Bank	Sta: Left	Right	Coeff	Contr.	Expan.
	208.45	282.53		.3	.5

Downstream Deck/Roadway Coordinates

num=	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
6	-176	5351.8		174	5347.29		251	5346.79	
	374	5348.06		470.4	5350.06		491	5351	

Downstream Bridge Cross Section Data

Station	Elevation	Data	num=	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-100	5348.5		34	64.3	5345.55	106.99	5344.59	208.45	5341.52				
212.88	5341.52			219.55	5341.43	220.08	5341.4	224.79	5341.09	227.42	5341		
231.98	5340.46			235.53	5340	240.35	5339.98	251.78	5339.91	253.38	5339.92		
267.29	5340			267.99	5340.13	274.23	5341	282.53	5341.78	284.17	5342		
286.98	5342.15			287.4	5342.17	297.64	5343	301.86	5343.12	301.95	5343.12		
312.36	5343.6			318.87	5344	319.07	5344	319.86	5344	323.45	5344.08		
342.32	5345.73			346.74	5345.87	350.63	5345.99	400	5348.5				

Manning's n Values num= 1
Sta n Val
-100 .016

Bank	Sta: Left	Right	Coeff	Contr.	Expan.
	208.45	282.53		.1	.3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
Downstream Embankment side slope = 0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow = .98
Elevation at which weir flow begins =
Energy head used in spillway design =
Spillway height used in design =
Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name	Shape	Rise	Span
Culvert #1	Circular	5	
FHWA Chart # 1 - Concrete Pipe Culvert			
FHWA Scale # 2 - Groove end entrance with headwall			
Solution Criteria = Highest U.S. EG			
Culvert Upstrm Dist	Length	Top n	Bottom n
50	56	.013	.013
Depth Blocked	Entrance Loss Coef	Exit Loss Coef	
0	.2	1	

Number of Barrels = 4
Upstream Elevation = 5340

Centerline Stations
 Sta. Sta. Sta. Sta.
 235 245 255 265
 Downstream Elevation = 5339.7
 Centerline Stations
 Sta. Sta. Sta. Sta.
 235 245 255 265

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Reach - 1 Lower RS: 19175.6

INPUT

Description: 12
 Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5345.96	33.06	5345.5864	29999	5345.55	106.99	5344.59	208.45	5341.52
212.88	5341.52	219.55	5341.43	220.08	5341.4	224.79	5341.09	227.42	5341
231.98	5340.46	235.53	5340	240.35	5339.98	251.78	5339.91	253.38	5339.92
267.29	5340	267.99	5340.13	274.23	5341	282.53	5341.78	284.17	5342
286.98	5342.15	287.4	5342.17	297.64	5343	301.86	5343.12	301.95	5343.12
312.36	5343.6	318.87	5344	319.07	5344	319.86	5344	323.45	5344.08
342.32	5345.73	346.74	5345.87	350.63	5345.99	400	5343.61		

Manning's n Values num= 1

Sta	n Val
0	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	208.45	282.53		50.1	50.1		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Reach - 1 Lower RS: 19125.5

INPUT

Description: Dam Access Road 11
 Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-20.92	5344.13	-5.5	5343.28	8.12	5342.2	35.66	5340.5	52.7	5339.7
62.7	5339.5	72.7	5339.7	89.7	5340.5	94.7	5340.75	123.44	5342.2
145.9	5343.31	195.9	5344.83						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-20.92	.016	35.66	.013	94.7	.016

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	8.12	123.44		70.95	70.95		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
 REACH: Reach - 1 Lower RS: 19054.6

INPUT

Description: 10
 Station Elevation Data num= 81

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5345.39	20.88	5345.31	67.91	5344.08	76.16	5343.889	01999	5344
91.64001	5344.92	35999	5344.94	07999	5343.94	123.61	5343	129.09	5342.74
156.79	5342	159.07	5341.66	163.51	5341	165.57	5340.69	170.22	5340
171.22	5339.8	175.26	5339	176.6	5338.67	183.95	5338.26	186.39	5338.11
196.19	5338.25	198.61	5338.27	201.46	5338.21	204.28	5338.02	205.25	5338.01
205.36	5338	205.77	5337.82	207.66	5337	209.38	5336.12	209.61	5336
211.36	5335.1	220.29	5335.09	220.45	5335.09	221.37	5335.09	223.15	5336
223.35	5336.1	225.12	5337	226.59	5337.64	227.44	5338	228.2	5338.38
229.46	5339	230.01	5339.03	230.9	5339.05	231.41	5339.05	231.69	5339.05
233.21	5339.13	234.16	5339.1	239.7	5339.26	240.93	5339.28	242.58	5339.35
243.83	5339.42	243.84	5339.42	245.64	5339.49	247.38	5339.61	252.9	5340
265.77	5340.87	267.16	5341	272.35	5341.51	276.53	5342	281.45	5342.56
283.53	5342.8	284.87	5343	285.07	5343.03	285.93	5343.12	286.23	5343.13
297.83	5344	298.23	5344	298.39	5344	298.42	5344	298.83	5344
298.91	5344	299.13	5344	299.31	5344	308.85	5344.03	316.5	5344.04
338.87	5344.24	366.69	5344.4	382.08	5344.5	387.83	5344.48	394.15	5344.45
400	5344.5								

Manning's n Values num= 1

Sta	n Val
0	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	183.95	228.2		50.98	50.98		.1	.3

CROSS SECTION

RIVER: BocaNegraArroyo
REACH: Reach - 1 Lower RS: 19003.57

INPUT

Description: 9

[illegible]

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Manning's n Values      num=      1
Sta      n Val
0      .035

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Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	108.43	260.42		.1	.3

