STP00-0009-02(092) GLYNN COUNTY

SR 25 (US 17) OVER WALLYLEG BRANCH

SITE NO. 2

P.I. NO.: 532650

HYDRAULIC AND HYDROLOGICAL STUDY

EXAMINED AND APPROVED:

2/23/16

DATE

WILLIAM M. DuVALL, P.E.

STATE BRIDGE ENGINEER

___FEMA and Community Coordination Required
___Community Coordination Only Required
_X_No FEMA or Community Coordination Required

STP00-0009-02(092) GLYNN COUNTY

SR 25 (US 17) OVER WALLYLEG BRANCH

SITE NO. 2

HYDRAULIC & HYDROLOGICAL REPORT

This project involves the replacement of the existing 81 ft long by 28 ft wide bridge at the crossing of State Route 25 (US 17) over Wallyleg Branch, about 6.4 miles south of Darien, in Glynn County, Georgia. This bridge is one of two coastal bridge replacements on this project; the other bridge crosses over Thornhill Creek. The proposed structure will be a 125 ft long by 88 ft wide bridge on a new, shifted alignment approximately 13 ft north of the existing alignment. The proposed span arrangement will consist of one 45 ft span and two 40 ft spans. It will have a total of two lanes in each direction separated by a raised concrete median. The proposed bents, like the existing bents, are to be built at 90° to the construction centerline to align with the flood flow.

The proposed bridge width of 88 ft was obtained from MOG 4265-10 for a divided multilane rural State Route, with two 12 ft travel lanes, an 8 ft outside shoulder, 2 ft offset and 2 ft curb and gutter on each side separated by a raised 16 ft median. The design year 2042 ADT is 8250 vpd, and the design speed is 55 mph. This bridge is located in a coastal area; however, the site is not affected by daily tides. Furthermore, the combined daily tide and storm surge for the 2 year and the 25 year storm will have no impact as they do not reach the site; therefore the 2 year and the 25 year riverine discharges will be taken more into consideration. The 100 year and the overtopping event will be modeled using the tide and storm surge discharges. The design storm for a coastal bridge on a State Route is the 25 year storm or the overtopping storm if less than the 25 year storm as per the GDOT Drainage Manual. The proposed site is located in Unincorporated Glynn County, Georgia. Glynn County participates in the National Flood

Insurance Program administered by the Federal Emergency Management Agency (FEMA). However, a detailed Flood Insurance Study with a regulatory floodway has not been done for this reach of Wallyleg Branch. Therefore, coordination with FEMA or Glynn County will not be required.

The 2, 25, 100, and 500 year riverine storm discharges were determined using the method found in the USGS publication, "Magnitude and Frequency of Rural Floods in the Southeastern United States, 2006: Volume 1, Georgia," for an ungaged site. The equivalent year combined daily tide and storm surge discharges were determined using methods detailed in HEC No. 25, "Tidal Hydrology, Hydraulics and Scour at Bridges." The daily tides were determined using the simple harmonic estimation and the storm surge using the ADCIRC estimation. The tidal and storm surge models were calibrated against an existing study done by Ayres Associates for the same tidal region. The watershed of the project is located 100% within Hydrologic Region 4. The hydraulic slope of 5.65 ft/mile and the drainage area of 1.5 sq mi were derived from the USGS Quad maps and the Streamstats web application.

All tidal variables used were found in the HEC-25 manual and at the National Oceanic and Atmospheric Administration (NOAA) website and its publications. The floodstage elevations, areas of opening, velocities and backwaters for the existing and proposed structures were calculated using the HEC-RAS computer model developed by the US Army Corps of Engineers (USACE). As mentioned earlier, the combined daily tides and storm surge for the 2 and 25 year storm do not have any impact on this site. Therefore, the riverine discharges for the upstream boundary were modeled using steady flow for the 2 and 25 year storm. The daily tides and storm surge were modeled using unsteady flow for the downstream boundary. The upstream boundary for the unsteady flow model is the lowest constant flow possible where the model

maintains stability. The existing and the proposed structures clear the 25 year riverine and 100 year tidal storms with no overtopping flow occurring during either storm. The Hydraulic Engineering Field Report states that the flood of record elevation is approximately 10.9 ft taken from measurements of the abrasion lines on the downstream columns of the existing bridge. There are residential structures within the floodplain of this bridge.

The existing bridge has a channel velocity of 2.55 fps for the 25 year flood and 4.17 fps for the 100 year flood. The existing structure creates 0.19 ft of backwater upstream during the 25 year riverine flood. Backwater is not calculated for the 100 year storm surge due to the tidal influence. The natural channel velocities are 2.57 fps and 1.46 fps for the 25 year and 100 year floods, respectively.

The proposed 125 ft bridge was chosen as a replacement for this site as the shortest structure with acceptable clearance to the existing bents. The bents of the proposed bridge are to be built at 90° to match the angle of the floodplain flow. The proposed bents were placed to miss the location of the existing intermediate bents and channel banks. Channel velocities for the proposed bridge are 2.48 fps and 3.85 fps for the 25 year and 100 year floods, respectively. The backwater for the proposed bridge is 0.18 ft for the 25 year riverine flood.

The scour for the propose bridge is 6.6 for the 100 year storm and 21.9 for the overtopping storm. Non-overtopping, peak velocities were used to calculate scour at this site. Additionally, only clear-water condition was considered for the scour calculations. Since the project has a very small drainage area upstream of the bridge, sediment deposition from upland will likely be much less than what the storm surge and tidal scour will take out. Additionally, any sediment upland from the riverine processes is likely to deposit further downstream where velocities are much lower than at the bridge. Therefore the scour at the bridge will likely be a

clear-water condition. There is no sand transport to the site from the ocean as the project site is located far upstream and is shielded from the ocean by St. Simons Island.

Guide bank and riprap calculations were performed using HEC No. 23, “Bridge Scour and Stream Instability Countermeasures.” These calculations indicate that Type III riprap is sufficient at both abutments of the proposed bridge; however, Type I riprap will be used as per GDOT Drainage Manual. Guide bank calculations using HEC-23 showed that guide banks are not required at either end of the proposed bridge. Deck drainage calculations were performed as per HEC No. 21, “Design of Bridge Deck Drainage.” The proposed bridge is located in a MS4 zone. Deck drains will be eliminated from the proposed bridge.

A risk assessment was performed and no risk was found due to the fact that the channel velocities are reduced for the proposed condition. The proposed bridge will be stage constructed to maintain traffic. The proposed bridge is on a designated bike route; therefore, it will have an S-shape concrete barrier. All other required maps, calculations, roadway sheets and preliminary layout are included in the following pages.

October 20, 2015 Prepared by: Toan D. Nguyen

STP00-0009-02(092) GLYNN COUNTY

SR 25 (US 17) OVER WALLYLEG BRANCH

HYDRAULIC SITE INSPECTION

A hydraulic site inspection was made at the crossing of State Route 25 (US 17) over Wallyleg Branch, approximately 6.4 miles south of Darien, GA, on September 14, 2015. This site is one of two bridges under the P.I. No. 532650; the other is over Thornhill Creek approximately 3.4 miles further south. The floodplain downstream is densely wooded on the southeast side with moderate undergrowth. The stream edge downstream is lined with tall grass and light vegetation. Similarly, most of the upstream floodplain is densely wooded with moderate undergrowth with the exception of small clearings from residential properties. There are residential structures located within both floodplains upstream and downstream.

The channel is approximately 7-10 ft wide upstream and downstream. The stream and floodplain intersect the road perpendicularly. At the time of the site inspection, the peak high tide was receding as per the National Oceanic and Atmospheric Administration (NOAA) tidal data. However, the water at this site remains unchanged and stagnant due to the fact that the bottom of the channel was well above the peak tide elevation.

The existing bridge is 81 ft long and comprised of three 27 ft long spans. The bridge was built in 1955 and consists of reinforced concrete deck girders on reinforced concrete caps and prestressed concrete piles. The bridge is located on a paved State Route approximately 4-6 ft above the ground line. Utility conduits can be found attached on the upstream side of the bridge and buried 40 ft downstream of the bridge. There are also overhead powerlines 40 ft downstream of the bridge.

September 15, 2015 Prepared by: Toan D. Nguyen

STP00-0009-02(092) GLYNN COUNTY

SR 25 (US 17) OVER WALLYLEG BRANCH

SITE NO. 2

PREDICTED SCOUR REPORT

Theoretical scour depths for the proposed bridge at this site were calculated using the methods shown in the FHWA publication, HEC No. 18, “Evaluating Scour at Bridges” and the HEC No. 25 for tidal-affected bridge. General contraction and local scour were calculated for the 100 year and overtopping storm surge. The predicted scour depth at each intermediate bent of the proposed bridge will be provided to the Office of Materials Soil Lab and the Bridge Structural Designer for inclusion in the analysis and design of the bridge foundations. Tables and calculations showing these predicted scour depths are included in this study.

October 20, 2015 Prepared by: Toan D. Nguyen

This spreadsheet computes the 50-, 20-, 10-, 4-, 2-, 1-, 0.5-, and 0.2-percent chance exceedance flows for an ungaged site in Georgia, South Carolina, and North Carolina. The spreasheet also includes the 95-percent prediction intervals, the minus and plus standard error of prediction intervals, and the average standard error of prediction. To use the spreadsheet, enter requested information in the yellow cells below.

Enter a site-description name: SR 25 (US 17) over WALLEYLEG BRANCH

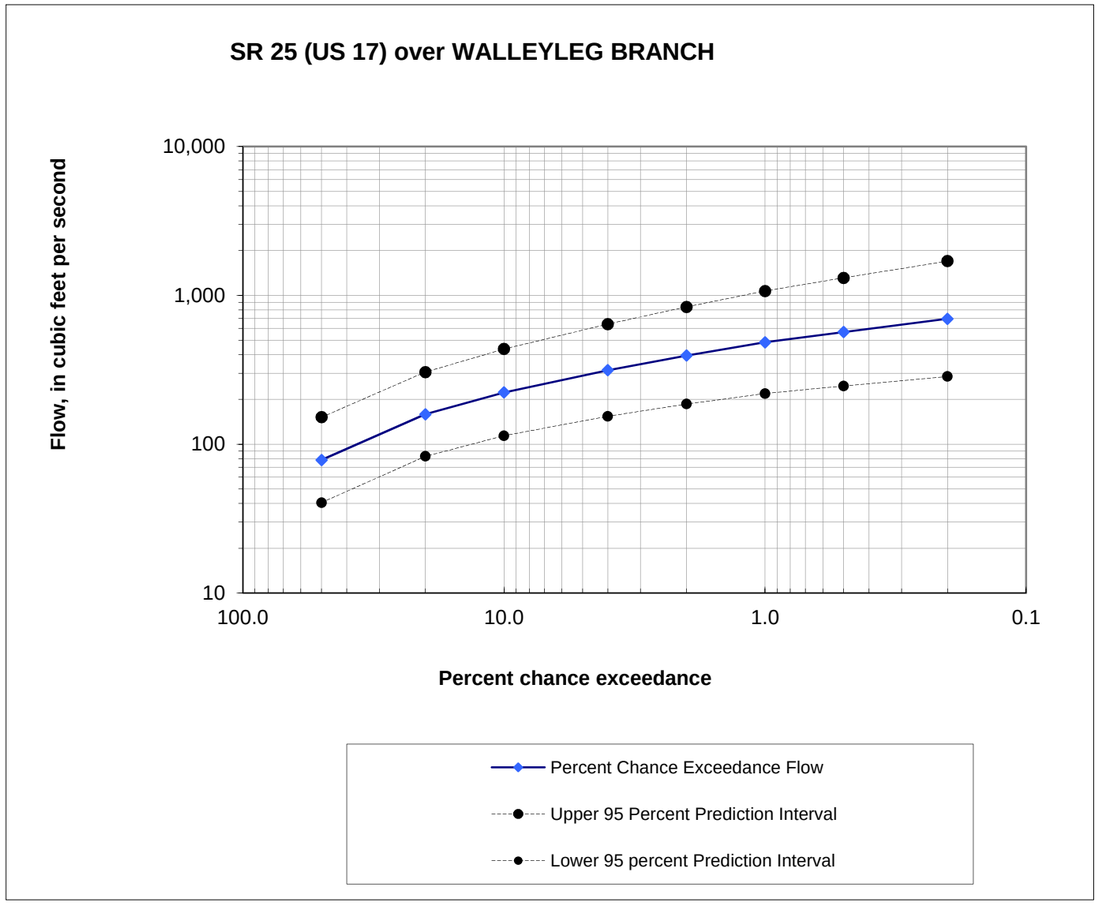
Enter the explanatory variables:

Drainage area, in square miles	1.5	Applicable range of draingage area is 1 to 9,000 square miles.
Percent of basin in Hydrologic Region 1	0	Hydrologic Region 1 corresponds to the USEPA Level III Ridge and Valley and Piedmont ecoregions
Percent of basin in Hydrologic Region 2	0	Hydrologic Region 2 corresponds to the USEPA Level III Blue Ridge ecoregion
Percent of basin in Hydrologic Region 3	0	Hydrologic Region 3 corresponds to the USEPA Level IV Sand Hills ecoregion
Percent of basin in Hydrologic Region 4	100	Hydrologic Region 4 corresponds to the USEPA Level III Southeastern, Middle Atlantic Coastal, and Southern Coastal Plain ecoregions
Percent of basin in Hydrologic Region 5	0	Hydrologic Region 5 corresponds to the lower portion of the USEPA Level IV Tifton Uplands ecoregion.

Sum of region percentages	100

Drainage area check
DRAINAGE AREA WITHIN APPLICABLE LIMITS.

Percent chance exceedance	Percent chance exceedance flow, in ft^3/s	Lower 95 percent prediction interval flow, in ft^3/s	Upper 95 percent prediction interval flow, in ft^3/s	$-S_{P,i}$ (percent)	$+S_{P,i}$ (percent)	Average $S_{p,i}$ (percent)
50	78	41	152	-28.6	40.0	34.6
20	159	83	305	-28.3	39.4	34.2
10	223	114	436	-29.0	40.8	35.3
4	314	154	641	-30.5	43.9	37.6
2	394	186	836	-31.9	46.7	39.8
1	484	219	1,070	-33.2	49.8	42.1
0.5	567	246	1,310	-34.7	53.0	44.6
0.2	696	285	1,700	-36.6	57.6	48.0



SIMULATING TIDE AND STORM SURGE FOR OUTFLOW BOUNDARY

USER INPUT PARAMETERS (CLOSEST TIDAL STATION STATION):

8676329 Mackay River (ICWW), Buttermilk Soun | Map

Consituents Used (6 should be accurate enough)
(Data Units: Feet & Timezone: GMT)

Time Specfication and Tide Parameters (Daily)

Time Start	0	hr	
Time Increment	0.1	hr	
Cycle Length	Semidiurnal	12.5	hr
Mean Tidal Range	6.87	ft	Link
Spring Tidal Range	7.9	ft	

	1	2	3	4	5	6	α_0 =
α_i =	3.32	0.52	0.72	0.36	0.14	0.26	-0.38
σ_i =	17.90	45.80	2.20	200.70	248.10	206.50	
δ_i =	28.98	30.00	28.44	15.04	57.97	13.94	

	7	8	9	10	11	12
α_i =	0.02	0.03				
σ_i =	60.4	33.1				
δ_i =	86.95	44.03				

Constituents Link

BENCHMARK TIDAL DATUM to MLLW (ft)

8670870 FORT PULASKI

	Meters	Feet
MHHW:	2.29	7.50
MHW:	2.17	7.13
MTL:	1.12	3.67
MSL:	1.17	3.82
MLW:	0.07	0.22
MLLW:	0.00	0.00
NGVD29:	N/A	N/A
NAVD88:	1.24	4.05

Mean Tidal Range:	6.92	ft
Mean Tidal Amplitude:	3.46	ft
MLLW to MTL:	-3.67	ft
MLLW to NGVD29:	N/A	ft
MLLW to NAVD88:	-4.05	ft
Datum Shift:	-0.38	ft

BENCHMARK-SUBORDINATE DIFFERENCES

Time				Height	
High Water		Low Water		High Water	Low Water
h	m	h	m	ft	ft
0	58	1	23	1	1.09

SYNTHETIC STORM SURGE CALCULATIONS

ADCIRC Estimate: Altamaha River

MSL	10 Year:	2.01	m	6.60	ft	NAVD88
	25 Year:	2.987	m	9.80	ft	
	100 Year:	4.39	m	14.40	ft	
	500 Year:	5.244	m	17.20	ft	AYRES

Hurricane Parameters: (HEC25 - Apndx D)

				Sp (ft):
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Radius of Max Wind (R):	24	nmi	25yr:	10.88
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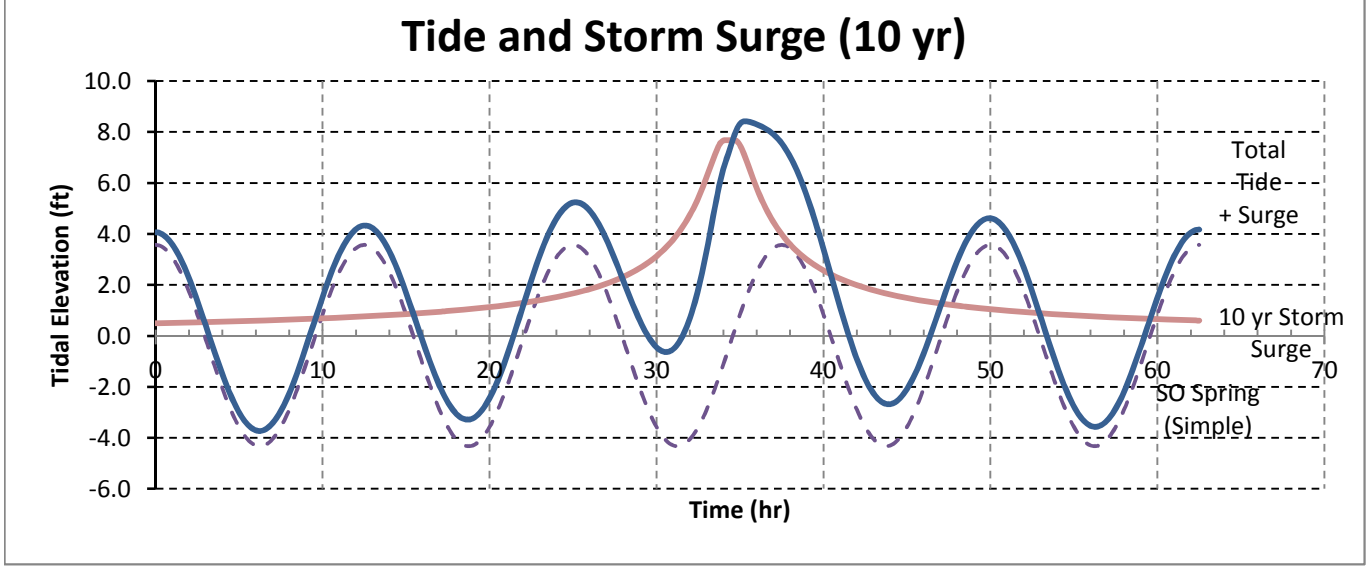

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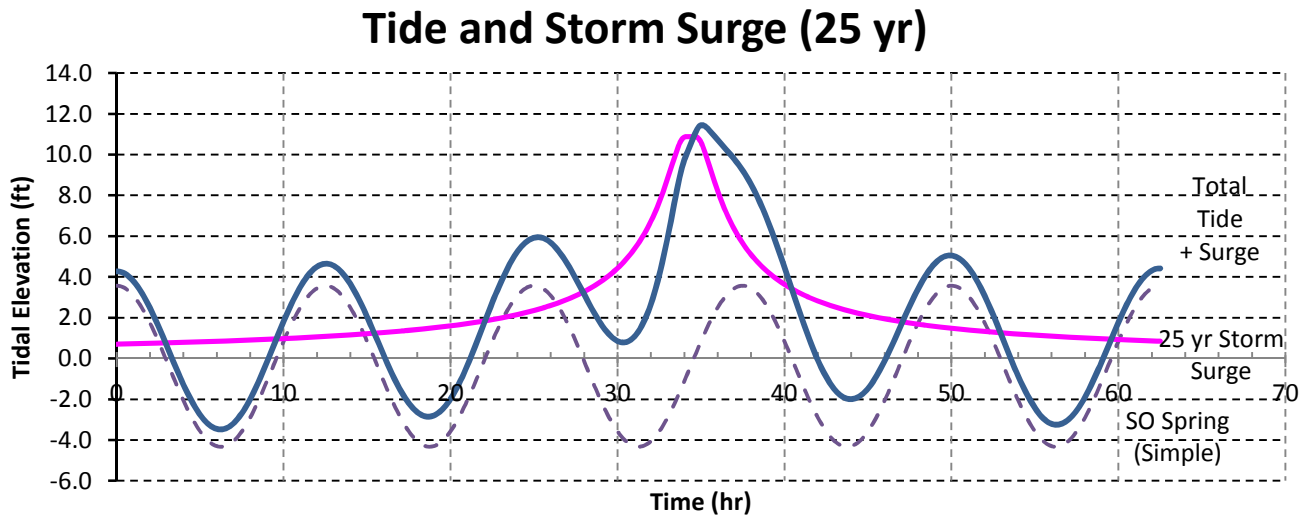

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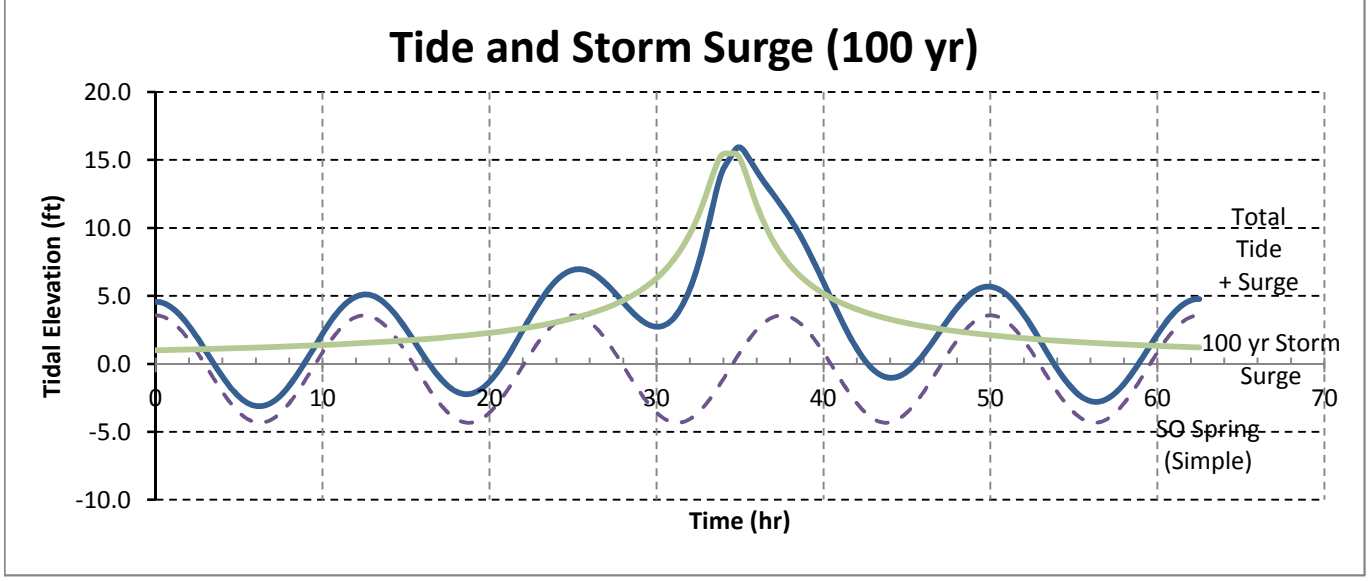

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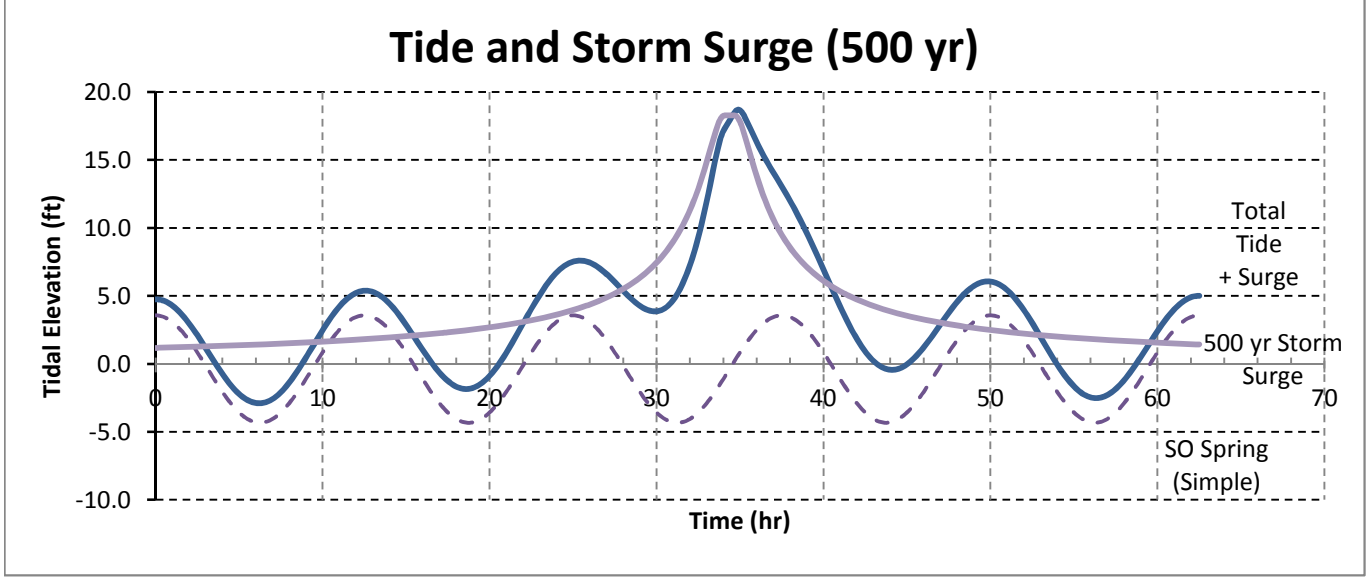


Project Information:

Project No.:	STP00-0009-02(092)
Project Name:	SR 25 (US 17) over WALLYLEG BRANCH
PI No.:	532650
Location:	Glynn County
Location ID:	127-00025D-022.45N
Coordinate:	

Inflow Flood Hydrograph [1,2,3,4]

Drainage Area (A):	**1.5**	sq mi	Hydraulic Slope (S):	0.00107	ft/ft
Hydrologic Region 1:	0	%		5.65	ft/mi
Hydrologic Region 2:	0	%	Project Site Classification:	Rural	
Hydrologic Region 3:	0	%	Location w.r.t. the Fall Line:	Below	
Hydrologic Region 4:	100	%	Calculated Lag Time (t_L):	9.47	hrs [2,3]
Hydrologic Region 5:	0	%	RED	Indiates variable is outside of min. research requirements	
Impervious Area (TIA):	2.94	%			

Peak Q Based on Streamstat or Excel [4]

Q2yr	78	cfs	Q50yr	394	cfs
Q10yr	223	cfs	Q100yr	484	cfs
Q25yr	314	cfs	Q500yr	696	cfs

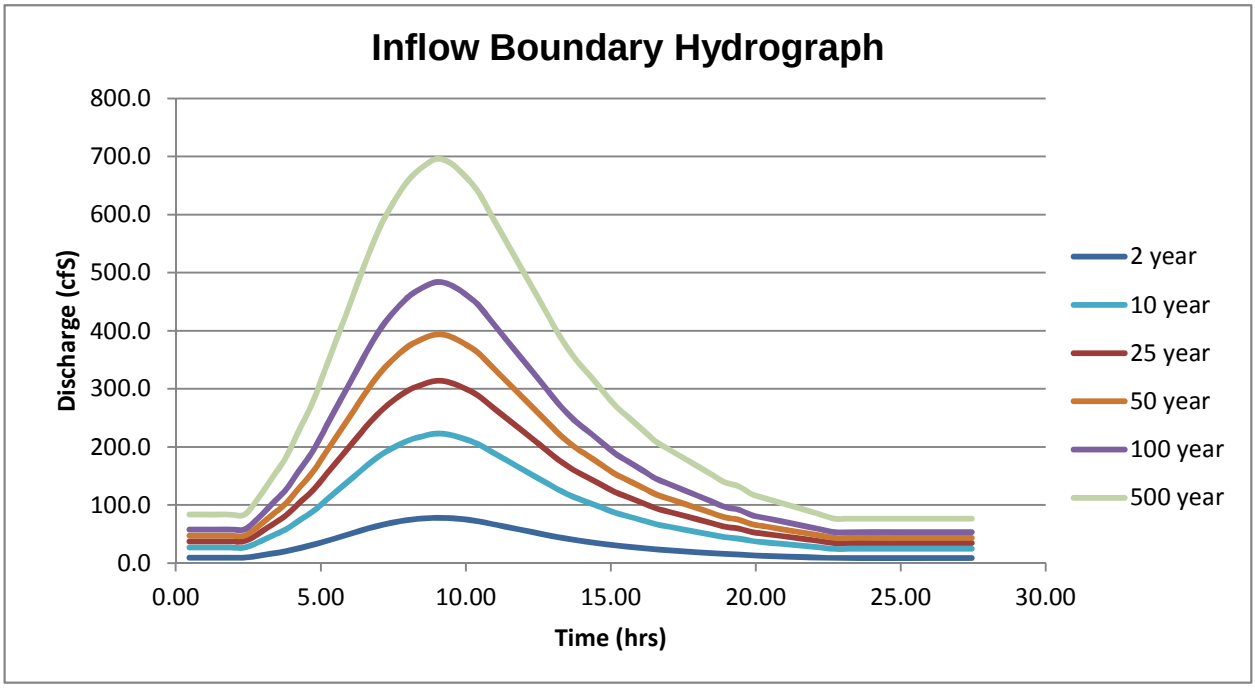
Calculations based on the following references:

[1] *Instantaneous Unit Hydrograph Derivation by Harmonic Analysis* (O'Donnell 1960)

[2] *Simulation of Flood Hydrographs For Georgia* (Inman 1986)

[3] *Lagtime Relations for Urban Streams in Georgia* (Inman 2000)

[4] *Magnitude and Frequency of Rural Floods in the Southeastern United States, 2006; Volume 1, Georgia*



	2 year	10 year	25 year	50 year	100 year	500 year	
t_{i-0}	Q(t) cfs	Q(t) cfs	Q(t) cfs	Q(t) cfs	Q(t) cfs	Q(t) cfs	
0.09	9.4	26.8	37.7	47.3	58.1	83.5	
0.47	9.4	26.8	37.7	47.3	58.1	83.5	22.80
0.95	9.4	26.8	37.7	47.3	58.1	83.5	
1.42	9.4	26.8	37.7	47.3	58.1	83.5	
1.89	9.4	26.8	37.7	47.3	58.1	83.5	
2.37	9.4	26.8	37.7	47.3	58.1	83.5	
2.84	12.5	35.7	50.2	63.0	77.4	111.4	
3.31	16.5	46.8	65.9	82.7	101.6	146.2	
3.79	20.4	58.0	81.6	102.4	125.8	181.0	
4.26	25.9	73.6	103.6	130.0	159.7	229.7	
4.73	31.4	89.2	125.6	157.6	193.6	278.4	
5.21	38.4	109.3	153.9	193.1	237.2	341.0	
5.68	45.5	129.3	182.1	228.5	280.7	403.7	
6.15	52.5	149.4	210.4	264.0	324.3	466.3	
6.63	59.6	169.5	238.6	299.4	367.8	529.0	
7.10	65.9	187.3	263.8	331.0	406.6	584.6	
7.57	70.6	200.7	282.6	354.6	435.6	626.4	
8.05	74.5	211.9	298.3	374.3	459.8	661.2	
8.52	76.8	218.5	307.7	386.1	474.3	682.1	
8.99	78.4	223.0	314.0	394.0	484.0	696.0	
9.47	77.6	220.8	310.9	390.1	479.2	689.0	
9.94	75.3	214.1	301.4	378.2	464.6	668.2	
10.41	72.1	205.2	288.9	362.5	445.3	640.3	
10.89	67.4	191.8	270.0	338.8	416.2	598.6	
11.36	62.7	178.4	251.2	315.2	387.2	556.8	
11.83	58.0	165.0	232.4	291.6	358.2	515.0	
12.31	53.3	151.6	213.5	267.9	329.1	473.3	
12.78	48.6	138.3	194.7	244.3	300.1	431.5	
13.25	43.9	124.9	175.8	220.6	271.0	389.8	
13.73	40.0	113.7	160.1	200.9	246.8	355.0	
14.20	36.8	104.8	147.6	185.2	227.5	327.1	
14.67	33.7	95.9	135.0	169.4	208.1	299.3	
15.15	30.6	87.0	122.5	153.7	188.8	271.4	
15.62	28.2	80.3	113.0	141.8	174.2	250.6	
16.09	25.9	73.6	103.6	130.0	159.7	229.7	
16.57	23.5	66.9	94.2	118.2	145.2	208.8	
17.04	22.0	62.4	87.9	110.3	135.5	194.9	
17.51	20.4	58.0	81.6	102.4	125.8	181.0	
17.99	18.8	53.5	75.4	94.6	116.2	167.0	
18.46	17.2	49.1	69.1	86.7	106.5	153.1	
18.93	15.7	44.6	62.8	78.8	96.8	139.2	
19.41	14.9	42.4	59.7	74.9	92.0	132.2	
19.88	13.3	37.9	53.4	67.0	82.3	118.3	

20.35	12.5	35.7	50.2	63.0	77.4	111.4
20.83	11.8	33.5	47.1	59.1	72.6	104.4
21.30	11.0	31.2	44.0	55.2	67.8	97.4
21.77	10.2	29.0	40.8	51.2	62.9	90.5
22.25	9.4	26.8	37.7	47.3	58.1	83.5
22.72	8.6	24.5	34.5	43.3	53.2	76.6
23.19	8.6	24.5	34.5	43.3	53.2	76.6
23.67	8.6	24.5	34.5	43.3	53.2	76.6
24.14	8.6	24.5	34.5	43.3	53.2	76.6
24.61	8.6	24.5	34.5	43.3	53.2	76.6
25.09	8.6	24.5	34.5	43.3	53.2	76.6
25.56	8.6	24.5	34.5	43.3	53.2	76.6
26.03	8.6	24.5	34.5	43.3	53.2	76.6
26.51	8.6	24.5	34.5	43.3	53.2	76.6

AYRES STORM SURGE ESTIMATION

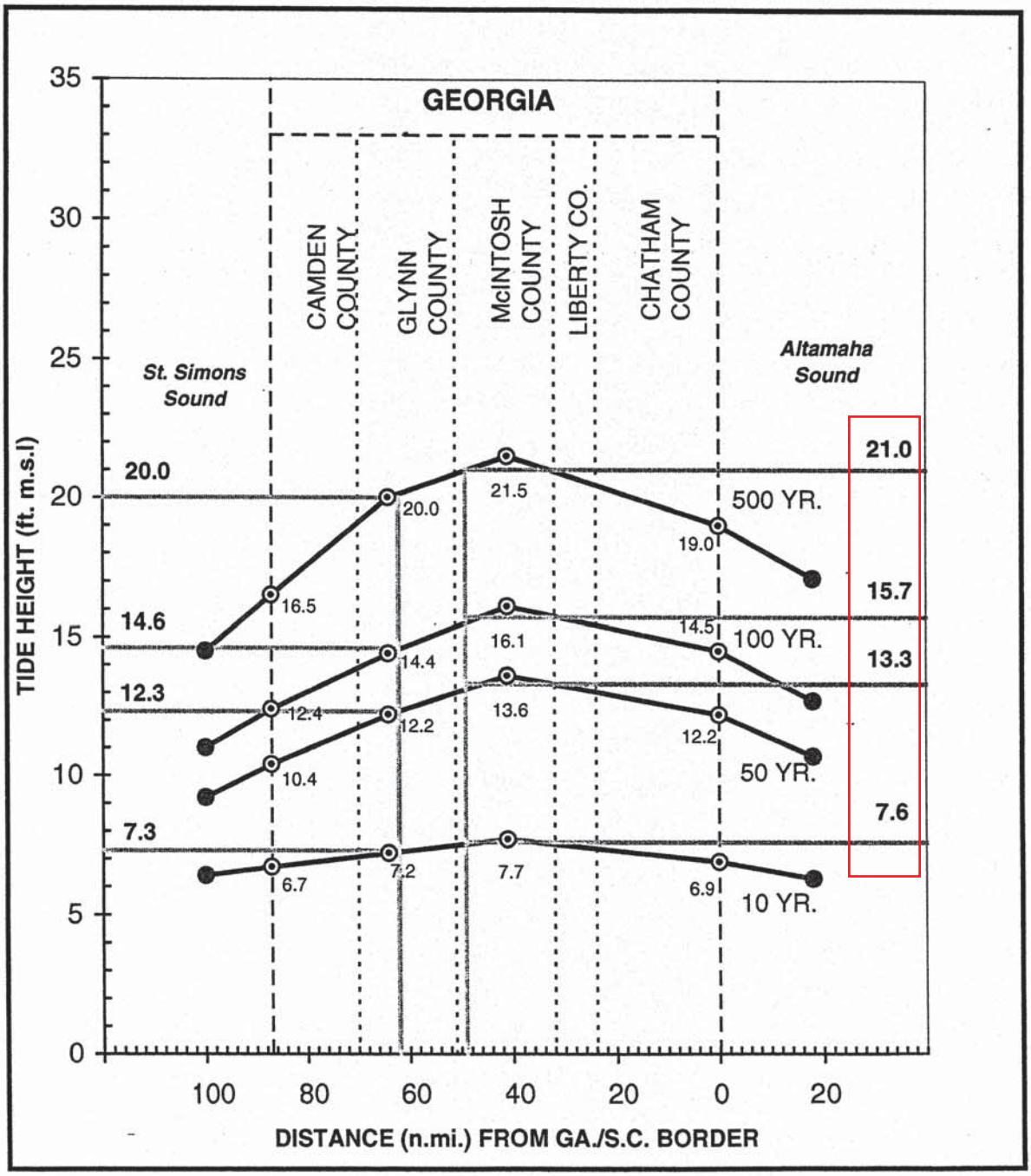
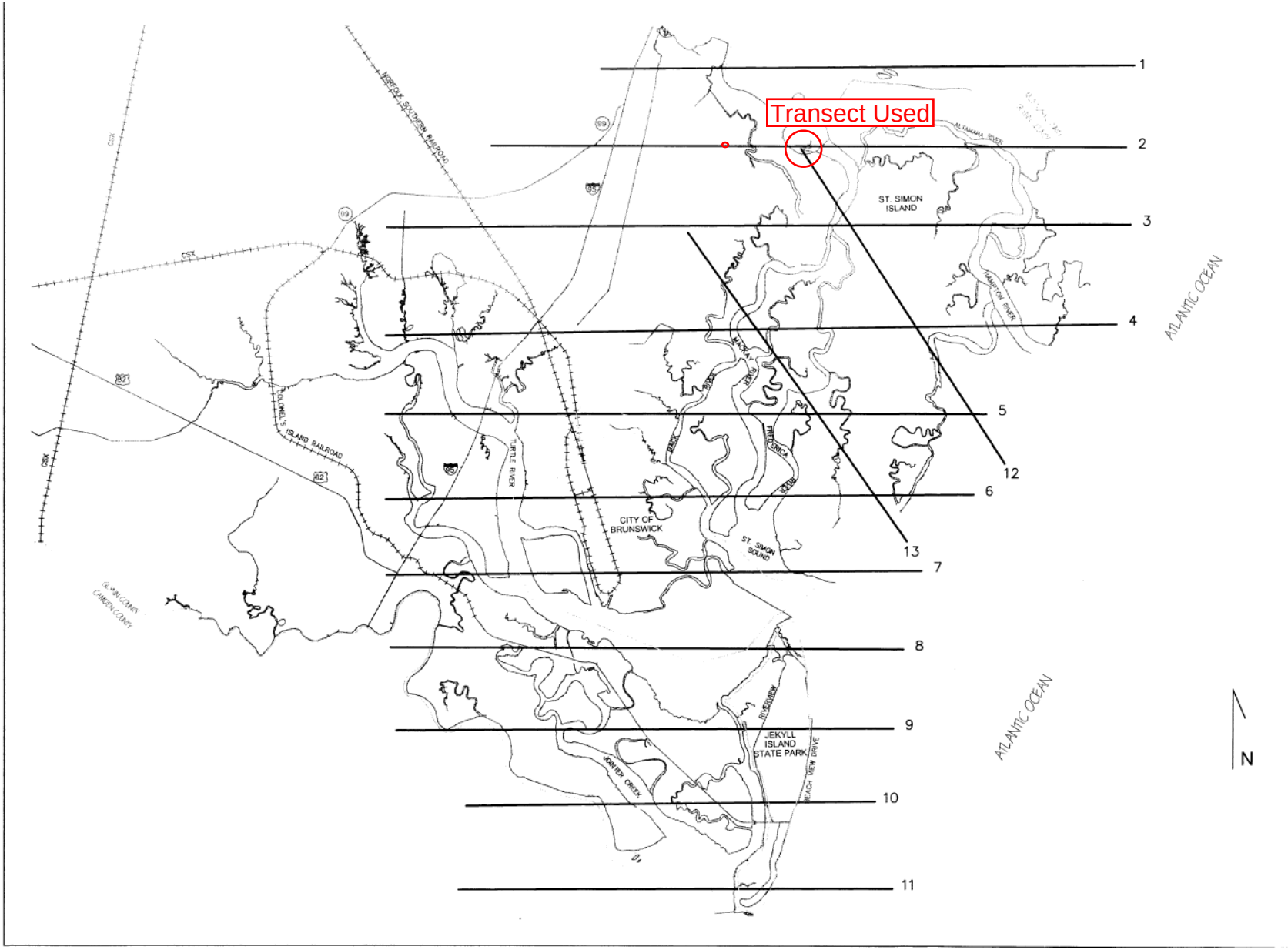


Figure 3.1. Hurricane Storm Tide elevations along the Georgia Coast (NOAA 1975).



TRANSECT LOCATION MAP

FEDERAL EMERGENCY MANAGEMENT AGENCY

GLYNN COUNTY, GA

AND INCORPORATED AREAS

FIGURE 1

FEMA ESTIMATION

FLOODING SOURCE	TRANSECTS	STILLWATER ELEVATION (FEET NAVD88)				ZONE[1]	BASE FLOOD ELEVATION (FEET NAVD88)[2]
		10-PERCENT-ANNUAL-CHANCE	2-PERCENT-ANNUAL-CHANCE	1-PERCENT-ANNUAL-CHANCE	0.2-PERCENT-ANNUAL-CHANCE		
ATLANTIC OCEAN	1, 12	6.9	11.0	12.1	16.8	VE	17-15
		6.9	11.0	12.1	16.8	AE	14-12
		*	*	10.0	*	AE	11-10
	2, 12	6.9	11.0	12.1	16.8	VE	20-15
		*	*	12.0	*	AE	14-12
	3, 12	6.7	10.8	12.4	16.5	VE	19-15
		*	*	12.0	*	AE	14-12
	4, 12	6.6	10.6	12.0	15.9	VE	19-15
		6.6	10.6	12.0	15.9	AE	14-12
		7.7	11.4	13.4	17.4	VE	17-16
		7.7	11.4	13.4	17.4	AE	15-13
	5, 13	6.7	10.9	12.1	16.0	VE	19-15
		6.7	10.9	12.1	16.0	AE	14-12
		7.7	11.2	13.3	16.8	VE	17-16
		7.7	11.2	13.3	16.8	AE	15-13

[1]Includes the effects of wave action, where applicable
[2]Due to map scale limitations, BFEs shown on the FIRM may represent average elevation for the zone depicted
*Data not available

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

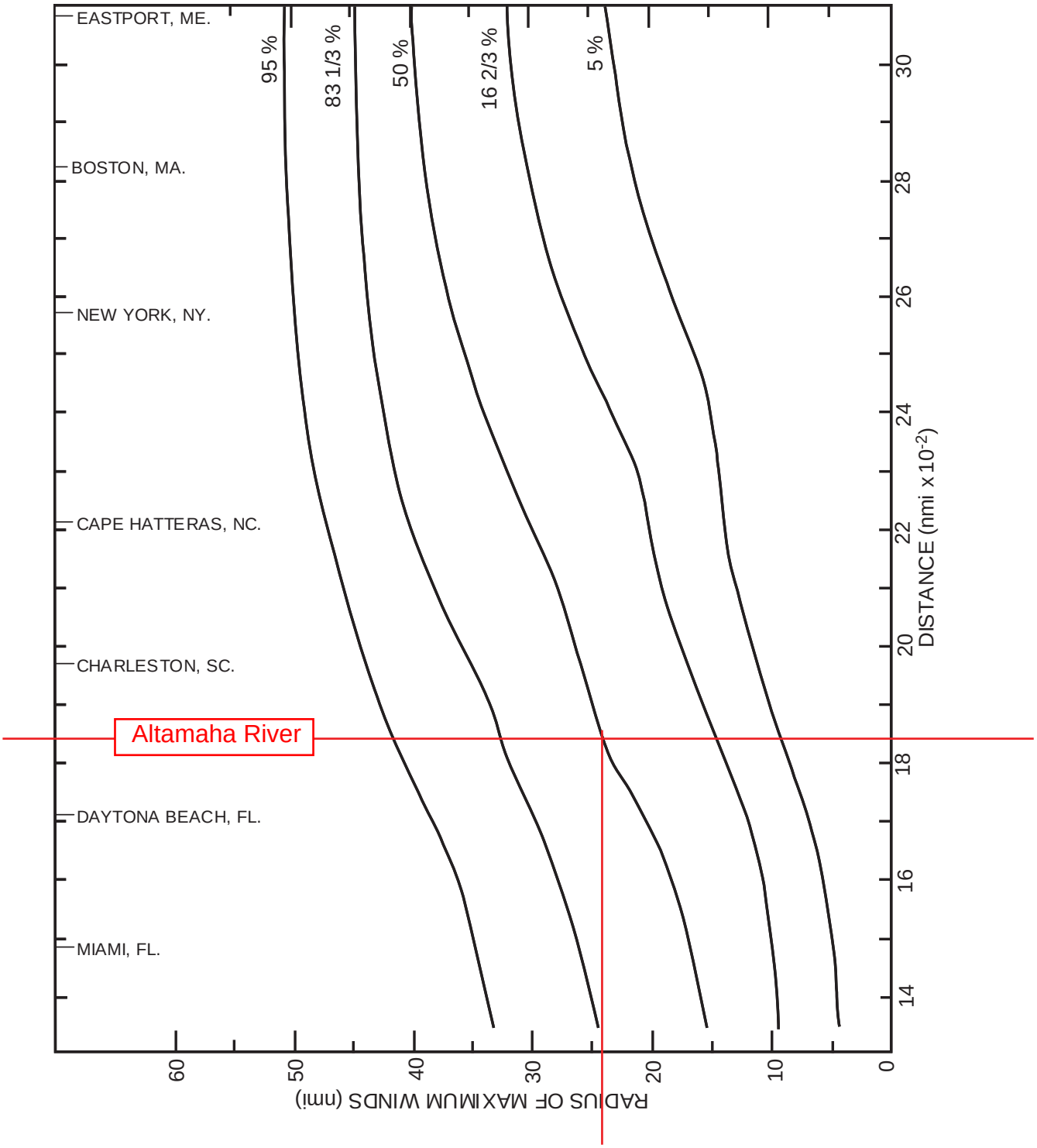
GLYNN COUNTY, GA
AND INCORPORATED AREAS

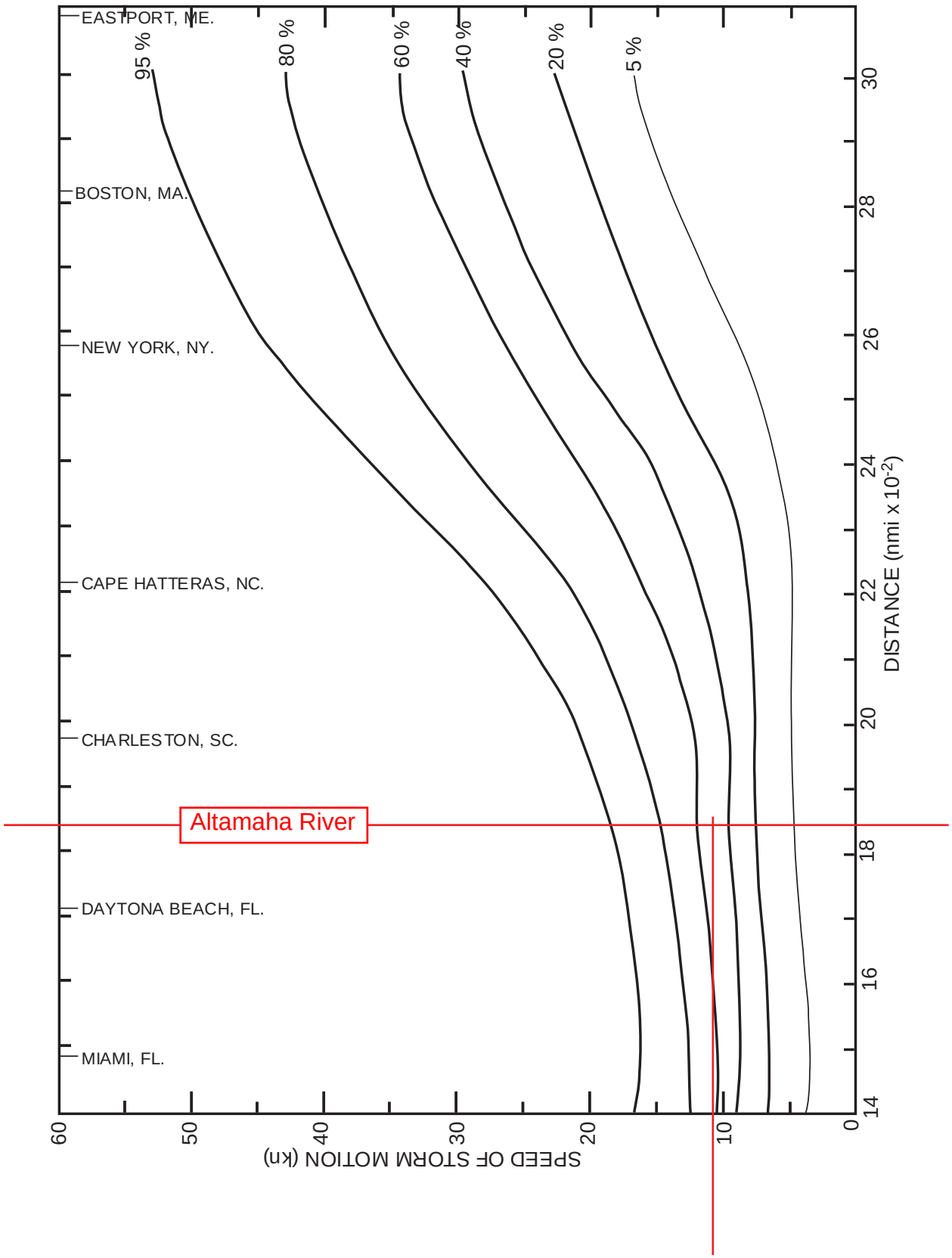
TRANSECT DATA TABLE

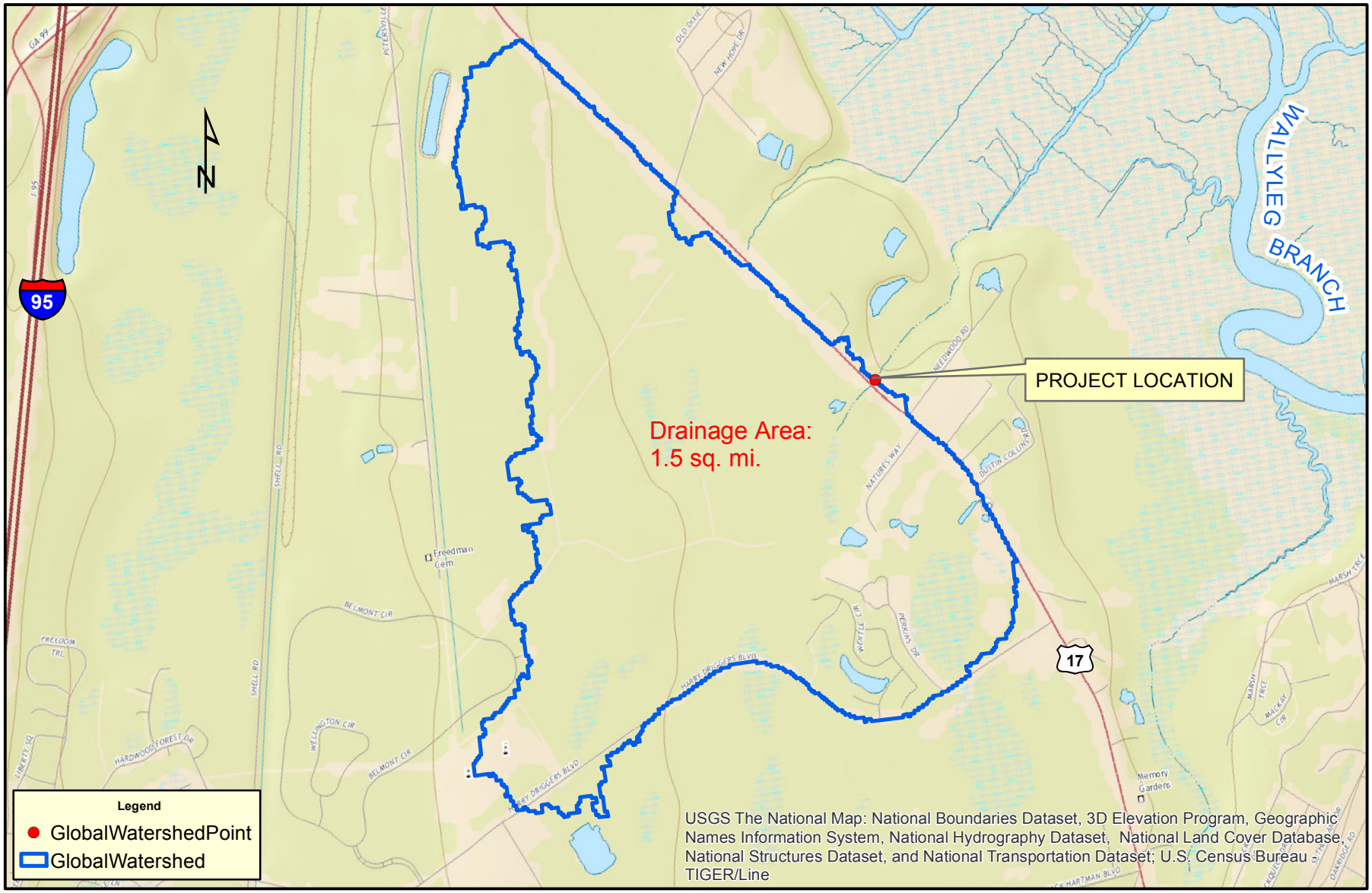
ATLANTIC OCEAN

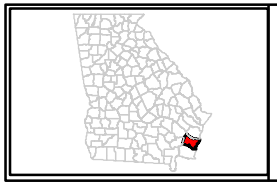
ADCIRC STORM SURGE ESTIMATION

State	Waterway Name	ADCIRC Results (local mean sea level) 50-Year (m)	100-Year (m)	500-Year (m)
		3.67	4.60	6.76
	Gordon Pass	3.43	4.32	6.39
	Big Marco Pass	3.37	4.18	6.06
	Caxambas Bay	3.37	4.18	6.06
	First Bay	3.27	3.92	5.43
	Whitewater Bay	3.27	3.92	5.43
	Biscayne Bay	1.00	1.21	1.70
	Miami	1.00	1.21	1.70
	Bakers Haulover Inlet	0.82	0.99	1.38
	Turning Basin	0.82	0.99	1.38
	Hillsboro Bay	0.77	0.91	1.24
	Boca Raton Inlet	0.77	0.91	1.24
	South Lake worth Inlet	0.77	0.90	1.20
	Lake Worth Inlet	0.79	0.94	1.29
	Loxahatchee River	0.76	0.94	1.36
	St Lucie River	0.91	1.13	1.64
	Fort Pierce Inlet	1.17	1.45	2.10
	Sebastian Inlet	1.41	1.75	2.54
	Cape Canaveral	0.84	0.97	1.27
	Ponce De Leon Inlet	0.95	1.10	1.45
	Matanzas Inlet	2.12	2.46	3.25
	St Augustine Inlet	2.17	2.51	3.30
	St Johns River	2.58	3.02	4.04
	Nassau Sound	2.17	2.51	3.30
GEORGIA				
	St Marys River	3.06	3.60	4.85
	St Andrew Sound	3.53	4.32	6.15
	St Simons Sound	3.53	4.32	6.15
	Hampton River	3.31	3.96	5.47
	Altamaha River	3.31	3.96	5.47
	Sapelo	3.31	3.96	5.47
	Sapelo Sound	3.86	4.71	6.68
	St Catherines Sound	3.86	4.71	6.68
	Ossabaw Sound	3.42	4.30	6.34
	Wassaw Sound	3.42	4.30	6.34
	Savannah River	3.42	4.30	6.34
SOUTH CAROLINA	Calibogue Sound	3.42	4.30	6.34
	Port Royal Sound	3.34	4.05	5.70
	St Helena Sound	3.02	3.52	4.68
	North Edisto River	3.06	3.64	4.99
	Stono Inlet	3.06	3.64	4.99
	Lighthouse Inlet	3.06	3.64	4.99
	Charleston Harbor	2.92	3.59	5.15
	Breach Inlet	2.92	3.59	5.15
	Bulls Bay	2.92	3.59	5.15
	North Santee Bay	3.06	3.94	5.98
	Winyah Bay	3.42	4.39	6.64
	North Inlet	3.42	4.39	6.64
	Pawleys Inlet	3.42	4.39	6.64
	Midway Inlet	3.42	4.39	6.64
	Murrells Inlet	3.24	4.16	6.30
	Hog Inlet	3.24	4.02	5.83
	Little River Inlet	3.24	4.02	5.83
NORTH CAROLINA	Tubbs Inlet	3.24	4.02	5.83
	Shallotte Inlet	3.24	4.02	5.83
	Lockwoods Folly Inlet	2.07	2.53	3.60


EASTPORT, ME.
BOSTON, MA.
NEW YORK, NY.
CAPE HATTERAS, NC.
CHARLESTON, SC.
Altamaha River
DAYTONA BEACH, FL.
MIAMI, FL.
95 %
83 1/3 %
50 %
16 2/3 %
5 %
RADIUS OF MAXIMUM WINDS (nmi)
0
10
20
30
40
50
60
DISTANCE (nmi x 10-2)
14
16
18
20
22
24
26
28
30


EASTPORT, ME.
BOSTON, MA.
NEW YORK, NY.
CAPE HATTERAS, NC.
CHARLESTON, SC.
Altamaha River
DAYTONA BEACH, FL.
MIAMI, FL.
95 %
80 %
60 %
40 %
20 %
5 %
SPEED OF STORM MOTION (kn)
0
10
20
30
40
50
60
DISTANCE (nmi x 10-2)
14
16
18
20
22
24
26
28
30





STP00-0009-02(092)
SR 25 (US 17) over WALLYLEG BRANCH
QUAD MAP/ DRAINAGE AREA

0 0.1 0.2 0.4 0.6 0.8 Miles

Albers Projection
Central Meridian: -96
1st Std Parallel: 20
2nd Std Parallel: 60
Latitude of Origin: 40

Georgia Department of Transportation

ESRI

Project Information:

Project No.:	STP00-0009-02(092)
Project Name:	SR 25 (US 17) over WALLYLEG BRANCH
PI No.:	532650
Location:	Glynn County
Location ID:	127-00025D-022.45N
Coordinate:	0.00

Hydraulic Slope Calculations

Slope Calculation from Quad maps

Upstream El.=	10	ft
Downstream El.=	0	ft
Hor. Distance =	9350	ft
(Used) Slope =	0.00107	ft/ft
	5.65	ft/mile

Slope Calculation from Survey WS Elev.

500' Upstream	10.60	ft
500' Downstream	8.90	ft
Hor. Distance	1000	ft
Slope =	0.00170	ft/ft
	8.98	ft/mile

Slope Calculation from Streamstat

Upstream El.=	N/A	ft
Downstream El.=	N/A	ft
Hor. Distance =	N/A	ft
Slope =	#VALUE!	ft/ft
	#VALUE!	ft/mile

P.I. No. 532650, GLYNN COUNTY
SR 25 (US 17) OVER WALLYLEG BRANCH

25 YEAR STORM (RIVERINE)

	NATURAL CONDITION	EXISTING BRIDGE L = 81' (90°)	PROPOSED BRIDGE L = 125' (90°)
FLOODSTAGE	11.88	12.21	12.22
DISCHARGE THRU STRUCTURE (ft^3/s)	---	314	314
DISCHARGE OVER ROAD (ft^3/s)	---	0	0
AREA OF OPENING (ft^2)	---	138	161
VELOCITY THRU STRUCTURE (ft/s)	---	2.28	1.95
CHANNEL VELOCITY (ft/s)	2.57	2.55	2.48
BACKWATER(ft)	---	0.19	0.18
APPROACH W/O STRUCTURE	12.45	12.45	12.45
APPROACH W/ STRUCTURE	---	12.64	12.63

100 YEAR STORM (TIDAL)[1]

[1]*DAILY TIDES AND STORM SURGE WITH BASE UPLAND FLOW @ MAXIMUM DISCHARGE*	NATURAL CONDITION	EXISTING BRIDGE L = 81' (90°)	PROPOSED BRIDGE L = 125' (90°)
[2]FLOODSTAGE	14.51	14.44	14.45
DISCHARGE THRU STRUCTURE (ft^3/s)	---	1032	1099
DISCHARGE OVER ROAD (ft^3/s)	---	0	0
AREA OF OPENING (ft^2)	---	296	410
VELOCITY THRU STRUCTURE (ft/s)	---	3.49	2.68
CHANNEL VELOCITY (ft/s)	1.46	4.17	3.85
BACKWATER(ft)	---	N/A	N/A
APPROACH W/O STRUCTURE	14.49	14.49	14.49
APPROACH W/ STRUCTURE	---	14.35	14.39

2 YEAR FLOODSTAGE = 10.79

[2] THE MAX ELEVATION OF 15.29 ft OCCURS AT THE TIME STEP {01 SEP 2015 1136} FOR THE PROPOSED BRIDGE, AFTER THE OCCURANCE OF THE MAX DISCHARGE.

P.I. No. 532650, GLYNN COUNTY
SR 25 (US 17) OVER WALLYLEG BRANCH

OVERTOPPING STORM (TIDAL)[1]

[1]*DAILY TIDES AND STORM SURGE WITH BASE UPLAND FLOW @ MAXIMUM DISCHARGE*	NATURAL CONDITION	EXISTING BRIDGE L = 81' (90°)	PROPOSED BRIDGE L = 125' (90°)
[3]FLOODSTAGE	16.78	17.65	17.12
DISCHARGE THRU STRUCTURE (ft^3/s)	---	4303	3594
DISCHARGE OVER ROAD (ft^3/s)	---	0	0
AREA OF OPENING (ft^2)	---	425	651
VELOCITY THRU STRUCTURE (ft/s)	---	10.12	5.52
CHANNEL VELOCITY (ft/s)	6.01	12.43	8.08
BACKWATER(ft)	---	N/A	N/A
APPROACH W/O STRUCTURE	16.77	16.77	16.77
APPROACH W/ STRUCTURE	---	17.41	16.94

[3] THE MAX ELEVATION OF 18.08 ft OCCURS AT THE TIME STEP {01 SEP 2015 1136} FOR THE PROPOSED BRIDGE, AFTER THE OCCURANCE OF THE MAX DISCHARGE.

P.I. No. 532650, GLYNN COUNTY
SR 25 (US 17) OVER WALLYLEG BRANCH

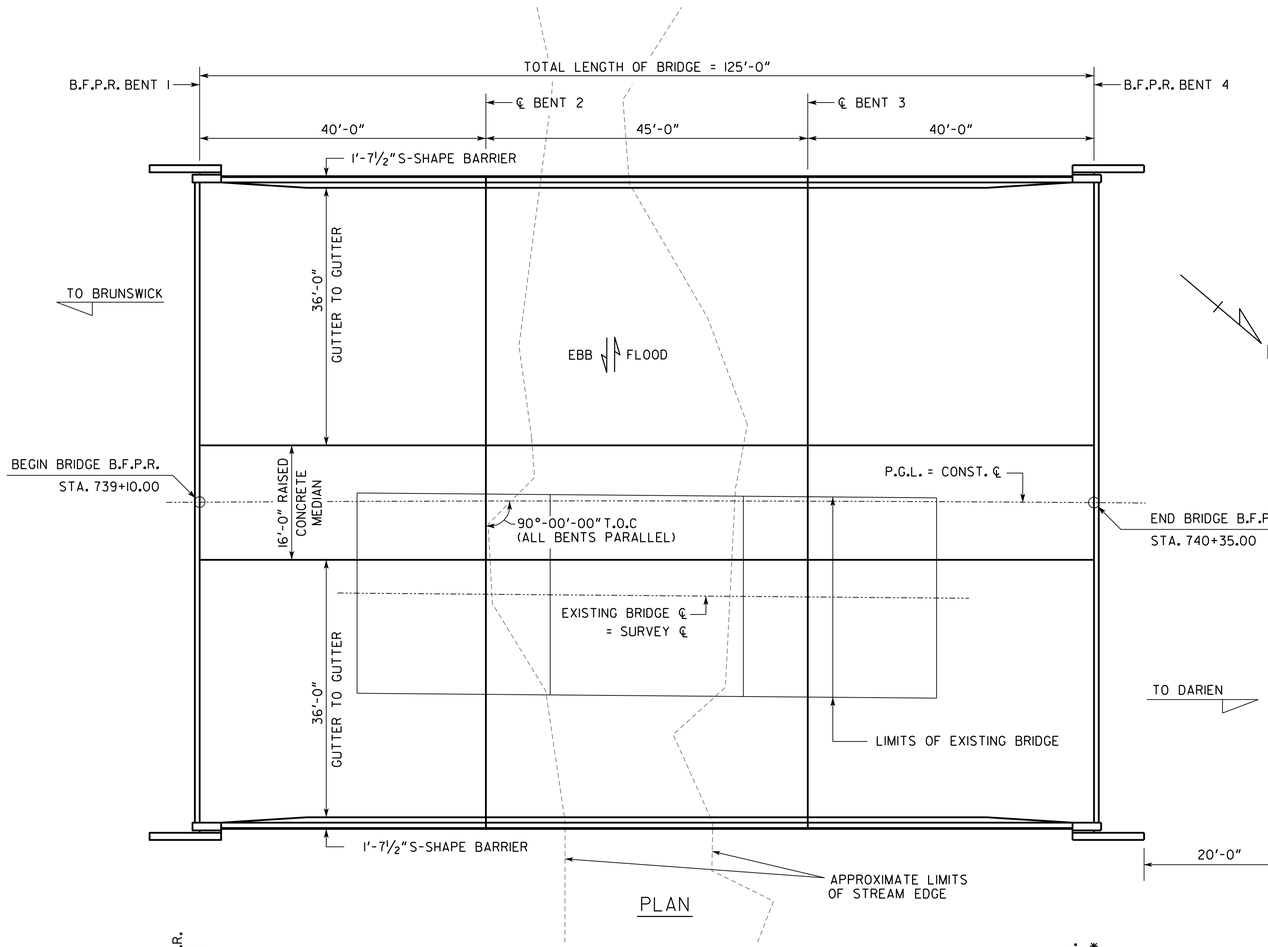
PROPOSED 125 FT LONG BRIDGE

PROFILE GRADE ELEVATION	19.67
DEPTH OF CROSS SLOPE	0.88
DEPTH OF SLAB AND BEAM	3.50 *
BOTTOM OF BEAM ELEVATION	15.29

BOTTOM OF BEAM ELEVATION	15.29
25 YEAR FLOODSTAGE ELEVATION	12.22
CLEARANCE	3.07

*CLEARANCE CALCULATED FOR TYPE I MOD PSC BEAM

P.I. NO. 532650-



PLAN

+0.4386% -0.4469%

PVI STA. 739+83.92
PVI EL. 20.00

LVC = 165 FT

PROPOSED VERTICAL CURVE DATA

PI STA = 735+54.39
PC STA = 729+74.18
PT STA = 741+33.14
D = 00°-36'-25.01"
Δ = 07°-02'-03.4" (RT)
T = 580.21
L = 1158.96
R = 9440.00
E = 17.81
MAX SE = 6 %

PROPOSED HORIZONTAL CURVE DATA

BERM ELEVATIONS ⊛	
END BENT	ELEVATIONS
1 LT & RT	13.29
4 LT & RT	13.37

⊛ NOTE: FOR BRIDGE ENDROLL STAKING PURPOSES ONLY.

PROPOSED BRIDGE CONSISTS OF

2 - 40'-0" TYPE I MOD PSC BEAM SPANS ---------- SPECIAL DESIGN
1 - 45'-0" TYPE I MOD PSC BEAM SPAN ---------- SPECIAL DESIGN
2 - PILE END BENTS ---------- SPECIAL DESIGN
2 - PILE INTERMEDIATE BENTS ---------- SPECIAL DESIGN

24" TYPE I RIP RAP

DESIGN DATA

SPECIFICATIONS ---------- AASTHO LRFD, 7TH EDITION, 2014
DESIGN VEHICLE LIVE LOAD ---------- HL-93
FUTURE PAVING ALLOWANCE---------- 30 LBS PER SQ FT

TRAFFIC DATA

TRAFFIC ---------- ADT = 7,350 (2022)
ADT = 8,250 (2042)
DESIGN SPEED ---------- 55 MPH
TRUCKS ---------- 2 %
24 HR TRUCKS ---------- 3.5 %
DIRECTIONAL ---------- 57 %

DRAINAGE DATA

DRAINAGE AREA ---------- 1.5 SQ MILES

FLOOD FREQUENCY	TOTAL DISCHARGE	MEAN VELOCITY	AREA OF OPENING UNDER FLOODSTAGE	BACKWATER
25 YEAR*	314 CFS	1.95 FPS	161 SQ FT	0.18 FT
100 YEAR**	1,099 CFS	2.68 FPS	410 SQ FT	N/A FT
OVERTOPPING**	3,594 CFS	5.52 FPS	651 SQ FT	N/A FT

* 25 YR FLOOD IS MODELED USING RIVERINE DISCHARGES
** 100 AND OVERTOPPING FLOOD ARE MODELED USING TIDAL AND STORM SURGE DISCHARGES

THEORETICAL SCOUR DEPTHS (FT)						
	100 YEAR STORM			OVERTOPPING STORM		
BENT LOCATION	GENERAL	LOCAL	TOTAL	GENERAL	LOCAL	TOTAL
2	0.3	2.5	2.8	5.0	3.8	8.8
3	0.4	2.5	2.9	5.8	3.8	9.6

NOTE: THE OVERTOPPING STORM SCOUR DEPTH IN THE CREEK IS 21.9 FT.

NOTES

CROSS-SLOPE - THE PROPOSED BRIDGE DECK IS TO BE BUILT ON A NORMAL CROWN OF 2%.

DECK DRAINS - ELIMINATE DECK DRAINS ON BRIDGE.

BENT LAYOUT - BENT 2 IS TO BE BUILT NORMAL TO THE CONST. ℄. ALL BENTS ARE PARALLEL TO BENT 2.

BEAM ELEVATION - MINIMUM BOTTOM OF BEAM ELEVATION FOR PROPOSED BRIDGE SHALL BE NO LOWER THAN ELEVATION 14.22 FT.

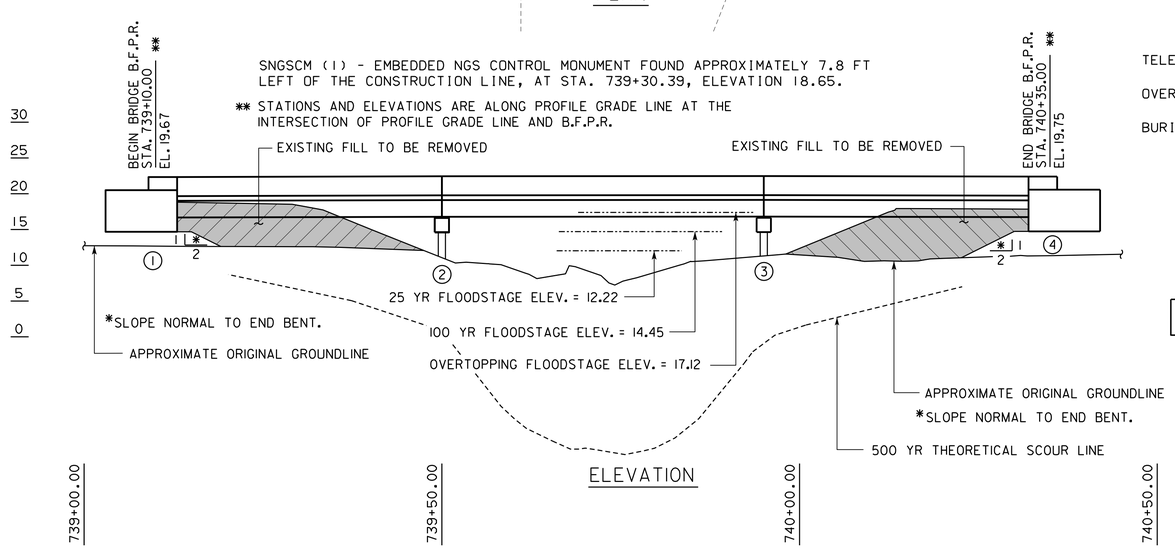
TRAFFIC CONTROLS - TRAFFIC TO BE MAINTAINED BY STAGE CONSTRUCTION. SEE CONSTRUCTION SEQUENCE FOR DETAILS.

EXISTING UTILITIES

TELEPHONE UTILITY CONDUIT ATTACHED TO UPSTREAM FACE OF EXISTING BRIDGE.
OVERHEAD UTILITY LOCATED APPROXIMATELY 40 FT DOWNSTREAM OF EXISTING BRIDGE.
BURIED UTILITY LOCATED APPROXIMATELY 40 FT DOWNSTREAM OF EXISTING BRIDGE.

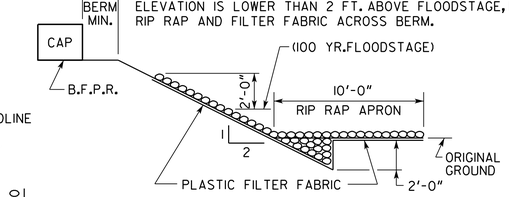
SNGSCM (1) - EMBEDDED NGS CONTROL MONUMENT FOUND APPROXIMATELY 7.8 FT LEFT OF THE CONSTRUCTION LINE, AT STA. 739+30.39, ELEVATION 18.65.

** STATIONS AND ELEVATIONS ARE ALONG PROFILE GRADE LINE AT THE INTERSECTION OF PROFILE GRADE LINE AND B.F.P.R.



ELEVATION

PLACE RIP RAP AND FILTER FABRIC FROM 2 FT. BELOW ORIGINAL GROUND TO 2 FT. ABOVE FLOODSTAGE ELEVATION. EXTEND RIP RAP AND FILTER FABRIC 20 FT. BEYOND END OF WINGWALLS UNLESS OTHERWISE NOTED. WHERE BERM ELEVATION IS LOWER THAN 2 FT. ABOVE FLOODSTAGE, EXTEND RIP RAP AND FILTER FABRIC ACROSS BERM.



RIP RAP DETAIL
NOT TO SCALE

BRIDGE SERIAL NO. 127-0010-0
BRIDGE I.D. NO. 127-00025D-022.45N
PROJECT P.I. NO. 532650-

BRIDGE NO. 2

GEORGIA
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION-OFFICE OF BRIDGES & STRUCTURES

PRELIMINARY LAYOUT
SR 25 (US 17) OVER WALLYLEG BRANCH
GLYNN COUNTY STP00-0009-02(092)

DATE | REVISIONS | BY

DRAWING NO. 35-0003
BRIDGE SHEET 1 OF 2

SCALE: 1" = 10'-0" (UNLESS OTHERWISE NOTED) JANUARY 2016

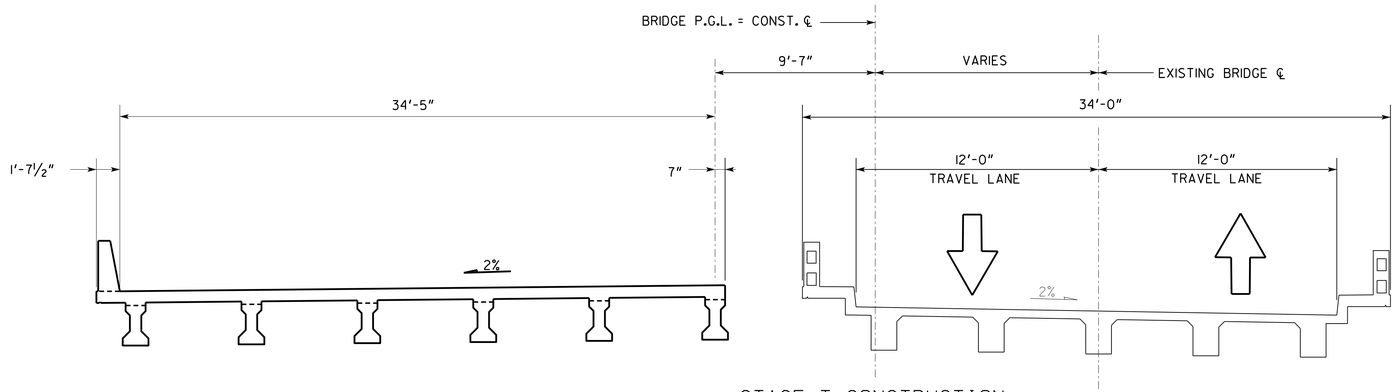
DESIGNED TDN | CHECKED STB | REVIEWED DLC/SKG
DRAWN TDN | DESIGN GROUP STB | APPROVED WMD

1 INCH WHEN PRINTED FULL SIZE

C:\USERS\ZACHERY.NGUYEN\DESKTOP\ZACHERY\WORK\532650\GLEAVER68\0532650BL.DWG

2/24/2016 USER:zngyen

P.I. NO.
532650-

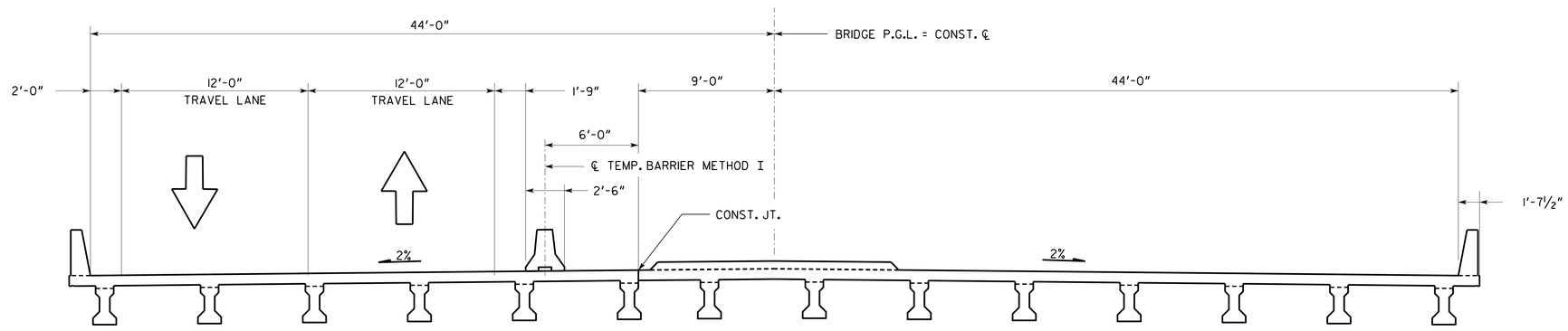


STAGE I CONSTRUCTION
TYPICAL SECTION

SPAN 2 SHOWN
(LOOKING AHEAD)

CONSTRUCTION SEQUENCE

1. PLACE TEMPORARY SHORING AS NECESSARY. MAINTAIN 2 - 12'-0" TRAFFIC LANES ON EXISTING BRIDGE.
2. BUILD STAGE I ACCORDING TO PLANS.
3. PLACE TEMPORARY BARRIER ACCORDING TO PLANS. SHIFT TRAFFIC TO STAGE I CONSTRUCTION, MAINTAINING 2 - 12'-0" TRAVEL LANES.
4. REMOVE EXISTING BRIDGE.
5. COMPLETE STAGE II CONSTRUCTION ACCORDING TO PLANS.
6. REMOVE TEMPORARY BARRIER, SHIFT TRAFFIC TO PERMANENT LOCATIONS AND OPEN COMPLETED BRIDGE TO TRAFFIC.

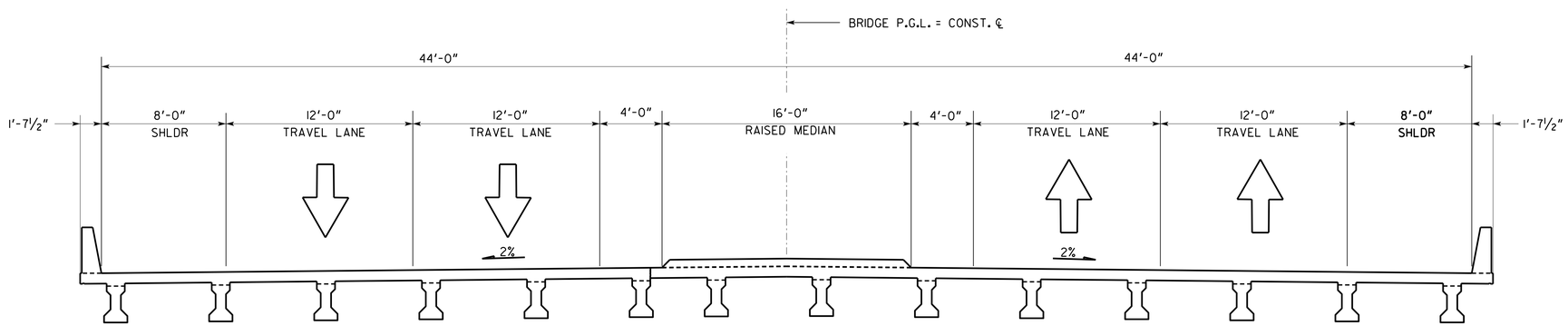


STAGE II CONSTRUCTION
TYPICAL SECTION

SPAN 2 SHOWN
(LOOKING AHEAD)

THE AFOREMENTIONED SEQUENCE SHALL BE COORDINATED WITH ROADWAY OPERATIONS, SEE ROADWAY PLANS.

IN LIEU OF THE ABOVE CONSTRUCTION SEQUENCE, THE CONTRACTOR MAY SUBMIT A PROPOSED CONSTRUCTION SEQUENCE FOR APPROVAL.



COMPLETE DECK SECTION

SPAN 2 SHOWN
(LOOKING AHEAD)

BRIDGE NO. 2

GEORGIA
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION-OFFICE OF BRIDGES & STRUCTURES

CONSTRUCTION STAGING
SR 25 (US 17) OVER WALLYLEG BRANCH
GLYNN COUNTY STP00-0009-02(092)

NOT TO SCALE JANUARY 2016

DATE	REVISIONS	BY

DRAWING NO. 35-0004

BRIDGE SHEET 2 OF 2

DESIGNED TDN	CHECKED STB	REVIEWED DLC/SKG
DRAWN TDN	DESIGN GROUP STB	APPROVED WMD

1 INCH WHEN PRINTED FULL SIZE

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA			

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PLAN AND PROFILE OF PROPOSED
SR25/US17 FROM YACHT DRIVE TO SR99
STP00-0009-02(092)
GLYNN COUNTY

FEDERAL AID PROJECT

LOCATION SKETCH

DESIGN DATA:
TRAFFIC A.D.T.: 2022 7350
TRAFFIC A.D.T.: 2042 8250
TRAFFIC D.H.V.: 2042 8250
DIRECTIONAL DIST: 57%
% TRUCKS: 2
24 HR.TRUCKS %: 3.5
SPEED DESIGN: 55

LOCATION & DESIGN APPROVAL DATE:

FUNCTIONAL CLASS:
URBAN MINOR ARTERIAL

THIS PROJECT IS 100% IN GLYNN COUNTY AND IS 100% IN CONG.DIST.NO.1 .

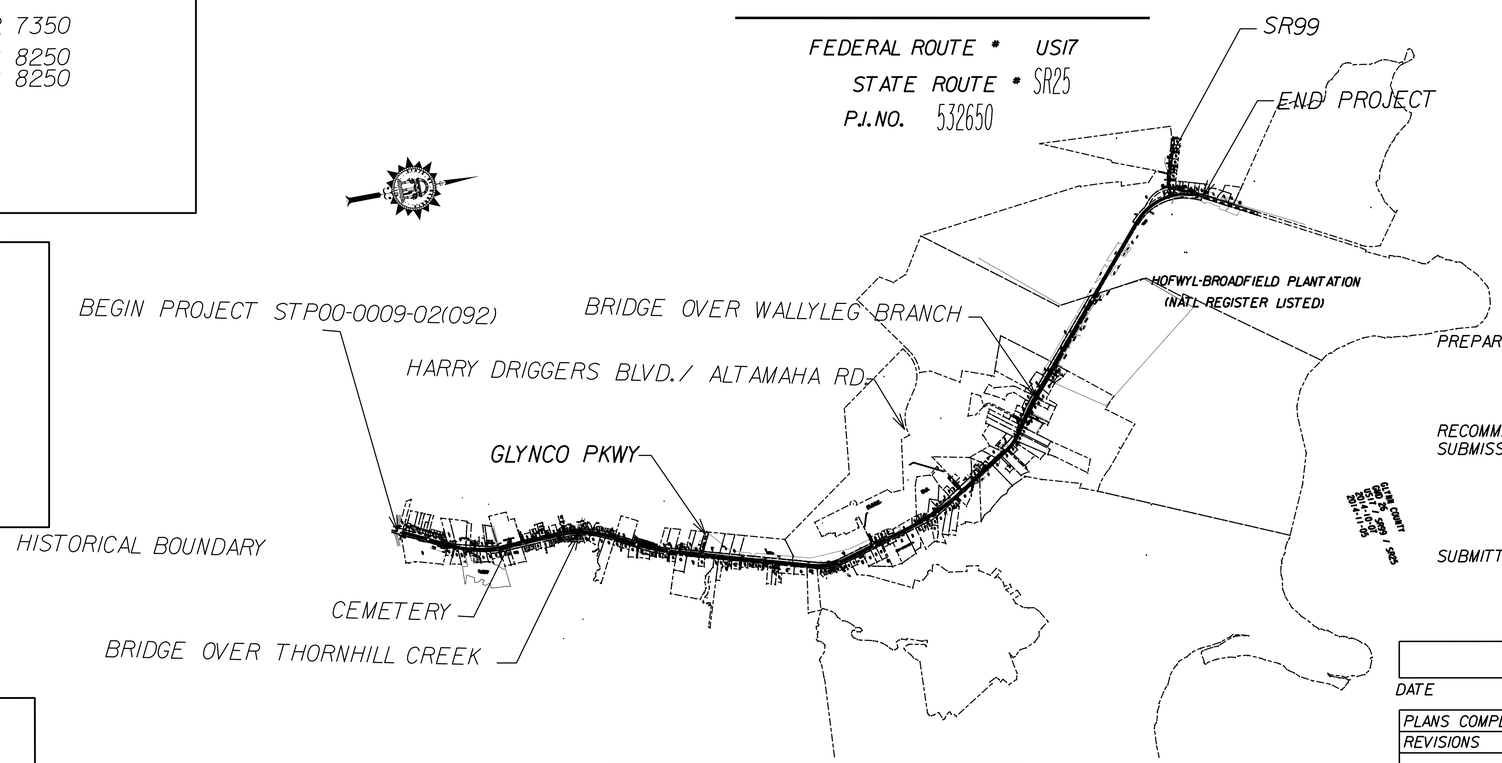
PROJECT DESIGNATION: EXEMPT
DESIGNED IN ENGLISH UNITS.

THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 1983)/94 WEST ZONE, AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

MID-POINT COORDINATES
STA STA. 214+50.00
N
E

NOTE :
ALL REFERENCES IN THIS DOCUMENT, WHICH INCLUDES ALL PAPERS, WRITINGS, DOCUMENTS, DRAWINGS, OR PHOTOGRAPHS USED, OR TO BE USED IN CONNECTION WITH THIS DOCUMENT, TO "STATE HIGHWAY DEPARTMENT OF GEORGIA", "STATE HIGHWAY DEPARTMENT", GEORGIA STATE HIGHWAY DEPARTMENT", "HIGHWAY DEPARTMENT", OR "DEPARTMENT" WHEN THE CONTEXT THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA, AND SHALL BE DEEMED TO MEAN THE DEPARTMENT OF TRANSPORTATION.

FEDERAL ROUTE * US17
STATE ROUTE * SR25
P.I.NO. 532650



PREPARED BY: _____
DESIGN

RECOMMENDED FOR SUBMISSION BY: _____
DESIGN

SUBMITTED BY: _____
STATE DESIGN ENGINEER

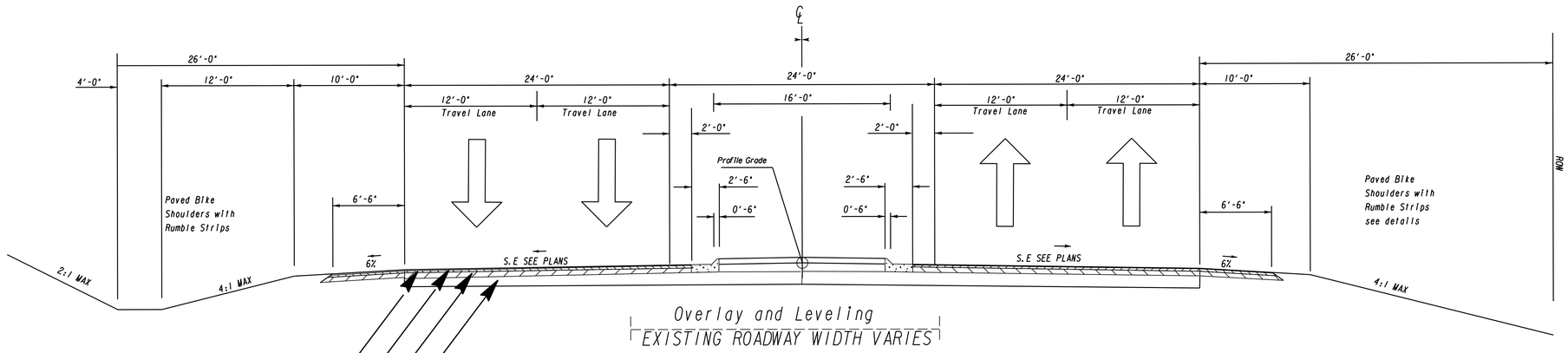
DATE CHIEF ENGINEER

PLANS COMPLETED - -	
REVISIONS	

LENGTH OF PROJECT	COUNTY No. Project No. MILES
NET LENGTH OF ROADWAY	6.324
NET LENGTH OF BRIDGES	
NET LENGTH OF PROJECT	6.324
NET LENGTH OF EXCEPTIONS	0.00
GROSS LENGTH OF PROJECT	6.324

THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANYWAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05, AND 104.03 OF THE SPECIFICATIONS.

DRAWING No. 01-



Overlay and Leveling
EXISTING ROADWAY WIDTH VARIES

A
B
C
D

TYPICAL SECTION

SR 25/US 17 FROM YACHT DR. TO SR99
4 LANE 24' RAISED MEDIAN DIVIDED

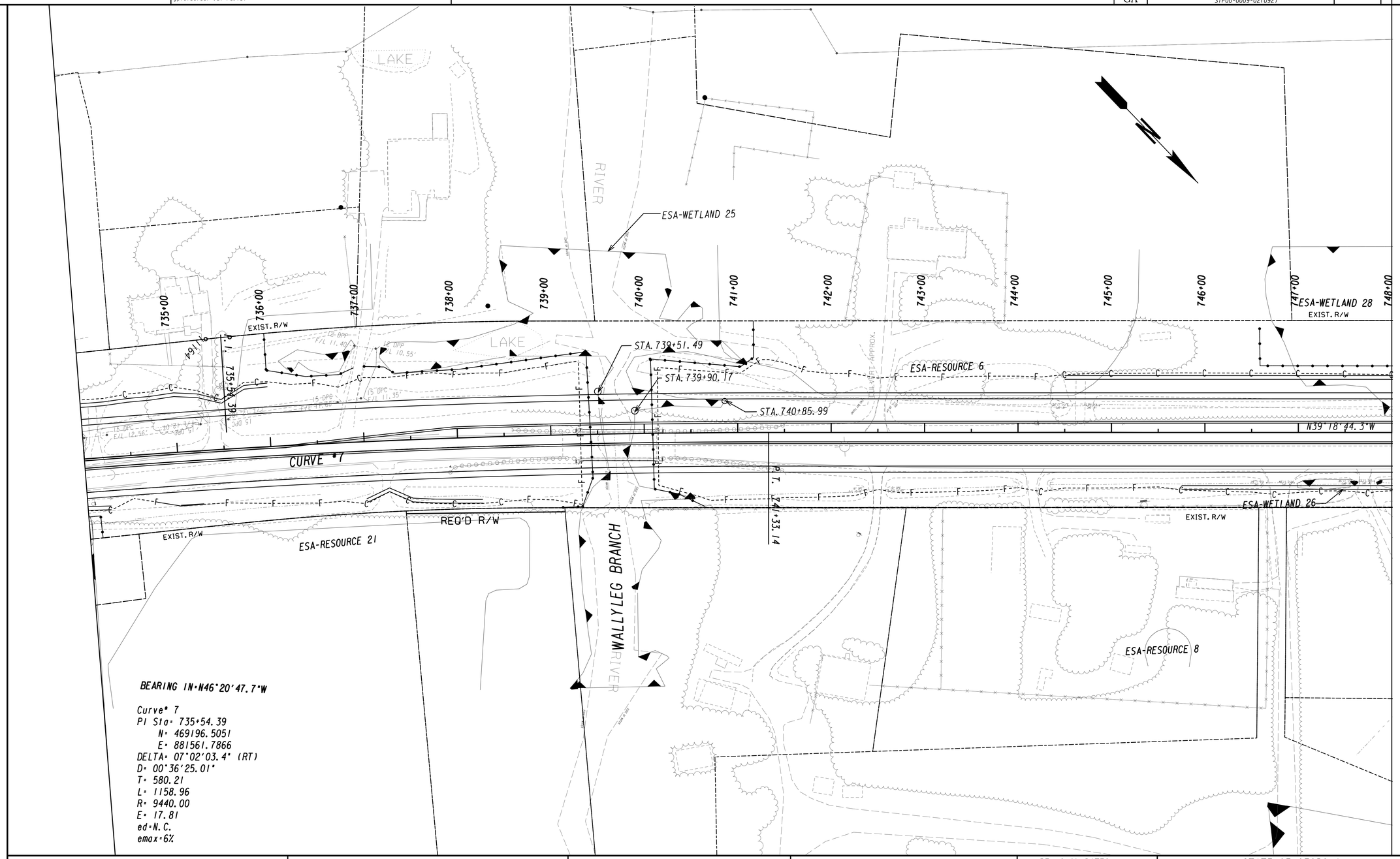
STA. 500+00 TO STA. 833+91.63

GEORGIA
DEPARTMENT OF TRANSPORTATION

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: ROADWAY DESIGN
TYPICAL SECTIONS
GLYNN COUNTY
SR25/US17 FROM YACHT DR. TO SR99
DRAWING No. 05-01

01/26/2015 GPLN



BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA (SEE ERIT 4-)

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

GEORGIA
DEPARTMENT OF TRANSPORTATION

SCALE IN FEET
0 50 100 200

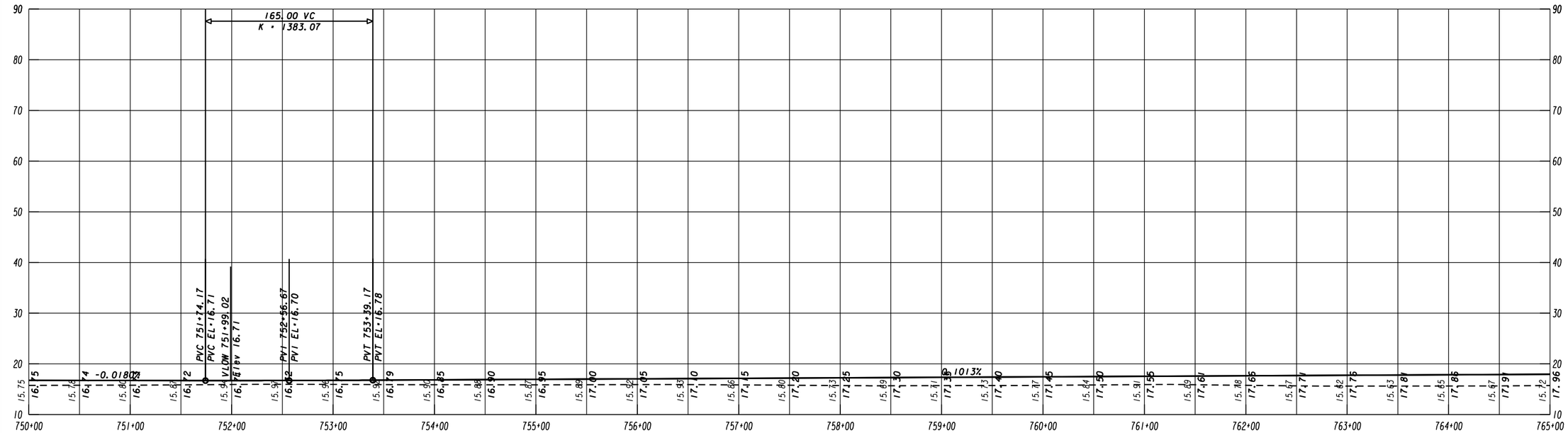
REVISION DATES

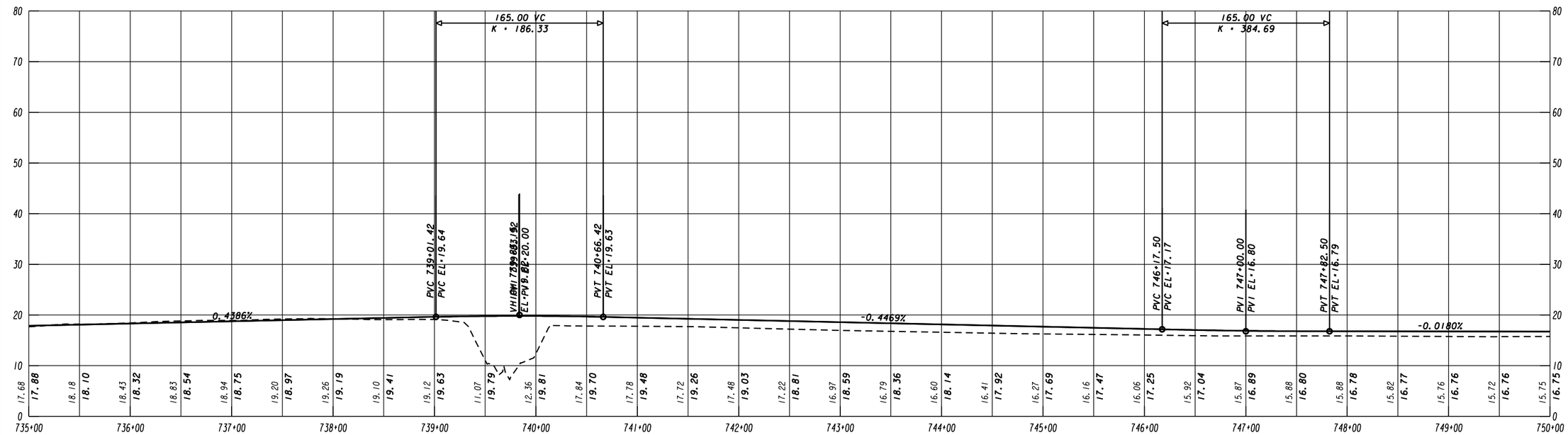
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:
MAINLINE PLAN

DRAWING NO.
13-018

01/26/2015 GPLN

8/4/2015 11:44:48 AM	GPLOT-V8	532650PROI51.dgn	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
tmcdonald	gplotborder-V8I-PO.tbl		GA			





REVISION DATES	

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

OFFICE:

MAINLINE PROFILE

DRAWING No.
15-

11/30/2011 GR2EDG

SUPPLEMENTAL

INFORMATION

P.I. No. 532650, GLYNN COUNTY
SR 25 (US 17) OVER WALLYLEG BRANCH
100 Year Storm
Hydraulic Design Data
Contraction Scour

	Left	Channel	Right
Input Data			
Average Depth (ft):	1.79	4.44	1.75
Approach Velocity (ft/s):	0.52	2.61	0.7
Br Average Depth (ft):	2.27	4.74	2.56
BR Opening Flow (cfs):	121.85	832.23	144.75
BR Top WD (ft):	38.15	43.85	39
Grain Size D50 (mm):	0.23	0.23	0.23
Approach Flow (cfs):	224.93	798.19	523.61
Approach Top WD (ft):	583.59	69	2823.18
K1 Coefficient:	0.69	0.69	0.69
Results			
Scour Depth Ys (ft):	0.31	6.59	0.37
Critical Velocity (ft/s):	1.12	1.3	1.12
Equation:	Clear	Clear	Clear

Pier Scour
Pier: #1 (CL = 73950)

Input Data

Pier Shape:	Square nose
Pier Width (ft):	2
Grain Size D50 (mm):	0.23
Depth Upstream (ft):	3.2
Velocity Upstream (ft/s):	1.41
K1 Nose Shape:	1.1
Pier Angle:	0
Pier Length (ft):	88
K2 Angle Coef:	1
K3 Bed Cond Coef:	1.1
Grain Size D90 (mm):	0.42
K4 Armouring Coef:	1

Results

Scour Depth Ys (ft):	2.44
Froude #:	0.14
Equation:	CSU equation

Pier: #2 (CL = 73995)

Input Data

Pier Shape:	Square nose
Pier Width (ft):	2
Grain Size D50 (mm):	0.23
Depth Upstream (ft):	3.2
Velocity Upstream (ft/s):	1.45
K1 Nose Shape:	1.1
Pier Angle:	0
Pier Length (ft):	88
K2 Angle Coef:	1
K3 Bed Cond Coef:	1.1
Grain Size D90 (mm):	0.42
K4 Armouring Coef:	1

Results

Scour Depth Ys (ft):	2.47
Froude #:	0.14
Equation:	CSU equation

P.I. No. 532650, GLYNN COUNTY
SR 25 (US 17) OVER WALLYLEG BRANCH
500 Year Storm
Hydraulic Design Data
Contraction Scour

	Left	Channel	Right
Input Data			
Average Depth (ft):	2.25	7.14	2.88
Approach Velocity (ft/s):	-0.18	-1.05	-0.29
Br Average Depth (ft):	4.23	6.77	4.58
BR Opening Flow (cfs):	-537.26	-2456.7	-599.73
BR Top WD (ft):	38.15	43.85	39
Grain Size D50 (mm):	0.23	0.23	0.23
Approach Flow (cfs):	-1513.4	-517.34	-3107.04
Approach Top WD (ft):	3772.04	69	3756.44
K1 Coefficient:	0.64	0.64	0.64
Results			
Scour Depth Ys (ft):	4.96	21.88	5.80
Critical Velocity (ft/s):	1.16	1.41	1.43
Equation:	Clear	Clear	Clear

Pier Scour
Pier: #1 (CL = 73950)

Input Data

Pier Shape:	Square nose
Pier Width (ft):	2
Grain Size D50 (mm):	0.23
Depth Upstream (ft):	5.18
Velocity Upstream (ft/s):	3.33
K1 Nose Shape:	1.1
Pier Angle:	0
Pier Length (ft):	88
K2 Angle Coef:	1
K3 Bed Cond Coef:	1.1
Grain Size D90 (mm):	0.42
K4 Armouring Coef:	1

Results

Scour Depth Ys (ft):	3.77
Froude #:	0.26
Equation:	CSU equation

Pier: #2 (CL = 73995)

Input Data

Pier Shape:	Square nose
Pier Width (ft):	2
Grain Size D50 (mm):	0.23
Depth Upstream (ft):	5.18
Velocity Upstream (ft/s):	3.36
K1 Nose Shape:	1.1
Pier Angle:	0
Pier Length (ft):	88
K2 Angle Coef:	1
K3 Bed Cond Coef:	1.1
Grain Size D90 (mm):	0.42
K4 Armouring Coef:	1

Results

Scour Depth Ys (ft):	3.78
Froude #:	0.26
Equation:	CSU equation

Project No.: STP00-0009-02(092)
Description: SR 25 / US 17 Spur over Wallyleg Branch

DECK DRAINAGE

P.I. No.: 532650
County: GLYNN

Preliminary Data Analysis Variables:

Yellow = Required Input

Wp =	44	ft	*The width of the area bring drained. Usually half the width of the crown deck or the entire super-elevated deck*
S =	Varies	ft/ft	*The longitudinal grade of the deck*
Sx =	0.02	ft/ft	*The cross-slope of the deck*
T =	8	ft	*The design spread, width of the flow on the deck*
n =	0.016	[ ]	*Manning's roughness coefficient, typically n = 0.016 for pavements*
C =	0.9	[ ]	*Runoff coefficient, typically C = 0.9 for pavements. See Table 1 in HEC-21 for other factors*

Geometric Variables:

g1 =	0.004386	ft/ft	*Grade 1, type in in terms of ft/ft*
g2 =	-0.004469	ft/ft	*Grade 2, type in in terms of ft/ft if any. Vertical curve must have g2*
Lvc =	165	ft	*Enter length of curve*
PVC =	739+01.42	[ ]	*Enter station for the beginning of curve*
Bridge Sta. =	739+10.00	[ ]	*Enter station for the beginning of bridge*
Bridge Len =	125	ft	*Length of bridge*

Select Grade

FLAT

CONSTAN

-->> VERTICAL

Other Significant Data:

Road class =	Major Collectors and Arterials	*Select road classification. This is also used for rainfall intensity calculation*
Nearest City =	Savannah	*Select the nearest city to your project. This is used for rainfall intensity calculation*
Grates =	○ Neenah ◉ Hec-21 ○ Curb	*Select the inlet type to be used for drainage on the deck*
Inlet Type =	Circular Scupper	*Select design speed*
Vehicle Spd =	55 mph	

Auto-populated Values From Input:

Rtrn Period =	10	yr	*From GA Rainfall intensity chart*
n =	0.840		*From GA Rainfall intensity chart*
a =	126.120		*From GA Rainfall intensity chart*
b =	24.000		*Return period of rainfall event for the road class chosen*
Wd =	0.333	ft	*Width of grate/opening for the inlet type chosen*
Lg =	0.333	ft	*Length of grate/opening for the inlet type chosen*
d =	0.080	in	*Hydroplaning depth, ~ 0.08 for 55 mph, and 0.047 for 65 mph*
i_calculated =	7.889	in/hr	*Rainfall intensity for this area*
Hydroplain =	OK		*Risk of hydroplaning at the rain intensity given based on the width and spread used*
Visibility =	**Reduced**		*Risk of impaired vision due to rain, using 4 in/hr due to splash and night time*

Neenah Grates Only

Determining K

ST:	**2%**	ft/ft
SL:	**1%**	ft/ft

Click link below to select

Select Grate

Determine K and Enter K

K = **33**

Project No.: PI 00xxxxx
Description: SR xxxx Spur over xxxx Creek

DECK DRAINAGE

P.I. No.: 00xxxxx
County: DRAINO

Calculated Values:

L_{E1} (ft) =	73.15	ft
L_{E2} (ft) =	51.85	ft
High Point =	739+83.15	
End bridge sta =	740+35.00	
Final t_c =	3.095	min
i (in/hr) =	7.889	in/hr
t_g =	1.983	min
t_o =	1.112	min
t_c =	3.095	min
Si =	0.004386	ft/ft
Qi =	0.869	cfs
Li =	9.86	ft
Eoi =	0.11	
Vi =	1.358	ft/s
Voi =	1.775	ft/s
Rfi =	1.000	
Rsi =	0.006	
Ei =	0.113	
Lci =	13.66	ft
StoredL =	348.03	
Su =	0.004386	
Ki =	0.112749456	

You can round down the spacing of inlets further to your specifications. Remember the physical layout of the bridge such as joints or bents and space inlets accordingly.