SUMMARY OF MANNING'S N VALUES

River : Boca Negra Arroyo

Reach	River Sta.	n1	n2	n3
Reach - 1 Upper	25374.6	.035	.035	.035
Reach - 1 Upper	24989.3	.035	.035	.035
Reach - 1 Upper	24106.4	.035	.035	.035
Reach - 1 Upper	23000.0	.035	.035	.035
Reach - 1 Upper	22241.1	.035	.035	.035
Reach - 1 Mid	22027.5	.035	.035	.035
Reach - 1 Mid	21845.5	.035	.035	.035
Reach - 1 Mid	21840	.035		
Reach - 1 Mid	21830	.035		
Reach - 1 Mid	21820	.035		
Reach - 1 Mid	21335.5	.035	.035	.035
Reach - 1 Mid	21001.7	.035	.035	.035
Split Flow	22027.5	.035	.035	
Split Flow	22000	.035		
Split Flow	21840	.035	.035	
Split Flow	21835	.035		
Split Flow	21800	.035		
Split Flow	21770.8	.035		
Split Flow	21520.8	.035		
Split Flow	21335.5	.035	.035	.035
Split Flow	21325	.035		
Split Flow	21315	.035		
Split Flow	21250	.035		
Split Flow	21200	.035		
Split Flow	21194.9	.035		
Split Flow	21001.7	.035		
Reach - 1 Lower	20573.7	.035	.035	.035
Reach - 1 Lower	20390.6	.035	.035	.035
Reach - 1 Lower	19770.6	.035	.035	.035
Reach - 1 Lower	19290.6	.035		
Reach - 1 Lower	19200	Culvert		
Reach - 1 Lower	19175.6	.035		
Reach - 1 Lower	19125.5	.016	.013	.016
Reach - 1 Lower	19054.6	.035		
Reach - 1 Lower	19003.57	.035		

SUMMARY OF REACH LENGTHS

River: BocaNegraArroyo

Reach	River Sta.	Left	Channel	Right
Reach - 1 Upper	25374.6	385.3	385.3	385.3
Reach - 1 Upper	24989.3	882.9	882.9	882.9
Reach - 1 Upper	24106.4	1106.4	1106.4	1106.4
Reach - 1 Upper	23000.0	758.9	758.9	758.9
Reach - 1 Upper	22241.1	0	0	0
Reach - 1 Mid	22027.5	182	182	182
Reach - 1 Mid	21845.5	290.81	290.81	290.81
Reach - 1 Mid	21840	71.4	71.4	71.4
Reach - 1 Mid	21830	115.95	115.95	115.95
Reach - 1 Mid	21820	45.3	45.3	45.3
Reach - 1 Mid	21335.5	333.8	333.8	333.8
Reach - 1 Mid	21001.7	0	0	0
Split Flow	22027.5	75.7	75.7	75.7
Split Flow	22000	77.63	77.63	77.63
Split Flow	21840	54.1	54.1	54.1
Split Flow	21835	135.23	135.23	135.23
Split Flow	21800	68.96	68.96	68.96
Split Flow	21770.8	95.48	95.48	95.48
Split Flow	21520.8	115.6	115.6	115.6
Split Flow	21335.5	268.96	268.96	268.96
Split Flow	21325	114.8	114.8	114.8
Split Flow	21315	268.94	268.94	268.94
Split Flow	21250	340.84	340.84	340.84
Split Flow	21200	276.3	276.3	276.3
Split Flow	21194.9	200	200	200
Split Flow	21001.7	130	130	130
Reach - 1 Lower	20573.7	183.1	183.1	183.1
Reach - 1 Lower	20390.6	620	620	620
Reach - 1 Lower	19770.6	480	480	480
Reach - 1 Lower	19290.6	115	115	115
Reach - 1 Lower	19200	Culvert		
Reach - 1 Lower	19175.6	50.1	50.1	50.1
Reach - 1 Lower	19125.5	70.95	70.95	70.95
Reach - 1 Lower	19054.6	50.98	50.98	50.98
Reach - 1 Lower	19003.57			

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS

River: BocaNegraArroyo

Reach	River Sta.	Contr.	Expan.
Reach - 1 Upper	25374.6	.1	.3
Reach - 1 Upper	24989.3	.1	.3
Reach - 1 Upper	24106.4	.1	.3
Reach - 1 Upper	23000.0	.1	.3
Reach - 1 Upper	22241.1	.1	.3
Reach - 1 Mid	22027.5	.1	.3
Reach - 1 Mid	21845.5	.1	.3
Reach - 1 Mid	21840	.1	.3
Reach - 1 Mid	21830	.1	.3
Reach - 1 Mid	21820	.1	.3
Reach - 1 Mid	21335.5	.1	.3
Reach - 1 Mid	21001.7	.1	.3
Split Flow	22027.5	.1	.3
Split Flow	22000	.1	.3
Split Flow	21840	.1	.3
Split Flow	21835	.1	.3
Split Flow	21800	.1	.3
Split Flow	21770.8	.1	.3
Split Flow	21520.8	.1	.3
Split Flow	21335.5	.1	.3
Split Flow	21325	.1	.3
Split Flow	21315	.1	.3
Split Flow	21250	.1	.3
Split Flow	21200	.1	.3
Split Flow	21194.9	.1	.3
Split Flow	21001.7	.1	.3
Reach - 1 Lower	20573.7	.1	.3
Reach - 1 Lower	20390.6	.1	.3
Reach - 1 Lower	19770.6	.1	.3
Reach - 1 Lower	19290.6	.3	.5
Reach - 1 Lower	19200	Culvert	
Reach - 1 Lower	19175.6	.1	.3
Reach - 1 Lower	19125.5	.1	.3
Reach - 1 Lower	19054.6	.1	.3
Reach - 1 Lower	19003.57	.1	.3