Inlets Not Needed

Spacing of inlets from the high point to begin/end bridge

L_i	Long Side (ft)	Station	Short Side (ft)	Station	Local S (ft/ft)	Gutter Flow (cfs)
L_0	No Inlet	-	No Inlet	-	-	-
L_1	-	-	-	-	-	-
L_2	-	-	-	-	-	-
L_3	-	-	-	-	-	-
L_4	-	-	-	-	-	-
L_5	-	-	-	-	-	-
L_6	-	-	-	-	-	-
L_7	-	-	-	-	-	-
L_8	-	-	-	-	-	-
L_9	-	-	-	-	-	-
L_{10}	-	-	-	-	-	-
L_{11}	-	-	-	-	-	-
L_{12}	-	-	-	-	-	-
L_{13}	-	-	-	-	-	-
L_{14}	-	-	-	-	-	-
L_{15}	-	-	-	-	-	-
L_{16}	-	-	-	-	-	-
L_{17}	-	-	-	-	-	-
L_{18}	-	-	-	-	-	-
L_{19}	-	-	-	-	-	-
L_{20}	-	-	-	-	-	-
L_{21}	-	-	-	-	-	-
L_{22}	-	-	-	-	-	-
L_{23}	-	-	-	-	-	-
...	...	...	...	...	...	...
Total Length	**Under**		**Under**			

If inlets are NOT needed, make sure the design is not at risk for hydroplaning.
Is this project site located in an MS4 area?

P.I. No. 532650, GLYNN COUNTY
SR 25 (US 17) OVER WALLYLEG BRANCH

PROPOSED 125 FT LONG BRIDGE

ENDROLL RIPRAP CALCULATIONS (100 YEAR STORM)
METHOD IN HEC-23,"BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES"

BRIDGE ABUTMENT LOCATION	739+10.00	740+35.00

SET BACK LENGTH (ft)	11.50	12.00
MAIN CHANNEL AREA @ BRIDGE (ft^2)	214.13	214.13
TOP WIDTH OF MAIN CHANNEL @ BRIDGE (ft)	43.85	43.85
AVERAGE DEPTH OF MAIN CHANNEL @ BR (ft)	4.88	4.88
SET BACK RATIO	2.36	2.46

CHARACTERISTIC AVG VELOCITY CALCULATIONS

DISCHARGE @ ABUTMENT (cfs)	-1098.84	-1098.84
AREA @ ABUTMENT (ft^2)	410.38	410.38
AVERAGE VELOCITY, V (ft/s)	-2.68	-2.68

AREA OF OVERBANK FLOW @ BRIDGE (ft^2)	91.50	104.75
LENGTH OF OVERBANK FLOW @ BRIDGE (ft)	38.15	39.00
AVERAGE DEPTH OF OVERBANK FLOW (ft)	2.40	2.69

FROUDE NUMBER	-0.30	-0.30

IF FROUDE NUMBER ≤ 0.80, THEN D50 =	0.12	0.12
IF FROUDE NUMBER > 0.80, THEN D50 =	0.64	0.70

MEDIAN STONE DIAMETER REQUIRED, D50 =	0.12	0.12

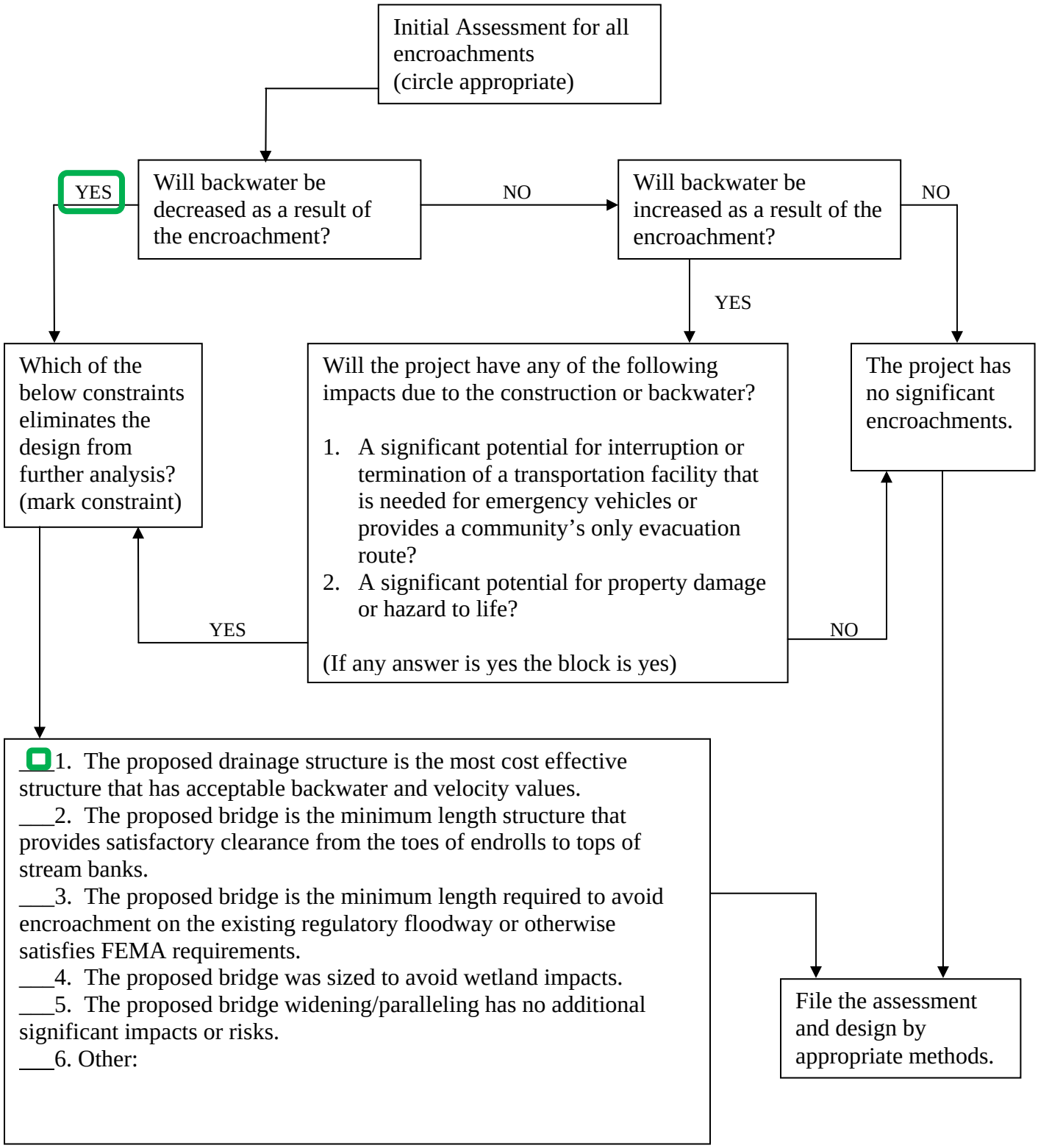
TYPE OF RIPRAP REQUIRED	TYPE 3	TYPE 3

Use Type I riprap at both endrolls per Drainage Manual.

Rip Rap Data

Plan: Pro_SS100yrS Walleyleg_Branch 1 RS: 400 BR D Profile: 01SEP2015 1118					
E.G. Elev (ft)	14.63	**Element**	**Left OB**	**Channel**	**Right OB**
Vel Head (ft)	0.18	**Wt. n-Val.**	0.08	0.04	0.08
W.S. Elev (ft)	14.45	**Reach Len. (ft)**			
Crit W.S. (ft)		**Flow Area (sq ft)**	91.5	214.13	104.75
E.G. Slope (ft/ft)	0.001775	**Area (sq ft)**	91.5	214.13	104.75
Q Total (cfs)	1098.84	**Flow (cfs)**	-126.89	-823.5	-148.45
Top Width (ft)	121	**Top Width (ft)**	38.15	43.85	39
Vel Total (ft/s)	2.68	**Avg. Vel. (ft/s)**	-1.39	-3.85	-1.42
Max Chl Dpth (ft)	5.65	**Hydr. Depth (ft)**	2.4	4.88	2.69
Conv. Total (cfs)	26081.7	**Conv. (cfs)**	3011.8	19546.4	3523.5
Length Wtd. (ft)		**Wetted Per. (ft)**	38.79	55.59	42.98
Min Ch El (ft)	8.8	**Shear (lb/sq ft)**	0.26	0.43	0.27
Alpha	1.61	**Stream Power (lb/ft s)**	78178.74	0	0
Frctn Loss (ft)		**Cum Volume (acre-ft)**	15902.07	494.03	14622
C & E Loss (ft)		**Cum SA (acres)**	1395.65	36.62	1324.61

532650 - RISK ASSESSMENT
BRIDGE



SITE INSPECTION PHOTOS

Top of Bridge Looking Upstream

Top of Bridge Looking Downstream

SITE INSPECTION PHOTOS (Continued…)

Downstream Looking at the Southeast Floodplain

Downstream Looking at the Northeast Floodplain

SITE INSPECTION PHOTOS (Continued…)

Upstream Looking at the Northwest Floodplain

Upstream Looking at the Southwest Floodplain

SITE INSPECTION PHOTOS (Continued…)

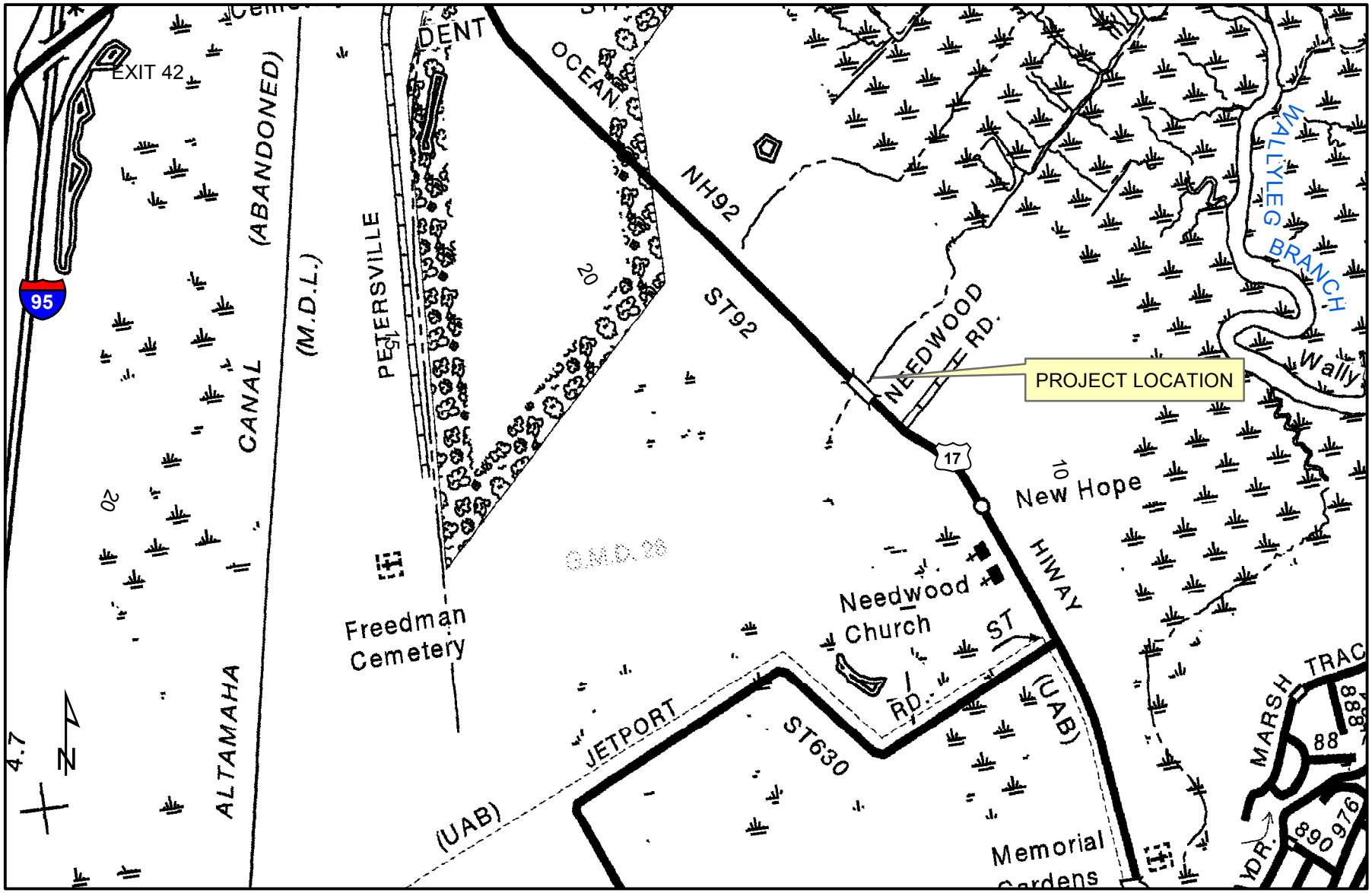
Utilities Located at the Site

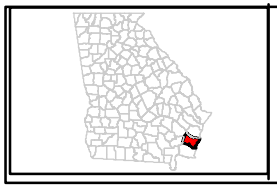
Bent 2 and Abutment of Existing Bridge

SITE INSPECTION PHOTOS (Continued…)

Looking North from Centerline

Looking South from Centerline





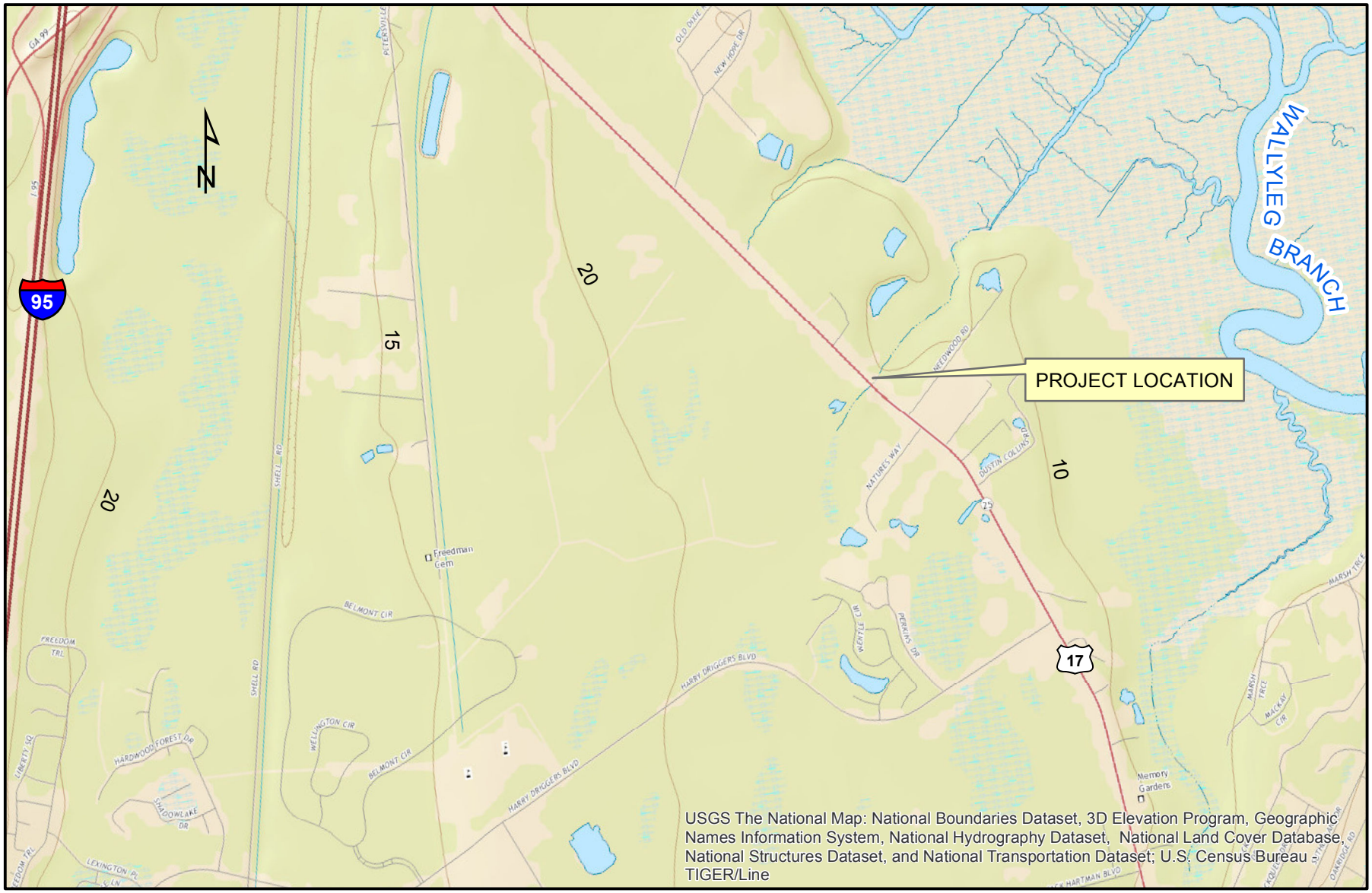
STP00-0009-02(092)
SR 25 (US 17) over WALLYLEG BRANCH
LOCATION MAP

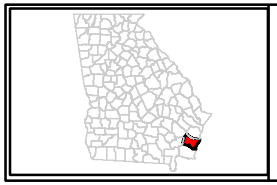
0 0.1 0.2 0.4 0.6 0.8 Miles

Albers Projection
Central Meridian: -96
1st Std Parallel: 20
2nd Std Parallel: 60
Latitude of Origin: 40

Georgia Department of Transportation

ESRI





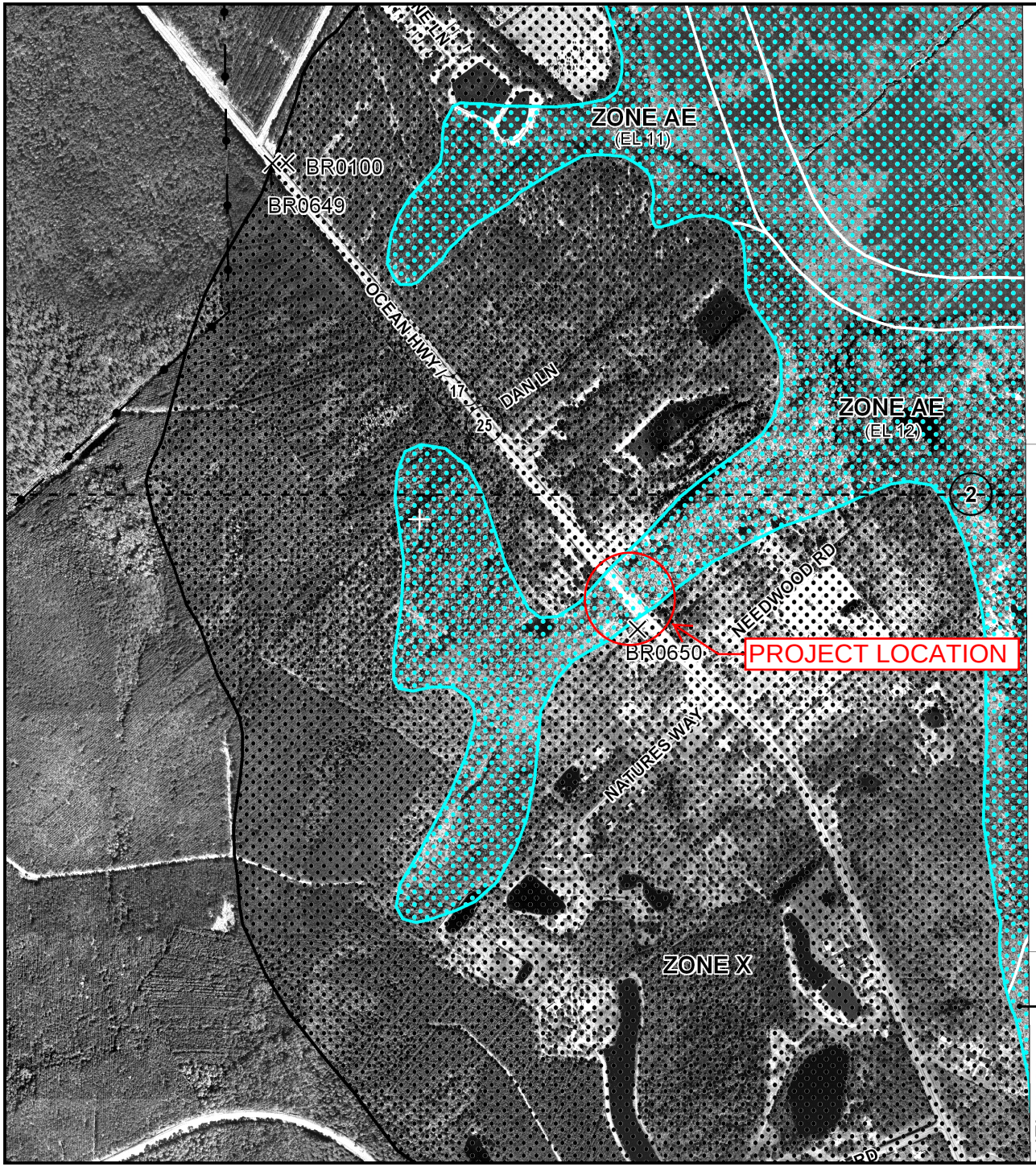
STP00-0009-02(092)
SR 25 (US 17) over WALLYLEG BRANCH
QUAD MAP

0 0.1 0.2 0.4 0.6 0.8 Miles

Albers Projection
Central Meridian: -96
1st Std Parallel: 20
2nd Std Parallel: 60
Latitude of Origin: 40

Georgia Department of Transportation

ESRI



MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

METE

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0115F

FIRM

FLOOD INSURANCE RATE MAP

GLYNN COUNTY, GEORGIA

AND INCORPORATED AREAS

PANEL 115 OF 345

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GLYNN COUNTY	130092	0115	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
13127C0115F

EFFECTIVE DATE
SEPTEMBER 6, 2006

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
PROGRAM = datasheet95, VERSION = 8.7.1
1        National Geodetic Survey,   Retrieval Date = AUGUST 11, 2015
 BR1451 ***********************************************************************
 BR1451  DESIGNATION -  HAMPTON
 BR1451  PID         -  BR1451
 BR1451  STATE/COUNTY-  GA/GLYNN
 BR1451  COUNTRY     -  US
 BR1451  USGS QUAD   -  DARIEN (1993)
 BR1451
 BR1451                        *CURRENT SURVEY CONTROL
 BR1451  ___________________________________________________________________
 BR1451* NAD 83(1994) POSITION- 31 16 49.54932(N) 081 22 59.34381(W)   ADJUSTED
 BR1451* NAVD 88 ORTHO HEIGHT -     2.    (meters)        7.    (feet) SCALED
 BR1451  ___________________________________________________________________
 BR1451  GEOID HEIGHT    -        -29.66  (meters)                     GEOID12B
 BR1451  LAPLACE CORR    -         -1.77  (seconds)                    DEFLEC12B
 BR1451  HORZ ORDER      -  THIRD
 BR1451
 BR1451.The horizontal coordinates were established by classical geodetic methods
 BR1451.and adjusted by the National Geodetic Survey in September 1997.
 BR1451.
 BR1451.The orthometric height was scaled from a topographic map.
 BR1451
 BR1451.The Laplace correction was computed from DEFLEC12B derived deflections.
 BR1451
 BR1451. The following values were computed from the NAD 83(1994) position.
 BR1451
 BR1451;                    North         East     Units Scale Factor Converg.
 BR1451;SPC GA E     -   142,203.437   274,602.825   MT  0.99996863   +0 24 24.6
 BR1451;SPC GA E     -   466,545.78    900,926.10   sFT  0.99996863   +0 24 24.6
 BR1451;UTM  17      - 3,460,744.656   463,529.430   MT  0.99961641   -0 11 56.2
 BR1451
 BR1451!             -  Elev Factor  x  Scale Factor =   Combined Factor
 BR1451!SPC GA E     -   1.00000439  x   0.99996863  =   0.99997302
 BR1451!UTM  17      -   1.00000439  x   0.99961641  =   0.99962080
 BR1451
 BR1451                          SUPERSEDED SURVEY CONTROL
 BR1451
 BR1451  NAD 83(1986)-  31 16 49.56152(N)    081 22 59.34793(W) AD(       ) 3
 BR1451  NAD 27      -  31 16 48.73200(N)    081 22 59.98700(W) AD(       ) 3
 BR1451
 BR1451.Superseded values are not recommended for survey control.
 BR1451
 BR1451.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 BR1451.See file dsdata.txt to determine how the superseded data were derived.
 BR1451
 BR1451_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMQ6352960744(NAD 83)
 BR1451
 BR1451
 BR1451  HISTORY     - Date     Condition        Report By
 BR1451  HISTORY     - 1933     FIRST OBSERVED   USE
 BR1451  HISTORY     - 1952     MARK NOT FOUND   CGS
```

BR1451
BR1451 STATION DESCRIPTION
BR1451
BR1451'DESCRIBED BY US ENGINEERS 1933 (CMD)
BR1451'A STATION OF THE U S E D ON THE EAST SHORE OF BUTTERMILK SOUND
BR1451'ABOUT 3/4 MILE N OF THE JUNCTION OF THE MACKAYS AND FREDERICA RIVERS
BR1451'AND JUST S OF THE MOUTH OF WILSONS CREEK. STATION IS MARKED BY A
BR1451'STAND AND 4 X 6 POST. THIS STATION WAS LOCATED BY INTERSECTION.
BR1451
BR1451 STATION RECOVERY (1952)
BR1451
BR1451'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1952 (PT)
BR1451'STATION WAS NOT RECOVERED AFTER A 30-MIN. SEARCH BY A TWO-MAN PARTY.
BR1451'THE STAND HAS BEEN DESTROYED AND THE 4- BY 6-IN. POST COULD NOT BE
BR1451'FOUND.

*** retrieval complete.
Elapsed Time = 00:00:09

Questions concerning the VERTCON process may be mailed to NGS

Latitude: 31 17 20.310

Longitude: 081 26 45.110

NGVD 29 height: 10.8 ft

Datum shift(NAVD 88 minus NGVD 29): -0.991 feet

Converted to NAVD 88 height: 9.809 feet

WEB SURVEY
SOIL REPORT
PROJECT SITE
US Highway 17 N
17
CaB
Ma
W
Po
Pe
Ru
Needwood Rd
Bennett Rd
Nature Way
0
400 ft

Report—Engineering Properties

Absence of an entry indicates that the data were not estimated. The asterisk '*' denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba).

Engineering Properties–Camden and Glynn Counties, Georgia

Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*Pct*	*Pct*					*Pct*	
CaB—Cainhoy fine sand, 0 to 5 percent slopes														
Cainhoy	100	A	0-50	Fine sand	SM, SP-SM	A-2, A-3	0- 0- 0	0- 0- 0	100-100-100	100-100-100	80-90-100	5-12- 18	—	NP
			50-99	Fine sand, sand	SP, SP-SM	A-3	0- 0- 0	0- 0- 0	100-100-100	100-100-100	80-90-100	3- 7- 10	—	NP
Ma—Mandarin fine sand, 0 to 2 percent slopes														
Mandarin	92	A	0-7	Fine sand, sand	SM, SP-SM	A-3, A-2-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	93-94-100	10-11-20	0-0 -25	NP-0 -6
			7-13	Sand, fine sand	SC-SM, SP-SM, SM	A-2-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	92-94-100	11-13-26	0-0 -26	NP-0 -9
			13-18	Sand, fine sand, loamy sand, loamy fine sand	SC-SM, SP-SM, SM	A-2-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	90-94-100	12-16-26	0-19 -29	NP-2 -9
			18-62	Loamy fine sand, loamy sand, sand, fine sand	SC-SM, SP-SM, SM	A-2-4, A-3	0- 0- 0	0- 0- 0	100-100-100	100-100-100	89-94-100	9-14- 24	0-17 -26	NP-2 -9
			62-80	Sand, fine sand, loamy sand, loamy fine sand	SC-SM, SM	A-2-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	91-95-100	14-18-27	0-19 -28	NP-2 -9

~95% PASSING @ 40 SIEVE
~14% PASSING @ 200 SIEVE
→ D95 = .42 mm
D50 = .23 mm

Engineering Properties–Camden and Glynn Counties, Georgia														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*Pct*	*Pct*					*Pct*	
Pe—Pelham loamy sand														
Pelham	100	B/D	0-25	Loamy sand	SM	A-2	0- 0- 0	0- 0- 0	100-100-100	95-98-100	75-83-90	15-23-30	—	NP
			25-40	Sandy clay loam, sandy loam, fine sandy loam	SC, SC-SM, SM	A-2, A-4, A-6	0- 0- 0	0- 0- 0	100-100-100	95-98-100	65-78-90	27-39-50	15-23-30	2-7 -12
			40-75	Sandy clay loam, sandy loam, sandy clay	CL, ML, SC, SM	A-2, A-4, A-6, A-7	0- 0- 0	0- 0- 0	100-100-100	95-98-100	65-78-90	27-46-65	20-33-45	3-12-20
Po—Pottsburg sand														
Pottsburg	95	A	0-10	Sand	SP, SP-SM	A-3	0- 0- 0	0- 0- 0	100-100-100	100-100-100	78-89-100	4- 6- 8	—	NP
			10-63	Sand, fine sand	SP, SP-SM	A-3	0- 0- 0	0- 0- 0	100-100-100	100-100-100	78-89-100	4- 6- 8	—	NP
			63-80	Sand, fine sand, loamy sand	SM, SP-SM	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	80-90-[illegible]	[illegible]	[illegible]	NP
Ru—Rutlege fine sand														
Rutlege	100	A/D	0-15	Sand	SP-SM	A-3	0- 0- 0	0- 0- 0	95-98-100	95-98-100	70-85-100	5- 8- 10	0-7 -14	NP
			15-70	Sand, loamy sand, loamy fine sand	SM, SP, SP-SM	A-2, A-3	0- 0- 0	0- 0- 0	95-98-100	95-98-100	50-65-80	2-14- 25	0-10 -20	NP

~98% PASSING @ 40 SIEVE
~11% PASSING @ 200 SIEVE

D95 = 0.42 mm
D50 = 0.23 mm

Data Source Information

Soil Survey Area: Camden and Glynn Counties, Georgia
Survey Area Data: Version 7, Sep 17, 2014

HYDRAULIC ENGINEERING FIELD REPORT

McKIM&CREED

1505 LAKES PARKWAY, SUITE 170
LAWRENCEVILLE, GEORGIA 30043
770-962-4125 O
770-962-4126 F
WWW.MCKIMCREED.COM

OCTOBER 7, 2014

BRIDGE AT WALLY'S LEG CREEK
SR25/US17
STP-00-0009-02(092)

P.I. NO: 532650

GLYNN COUNTY

HYDRAULIC ENGINEERING FIELD REPORT

A. Project Location

Project No.: STP00-0009-02(092) County: GLYNN District: 5 P.I. No.:532650

Stream Name: WALLY'S LEG CREEK

Route: SR25/US17 FROM CR372/YACHT DRIVE TO SR99

Surveyed By: MCKIM & CREED, INC. Date: 09-04-2014

B. Site Information

Floodplain and Stream Channel description:

1. Flat, rolling, mountainous, etc.: FLAT

2. Wooded, heavily vegetated, pasture, swampy, etc.: WOODED & SWAMPY

3. Stream channel description: well-defined banks, meandering, debris, etc. NON-DEFINED BANKS

4. Is there any fill in the upstream or downstream floodplain, which will affect the natural drainage or limit the floodplain width at this site? NONE OBSERVED

C. Required Existing Bridge Information at Project Site

1. Bridge Identification No.:127-0010-0 2. Date Built: 1955

3. Skew angle of bridge bents: 90 DEGREES

4. Height of curb, parapet or barrier: 3.3' FROM BRIDGE DECK TOP TO TOP OF PARAPET

SUBSTRUCTURE INFORMATION:

1. Column type (concrete, steel, etc): CONCRETE

2. Size of columns: 1.2' x 1.2' SQUARE WITH 1 INCH MITERED EDGES

3. Number of columns per bent: 4

4. Guide Bank (Spur Dike) length, elevation and location (if applicable): NONE OBSERVED

5. Note any scour problems at intermediate bents or abutments: MINOR SCOURING OBSERVED

D. Normal Water Surface Data

WS ELEV

500 feet upstream of survey centerline: 10.6'

At the survey centerline: 10.4'

500 feet downstream of survey centerline: 8.9'

Normal high tide: N/A

Normal low tide: N/A

E. Historical Flood Data

1. Extreme high water elevation at site: 10.9' Date:_____

2. Highest observed tide elevation: N/A Date:_____

3. Location of extreme high water elevation (upstream/downstream face of bridge at the centerline or station and offset if not at bridge): MEASUREMENT TAKEN AT DOWNSTREAM COLUMN

4. Source of high water information: SCOUR MARKINGS AT COLUMNS

5. Location and floor elevation of any houses/buildings/structures that have been flooded: NONE OBSERVED

6. Information about flood (number of times structure has been flooded, water surface elevations and date(s) of flood): NONE OBSERVED (SEE REPORT FROM ADJOINING HOME OWNER)

7. Location and floor elevation of any houses/buildings/structures that have floor elevations within 2 feet of the extreme high water elevation:

LOWEST BUILDING FINISHED FLOOR ELEVATION OBSERVED +/- 13.5'

HOME OWNER REPORT

PROJECT SURVEYOR MET WITH MR. HARDEE (PARCEL ID 02-0048) ON OCTOBER 4, 2014. IT WAS NOTED THAT MR. HARDEE'S FATHER LIVED AT THE LOCATION SINCE 1961 AND REPORTED THAT THERE WAS NO OBSERVABLE FLOODING OF THE SURROUNDING HOMES OR LAND SINCE THAT TIME. MR. HARDEE DID NOTE THAT THE LAND AROUND THE CREEK HAS ALWAYS BEEN INUNDATED WITH WATER (SWAMPY).

F. Benchmark Information

Location 1:

1. Benchmark Name: D-9 Elevation: 17.14'

2. Location (project stations/offset): NO PROJECT STATION

Northing: 469405.5071 Easting: 881438.3680

3. Physical description: REBAR WITH CAP

Location 2:

1. Benchmark Name: NO. 286 Elevation: 17.58'

2. Location (project stations/offset): NO PROJECT STATION

Northing: 469658.1049 Easting: 881175.9259

3. Physical description: 60d MAG NAIL SPIKE

Location 3:

1. Benchmark Name: NGS MONUMENT BR 650 Elevation: 18.63'

2. Location (project stations/offset): NO PROJECT STATION

Northing: 469485.2843 Easting: 881318.3889

3. Physical description: VERTICAL CONTROL DISK

H. Miscellaneous Information

1. Are there water surfaces affected by other factors (high water from other streams, reservoirs, etc.):

OFFLINE POND 0.12 MILES UPSTREAM OF THE BRIDGE

2. Give location (horizontal distance to dam or spillway along stream centerline), length, width and elevation of dam and spillway, if applicable: NONE OBSERVED

VICINITY MAP

NTS

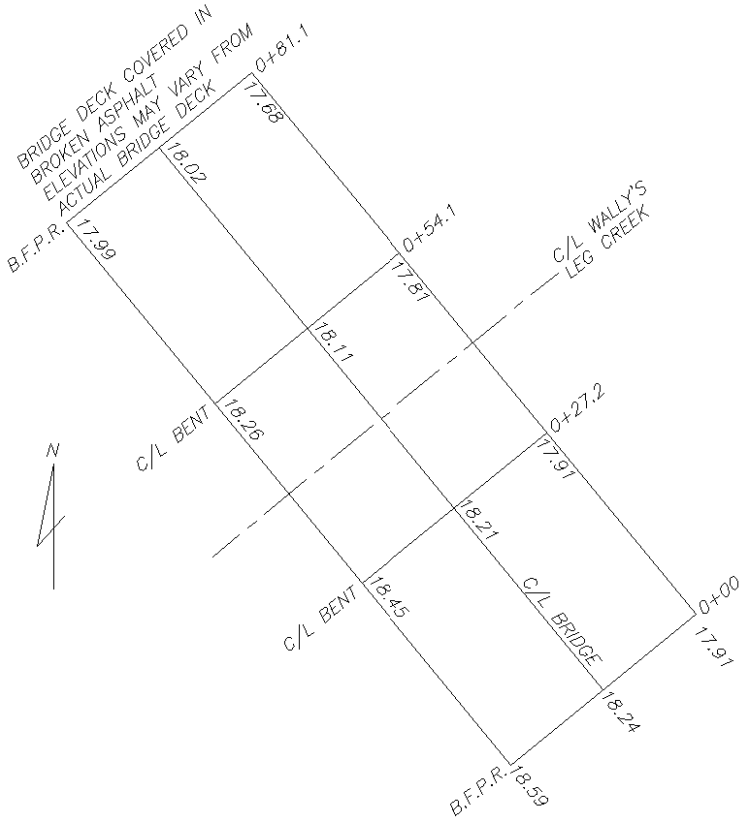
BRIDGE LOCATION

UPSTREAM SIDE OF BRIDGE

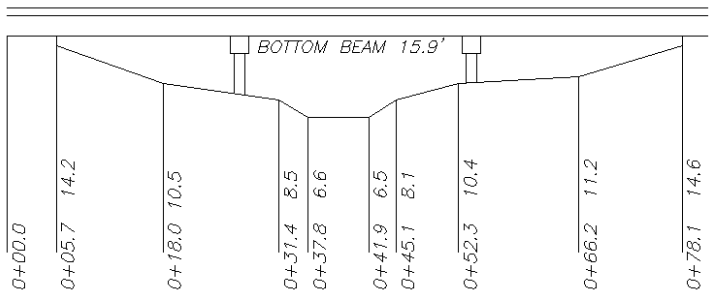
DOWNSTREAM SIDE OF BRIDGE

BRIDGE BENTS UPSTREAM SIDE

BRIDGE BENT UPSTREAM SIDE



BRIDGE DECK ELEVATIONS
FIGURE 1

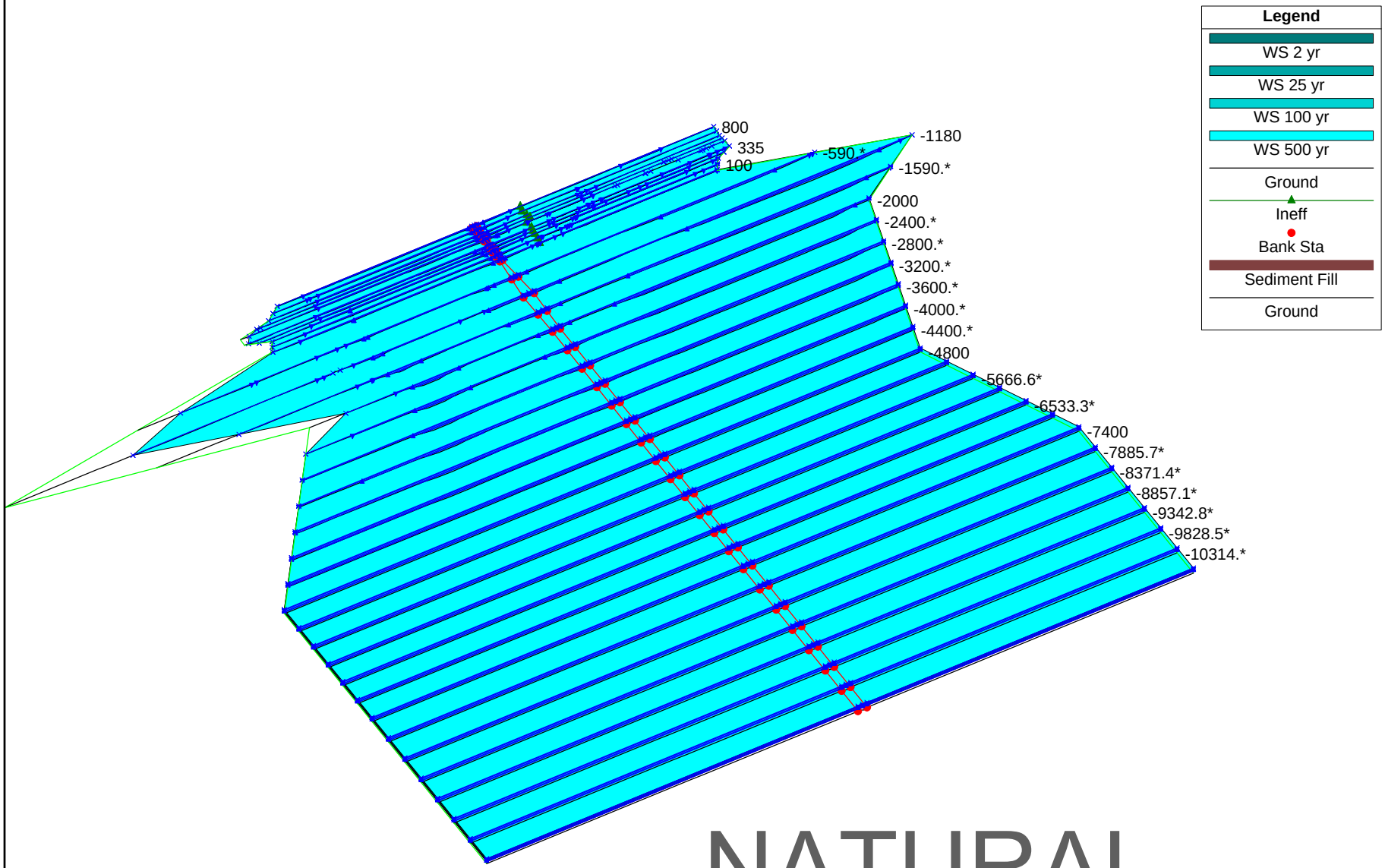


PROFILE OF BRIDGE OPENING
FIGURE 2

HEC-RAS

RESULTS

532650-SR25_over_WALLYLEG_BRANCH Plan: Nat_SteadyRiver 10/21/2015



NATURAL

532650-SR25WALLEYLEG.rep

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

```
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   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X            X  X     X    X        X
X     X  X        X    X       X   X    X    X        X
X     X  XXXXXX    XXXX        X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: 532650-SR25_over_WALLYLEG_BRANCH
Project File : 532650-SR25WALLEYLEG.prj
Run Date and Time: 10/19/2015 6:55:16 AM

Project in English units

Project Description:
532560 - SR 25 (US 17) over WALLEYLEG CREEK, GLYNN COUNTY

PLAN DATA

Plan Title: Nat_SS100yrBase
Plan File : C:\Users\tonguyen\Desktop\working\Bridge Hydraulics\532650\New folder\532650-SR25WALLEYLEG.p04

Geometry Title: Natural02
Geometry File : C:\Users\tonguyen\Desktop\working\Bridge Hydraulics\532650\New folder\532650-SR25WALLEYLEG.g06

Flow Title :
Flow File :

Plan Summary Information:

Number of:	Cross Sections	= 34	Multiple Openings	=	0
	Culverts	= 0	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

GEOMETRY DATA

Geometry Title: Natural02
Geometry File : C:\Users\tonguyen\Desktop\working\Bridge Hydraulics\532650\New folder\532650-SR25WALLEYLEG.g06

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 800

INPUT
Description:
Station Elevation Data num= 200

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69869.36	17.969	70609.09	17.876	70910.39	16.87	70647	17.42	70654	17.23
70654.05	17.23	70654.1	17.237	70683.01	17.37	70704.1	17.25	70724.1	16.93
70804.1	14.567	70804.78	14.517	1148.88	14.517	1281.26	14.517	1429.09	14.51
71434.1	14.717	1509.94	16.587	1514.06	16.68	71514.1	16.68	71594.1	16.72
71595.87	16.737	2124.65	15.657	2125.06	15.657	2125.47	15.657	2896.63	16.81
72899.55	16.32	72899.8	16.327	2912.79	16.27	72969.8	16.177	2973.22	16.13
72974.18	16.147	3051.44	16.257	3113.88	16.247	3123.48	16.27	3128.71	16.18
73128.73	16.187	3183.41	16.457	3186.65	16.457	3186.75	16.457	3189.86	16.51
73190.63	16.5	73193.6	16.487	3706.27	13.17	3707.04	13.097	3708.19	13.11
73708.68	13.127	3714.94	13.257	3722.95	13.467	3723.67	13.48	73723.7	13.48
73747.06	13.47	3749.26	13.417	3756.65	13.58	73758.7	13.637	3766.13	13.51
73766.24	13.5	73766.8	13.57	3775.84	13.177	3776.46	13.147	3785.43	13.01
73785.45	13.027	3785.63	13.04	73833.4	12.297	3842.99	12.06	73843.4	12.05
73852.58	11.837	3859.45	11.677	3862.18	11.637	3862.72	11.627	3871.77	11.48
73881.36	11.347	3882.03	11.337	3890.96	11.197	3900.55	11.057	3910.14	10.9
73919.74	10.787	3920.66	10.777	3929.33	10.697	3929.64	10.697	3935.49	10.46
73938.93	10.457	3958.11	10.17	73959.3	10.147	3967.71	9.927	3976.73	9.69
73977.3	9.77	3978.61	9.747	3986.89	9.947	3996.49	10.187	3997.93	10.21
74000.28	10.277	4006.08	10.44	74011.1	10.587	4015.67	10.657	4017.24	10.67
74025.27	10.797	4034.86	10.947	4036.37	10.967	4036.56	10.977	4044.45	11.27
74051.9	11.567	4054.05	11.667	4055.88	11.757	4063.64	12.137	4075.19	12.36
74082.83	12.447	4092.42	12.557	4102.01	12.667	4111.61	12.787	4113.82	12.8
74114.98	12.81	74121.2	12.88	74130.8	12.98	74160.7	13.23	74180.7	13.39
74190.7	13.47	74191	13.477	4245.53	13.677	4315.26	13.787	4460.07	13.84
74615.62	13.97	4851.61	13.987	4964.24	13.797	5119.79	13.56	75323.6	13.28
75451.89	13.287	5482.88	13.21	75484.3	13.21	75517.9	13.13	75520.7	13.14
75542.06	13.197	5543.33	13.19	75550.7	13.21	75620.7	13.347	5718.15	13.49
75914.07	13.82	75960.7	13.72	75980.7	13.67	5981.39	13.67	6016.61	13.75
76018.97	13.717	6019.09	13.71	76050.7	13.71	76070.6	14.13	76070.7	14.13
76160.7	14.227	6200.96	14.227	6207.79	14.3	76230.7	14.12	76250.7	13.98
76252.23	13.97	76270.7	14.1	76271.8	14.1	76280.7	14.11	76290.7	14.12
76293.32	14.12	76300.7	14.527	6302.86	14.63	76340.7	14.75	76344.8	14.78
76360.7	14.367	6369.25	14.13	76370.7	14.13	76390.7	14.06	76400.7	14.05
76425.11	14.177	6449.08	13.67	76450.7	13.68	76470.7	13.83	76560.7	14.25
76561.55	14.27	76570.7	14.52	76580.7	14.8	76590.7	15.07	7659 8.28	15.28
76600.7	15.29	76610.7	15.32	76640.7	15.12	7667 7.79	15.07	76670.7	15.05
76801.69	14.53	76810.7	14.56	76870.7	14.93	76930.7	15.87	6931.16	15.8
76980.7	16.01	7044.25	16.01	77060.7	16.09	7063.99	16.1	77200.7	16.68
77202.34	16.69	77220.7	16.67	7220.96	16.6	77255.8	16.41	77260.7	16.41
77270.7	16.41	7272.42	16.41	7326.19	16.72	7336.96	17.25	7351.91	17.35

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69869.36	.117	3929.33	.047	4017.24	.11

```
Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73929.3374017.24              100     100     100              .1       .3
Ineffective Flow     num=       1
   Sta L   Sta R    Elev  Permanent
69869.3673184.12   16.54       F
```

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 700

INPUT
Description:
Station Elevation Data num= 473

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69868.52	17.83	69869.25	17.79	69870.88	17.74	69872.19	17.76	9872.42	17.74
69872.88	17.78	69873.06	17.77	69873.34	17.76	69909.56	17.09	70013.87	16.49
70014.23	16.49	70139.12	16.53	70140.24	16.53	70227.79	16.83	70235.44	16.86
70237.79	16.85	70297.77	16.63	70298.95	16.63	70300.41	16.74	70307.77	17.86
70311.33	17.86	70347.77	17.36	70387.75	17.07	70388.52	17.06	70430.85	17.25
70437.73	17.26	70521.54	17.73	70557.29	17.33	70646.35	17.49	70653.35	17.41
70653.4	17.41	70653.45	17.41	70682.37	17.52	70703.47	17.49	70707.67	17.46
70717.67	17.35	70723.47	17.37	70727.67	17.36	70727.92	17.35	70737.66	17.22
70738.15	17.22	70803.49	16.18	70804.17	16.16	70816.39	16.15	70817.64	16.16
70842.7	16.44	70867.63	16.17	70867.87	16.17	70877.33	15.99	70877.62	15.99
70899.84	16.02	70922.23	15.94	70923.36	15.94	70927.62	15.97	71107.58	16.15
71109.02	16.15	71128.51	16.17	71147.56	16.11	71148.36	16.11	71175.95	16.07
71176.3	16.07	71178.4	16.08	71280.77	15.96	71311.77	15.92	71367.52	16.06
71406.52	16.4	71407.5	16.47	71409.72	16.39	71427.5	16.27	71428.64	16.19
71433.65	16.24	71440.34	16.25	71440.89	16.25	71447.97	16.24	71505.5	16.2
71507.48	16.22	71509.5	16.23	71510.7	16.24	71513.62	16.31	71513.67	16.31
71517.47	16.36	71578.92	16.97	71593.69	16.97	71595.45	16.98	71599.41	17
71617.45	16.93	71647.44	16.82	71677.44	16.62	71680.86	16.62	71696.49	16.47
71699.14	16.32	71785.57	16.18	71795.4	16.51	71806.55	16.46	71817.4	15.76
71817.64	15.75	71880.56	15.77	71974.79	15.69	71976.48	15.69	71977.59	15.68
72000.66	15.64	72001.67	15.64	72077.23	15.53	72081.41	15.53	72124.36	15.52
72124.78	15.52	72125.19	15.52	72219.94	15.66	72228.34	15.65	72229.25	15.65
72231.37	15.66	72245.12	15.47	72247.44	15.16	72248.94	15.01	72253.53	15.11
72254.44	15.13	72254.55	15.13	72257.38	15.09	72260.21	15.34	72261.92	15.41
72265.98	15.56	72457.62	16.09	72462.09	16.02	72463.41	16.02	72483.38	15.91
72753.78	16.7	72758.97	16.79	72760.02	16.79	72770.02	16.83	72840	16.97
72845.92	17.09	72896.54	16.74	72899.45	16.47	72899.7	16.47	72901.84	16.45
72908.25	16.33	72909.25	16.34	72909.98	16.34	72912.7	16.33	72914.81	16.33
72919.98	16.41	72969.72	16.43	72973.14	16.41	72974.11	16.42	73000.88	16.47
73025.52	16.36	73032.2	16.06	73033.48		1673046.88	16.59	73051.38	16.56
73051.49	16.55	73070.55	16.15	73070.81	16.15	73087.54	16.45	73109.44	16.67
73113.84	16.7	73123.44	16.74	73128.67	16.77	73128.69	16.77	73147.88	16.95
73148.05	16.95	73183.38	17.04	73186.62	17.02	73186.67	17.02	73186.73	17.02
73188.67	17.05	73189.84	17.06	73190.61	17.06	73193.38	17.05	73193.58	17.05
73521.27	14.94	73534.28	14.84	73706.38	13.47	73707.14	13.46	73708.3	13.47
73708.78	13.47	73715.05	13.51	73723.06	13.57	73723.78	13.58	73723.81	13.58
73738.97	13.48	73747.18	13.39	73749.38	13.37	73756.77	13.39	73758.82	13.39
73763.06	13.32	73766.02	13.27	73766.25	13.27	73766.36	13.26	73766.92	13.26
73775.97	13.04	73776.58	13.02	73782.63	12.94	73785.55	12.91	73785.58	12.91
73785.76	12.92	73792.44	12.84	73794.66	12.82	73804.64	12.74	73809.41	12.7
73812.01	12.69	73833.53	12.58	73836.72	12.55	73843.13	12.43	73843.26	12.43
73843.54	12.42	73848.44	12.24	73850.31	12.12	73852.06	11.99	73852.72	11.97
73859.59	11.75	73860.09	11.74	73862.33	11.69	73862.86	11.67	73870.75	11.5
73871.92	11.48	73878.42	11.37	73880.54	11.34	73881.51	11.33	73882.18	11.32
73891.11	11.18	73900.12	11.05	73900.7	11.04	73901.2	11.03	73909.91	10.87
73910.3	10.86	73919.7	10.7	73919.9	10.69	73920.5	10.68	73920.81	10.68

73923.22	10.6473924.34	10.5773927.75	10.5273929.48	10.49 73929.7	10.49
73933.82	10.3573934.27	10.3573936.23	10.3173946.45	10.0273947.38	9.99
73949.72	9.9373950.55	9.973956.47	9.68 73962.8	9.4573963.23	9.46
73963.3	9.4773964.44	9.573971.62	9.72 73974.8	9.8273975.11	9.83
73977.69	9.973979.94	9.9573981.19	9.9773983.22	10.0273985.36	10.07
73986.36	10.1173988.25	10.273990.98	10.32 73992.6	10.3773996.56	10.48
73997.92	10.5173998.96	10.54 74006.3	10.6774007.34	10.6974016.28	10.87
74016.49	10.8774016.76	10.8774017.86	10.8974018.06	10.974026.16	11.14
74026.28	11.1574034.05	11.3974036.28	11.47 74038.2	11.5474046.28	11.83
74049.62	11.974052.94	11.9874054.39	12.0274058.31	12.11 74063.8	12.22
74066.28	12.27 74069.7	12.3474073.22	12.4174076.28	12.4874082.63	12.6
74086.27	12.6674096.28	12.8374098.58	12.8674099.78	12.8874101.31	12.9
74101.45	12.974106.28	12.9774109.31	13.0174116.27	13.0974147.45	13.42
74167.78	13.6374168.29	13.6474178.71	13.7174179.02	13.71 74187	13.75
74229.23	13.9374230.94	13.9474235.86	13.9574293.21	14.0674308.52	14.1
74349.7	14.1674350.38	14.1774459.45	14.1974621.56	14.2274785.39	13.96
74862.71	13.7774867.52	13.7674984.91	13.4775027.66	13.3675146.22	13.31
75147.03	13.3175292.22	13.2675301.83	13.3475311.45	13.4275321.05	13.5
75329.31	13.5675330.66	13.5575359.45	13.575369.11	13.4975370.97	13.5
75417.16	13.475493.16	13.675525.45	13.6475526.92	13.6575532.48	13.65
75561.95	13.6475564.88	13.6575587.13	13.6975588.45	13.775596.14	13.71
75599.77	13.7275669.09	13.6175695.88	13.5775770.66	13.9175791.98	14.01
75804.12	13.7975812.79	13.9975820.81	13.9775822.43	13.9775839.42	13.67
75840.03	13.7375849.64	13.7775850.17	13.6775874.06	14.0475874.67	14.04
75878.47	13.9575974.84	13.6975980.05	13.6775988.73	13.6875991.69	13.67
76020.25	13.7476022.63	13.7276023.45	13.71 76044.3	13.6276045.01	13.62
76051.47	13.6276070.69	13.5 76070.7	13.576081.72	13.5676084.17	13.55
76084.3	13.5576089.91	13.5776094.25	13.5676117.25	13.6276129.41	13.77
76137.98	13.8976138.09	13.8976214.84	14.1976222.48	14.2476224.45	14.22
76231.89	14.1876246.89	14.0876273.85	14.1176280.97	14.1676285.59	14.15
76298.64	14.1276301.34	14.1376304.84	14.1376320.56	14.17 76325.7	14.08
76327.28	14.0576330.44	14.0276346.54	14.0976347.68	14.0976356.96	14.11
76367.38	14.1376370.11	14.13 76377.8	14.3476380.05	14.476416.67	14.5
76419.49	14.5876421.36	14.6476423.77	14.6476426.28	14.5976426.53	14.59
76429.19	14.4476440.34	14.1176444.19	13.9976449.25	13.9776450.77	13.98
76471.61	14.1376482.03	14.22 76486.9	14.2876493.55	14.3376507.47	14.38
76532	14.1776532.45	14.1776534.14	14.1876554.98	14.3176648.78	14.77
76649.66	14.79 76659.2	14.9476669.62	15.176680.05	15.2776687.95	15.39
76690.47	15.476700.89	15.45 76724.2	15.4476732.16	15.4476736.38	15.46
76760.39	15.6276763.43	15.6476770.86	15.6876772.27	15.6876781.88	15.67
76786.85	15.6776791.48	15.6576865.02	15.2476868.37	15.2576877.98	15.27
76887.59	15.4376899.94	15.4776909.34	15.5476926.03	15.6876928.11	15.7
76940.09	15.6476971.88	15.5276974.09	15.5377034.41	15.9577034.88	15.95
77086.52	16.0677152.75	16.0677169.89	16.177171.62	16.1177173.33	16.1
77195.12	16.0177195.56	16.0277204.27	16.0277204.55	16.0277204.73	16.02
77214.35	16.1277223.96	16.2277315.81	16.9777317.52	16.9977336.66	17.06
77336.92	17.0677373.23	17.1977377.73	17.2277378.34	17.2277387.34	17.23
77388.77	17.2377388.82	17.2377390.55	17.2277435.39	17.1877437.62	17.18
77446.59	17.1977457.81	17.4577473.39	17.48		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69868.52	.11	73929.48	.04	73997.92	.11

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73929.4	873997.92	100	100	100	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
69868.5	273209.36	17.1	F

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 600

INPUT
Description: 200 FT UPSTREAM OF THE PROPOSED CL
Station Elevation Data num= 214

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	17.75	69870.03	17.65	69871.35	17.66	9871.58	17.68	69872.03	17.78
69872.22	17.77	69872.5	17.75	70013.06	16.04	70013.42	16.04	70138.34	16.01
70139.47	16.01	70227.04	16.56	70234.69	16.67	0237.04	16.58	70297.04	16.11
70298.22	16.17	0299.68	16.32	70347.04	17.52	70387.04	16.91	70387.81	16.9
70430.15	17.25	70437.04	17.25	70707.04	17.74	70717.04	17.68	70727.04	17.91
70727.29	17.91	70737.04	17.94	70737.52	17.94	70815.78	17.78	70817.04	17.81
70867.04	17.82	70867.27	17.82	70899.25	17.53	70927.04	17.43	71107.04	17.78
71108.48	17.78	71127.98	17.82	71147.04	17.71	71175.44	17.62	71175.77	17.63
71177.88	17.64	71311.29	17.33	71367.04	17.67	1427.04	17.89	71439.88	17.62
71440.44	17.61	71447.52	17.42	71578.51	17.09	71617.04	17.18	71647.04	17.01
71677.04	16.67	71680.46	16.69	71696.1	16.42	71698.75	16.13	71785.2	16.01
71974.47	15.43	71976.16	15.43	71977.27	15.42	72000.34	15.38	72001.35	15.38
72076.93	15.31	72081.11	15.32	72219.68	15.52	72228.08	15.57	2228.99	15.5
72231.11	15.51	72244.87	14.97	72247.19	14.48	72248.69	14.18	72253.27	14.38
72254.19	14.42	72254.3	14.42	72257.13	14.33	72259.96	14.83	72261.67	14.96
72265.73	15.26	72457.42	16.03	72753.66	16.81	72758.84	16.97	72759.89	16.98
72769.89	17.04	72839.89	17.21	73000.81	16.76	73046.81	16.94	73051.44	16.86
73109.39	17.09	73147.85	17.62	73148.02	17.62	73167.34	17.76	73169.56	17.78
73186.65	17.59	73188.65	17.61	73193.36	17.62	73521.32	15.56	73534.34	15.45
73739.08	13.54	73763.18	13.07	73766.13	13.03	73782.76	12.83	73792.56	12.75
73794.79	12.74	73804.77	12.74	73809.54	12.74	73812.14	12.75	73836.86	12.89
73843.4	12.87	73848.58	12.54	73850.45	12.35	73852.2	12.14	73860.24	11.81
73870.9	11.57	73878.57	11.36	73880.69	11.33	73900.27	11.04	73901.35	11.02
73910.07	10.83	73919.86	10.61	73920.66	10.59	73923.38	10.53	73924.5	10.41
73927.91	10.33	73929.65	10.37	3932.41	10.24	73939.44	9.87	3939.98	9.77
73948.88	9.22	73949.24	9.23	73959.03	9.6	73959.3	9.61	73961.48	9.69
73967.98	9.79	73968.82	9.85	73972.73	10.11	73978.61	10.35	73979.69	10.39
73988.41	10.58	73997.93	10.8	73998.2	10.87	4007.99	11.02	74032.4	11.61
74035.84	11.77	4037.37	11.75	74047.16	12.03	74053.3	12.21	74056.95	12.31
74066.75	12.59	74086.19	12.98	74086.33	12.98	74094.51	13.11	74155.34	13.88
74175.34	14	74219.28	14.22	74221.06	14.22	74285.86	14.37	74344.64	14.52
74345.34	14.54	74669.25	14.54	74797.98	13.96	74878.43	13.56	75050.06	13
75173.42	13.05	75335.34	13.33	75345.34	13.49	75355.34	13.66	75363.94	13.8
75365.34	13.78	75405.34	13.71	75407.28	13.72	75455.34	13.53	75575.34	14.11
75645.34	14.22	75745.34	13.76	75867	14.42	75875.34	14.37	75877.03	14.36
75935.34	14.24	76041.04	13.53	76050.07	13.56	76053.14	13.55	76082.87	13.75
76085.34	13.71	76115.34	13.62	76135.34	13.37	6135.37	13.37	6155.34	13.42
76159.87	13.41	76196.45	13.59	76358.95	14.04	76568.42	14.48	76575.34	14.55
76615.34	14.67	76815.34	15.77	6828.01	15.87	6863.89	16.34	76865.34	16.34
76875.34	16.36	76880.52	16.37	76885.34	16.36	76961.85	15.81	76965.34	15.84
76975.34	15.92	76985.34	16.28	77025.34	16.71	77027.51	16.72	77039.97	16.54
77075.34	16.09	77280.89	16.12	77335.34	16.14	77495.34	18.03	77505.34	18.05
77506.88	18.05	77555.34	17.77	7557.66	17.68	77594.88	17.61		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69867.68	.11	73929.65	.04	73978.61	.11

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73929.65	73978.61	67.5	67.5	67.5	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
69867.68	73172.41	17.81	F

Sediment Elevation = 9.22

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 532.5*

INPUT
Description:
Station Elevation Data num= 475

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	17.85	69870	17.8	69870.03	17.79	69871.36	17.76	69871.59	17.8
69872.04	17.85	69872.23	17.85	69872.51	17.83	69880.05	17.75	69920.25	17.45
70013.34	16.96	70013.7	16.96	70060.95	16.99	70101.15	17.16	70101.94	17.16
70102.38	17.16	70102.78	17.16	70109.49	17.16	70111.19	17.16	70121.24	17.16
70121.94	17.16	70131.3	17.17	70138.86	17.18	70139.98	17.18	70141.34	17.18
70141.5	17.18	70143.09	17.19	70148.5	17.21	70149.56	17.21	70221.61	17.26
70223.16	17.26	70227.73	17.29	70235.39	17.35	70237.75	17.35	70264.65	17.38
70267.46	17.38	70280.9	17.16	70281.49	17.16	70281.98	17.16	70297.86	17.11
70299.05	17.11	70300.51	17.22	70315.5	17.41	70347.95	17.79	70388.03	17.44
70388.81	17.43	70431.23	17.55	70438.12	17.55	70512.34	17.53	70516.94	17.53
70521.03	17.55	70564.73	17.8	70565.14	17.8	70592.44	17.78	70620.84	17.83
70708.64	18.04	70718.66	18.02	70728.69	18.15	70728.94	18.15	70730.63	18.16
70738.7	18.22	70739.19	18.23	70742.86	18.25	70750.59	18.24	70770.55	18.23
70775.88	18.23	70796.15	18.1	70800.5	18.12	70817.59	18.12	70818.86	18.14
70868.95	18.21	70869.19	18.21	70890.33	18.13	70901.23	18.17	70905.44	18.1
70929.06	18.03	70980.94	18.02	71019.91	18.07	71020.08	18.07	71060.03	18.06
71065.97	18.05	71099.92	18.12	71102.63	18.12	71109.41	18.17	71110.85	18.09
71130.39	18.03	71140.17	17.96	71149.48	17.91	71157.06	17.88	71162.45	17.76
71164.27	17.76	71169.8	17.77	71177.94	17.78	71178.28	17.79	71180.39	17.8
71219.7	17.88	71221.84	17.88	71222	17.88	71229.68	17.86	71242.34	17.81
71314.05	17.59	71349.45	17.61	71366.64	17.65	71367.64	17.64	71369.41	17.64
71369.91	17.65	71409.34	17.82	71430.02	17.84	71442.89	17.77	71443.45	17.69
71449.26	17.61	71450.55	17.59	71479.2	17.48	71482.66	17.47	71499.16	17.51
71544.41	17.67	71579.02	17.46	71581.78	17.46	71620.39	17.48	71638.54	17.42
71638.89	17.42	71648.88	17.34	71650.45	17.33	71655.55	17.28	71680.5	17.31
71683.94	17.34	71698.78	17.31	71699.6	17.31	71702.26	17.17	71721.64	17.18
71728.73	17.17	71738.7	17.15	71768.65	17.09	71788.88	17.04	71978.5	16.35
71980.19	16.35	71981.31	16.34	72004.42	16.27	72005.44	16.27	72054.97	16.14
72055.74	16.14	72063.7	16.07	72081.16	15.85	72085.34	15.87	72117.56	15.42
72127.3	15.29	72169.73	14.82	72175.31	14.76	72180.16	14.82	72190.6	14.95
72190.91	14.95	72224.19	15.33	72228.28	15.37	72232.59	15.36	72233.52	15.36
72235.63	15.37	72249.42	15.11	72251.74	14.86	72253.25	14.71	72257.84	14.81
72258.76	14.83	72258.87	14.83	72261.7	14.79	72264.55	15.04	72266.25	15.11
72270.31	15.26	72270.44	15.26	72284.49	15.42	72286.33	15.44	72315.79	15.96
72316.69		72318.14	16.01	72321.81	16.01	72326.08	16.02	72326.23	16.02
72327.12	16.02	72332.06	15.81	72389.7	15.71	72390.75	15.71	72396.58	15.75
72397.64	15.75	72399.27	15.75	72421.5	16.06	72421.56	16.06	72462.38	15.96
72477.16	15.91	72584.02	16.01	72593.06	16.04	72658.33	16.35	72663.04	16.35
72663.87	16.35	72668.38	16.36	72759.19	16.57	72764.38	16.58	72765.43	16.58
72775.45	16.61	72836.94	16.77	72845.58	16.58	72874.47	16.17	72874.72	16.1
72937.84	16.37	72940.09	16.42	72953.31	16.57	72956.88	16.49	72987.29	16.81
72987.86	16.82	72989.11	16.82	72989.72	16.82	73006.81	16.57	73022.8	16.38
73023.17	16.47	73032.71	16.89	73033.8	16.94	73036.02	17.05	73041.44	17.02
73042.62	17.02	73046.67	17.02	73047.96	17.03	73052.53	16.91	73052.9	16.9
73057.53	16.68	73063.61	16.47	73085.89	16.87	73092.19	16.89	73115.59	16.96
73154.13	17.25	73154.3	17.25	73160.89	17.28	73166.77	17.27	73173.66	17.18
73175.88	17.18	73193	16.98	73195.01	16.98	73199.73	16.96	73229.25	16.69
73229.58	16.52	73230.97	16.05	73231.39	15.91	73232	15.97	73235.06	16.04
73235.63	16.32	73261.77	16.68	73261.91	16.68	73261.94	16.68	73261.97	16.67
73262.25	16.68	73262.34	16.68	73412.18	15.99	73468.87	15.89	73471.64	15.87
73520.58	15.63	73525.78	15.69	73528.31	15.69	73541.36	15.69	73548.17	15.68
73552.8	15.65	73558.09	15.43	73607.64	13.64	73634.84	13.44	73713.28	13.08
73716.69	13.05	73746.49	12.81	73756.34	12.68	73770.64	12.56	73773.59	12.54
73779.91	12.51	73790.25	12.48	73793.09	12.47	73800.08	12.47	73802.31	12.47

```
73812.31    12.573817.09   12.5173819.69   12.5273830.95   12.5973844.46   12.64
73851.02    12.6 73856.2   12.4773858.08   12.3873859.83   12.2773867.89   12.11
73878.56   11.9773881.98   11.9473886.25   11.9173888.38   11.89   73908   11.78
73909.08   11.7773917.41   11.6973917.81   11.6873927.62   11.2473928.42   11.21
73931.15   11.0973932.27   10.9973935.68   10.8473937.42   10.7673940.88    10.4
73941.59   10.3273946.33    9.7673949.67    9.5273950.34    9.4773950.91    9.43
73952.25    9.1273954.33    8.3973955.58    8.4973956.58    9.7173958.08    9.51
73960.08    8.3573961.49    8.0173961.77    8.0673964.02     8.573969.38     9.1
73969.58    9.1373971.27    9.3273976.32    9.8173976.98     9.973979.03   10.17
73980.01   10.2973984.58   10.8173985.74   10.9973986.21   11.0573995.14   11.34
 74003.3   11.6174005.41   11.63 74005.7   11.6274016.25   11.7174031.25   11.84
74042.56   11.9574046.28   11.9974047.92   12.0174058.47   12.1474065.09   12.22
74069.03   12.2674078.16   12.3774079.59   12.3974100.55   12.62 74100.7   12.62
74109.52    12.774143.73   12.9674153.05   13.1874162.38   13.4974175.11   13.58
74196.66   13.68 74202.6    13.774213.75   13.9474237.59   14.2974244.03   14.22
74245.95   14.19 74246.3   14.1974263.55   14.0174264.95   14.0174266.66      14
 74269.7   13.9974274.28   14.0274312.72   14.26 74315.8   14.2574376.86   14.12
74377.62   14.1174379.17   14.1374379.93   14.1474382.22   14.1674436.06   14.67
74437.19   14.6774470.11   14.67 74490.2   14.6974498.08   14.6974549.13   14.59
74721.17   13.9874729.11   13.9674861.75   13.3374867.89    13.374880.41   13.23
74899.05   13.2174908.38   13.1974954.62   13.0975038.93   12.9675057.58   12.95
75139.64    12.9 75141.5    12.975144.77    12.975169.48   13.0875234.75   13.55
75272.05   13.8275272.62   13.8275273.23   13.8375393.28   13.5475395.51   13.53
75401.72   13.54 75402.6   13.5475421.25   13.5775447.19    13.675457.97   13.69
75468.75   13.7775478.02   13.8575479.53   13.8475522.65   13.8275524.73   13.82
75576.55   13.7475682.35   14.0175692.95   14.0475705.91   14.0875781.38    14.2
75840.88   14.1375889.18   13.9575971.42   14.0275972.35   14.0175980.75   14.04
76020.33   14.1576029.33   14.1376031.14   14.1276094.01   14.0876120.62      14
76207.95   13.8576217.69   13.88   76221   13.8876253.05   14.0376255.72   14.01
 76260.5   14.0176288.05   13.9376309.62   13.7476309.64   13.7476331.17   13.76
76336.05   13.7576375.49   13.78 76409.7   13.7676550.67   14.4476624.17   14.77
 76670.8   14.9576680.12   14.9976776.48    15.276783.95   15.2576827.08   15.36
77042.68   16.1377056.33    16.277095.02   16.5277096.58   16.5277107.36   16.54
77112.95   16.5577118.14   16.5577200.62   16.3877204.39    16.477215.16   16.45
77225.95   16.6577269.06   16.91 77271.4   16.9277284.83   16.8577322.97   16.67
77407.48   16.7877415.69   16.78 77416.8   16.7777426.12   16.6377444.78   16.36
 77454.1   16.3577461.33   16.3577463.42   16.3577472.75   16.3877544.55    16.5
77593.98   16.5877603.26   16.59 77603.3    16.677612.62   16.6677616.12   16.69
77616.25   16.3877621.95   16.4777631.28   16.61 77640.6   16.7577687.23   17.44
 77715.2   17.7177775.74    18.277786.52   18.2477788.19   18.2577836.42   18.22
77840.42   18.2177842.92    18.277864.41   18.2277873.73   18.2277883.05   18.23

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69867.68     .1173937.42     .0473984.58     .11

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73937.4273984.58             67.5    67.5    67.5             .1       .3
Ineffective Flow     num=       1
   Sta L   Sta R    Elev  Permanent
69867.68 73160.1   17.36       F
Sediment Elevation = 9.059999

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: 465

INPUT
Description: 105 FT DOWNSTREAM OF BRIDGE
Station Elevation Data    num=     263
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
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69867.68	17.96	69870	17.9469880.07	17.8569920.35	17.7270061.32
70101.59	18.3	70101.6	18.370102.38	18.370102.83	18.370103.23
70109.95	18.3170111.66		18.3170121.73	18.3170122.42	18.31 70131.8
70141.87	18.3570142.02		18.3570143.62	18.3670149.04	18.35 70150.1
70222.28	1870223.84		17.9870265.41	18.3970268.23	18.4270281.69
70282.28	18.0870282.78		18.0970316.35	18.1370513.57	17.6770518.18
70522.28	17.770566.07		18.1270566.47	18.1270593.83	18.0470622.28
70732.28	18.470744.53		18.5670752.28	18.5770772.28	18.5870777.61
70797.92	18.3770802.28		18.4370892.28	18.6470907.42	18.6870983.06
71022.12	18.5471022.28		18.5471062.31	18.4371068.26	18.4171102.28
71104.99	18.47	71142.6	18.1571159.53	18.0771164.93	17.8671166.74
71172.28	17.8971222.28		18.2171224.42	18.2271224.59	18.2271232.28
71244.97	18.1371352.28		17.7271369.51	17.7171370.51	17.6971372.28
71412.28	17.8471452.28		17.7671482.28	17.6271485.75	17.671502.28
71547.61	18.0171582.28		17.8371641.92	17.7671642.28	17.7671652.28
71658.96	17.6171702.28		18.1971725.18	18.2671732.28	18.2471742.28
71772.28	18.1572059.15		16.9572059.92	16.9472067.89	16.8272121.87
72131.62	15.272174.13		14.1972179.72	14.0872184.58	14.1972195.04
72195.35	14.4372232.79		15.2272275.02	15.2672289.11	15.5372290.95
72320.47	16.4772321.37		16.5672322.82	16.5672326.51	16.5672330.78
72330.93	16.5572331.83		16.5572336.77	16.1272394.52	15.6872395.57
72401.41	15.7372402.48		15.73	72404.1	15.7372426.38
72482.15	15.7572589.21		15.6872598.27	15.7172663.66	16.1572668.38
72669.21	16.1572673.73		16.1572842.62	16.2172880.21	15.0872880.46
72943.71	15.7972945.96		15.8972959.21	16.0972962.77	16.0972993.25
72993.82	16.8272995.08		16.8372995.68	16.8373028.83	15.94
73038.76	16.9273039.85		17.0173042.08	17.2273047.51	17.1573048.69
73052.75	17.1373054.04		17.1373058.62	16.8873069.72	16.0673092.04
73098.35	16.7973167.18		16.8973173.08	16.6973235.67	15.9473236.01
73237.39	14.6873237.82		14.473238.43	14.3973241.49	14.6873242.07
73268.26	16.13	73268.4	16.1373268.43	16.1373268.45	16.1273268.74
73268.83	16.1373418.95		15.773475.75	15.8573478.53	15.8273527.56
73532.77	15.81	73555.2	15.9773559.84	15.9573565.14	15.5673614.79
73642.05	12.373720.63		12.3173724.04	12.2873763.77	12.0273787.39
73800.59	12.1473838.53		12.3673889.66	12.4473925.14	12.55
73950.2	10.43	73955.9	9.55	73961.4	9.12
73974.1	6.8	73975.9	7.6673986.59	10.3173990.55	11.27
74010.62	12.46	74040.6	12.3374090.91	12.1874161.22	12.474171.22
74181.22	13.2574224.35		13.3774236.31	13.874261.88	14.3874271.22
74289.72	13.7674291.22		13.7574293.04	13.7374296.31	13.7174301.22
74342.44	14.1674411.22		13.7274412.05	13.7174416.97	13.7774474.72
74475.92	14.874511.22		14.874532.77	14.8574541.22	14.8574595.97
74780.46	13.4274931.22		12.6774951.22	12.5574971.22	12.674981.22
75121.22	12.6275141.22		12.6675231.22	12.875234.72	12.875261.22
75331.22	14.0675371.22		14.5975372.48	14.6175501.22	13.8375503.61
75510.27	13.8275511.22		13.8275531.22	13.8675811.22	14.0275822.58
75981.22	14.376121.22		13.8676122.21	13.8576131.22	13.8676281.22
76431.22	14.3376591.22		13.8576821.22	15.3676871.22	15.6376881.22
77661.22	17.4577670.02		17.4677671.22	17.4377681.22	17.1577701.22
77711.22	16.677718.97		16.5977721.22	16.677731.22	16.6477861.22
77871.22	17.0577881.22		17.0877884.96	17.0977885.11	16.4877891.22
77901.22	16.7777911.22		16.9677961.22	17.8277991.22	18.0578121.22
78151.22	18.7978161.22		18.8278171.22	18.85	

Manning's n Values num= 5

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
69867.68	.11	73642.05	.08	73945.2	.04	73990.55	.08	74296.31	.11

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73945.2	73990.55	130	130	130	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
69867.6	73268.64	16.14	F

Sediment Elevation = 8.9

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 335

INPUT
Description:
Station Elevation Data num= 321

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	15.8	69869.97	15.8	69879.9	15.79	69887.28	15.78	69889.83	15.77
69899.76	15.76	69906.87	15.75	69909.7	15.75	69919.58	15.74	69919.63	15.74
69921.85	15.73	69924.29	15.71	69926.47	15.78	69928.22	15.85	69929.56	15.85
69934.28	15.87	69938.14	15.65	69939.45	15.51	69965.66	14.85	69968.93	14.62
69969.28	14.62	69972.74	14.66	69978.62	15.03	69979.22	15.02	70142.02	15.68
70148	15.81	70148.05	15.81	70155.04	15.84	70157.99	15.79	70161.61	15.73
70197.71	15.32	70200.8	15.31	70207.69	15.28	70208.22	15.27	70237.69	15.72
70281.11	15.73	70290.53	15.67	70300.56	15.69	70367.69	15.97	70731.82	14.82
70757.69	15.33	70807.69	15.07	70852.36	14.77	70857.69	14.83	70907.69	15.13
71089.86	15.58	71287.69	16.33	71289.53	16.34	71295.59	16.31	71297.69	16.33
71302.76	16.35	71307.69	16.33	71465.31	15.57	71467.69	15.59	71617.69	16.36
71625.89	16.38	71627.69	16.37	71787.69	16.23	71915.93	16.27	71916.98	16.27
71919.91	16.27	71922.16	16.25	71923.6	16.26	71925.03	16.27	71925.9	16.27
71926.56	16.29	71926.61	16.29	71927.55	16.29	72059.25	15.34	72182.94	16.17
72184.43	16.17	72185.35	16.17	72188.81	16.17	72192.11	16.17	72192.54	16.17
72207.45	14.65	72208.19	14.64	72214.1	14.62	72215.12	14.62	72215.64	14.62
72223.69	14.68	72253.48	14.89	72254.53	14.97	72276.49	15.44	72278	15.48
72280.77	15.48	72281.2	15.48	72284.16	15.48	72287.05	15.48	72314.85	15.04
72360.88	14.93	72367.46	14.97	72368.55	14.97	72376.22	14.92	72377.04	14.93
72377.52	14.93	72603.37	16.55	72635.79	16.63	72738.43	15.51	72820.76	16.52
72838.92	17.17	72843.66	16.41	72878.09	15.34	72878.11	15.34	72905.46	15.08
72949.97	14.93	72950.76	14.96	72953.27	15.03	72960.76	15.32	72964.51	15.52
73002.78	15.72	73162.06	16.19	73163.29	16.18	73170.61	16.23	73172.13	16.24
73173.34	16.24	73263.41	17.53	73313.1	16.36	73423.86	14.37	73442.12	13.96
73495.86	13.34	73499.81	13.31	73504.41	13.31	73504.55	13.31	73505.19	13.31
73514.48	13.31	73524.19	13.37	73524.55	13.37	73563.48	13.12	73584.97	12.98
73645.39	12.98	73646.93		73647.93	12.97	73661.7	13.24	73665.52	13.31
73675.59	13.57	73675.61	13.57	73681.34	13.54	73685.66	13.56	73743.27	13.89
73746.08	13.76	73747.07	13.71	73756.15	13.47	73806.49	12.82	73821.85	12.38
73826.48	12.25	73826.63	12.26	73829.21	12.36	73856.84	12.76	73858.13	12.77
73866.91	12.78	73872.75	12.76	73876.98	12.74	73877.78	12.74	73924.3	12.09
73927.33		73933.17	11.83	73936.71	11.61	73937.4	11.56	73943	11.21
73947.47	11.11	73948.15	11.09	73950.2	10.43	73955.9	9.55	73961.4	9.12
73963	8.57	73965.5	7.21	73974.1	6.8	73975.9	7.66	73979.7	8.86
73984.4	10.64	73985.9	10.52	73994.1	11.01	73995.9	11.16	74007.88	11.31
74009.33	11.33	74009.72	11.37	74013.41	11.35	74038.09	11.88	74040.94	11.94
74044.54	11.93	74048.16	11.83	74058.23	11.56	74068.3	11.29	74071.8	11.19
74072.97	11.27	74074.21	11.23	74078.37	11.32	74088.44	11.54	74090.09	11.57
74091.75	11.56	74093.85	11.57	74094.56	11.58	74113.5	11.57	74118.64	11.56
74128.71	11.55	74177.89	11.27	74178.09	11.27	74178.32	11.27	74178.74	11.27
74184.47	11.27	74188.74	11.37	74216.54	11.52	74217.31	11.53	74218.74	11.56
74224.25	11.68	74226.85	12.07	74228.74	12.21	74229.31	12.25	74230.94	12.48
74233.47	12.77	74234.49	12.91	74237.9	13.89	74261.25	13.06	74303.78	12.82
74318.74	12.93	74392.15	13.91	74392.27	13.91	74392.33	13.92	74448.74	13.84
74518.74	13.57	74521.32	13.47	74528.74	13.57	74534.94	13.52	74588.74	14.09
74731.05	13.65	74734.71	13.66	74738.74	13.63	74788.74	13.67	74790.05	13.46
74798.74	13.43	74799.36	13.43	74802.91	13.47	74936.15	13.11	75027.7	13.02
75158.74	13.61	75168.74	13.67	75168.85	13.67	75178.74	13.63	75218.74	14.57
75222.44	14.76	75225.05	14.77	75228.74	14.75	75231.71	14.73	75258.74	14.58
75264.22	14.58	75265.17	14.58	75317.79	14.66	75318.74	14.67	75321.51	14.68
75415.24	14.82	75418.74	14.81	75458.05	14.62	75504.05	13.91	75545.43	14.01

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75548.74      1475578.74   13.7675579.66   13.7675675.45   13.6875699.54   13.69
75702.85   13.9775788.74   14.7275789.02   14.7475896.34   13.7276058.74   14.88
76068.74   14.8676070.36   14.8576173.27    13.976178.74   13.5676178.81   13.55
76179.67   13.5776352.89   13.4576358.13   13.4176358.74   13.4176359.89   13.42
76459.95    13.776621.23   13.4376628.74   13.48 76630.8    13.576661.57    13.8
76668.74   13.8776918.74   15.2576948.74   15.2777058.74   16.3177098.74   16.89
77099.37    16.977102.51   16.8777118.74   16.6677206.24   16.5877208.74   16.56
77238.74   16.3877268.74   16.2677278.74   16.2777294.44   16.2977358.74   16.73
77368.74   16.8877369.24   16.88 77372.3   16.8877435.72   16.6977448.74   16.76
77638.39   18.0777638.74   18.0877639.06   18.0877648.74   18.09 77665.1    18.1
77748.74    15.977749.11   15.8677808.74    16.477809.32    16.477884.82   15.87
77888.74   15.8777898.74   15.8677901.43   15.8677918.74   15.9678148.74   18.65
78148.99   18.6678158.74   18.7678159.33   18.7778167.33   18.7578168.74   18.75
78178.74   18.75

Manning's n Values        num=       5
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
69867.68     .1173647.93     .0873948.15     .04 73995.9     .0874216.54      .1

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73948.15 73995.9             67.5    67.5    67.5              .1       .3
Ineffective Flow     num=       1
   Sta L   Sta R    Elev  Permanent
69867.6873261.09   17.58       F
Sediment Elevation = 8.8

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: 267.5*

INPUT
Description:
Station Elevation Data    num=     350
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
69999.98   15.7570000.88   15.7770001.58    15.870002.09   15.78 70002.2   15.78
70003.53   15.7570007.54   15.6270064.27   15.4970138.72   15.6770140.12   15.73
70141.08   15.7570145.87   15.7570156.24   15.7670157.14   15.7570216.86   15.71
70218.48   15.6970222.19   15.6670227.88   15.7170228.85   15.7270264.81   16.18
70270.34   16.3170270.58   16.3170270.62   16.3170271.59   16.3370277.38    16.3
70279.23   16.2770280.22   16.2770280.72   16.2770282.51   16.2770283.72   16.25
 70328.2   15.92 70328.7   15.9170357.16   16.0770399.07   15.9770408.16   15.92
70417.84    15.970482.64   15.8870737.12   14.8470768.24   14.7870768.34   14.78
70834.14   14.6870859.11   14.9470907.38   14.82 70950.5   14.6470955.64   14.71
71003.91   14.8771179.76   15.1271188.11   15.1471370.72   15.52 71372.5   15.52
71378.35   15.5171380.38   15.5271385.27   15.5371390.03   15.5271542.19   15.15
71544.48   15.1671573.86   15.2471689.27   15.5571697.19   15.5771698.92   15.56
71853.38    15.571929.92   15.5171977.16   15.5271978.17   15.52   71981   15.52
71983.17   15.5171984.57   15.5271985.95   15.5271986.78   15.5271987.42   15.53
71987.47   15.5371988.38   15.5372115.52   15.0672234.91   15.4872236.34   15.48
72237.23   15.4872240.58   15.4872243.77   15.4872244.17   15.4872258.57   14.72
72259.28   14.7272264.98   14.7172265.97   14.71 72266.2   14.7172266.48   14.71
72274.24   14.74   72303   14.8472304.02   14.8572325.22   15.1172326.67   15.13
72329.34   15.1372329.77   15.1372332.61   15.1372335.41   15.1372362.24   14.91
72406.68   14.8572413.03   14.8472414.08   14.8472421.48   14.8472422.27   14.85
72422.74   14.8572527.69   15.5672528.66    15.672529.95   15.6672566.12   15.62
72569.34   15.6972570.16   15.71 72570.2   15.7172570.41   15.7172571.44    15.7
72640.75   16.0372672.05    16.172701.59   15.97   72705   15.9672715.38   15.95
72717.08   15.9572717.94   15.9472724.05    15.972725.75   15.8972729.45   15.87
72733.27   15.8572771.12   15.5772860.59   16.1772868.12   16.2772932.36   15.29
72968.21   15.2872968.78   15.2872975.33   15.2972976.09    15.373122.28   16.33
73122.31   16.3373123.65   16.3373131.22   16.3473134.24   16.34 73144.3   16.35
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73144.84   16.3573145.25   16.3573151.59    16.273155.44   16.11 73155.8    16.1
73158.33   16.0673164.16   16.0773166.03   16.0873171.97   16.1373176.63   16.16
73240.22   17.1173242.14   17.18 73250.8   17.3373252.94   17.3673253.47   17.37
73260.69   17.44 73260.8   17.4573260.94   17.4473261.41   17.4373261.72   17.42
73265.11    17.473272.02   17.3273273.84   17.3173277.89   17.2673282.59   17.12
73432.77   15.0673450.39   14.7973502.27   14.3273506.09   14.2973510.52   14.28
73510.66   14.2873511.28   14.2773520.24   14.2473529.62   14.2173529.97   14.21
73567.55      1473588.29   13.8673646.62   13.67 73648.1   13.6873649.06   13.66
73662.36   13.7573666.05   13.7873675.77   13.8473675.78   13.8473681.32   13.84
73685.48   13.84 73741.1   13.8373743.81   13.7573744.77   13.7373753.53   13.58
73812.47   12.7573816.95   12.6573821.42   12.5573821.57   12.5573824.06   12.58
73833.67   12.5773850.73   12.5673851.98   12.5673928.49    11.573929.05   11.48
73933.38   11.33 73933.9   11.3173938.21   11.2573938.87   11.2473939.64   11.11
73940.85   10.9173945.57   10.3373947.21   10.1273948.32   10.0173953.35    9.59
73954.56    9.3473955.14    9.2373957.93    8.4273958.29    8.4373959.61    8.46
73960.95    9.6473962.95    9.3973963.36     9.273965.63    8.1573967.53    7.76
73969.48    8.0273971.89    8.4473973.98    8.73   73977    9.1573980.41    9.63
73981.09    9.7273983.73   10.1373992.45   11.0273993.88   10.9674001.67    11.2
74046.17   11.6274049.59   11.6174053.03   11.5574075.49   11.2374076.61   11.23
 74176.3   12.0974176.48   12.09 74176.7   12.0974177.11    12.174182.55   12.13
74186.61   12.1674222.81   12.6474224.61    12.774225.16   12.7374230.08   13.06
74233.31   13.5574233.53   13.5474236.46   13.5174250.09   13.34 74255.5   13.27
74256.38   13.2874295.91   13.2274313.42   13.3574314.36   13.3674379.88    13.9
74379.99    13.974380.05   13.9174433.65   13.9174500.11    13.874500.16    13.8
74502.61   13.7874509.66    13.874515.55   13.8174566.67   14.1374705.36      14
74706.41      14 74766.2   13.9174766.79   13.9174770.16    13.974837.22   13.85
74983.75   13.7675031.06   13.8875057.65   13.6275058.03   13.61 75060.3    13.5
75061.98   13.4775062.73    13.575064.62   13.5775127.27   13.9475139.11   14.12
75165.27   14.4475168.78   14.5475171.26   14.5475174.77   14.5375177.59   14.52
75203.27   14.4575208.48   14.4575209.38   14.4575259.38   14.4975260.28    14.5
75262.91    14.575351.97   14.58 75355.3   14.5775392.64   14.4875475.67   14.18
75478.82   14.1875507.33   14.0675508.19   14.0675599.22   13.9975622.09   13.99
75809.09   13.9476077.42   13.7776077.48   13.76 76078.3   13.7776155.48   13.73
76242.88   13.6576247.86   13.6376248.45   13.6376249.53   13.6476306.44   13.69
76344.61   13.7376432.21    13.676536.18   13.5776542.99   13.5876560.03   13.58
76564.72   12.2976565.09   12.1776570.52   12.3376570.67   12.33 76571.9   12.63
76576.42   13.7176913.55   15.3876951.56   15.7276952.16   15.7276955.14   15.71
77198.59   15.97 77208.1   16.0677208.58   16.0677211.48   16.0677271.73   16.05
77284.11    16.177464.31      1777464.64   17.0177464.95   17.0177474.14   17.03
77489.69   17.0577569.16   16.0677569.51   16.04 77624.7   16.3877626.17   16.39
77626.72   16.3977698.45   16.2277702.18   16.2377711.69   16.2377714.23   16.24
77730.69   16.3177949.22   17.9577949.46   17.9677956.44      1877958.72    18.1
77959.28   18.1277959.55   18.1377966.88   18.2877968.23   18.3177977.73   18.51

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69999.98     .1173938.87     .0474001.67     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73938.8774001.67             67.5    67.5    67.5              .1       .3
Ineffective Flow     num=       1
   Sta L   Sta R    Elev  Permanent
69999.9873270.94   17.53       F
Sediment Elevation = 8.775

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: 200

INPUT
Description: 200 FT DOWNSTREAM OF THE PROPOSED CL
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Station Elevation Data num= 262

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
70132.29	15.77	0133.16	15.75	70133.83	15.79	70134.33	15.77	70135.7	15.7
70139.57	15.45	70142.02	15.07	70145.1	14.29	70146.64	13.87	70146.7	14.01
70147.37	14.26	70147.95	14.41	70164.55	14.84	70239.53	15.53	70242.72	15.64
70242.93	15.65	70266.03	16.18	70267.39	16.37	0268.31	16.34	70272.93	16.32
70282.93	16.29	70283.8	16.28	70341.37	15.94	70342.93	15.97	0346.51	15.82
70351.99	15.97	0352.93	15.91	70392.93	16.81	70394.14	16.85	70401.49	16.74
70402.93	16.76	70404.66	16.78	70842.51	14.55	70842.93	14.54	70846.1	14.43
70848.04	14.37	0848.49	14.31	70872.01	14.51	70872.93	14.52	70873.02	14.52
70873.03	14.52	71277.71	14.67	71649.59	14.74	71992.85	14.77	72317.05	14.8
72514.67	14.76	72517.98	14.84	72521.98	14.88	72538.18	15.01	72540.07	15.02
72544.49	15.05	72548.85	15.27	2550.07	15.28	72556.31	15.68	72560.07	15.35
72562.98	15.17	2564.62	15.08	72569.13	15.41	72570.07	15.49	72571.31	15.59
72600.07	15.03	72606.18	15.25	72609.3	15.36	72610.07	15.39	72610.12	15.39
72610.32	15.47	2611.31	15.37	72736.79	15.64	72740.07	15.67	72750.07	15.76
72751.71	15.78	72752.55	15.77	72758.44	15.75	72760.07	15.76	72763.64	15.76
72767.32	15.76	72770.07	15.77	2770.18	15.69	72853.92	15.55	72860.07	15.62
72860.74	15.62	72863.47	15.61	72867.98	15.61	72870.07	15.67	2880.07	15.54
72890.07	15.48	72900.07	15.43	72904.38	15.47	2908.18	15.47	2910.07	15.4
72920.07	15.42	72940.39	15.46	72993.82	15.67	2994.37	15.67	3142.35	16.64
73142.38	16.64	73143.67	16.64	73150.97	16.63	73153.88	16.63	73163.58	16.61
73164.1	16.61	73164.49	16.61	73170.61	16.29	73174.31	16.17	3174.67	16.08
73177.11		1673182.72		1673184.53	16.02	73190.25	16.17	3194.75	16.15
73198.7	16.27	3204.96	16.16	73209.9	16.13	73212.25	16.12	73215.18	16.11
73225.4	16.08	73227.74	16.07	73229.54	16.06	73231.73	16.05	73235.61	16.05
73235.85	16.05	73242.91	16.34	73245.83	16.54	73249.19	16.77	73256.05	17.25
73257.91	17.37	73266.26	17.53	73268.31	17.57	73268.83	17.57	73275.89	17.62
73275.9	17.61	73276.03	17.61	73276.48	17.57	73276.77	17.54	73280.05	17.45
73286.7	17.27	3288.47	17.14	73296.91	16.82	73307.13	16.45	73308.12	16.41
73314.09	16.19	73317.34	16.25	73322.18	16.33	73327.56	16.42	73327.76	16.43
73329.65	16.46	73335	16.45	73763.62	13.6	73763.8	13.67	3766.87	13.6
73772.46	13.59	73777.09	13.51	73779.56	13.46	73787.3	13.33	73807.73	12.99
73828.17	12.64	73851.24	12.25	73858.13	12.05	73858.82	12.03	73864.55	11.86
73868.7	11.89	73869.03	11.88	73877.78	11.66	73878.15	11.65	73879.25	11.64
73889.47	11.59	73897.42	11.55	73899.68	11.54	73909.9	11.49	73917.06	11.45
73920.12	11.43	73924.31	11.40	95373930.33	11.38	73931.5	11.38	73936.71	10.88
73939.75	10.55	73946.65	9.94	73950.76	9.59	73956.35	9.11	73960.97	8.72
73960.98	8.72	73964.07	8.86	73971.2	9.53	73975.99	9.98	73981.41	10.49
73986.68	10.98	74000.5	11.47	4034.95	11.36	74040.94	11.33	59574064.81	11.24
74073.36	11.25	74074.21	11.25	74082.6	11.27	74083.58	11.28	74093.09	11.33
74093.79	11.33	74093.85	11.33	74104.01	11.41	74107.09	11.43	74113.5	11.7
74114.23	11.73	74124.44	12.15	74125.06	12.17	74129.47	12.36	74130.46	12.36
74133.14	12.47	4134.63	12.42	74144.63	12.55	74154.63	12.68	74197.38	13.18
74204.63	13.18	74205.47	13.18	74212.32	13.22	74213.91	13.27	4214.63	13.2
74224.63	13.27	4228.94	13.27	4231.71	13.25	74234.63	13.29	74244.63	13.42
74250.58	13.57	4296.38	13.64	74304.63	13.72	74305.52	13.73	74309.79	13.79
74481.52	14.09	74677	14.34	74800.95	14.46	74984.63	14.52	75009.82	13.86
75010.18	13.85	75012.33	13.62	75013.93	13.54	75014.63	13.67	5016.42	13.73
75044.63	14.11	75087.01	14.31	75454.11	14.36	75864.12	14.04	76050.06	13.94
76193.09	13.87	6312.27	13.66	76350.41	13.57	76393.33	13.46	76433.38	13.19
76434.63	12.46	76437.83	10.59	76438.19	10.35	76443.33	10.63	76443.47	10.63
76444.63	11.22	76446.47	12.15	76448.92	13.36	76504.63	13.78	76514.63	13.84
76554.63	13.87	6703.22	14.26	76870.09	14.73	77442.2	16.37	77756.54	17.27
77759.49	17.57	7776.71	18.26						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
70132.29	.11	73931.5	.04	74000.5	.08

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73931.5	74000.5	100	100	100	.1	.3

Ineffective Flow num= 1

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   Sta L   Sta R    Elev  Permanent
70132.2973280.79    17.7       F
Sediment Elevation = 8.75

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: 100

INPUT
Description:
Station Elevation Data    num=     483
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
70171.03   15.3870171.89   15.3970172.55   15.39   70173   15.3870173.04   15.37
70174.39    15.370177.24   15.13 70178.2   15.0770179.73   14.9170180.61   14.82
70183.64   14.3570185.16    14.170185.21   14.1770185.86   14.2870186.44   14.34
70195.12   14.2270196.33   14.0470197.34   13.9970197.58   14.0570198.24   14.18
70202.77   14.2870232.05   14.7170232.34   14.7170232.47   14.7170276.52   14.94
70279.65   14.9970279.86      1570302.58   15.2870303.91   15.3470304.82   15.36
70309.36   15.35 70319.2   15.3470320.05   15.3370376.67   15.19 70378.2   15.17
70381.73   15.1470387.12   15.1870388.05   15.1870427.39   15.6570428.58   15.67
 70435.8   15.6270437.22   15.6370438.92   15.64 70646.2   15.2170869.56   14.69
70869.98   14.6870873.09   14.63   70875   14.5670875.45   14.5770898.58   14.68
70899.48   14.6870899.58   14.6871087.44   14.76 71297.6   14.7771523.83   14.77
71663.36   14.7471863.23   14.6972000.97   14.6672149.32   14.6372319.83   14.53
72352.97   14.5172440.86   14.0472445.36   14.0572448.88   14.0572452.38   14.06
72453.61   14.06 72457.5   14.1472459.41   14.1472466.42   14.1472472.97   14.15
72473.44   14.1572478.12   14.14   72481   14.1672489.03    14.2 72489.5    14.2
 72494.5    14.372495.02   14.3172498.17   14.3772501.53   14.3672508.55   14.31
72513.11   14.32 72514.2   14.3272515.58   14.3372515.77   14.3372517.45   14.35
72521.38   14.3672522.59   14.3672526.37   14.3772532.81   14.3372534.25   14.32
72537.31   14.3772539.17   14.4172543.53   14.4972547.81   14.6272549.02   14.68
72555.16   14.9772558.84   14.86 72561.7   14.7872563.32   14.7972567.77   15.02
72568.69   15.0772569.91   15.1472581.78    15.272591.95   15.0872597.08   15.02
72598.19      1572602.12   15.02 72604.2   15.0472606.52   15.0772607.27   15.09
72608.02   15.1272608.07   15.1272608.27   15.1372609.25   15.1372614.33   15.22
72642.67   15.2572642.81   15.2572652.98   15.2472663.15   15.3372673.23   15.42
72673.32   15.4372677.02   15.4372683.48   15.4472691.77   15.4572693.66   15.45
72700.34   15.4472703.83   15.4272704.84   15.41   72714   15.3672719.66   15.33
72724.17   15.3472732.66   15.3772734.34   15.3872735.88   15.3972744.52   15.43
72745.72   15.4372747.33   15.4472747.98   15.4472748.16   15.4372753.95   15.41
72754.68   15.4172755.55   15.4172759.06    15.472762.69    15.472765.39   15.36
 72765.5   15.3572777.02   15.3272777.81   15.3172779.03   15.3272785.62   15.32
72807.76   15.3172810.23   15.31 72815.7   15.2872821.55   15.2572825.88   15.27
72847.73   15.3672847.86   15.36 72849.3   15.3772851.59   15.3972853.91   15.44
72854.57   15.4572856.38   15.4772857.25   15.4872861.69   15.5472863.74   15.56
72866.55    15.672867.39    15.672873.58   15.6372874.41   15.6472876.72   15.61
72883.41   15.51 72887.2   15.4672893.25   15.4472897.06   15.4372897.49   15.43
72901.23   15.4272903.09   15.4272907.23   15.4272911.38   15.4272912.92   15.45
72917.41   15.5572918.89   15.5972932.91   15.5972944.52   15.6172947.91   15.56
72985.45   15.53   72986   15.5373131.55   15.7273131.58   15.7273132.84   15.72
73140.02    15.773142.88   15.6973145.06   15.6873148.16   15.6773152.42   15.66
73152.94   15.6673153.32   15.6673159.34   15.4873162.98   15.3873163.33   15.37
73165.73   15.3273169.41   15.3173171.25    15.373173.03   15.3173175.54   15.32
73178.66   15.3573180.03   15.36 73180.3   15.3673183.08   15.3873185.72    15.4
73186.97   15.4173190.65   15.3973193.12   15.3973197.98   15.3773200.29   15.36
73201.27   15.3673203.17   15.3673206.03   15.3673211.88   15.3573213.22   15.35
73215.53   15.34 73216.8   15.34 73217.3   15.3473219.45   15.3473222.52   15.34
73223.27   15.34 73223.5   15.3573230.44   15.5573233.31   15.6873236.62   15.82
73243.37   16.12 73245.2    16.273246.38   16.2273246.67   16.2373249.45   16.33
73253.41   16.4673254.36   16.4973255.43   16.5373255.52   16.5373255.94   16.55
73262.88   16.7673263.02   16.7573263.23   16.7573263.46   16.7573263.75   16.74
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73264.45   16.75   73265   16.7473265.84   16.7373266.97   16.7273267.01   16.72
73272.56   16.6773273.52   16.6573275.25    16.673275.61   16.5973275.78   16.58
73280.95   16.4373282.54   16.2373283.55   16.1373283.96   16.0973286.23   15.96
73286.47   15.9573287.33    15.973287.36    15.9 73288.3   15.9173291.02   15.94
73293.61   15.8973294.58   15.8873300.45   15.7873303.66   15.8173308.41   15.86
 73313.7   15.9273313.89   15.9273315.76   15.9473321.02   15.95 73365.5   15.88
73742.58   13.0373742.76   13.0373745.78   13.0273751.28   12.9973755.84   12.93
73758.27    12.973765.88    12.873780.34   12.6273785.39   12.5773785.97   12.57
73790.17   12.5373791.33   12.5373795.38   12.45   73796   12.4473806.07   12.25
73806.62   12.24 73815.7   12.0673817.25   12.0373827.86   11.8373828.77   11.82
73835.54   11.6573836.03   11.6373836.22   11.6373838.48   11.5773841.84   11.49
73845.94   11.4673846.26   11.45 73849.1   11.3873854.86   11.2573855.23   11.24
73856.31   11.2373856.34   11.2273859.72   11.1873866.36    11.173874.19      11
73876.41   10.9773880.96   10.9173883.98   10.8873886.45   10.7773891.58   10.54
 73893.5   10.4573894.66    10.4 73896.5   10.3873896.98   10.38 73902.2   10.33
73906.55   10.29 73907.7   10.2873912.83      1073916.56    9.8373917.52    9.78
73919.94    9.6773921.66    9.5873924.34    9.4573924.98    9.41   73930     9.1
73930.48    9.07 73931.59.00843373933.47    8.8973936.84    8.6873939.31    8.53
73940.62    8.4573942.48    8.3373944.53    8.4973949.25    9.0273952.41    9.38
73955.62    9.7573955.98    9.7873956.28    9.8173959.47   10.0873960.52    10.1
 73968.2   10.2173973.55   10.2973978.47   10.2973980.14   10.2973988.72   10.29
73991.91   10.2873992.72   10.3573998.98   10.4173999.77   10.42 74000.510.42739
74008.62   10.5174009.23   10.5174019.41    10.674019.49    10.674019.62    10.6
74029.74   10.7174039.03   10.8174040.02   10.8274045.19   10.8874047.73    10.9
 74048.6    10.974050.27   10.9174057.15   10.9574058.14   10.9674058.66   10.96
74060.53   10.9774065.66   11.0174067.83   11.0374068.54   11.0374068.61   11.03
74070.78   11.0574078.95   11.1374081.05   11.1574082.09   11.1674088.61   11.34
74089.35   11.3574099.75   11.6374100.39   11.6474104.88   11.7674105.88   11.77
74108.61   11.8174110.13   11.8274111.81   11.8574117.55   11.9174120.31   11.95
74122.08   11.97 74130.5   12.0774132.33    12.174159.52   12.4274162.83   12.46
74172.31   12.5774172.66   12.5874174.03   12.5974181.41   12.6374182.27   12.64
74189.24    12.774190.86   12.6974191.59    12.774191.95    12.7 74192.3    12.7
74194.53   12.6974201.78   12.7374202.12   12.7374206.16   12.7574208.98   12.79
74211.95   12.8274211.97   12.8274211.98   12.8374217.55   12.9674221.77   13.02
74222.15   13.03 74228.2    13.174231.59   13.1374236.02   13.14 74236.2   13.14
74237.09   13.1574274.84   13.3174283.25   13.3774284.16   13.38 74288.5   13.42
74397.88    13.874398.59   13.8174463.38   13.8974522.45   13.9574662.44   14.08
74788.66   14.1874915.85   14.24   74958      14 74975.7   14.0875001.35   13.86
75001.72   13.8675003.91   13.7575005.53   13.7275006.25   13.7575008.08   13.82
 75014.2   13.89 75036.8   14.0475079.95   14.1575445.06    14.275453.78    14.2
 75871.3   13.8975983.65   13.8276060.66   13.74 76206.3   13.5676327.66   13.41
 76366.5   13.3376391.09   13.28 76410.2   12.3876423.88   11.7176428.56   13.28
76450.99   13.2776452.27    12.976455.52   11.9876455.89   11.8676461.12   12.01
76461.27   12.0176462.45   12.3176464.32   12.7876466.81   13.3976480.08   13.48
76523.55   13.6876533.73   13.7276574.47   13.7476725.77   14.11 76895.7    14.5
76953.08   14.6377210.67   15.32 77478.3   16.1677510.41   16.2777721.16   17.34
77798.39   17.8377801.39   17.9677804.14   18.0377807.27   18.2277807.92   18.26
77809.88   18.36 77818.9   18.6577818.93   18.65

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
70171.03      .173912.83     .0473959.47     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73912.8373959.47               100     100     100              .1       .3
Ineffective Flow     num=       1
   Sta L   Sta R    Elev  Permanent
70171.0373256.16   16.84       F

CROSS SECTION


RIVER: Walleyleg_Branch
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REACH: 1 RS: 0

INPUT
Description: 400 FT DOWNSTREAM OF THE PROPOSED CL
Station Elevation Data num= 232

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
70209.78	15.06	70211.72	14.98	70215.88	14.75	70218.33	14.61	70233.46	13.81
70234.66	13.41	70235.65	13.29	70235.88	13.39	70236.53	13.64	70269.78	14.3
70270.06	14.37	70270.19	14.3	70677	14.72	71110.84	14.93	71539.93	14.82
71873.66	14.62	72154.95	14.47	72355.19	14.23	72441.61	13.37	2446.03	13.32
72449.5	13.33	72452.94	13.35	72454.15	13.35	72457.98	13.57	2459.84	13.51
72466.75	13.52	72473.19	13.53	72473.65	13.53	72478.26	13.52	72481.08	13.55
72488.98	13.64	72489.44	13.64	72494.36	13.83	72494.87	13.85	72497.96	13.98
72501.27	13.95	72508.17	13.86	72512.66	13.87	72515.08	13.87	72515.27	13.87
72521.98	13.83	72525.69	13.82	72532.02	13.69	72533.44	13.65	72580.18	15.04
72590.18		1572595.21	14.99	72600.18	14.87	72604.5	14.87	2612.18	15.05
72640.05	15.05	72640.18	15.05	72650.18	15.02	72660.18	15.18	72670.09	15.34
72670.18	15.34	72673.81	15.35	72680.18	15.35	72688.32	15.34	72690.18	15.34
72696.76	15.31	72700.18	15.26	72701.17	15.25	72710.18	15.12	72715.74	15.05
72720.18	15.06	72730.18	15.11	72740.18	15.11	72743.59	15.17	2750.18	15.07
72772.15	14.96	72772.92	14.96	72774.12	14.97	72780.61	14.98	72802.37	15.01
72804.8	15.01	72810.18	14.96	72815.93	14.97	2820.18	14.95	72841.67	15.16
72843.22	15.17	72845.47	15.19	72850.18	15.32	72860.18	15.61	72861	15.63
72867.91	15.74	72870.18	15.69	72880.48	15.46	72890.18	15.46	72900.18	15.43
72904.25	15.42	72910.18	15.68	72911.64	15.74	72936.84	15.72	72940.18	15.63
73134.03	14.74	73137.08	14.73	73157.96	14.62	73163.99	14.58	73168.41	14.6
73168.67	14.6	73174	14.61	73178.85	14.61	73189.29	14.61	73193.98	14.61
73199.73	14.62	73204.57	14.62	73210.18	14.63	73210.92	14.64	73233.64	15.05
73233.94	15.07	73236.67	15.2	73241.5	15.44	73242.63	15.5	73250.23	15.91
73251.42	15.97	73251.95	15.97	73252.78	15.97	73253.93		1673262.39	16.05
73262.56	16.05	73267.65	15.94	73269.2	15.61	73270.6	15.38	73272.83	15.2
73273.07	15.18	73273.91	15.12	73273.94	15.12	73274.87	15.17	73277.54	15.33
73350.77	15.61	73758.68	12.15	73763.63	12.15	73768.34	12.15	73769.48	12.16
73773.46	12.07	73774.07	12.06	73784.51	11.84	73793.44	11.65	73794.96	11.62
73805.4	11.4	73813.43	11.23	73815.84	11.18	73826.28	10.96	73833.41	10.81
73836.72	10.74	73857.61	10.31	73860.58	10.25	73868.05	9.62	73871.08	9.36
73873.37	9.33	73878.49	9.26	73888.94	9.12	73893.35	9.06	73897.34	9.01
73899.38	8.97	73902.55	8.92	73909.82	8.59	73912.838	.45341	573913.34	8.43
73920.26	8.12	73921.8	8.05	73924.01	7.94	73930.39	9.06	73930.71	9.08
73932.26	9.18	73933.32	9.18	73941.15	9.18	73951.59	9.19	73953.3	9.19
73959.47	9.19	73962.03	9.19	73965.27	9.19	73966.1	9.32	73972.48	9.45
73973.28	9.47	73982.92	9.67	73993.27	9.88	73993.36	9.89	73993.49	9.89
74003.8	10.14	74013.25	10.37	74014.25	10.39	74019.52	10.52	74024.69	10.56
74033.23	10.64	74035.13	10.65	74040.36	10.7	74045.57	10.76	74056.02	10.88
74087.34	11.25	74093.18	11.31	74097.79	11.37	74108.23	11.49	74135.9	11.82
74139.28	11.86	74148.93	11.97	74149.28	11.99	74168.93	12.2	74169.28	12.2
74171.55	12.19	74179.28	12.26	74189.28	12.36	74189.32	12.36	74194.98	12.55
74199.28	12.63	74209.28	12.74	74213.79	12.76	74213.96	12.76	74214.88	12.78
74378.55	13.63	74379.28	13.65	74505.37	13.73	74905.84	13.98	74948.75	13.48
75005.96	13.97	75444.58	14.05	75992.85	13.65	76407.62	13.06	76441	10.05
76445.77	13.22	76498.21	13.5	76979.73	14.37	77241.95	15.02	77547.08	16.07
77761.62	17.62	77846.09	18.44	77849.28	18.69	77849.94	18.74	77851.93	18.85
77861.12	19.04	77861.15	19.04						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
70209.78	.17	3888.94	.04	73932.26	.08

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73888.94	73932.26	425	410	250	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
70209.78	73251.23	16.1	F

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -590.*

INPUT
Description:
Station Elevation Data num= 371

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68767.19	16.5368	769.87	16.4668	773.22	16.3568	775.62	16.2868	778.99	16.18
68799.88	15.6168	801.53	15.468	802.91	15.3368	803.23	15.3868	804.12	15.5
68850.03	15.4568	850.42	15.4568	850.59	15.4569	412.23	11.1269	568.25	9.89
69828.11	8.93	70011.2	8.7370	100.29	8.670	227.33	8.5670	396.05	8.93
70396.75	8.9470	592.88	9.4170	599.08	9.4970	603.61	9.571	064.35	10.2
71126.72	10.371	452.72	10.8971	564.44	11.0771	567.73	11.171	729.16	12.09
71848.47	12.4271	854.58	12.4771	859.37	12.571	864.11	12.5571	865.78	12.56
71871.07	12.6771	873.65	12.6971	883.19	12.7671	892.07	12.82	71892.7	12.82
71899.07	12.8671	902.97	12.971	913.88	13.02	71914.5	13.02	71921.3	13.16
71922	13.1871	926.27	13.2771	930.84	13.2971	940.38	13.371	946.56	13.35
71949.91	13.3771	950.17	13.3771	959.43	13.4171	964.55	13.44	71973.3	13.44
71975.25	13.4372	039.78	14.5572	053.59	14.6272	060.54	14.66	72067.4	14.65
72073.36	14.6572	083.97	14.8572	108.94	15.0172	110.73	15.0272	122.44	15.02
72122.62	15.0272	136.42	15.0172	150.23	15.0972	163.92	15.1772	164.04	15.17
72169.05	15.1872	177.84	15.1872	189.09	15.1772	191.66	15.1772	200.73	15.16
72205.45	15.1372	206.83	15.1272	219.27	15.0672	226.95	15.0272	233.07	15.03
72246.88	15.0672	260.69	15.0672	265.39	15.0572	274.48	15.0372	304.82	14.98
72305.89	14.9872	307.53	14.99	72316.5	14.9972	346.54	15.0172	349.89	15.01
72357.33	14.9872	365.27	14.9572	371.13	14.98	72400.8	15.0872	402.94	15.09
72406.05	15.0972	412.55	15.1672	426.36	15.3172	427.48	15.3272	437.02	15.37
72440.16	15.3472	454.38	15.2372	467.77	15.2372	481.58	15.22	72487.2	15.21
72495.39	15.3472	497.41	15.37	72532.2	15.36	72536.8	15.3272	613.99	15.19
72616.59	15.1572	804.44	14.0272	808.64	14	72836.7	13.8272	837.02	13.81
72837.48	13.81	72845.8	13.7872	851.89	13.7872	852.27	13.7872	859.62	13.78
72866.31	13.7772	880.73	13.76	72887.2	13.7572	895.14	13.7572	901.83	13.74
72909.57	13.7472	910.59	13.7472	941.96	13.9272	942.37	13.9372	946.14	13.99
72952.81	14.172	954.38	14.1372	964.86	14.3272	966.51	14.3572	967.24	14.35
72968.39	14.3572	969.97	14.3672	977.52	14.4172	981.66	14.3872	981.89	14.38
72988.91	14.3172	991.06	14.1572	992.98	14.0372	996.06	13.9472	996.39	13.93
72997.55	13.972	997.59	13.972	998.88	13.9273	002.56	1473	103.67	14.03
73324.28	13.1373	470.48	12.2373	473.53	12.1773	587.28	11.4473	594.56	11.3
73666.83	11.0573	673.67	11.0473	680.17	11.0473	681.73	11.0573	687.23	11
73688.08	10.9973	696.86	10.9273	702.49	10.7573	705.34	10.66	73713.8	10.39
73714.82	10.3673	716.78	10.3173	716.92	10.3173	731.33	10.1473	742.42	10.01
73745.75	9.9773	760.16	9.81	73770	9.6973	774.58	9.6473	798.93	9.36
73803.42	9.2573	807.47	9.1673	807.52	9.1573	817.83	8.8373	822.02	8.7
73825.17	8.6873	832.25	8.6473	840.31	8.5973	841.73	8.5673	842.36	8.55
73846.67	8.46	73849.7	8.3973	855.88	8.2573	856.93	8.2373	860.81	8.14
73864.09	8.07	73864.2	8.0773	867.45	7.9973	868.45	7.9873	875.05	7.92
73890.22	7.6873	896.48	7.5973	897.56	7.5773	902.44	7.4973	907.44	7.39
73911.98	7.2973	914.67	7.24	73915.2	7.22	73919.8	7.1273	921.59	7.18
73927.75	7.3673	932.84	7.5	73933.9	7.5573	940.05	7.873	942.12	7.89
73946.27	8.0573	949.84	8.273	951.34	8.2573	952.42	8.2873	952.64	8.28
73958.62	8.5273	959.69	8.5473	962.44	8.59	73967.5	8.6873	969.16	8.72
73969.66	8.7373	977.92	8.8873	979.62	8.9173	980.78	8.9373	985.78	8.93
73988.34	8.9373	991.57	8.93	73992.4	973	998.76	9.0673	999.56	9.07
74009.18	9.1774	019.51	9.2874	019.59	9.2874	019.73	9.2874	030.01	9.41
74039.44	9.5274	040.44	9.53	74045.7	9.674	050.85	9.6274	059.38	9.66
74061.27	9.6774	066.48	9.6974	071.69	9.7274	082.12	9.7874	113.37	9.97
74119.19	1074	123.79	10.03	74134.2	10.0974	161.81	10.2674	165.19	10.28
74174.81	10.3474	175.17	10.3574	194.77	10.4574	195.12	10.4574	197.38	10.45
74205.09	10.4874	215.08	10.5374	215.12	10.5374	220.76	10.6374	225.05	10.67

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74235.03   10.7374239.53   10.74 74239.7   10.7474240.62   10.75 74346.6   11.03
74356.32   10.8674364.14   10.7174403.92   10.8374404.66   10.84 74482.6   10.89
74492.33   11.0474493.83   11.0674530.45   11.6774549.75      1274550.66   12.02
74618.71   14.3574620.22   14.3974628.43   14.5174643.97   14.74 74657.5   14.84
74930.03   14.9174972.84   14.6675000.77   14.7775029.92   14.7575080.75    14.5
75467.56   14.4975621.16   14.4175658.05   13.99 75681.2   13.9975691.22   13.97
75701.25   13.9675703.65   13.9675705.34   13.9675751.26   14.4176014.61   14.31
76239.55   14.1576241.55    14.176251.58   13.8876291.66   13.5876311.62   13.36
76321.64   13.2576428.44   10.6976451.73    9.0976461.75    8.5376462.05    8.56
76474.89   10.1176481.67   10.1276534.94   13.5176619.24   13.71   76652   13.76
76656.95   13.8576814.83   15.5876815.56   15.5976888.09   16.1976888.76    16.2
76894.87   16.3276896.27   16.3476920.66   16.3576923.41   16.25 76947.3   15.42
 76949.8   15.3776950.53   15.3676955.84   15.2676968.06   15.0477010.77   14.81
77019.81   14.6677029.09    14.577033.98   14.4277035.15    14.477036.19   14.39
77086.23    14.477090.07   14.4777090.62   14.4877095.39   14.5877096.19   14.59
 77102.3    14.777108.41   14.82 77297.5   15.3677302.69   15.4677303.06   15.47
77303.36   15.4777510.97   15.88 77515.5   16.0477835.83   16.1577944.77   15.97
   78351   15.3778635.41    15.578639.56   15.5778666.64   15.6378872.34   16.14
78877.41   16.2378877.47   16.2378883.58   16.3479020.44   16.7379023.86   16.79
79029.97    16.9   79331   17.4379334.78   17.4679347.12   17.5679347.98   17.57
79394.29   17.9679506.59   18.0380097.19   18.8180132.53   18.8780133.32   18.85
80329.73    19.180338.51   19.2280340.31   19.25 80345.8    19.380371.09   19.38
80371.17   19.38

Manning's n Values        num=       7
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
68767.19      .173846.67    .03573958.62     .0873974.56     .0874237.66    .065
74461.25     .0880371.17     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73846.6773958.62              425     410     250              .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -1180

INPUT
Description:
Station Elevation Data    num=     145
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 67324.6      18 67332.3   17.85 68346.5       5   68678       369025.21    2.29
69187.27    2.24 69402.5       3 69403.4    3.02 69653.6       4 69661.5    4.16
 70334.6       6   70893    7.76 70897.2    7.83 71587.6   14.97 71589.9      15
 72231.9      15 72235.2   14.94   72516   13.02 72516.4      13   73138      12
 73324.5    11.1 73328.4      11 73473.5   10.24 73482.8      10 73613.3    9.92
 73624.1    9.52 73634.9    9.11 73636.2    9.06 73638.7       9 73743.5    8.34
 73754.4    8.06 73796.3       8 73798.1    7.96 73798.9    7.93 73804.4     7.8
   73809    7.68   73820     7.4 73825.9    7.25 73830.9    7.13   73836       7
 73889.2    6.66 73896.8    6.56 73907.8    6.41 73915.6    6.31 73918.8    6.35
 73929.8    6.48 73938.9    6.58 73940.8    6.63 73951.8    6.91 73955.5       7
 73962.9    7.18 73973.9    7.46 73974.3    7.47   73985    7.86 73988.8       8
 73995.5    8.25   73996    8.27 74007.1    8.67 74372.1    8.73 74381.8    8.33
 74389.6       8 74507.8    8.09 74517.5    8.37   74519    8.41 74574.8   10.25
 74575.7   10.29 74643.6   14.91 74645.1      15 74653.3   15.23 74668.8   15.68
 74682.3   15.88 75024.8   15.83 75104.6   15.03 75643.8   14.89 75680.6   14.06
 75703.7   14.08 75713.7   14.06 75723.7   14.04 75726.1   14.04 75727.8   14.04
 75773.6   14.98 76260.8   14.97 76262.8   14.88 76272.8   14.45 76312.8    13.9
 76332.7   13.49 76342.7   13.28 76472.5    7.23 76482.5    7.01   76483       7
 76515.1       7 76602.3   13.69 76793.9      14   76802   14.18 77060.4   17.53
 77061.6   17.55 77180.3    18.7 77181.4   18.72 77191.4   18.95 77193.7      19
 77233.6      19 77238.1   18.81 77277.2   17.12 77281.3   17.03 77282.5      17
```

77291.2	16.8	77311.2	16.35	77381.1	15.86	77395.9	15.55	77411.1	15.24
77419.1	15.07	77421	15.03	77422.7	15	77504.6	15	77510.9	15.14
77511.8	15.16	77519.6	15.34	77520.9	15.37	77530.9	15.59	77540.9	15.82
77850.4	16.78	77858.9	16.98	77859.5	16.99	77860	17	78199.8	17.68
78207.2	18	78731.5	18	79574.7	16	80040.2	16	80047	16.14
80428	17	80436.3	17.17	80436.4	17.17	80446.4	17.38	80670.4	18
80676	18.12	80686	18.32	81178.7	19	81184.9	19.06	81205.1	19.25
81206.5	19.26	81282.3	20	82490.6	20	82491.9	19.96	82881.2	19.72

Manning's n Values num= 5

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
67324.6	.1	73804.4	.035	74007.1	.08	74372.1	.05	74682.3	.08

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73804.4	73985	900	410	410	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -1590.*

INPUT
Description:
Station Elevation Data num= 265

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
67972.3	14.5	67979.3	14.43	68205.73	12.85	68362.77	11.25	68364.44	11.21
68618.55	6.47	68648.8	5.79	68650.58	5.75	68650.7	5.74	68813.84	4.61
68900.61	3.98	69201.75	2.92	69338.81	2.74	69517.16	2.54	69664.38	2.51
69859.89	2.89	69860.71	2.97	70049.08	3.3	70088	3.39	70095.17	3.47
70619.16	4.37	70706.63	4.45	71105.12	5.25	71213.89	5.73	71217.7	5.78
71256.84	6.11	71260.29	6.16	71844.88	9.49	71846.96	9.57	72271.88	9.5
72356.28	10.25	72430.16	10.71	72433.17	10.77	72544.12	10.97	72688.25	11.26
72688.61	11.25	72709.27	11.36	72709.94	11.36	72715.61	11.41	72720.95	11.45
72723.4	11.47	72836.61	11.82	72842.84	11.86	73253.28	11.92	73320.5	11.81
73321.72	11.82	73333.28	11.79	73345.41	11.72	73357.42	11.64	73357.86	11.65
73364.2	11.71	73422.7	11.52	73426.24	11.47	73558.05	11.01	73566.5	10.89
73627	10.83	73627.44	10.83	73685.05	10.27	73687.61	10.27	73694.86	10.02
73697.06	9.97	73699.5	9.88	73704.67	9.69	73705.86	9.65	73708.12	9.58
73711.52	9.52	73713.3	9.48	73737.77	9.4	73745	9.28	73747.22	9.25
73803.33	7.97	73806.49	7.87	73813.23	7.55	73851.29	6.68	73852.93	6.62
73853.53	6.67	73853.66	6.59	73858.65	6.47	73861.69	6.32	73868.97	6.13
73870.73	6.08	73872.87	6.03	73876.17	5.94	73879.55	5.86	73892.45	5.71
73913.97	5.46	73914.73	5.45	73919.77	5.36	73923.19	5.37	73927.04	5.24
73932.2	5.15	73950	5.15	73952.97	5.21	73958.46	5.32	73963.17	5.41
73969.73	5.53	73971.62	5.57	73973.38	5.62	73974.07	5.63	73981.01	5.7
73983.59	5.73	73987.02	5.76	73988.48	5.78	73992.28	5.86	73993.89	5.9
74003.56	6.12	74004.09	6.13	74004.47	6.14	74014.4	6.43	74017.95	6.52
74024.23	6.67	74024.7	6.68	74033.61	6.97	74035.09	6.92	74036.93	6.92
74047.98	6.87	74057.53	6.84	74067.19	6.87	74070.09	6.91	74081.02	7.06
74092.08	7.21	74157.31	8.24	74163.64	8.35	74193.67	8.35	74201.41	8.47
74271.89	9.62	74278.97	9.78	74280.69	9.87	74282.83	9.84	74283.91	9.86
74313.95	9.86	74315.77	9.89	74315.98	9.89	74376.88	10.33	74385.96	10.2
74393.27	10.09	74450.95	10.52	74453.52	10.54	74461.89	10.61	74464.14	10.59
74474.77	10.54	74503.95	10.55	74513.03	10.69	74514.44	10.71	74520.58	10.81
74527.66	10.99	74566.69	11.95	74567.53	11.98	74585.06	12.74	74590.31	12.97
74622.08	14.13	74622.93	14.15	74631.12	14.45	74632.52	14.49	74640.2	14.61
74654.71	14.83	74667.35	14.93	74988.07	14.91	75062.8	14.51	75567.7	14.44
75582.92	14.26	75586.04	14.18	75596.55	13.93	75602.13	13.79	75602.17	13.79
75607.17	13.73	75623.8	13.57	75633.17	13.47	75642.53	13.37	75644.78	13.35
75646.36	13.33	75689.26	13.39	75787.09	12.44	75983.31	11.48	75983.53	11.48
76103.37	8.99	76145.47	8.99	76147.34	8.94	76156.7	8.73	76194.16	8.45
76212.8	8.24	76222.17	8.14	76343.71	5.11	76353.08	5.01	76353.55	5

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 76383.6       576440.62     8.976565.91   10.2776571.22   10.4276740.19   13.74
76740.98   13.7576818.59   15.0876819.31    15.176825.86   15.2876827.36   15.32
76853.45   15.5776856.39   15.5176881.97   14.9176884.64   14.8976885.43   14.88
76891.12   14.84 76904.2   14.7476922.06   14.8276933.31   14.87 76943.3   14.92
76947.77   14.9476949.91   14.9376959.58   14.7776969.52   14.6276974.76   14.53
   76976   14.5176977.11    14.577030.67    14.577034.78   14.5777035.38   14.58
77036.33    14.677040.48   14.6977041.33   14.7177047.86   14.8577049.29   14.89
77054.41      1577055.45   15.01 77112.8   15.4277134.03   15.5777139.34   15.61
 77256.8   15.9877262.36   16.0877262.75   16.0977263.08   16.0977485.28    16.6
77490.12   16.7677749.17   16.9677757.05      1777832.98   17.0378384.38   16.27
78659.56   16.3978661.04   16.3978682.28   16.4978683.56    16.578688.78    16.5
78693.22   16.5878942.38   17.23 78947.8   17.3278947.86   17.3278954.41   17.43
79100.89   17.8779104.55   17.9379106.47   17.9679111.09   18.0579127.71   18.16
79131.33   18.1879433.28   18.8379437.33   18.8679450.55   18.9779451.45   18.98
79488.17   19.2979501.02   19.46 79507.3   19.4979507.92   19.4979508.77    19.5
80291.17   19.8180292.02   19.7980527.27   19.7780536.83   19.81 80546.6   19.86

Manning's n Values        num=       7
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
 67972.3     .0973858.65    .035 74014.4     .0874030.62     .0874298.64    .065
74526.41     .08 80546.6     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73858.65 74014.4              900     410     410              .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -2000

INPUT
Description:
Station Elevation Data    num=     126
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68620      11 68829.9      11 68971.1      10 68972.6    9.95 69201.1       4
 69228.3    3.06 69229.9    3.01   69230       3 69376.7       369848.74    2.79
 70487.4    2.77   71000    2.8671436.98    3.11 71573.4    3.94 71576.5       4
 72486.1       4   72562     5.5 72730.9    7.83 72879.4    9.75   72880    9.76
 72885.1    9.86 72889.9    9.96 72892.1      10 72993.9   10.91 72999.5      11
   73429   11.97 73430.1      12 73440.5      12 73451.4   11.92 73462.2   11.84
 73462.6   11.85 73468.3      12 73704.6   11.71   73705    11.7 73759.1   10.58
 73767.6   10.51 73769.8   10.43 73780.6   10.06 73782.2      10 73804.2      10
 73810.7    9.82 73812.7    9.77   73866    7.34 73908.3    5.26 73912.9       5
 73918.8    4.83 73929.4    4.54 73939.9    4.25 73944.4    4.12 73948.8       4
 73984.4       4 73992.2    4.22 74002.6    4.51 74006.6    4.62   74013    4.57
 74019.9    4.52 74023.4    4.59 74033.8     4.8 74043.8       5 74061.7    5.18
 74064.8    5.16 74075.1    5.07   74084       5   74093    5.07 74095.7    5.15
 74105.9    5.44 74116.2    5.74   74177    7.79 74182.9       8 74210.9       8
 74218.1    8.25 74283.8   10.53 74290.4   10.84   74292   10.89   74294   10.96
   74295      11   74323      11 74324.7   11.06 74324.9   11.06 74450.7      13
 74453.1   13.04 74460.9   13.16   74463   13.13 74472.9   13.02 74515.6      13
 74522.2    13.1 74575.7   13.92 74580.6      14 74610.2      14   74611   13.98
 75505.8      14 75508.7   13.92 75518.5   13.66 75523.7   13.52 75528.4   13.39
 75696.1     9.9   75879    7.98 75879.2    7.98 75990.9       3 76252.1       3
 76505.6   13.48 76510.9   13.71 76515.6   13.91 76517.7      14 76559.4      14
 76565.5   14.13 76568.4   14.19 76595.4   14.74 76605.4   14.95 76607.9      15
   76895   15.92 76898.7      16 77323.6   16.77 77324.3   16.78 77334.3   16.99
 77334.9      17   77534   17.74   77544   17.96 77545.7      18 77713.7   18.78
 77722.7   18.99   77723   18.99 77723.4      19 78202.9    19.8 78207.4    19.9
   78212      20

Manning's n Values        num=       3
```

Sta	n Val	Sta	n Val	Sta	n Val
68620	.08	73912.9	.035	74043.8	.08

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73912.9	74043.8	440.82	440.82	440.82	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -2400.*

INPUT
Description:
Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68789.74	1	068793.28	9.98	68798.11	9.94	68799.06	9.94	68804.72	9.92
68810.5	9.96	8811.09	9.96	8816.28	9.88	68822.06	9.86	68822.53	9.86
68994.45	9.85	69132.16	8.99	69133.62	8.95	69356.47	3.84	69382.99	3.04
69384.55	2.99	69384.65	2.98	69527.73	2.98	69988.09	2.79	70610.95	2.75
71110.87	2.82	71537.03	3.02	71670.08	3.72	71673.1	3.78	72560.2	3.75
72634.22	5.03	72798.94	7.03	72943.77	8.67	72944.35	8.68	72949.33	8.76
72954.01	8.85	72956.16	8.88	73055.44	9.66	73060.9	9.74	73407.91	10.42
73479.77	10.56	73480.84	10.58	73490.98	10.58	73501.62	10.51	73512.16	10.44
73512.54	10.45	73518.09	10.58	73748.55	10.33	73748.95	10.32	73801.7	9.36
73810	9.37	3812.14	9.23	73822.67	8.91	73824.23	8.86	73845.7	8.86
73852.03	8.71	73853.98	8.66	73905.96	6.58	73947.21	4.79	73951.7	4.57
73957.3	4.38	73959.52	4.31	73967.36	4.05	73971.17	3.92	73974.12	3.82
73977.32	3.71	73981.59	3.57	73985.77	3.43	74016.28	3.43	74025.41	3.62
74037.59	3.87	74042.27	3.97	74049.75	3.93	74054.64	3.91	74057.82	3.93
74059.98	3.98	74060.84	4.01	74061.91	4.03	74065.27	4.12	74065.65	4.13
74070.4	4.26	74070.61	4.26	74074.09	4.33	74075.9	4.37	74081.24	4.48
74085.78	4.57	74105.04	4.73	74108.37	4.71	74119.45	4.63	74129.02	4.57
74138.7	4.63	74141.61	4.77	4152.57	4.95	74163.66	5.21	74229.04	6.97
74235.38	7.15	74265.5	7.15	74273.24	7.36	74343.9	9.32	74351	9.59
74352.72	9.63	74354.87	9.69	74355.95	9.72	74386.06	9.72	74387.89	9.78
74388.1	9.78	74523.4	11.44	74525.98	11.48	74534.37	11.58	74536.62	11.55
74547.27	11.46	74593.2	11.44	74600.3	11.53	74657.84	12.24	74663.1	12.3
74694.94	12.31	74695.8	12.29	75658.13	12.34	75661.26	12.27	75671.79	12.05
75677.39	11.93	75682.44	11.81	75862.8	8.83	76059.5	7.19	76059.72	7.19
76179.84	2.92	76460.77	2.93	76733.4	11.93	76739.09	12.12	76744.15	12.29
76746.41	12.37	76791.25	12.37	76797.81	12.48	76800.93	12.54	76829.97	13.01
76840.73	13.19	76843.41	13.23	77152.19	14.03	77156.16	14.17	7613.13	14.77
77613.88	14.78	77624.64	14.96	77625.28	14.97	77839.41	15.61	77850.16	15.8
77852	15.84	78032.68	16.51	78042.36	16.69	78042.68	16.69	78043.11	16.7
78519.75	17.35	78520.52	17.35	78524.81	17.38	78531.77	17.42	78538.75	17.46
78545.72	17.57	8550.43	17.53	78558.8	17.54	78563.64	17.63	78568.59	17.71

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
68789.74	.077	73951.7	.03	74085.78	.077

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73951.7	74085.78	440.82	440.82	440.82	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -2800.*

INPUT
Description:

Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68959.48		968962.93	8.9568967.64		8.8968968.57		8.8868974.08		8.84
68979.71		8.868980.29	8.7968985.35		8.7668990.98		8.7268991.44		8.71
69159		8.769293.22	7.9869294.64		7.9569511.84		3.6869537.69		3.01
69539.21	2.98	69539.3	2.9769678.75		2.9670127.43		2.7870734.48		2.73
71221.73	2.7771637.09		2.9271766.76		3.51	71769.7	3.55	72634.3	3.5
72706.45	4.5772866.98		6.2273008.13		7.5973008.71		7.5973013.55		7.67
73018.12	7.7473020.21		7.7773116.97		8.41	73122.3	8.47	73460.5	9.03
73530.54	9.1473531.59		9.1773541.48		9.1673551.84		9.11	73562.1	9.05
73562.48	9.06	73567.9	9.1673792.51		8.9573792.88		8.9473844.31		8.14
73852.39	8.0973854.48		8.0373864.75		7.7673866.27		7.7273887.18		7.72
73893.36	7.5973895.26		7.5573945.92		5.8273986.12		4.33	73990.5	4.14
73995.8	3.9373997.89		3.8574005.32		3.5574008.92		3.4174011.72		3.3
74014.75	3.1874018.79		3.0174022.74		2.8674048.17		2.8674058.63		3.02
74072.56	3.2474077.92		3.32	74086.5	3.29	74092.1	3.2774095.74		3.33
74098.22	3.41	74099.2	3.4474100.44		3.4874104.27		3.6	74104.7	3.61
74110.15	3.7874110.39		3.7874114.37		3.8774116.45		3.9174122.57		4.04
74127.77	4.1474148.38		4.2774151.94		4.26	74163.8	4.274174.04		4.15
74184.4	4.274187.51		4.2574199.25		4.4674211.11		4.6874281.08		6.14
74287.87	6.374320.09		6.374328.39		6.48	74404	8.1174411.59		8.33
74413.44	8.3774415.74		8.4274416.89		8.4574449.12		8.4574451.08		8.49
74451.3	8.49	74596.1	9.8974598.86		9.9174607.84		1074610.25		9.98
74621.65	9.9	74670.8	9.8974678.39		9.9674739.97		10.5574745.61		10.61
74779.68	10.6174780.59		10.675810.46		10.67	75813.8	10.6275825.09		10.43
75831.07	10.3375836.48		10.2476029.49		7.76	76240	6.476240.23		6.4
76368.79	2.8576669.42		2.8776961.19		10.3776967.28		10.54	76972.7	10.68
76975.12	10.7477023.11		10.7577030.13		10.8477033.47		10.8877064.54		11.28
77076.05	11.4377078.93		11.4677409.37		12.1477413.63		12.277902.67		12.78
77903.47	12.7877914.98		12.9477915.67		12.9478144.83		13.4878156.34		13.64
78158.3	13.6778351.66		14.2478362.02		14.3978362.36		14.3978362.81		14.4
78872.91	14.9678873.73		14.9678878.33		15.0178885.78		15.0878893.24		15.15
78900.7	15.2378905.74		15.28	78914.7	15.2978919.88		15.3678925.17		15.43

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
68959.48	.074	73990.5	.0374127.77		.074

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73990.574	127.77	440.82	440.82	440.82	.1	.3

Ineffective Flow num= 0

Sta L	Sta R	Elev	Permanent

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -3200.*

INPUT
Description:
Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69129.23		869132.59	7.9369137.17		7.8369138.08		7.8269143.45		7.76
69148.93		7.769149.49	7.6969154.42		7.6469159.91		7.5869160.35		7.57
69323.55	7.5669454.27		6.9769455.66		6.94	69667.2	3.5369692.38		2.99
69693.87	2.9669693.95		2.9569829.77		2.9470266.77		2.7870858.03		2.72
71332.59	2.7371737.14		2.8371863.44		3.29	71866.3	3.33	72708.4	3.25
72778.66		4.172935.02	5.42	73072.5	6.5173073.06		6.5173077.78		6.57
73082.23	6.6373084.27		6.6573178.51		7.16	73183.7	7.2173513.09		7.64
73581.31	7.7373582.34		7.7573591.96		7.7573602.05		7.773612.05		7.65
73612.42	7.66	73617.7	7.7573836.46		7.5673836.83		7.5673886.91		6.91
73894.79	6.8773896.82		6.8373906.82		6.61	73908.3	6.5873928.67		6.58

73934.69	6.4873936.54	6.4573985.88	5.0574025.04	3.86 74029.3	3.71
74034.3	3.4874036.27	3.3974043.28	3.0674046.68	2.974049.31	2.78
74052.17	2.6474055.98	2.4674059.71	2.2974080.05	2.2974091.84	2.42
74107.55	2.674113.59	2.6774123.25	2.6574129.56	2.6474133.66	2.74
74136.45	2.8474137.55	2.8774138.95	2.9274143.28	3.0774143.77	3.09
74149.9	3.374150.17	3.374154.66	3.4 74157	3.45 74163.9	3.59
74169.76	3.7174191.72	3.8274195.51	3.8174208.15	3.7674219.06	3.72
74230.1	3.7674233.41	3.8174245.92	3.9774258.56	4.1474333.12	5.32
74340.35	5.44 74374.7	5.4574383.53	5.59 74464.1	6.9 74472.2	7.08
74474.16	7.1174476.61	7.1574477.84	7.1774512.18	7.1774514.27	7.21
74514.51	7.21 74668.8	8.3374671.74	8.35 74681.3	8.4274683.88	8.4
74696.02	8.3474748.39	8.3374756.48	8.39 74822.1	8.8774828.11	8.91
74864.41	8.9274865.39	8.9 75962.8	9.0175966.36	8.9675978.38	8.82
75984.76	8.7475990.52	8.6676196.19	6.69 76420.5	5.6176420.75	5.61
76557.73	2.7776878.09	2.877188.98	8.8277195.48	8.9577201.25	9.06
77203.83	9.1177254.96	9.1277262.45	9.19 77266	9.2377299.11	9.55
77311.38	9.6777314.45	9.777666.55	10.2577671.09	10.3 78192.2	10.78
78193.05	10.7978205.32	10.9178206.05	10.9178450.24	11.36 78462.5	11.48
78464.59	11.5178670.63	11.9778681.67	12.0978682.04	12.0978682.52	12.1
79226.07	12.5779226.95	12.5779231.84	12.6479239.78	12.7479247.73	12.85
79255.68	12.9579261.05	13.0279270.59	13.0379276.12	13.0979281.76	13.14

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69129.23	.071	74029.3	.03	74169.76	.071

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74029.3	74169.76	440.82	440.82	440.82	.1	.3

Ineffective Flow num= 0

Sta L	Sta R	Elev	Permanent

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -3600.*

INPUT
Description:
Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69298.98		769302.24	6.9	69306.7	6.78	69307.58	6.77	69312.8	6.68
69318.15	6.6	69318.69	6.59	69323.49	6.52	69328.84	6.43	69329.27	6.43
69488.1	6.41	69615.33	5.96	69616.68	5.94	69822.57	3.37	69847.07	2.96
69848.52	2.94	69848.61	2.94	69980.8	2.92	70406.12	2.78	70981.58	2.7
71443.45	2.68	71837.19	2.74	71960.11	3.08	71962.91	3.11	72782.49	3
72850.88	3.64	73003.07	4.62	73136.88	5.43	73137.41	5.43	73142.02	5.47
73146.33	5.51	73148.31	5.53	73240.04	5.91	73245.09	5.95	73565.7	6.25
73632.09	6.32	73633.08	6.33	73642.45	6.33	73652.27	6.29	73662	6.26
73662.37	6.26	73667.49	6.33	73880.41	6.18	73880.77	6.18	73929.52	5.69
73937.18	5.66	73939.16	5.63	73948.9	5.47	73950.34	5.44	73970.16	5.44
73976.02	5.36	73977.82	5.34	74025.84	4.29	74063.95	3.4	74068.1	3.29
74072.8	3.03	74074.66	2.93	74081.23	2.57	74084.44	2.39	74086.91	2.26
74089.6	2.11	74093.19	1.91	74096.69	1.71	74111.95	1.71	74125.05	1.82
74142.52	1.97	74149.25	2.02	74160	2.01	74167.02	2.01	74171.59	2.15
74174.69	2.26	74175.92	2.31	74177.47	2.37	74182.28	2.55	74182.82	2.57
74189.65	2.82	74189.95	2.83	74194.94	2.93	74197.55	2.99	74205.22	3.15
74211.74	3.29	74235.05	3.37	74239.09	3.36	74252.5	3.32	74264.09	3.29
74275.8	3.32	74279.32	3.36	74292.59	3.48	74306.01	3.61	74385.16	4.5
74392.84	4.59	74429.29	4.59	74438.67	4.7	74524.2	5.69	74532.8	5.82
74534.88	5.84	74537.48	5.87	74538.79	5.89	74575.24	5.97	74577.46	5.92
74577.71	5.92	74741.5	6.77	74744.62	6.79	74754.77	6.84	74757.51	6.83
74770.39	6.78	74825.99	6.78	74834.59	6.82	74904.23	7.18	74910.61	7.22

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74949.15    7.2274950.19    7.2176115.12    7.3576118.91    7.3176131.66     7.2
76138.44    7.1476144.55    7.0976362.89    5.61   76601    4.8276601.27    4.82
76746.69     2.777086.74    2.7377416.77    7.2677423.67    7.36 77429.8    7.45
77432.53    7.4977486.81    7.4977494.76    7.5577498.53    7.5777533.69    7.81
 77546.7    7.9177549.95    7.9377923.73    8.3677928.55     8.478481.73    8.78
78482.64    8.7978495.66    8.8878496.45    8.8878755.65    9.2378768.67    9.33
78770.89    9.3478989.61     9.779001.33    9.7979001.71    9.7979002.23     9.8
79579.23   10.1779580.16   10.1979585.35   10.2779593.79    10.479602.23   10.54
79610.66   10.6879616.36   10.7779626.49   10.7779632.35   10.8179638.34   10.86

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69298.98    .069 74068.1     .0374211.74    .069

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74068.174211.74           440.82  440.82  440.82             .1       .3
Ineffective Flow     num=       0
   Sta L   Sta R    Elev  Permanent

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -4000.*

INPUT
Description:
Station Elevation Data    num=     155
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
69468.72       6 69471.9    5.8869476.23    5.7269477.09    5.7169482.17     5.6
69487.37     5.569487.89    5.4969492.56     5.469497.76    5.2969498.18    5.29
69652.65    5.2669776.38    4.96 69777.7    4.9469977.94    3.2170001.77    2.94
70003.17    2.9270003.26    2.9270131.82     2.970545.47    2.7771105.12    2.68
71554.32    2.6471937.24    2.6572056.79    2.8672059.51    2.8872856.59    2.76
 72923.1    3.1773071.11    3.8273201.24    4.3473201.77    4.3573206.24    4.38
73210.44     4.473212.37    4.4173301.58    4.6673306.48    4.6873618.29    4.87
73682.86     4.973683.82    4.9173692.93    4.9173702.48    4.8973711.95    4.86
 73712.3    4.8773717.29    4.9173924.37     4.873924.72     4.873972.12    4.47
73979.58    4.45 73981.5    4.4373990.97    4.3273992.37     4.374011.65     4.3
74017.34    4.25 74019.1    4.23 74065.8    3.5374102.87    2.93 74106.9    2.86
 74111.3    2.5874113.04    2.47 74119.2    2.07 74122.2    1.8874124.51    1.73
74127.02    1.5774130.38    1.3574133.66    1.1474143.83    1.1474158.27    1.22
74177.51    1.3374184.91    1.3774196.75    1.3774204.48    1.3874209.52    1.55
74212.92    1.6974214.28    1.7474215.98    1.8174221.29    2.0274221.88    2.04
 74229.4    2.3474229.73    2.3574235.23    2.47 74238.1    2.5374246.55    2.71
74253.73    2.8674278.39    2.9174282.66    2.9174296.85    2.8874309.11    2.86
 74321.5    2.8974325.23    2.9174339.27    2.9974353.46    3.08 74437.2    3.68
74445.33    3.7474483.89    3.7474493.81    3.82 74584.3    4.48 74593.4    4.57
 74595.6    4.5874598.35     4.674599.73    4.61 74638.3    4.6274640.65    4.64
74640.91    4.64 74814.2    5.21 74817.5    5.2374828.23    5.2674831.13    5.25
74844.77    5.2274903.59    5.2274912.68    5.2574986.37     5.574993.11    5.52
75033.88    5.5375034.98    5.5276267.46    5.6876271.46    5.6676284.95    5.59
76292.12    5.5576298.59    5.5176529.59    4.54 76781.5    4.0376781.78    4.03
76935.63    2.6277295.41    2.6777644.57    5.7177651.87    5.7777658.34    5.83
77661.24    5.8677718.66    5.8677727.07     5.977731.06    5.9277768.26    6.08
77782.03    6.1477785.47    6.1678180.92    6.4778186.02    6.4978771.27    6.79
78772.23    6.79   78786    6.8578786.83    6.8679061.06     7.179074.84    7.17
79077.19    7.1879308.59    7.4379320.98    7.4979321.39    7.4979321.95    7.49
79932.38    7.7879933.37     7.879938.87    7.9179947.79    8.0779956.72    8.23
79965.64     8.479971.67    8.5179982.39    8.5179988.59    8.5479994.93    8.57

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
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69468.72    .066 74106.9     .0374253.73    .066

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74106.974253.73           440.82  440.82  440.82             .1       .3
Ineffective Flow     num=       0
   Sta L   Sta R    Elev  Permanent

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -4400.*

INPUT
Description:
Station Elevation Data    num=     155
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
69638.46       569641.55    4.8569645.77    4.6769646.59    4.6569651.53    4.52
69656.58     4.469657.09    4.3869661.63    4.2869666.68    4.1569667.09    4.14
 69817.2    4.1169937.45    3.9569938.72    3.94 70133.3    3.0570156.46    2.91
70157.83    2.9170157.91     2.970282.84    2.8870684.81    2.7771228.66    2.66
71665.18    2.59 72037.3    2.5572153.47    2.6572156.11    2.6672930.69    2.51
72995.33    2.7173139.16    3.0173265.61    3.2673266.12    3.2673270.47    3.28
73274.55    3.2973276.42     3.373363.11    3.4173367.88    3.4273670.88    3.48
73733.62    3.4973734.57     3.573743.42    3.49 73752.7    3.48 73761.9    3.47
73762.25    3.4773767.09    3.4973968.32    3.4273968.66    3.4174014.73    3.25
74021.97    3.2474023.84    3.2274033.05    3.1774034.41    3.1674053.13    3.16
74058.67    3.1374060.38    3.1274105.77    2.7774141.78    2.47 74145.7    2.43
 74149.8    2.1374151.41    2.0174157.16    1.5874159.95    1.3774162.11    1.21
74164.45    1.0474167.58      .874170.63     .5774175.72     .5774191.48     .63
74212.48      .774220.57     .72 74233.5     .7474241.94     .7474247.44     .96
74251.16    1.1174252.64    1.1874254.51    1.2574260.29     1.574260.94    1.52
74269.15    1.8674269.52    1.8774275.51       274278.66    2.0774287.88    2.26
74295.72    2.4374321.73    2.4674326.23    2.46 74341.2    2.4574354.12    2.44
 74367.2    2.4574371.12    2.4674385.95     2.574400.91    2.5574489.24    2.85
74497.81    2.8974538.48    2.8974548.96    2.93 74644.4    3.2774653.99    3.31
74656.32    3.3274659.23    3.3374660.68    3.3474701.36    3.3474703.84    3.35
74704.12    3.35 74886.9    3.6674890.38    3.66 74901.7    3.6874904.76    3.68
74919.14    3.6674981.19    3.6774990.77    3.69 75068.5    3.8175075.62    3.83
75118.62    3.8375119.78    3.8376419.79    4.0276424.01    4.0176438.25    3.97
 76445.8    3.9576452.62    3.9476696.28    3.47   76962    3.24 76962.3    3.24
77124.58    2.5577504.06     2.677872.36    4.1577880.05    4.19 77886.9    4.22
77889.95    4.2377950.52    4.2477959.39    4.26 77963.6    4.2778002.83    4.35
78017.35    4.3878020.98    4.39 78438.1    4.5878443.48    4.59 79060.8    4.79
79061.81    4.7979076.34    4.8379077.22    4.8379366.48    4.9779381.01    5.01
79383.48    5.0179627.56    5.1679640.64    5.1979641.07    5.1979641.65    5.19
80285.55    5.3980286.59    5.4180292.38    5.54 80301.8    5.7380311.21    5.93
80320.62    6.1380326.98    6.2680338.29    6.2680344.83    6.2780351.52    6.29

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69638.46    .063 74145.7     .0374295.72    .063

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74145.774295.72           440.82  440.82  440.82             .1       .3
Ineffective Flow     num=       0
   Sta L   Sta R    Elev  Permanent

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -4800
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INPUT
Description:
Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69808.2	4	69811.2	3.83	69815.3	3.61	69816.1	3.59	69820.9	3.44
69825.8	3.3	69826.3	3.28	69830.7	3.16	69835.6	3.01	69836	3
73723.48	2.09	74184.5	2	74189.8	1.55	74197.7	.86	74199.7	.69
74207.6	0	74279.4	.11	74289.4	.54	74291	.61	74299.3	.97
74300	1	74308.9	1.38	74309.3	1.39	74319.2	1.61	74329.2	1.82
74337.7	2	80638.7	3	80639.8	3.02	80645.9	3.17	80655.8	3.39
80665.7	3.62	80675.6	3.85	80682.3	4	80708.1	4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69808.2	.06	74184.5	.03	74337.7	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74184.5	74337.7	433.33	433.33	433.33	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -5233.3*

INPUT
Description:
Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69604.84	3.676	9607.98	3.526	9612.26	3.34	69613.1	3.336	9618.12	3.2
69623.25	3.086	9623.77	3.076	9628.38	2.976	9633.51	2.846	9633.92	2.83
73702.05	2.08	74184.5		274187.09	1.787	4190.95	1.45	74191.2	1.43
74191.93	1.367	4195.78	1.037	4196.81	.957	4200.58	.68	74201.2	.64
74201.65	.617	4203.73	.487	4206.53	.374	207.08	.267	4211.42	-.02
74213.72	-.177	4220.62	-.14	74233.9	-.097	4238.81	-.077	4247.03	-.01
74260.31	.087	4273.59	.177	4275.71	.187	4282.14	.237	4286.73	.43
74287.66	.477	4291.67	.64	74293.2	.774	299.47	.98	74300	1
74301.1	1.047	4301.77	1.077	4310.25	1.417	4310.63	1.427	4313.15	1.48
74320.07	1.637	4326.42	1.76	74329.6	1.83	74337.7		275250.84	2.13
76386.18	2.28	76995.6	2.38	77237.7	2.548	0637.96		380639.05	3.02
80645.16	3.148	0655.05	3.328	0664.96	3.528	0674.86	3.718	0681.55	3.83
80707.35	3.83								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69604.84	.06	74184.5	.03	74337.7	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74184.5	74337.7	433.33	433.33	433.33	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -5666.6*

INPUT
Description:
Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69401.47	3.336	9404.75	3.226	9409.22	3.07	69410.1	3.066	9415.34	2.96
69420.7	2.876	9421.24	2.856	9426.06	2.776	9431.41	2.676	9431.85	2.67

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73680.62    2.06 74184.5       274187.63    1.73 74192.3    1.33 74192.6    1.31
74193.48    1.2374198.15     .8274199.39     .7574203.94     .46 74204.7     .42
74205.24      .474207.75     .2774211.15      .1 74211.8     .0774217.06    -.19
74219.84    -.33 74226.4    -.2974239.02    -.21 74243.7    -.1774251.51    -.07
74264.12     .0974276.75     .2474278.77     .2774284.88     .3574289.24     .53
74290.12     .5774293.94     .7474295.39      .874301.36    1.0674301.86    1.08
74302.91    1.1274303.55    1.1474311.61    1.4474311.97    1.4574314.36     1.5
74320.95    1.6574326.98    1.77   74330    1.84 74337.7       275250.73    2.11
76385.94    2.2376995.29    2.3477237.36    2.6180637.22       380638.31    3.01
80644.41    3.1180654.31    3.2680664.21    3.4180674.11    3.57 80680.8    3.67
 80706.6    3.67

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69401.47     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -6100.*

INPUT
Description:
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 69198.1       369201.52    2.9169206.19     2.8 69207.1     2.869212.56    2.72
69218.15    2.6569218.72    2.6469223.73    2.5869229.32    2.5169229.77     2.5
 73659.2    2.05 74184.5       274188.17    1.6974193.66    1.21   74194    1.18
74195.04    1.0974200.52     .6274201.97     .54 74207.3     .2474208.19     .21
74208.83     .1874211.78     .0774215.77    -.0974216.53    -.13 74222.7    -.37
74225.95     -.574232.17    -.4474244.14    -.3274248.57    -.2874255.98    -.13
74267.95     .0974279.91     .3274281.83     .3574287.62     .4774291.75     .64
74292.59     .6874296.21     .8374297.59     .8974303.24    1.1474303.72    1.15
74304.72    1.1974305.31    1.2174312.96    1.47 74313.3    1.4874315.57    1.53
74321.81    1.6674327.53    1.7874330.41    1.85 74337.7       275250.62    2.09
 76385.7    2.1876994.98     2.377237.02    2.6980636.48       380637.57    3.01
80643.67    3.0880653.56    3.1980663.47    3.3180673.36    3.4280680.05     3.5
80705.85     3.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 69198.1     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -6533.3*

INPUT
Description:
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
68994.73    2.6768998.29    2.6169003.15    2.54 69004.1    2.5369009.79    2.48
 69015.6    2.43 69016.2    2.4369021.41    2.3969027.23    2.34 69027.7    2.33
73637.78    2.03 74184.5       274188.71    1.64   74195     1.174195.41    1.06
```

```
74196.59     .9674202.88     .4174204.55     .3374210.67     .0274211.68    -.01
74212.42    -.04 74215.8    -.1474220.38    -.2974221.25    -.3274228.33    -.55
74232.06    -.6774237.95    -.5974249.26    -.4474253.45    -.3974260.45     -.2
74271.77      .174283.07     .3974284.88     .4474290.36     .5874294.27     .75
74295.06     .7974298.48     .9374299.78     .9974305.12    1.2274305.58    1.23
74306.52    1.2674307.09    1.2874314.31     1.574314.64    1.5174316.78    1.56
74322.68    1.6874328.09     1.8 74330.8    1.85 74337.7       275250.52    2.07
76385.46    2.1376994.66    2.2577236.67    2.7680635.73       380636.83    3.01
80642.93    3.0680652.82    3.1380662.73    3.2180672.62    3.28 80679.3    3.33
 80705.1    3.33

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
68994.73     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -6966.6*

INPUT
Description:
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
68791.37    2.3368795.06    2.3168800.11    2.27 68801.1    2.2768807.02    2.24
68813.05    2.2268813.66    2.2168819.09    2.1968825.13    2.1768825.62    2.17
73616.35    2.02 74184.5       274189.26     1.674196.35     .98 74196.8     .94
74198.15     .8274205.23     .2174207.12     .1274214.03     -.274215.18    -.23
74216.01    -.2574219.83    -.3574224.98    -.4874225.98    -.5274233.97    -.72
74238.18    -.8374243.73    -.7474254.38    -.5674258.33    -.4974264.92    -.26
74275.58      .174286.23     .4774287.95     .52 74293.1      .774296.78     .86
74297.53     .8974300.75    1.0374301.98    1.0874307.02     1.374307.44    1.31
74308.33    1.3474308.86    1.3574315.67    1.5374315.98    1.5474317.99    1.58
74323.55     1.774328.65    1.81 74331.2    1.86 74337.7       275250.41    2.06
76385.22    2.0876994.35    2.2177236.34    2.8480634.99       380636.09       3
80642.19    3.0380652.08    3.0680661.98     3.180671.88    3.1480678.56    3.17
80704.35    3.17

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
68791.37     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -7400

INPUT
Description:
Station Elevation Data    num=      32
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588       2 74184.5       2 74189.8    1.55 74197.7     .86 74199.7     .69
 74207.6       0 74209.7    -.09 74217.4    -.42 74219.6    -.47 74229.6    -.68
 74230.7    -.71 74239.6     -.9 74244.3      -1 74249.5    -.89 74259.5    -.68
 74263.2     -.6 74269.4    -.32 74279.4     .11 74289.4     .54   74291     .61
```

```
 74299.3     .97   74300       1 74308.9    1.38 74309.3    1.39 74319.2    1.61
 74329.2    1.82 74337.7       2 75250.3    2.0476384.98    2.0376994.04    2.17
77235.99    2.91 80703.6       3

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -7885.7*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588    1.71 74184.5    1.7174189.73    1.27 74190.2    1.2374197.55     .59
74198.68     .4974199.53     .4274200.84     .3174207.34    -.2674209.31    -.36
74209.41    -.3674211.57    -.4674217.02    -.69 74219.2    -.7474219.84    -.76
 74222.2    -.8174226.23    -.9274229.09    -.9974230.18   -1.0374230.97   -1.05
74235.71    -1.274238.98   -1.3474243.62   -1.5274248.86   -1.34 74253.5   -1.18
74258.93   -1.0174262.66     -.974262.76    -.89 74266.3    -.75 74268.9    -.63
74272.23    -.4874278.98    -.1974281.82    -.0774289.05     .2474290.66     .31
74291.41     .3474292.95     .4174299.02     .6774299.73      .7 74300.9     .75
74301.57     .7874308.69    1.0974309.09     1.174310.09    1.1274310.48    1.13
74319.07    1.3274319.98    1.3474329.14    1.5374329.55    1.54 74337.7    1.71
 75250.3    1.7576384.98    1.7476994.04    1.8877235.99    2.62 80703.6    2.71

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -8371.4*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588    1.43 74184.5    1.4374189.68     .9974190.12     .95 74197.4     .31
74198.52     .2274199.36     .1574200.65     .0474207.08    -.5374209.03    -.63
74209.13    -.6474211.26    -.7374216.65    -.96 74218.8   -1.0274219.44   -1.04
74221.77   -1.0974225.75   -1.2274228.58   -1.3174229.65   -1.3574230.43   -1.37
74235.12   -1.5874238.34   -1.7774242.94   -2.0574248.21   -1.7974252.89   -1.56
74258.36   -1.3474262.12    -1.274262.21   -1.1974265.79   -1.0574268.41    -.94
74271.77    -.7974278.55     -.574281.42    -.37 74288.7    -.0674290.32     .01
74291.07     .0474292.62     .1174298.73     .3774299.45      .474300.63     .46
 74301.3     .4874308.48     .7974308.88      .8 74309.9     .8374310.28     .84
74318.93    1.0374319.84    1.0574329.08    1.25 74329.5    1.25 74337.7    1.43
 75250.3    1.4776384.98    1.4676994.04     1.677235.99    2.34 80703.6    2.43

Manning's n Values        num=       3
```

```
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -8857.1*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588    1.14 74184.5    1.1474189.62     .7174190.06     .6774197.25     .04
74198.35    -.0574199.19    -.1274200.46    -.2374206.81    -.7974208.74    -.91
74208.84    -.9174210.95      -174216.27   -1.2374218.41   -1.2974219.03   -1.31
74221.34   -1.3674225.27   -1.5274228.06   -1.6274229.12   -1.67 74229.9    -1.7
74234.53   -1.9574237.72   -2.2174242.26   -2.5774247.57   -2.2474252.28   -1.94
74257.79   -1.6874261.57   -1.4974261.67   -1.4974265.27   -1.3674267.91   -1.24
74271.29    -1.174278.12     -.874281.02    -.6874288.34    -.3674289.98    -.29
74290.73    -.26 74292.3    -.1974298.45     .0874299.18     .1174300.37     .16
74301.05     .1974308.27      .574308.67     .51 74309.7     .5474310.09     .55
 74318.8     .7474319.72     .7674329.02     .9674329.44     .97 74337.7    1.14
 75250.3    1.1876384.98    1.1776994.04    1.3177235.99    2.05 80703.6    2.14

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -9342.8*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588     .86 74184.5     .8674189.55     .4374189.99     .39 74197.1    -.23
 74198.2    -.3274199.01    -.3974200.27     -.574206.55   -1.0574208.46   -1.18
74208.55   -1.1874210.64   -1.27 74215.9    -1.5   74218   -1.5774218.62   -1.59
74220.91   -1.6474224.79   -1.8174227.55   -1.94 74228.6   -1.9974229.36   -2.02
74233.94   -2.3274237.09   -2.6474241.57    -3.174246.93   -2.6974251.67   -2.32
74257.22   -2.0174261.03   -1.7974261.12   -1.7974264.75   -1.6774267.41   -1.55
74270.82    -1.4 74277.7   -1.1174280.61    -.9874287.99    -.6674289.64    -.59
74290.41    -.5674291.97    -.4974298.18    -.22 74298.9    -.1974300.09    -.14
74300.78    -.1174308.06      .274308.47     .22 74309.5     .2574309.89     .26
74318.66     .4674319.59     .4874328.95     .6774329.38     .68 74337.7     .86
 75250.3      .976384.98     .8976994.04    1.0377235.99    1.77 80703.6    1.86

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3
```

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -9828.5*

INPUT
Description:
Station Elevation Data num= 55

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68588	.57	74184.5	.57	74189.49	.157	4189.93	.117	4196.95	-.5
74198.03	-.67	4198.84	-.67	74200.08	-.77	74206.28	-1.317	4208.17	-1.45
74208.27	-1.467	4210.33	-1.557	4215.52	-1.77	74217.6	-1.847	4218.21	-1.87
74220.47	-1.92	74224.3	-2.117	4227.03	-2.257	4228.08	-2.317	4228.83	-2.34
74233.35	-2.697	4236.47	-3.087	4240.89	-3.627	4246.29	-3.147	4251.06	-2.71
74256.65	-2.347	4260.48	-2.097	4260.59	-2.087	4264.23	-1.987	4266.91	-1.86
74270.34	-1.717	4277.27	-1.41	74280.2	-1.287	4287.64	-.96	74289.3	-.89
74290.07	-.867	4291.65	-.79	74297.9	-.527	4298.62	-.497	4299.83	-.44
74300.52	-.417	4307.85	-.097	4308.26	-.08	74309.3	-.04	74309.7	-.03
74318.53	.177	4319.46	.197	4328.89	.387	4329.32	.39	74337.7	.57
75250.3	.617	6384.98	.67	6994.04	.747	7235.99	1.48	80703.6	1.57

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
68588	.06	74184.5	.03	74337.7	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74184.5	74337.7	485.71	485.71	485.71	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -10314.*

INPUT
Description:
Station Elevation Data num= 55

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68588	.29	74184.5	.29	74189.44	-.137	4189.86	-.17	74196.8	-.78
74197.87	-.87	4198.66	-.94	74199.89	-1.047	4206.02	-1.587	4207.89	-1.73
74207.98	-1.737	4210.02	-1.827	4215.15	-2.04	74217.2	-2.12	74217.8	-2.14
74220.04	-2.197	4223.83	-2.417	4226.52	-2.567	4227.55	-2.627	4228.29	-2.67
74232.76	-3.077	4235.84	-3.517	4240.21	-4.157	4245.64	-3.587	4250.45	-3.09
74256.08	-2.677	4259.95	-2.397	4260.04	-2.387	4263.72	-2.297	4266.41	-2.17
74269.88	-2.017	4276.84	-1.71	74279.8	-1.597	4287.29	-1.277	4288.96	-1.19
74289.73	-1.167	4291.32	-1.097	4297.62	-.827	4298.35	-.797	4299.56	-.73
74300.26	-.77	4307.64	-.397	4308.05	-.37	74309.1	-.337	4309.49	-.32
74318.39	-.127	4319.33	-.17	4328.83	.17	4329.27	.11	74337.7	.29
75250.3	.337	6384.98	.32	6994.04	.467	7235.99	1.2	80703.6	1.29

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
68588	.06	74184.5	.03	74337.7	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74184.5	74337.7	485.71	485.71	485.71	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch

REACH: 1 RS: -10800

INPUT
Description:
Station Elevation Data num= 32

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68588	0	74184.5	0	74189.8	-.45	74197.7	-1.14	74199.7	-1.31
74207.6	-2	74209.7	-2.09	74217.4	-2.42	74219.6	-2.47	74223.34	-2.71
74227.76	-2.99	74232.17	-3.44	74239.53	-4.67	74249.84	-3.47	74259.5	-2.68
74263.2	-2.6	74269.4	-2.32	74279.4	-1.89	74289.4	-1.46	74291	-1.39
74299.3	-1.03	74300	-1	74308.9	-.62	74309.3	-.61	74319.2	-.39
74329.2	-.18	74337.7	0	75250.3	.047	6384.98	.037	6994.04	.17
77235.99	.91	80703.6	1						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
68588	.06	74184.5	.03	74337.7	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74184.5	74337.7	0	0	0	.1	.3

SUMMARY OF MANNING'S N VALUES

River:Walleyleg_Branch

Reach	River Sta.	n1	n2	n3	n4	n5	n6	n7
1	800	.11	.04	.11				
1	700	.11	.04	.11				
1	600	.11	.04	.11				
1	532.5*	.11	.04	.11				
1	465	.11	.08	.04	.08	.11		
1	335	.11	.08	.04	.08	.1		
1	267.5*	.11	.04	.08				
1	200	.11	.04	.08				
1	100	.1	.04	.08				
1	0	.1	.04	.08				
1	-590.*	.1	.035	.08	.08	.065	.08	.08
1	-1180	.1	.035	.08	.05	.08		
1	-1590.*	.09	.035	.08	.08	.065	.08	.08
1	-2000	.08	.035	.08				
1	-2400.*	.077	.03	.077				
1	-2800.*	.074	.03	.074				

1	-3200.*	.071	.03	.071
1	-3600.*	.069	.03	.069
1	-4000.*	.066	.03	.066
1	-4400.*	.063	.03	.063
1	-4800	.06	.03	.06
1	-5233.3*	.06	.03	.06
1	-5666.6*	.06	.03	.06
1	-6100.*	.06	.03	.06
1	-6533.3*	.06	.03	.06
1	-6966.6*	.06	.03	.06
1	-7400	.06	.03	.06
1	-7885.7*	.06	.03	.06
1	-8371.4*	.06	.03	.06
1	-8857.1*	.06	.03	.06
1	-9342.8*	.06	.03	.06
1	-9828.5*	.06	.03	.06
1	-10314.*	.06	.03	.06
1	-10800	.06	.03	.06

SUMMARY OF REACH LENGTHS

River: Walleyleg_Branch

Reach	River Sta.	Left	Channel	Right
1	800	100	100	100
1	700	100	100	100
1	600	67.5	67.5	67.5
1	532.5*	67.5	67.5	67.5
1	465	130	130	130
1	335	67.5	67.5	67.5
1	267.5*	67.5	67.5	67.5
1	200	100	100	100
1	100	100	100	100
1	0	425	410	250
1	-590.*	425	410	250
1	-1180	900	410	410
1	-1590.*	900	410	410
1	-2000	440.82	440.82	440.82
1	-2400.*	440.82	440.82	440.82

1	-2800.*	440.82	440.82	440.82
1	-3200.*	440.82	440.82	440.82
1	-3600.*	440.82	440.82	440.82
1	-4000.*	440.82	440.82	440.82
1	-4400.*	440.82	440.82	440.82
1	-4800	433.33	433.33	433.33
1	-5233.3*	433.33	433.33	433.33
1	-5666.6*	433.33	433.33	433.33
1	-6100.*	433.33	433.33	433.33
1	-6533.3*	433.33	433.33	433.33
1	-6966.6*	433.33	433.33	433.33
1	-7400	485.71	485.71	485.71
1	-7885.7*	485.71	485.71	485.71
1	-8371.4*	485.71	485.71	485.71
1	-8857.1*	485.71	485.71	485.71
1	-9342.8*	485.71	485.71	485.71
1	-9828.5*	485.71	485.71	485.71
1	-10314.*	485.71	485.71	485.71
1	-10800	0	0	0

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: Walleyleg_Branch

Reach	River Sta.	Contr.	Expan.
1	800	.1	.3
1	700	.1	.3
1	600	.1	.3
1	532.5*	.1	.3
1	465	.1	.3
1	335	.1	.3
1	267.5*	.1	.3
1	200	.1	.3
1	100	.1	.3
1	0	.1	.3
1	-590.*	.1	.3
1	-1180	.1	.3
1	-1590.*	.1	.3
1	-2000	.1	.3
1	-2400.*	.1	.3
1	-2800.*	.1	.3
1	-3200.*	.1	.3
1	-3600.*	.1	.3
1	-4000.*	.1	.3
1	-4400.*	.1	.3
1	-4800	.1	.3
1	-5233.3*	.1	.3
1	-5666.6*	.1	.3
1	-6100.*	.1	.3
1	-6533.3*	.1	.3
1	-6966.6*	.1	.3
1	-7400	.1	.3
1	-7885.7*	.1	.3
1	-8371.4*	.1	.3
1	-8857.1*	.1	.3
1	-9342.8*	.1	.3
1	-9828.5*	.1	.3
1	-10314.*	.1	.3
1	-10800	.1	.3

Natural Steady Model

HEC-RAS Plan: Nat_SteadyRiver Locations: User Defined

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)	
Walleyleg_Branch	1	800	2 yr	78.00	9.69	11.13	10.44	11.14	0.000697	0.93	96.07	145.60	0.17
Walleyleg_Branch	1	800	10 yr	223.00	9.69	12.08	10.79	12.10	0.000438	1.18	274.36	220.72	0.15
Walleyleg_Branch	1	800	25 yr	314.00	9.69	12.45	10.95	12.48	0.000452	1.36	362.28	261.08	0.16
Walleyleg_Branch	1	800	100 yr	910.00	9.69	15.43	11.68	15.43	0.000032	0.63	6224.99	4239.59	0.05
Walleyleg_Branch	1	800	500 yr	1040.00	9.69	18.20	11.81	18.20	0.000002	0.19	24183.19	7482.55	0.01
Walleyleg_Branch	1	600	2 yr	78.00	9.22	10.96	10.16	10.99	0.000949	1.29	74.29	101.53	0.21
Walleyleg_Branch	1	600	10 yr	223.00	9.22	11.95	10.65	11.99	0.000772	1.73	221.66	187.57	0.21
Walleyleg_Branch	1	600	25 yr	314.00	9.22	12.31	10.88	12.36	0.000819	1.98	292.79	206.20	0.22
Walleyleg_Branch	1	600	100 yr	910.00	9.22	15.42	11.90	15.42	0.000052	0.85	5345.18	3462.20	0.06
Walleyleg_Branch	1	600	500 yr	1040.00	9.22	18.20	12.05	18.20	0.000003	0.25	21103.26	7727.20	0.02
Walleyleg_Branch	1	465	2 yr	78.00	8.90	10.84	9.65	10.86	0.000799	1.33	58.84	41.09	0.20
Walleyleg_Branch	1	465	10 yr	223.00	8.90	11.77	10.29	11.84	0.001256	2.22	102.94	56.66	0.26
Walleyleg_Branch	1	465	25 yr	314.00	8.90	12.07	10.59	12.19	0.001591	2.72	123.29	103.24	0.30
Walleyleg_Branch	1	465	100 yr	910.00	8.90	15.41	11.92	15.41	0.000029	0.64	6010.48	3473.49	0.05
Walleyleg_Branch	1	465	500 yr	1040.00	8.90	18.20	12.77	18.20	0.000002	0.22	20892.79	7506.92	0.01
Walleyleg_Branch	1	335	2 yr	78.00	8.80	10.70	9.62	10.74	0.001213	1.52	51.20	39.55	0.24
Walleyleg_Branch	1	335	10 yr	223.00	8.80	11.57	10.29	11.65	0.001748	2.37	122.10	225.51	0.30
Walleyleg_Branch	1	335	25 yr	314.00	8.80	11.88	10.64	11.97	0.001679	2.57	205.54	285.88	0.30
Walleyleg_Branch	1	335	100 yr	910.00	8.80	15.41	12.09	15.41	0.000023	0.57	6515.59	4565.98	0.04
Walleyleg_Branch	1	335	500 yr	1040.00	8.80	18.20	12.19	18.20	0.000001	0.17	26828.89	8242.63	0.01
Walleyleg_Branch	1	200	2 yr	78.00	8.75	10.42	9.90	10.50	0.004261	2.23	35.01	40.88	0.42
Walleyleg_Branch	1	200	10 yr	223.00	8.75	11.15	10.56	11.30	0.005760	3.16	73.54	65.80	0.51
Walleyleg_Branch	1	200	25 yr	314.00	8.75	11.44	10.83	11.61	0.006165	3.43	106.97	197.21	0.53
Walleyleg_Branch	1	200	100 yr	910.00	8.75	15.40	11.94	15.41	0.000035	0.66	5421.88	5640.48	0.05
Walleyleg_Branch	1	200	500 yr	1040.00	8.75	18.20	12.05	18.20	0.000001	0.15	26650.93	7643.07	0.01
Walleyleg_Branch	1	0	2 yr	78.00	7.94	9.69	9.12	9.72	0.001595	1.51	73.34	116.53	0.26
Walleyleg_Branch	1	0	10 yr	223.00	7.94	9.59	9.59	9.92	0.018950	4.88	62.68	110.89	0.89
Walleyleg_Branch	1	0	25 yr	314.00	7.94	10.77	9.78	10.84	0.001529	2.39	243.64	220.95	0.29
Walleyleg_Branch	1	0	100 yr	910.00	7.94	15.40	10.52	15.40	0.000015	0.51	7585.60	6896.16	0.03
Walleyleg_Branch	1	0	500 yr	1040.00	7.94	18.20	10.79	18.20	0.000001	0.13	30476.54	7611.60	0.01

HEC-RAS Plan: Nat_SteadyRiver Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Vel Head	Frctn Loss	C & E Loss	Q Left	Q Channel	Q Right	Top Width
				(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft)
Walleyleg_Branch	1	800	2 yr	11.14	11.13	0.01	0.07	0.00	1.14	75.91	0.95	145.60
Walleyleg_Branch	1	800	10 yr	12.10	12.08	0.02	0.05	0.00	16.67	195.98	10.35	220.72
Walleyleg_Branch	1	800	25 yr	12.48	12.45	0.02	0.05	0.00	29.62	268.40	15.99	261.08
Walleyleg_Branch	1	800	100 yr	15.43	15.43	0.00	0.00	0.00	128.17	290.23	491.60	4239.59
Walleyleg_Branch	1	800	500 yr	18.20	18.20	0.00	0.00	0.00	312.11	133.52	594.37	7482.55
Walleyleg_Branch	1	600	2 yr	10.99	10.96	0.02	0.07	0.00	1.49	75.01	1.50	101.53
Walleyleg_Branch	1	600	10 yr	11.99	11.95	0.04	0.06	0.00	20.01	184.91	18.08	187.57
Walleyleg_Branch	1	600	25 yr	12.36	12.31	0.05	0.07	0.00	36.57	245.75	31.68	206.20
Walleyleg_Branch	1	600	100 yr	15.42	15.42	0.00	0.00	0.00	125.19	233.69	551.12	3462.20
Walleyleg_Branch	1	600	500 yr	18.20	18.20	0.00	0.00	0.00	233.06	102.60	704.34	7727.20
Walleyleg_Branch	1	465	2 yr	10.86	10.84	0.03	0.13	0.00		78.00		41.09
Walleyleg_Branch	1	465	10 yr	11.84	11.77	0.08	0.19	0.00	0.60	222.30	0.10	56.66
Walleyleg_Branch	1	465	25 yr	12.19	12.07	0.11	0.21	0.01	2.34	310.89	0.77	103.24
Walleyleg_Branch	1	465	100 yr	15.41	15.41	0.00	0.00	0.00	223.03	170.92	516.05	3473.49
Walleyleg_Branch	1	465	500 yr	18.20	18.20	0.00	0.00	0.00	280.76	85.14	674.10	7506.92
Walleyleg_Branch	1	335	2 yr	10.74	10.70	0.04	0.09	0.00		78.00		39.55
Walleyleg_Branch	1	335	10 yr	11.65	11.57	0.08	0.13	0.00	1.08	215.05	6.87	225.51
Walleyleg_Branch	1	335	25 yr	11.97	11.88	0.09	0.12	0.00	3.22	271.50	39.28	285.88
Walleyleg_Branch	1	335	100 yr	15.41	15.41	0.00	0.00	0.00	169.20	156.67	584.14	4565.98
Walleyleg_Branch	1	335	500 yr	18.20	18.20	0.00	0.00	0.00	369.83	67.87	602.30	8242.63
Walleyleg_Branch	1	200	2 yr	10.50	10.42	0.08	0.49	0.00		77.99	0.01	40.88
Walleyleg_Branch	1	200	10 yr	11.30	11.15	0.15	0.52	0.00		219.11	3.89	65.80
Walleyleg_Branch	1	200	25 yr	11.61	11.44	0.18	0.50	0.00	0.05	302.30	11.66	197.21
Walleyleg_Branch	1	200	100 yr	15.41	15.40	0.00	0.00	0.00	86.75	238.42	584.83	5640.48
Walleyleg_Branch	1	200	500 yr	18.20	18.20	0.00	0.00	0.00	335.72	80.65	623.63	7643.07
Walleyleg_Branch	1	0	2 yr	9.72	9.69	0.03	1.65	0.02	2.76	67.23	8.01	116.53
Walleyleg_Branch	1	0	10 yr	9.92	9.59	0.33	0.16	0.10	6.38	197.59	19.03	110.89
Walleyleg_Branch	1	0	25 yr	10.84	10.77	0.06	0.02	0.02	22.58	219.04	72.39	220.95
Walleyleg_Branch	1	0	100 yr	15.40	15.40	0.00	0.00	0.00	122.55	148.84	638.61	6896.16
Walleyleg_Branch	1	0	500 yr	18.20	18.20	0.00	0.00	0.00	372.35	53.05	614.60	7611.60

Plan: Nat_SteadyRiver Walleyleg_Branch 1 RS: 335 Profile: 2 yr

E.G. Elev (ft)	10.74	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.04	Wt. n-Val.		0.040	
W.S. Elev (ft)	10.70	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)	9.62	Flow Area (sq ft)		51.20	
E.G. Slope (ft/ft)	0.001213	Area (sq ft)		51.20	
Q Total (cfs)	78.00	Flow (cfs)		78.00	
Top Width (ft)	39.55	Top Width (ft)		39.55	
Vel Total (ft/s)	1.52	Avg. Vel. (ft/s)		1.52	
Max Chl Dpth (ft)	1.90	Hydr. Depth (ft)		1.29	
Conv. Total (cfs)	2239.1	Conv. (cfs)		2239.1	
Length Wtd. (ft)	67.50	Wetted Per. (ft)		40.08	
Min Ch El (ft)	8.80	Shear (lb/sq ft)		0.10	
Alpha	1.00	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.09	Cum Volume (acre-ft)	6222.62	222.66	5596.84
C & E Loss (ft)	0.00	Cum SA (acres)	1179.95	35.92	1099.63

Plan: Nat_SteadyRiver Walleyleg_Branch 1 RS: 335 Profile: 25 yr

E.G. Elev (ft)	11.97	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.09	Wt. n-Val.	0.080	0.040	0.080
W.S. Elev (ft)	11.88	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)	10.64	Flow Area (sq ft)	7.33	105.81	92.40
E.G. Slope (ft/ft)	0.001679	Area (sq ft)	7.33	105.81	92.40
Q Total (cfs)	314.00	Flow (cfs)	3.22	271.50	39.28
Top Width (ft)	285.88	Top Width (ft)	16.70	47.75	221.43
Vel Total (ft/s)	1.53	Avg. Vel. (ft/s)	0.44	2.57	0.43
Max Chl Dpth (ft)	3.08	Hydr. Depth (ft)	0.44	2.22	0.42
Conv. Total (cfs)	7662.2	Conv. (cfs)	78.6	6625.1	958.5
Length Wtd. (ft)	67.50	Wetted Per. (ft)	16.72	48.35	221.47
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.05	0.23	0.04
Alpha	2.45	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.12	Cum Volume (acre-ft)	10152.46	338.07	9258.52
C & E Loss (ft)	0.00	Cum SA (acres)	1283.02	36.63	1196.78

Plan: Nat_SteadyRiver Walleyleg_Branch 1 RS: 335 Profile: 100 yr

E.G. Elev (ft)	15.41	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.088	0.040	0.093
W.S. Elev (ft)	15.41	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)	12.09	Flow Area (sq ft)	1239.20	274.31	5002.08
E.G. Slope (ft/ft)	0.000023	Area (sq ft)	1528.00	274.31	5002.08
Q Total (cfs)	910.00	Flow (cfs)	169.20	156.67	584.14
Top Width (ft)	4565.98	Top Width (ft)	1550.70	47.75	2967.53
Vel Total (ft/s)	0.14	Avg. Vel. (ft/s)	0.14	0.57	0.12
Max Chl Dpth (ft)	6.61	Hydr. Depth (ft)	2.13	5.74	1.69
Conv. Total (cfs)	188279.2	Conv. (cfs)	35006.9	32414.2	120858.0
Length Wtd. (ft)	67.50	Wetted Per. (ft)	582.19	48.35	2967.89
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.00	0.01	0.00
Alpha	3.51	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	16397.51	506.33	15040.25
C & E Loss (ft)	0.00	Cum SA (acres)	1434.03	36.63	1348.92

Plan: Nat_SteadyRiver Walleyleg_Branch 1 RS: 335 Profile: 500 yr

E.G. Elev (ft)	18.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.102	0.040	0.096
W.S. Elev (ft)	18.20	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)	12.19	Flow Area (sq ft)	11456.60	407.61	14964.69
E.G. Slope (ft/ft)	0.000001	Area (sq ft)	11456.60	407.61	14964.69

Plan: Nat_SteadyRiver Walleyleg_Branch 1 RS: 335 Profile: 500 yr (Continued)

Q Total (cfs)	1040.00	Flow (cfs)	369.83	67.87	602.30
Top Width (ft)	8242.63	Top Width (ft)	4080.47	47.75	4114.41
Vel Total (ft/s)	0.04	Avg. Vel. (ft/s)	0.03	0.17	0.04
Max Chl Dpth (ft)	9.40	Hydr. Depth (ft)	2.81	8.54	3.64
Conv. Total (cfs)	961111.4	Conv. (cfs)	341775.8	62719.1	556616.6
Length Wtd. (ft)	67.50	Wetted Per. (ft)	4083.26	48.35	4114.83
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.00	0.00	0.00
Alpha	2.07	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	20444.84	608.89	18951.56
C & E Loss (ft)	0.00	Cum SA (acres)	1448.66	36.63	1435.43

Natural 100 year Unsteady Model

HEC-RAS Plan: Nat_SS100yrBase Locations: User Defined

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)	
Walleyleg_Branch	1	800	01SEP2015 1100	40.00	9.69	13.85		13.85	0.000001	0.09	1365.80	2056.73	0.01
Walleyleg_Branch	1	800	01SEP2015 1106	40.00	9.69	14.16		14.16	0.000001	0.07	2145.86	2796.04	0.01
Walleyleg_Branch	1	800	01SEP2015 1112	40.00	9.69	14.49		14.49	0.000000	0.05	3125.36	3019.03	0.00
Walleyleg_Branch	1	800	01SEP2015 1118	40.00	9.69	14.83		14.83	0.000000	0.04	4187.08	3910.81	0.00
Walleyleg_Branch	1	800	01SEP2015 1124	40.00	9.69	15.12		15.12	0.000000	0.03	5172.80	4103.64	0.00
Walleyleg_Branch	1	800	01SEP2015 1130	40.00	9.69	15.31		15.31	0.000000	0.03	5807.27	4198.73	0.00
Walleyleg_Branch	1	800	01SEP2015 1136	40.00	9.69	15.34		15.34	0.000000	0.03	5914.25	4213.70	0.00
Walleyleg_Branch	1	600	01SEP2015 1100	-286.98	9.22	13.85		13.86	0.000078	-0.84	1204.78	1485.96	0.07
Walleyleg_Branch	1	600	01SEP2015 1106	-372.55	9.22	14.16		14.17	0.000080	-0.89	1744.64	2025.13	0.07
Walleyleg_Branch	1	600	01SEP2015 1112	-518.28	9.22	14.49		14.50	0.000089	-0.99	2519.43	2599.41	0.08
Walleyleg_Branch	1	600	01SEP2015 1118	-551.60	9.22	14.83		14.84	0.000054	-0.80	3514.59	3060.82	0.06
Walleyleg_Branch	1	600	01SEP2015 1124	-429.68	9.22	15.13		15.13	0.000019	-0.49	4419.19	3157.55	0.04
Walleyleg_Branch	1	600	01SEP2015 1130	-176.33	9.22	15.31		15.31	0.000002	-0.18	4994.55	3230.56	0.01
Walleyleg_Branch	1	600	01SEP2015 1136	148.05	9.22	15.34		15.34	0.000002	0.15	5089.98	3292.87	0.01
Walleyleg_Branch	1	465	01SEP2015 1100	-483.54	8.90	13.87		13.87	0.000108	-1.02	1621.85	1399.74	0.09
Walleyleg_Branch	1	465	01SEP2015 1106	-638.85	8.90	14.18		14.18	0.000109	-1.07	2250.23	2496.09	0.09
Walleyleg_Branch	1	465	01SEP2015 1112	-888.52	8.90	14.51		14.52	0.000117	-1.16	3174.97	2967.97	0.09
Walleyleg_Branch	1	465	01SEP2015 1118	-915.30	8.90	14.84		14.84	0.000073	-0.95	4175.64	3223.34	0.07
Walleyleg_Branch	1	465	01SEP2015 1124	-737.05	8.90	15.13		15.13	0.000029	-0.63	5089.73	3318.81	0.05
Walleyleg_Branch	1	465	01SEP2015 1130	-308.84	8.90	15.31		15.31	0.000004	-0.23	5668.44	3428.80	0.02
Walleyleg_Branch	1	465	01SEP2015 1136	216.73	8.90	15.34		15.34	0.000002	0.16	5762.00	3440.59	0.01
Walleyleg_Branch	1	335	01SEP2015 1100	-664.07	8.80	13.88		13.89	0.000177	-1.28	1766.68	2298.01	0.11
Walleyleg_Branch	1	335	01SEP2015 1106	-900.82	8.80	14.19		14.20	0.000180	-1.35	2560.84	2715.94	0.11
Walleyleg_Branch	1	335	01SEP2015 1112	-1281.04	8.80	14.53		14.54	0.000191	-1.46	3513.29	2985.41	0.12
Walleyleg_Branch	1	335	01SEP2015 1118	-1277.71	8.80	14.85		14.86	0.000113	-1.17	4553.05	3525.51	0.09
Walleyleg_Branch	1	335	01SEP2015 1124	-1064.52	8.80	15.13		15.13	0.000049	-0.80	5526.39	4007.54	0.06
Walleyleg_Branch	1	335	01SEP2015 1130	-452.46	8.80	15.31		15.31	0.000007	-0.30	6147.71	4368.38	0.02
Walleyleg_Branch	1	335	01SEP2015 1136	293.35	8.80	15.33		15.33	0.000003	0.19	6246.39	4423.77	0.01
Walleyleg_Branch	1	200	01SEP2015 1100	-881.15	8.75	13.92		13.96	0.000531	-2.06	1138.26	1210.50	0.19
Walleyleg_Branch	1	200	01SEP2015 1106	-1206.93	8.75	14.23		14.28	0.000643	-2.40	1650.78	2072.67	0.21
Walleyleg_Branch	1	200	01SEP2015 1112	-1684.86	8.75	14.57		14.62	0.000709	-2.65	2573.54	3366.06	0.22
Walleyleg_Branch	1	200	01SEP2015 1118	-1743.91	8.75	14.87		14.90	0.000366	-1.99	3571.29	5114.80	0.16
Walleyleg_Branch	1	200	01SEP2015 1124	-1453.64	8.75	15.14		15.15	0.000145	-1.30	4479.29	5367.24	0.10
Walleyleg_Branch	1	200	01SEP2015 1130	-648.84	8.75	15.31		15.31	0.000021	-0.51	5069.03	5523.93	0.04
Walleyleg_Branch	1	200	01SEP2015 1136	402.88	8.75	15.33		15.33	0.000008	0.31	5159.00	5547.39	0.02
Walleyleg_Branch	1	0	01SEP2015 1100	-1292.22	7.94	14.00		14.04	0.000405	-2.28	2502.96	3112.86	0.17
Walleyleg_Branch	1	0	01SEP2015 1106	-1823.19	7.94	14.34		14.37	0.000409	-2.39	3612.65	3834.20	0.18
Walleyleg_Branch	1	0	01SEP2015 1112	-2330.25	7.94	14.67		14.69	0.000335	-2.24	4787.57	4885.11	0.16
Walleyleg_Branch	1	0	01SEP2015 1118	-2593.74	7.94	14.93		14.95	0.000256	-2.02	5762.65	6290.27	0.14
Walleyleg_Branch	1	0	01SEP2015 1124	-2120.37	7.94	15.16		15.17	0.000116	-1.39	6644.31	6658.01	0.10
Walleyleg_Branch	1	0	01SEP2015 1130	-978.01	7.94	15.31		15.31	0.000020	-0.58	7212.21	6783.27	0.04
Walleyleg_Branch	1	0	01SEP2015 1136	634.22	7.94	15.33		15.33	0.000008	0.37	7286.08	6801.29	0.03

HEC-RAS Plan: Nat_SS100yrBase Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Vel Head	Frctn Loss	C & E Loss	Q Left	Q Channel	Q Right	Top Width
				(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft)
Walleyleg_Branch	1	800	01SEP2015 1100	13.85	13.85	0.00	0.00		5.60	29.03	5.37	2056.73
Walleyleg_Branch	1	800	01SEP2015 1106	14.16	14.16	0.00	0.00		5.86	24.59	9.55	2796.04
Walleyleg_Branch	1	800	01SEP2015 1112	14.49	14.49	0.00	0.00		5.80	20.05	14.15	3019.03
Walleyleg_Branch	1	800	01SEP2015 1118	14.83	14.83	0.00	0.00		5.71	16.62	17.67	3910.81
Walleyleg_Branch	1	800	01SEP2015 1124	15.12	15.12	0.00	0.00		5.61	14.32	20.07	4103.64
Walleyleg_Branch	1	800	01SEP2015 1130	15.31	15.31	0.00	0.00		5.57	13.20	21.24	4198.73
Walleyleg_Branch	1	800	01SEP2015 1136	15.34	15.34	0.00	0.00		5.66	13.26	21.08	4213.70
Walleyleg_Branch	1	600	01SEP2015 1100	13.86	13.85	0.01	0.01		-48.30	-167.52	-71.15	1485.96
Walleyleg_Branch	1	600	01SEP2015 1106	14.17	14.16	0.01	0.01		-63.05	-190.86	-118.63	2025.13
Walleyleg_Branch	1	600	01SEP2015 1112	14.50	14.49	0.01	0.01		-86.70	-228.28	-203.30	2599.41
Walleyleg_Branch	1	600	01SEP2015 1118	14.84	14.83	0.00	0.00		-86.44	-199.09	-266.07	3060.82
Walleyleg_Branch	1	600	01SEP2015 1124	15.13	15.13	0.00	0.00		-62.45	-129.04	-238.19	3157.55
Walleyleg_Branch	1	600	01SEP2015 1130	15.31	15.31	0.00	0.00		-24.71	-47.89	-103.73	3230.56
Walleyleg_Branch	1	600	01SEP2015 1136	15.34	15.34	0.00	0.00		20.64	39.59	87.83	3292.87
Walleyleg_Branch	1	465	01SEP2015 1100	13.87	13.87	0.01	0.02		-137.93	-198.40	-147.21	1399.74
Walleyleg_Branch	1	465	01SEP2015 1106	14.18	14.18	0.01	0.02		-186.48	-223.76	-228.62	2496.09
Walleyleg_Branch	1	465	01SEP2015 1112	14.52	14.51	0.01	0.02		-252.94	-259.90	-375.68	2967.97
Walleyleg_Branch	1	465	01SEP2015 1118	14.84	14.84	0.00	0.01		-251.89	-228.46	-434.94	3223.34
Walleyleg_Branch	1	465	01SEP2015 1124	15.13	15.13	0.00	0.01		-190.85	-158.10	-388.10	3318.81
Walleyleg_Branch	1	465	01SEP2015 1130	15.31	15.31	0.00	0.00		-77.16	-60.78	-170.89	3428.80
Walleyleg_Branch	1	465	01SEP2015 1136	15.34	15.34	0.00	0.00		53.85	42.10	120.77	3440.59
Walleyleg_Branch	1	335	01SEP2015 1100	13.89	13.88	0.01	0.02		-93.48	-257.76	-312.82	2298.01
Walleyleg_Branch	1	335	01SEP2015 1106	14.20	14.19	0.01	0.02		-142.67	-292.61	-465.54	2715.94
Walleyleg_Branch	1	335	01SEP2015 1112	14.54	14.53	0.01	0.02		-222.65	-339.01	-719.38	2985.41
Walleyleg_Branch	1	335	01SEP2015 1118	14.86	14.85	0.01	0.01		-237.29	-290.57	-749.84	3525.51
Walleyleg_Branch	1	335	01SEP2015 1124	15.13	15.13	0.00	0.00		-198.24	-208.49	-657.79	4007.54
Walleyleg_Branch	1	335	01SEP2015 1130	15.31	15.31	0.00	0.00		-84.32	-81.64	-286.49	4368.38
Walleyleg_Branch	1	335	01SEP2015 1136	15.33	15.33	0.00	0.00		54.64	52.25	186.46	4423.77
Walleyleg_Branch	1	200	01SEP2015 1100	13.96	13.92	0.04	0.05		-98.30	-535.02	-247.83	1210.50
Walleyleg_Branch	1	200	01SEP2015 1106	14.28	14.23	0.05	0.06		-142.40	-672.98	-391.55	2072.67
Walleyleg_Branch	1	200	01SEP2015 1112	14.62	14.57	0.05	0.06		-200.72	-806.77	-677.37	3366.06
Walleyleg_Branch	1	200	01SEP2015 1118	14.90	14.87	0.02	0.03		-186.16	-647.55	-910.20	5114.80
Walleyleg_Branch	1	200	01SEP2015 1124	15.15	15.14	0.01	0.01		-145.10	-447.29	-861.25	5367.24
Walleyleg_Branch	1	200	01SEP2015 1130	15.31	15.31	0.00	0.00		-62.78	-179.91	-406.15	5523.93
Walleyleg_Branch	1	200	01SEP2015 1136	15.33	15.33	0.00	0.00		38.83	110.06	253.99	5547.39
Walleyleg_Branch	1	0	01SEP2015 1100	14.04	14.00	0.03	0.01		-262.74	-528.07	-501.41	3112.86
Walleyleg_Branch	1	0	01SEP2015 1106	14.37	14.34	0.03	0.02		-334.19	-586.81	-902.19	3834.20
Walleyleg_Branch	1	0	01SEP2015 1112	14.69	14.67	0.02	0.02		-376.31	-583.56	-1370.38	4885.11
Walleyleg_Branch	1	0	01SEP2015 1118	14.95	14.93	0.02	0.01		-387.57	-548.01	-1658.16	6290.27
Walleyleg_Branch	1	0	01SEP2015 1124	15.17	15.16	0.01	0.01		-299.54	-392.36	-1428.47	6658.01
Walleyleg_Branch	1	0	01SEP2015 1130	15.31	15.31	0.00	0.00		-134.03	-167.62	-676.35	6783.27
Walleyleg_Branch	1	0	01SEP2015 1136	15.33	15.33	0.00	0.00		86.60	107.67	439.94	6801.29

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1100

E.G. Elev (ft)	13.87	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.01	Wt. n-Val.	0.082	0.040	0.095
W.S. Elev (ft)	13.87	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	544.76	195.45	881.63
E.G. Slope (ft/ft)	0.000108	Area (sq ft)	544.76	195.45	881.63
Q Total (cfs)	-483.54	Flow (cfs)	-137.93	-198.40	-147.21
Top Width (ft)	1399.74	Top Width (ft)	353.13	45.34	1001.27
Vel Total (ft/s)	-0.30	Avg. Vel. (ft/s)	-0.25	-1.02	-0.17
Max Chl Dpth (ft)	4.97	Hydr. Depth (ft)	1.54	4.31	0.88
Conv. Total (cfs)	46547.2	Conv. (cfs)	13277.7	19098.4	14171.1
Length Wtd. (ft)	130.00	Wetted Per. (ft)	353.22	45.82	1001.38
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.01	0.03	0.01
Alpha	5.06	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	15112.29	474.15	13947.03
C & E Loss (ft)		Cum SA (acres)	1378.31	36.77	1288.62

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1106

E.G. Elev (ft)	14.18	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.01	Wt. n-Val.	0.082	0.040	0.096
W.S. Elev (ft)	14.18	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	654.56	209.45	1386.21
E.G. Slope (ft/ft)	0.000109	Area (sq ft)	655.00	209.45	1386.21
Q Total (cfs)	-638.85	Flow (cfs)	-186.48	-223.76	-228.62
Top Width (ft)	2496.09	Top Width (ft)	367.21	45.34	2083.53
Vel Total (ft/s)	-0.28	Avg. Vel. (ft/s)	-0.28	-1.07	-0.16
Max Chl Dpth (ft)	5.28	Hydr. Depth (ft)	1.83	4.62	0.67
Conv. Total (cfs)	61192.9	Conv. (cfs)	17862.2	21432.6	21898.1
Length Wtd. (ft)	130.00	Wetted Per. (ft)	358.15	45.82	2083.66
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.01	0.03	0.00
Alpha	5.37	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	15469.41	483.50	14255.22
C & E Loss (ft)		Cum SA (acres)	1384.61	36.77	1307.65

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1112

E.G. Elev (ft)	14.52	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.01	Wt. n-Val.	0.082	0.040	0.099
W.S. Elev (ft)	14.51	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	774.79	224.57	2175.62
E.G. Slope (ft/ft)	0.000117	Area (sq ft)	783.28	224.57	2175.62
Q Total (cfs)	-888.52	Flow (cfs)	-252.94	-259.90	-375.68
Top Width (ft)	2967.97	Top Width (ft)	403.86	45.34	2518.77
Vel Total (ft/s)	-0.28	Avg. Vel. (ft/s)	-0.33	-1.16	-0.17
Max Chl Dpth (ft)	5.61	Hydr. Depth (ft)	2.13	4.95	0.86
Conv. Total (cfs)	82292.4	Conv. (cfs)	23426.6	24071.7	34794.1
Length Wtd. (ft)	130.00	Wetted Per. (ft)	363.46	45.82	2518.91
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.02	0.04	0.01
Alpha	5.55	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	15764.92	491.17	14509.76
C & E Loss (ft)		Cum SA (acres)	1394.62	36.77	1328.13

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1118

E.G. Elev (ft)	14.84	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.082	0.040	0.099
W.S. Elev (ft)	14.84	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	895.98	239.58	3040.09
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	923.32	239.58	3040.09

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1118 (Continued)

Q Total (cfs)	-915.30	Flow (cfs)	-251.89	-228.46	-434.94
Top Width (ft)	3223.34	Top Width (ft)	441.22	45.34	2736.78
Vel Total (ft/s)	-0.22	Avg. Vel. (ft/s)	-0.28	-0.95	-0.14
Max Chl Dpth (ft)	5.94	Hydr. Depth (ft)	2.43	5.28	1.11
Conv. Total (cfs)	107423.5	Conv. (cfs)	29562.8	26813.4	51047.3
Length Wtd. (ft)	130.00	Wetted Per. (ft)	368.74	45.82	2736.93
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.01	0.02	0.01
Alpha	5.38	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	15990.11	496.91	14700.92
C & E Loss (ft)		Cum SA (acres)	1412.03	36.77	1347.03

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1124

E.G. Elev (ft)	15.13	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.082	0.040	0.101
W.S. Elev (ft)	15.13	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	1002.28	252.58	3834.87
E.G. Slope (ft/ft)	0.000029	Area (sq ft)	1054.36	252.58	3834.87
Q Total (cfs)	-737.05	Flow (cfs)	-190.85	-158.10	-388.10
Top Width (ft)	3318.81	Top Width (ft)	478.20	45.34	2795.27
Vel Total (ft/s)	-0.14	Avg. Vel. (ft/s)	-0.19	-0.63	-0.10
Max Chl Dpth (ft)	6.23	Hydr. Depth (ft)	2.69	5.57	1.37
Conv. Total (cfs)	136510.4	Conv. (cfs)	35348.4	29281.1	71881.0
Length Wtd. (ft)	130.00	Wetted Per. (ft)	373.31	45.82	2795.42
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.00	0.01	0.00
Alpha	4.71	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	16145.31	500.66	14822.84
C & E Loss (ft)		Cum SA (acres)	1429.80	36.77	1352.88

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1130

E.G. Elev (ft)	15.31	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.082	0.040	0.101
W.S. Elev (ft)	15.31	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	1069.42	260.71	4338.31
E.G. Slope (ft/ft)	0.000004	Area (sq ft)	1146.47	260.71	4338.31
Q Total (cfs)	-308.84	Flow (cfs)	-77.16	-60.78	-170.89
Top Width (ft)	3428.80	Top Width (ft)	560.89	45.34	2822.56
Vel Total (ft/s)	-0.05	Avg. Vel. (ft/s)	-0.07	-0.23	-0.04
Max Chl Dpth (ft)	6.41	Hydr. Depth (ft)	2.84	5.75	1.54
Conv. Total (cfs)	156839.7	Conv. (cfs)	39185.2	30868.1	86786.4
Length Wtd. (ft)	130.00	Wetted Per. (ft)	376.17	45.82	2822.72
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.00	0.00	0.00
Alpha	4.33	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	16207.28	502.01	14858.67
C & E Loss (ft)		Cum SA (acres)	1434.15	36.77	1355.34

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1136

E.G. Elev (ft)	15.34	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.082	0.040	0.101
W.S. Elev (ft)	15.34	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	1080.27	262.01	4419.72
E.G. Slope (ft/ft)	0.000002	Area (sq ft)	1162.75	262.01	4419.72
Q Total (cfs)	216.73	Flow (cfs)	53.85	42.10	120.77
Top Width (ft)	3440.59	Top Width (ft)	568.29	45.34	2826.95
Vel Total (ft/s)	0.04	Avg. Vel. (ft/s)	0.05	0.16	0.03
Max Chl Dpth (ft)	6.44	Hydr. Depth (ft)	2.87	5.78	1.56
Conv. Total (cfs)	160239.3	Conv. (cfs)	39817.6	31126.5	89295.2

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1136 (Continued)

Length Wtd. (ft)	130.00	Wetted Per. (ft)	376.63	45.82	2827.11
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.00	0.00	0.00
Alpha	4.28	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	16128.38	499.75	14765.06
C & E Loss (ft)		Cum SA (acres)	1434.80	36.77	1355.35

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1100

E.G. Elev (ft)	13.89	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.01	Wt. n-Val.	0.086	0.040	0.085
W.S. Elev (ft)	13.88	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	414.06	201.40	1151.22
E.G. Slope (ft/ft)	0.000177	Area (sq ft)	414.06	201.40	1151.22
Q Total (cfs)	-664.07	Flow (cfs)	-93.48	-257.76	-312.82
Top Width (ft)	2298.01	Top Width (ft)	497.68	47.75	1752.58
Vel Total (ft/s)	-0.38	Avg. Vel. (ft/s)	-0.23	-1.28	-0.27
Max Chl Dpth (ft)	5.08	Hydr. Depth (ft)	0.83	4.22	0.66
Conv. Total (cfs)	49898.8	Conv. (cfs)	7024.2	19368.7	23505.9
Length Wtd. (ft)	67.50	Wetted Per. (ft)	497.74	48.35	1752.89
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.01	0.05	0.01
Alpha	4.80	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	15110.86	473.56	13944.00
C & E Loss (ft)		Cum SA (acres)	1377.04	36.63	1284.51

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1106

E.G. Elev (ft)	14.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.01	Wt. n-Val.	0.087	0.040	0.087
W.S. Elev (ft)	14.19	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	572.80	216.29	1771.75
E.G. Slope (ft/ft)	0.000180	Area (sq ft)	572.80	216.29	1771.75
Q Total (cfs)	-900.82	Flow (cfs)	-142.67	-292.61	-465.54
Top Width (ft)	2715.94	Top Width (ft)	516.44	47.75	2151.75
Vel Total (ft/s)	-0.35	Avg. Vel. (ft/s)	-0.25	-1.35	-0.26
Max Chl Dpth (ft)	5.39	Hydr. Depth (ft)	1.11	4.53	0.82
Conv. Total (cfs)	67155.0	Conv. (cfs)	10636.0	21813.6	34705.4
Length Wtd. (ft)	67.50	Wetted Per. (ft)	516.51	48.35	2152.08
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.01	0.05	0.01
Alpha	5.17	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	15467.58	482.87	14250.51
C & E Loss (ft)		Cum SA (acres)	1383.29	36.63	1301.33

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1112

E.G. Elev (ft)	14.54	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.01	Wt. n-Val.	0.087	0.040	0.090
W.S. Elev (ft)	14.53	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	748.00	232.25	2533.04
E.G. Slope (ft/ft)	0.000191	Area (sq ft)	748.00	232.25	2533.04
Q Total (cfs)	-1281.04	Flow (cfs)	-222.65	-339.01	-719.38
Top Width (ft)	2985.41	Top Width (ft)	533.08	47.75	2404.58
Vel Total (ft/s)	-0.36	Avg. Vel. (ft/s)	-0.30	-1.46	-0.28
Max Chl Dpth (ft)	5.73	Hydr. Depth (ft)	1.40	4.86	1.05
Conv. Total (cfs)	92809.6	Conv. (cfs)	16130.6	24561.1	52117.9
Length Wtd. (ft)	67.50	Wetted Per. (ft)	533.15	48.35	2404.92
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.02	0.06	0.01
Alpha	4.70	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	15762.64	490.48	14502.74
C & E Loss (ft)		Cum SA (acres)	1393.23	36.63	1320.78

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1118

E.G. Elev (ft)	14.86	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.01	Wt. n-Val.	0.088	0.040	0.091
W.S. Elev (ft)	14.85	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	923.37	247.70	3381.98
E.G. Slope (ft/ft)	0.000113	Area (sq ft)	932.64	247.70	3381.98
Q Total (cfs)	-1277.71	Flow (cfs)	-237.29	-290.57	-749.84
Top Width (ft)	3525.51	Top Width (ft)	642.51	47.75	2835.25
Vel Total (ft/s)	-0.28	Avg. Vel. (ft/s)	-0.26	-1.17	-0.22
Max Chl Dpth (ft)	6.05	Hydr. Depth (ft)	1.68	5.19	1.19
Conv. Total (cfs)	120235.9	Conv. (cfs)	22329.9	27343.7	70562.3
Length Wtd. (ft)	67.50	Wetted Per. (ft)	551.16	48.35	2835.61
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.01	0.04	0.01
Alpha	4.50	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	15987.34	496.18	14691.33
C & E Loss (ft)		Cum SA (acres)	1410.41	36.63	1338.72

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1124

E.G. Elev (ft)	15.13	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.088	0.040	0.092
W.S. Elev (ft)	15.13	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	1079.61	261.05	4185.73
E.G. Slope (ft/ft)	0.000049	Area (sq ft)	1166.76	261.05	4185.73
Q Total (cfs)	-1064.52	Flow (cfs)	-198.24	-208.49	-657.79
Top Width (ft)	4007.54	Top Width (ft)	1058.51	47.75	2901.28
Vel Total (ft/s)	-0.19	Avg. Vel. (ft/s)	-0.18	-0.80	-0.16
Max Chl Dpth (ft)	6.33	Hydr. Depth (ft)	1.91	5.47	1.44
Conv. Total (cfs)	152379.5	Conv. (cfs)	28376.6	29843.6	94159.3
Length Wtd. (ft)	67.50	Wetted Per. (ft)	566.72	48.35	2901.64
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.01	0.02	0.00
Alpha	3.95	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	16142.00	499.89	14810.87
C & E Loss (ft)		Cum SA (acres)	1427.51	36.63	1344.38

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1130

E.G. Elev (ft)	15.31	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.088	0.040	0.093
W.S. Elev (ft)	15.31	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	1179.83	269.42	4698.46
E.G. Slope (ft/ft)	0.000007	Area (sq ft)	1378.52	269.42	4698.46
Q Total (cfs)	-452.46	Flow (cfs)	-84.32	-81.64	-286.49
Top Width (ft)	4368.38	Top Width (ft)	1363.95	47.75	2956.69
Vel Total (ft/s)	-0.07	Avg. Vel. (ft/s)	-0.07	-0.30	-0.06
Max Chl Dpth (ft)	6.51	Hydr. Depth (ft)	2.05	5.64	1.59
Conv. Total (cfs)	174334.1	Conv. (cfs)	32489.7	31456.1	110388.3
Length Wtd. (ft)	67.50	Wetted Per. (ft)	576.49	48.35	2957.04
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.00	0.00	0.00
Alpha	3.67	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	16203.52	501.22	14845.19
C & E Loss (ft)		Cum SA (acres)	1431.28	36.63	1346.72

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1136

E.G. Elev (ft)	15.33	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.088	0.040	0.093
W.S. Elev (ft)	15.33	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	1195.72	270.74	4779.93
E.G. Slope (ft/ft)	0.000003	Area (sq ft)	1416.84	270.74	4779.93

Plan: Nat_SS100yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1136 (Continued)

Q Total (cfs)	293.35	Flow (cfs)	54.64	52.25	186.46
Top Width (ft)	4423.77	Top Width (ft)	1416.41	47.75	2959.60
Vel Total (ft/s)	0.05	Avg. Vel. (ft/s)	0.05	0.19	0.04
Max Chl Dpth (ft)	6.53	Hydr. Depth (ft)	2.07	5.67	1.62
Conv. Total (cfs)	178028.4	Conv. (cfs)	33157.9	31712.4	113158.2
Length Wtd. (ft)	67.50	Wetted Per. (ft)	578.02	48.35	2959.96
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.00	0.00	0.00
Alpha	3.62	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	16124.53	498.95	14751.34
C & E Loss (ft)		Cum SA (acres)	1431.84	36.63	1346.71

Natural 500 year Unsteady Model

HEC-RAS Plan: Nat_SS500yrBase Locations: User Defined

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)	
Walleyleg_Branch	1	800	01SEP2015 1036	40.00	9.69	15.27		15.27	0.000000	0.03	5672.12	4172.91	0.00
Walleyleg_Branch	1	800	01SEP2015 1042	40.00	9.69	15.85		15.85	0.000000	0.02	7734.57	4597.40	0.00
Walleyleg_Branch	1	800	01SEP2015 1048	40.00	9.69	16.34		16.34	0.000000	0.02	9609.09	5720.66	0.00
Walleyleg_Branch	1	800	01SEP2015 1054	40.00	9.69	16.77		16.77	0.000000	0.01	13838.65	6572.63	0.00
Walleyleg_Branch	1	800	01SEP2015 1100	40.00	9.69	17.17		17.17	0.000000	0.01	16505.18	7035.27	0.00
Walleyleg_Branch	1	800	01SEP2015 1106	40.00	9.69	17.51		17.51	0.000000	0.01	19029.36	7467.39	0.00
Walleyleg_Branch	1	800	01SEP2015 1112	40.00	9.69	17.80		17.80	0.000000	0.01	21181.79	7479.00	0.00
Walleyleg_Branch	1	600	01SEP2015 1036	-1163.51	9.22	15.27		15.28	0.000107	-1.20	4884.50	3210.67	0.09
Walleyleg_Branch	1	600	01SEP2015 1042	-1171.79	9.22	15.85		15.85	0.000046	-0.84	6761.80	3938.31	0.06
Walleyleg_Branch	1	600	01SEP2015 1048	-1294.56	9.22	16.34		16.34	0.000030	-0.71	8536.62	4982.51	0.05
Walleyleg_Branch	1	600	01SEP2015 1054	-1383.10	9.22	16.77		16.77	0.000023	-0.64	10261.97	5506.18	0.04
Walleyleg_Branch	1	600	01SEP2015 1100	-1337.06	9.22	17.17		17.17	0.000014	-0.52	11880.36	6146.98	0.03
Walleyleg_Branch	1	600	01SEP2015 1106	-1200.38	9.22	17.51		17.51	0.000008	-0.41	13328.09	6807.23	0.03
Walleyleg_Branch	1	600	01SEP2015 1112	-1015.62	9.22	17.80		17.80	0.000004	-0.31	14565.74	7489.10	0.02
Walleyleg_Branch	1	465	01SEP2015 1036	-1875.66	8.90	15.29		15.30	0.000147	-1.43	5607.58	3421.13	0.11
Walleyleg_Branch	1	465	01SEP2015 1042	-1978.40	8.90	15.85		15.86	0.000076	-1.10	7494.47	4063.29	0.08
Walleyleg_Branch	1	465	01SEP2015 1048	-2132.86	8.90	16.35		16.35	0.000050	-0.93	9935.04	4871.32	0.06
Walleyleg_Branch	1	465	01SEP2015 1054	-2210.21	8.90	16.78		16.78	0.000033	-0.80	12118.22	5287.73	0.05
Walleyleg_Branch	1	465	01SEP2015 1100	-2189.92	8.90	17.17		17.17	0.000022	-0.67	14296.78	5769.05	0.04
Walleyleg_Branch	1	465	01SEP2015 1106	-1959.00	8.90	17.51		17.51	0.000013	-0.53	16325.94	6018.98	0.03
Walleyleg_Branch	1	465	01SEP2015 1112	-1683.04	8.90	17.80		17.80	0.000007	-0.41	18088.63	6470.70	0.03
Walleyleg_Branch	1	335	01SEP2015 1036	-2663.07	8.80	15.31		15.32	0.000232	-1.78	6159.28	4375.13	0.13
Walleyleg_Branch	1	335	01SEP2015 1042	-2872.14	8.80	15.87		15.87	0.000125	-1.39	8177.97	5755.38	0.10
Walleyleg_Branch	1	335	01SEP2015 1048	-3077.96	8.80	16.35		16.36	0.000081	-1.18	10045.66	7175.03	0.08
Walleyleg_Branch	1	335	01SEP2015 1054	-3156.87	8.80	16.78		16.78	0.000055	-1.01	11836.24	7701.19	0.07
Walleyleg_Branch	1	335	01SEP2015 1100	-3119.14	8.80	17.17		17.17	0.000039	-0.88	13587.81	7922.81	0.06
Walleyleg_Branch	1	335	01SEP2015 1106	-2779.25	8.80	17.52		17.52	0.000023	-0.70	15164.00	8053.07	0.04
Walleyleg_Branch	1	335	01SEP2015 1112	-2340.87	8.80	17.80		17.80	0.000008	-0.43	23558.14	8131.45	0.03
Walleyleg_Branch	1	200	01SEP2015 1036	-3734.80	8.75	15.35		15.39	0.000643	-2.82	5227.43	5565.16	0.22
Walleyleg_Branch	1	200	01SEP2015 1042	-4102.01	8.75	15.89		15.90	0.000326	-2.14	7225.07	6437.95	0.16
Walleyleg_Branch	1	200	01SEP2015 1048	-4292.65	8.75	16.37		16.38	0.000188	-1.72	9129.61	7040.74	0.12
Walleyleg_Branch	1	200	01SEP2015 1054	-4316.11	8.75	16.79		16.80	0.000116	-1.41	10912.53	7402.12	0.10
Walleyleg_Branch	1	200	01SEP2015 1100	-4190.09	8.75	17.18		17.18	0.000072	-1.16	12605.97	7559.71	0.08
Walleyleg_Branch	1	200	01SEP2015 1106	-3714.11	8.75	17.52		17.52	0.000040	-0.89	14122.39	7615.56	0.06
Walleyleg_Branch	1	200	01SEP2015 1112	-3087.90	8.75	17.80		17.80	0.000012	-0.50	23605.96	7634.04	0.03
Walleyleg_Branch	1	0	01SEP2015 1036	-5539.85	7.94	15.46		15.49	0.000504	-2.99	7827.64	6977.93	0.20
Walleyleg_Branch	1	0	01SEP2015 1042	-6089.69	7.94	15.95		15.96	0.000321	-2.50	9853.78	7285.27	0.16
Walleyleg_Branch	1	0	01SEP2015 1048	-6083.55	7.94	16.40		16.41	0.000123	-1.61	16971.07	7383.03	0.10
Walleyleg_Branch	1	0	01SEP2015 1054	-5961.20	7.94	16.81		16.81	0.000072	-1.27	19998.51	7439.57	0.08
Walleyleg_Branch	1	0	01SEP2015 1100	-5719.62	7.94	17.19		17.19	0.000044	-1.03	22828.80	7492.05	0.06
Walleyleg_Branch	1	0	01SEP2015 1106	-5032.23	7.94	17.52		17.52	0.000025	-0.79	25334.64	7538.20	0.05
Walleyleg_Branch	1	0	01SEP2015 1112	-4142.99	7.94	17.80		17.80	0.000013	-0.59	27462.60	7570.70	0.03

HEC-RAS Plan: Nat_SS500yrBase Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Vel Head	Frctn Loss	C & E Loss	Q Left	Q Channel	Q Right	Top Width
				(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft)
Walleyleg_Branch	1	800	01SEP2015 1036	15.27	15.27	0.00	0.00		5.57	13.41	21.02	4172.91
Walleyleg_Branch	1	800	01SEP2015 1042	15.85	15.85	0.00	0.00		5.57	10.85	23.58	4597.40
Walleyleg_Branch	1	800	01SEP2015 1048	16.34	16.34	0.00	0.00		5.65	9.42	24.93	5720.66
Walleyleg_Branch	1	800	01SEP2015 1054	16.77	16.77	0.00	0.00		8.43	7.85	23.71	6572.63
Walleyleg_Branch	1	800	01SEP2015 1100	17.17	17.17	0.00	0.00		9.48	6.86	23.66	7035.27
Walleyleg_Branch	1	800	01SEP2015 1106	17.51	17.51	0.00	0.00		9.88	6.28	23.84	7467.39
Walleyleg_Branch	1	800	01SEP2015 1112	17.80	17.80	0.00	0.00		10.86	5.74	23.40	7479.00
Walleyleg_Branch	1	600	01SEP2015 1036	15.28	15.27	0.01	0.01		-164.11	-321.84	-677.56	3210.67
Walleyleg_Branch	1	600	01SEP2015 1042	15.85	15.85	0.00	0.00		-149.86	-248.38	-773.55	3938.31
Walleyleg_Branch	1	600	01SEP2015 1048	16.34	16.34	0.00	0.00		-157.07	-228.01	-909.49	4982.51
Walleyleg_Branch	1	600	01SEP2015 1054	16.77	16.77	0.00	0.00		-171.08	-220.93	-991.09	5506.18
Walleyleg_Branch	1	600	01SEP2015 1100	17.17	17.17	0.00	0.00		-162.49	-189.18	-985.38	6146.98
Walleyleg_Branch	1	600	01SEP2015 1106	17.51	17.51	0.00	0.00		-145.19	-154.87	-900.32	6807.23
Walleyleg_Branch	1	600	01SEP2015 1112	17.80	17.80	0.00	0.00		-123.80	-122.20	-769.62	7489.10
Walleyleg_Branch	1	465	01SEP2015 1036	15.30	15.29	0.01	0.02		-470.30	-372.36	-1033.00	3421.13
Walleyleg_Branch	1	465	01SEP2015 1042	15.86	15.85	0.00	0.01		-454.62	-314.09	-1209.69	4063.29
Walleyleg_Branch	1	465	01SEP2015 1048	16.35	16.35	0.00	0.01		-495.64	-287.15	-1350.07	4871.32
Walleyleg_Branch	1	465	01SEP2015 1054	16.78	16.78	0.00	0.01		-532.62	-260.77	-1416.82	5287.73
Walleyleg_Branch	1	465	01SEP2015 1100	17.17	17.17	0.00	0.00		-544.75	-231.92	-1413.25	5769.05
Walleyleg_Branch	1	465	01SEP2015 1106	17.51	17.51	0.00	0.00		-509.55	-192.29	-1257.15	6018.98
Walleyleg_Branch	1	465	01SEP2015 1112	17.80	17.80	0.00	0.00		-442.80	-152.30	-1087.93	6470.70
Walleyleg_Branch	1	335	01SEP2015 1036	15.32	15.31	0.01	0.02		-496.27	-479.78	-1687.02	4375.13
Walleyleg_Branch	1	335	01SEP2015 1042	15.87	15.87	0.01	0.01		-528.30	-411.81	-1932.03	5755.38
Walleyleg_Branch	1	335	01SEP2015 1048	16.36	16.35	0.00	0.01		-559.87	-376.77	-2141.33	7175.03
Walleyleg_Branch	1	335	01SEP2015 1054	16.78	16.78	0.00	0.00		-568.43	-342.73	-2245.71	7701.19
Walleyleg_Branch	1	335	01SEP2015 1100	17.17	17.17	0.00	0.00		-572.27	-316.71	-2230.16	7922.81
Walleyleg_Branch	1	335	01SEP2015 1106	17.52	17.52	0.00	0.00		-503.02	-260.58	-2015.65	8053.07
Walleyleg_Branch	1	335	01SEP2015 1112	17.80	17.80	0.00	0.00		-781.30	-167.72	-1391.84	8131.45
Walleyleg_Branch	1	200	01SEP2015 1036	15.39	15.35	0.04	0.06		-358.86	-1009.07	-2366.87	5565.16
Walleyleg_Branch	1	200	01SEP2015 1042	15.90	15.89	0.02	0.03		-373.28	-846.47	-2882.26	6437.95
Walleyleg_Branch	1	200	01SEP2015 1048	16.38	16.37	0.01	0.02		-384.42	-734.56	-3173.66	7040.74
Walleyleg_Branch	1	200	01SEP2015 1054	16.80	16.79	0.01	0.01		-393.75	-643.20	-3279.16	7402.12
Walleyleg_Branch	1	200	01SEP2015 1100	17.18	17.18	0.00	0.01		-396.53	-559.29	-3234.27	7559.71
Walleyleg_Branch	1	200	01SEP2015 1106	17.52	17.52	0.00	0.00		-357.07	-451.00	-2906.04	7615.56
Walleyleg_Branch	1	200	01SEP2015 1112	17.80	17.80	0.00	0.00		-960.60	-266.02	-1861.29	7634.04
Walleyleg_Branch	1	0	01SEP2015 1036	15.49	15.46	0.03	0.04		-738.44	-880.36	-3921.05	6977.93
Walleyleg_Branch	1	0	01SEP2015 1042	15.96	15.95	0.02	0.03		-752.40	-788.77	-4548.52	7285.27
Walleyleg_Branch	1	0	01SEP2015 1048	16.41	16.40	0.01	0.02		-1765.75	-538.68	-3779.12	7383.03
Walleyleg_Branch	1	0	01SEP2015 1054	16.81	16.81	0.00	0.01		-1867.75	-448.87	-3644.58	7439.57
Walleyleg_Branch	1	0	01SEP2015 1100	17.19	17.19	0.00	0.01		-1885.32	-379.43	-3454.88	7492.05
Walleyleg_Branch	1	0	01SEP2015 1106	17.52	17.52	0.00	0.01		-1716.38	-303.07	-3012.78	7538.20
Walleyleg_Branch	1	0	01SEP2015 1112	17.80	17.80	0.00	0.00		-1445.67	-231.83	-2465.50	7570.70

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1042

E.G. Elev (ft)	15.86	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.083	0.040	0.102
W.S. Elev (ft)	15.85	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	1293.05	285.56	5915.85
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1529.43	285.56	5915.85
Q Total (cfs)	-1978.40	Flow (cfs)	-454.62	-314.09	-1209.69
Top Width (ft)	4063.29	Top Width (ft)	1054.16	45.34	2963.79
Vel Total (ft/s)	-0.26	Avg. Vel. (ft/s)	-0.35	-1.10	-0.20
Max Chl Dpth (ft)	6.95	Hydr. Depth (ft)	2.32	6.30	2.00
Conv. Total (cfs)	226302.3	Conv. (cfs)	52002.3	35927.8	138372.3
Length Wtd. (ft)	130.00	Wetted Per. (ft)	558.46	45.82	2963.94
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.01	0.03	0.01
Alpha	3.53	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	18070.98	551.40	16789.48
C & E Loss (ft)		Cum SA (acres)	1447.85	36.77	1378.89

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1048

E.G. Elev (ft)	16.35	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.085	0.040	0.103
W.S. Elev (ft)	16.35	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	2201.84	307.84	7425.36
E.G. Slope (ft/ft)	0.000050	Area (sq ft)	2201.84	307.84	7425.36
Q Total (cfs)	-2132.86	Flow (cfs)	-495.64	-287.15	-1350.07
Top Width (ft)	4871.32	Top Width (ft)	1644.47	45.34	3181.51
Vel Total (ft/s)	-0.21	Avg. Vel. (ft/s)	-0.23	-0.93	-0.18
Max Chl Dpth (ft)	7.45	Hydr. Depth (ft)	1.34	6.79	2.33
Conv. Total (cfs)	302451.9	Conv. (cfs)	70285.3	40719.2	191447.4
Length Wtd. (ft)	130.00	Wetted Per. (ft)	1645.55	45.82	3181.66
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.00	0.02	0.01
Alpha	3.25	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	18586.84	564.24	17266.15
C & E Loss (ft)		Cum SA (acres)	1453.89	36.77	1397.45

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1054

E.G. Elev (ft)	16.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.087	0.040	0.103
W.S. Elev (ft)	16.78	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	2940.13	327.41	8850.69
E.G. Slope (ft/ft)	0.000033	Area (sq ft)	2940.13	327.41	8850.69
Q Total (cfs)	-2210.21	Flow (cfs)	-532.62	-260.77	-1416.82
Top Width (ft)	5287.73	Top Width (ft)	1771.18	45.34	3471.21
Vel Total (ft/s)	-0.18	Avg. Vel. (ft/s)	-0.18	-0.80	-0.16
Max Chl Dpth (ft)	7.88	Hydr. Depth (ft)	1.66	7.22	2.55
Conv. Total (cfs)	382453.8	Conv. (cfs)	92164.4	45123.6	245165.8
Length Wtd. (ft)	130.00	Wetted Per. (ft)	1772.34	45.82	3471.60
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.00	0.01	0.01
Alpha	2.98	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	19055.55	575.81	17699.21
C & E Loss (ft)		Cum SA (acres)	1455.59	36.77	1412.65

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1100

E.G. Elev (ft)	17.17	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.089	0.040	0.103
W.S. Elev (ft)	17.17	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	3673.31	345.19	10278.28
E.G. Slope (ft/ft)	0.000022	Area (sq ft)	3673.31	345.19	10278.28

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1100 (Continued)

Q Total (cfs)	-2189.92	Flow (cfs)	-544.75	-231.92	-1413.25
Top Width (ft)	5769.05	Top Width (ft)	1934.23	45.34	3789.48
Vel Total (ft/s)	-0.15	Avg. Vel. (ft/s)	-0.15	-0.67	-0.14
Max Chl Dpth (ft)	8.27	Hydr. Depth (ft)	1.90	7.61	2.71
Conv. Total (cfs)	465346.1	Conv. (cfs)	115756.6	49282.0	300307.5
Length Wtd. (ft)	130.00	Wetted Per. (ft)	1935.42	45.82	3790.13
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.00	0.01	0.00
Alpha	2.79	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	19465.55	585.84	18076.99
C & E Loss (ft)		Cum SA (acres)	1456.53	36.77	1426.55

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1106

E.G. Elev (ft)	17.51	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.091	0.040	0.104
W.S. Elev (ft)	17.51	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	4353.47	360.77	11611.70
E.G. Slope (ft/ft)	0.000013	Area (sq ft)	4353.47	360.77	11611.70
Q Total (cfs)	-1959.00	Flow (cfs)	-509.55	-192.29	-1257.15
Top Width (ft)	6018.98	Top Width (ft)	2020.78	45.34	3952.86
Vel Total (ft/s)	-0.12	Avg. Vel. (ft/s)	-0.12	-0.53	-0.11
Max Chl Dpth (ft)	8.61	Hydr. Depth (ft)	2.15	7.96	2.94
Conv. Total (cfs)	540394.6	Conv. (cfs)	140561.1	53045.0	346788.5
Length Wtd. (ft)	130.00	Wetted Per. (ft)	2021.98	45.82	3953.52
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.00	0.01	0.00
Alpha	2.71	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	19801.92	593.98	18383.81
C & E Loss (ft)		Cum SA (acres)	1457.24	36.77	1434.03

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 465 Profile: 01SEP2015 1112

E.G. Elev (ft)	17.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.092	0.040	0.104
W.S. Elev (ft)	17.80	Reach Len. (ft)	130.00	130.00	130.00
Crit W.S. (ft)		Flow Area (sq ft)	4966.68	373.78	12748.17
E.G. Slope (ft/ft)	0.000007	Area (sq ft)	4966.68	373.78	12748.17
Q Total (cfs)	-1683.04	Flow (cfs)	-442.80	-152.30	-1087.93
Top Width (ft)	6470.70	Top Width (ft)	2455.81	45.34	3969.54
Vel Total (ft/s)	-0.09	Avg. Vel. (ft/s)	-0.09	-0.41	-0.09
Max Chl Dpth (ft)	8.90	Hydr. Depth (ft)	2.02	8.24	3.21
Conv. Total (cfs)	621828.7	Conv. (cfs)	163601.4	56271.1	401956.2
Length Wtd. (ft)	130.00	Wetted Per. (ft)	2457.01	45.82	3970.20
Min Ch El (ft)	8.90	Shear (lb/sq ft)	0.00	0.00	0.00
Alpha	2.52	Stream Power (lb/ft s)	78171.22	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	20057.11	600.04	18611.11
C & E Loss (ft)		Cum SA (acres)	1458.24	36.77	1438.79

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1042

E.G. Elev (ft)	15.87	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.01	Wt. n-Val.	0.089	0.040	0.094
W.S. Elev (ft)	15.87	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	1511.28	296.16	6370.53
E.G. Slope (ft/ft)	0.000125	Area (sq ft)	2469.93	296.16	6370.53
Q Total (cfs)	-2872.14	Flow (cfs)	-528.30	-411.81	-1932.03
Top Width (ft)	5755.38	Top Width (ft)	2680.97	47.75	3026.66
Vel Total (ft/s)	-0.35	Avg. Vel. (ft/s)	-0.35	-1.39	-0.30
Max Chl Dpth (ft)	7.07	Hydr. Depth (ft)	2.49	6.20	2.10
Conv. Total (cfs)	256862.0	Conv. (cfs)	47247.3	36828.7	172785.9

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1042 (Continued)

Length Wtd. (ft)	67.50	Wetted Per. (ft)	607.65	48.35	3027.02
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.02	0.05	0.02
Alpha	2.93	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	18065.01	550.53	16771.15
C & E Loss (ft)		Cum SA (acres)	1442.28	36.63	1369.95

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1048

E.G. Elev (ft)	16.36	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.089	0.040	0.095
W.S. Elev (ft)	16.35	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	1813.89	319.42	7912.35
E.G. Slope (ft/ft)	0.000081	Area (sq ft)	4023.36	319.42	7912.35
Q Total (cfs)	-3077.96	Flow (cfs)	-559.87	-376.77	-2141.33
Top Width (ft)	7175.03	Top Width (ft)	3794.59	47.75	3332.70
Vel Total (ft/s)	-0.31	Avg. Vel. (ft/s)	-0.31	-1.18	-0.27
Max Chl Dpth (ft)	7.55	Hydr. Depth (ft)	2.86	6.69	2.37
Conv. Total (cfs)	341279.9	Conv. (cfs)	62077.1	41775.6	237427.3
Length Wtd. (ft)	67.50	Wetted Per. (ft)	634.77	48.35	3333.07
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.01	0.03	0.01
Alpha	2.54	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	18577.55	563.30	17243.26
C & E Loss (ft)		Cum SA (acres)	1445.77	36.63	1387.73

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1054

E.G. Elev (ft)	16.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.089	0.040	0.096
W.S. Elev (ft)	16.78	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	2089.88	339.89	9406.48
E.G. Slope (ft/ft)	0.000055	Area (sq ft)	5702.45	339.89	9406.48
Q Total (cfs)	-3156.87	Flow (cfs)	-568.43	-342.73	-2245.71
Top Width (ft)	7701.19	Top Width (ft)	3984.35	47.75	3669.09
Vel Total (ft/s)	-0.27	Avg. Vel. (ft/s)	-0.27	-1.01	-0.24
Max Chl Dpth (ft)	7.98	Hydr. Depth (ft)	3.20	7.12	2.56
Conv. Total (cfs)	426758.5	Conv. (cfs)	76842.3	46331.6	303584.5
Length Wtd. (ft)	67.50	Wetted Per. (ft)	653.07	48.35	3669.48
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.01	0.02	0.01
Alpha	2.31	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	19042.65	574.82	17671.97
C & E Loss (ft)		Cum SA (acres)	1447.00	36.63	1401.99

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1100

E.G. Elev (ft)	17.17	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.090	0.040	0.096
W.S. Elev (ft)	17.17	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	2348.27	358.54	10881.00
E.G. Slope (ft/ft)	0.000039	Area (sq ft)	7270.67	358.54	10881.00
Q Total (cfs)	-3119.14	Flow (cfs)	-572.27	-316.71	-2230.16
Top Width (ft)	7922.81	Top Width (ft)	4040.36	47.75	3834.70
Vel Total (ft/s)	-0.23	Avg. Vel. (ft/s)	-0.24	-0.88	-0.20
Max Chl Dpth (ft)	8.37	Hydr. Depth (ft)	3.51	7.51	2.84
Conv. Total (cfs)	498808.0	Conv. (cfs)	91516.0	50647.6	356644.3
Length Wtd. (ft)	67.50	Wetted Per. (ft)	669.67	48.35	3835.10
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.01	0.02	0.01
Alpha	2.28	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	19449.22	584.79	18045.41
C & E Loss (ft)		Cum SA (acres)	1447.61	36.63	1415.17

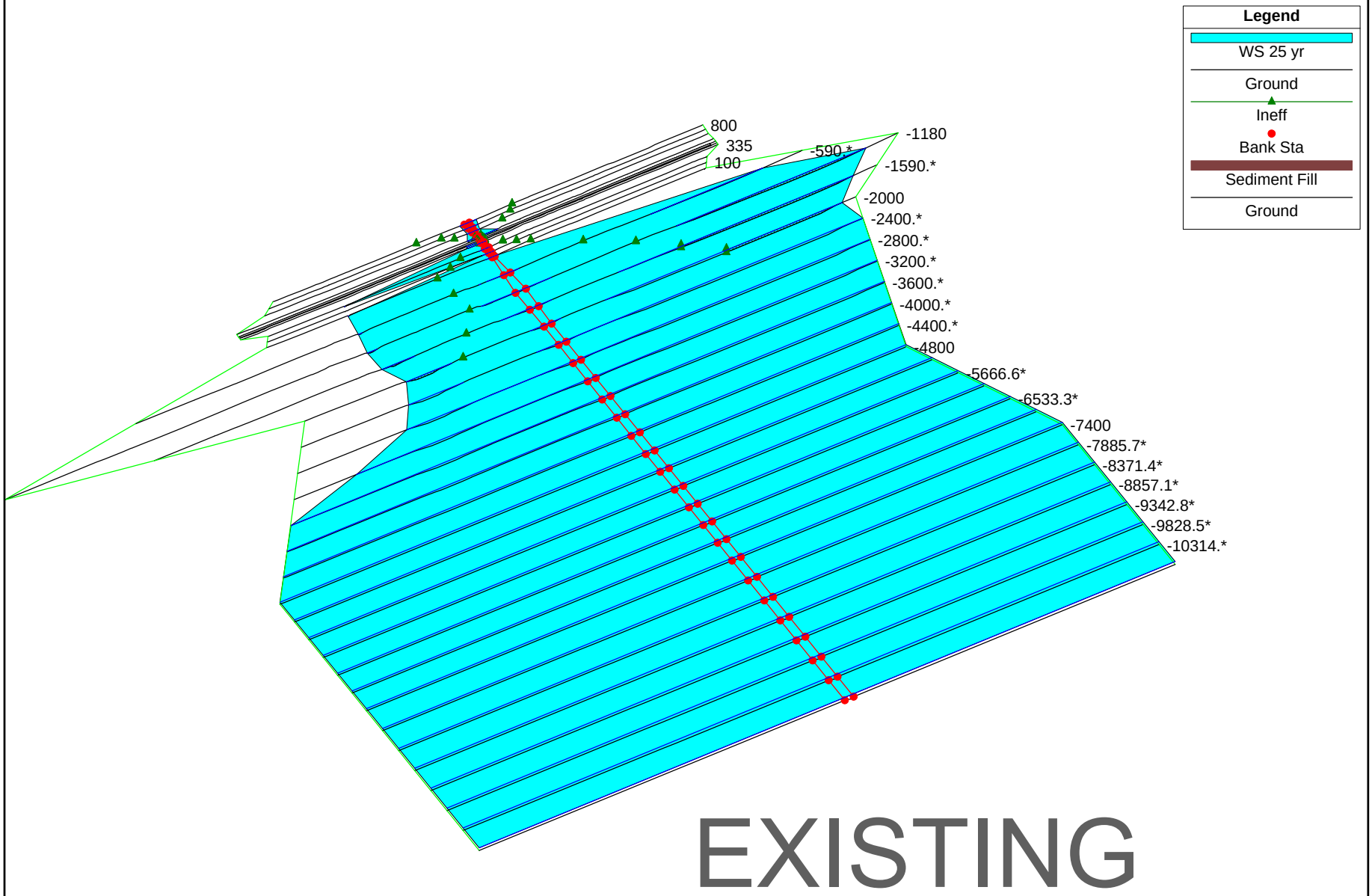
Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1106

E.G. Elev (ft)	17.52	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.090	0.040	0.096
W.S. Elev (ft)	17.52	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	2579.93	374.89	12209.18
E.G. Slope (ft/ft)	0.000023	Area (sq ft)	8660.10	374.89	12209.18
Q Total (cfs)	-2779.25	Flow (cfs)	-503.02	-260.58	-2015.65
Top Width (ft)	8053.07	Top Width (ft)	4078.80	47.75	3926.52
Vel Total (ft/s)	-0.18	Avg. Vel. (ft/s)	-0.19	-0.70	-0.17
Max Chl Dpth (ft)	8.72	Hydr. Depth (ft)	3.76	7.85	3.11
Conv. Total (cfs)	581849.5	Conv. (cfs)	105309.6	54553.4	421986.5
Length Wtd. (ft)	67.50	Wetted Per. (ft)	685.48	48.35	3926.94
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.01	0.01	0.00
Alpha	2.14	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	19782.50	592.88	18348.27
C & E Loss (ft)		Cum SA (acres)	1448.13	36.63	1422.28

Plan: Nat_SS500yrBase Walleyleg_Branch 1 RS: 335 Profile: 01SEP2015 1112

E.G. Elev (ft)	17.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.	0.101	0.040	0.096
W.S. Elev (ft)	17.80	Reach Len. (ft)	67.50	67.50	67.50
Crit W.S. (ft)		Flow Area (sq ft)	9826.78	388.54	13342.82
E.G. Slope (ft/ft)	0.000008	Area (sq ft)	9826.78	388.54	13342.82
Q Total (cfs)	-2340.87	Flow (cfs)	-781.30	-167.72	-1391.84
Top Width (ft)	8131.45	Top Width (ft)	4080.47	47.75	4003.23
Vel Total (ft/s)	-0.10	Avg. Vel. (ft/s)	-0.08	-0.43	-0.10
Max Chl Dpth (ft)	9.00	Hydr. Depth (ft)	2.41	8.14	3.33
Conv. Total (cfs)	808157.9	Conv. (cfs)	269735.2	57904.7	480517.9
Length Wtd. (ft)	67.50	Wetted Per. (ft)	4082.86	48.35	4003.64
Min Ch El (ft)	8.80	Shear (lb/sq ft)	0.00	0.00	0.00
Alpha	2.22	Stream Power (lb/ft s)	78178.74	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	20035.04	598.90	18572.18
C & E Loss (ft)		Cum SA (acres)	1448.49	36.63	1426.89

532650-SR25_over_WALLYLEG_BRANCH Plan: Ext_SteadyRiver 10/21/2015



532650-SR25WALLEYLEG.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
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X     X  X        X            X  X     X    X        X
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PROJECT DATA
Project Title: 532650-SR25_over_WALLYLEG_BRANCH
Project File : 532650-SR25WALLEYLEG.prj
Run Date and Time: 10/19/2015 7:33:48 AM

Project in English units

Project Description:
532560 - SR 25 (US 17) over WALLEYLEG CREEK, GLYNN COUNTY

PLAN DATA

Plan Title: Ext_SS100yrSpring
Plan File : C:\Users\tonguyen\Desktop\working\Bridge Hydraulics\532650\New folder\532650-SR25WALLEYLEG.p07

Geometry Title: Existing02
Geometry File : C:\Users\tonguyen\Desktop\working\Bridge Hydraulics\532650\New folder\532650-SR25WALLEYLEG.g04

Flow Title :
Flow File :

Plan Summary Information:

Number of:	Cross Sections	= 32	Multiple Openings	=	0
	Culverts	= 0	Inline Structures	=	0
	Bridges	= 1	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

GEOMETRY DATA

Geometry Title: Existing02
Geometry File : C:\Users\tonguyen\Desktop\working\Bridge Hydraulics\532650\New folder\532650-SR25WALLEYLEG.g04

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 800

INPUT
Description:
Station Elevation Data num= 200

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69869.36	17.969	70609.09	17.876	70910.39	16.87	70647	17.42	70654	17.23
70654.05	17.23	70654.1	17.237	70683.01	17.37	70704.1	17.25	70724.1	16.93
70804.1	14.567	70804.78	14.517	1148.88	14.517	1281.26	14.517	1429.09	14.51
71434.1	14.717	1509.94	16.587	1514.06	16.68	71514.1	16.68	71594.1	16.72
71595.87	16.737	2124.65	15.657	2125.06	15.657	2125.47	15.657	2896.63	16.81
72899.55	16.32	72899.8	16.327	2912.79	16.27	72969.8	16.177	2973.22	16.13
72974.18	16.147	3051.44	16.257	3113.88	16.247	3123.48	16.27	3128.71	16.18
73128.73	16.187	3183.41	16.457	3186.65	16.457	3186.75	16.457	3189.86	16.51
73190.63	16.5	73193.6	16.487	3706.27	13.17	3707.04	13.097	3708.19	13.11
73708.68	13.127	3714.94	13.257	3722.95	13.467	3723.67	13.48	73723.7	13.48
73747.06	13.47	3749.26	13.417	3756.65	13.58	73758.7	13.637	3766.13	13.51
73766.24	13.5	73766.8	13.57	3775.84	13.177	3776.46	13.147	3785.43	13.01
73785.45	13.027	3785.63	13.04	73833.4	12.297	3842.99	12.06	73843.4	12.05
73852.58	11.837	3859.45	11.677	3862.18	11.637	3862.72	11.627	3871.77	11.48
73881.36	11.347	3882.03	11.337	3890.96	11.197	3900.55	11.057	3910.14	10.9
73919.74	10.787	3920.66	10.777	3929.33	10.697	3929.64	10.697	3935.49	10.46
73938.93	10.457	3958.11	10.17	73959.3	10.147	3967.71	9.927	3976.73	9.69
73977.3	9.77	3978.61	9.747	3986.89	9.947	3996.49	10.187	3997.93	10.21
74000.28	10.277	4006.08	10.44	74011.1	10.587	4015.67	10.657	4017.24	10.67
74025.27	10.797	4034.86	10.947	4036.37	10.967	4036.56	10.977	4044.45	11.27
74051.9	11.567	4054.05	11.667	4055.88	11.757	4063.64	12.137	4075.19	12.36
74082.83	12.447	4092.42	12.557	4102.01	12.667	4111.61	12.787	4113.82	12.8
74114.98	12.81	74121.2	12.88	74130.8	12.98	74160.7	13.23	74180.7	13.39
74190.7	13.47	74191	13.477	4245.53	13.677	4315.26	13.787	4460.07	13.84
74615.62	13.97	4851.61	13.987	4964.24	13.797	5119.79	13.56	75323.6	13.28
75451.89	13.287	5482.88	13.21	75484.3	13.21	75517.9	13.13	75520.7	13.14
75542.06	13.197	5543.33	13.19	75550.7	13.21	75620.7	13.347	5718.15	13.49
75914.07	13.82	75960.7	13.72	75980.7	13.67	5981.39	13.67	6016.61	13.75
76018.97	13.717	6019.09	13.71	76050.7	13.71	76070.6	14.13	76070.7	14.13
76160.7	14.227	6200.96	14.227	6207.79	14.3	76230.7	14.12	76250.7	13.98
76252.23	13.97	76270.7	14.1	76271.8	14.1	76280.7	14.11	76290.7	14.12
76293.32	14.12	76300.7	14.527	6302.86	14.63	76340.7	14.75	76344.8	14.78
76360.7	14.367	6369.25	14.13	76370.7	14.13	76390.7	14.06	76400.7	14.05
76425.11	14.177	6449.08	13.67	76450.7	13.68	76470.7	13.83	76560.7	14.25
76561.55	14.27	76570.7	14.52	76580.7	14.8	76590.7	15.07	6598.28	15.28
76600.7	15.29	76610.7	15.32	76640.7	15.12	6667.79	15.07	76670.7	15.05
76801.69	14.53	76810.7	14.56	76870.7	14.93	76930.7	15.87	6931.16	15.8
76980.7	16.01	7044.25	16.01	77060.7	16.09	7063.99	16.1	77200.7	16.68
77202.34	16.69	77220.7	16.67	7220.96	16.6	77255.8	16.41	77260.7	16.41
77270.7	16.41	7272.42	16.41	7326.19	16.72	7336.96	17.25	7351.91	17.35

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69869.36	.117	3929.33	.047	4017.24	.11

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73929.3	374017.24	100	100	100	.3	.5

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
69869.3	673188.91	17.67	T
74853.8	877351.91	15.84	T

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 700

INPUT
Description:
Station Elevation Data num= 476

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69868.52	17.83	69869.25	17.79	69870.88	17.74	69872.19	17.76	9872.42	17.74
69872.88	17.78	69873.06	17.77	69873.34	17.76	69909.56	17.09	70013.87	16.49
70014.23	16.49	70139.12	16.53	70140.24	16.53	70227.79	16.83	70235.44	16.86
70237.79	16.85	70297.77	16.63	70298.95	16.63	70300.41	16.74	70307.77	17.86
70311.33	17.86	70347.77	17.36	70387.75	17.07	70388.52	17.06	70430.85	17.25
70437.73	17.26	70521.54	17.73	70557.29	17.33	70646.35	17.49	70653.35	17.41
70653.4	17.41	70653.45	17.41	70682.37	17.52	70703.47	17.49	70707.67	17.46
70717.67	17.35	70723.47	17.37	70727.67	17.36	70727.92	17.35	70737.66	17.22
70738.15	17.22	70803.49	16.18	70804.17	16.16	70816.39	16.15	70817.64	16.16
70842.7	16.44	70867.63	16.17	70867.87	16.17	70877.33	15.99	70877.62	15.99
70899.84	16.02	70922.23	15.94	70923.36	15.94	70927.62	15.97	71107.58	16.15
71109.02	16.15	71128.51	16.17	71147.56	16.11	71148.36	16.11	71175.95	16.07
71176.3	16.07	71178.4	16.08	71280.77	15.96	71311.77	15.92	71367.52	16.06
71406.52	16.4	71407.5	16.47	71409.72	16.39	71427.5	16.27	71428.64	16.19
71433.65	16.24	71440.34	16.25	71440.89	16.25	71447.97	16.24	71505.5	16.2
71507.48	16.22	71509.5	16.23	71510.7	16.24	71513.62	16.31	71513.67	16.31
71517.47	16.36	71578.92	16.97	71593.69	16.97	71595.45	16.98	71599.41	17
71617.45	16.93	71647.44	16.82	71677.44	16.62	71680.86	16.62	71696.49	16.47
71699.14	16.32	71785.57	16.18	71795.4	16.51	71806.55	16.46	71817.4	15.76
71817.64	15.75	71880.56	15.77	71974.79	15.69	71976.48	15.69	71977.59	15.68
72000.66	15.64	72001.67	15.64	72077.23	15.53	72081.41	15.53	72124.36	15.52
72124.78	15.52	72125.19	15.52	72219.94	15.66	72228.34	15.65	72229.25	15.65
72231.37	15.66	72245.12	15.47	72247.44	15.16	72248.94	15.01	72253.53	15.11
72254.44	15.13	72254.55	15.13	72257.38	15.09	72260.21	15.34	72261.92	15.41
72265.98	15.56	72457.62	16.09	72462.09	16.02	72463.41	16.02	72483.38	15.91
72753.78	16.77	72758.97	16.79	72760.02	16.79	72770.02	16.83	72840	16.97
72845.92	17.09	72896.54	16.74	72899.45	16.47	72899.7	16.47	72901.84	16.45
72908.25	16.33	72909.25	16.34	72909.98	16.34	72912.7	16.33	72914.81	16.33
72919.98	16.41	72969.72	16.43	72973.14	16.41	72974.11	16.42	73000.88	16.47
73025.52	16.36	73032.2	16.06	73033.48		1673046.88	16.59	73051.38	16.56
73051.49	16.55	73070.55	16.15	73070.81	16.15	73087.54	16.45	73109.44	16.67
73113.84	16.77	73123.44	16.74	73128.67	16.77	73128.69	16.77	73147.88	16.95
73148.05	16.95	73167.38	17.07	73169.59	17.08	73183.38	17.04	73186.62	17.02
73186.67	17.02	73186.73	17.02	73188.67	17.05	73189.84	17.06	73190.61	17.06
73193.38	17.05	73193.58	17.05	73521.27	14.94	73534.28	14.84	73706.38	13.47
73707.14	13.46	73708.3	13.47	73708.78	13.47	73715.05	13.51	73723.06	13.57
73723.78	13.58	73723.81	13.58	73738.97	13.48	73747.18	13.39	73749.38	13.37
73756.77	13.39	73758.82	13.39	73763.06	13.32	73766.02	13.27	73766.25	13.27
73766.36	13.26	73766.92	13.26	73775.97	13.04	73776.58	13.02	73782.63	12.94
73785.55	12.91	73785.58	12.91	73785.76	12.92	73792.44	12.84	73794.66	12.82
73804.64	12.74	73809.41	12.77	73812.01	12.69	73833.53	12.58	73836.72	12.55
73843.13	12.43	73843.26	12.43	73843.54	12.42	73848.44	12.24	73850.31	12.12
73852.06	11.99	73852.72	11.97	73859.59	11.75	73860.09	11.74	73862.33	11.69
73862.86	11.67	73870.75	11.57	73871.92	11.48	73878.42	11.37	73880.54	11.34
73881.51	11.33	73882.18	11.32	73891.11	11.18	73900.12	11.05	73900.7	11.04

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 73901.2   11.0373909.91   10.87 73910.3   10.86 73919.7    10.7 73919.9   10.69
 73920.5   10.6873920.81   10.6873923.22   10.6473924.34   10.5773927.75   10.52
73929.48   10.49 73929.7   10.4973933.82   10.3573934.27   10.3573936.23   10.31
73946.45   10.0273947.38    9.9973949.72    9.9373950.55     9.973956.47    9.68
 73962.8    9.4573963.23    9.46 73963.3    9.4773964.44     9.573971.62    9.72
 73974.8    9.8273975.11    9.8373977.69     9.973979.94    9.9573981.19    9.97
73983.22   10.0273985.36   10.0773986.36   10.1173988.25    10.273990.98   10.32
 73992.6   10.3773996.56   10.4873997.92   10.5173998.96   10.54 74006.3   10.67
74007.34   10.6974016.28   10.8774016.49   10.8774016.76   10.8774017.86   10.89
74018.06    10.974026.16   11.1474026.28   11.1574034.05   11.3974036.28   11.47
 74038.2   11.5474046.28   11.8374049.62    11.974052.94   11.9874054.39   12.02
74058.31   12.11 74063.8   12.2274066.28   12.27 74069.7   12.3474073.22   12.41
74076.28   12.4874082.63    12.674086.27   12.6674096.28   12.8374098.58   12.86
74099.78   12.8874101.31    12.974101.45    12.974106.28   12.9774109.31   13.01
74116.27   13.0974147.45   13.4274167.78   13.6374168.29   13.6474178.71   13.71
74179.02   13.71   74187   13.7574229.23   13.9374230.94   13.9474235.86   13.95
74293.21   14.0674308.52    14.1 74349.7   14.1674350.38   14.1774459.45   14.19
74621.56   14.2274661.67   14.2374785.39   13.9674862.71   13.7774867.52   13.76
74984.91   13.4775027.66   13.3675146.22   13.3175147.03   13.3175292.22   13.26
75301.83   13.3475311.45   13.4275321.05    13.575329.31   13.5675330.66   13.55
75359.45    13.575369.11   13.4975370.97    13.575417.16    13.475493.16    13.6
75525.45   13.6475526.92   13.6575532.48   13.6575561.95   13.6475564.88   13.65
75587.13   13.6975588.45    13.775596.14   13.7175599.77   13.7275669.09   13.61
75695.88   13.5775770.66   13.9175791.98   14.0175804.12   13.7975812.79   13.99
75820.81   13.9775822.43   13.9775839.42   13.6775840.03   13.7375849.64   13.77
75850.17   13.6775874.06   14.0475874.67   14.0475878.47   13.9575974.84   13.69
75980.05   13.6775988.73   13.6875991.69   13.6776020.25   13.7476022.63   13.72
76023.45   13.71 76044.3   13.6276045.01   13.6276051.47   13.6276070.69    13.5
 76070.7    13.576081.72   13.5676084.17   13.55 76084.3   13.5576089.91   13.57
76094.25   13.5676117.25   13.6276129.41   13.7776137.98   13.8976138.09   13.89
76214.84   14.1976222.48   14.2476224.45   14.2276231.89   14.1876246.89   14.08
76273.85   14.1176280.97   14.1676285.59   14.1576298.64   14.1276301.34   14.13
76304.84   14.1376320.56   14.17 76325.7   14.0876327.28   14.0576330.44   14.02
76346.54   14.0976347.68   14.0976356.96   14.1176367.38   14.1376370.11   14.13
 76377.8   14.3476380.05    14.476416.67    14.576419.49   14.5876421.36   14.64
76423.77   14.6476426.28   14.5976426.53   14.5976429.19   14.4476440.34   14.11
76444.19   13.9976449.25   13.9776450.77   13.9876471.61   14.1376482.03   14.22
 76486.9   14.2876493.55   14.3376507.47   14.38   76532   14.1776532.45   14.17
76534.14   14.1876554.98   14.3176648.78   14.7776649.66   14.79 76659.2   14.94
76669.62    15.176680.05   15.2776687.95   15.3976690.47    15.476700.89   15.45
 76724.2   15.4476732.16   15.4476736.38   15.4676760.39   15.6276763.43   15.64
76770.86   15.6876772.27   15.6876781.88   15.6776786.85   15.6776791.48   15.65
76865.02   15.2476868.37   15.2576877.98   15.2776887.59   15.4376899.94   15.47
76909.34   15.5476926.03   15.6876928.11    15.776940.09   15.6476971.88   15.52
76974.09   15.5377034.41   15.9577034.88   15.9577086.52   16.0677152.75   16.06
77169.89    16.177171.62   16.1177173.33    16.177195.12   16.0177195.56   16.02
77204.27   16.0277204.55   16.0277204.73   16.0277214.35   16.1277223.96   16.22
77315.81   16.9777317.52   16.9977336.66   17.0677336.92   17.0677373.23   17.19
77377.73   17.2277378.34   17.2277387.34   17.2377388.77   17.2377388.82   17.23
77390.55   17.2277435.39   17.1877437.62   17.1877446.59   17.1977457.81   17.45
77473.39   17.48

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69868.52     .1173929.48     .0473997.92     .11

Bank Sta: Left   Right    Lengths: Left Channel   Right      Coeff Contr.   Expan.
      73929.4873997.92              100     100     100              .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
69868.5273270.56   17.67       F
74467.3377473.39   15.84       F
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CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 600

INPUT
Description: 200 FT UPSTREAM OF THE PROPOSED CL
Station Elevation Data num= 214

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	17.75	69870.03	17.65	69871.35	17.66	9871.58	17.68	69872.03	17.78
69872.22	17.77	69872.5	17.75	70013.06	16.04	70013.42	16.04	70138.34	16.01
70139.47	16.01	70227.04	16.56	70234.69	16.67	0237.04	16.58	70297.04	16.11
70298.22	16.17	0299.68	16.32	70347.04	17.52	70387.04	16.91	70387.81	16.9
70430.15	17.25	70437.04	17.25	70707.04	17.74	70717.04	17.68	70727.04	17.91
70727.29	17.91	70737.04	17.94	70737.52	17.94	70815.78	17.78	70817.04	17.81
70867.04	17.82	70867.27	17.82	70899.25	17.53	70927.04	17.43	71107.04	17.78
71108.48	17.78	71127.98	17.82	71147.04	17.71	71175.44	17.62	71175.77	17.63
71177.88	17.64	71311.29	17.33	71367.04	17.67	1427.04	17.89	71439.88	17.62
71440.44	17.61	71447.52	17.42	71578.51	17.09	71617.04	17.18	71647.04	17.01
71677.04	16.67	71680.46	16.69	71696.1	16.42	71698.75	16.13	71785.2	16.01
71974.47	15.43	71976.16	15.43	71977.27	15.42	72000.34	15.38	72001.35	15.38
72076.93	15.31	72081.11	15.32	72219.68	15.52	72228.08	15.57	2228.99	15.5
72231.11	15.51	72244.87	14.97	72247.19	14.48	72248.69	14.18	72253.27	14.38
72254.19	14.42	72254.3	14.42	72257.13	14.33	72259.96	14.83	72261.67	14.96
72265.73	15.26	72457.42	16.03	72753.66	16.81	72758.84	16.97	72759.89	16.98
72769.89	17.04	72839.89	17.21	73000.81	16.76	73046.81	16.94	73051.44	16.86
73109.39	17.09	73147.85	17.62	73148.02	17.62	73167.34	17.76	73169.56	17.78
73186.65	17.59	73188.65	17.61	73193.36	17.62	73521.32	15.56	73534.34	15.45
73739.08	13.54	73763.18	13.07	73766.13	13.03	73782.76	12.83	73792.56	12.75
73794.79	12.74	73804.77	12.74	73809.54	12.74	73812.14	12.75	73836.86	12.89
73843.4	12.87	73848.58	12.54	73850.45	12.35	73852.2	12.14	73860.24	11.81
73870.9	11.57	73878.57	11.36	73880.69	11.33	73900.27	11.04	73901.35	11.02
73910.07	10.83	73919.86	10.61	73920.66	10.59	73923.38	10.53	73924.5	10.41
73927.91	10.33	73929.65	10.37	3932.41	10.24	73939.44	9.87	3939.98	9.77
73948.88	9.22	73949.24	9.23	73959.03	9.6	73959.3	9.61	73961.48	9.69
73967.98	9.79	73968.82	9.85	73972.73	10.11	73978.61	10.35	73979.69	10.39
73988.41	10.58	73997.93	10.8	73998.2	10.87	4007.99	11.02	74032.4	11.61
74035.84	11.77	4037.37	11.75	74047.16	12.03	74053.3	12.21	74056.95	12.31
74066.75	12.59	74086.19	12.98	74086.33	12.98	74094.51	13.11	74155.34	13.88
74175.34	14	74219.28	14.22	74221.06	14.22	74285.86	14.37	74344.64	14.52
74345.34	14.54	74669.25	14.54	74797.98	13.96	74878.43	13.56	75050.06	13
75173.42	13.05	75335.34	13.33	75345.34	13.49	75355.34	13.66	75363.94	13.8
75365.34	13.78	75405.34	13.71	75407.28	13.72	75455.34	13.53	75575.34	14.11
75645.34	14.22	75745.34	13.76	75867	14.42	75875.34	14.37	75877.03	14.36
75935.34	14.24	76041.04	13.53	76050.07	13.56	76053.14	13.55	76082.87	13.75
76085.34	13.71	76115.34	13.62	76135.34	13.37	6135.37	13.37	6155.34	13.42
76159.87	13.41	76196.45	13.59	76358.95	14.04	76568.42	14.48	76575.34	14.55
76615.34	14.67	76815.34	15.77	6828.01	15.87	6863.89	16.34	76865.34	16.34
76875.34	16.36	76880.52	16.37	76885.34	16.36	76961.85	15.81	76965.34	15.84
76975.34	15.92	76985.34	16.28	77025.34	16.71	77027.51	16.72	77039.97	16.54
77075.34	16.09	77280.89	16.12	77335.34	16.14	77495.34	18.03	77505.34	18.05
77506.88	18.05	77555.34	17.77	7557.66	17.68	77594.88	17.61		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69867.68	.11	73929.65	.04	73978.61	.11

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73929.65	73978.61	135	135	135	.3	.5

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
69867.68	73456.23	17.93	F

74288.5377594.88 15.84 F
Sediment Elevation = 9.22

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 465

INPUT
Description: 105 FT DOWNSTREAM OF BRIDGE
Station Elevation Data num= 263

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	17.96	69870	17.94	69880.07	17.85	69920.35	17.72	70061.32	17.96
70101.59	18.3	70101.6	18.37	0102.38	18.37	0102.83	18.37	0103.23	18.3
70109.95	18.31	70111.66	18.31	70121.73	18.31	70122.42	18.31	70131.8	18.32
70141.87	18.35	70142.02	18.35	70143.62	18.36	70149.04	18.35	70150.1	18.35
70222.28		187	0223.84	17.98	70265.41	18.39	70268.23	18.42	70281.69	18.08
70282.28	18.08	70282.78	18.09	70316.35	18.13	70513.57	17.67	70518.18	17.67
70522.28	17.7	70566.07	18.12	70566.47	18.12	70593.83	18.04	70622.28	18.07
70732.28	18.4	70744.53	18.56	70752.28	18.57	70772.28	18.58	70777.61	18.59
70797.92	18.37	70802.28	18.43	70892.28	18.64	70907.42	18.68	70983.06	18.5
71022.12	18.54	71022.28	18.54	71062.31	18.43	71068.26	18.41	71102.28	18.47
71104.99	18.47	71142.6	18.15	71159.53	18.07	71164.93	17.86	71166.74	17.85
71172.28	17.89	71222.28	18.21	71224.42	18.22	71224.59	18.22	71232.28	18.19
71244.97	18.13	71352.28	17.72	71369.51	17.71	71370.51	17.69	71372.28	17.69
71412.28	17.84	71452.28	17.76	71482.28	17.62	71485.75	17.67	1502.28	17.72
71547.61	18.01	71582.28	17.83	71641.92	17.76	71642.28	17.76	71652.28	17.67
71658.96	17.61	71702.28	18.19	71725.18	18.26	71732.28	18.24	71742.28	18.22
71772.28	18.15	72059.15	16.95	72059.92	16.94	72067.89	16.82	72121.87	15.48
72131.62	15.2	72174.13	14.19	72179.72	14.08	72184.58	14.19	72195.04	14.43
72195.35	14.43	72232.79	15.22	72275.02	15.26	72289.11	15.53	72290.95	15.56
72320.47	16.47	72321.37	16.56	72322.82	16.56	72326.51	16.56	72330.78	16.55
72330.93	16.55	72331.83	16.55	72336.77	16.12	72394.52	15.68	72395.57	15.67
72401.41	15.73	72402.48	15.73	72404.1	15.73	72426.38	16.25	72426.44	16.26
72482.15	15.75	72589.21	15.68	72598.27	15.71	72663.66	16.15	72668.38	16.15
72669.21	16.15	72673.73	16.15	72842.62	16.21	72880.21	15.08	72880.46	15.08
72943.71	15.79	72945.96	15.89	72959.21	16.09	72962.77	16.09	72993.25	16.81
72993.82	16.82	72995.08	16.83	72995.68	16.83	73028.83	15.94	73029.2	15.98
73038.76	16.92	73039.85	17.01	73042.08	17.22	73047.51	17.15	73048.69	17.15
73052.75	17.13	73054.04	17.13	73058.62	16.88	73069.72	16.06	73092.04	16.77
73098.35	16.79	73167.18	16.89	73173.08	16.69	73235.67	15.94	73236.01	15.61
73237.39	14.68	73237.82	14.47	3238.43	14.39	73241.49	14.68	73242.07	15.25
73268.26	16.13	73268.4	16.13	73268.43	16.13	73268.45	16.12	73268.74	16.13
73268.83	16.13	73418.95	15.77	3475.75	15.85	73478.53	15.82	73527.56	15.66
73532.77	15.81	73555.2	15.97	73559.84	15.95	73565.14	15.56	73614.79	12.44
73642.05	12.37	3720.63	12.31	73724.04	12.28	73763.77	12.02	73787.39	12.06
73800.59	12.14	73838.53	12.36	73889.66	12.44	73925.14	12.55	73945.2	11.23
73950.2	10.43	73955.9	9.55	73961.4	9.12	73963	8.57	73965.5	7.21
73974.1	6.8	73975.9	7.66	73986.59	10.31	73990.55	11.27	73992.3	11.71
74010.62	12.46	74040.6	12.33	74090.91	12.18	74161.22	12.47	4171.22	12.74
74181.22	13.25	74224.35	13.37	74236.31	13.87	4261.88	14.38	74271.22	14.16
74289.72	13.76	74291.22	13.75	74293.04	13.73	74296.31	13.71	74301.22	13.76
74342.44	14.16	74411.22	13.72	74412.05	13.71	74416.97	13.77	74474.72	14.8
74475.92	14.87	4511.22	14.87	4532.77	14.85	74541.22	14.85	74595.97	14.65
74780.46	13.42	74931.22	12.67	74951.22	12.55	74971.22	12.67	4981.22	12.61
75121.22	12.62	75141.22	12.66	75231.22	12.87	5234.72	12.87	5261.22	13.14
75331.22	14.06	75371.22	14.59	75372.48	14.61	75501.22	13.83	75503.61	13.81
75510.27	13.82	75511.22	13.82	75531.22	13.86	75811.22	14.02	75822.58	14.02
75981.22	14.3	76121.22	13.86	76122.21	13.85	76131.22	13.86	76281.22	13.93
76431.22	14.33	76591.22	13.85	76821.22	15.36	76871.22	15.63	76881.22	15.69
77661.22	17.45	77670.02	17.46	77671.22	17.43	77681.22	17.15	77701.22	16.62
77711.22	16.6	77718.97	16.59	77721.22	16.6	77731.22	16.64	77861.22	17.03

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77871.22   17.0577881.22   17.0877884.96   17.0977885.11   16.4877891.22   16.59
77901.22   16.7777911.22   16.9677961.22   17.8277991.22   18.0578121.22   18.71
78151.22   18.7978161.22   18.8278171.22   18.85

Manning's n Values        num=       5
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
69867.68     .1173642.05     .08 73945.2     .0473990.55     .0874296.31     .11

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       73945.273990.55              130     130     130             .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
69867.6873922.15   17.67       T
74023.8578171.22   15.84       T
Sediment Elevation = 8.9

BRIDGE


RIVER: Walleyleg_Branch
REACH: 1                  RS: 388

INPUT
Description:
Distance from Upstream XS =      62
Deck/Roadway Width        =      30
Weir Coefficient          =     2.6
Upstream  Deck/Roadway Coordinates
    num=     458
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
 69969.9   18.54         69976.1   18.55           69990   18.54
 70030.1   18.55         70040.2   18.57         70068.3   18.56
 70080.3   18.61         70090.4   18.66         70092.2   18.67
 70100.4   18.69         70110.5   18.72         70120.2   18.75
 70140.6   18.75         70147.8   18.74         70160.7   18.67
 70168.9   18.63         70171.9   18.61         70174.2   18.59
 70198.5   18.62         70210.9   18.57         70220.9   18.54
 70224.6   18.52         70230.9   18.49         70240.9   18.44
 70247.1   18.41         70249.1   18.42         70260.9   18.41
 70270.1   18.42         70280.9   18.49         70290.9   18.56
 70294.5   18.58         70300.9   18.55         70310.9    18.5
 70320.9   18.45         70325.8   18.42         70340.9   18.47
 70350.9   18.53         70355.2   18.56         70358.6    18.6
 70420.9   18.65         70430.9   18.69         70440.9    18.6
 70443.2   18.56         70460.9   18.54         70470.3   18.51
 70480.9   18.46         70490.9   18.42         70500.9   18.37
 70510.9   18.39         70520.9   18.42         70525.6   18.44
 70540.9   18.42         70550.9   18.41         70560.8    18.4
 70566.4   18.42         70570.9   18.44         70580.9   18.47
 70590.9   18.51         70596.1   18.53         70610.9   18.56
 70620.9   18.58         70634.3   18.62         70640.9   18.66
 70650.9   18.71         70660.9   18.76         70667.6   18.78
 70680.9   18.83         70690.9   18.88         70700.9   18.92
 70706.2   18.94         70720.9   18.99         70730.9   19.02
 70740.9   19.06         70750.9   19.05         70800.9   19.04
 70810.9      19         70820.9   18.97         70829.9   18.93
 70840.9    18.9         70850.9   18.87         70860.9   18.84
   70869   18.82         70890.9   18.79         70900.9   18.77
 70920.9   18.79         70930.9   18.81         70940.9   18.83
 70948.3   18.82         70960.9   18.79         70970.9   18.77
 70980.9   18.75         71000.9   18.76         71010.9   18.78
 71020.9    18.8         71030.5   18.82         71035.6    18.8
 71040.9   18.78         71050.9   18.75         71060.9   18.73
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71080.9	18.7	71090.9	18.67	71100.9	18.64
71110.9	18.61	71120.9	18.59	71130.9	18.57
71140.9	18.55	71145.9	18.54	71160.9	18.49
71170.9	18.46	71180.9	18.43	71189.6	18.4
71200.9	18.31	71210.9	18.23	71214	18.21
71218.6	18.24	71220.9	18.26	71230.9	18.37
71240.9	18.48	71243.3	18.51	71250.9	18.48
71260.9	18.44	71270.9	18.41	71290.9	18.35
71300.9	18.31	71310.9	18.26	71340.9	18.29
71350.9	18.31	71360.9	18.3	71370.9	18.33
71380.9	18.37	71390.9	18.41	71394.8	18.43
71446.7	18.44	71490.9	18.41	71500.9	18.44
71510.9	18.46	71530.9	18.5	71670.9	18.49
71690.6	18.46	71696.7	18.45	71700.9	18.43
71710.9	18.4	71720.9	18.37	71728.5	18.34
71968.4	18.26	72009.3	18.33	72024.3	18.31
72034.5	18.29	72054.9	18.3	72065.1	18.34
72067.6	18.34	72071.5	18.38	72074.5	18.4
72079.4	18.42	72095	18.46	72102.8	18.48
72134.1	18.51	72141.9	18.53	72154.1	18.56
72224.4	18.54	72242.9	18.51	72250.6	18.48
72273.8	18.46	72277.1	18.45	72281.3	18.44
72287.1	18.41	72289.3	18.4	72294.1	18.38
72297	18.36	72317.1	18.32	72320.1	18.3
72334.4	18.27	72347	18.25	72350.8	18.23
72353.3	18.21	72386.8	18.25	72404.5	18.27
72412.1	18.29	72465.5	18.27	72471.6	18.24
72473.2	18.25	72511.2	18.23	72514.7	18.2
72525.3	18.23	72541.7	18.22	72559.2	18.21
72572	18.23	72585	18.25	72595	18.27
72603.2	18.31	72605	18.32	72610.9	18.31
72625	18.33	72626.1	18.34	72634	18.3
72636.7	18.28	72641.7	18.3	72647.4	18.32
72649.4	18.31	72655	18.29	72664.9	18.3
72685	18.29	72695	18.27	72705	18.25
72715	18.19	72720.8	18.15	72725	18.16
72735	18.14	72740.6	18.12	72745	18.08
72764.8	18.03	72775	18	72778.7	17.99
72805	17.97	72825	17.98	72835	17.97
72855	17.95	72865	17.93	72875	17.91
72885	17.87	72895	17.83	72925	17.89
72935	17.94	72945	17.93	72955	17.91
72965	17.89	72973.7	17.87	73007	17.89
73024	17.91	73035.1	17.92	73055.2	17.91
73065.2	17.9	73085.3	17.88	73105.3	17.85
73111.8	17.84	73115.3	17.83	73135.4	17.81
73155.1	17.78	73165.4	17.74	73175.5	17.71
73182.7	17.68	73185.5	17.69	73192.3	17.72
73205.5	17.7	73222.2	17.68	73225.6	17.66
73234	17.63	73255.6	17.64	73265.6	17.62
73272.8	17.61	73305.7	17.64	73311	17.66
73315.7	17.65	73325.7	17.63	73333.4	17.61
73335.7	17.62	73345.7	17.64	73355.7	17.62
73365.7	17.59	73385.8	17.62	73393.2	17.65
73405.8	17.6	73415.8	17.64	73435.8	17.72
73445.8	17.75	73453.1	17.78	73465.8	17.86
73471	17.89	73495.8	17.93	73497.9	17.94
73505.8	17.97	73509.4	17.99	73512.1	18
73515.8	18.04	73520.8	18.1	73525.8	18.16
73531.7	18.23	73535.8	18.26	73543.7	18.32
73550.8	18.34	73555.2	18.35	73580.7	18.34
73585.8	18.35	73595.8	18.37	73601.1	18.39
73605.8	18.42	73612.5	18.46	73615.8	18.48

73624	18.54		73625.8	18.56		73634.5	18.63		
73645.8	18.66		73646.9	18.67		73655.8	18.71		
73665.8	18.76		73669.9	18.78		73673.5	18.8		
73685.8	18.79		73715.7	18.85		73725.7	18.93		
73735.8	18.97		73738.7	18.98		73744.7	19.01		
73755.8	19.04		73761.6	19.06		73763.4	19.07		
73773.1	19.12		73780.1	19.15		73792.8	19.12		
73805.9	19.14		73815.9	19.11		73819	19.09		
73825.5	19.05		73830.4	19.03		73835.9	19		
73841.9	18.98		73845.2	18.96		73855.9	18.95		
73864.8	18.96		73875.9	18.98		73905.9	18.86		
73912.6	18.77		73915.9	18.68		73919.9	18.57		
73932	18.21	0	73932	18.21	16.21	73959	18.2	16.2	
73986	18.07	16.07	74013	18.01	16.01	74013	18.01	0	
74096	17.92		74105.6	17.91		74116	17.9		
74136.1	17.88		74154.9	17.86		74166.1	17.81		
74236.1	17.47		74240.8	17.45		74246.1	17.42		
74256.1	17.37		74286.1	17.22		74289.7	17.2		
74296.1	17.18		74306.1	17.15		74406.1	16.83		
74416.1	16.79		74426.1	16.75		74436.1	16.72		
74476.1	16.57		74486.1	16.55		74496.1	16.53		
74546.1	16.42		74551.6	16.41		74556.1	16.4		
74566.1	16.37		74576.1	16.35		74666.1	16.12		
74673.8	16.1		74776.1	16.12		74816.1	16.11		
74856.1	16.06		74886.1	16.04		74936.1	16		
75016.1	16.03		75086.1	16.07		75106.1	16.09		
75146.1	16.14		75166.1	16.16		75226.1	16.21		
75286.1	16.17		75306.1	16.16		75366.1	16.12		
75376.1	16.11		75446.1	16.08		75496.1	16.06		
75586.1	16.09		75606.1	16.1		75641.1	16.12		
75646.1	16.11		75656.1	16.09		75746.1	15.96		
75756.1	15.95		75816.1	15.87		75976.1	15.88		
76056.1	15.98		76066	16		76076.1	16.01		
76116.1	16.07		76136.1	16.06		76216.1	15.94		
76226.1	15.92		76236.1	15.9		76266.1	15.84		
76275.6	15.81		76366.1	15.84		76526.1	15.92		
76546.1	15.95		76576.1	15.98		76596.1	16.02		
76606.1	16.05		76676.1	16.25		76686.1	16.28		
76696.1	16.3		76726.1	16.38		76731.5	16.39		
76746.1	16.43		76786.1	16.51		76796.1	16.53		
76806.1	16.56		76886.1	16.73		76896.1	16.76		
76906.1	16.78		76946.1	16.89		76956.1	16.91		
76966.1	16.93		77056.1	17.13		77066.1	17.15		
77076.1	17.17		77096.1	17.2		77105.8	17.21		
77116.1	17.23		77196.1	17.33		77206.1	17.34		
77216.1	17.37		77286.1	17.52		77294.4	17.54		
77306.1	17.57		77336.1	17.65		77344.8	17.67		
77356.1	17.7		77436.1	17.92		77443.4	17.94		
77456.1	17.96		77496.1	18.05		77506.1	18.07		
77516.1	18.09		77576.1	18.22		77586.1	18.25		
77596.1	18.28		77696.1	18.55		77703.1	18.57		
77806.1	18.61		77826.1	18.62		77876.1	18.66		
77880.3	18.67		77886.1	18.69		77896.1	18.73		
77966.1	19.04		77974.1	19.07		77986.1	19.12		
78026.1	19.28		78033.2	19.31		78036.1	19.32		
78046.1	19.34		78106.1	19.47		78108.8	19.48		
78126.1	19.51		78156.1	19.56					

Upstream Bridge Cross Section Data
Station Elevation Data num= 263

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	17.96	69870	17.94	69880.07	17.85	69920.35	17.72	70061.32	17.96
70101.59	18.3	70101.6	18.37	0102.38	18.37	0102.83	18.37	0103.23	18.3

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70109.95   18.3170111.66   18.3170121.73   18.3170122.42   18.31 70131.8   18.32
70141.87   18.3570142.02   18.3570143.62   18.3670149.04   18.35 70150.1   18.35
70222.28      1870223.84   17.9870265.41   18.3970268.23   18.4270281.69   18.08
70282.28   18.0870282.78   18.0970316.35   18.1370513.57   17.6770518.18   17.67
70522.28    17.770566.07   18.1270566.47   18.1270593.83   18.0470622.28   18.07
70732.28    18.470744.53   18.5670752.28   18.5770772.28   18.5870777.61   18.59
70797.92   18.3770802.28   18.4370892.28   18.6470907.42   18.6870983.06    18.5
71022.12   18.5471022.28   18.5471062.31   18.4371068.26   18.4171102.28   18.47
71104.99   18.47 71142.6   18.1571159.53   18.0771164.93   17.8671166.74   17.85
71172.28   17.8971222.28   18.2171224.42   18.2271224.59   18.2271232.28   18.19
71244.97   18.1371352.28   17.7271369.51   17.7171370.51   17.6971372.28   17.69
71412.28   17.8471452.28   17.7671482.28   17.6271485.75    17.671502.28   17.72
71547.61   18.0171582.28   17.8371641.92   17.7671642.28   17.7671652.28   17.67
71658.96   17.6171702.28   18.1971725.18   18.2671732.28   18.2471742.28   18.22
71772.28   18.1572059.15   16.9572059.92   16.9472067.89   16.8272121.87   15.48
72131.62    15.272174.13   14.1972179.72   14.0872184.58   14.1972195.04   14.43
72195.35   14.4372232.79   15.2272275.02   15.2672289.11   15.5372290.95   15.56
72320.47   16.4772321.37   16.5672322.82   16.5672326.51   16.5672330.78   16.55
72330.93   16.5572331.83   16.5572336.77   16.1272394.52   15.6872395.57   15.67
72401.41   15.7372402.48   15.73 72404.1   15.7372426.38   16.2572426.44   16.26
72482.15   15.7572589.21   15.6872598.27   15.7172663.66   16.1572668.38   16.15
72669.21   16.1572673.73   16.1572842.62   16.2172880.21   15.0872880.46   15.08
72943.71   15.7972945.96   15.8972959.21   16.0972962.77   16.0972993.25   16.81
72993.82   16.8272995.08   16.8372995.68   16.8373028.83   15.94 73029.2   15.98
73038.76   16.9273039.85   17.0173042.08   17.2273047.51   17.1573048.69   17.15
73052.75   17.1373054.04   17.1373058.62   16.8873069.72   16.0673092.04   16.77
73098.35   16.7973167.18   16.8973173.08   16.6973235.67   15.9473236.01   15.61
73237.39   14.6873237.82    14.473238.43   14.3973241.49   14.6873242.07   15.25
73268.26   16.13 73268.4   16.1373268.43   16.1373268.45   16.1273268.74   16.13
73268.83   16.1373418.95    15.773475.75   15.8573478.53   15.8273527.56   15.66
73532.77   15.81 73555.2   15.9773559.84   15.9573565.14   15.5673614.79   12.44
73642.05    12.373720.63   12.3173724.04   12.2873763.77   12.0273787.39   12.06
73800.59   12.1473838.53   12.3673889.66   12.4473925.14   12.55 73945.2   11.23
 73950.2   10.43 73955.9    9.55 73961.4    9.12   73963    8.57 73965.5    7.21
 73974.1     6.8 73975.9    7.6673986.59   10.3173990.55   11.27 73992.3   11.71
74010.62   12.46 74040.6   12.3374090.91   12.1874161.22    12.474171.22   12.74
74181.22   13.2574224.35   13.3774236.31    13.874261.88   14.3874271.22   14.16
74289.72   13.7674291.22   13.7574293.04   13.7374296.31   13.7174301.22   13.76
74342.44   14.1674411.22   13.7274412.05   13.7174416.97   13.7774474.72    14.8
74475.92    14.874511.22    14.874532.77   14.8574541.22   14.8574595.97   14.65
74780.46   13.4274931.22   12.6774951.22   12.5574971.22    12.674981.22   12.61
75121.22   12.6275141.22   12.6675231.22    12.875234.72    12.875261.22   13.14
75331.22   14.0675371.22   14.5975372.48   14.6175501.22   13.8375503.61   13.81
75510.27   13.8275511.22   13.8275531.22   13.8675811.22   14.0275822.58   14.02
75981.22    14.376121.22   13.8676122.21   13.8576131.22   13.8676281.22   13.93
76431.22   14.3376591.22   13.8576821.22   15.3676871.22   15.6376881.22   15.69
77661.22   17.4577670.02   17.4677671.22   17.4377681.22   17.1577701.22   16.62
77711.22    16.677718.97   16.5977721.22    16.677731.22   16.6477861.22   17.03
77871.22   17.0577881.22   17.0877884.96   17.0977885.11   16.4877891.22   16.59
77901.22   16.7777911.22   16.9677961.22   17.8277991.22   18.0578121.22   18.71
78151.22   18.7978161.22   18.8278171.22   18.85

Manning's n Values        num=       5
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
69867.68     .1173642.05     .08 73945.2     .0473990.55     .0874296.31     .11

Bank Sta: Left   Right    Coeff Contr.   Expan.
       73945.273990.55             .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
69867.6873922.15   17.67       T
74023.8578171.22   15.84       T
Sediment Elevation = 8.9
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Downstream Deck/Roadway Coordinates
num= 458

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
69969.9	18.54		69976.1	18.55		69990	18.54	
70030.1	18.55		70040.2	18.57		70068.3	18.56	
70080.3	18.61		70090.4	18.66		70092.2	18.67	
70100.4	18.69		70110.5	18.72		70120.2	18.75	
70140.6	18.75		70147.8	18.74		70160.7	18.67	
70168.9	18.63		70171.9	18.61		70174.2	18.59	
70198.5	18.62		70210.9	18.57		70220.9	18.54	
70224.6	18.52		70230.9	18.49		70240.9	18.44	
70247.1	18.41		70249.1	18.42		70260.9	18.41	
70270.1	18.42		70280.9	18.49		70290.9	18.56	
70294.5	18.58		70300.9	18.55		70310.9	18.5	
70320.9	18.45		70325.8	18.42		70340.9	18.47	
70350.9	18.53		70355.2	18.56		70358.6	18.6	
70420.9	18.65		70430.9	18.69		70440.9	18.6	
70443.2	18.56		70460.9	18.54		70470.3	18.51	
70480.9	18.46		70490.9	18.42		70500.9	18.37	
70510.9	18.39		70520.9	18.42		70525.6	18.44	
70540.9	18.42		70550.9	18.41		70560.8	18.4	
70566.4	18.42		70570.9	18.44		70580.9	18.47	
70590.9	18.51		70596.1	18.53		70610.9	18.56	
70620.9	18.58		70634.3	18.62		70640.9	18.66	
70650.9	18.71		70660.9	18.76		70667.6	18.78	
70680.9	18.83		70690.9	18.88		70700.9	18.92	
70706.2	18.94		70720.9	18.99		70730.9	19.02	
70740.9	19.06		70750.9	19.05		70800.9	19.04	
70810.9	19		70820.9	18.97		70829.9	18.93	
70840.9	18.9		70850.9	18.87		70860.9	18.84	
70869	18.82		70890.9	18.79		70900.9	18.77	
70920.9	18.79		70930.9	18.81		70940.9	18.83	
70948.3	18.82		70960.9	18.79		70970.9	18.77	
70980.9	18.75		71000.9	18.76		71010.9	18.78	
71020.9	18.8		71030.5	18.82		71035.6	18.8	
71040.9	18.78		71050.9	18.75		71060.9	18.73	
71080.9	18.7		71090.9	18.67		71100.9	18.64	
71110.9	18.61		71120.9	18.59		71130.9	18.57	
71140.9	18.55		71145.9	18.54		71160.9	18.49	
71170.9	18.46		71180.9	18.43		71189.6	18.4	
71200.9	18.31		71210.9	18.23		71214	18.21	
71218.6	18.24		71220.9	18.26		71230.9	18.37	
71240.9	18.48		71243.3	18.51		71250.9	18.48	
71260.9	18.44		71270.9	18.41		71290.9	18.35	
71300.9	18.31		71310.9	18.26		71340.9	18.29	
71350.9	18.31		71360.9	18.3		71370.9	18.33	
71380.9	18.37		71390.9	18.41		71394.8	18.43	
71446.7	18.44		71490.9	18.41		71500.9	18.44	
71510.9	18.46		71530.9	18.5		71670.9	18.49	
71690.6	18.46		71696.7	18.45		71700.9	18.43	
71710.9	18.4		71720.9	18.37		71728.5	18.34	
71968.4	18.26		72009.3	18.33		72024.3	18.31	
72034.5	18.29		72054.9	18.3		72065.1	18.34	
72067.6	18.34		72071.5	18.38		72074.5	18.4	
72079.4	18.42		72095	18.46		72102.8	18.48	
72134.1	18.51		72141.9	18.53		72154.1	18.56	
72224.4	18.54		72242.9	18.51		72250.6	18.48	
72273.8	18.46		72277.1	18.45		72281.3	18.44	
72287.1	18.41		72289.3	18.4		72294.1	18.38	
72297	18.36		72317.1	18.32		72320.1	18.3	
72334.4	18.27		72347	18.25		72350.8	18.23	
72353.3	18.21		72386.8	18.25		72404.5	18.27	

72412.1	18.29		72465.5	18.27		72471.6	18.24	
72473.2	18.25		72511.2	18.23		72514.7	18.2	
72525.3	18.23		72541.7	18.22		72559.2	18.21	
72572	18.23		72585	18.25		72595	18.27	
72603.2	18.31		72605	18.32		72610.9	18.31	
72625	18.33		72626.1	18.34		72634	18.3	
72636.7	18.28		72641.7	18.3		72647.4	18.32	
72649.4	18.31		72655	18.29		72664.9	18.3	
72685	18.29		72695	18.27		72705	18.25	
72715	18.19		72720.8	18.15		72725	18.16	
72735	18.14		72740.6	18.12		72745	18.08	
72764.8	18.03		72775	18		72778.7	17.99	
72805	17.97		72825	17.98		72835	17.97	
72855	17.95		72865	17.93		72875	17.91	
72885	17.87		72895	17.83		72925	17.89	
72935	17.94		72945	17.93		72955	17.91	
72965	17.89		72973.7	17.87		73007	17.89	
73024	17.91		73035.1	17.92		73055.2	17.91	
73065.2	17.9		73085.3	17.88		73105.3	17.85	
73111.8	17.84		73115.3	17.83		73135.4	17.81	
73155.1	17.78		73165.4	17.74		73175.5	17.71	
73182.7	17.68		73185.5	17.69		73192.3	17.72	
73205.5	17.7		73222.2	17.68		73225.6	17.66	
73234	17.63		73255.6	17.64		73265.6	17.62	
73272.8	17.61		73305.7	17.64		73311	17.66	
73315.7	17.65		73325.7	17.63		73333.4	17.61	
73335.7	17.62		73345.7	17.64		73355.7	17.62	
73365.7	17.59		73385.8	17.62		73393.2	17.65	
73405.8	17.6		73415.8	17.64		73435.8	17.72	
73445.8	17.75		73453.1	17.78		73465.8	17.86	
73471	17.89		73495.8	17.93		73497.9	17.94	
73505.8	17.97		73509.4	17.99		73512.1	18	
73515.8	18.04		73520.8	18.1		73525.8	18.16	
73531.7	18.23		73535.8	18.26		73543.7	18.32	
73550.8	18.34		73555.2	18.35		73580.7	18.34	
73585.8	18.35		73595.8	18.37		73601.1	18.39	
73605.8	18.42		73612.5	18.46		73615.8	18.48	
73624	18.54		73625.8	18.56		73634.5	18.63	
73645.8	18.66		73646.9	18.67		73655.8	18.71	
73665.8	18.76		73669.9	18.78		73673.5	18.8	
73685.8	18.79		73715.7	18.85		73725.7	18.93	
73735.8	18.97		73738.7	18.98		73744.7	19.01	
73755.8	19.04		73761.6	19.06		73763.4	19.07	
73773.1	19.12		73780.1	19.15		73792.8	19.12	
73805.9	19.14		73815.9	19.11		73819	19.09	
73825.5	19.05		73830.4	19.03		73835.9	19	
73841.9	18.98		73845.2	18.96		73855.9	18.95	
73864.8	18.96		73875.9	18.98		73905.9	18.86	
73912.6	18.77		73915.9	18.68		73919.9	18.57	
73932	18.21	0	73932	18.21	16.21	73959	18.2	16.2
73986	18.07	16.07	74013	18.01	16.01	74013	18.01	0
74096	17.92		74105.6	17.91		74116	17.9	
74136.1	17.88		74154.9	17.86		74166.1	17.81	
74236.1	17.47		74240.8	17.45		74246.1	17.42	
74256.1	17.37		74286.1	17.22		74289.7	17.2	
74296.1	17.18		74306.1	17.15		74406.1	16.83	
74416.1	16.79		74426.1	16.75		74436.1	16.72	
74476.1	16.57		74486.1	16.55		74496.1	16.53	
74546.1	16.42		74551.6	16.41		74556.1	16.4	
74566.1	16.37		74576.1	16.35		74666.1	16.12	
74673.8	16.1		74776.1	16.12		74816.1	16.11	
74856.1	16.06		74886.1	16.04		74936.1	16	
75016.1	16.03		75086.1	16.07		75106.1	16.09	

75146.1	16.14	75166.1	16.16	75226.1	16.21
75286.1	16.17	75306.1	16.16	75366.1	16.12
75376.1	16.11	75446.1	16.08	75496.1	16.06
75586.1	16.09	75606.1	16.1	75641.1	16.12
75646.1	16.11	75656.1	16.09	75746.1	15.96
75756.1	15.95	75816.1	15.87	75976.1	15.88
76056.1	15.98	76066	16	76076.1	16.01
76116.1	16.07	76136.1	16.06	76216.1	15.94
76226.1	15.92	76236.1	15.9	76266.1	15.84
76275.6	15.81	76366.1	15.84	76526.1	15.92
76546.1	15.95	76576.1	15.98	76596.1	16.02
76606.1	16.05	76676.1	16.25	76686.1	16.28
76696.1	16.3	76726.1	16.38	76731.5	16.39
76746.1	16.43	76786.1	16.51	76796.1	16.53
76806.1	16.56	76886.1	16.73	76896.1	16.76
76906.1	16.78	76946.1	16.89	76956.1	16.91
76966.1	16.93	77056.1	17.13	77066.1	17.15
77076.1	17.17	77096.1	17.2	77105.8	17.21
77116.1	17.23	77196.1	17.33	77206.1	17.34
77216.1	17.37	77286.1	17.52	77294.4	17.54
77306.1	17.57	77336.1	17.65	77344.8	17.67
77356.1	17.7	77436.1	17.92	77443.4	17.94
77456.1	17.96	77496.1	18.05	77506.1	18.07
77516.1	18.09	77576.1	18.22	77586.1	18.25
77596.1	18.28	77696.1	18.55	77703.1	18.57
77806.1	18.61	77826.1	18.62	77876.1	18.66
77880.3	18.67	77886.1	18.69	77896.1	18.73
77966.1	19.04	77974.1	19.07	77986.1	19.12
78026.1	19.28	78033.2	19.31	78036.1	19.32
78046.1	19.34	78106.1	19.47	78108.8	19.48
78126.1	19.51	78156.1	19.56		

Downstream Bridge Cross Section Data
Station Elevation Data num= 321

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	15.8	69869.97	15.8	69879.9	15.79	69887.28	15.78	69889.83	15.77
69899.76	15.76	69906.87	15.75	69909.7	15.75	69919.58	15.74	69919.63	15.74
69921.85	15.73	69924.29	15.71	69926.47	15.78	69928.22	15.85	69929.56	15.85
69934.28	15.87	69938.14	15.65	69939.45	15.51	69965.66	14.85	69968.93	14.62
69969.28	14.62	69972.74	14.66	69978.62	15.03	69979.22	15.02	70142.02	15.68
70148	15.81	70148.05	15.81	70155.04	15.84	70157.99	15.79	70161.61	15.73
70197.71	15.32	70200.8	15.31	70207.69	15.28	70208.22	15.27	70237.69	15.72
70281.11	15.73	70290.53	15.67	70300.56	15.69	70367.69	15.97	70731.82	14.82
70757.69	15.33	70807.69	15.07	70852.36	14.77	70857.69	14.83	70907.69	15.13
71089.86	15.58	71287.69	16.33	71289.53	16.34	71295.59	16.31	71297.69	16.33
71302.76	16.35	71307.69	16.33	71465.31	15.57	71467.69	15.59	71617.69	16.36
71625.89	16.38	71627.69	16.37	71787.69	16.23	71915.93	16.27	71916.98	16.27
71919.91	16.27	71922.16	16.25	71923.6	16.26	71925.03	16.27	71925.9	16.27
71926.56	16.29	71926.61	16.29	71927.55	16.29	72059.25	15.34	72182.94	16.17
72184.43	16.17	72185.35	16.17	72188.81	16.17	72192.11	16.17	72192.54	16.17
72207.45	14.65	72208.19	14.64	72214.1	14.62	72215.12	14.62	72215.64	14.62
72223.69	14.68	72253.48	14.89	72254.53	14.97	72276.49	15.44	72278	15.48
72280.77	15.48	72281.2	15.48	72284.16	15.48	72287.05	15.48	72314.85	15.04
72360.88	14.93	72367.46	14.97	72368.55	14.97	72376.22	14.92	72377.04	14.93
72377.52	14.93	72603.37	16.55	72635.79	16.63	72738.43	15.51	72820.76	16.52
72838.92	17.17	72843.66	16.41	72878.09	15.34	72878.11	15.34	72905.46	15.08
72949.97	14.93	72950.76	14.96	72953.27	15.03	72960.76	15.32	72964.51	15.52
73002.78	15.72	73162.06	16.19	73163.29	16.18	73170.61	16.23	73172.13	16.24
73173.34	16.24	73263.41	17.53	73313.1	16.36	73423.86	14.37	73442.12	13.96
73495.86	13.34	73499.81	13.31	73504.41	13.31	73504.55	13.31	73505.19	13.31
73514.48	13.31	73524.19	13.37	73524.55	13.37	73563.48	13.12	73584.97	12.98
73645.39	12.98	73646.93	13	73647.93	12.97	73661.7	13.24	73665.52	13.31
73675.59	13.57	73675.61	13.57	73681.34	13.54	73685.66	13.56	73743.27	13.89

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73746.08   13.7673747.07   13.7173756.15   13.4773806.49   12.8273821.85   12.38
73826.48   12.2573826.63   12.2673829.21   12.3673856.84   12.7673858.13   12.77
73866.91   12.7873872.75   12.7673876.98   12.7473877.78   12.74 73924.3   12.09
73927.33      1273933.17   11.8373936.71   11.61 73937.4   11.56   73943   11.21
73947.47   11.1173948.15   11.09 73950.2   10.43 73955.9    9.55 73961.4    9.12
   73963    8.57 73965.5    7.21 73974.1     6.8 73975.9    7.66 73979.7    8.86
 73984.4   10.64 73985.9   10.52 73994.1   11.01 73995.9   11.1674007.88   11.31
74009.33   11.3374009.72    11.374013.41   11.3574038.09   11.8874040.94   11.94
74044.54   11.9374048.16   11.8374058.23   11.56 74068.3   11.29 74071.8   11.19
74072.97    11.274074.21   11.2374078.37   11.3274088.44   11.5474090.09   11.57
74091.75   11.5674093.85   11.5774094.56   11.58 74113.5   11.5774118.64   11.56
74128.71   11.5574177.89   11.2774178.09   11.2774178.32   11.2774178.74   11.27
74184.47   11.2774188.74    11.374216.54   11.5274217.31   11.5374218.74   11.56
74224.25   11.6874226.85   12.0774228.74   12.2174229.31   12.2574230.94   12.48
74233.47    12.774234.49   12.91 74237.9   13.8974261.25   13.0674303.78   12.82
74318.74   12.9374392.15   13.9174392.27   13.9174392.33   13.9274448.74   13.84
74518.74    13.574521.32   13.4774528.74    13.574534.94   13.5274588.74   14.09
74731.05   13.6574734.71   13.6674738.74   13.6374788.74    13.674790.05   13.46
74798.74   13.4374799.36   13.4374802.91    13.474936.15   13.11 75027.7   13.02
75158.74   13.6175168.74    13.675168.85    13.675178.74   13.6375218.74   14.57
75222.44   14.7675225.05   14.7775228.74   14.7575231.71   14.7375258.74   14.58
75264.22   14.5875265.17   14.5875317.79   14.6675318.74   14.6775321.51   14.68
75415.24   14.8275418.74   14.8175458.05   14.6275504.05   13.9175545.43   14.01
75548.74      1475578.74   13.7675579.66   13.7675675.45   13.6875699.54   13.69
75702.85   13.9775788.74   14.7275789.02   14.7475896.34   13.7276058.74   14.88
76068.74   14.8676070.36   14.8576173.27    13.976178.74   13.5676178.81   13.55
76179.67   13.5776352.89   13.4576358.13   13.4176358.74   13.4176359.89   13.42
76459.95    13.776621.23   13.4376628.74   13.48 76630.8    13.576661.57    13.8
76668.74   13.8776918.74   15.2576948.74   15.2777058.74   16.3177098.74   16.89
77099.37    16.977102.51   16.8777118.74   16.6677206.24   16.5877208.74   16.56
77238.74   16.3877268.74   16.2677278.74   16.2777294.44   16.2977358.74   16.73
77368.74   16.8877369.24   16.88 77372.3   16.8877435.72   16.6977448.74   16.76
77638.39   18.0777638.74   18.0877639.06   18.0877648.74   18.09 77665.1    18.1
77748.74    15.977749.11   15.8677808.74    16.477809.32    16.477884.82   15.87
77888.74   15.8777898.74   15.8677901.43   15.8677918.74   15.9678148.74   18.65
78148.99   18.6678158.74   18.7678159.33   18.7778167.33   18.7578168.74   18.75
78178.74   18.75

Manning's n Values        num=       5
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
69867.68     .1173647.93     .0873948.15     .04 73995.9     .0874216.54      .1

Bank Sta: Left   Right    Coeff Contr.   Expan.
      73948.15 73995.9             .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
69867.6873922.15   17.67       T
74023.8578178.74   15.84       T
Sediment Elevation = 8.8

Upstream Embankment side slope              =       2 horiz. to 1.0 vertical
Downstream Embankment side slope            =       2 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .98
Elevation at which weir flow begins         =   15.81
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Abutments =  2

Abutment Data
Upstream     num=       4
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
```

```
   73932   16.21   73932   14.21   73934   14.21   73954    4.21
Downstream     num=       4
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   73932   16.21   73932   14.21   73934   14.21   73954    4.21

Abutment Data
Upstream     num=       4
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   73991    4.01   74011   14.01   74013   14.01   74013   16.01
Downstream     num=       4
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   73991    4.01   74011   14.01   74013   14.01   74013   16.01

Number of Piers =  2

Pier Data
Pier Station     Upstream=   73959    Downstream=   73959
Upstream     num=       4
    Width   Elev    Width   Elev    Width   Elev    Width   Elev
    1.17       0    1.17    14.3    2.17    14.3    2.17    16.3
Downstream     num=       4
    Width   Elev    Width   Elev    Width   Elev    Width   Elev
    1.17       0    1.17    14.3    2.17    14.3    2.17    16.3

Pier Data
Pier Station     Upstream=   73986    Downstream=   73986
Upstream     num=       4
    Width   Elev    Width   Elev    Width   Elev    Width   Elev
    1.17       0    1.17    14.3    2.17    14.3    2.17    16.3
Downstream     num=       4
    Width   Elev    Width   Elev    Width   Elev    Width   Elev
    1.17       0    1.17    14.3    2.17    14.3    2.17    16.3

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       W.S. Pro Method

  W.S.Pro Data
    Left Embankment
       El of the top of the embankment = 18.21
       El of the toe of the abutment   = 12.35
    Right Embankment
       El of the top of the embankment = 18.01
       El of the toe of the abutment   = 13.43
    Abtument Type                      = 3 Sloping abutments and sloping embankments
    Slope of abutments                 = 2
    Top with of embankment             = 30
    Centroid station of bridge opening =
    Wing Wall Type                     = No wing walls present
       Width                           =
       Angle                           =
       Radius                          =
    Guide Banks Type                   = No Guide Bank present
       Length                          =
       Offset                          =
       Angle                           =

Selected Low Flow Methods = W.S.Pro Method

High Flow Method
       Pressure and Weir flow
           Submerged Inlet Cd          =
```

Submerged Inlet + Outlet Cd = .8
Max Low Cord =

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 335

INPUT
Description:
Station Elevation Data num= 321

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	15.86	9869.97	15.8	69879.9	15.79	69887.28	15.78	69889.83	15.77
69899.76	15.76	69906.87	15.75	69909.7	15.75	69919.58	15.74	69919.63	15.74
69921.85	15.73	69924.29	15.71	69926.47	15.78	69928.22	15.85	69929.56	15.85
69934.28	15.87	69938.14	15.65	69939.45	15.51	69965.66	14.85	69968.93	14.62
69969.28	14.62	69972.74	14.66	69978.62	15.03	69979.22	15.02	70142.02	15.68
70148	15.81	70148.05	15.81	70155.04	15.84	70157.99	15.79	70161.61	15.73
70197.71	15.32	70200.8	15.31	70207.69	15.28	70208.22	15.27	70237.69	15.72
70281.11	15.73	70290.53	15.67	70300.56	15.69	70367.69	15.97	70731.82	14.82
70757.69	15.33	70807.69	15.07	70852.36	14.77	0857.69	14.83	70907.69	15.13
71089.86	15.58	71287.69	16.33	71289.53	16.34	71295.59	16.31	71297.69	16.33
71302.76	16.35	71307.69	16.33	71465.31	15.57	71467.69	15.59	71617.69	16.36
71625.89	16.38	71627.69	16.37	71787.69	16.23	71915.93	16.27	71916.98	16.27
71919.91	16.27	71922.16	16.25	71923.6	16.26	71925.03	16.27	71925.9	16.27
71926.56	16.29	71926.61	16.29	71927.55	16.29	72059.25	15.34	72182.94	16.17
72184.43	16.17	72185.35	16.17	72188.81	16.17	72192.11	16.17	72192.54	16.17
72207.45	14.65	72208.19	14.64	72214.1	14.62	72215.12	14.62	72215.64	14.62
72223.69	14.68	72253.48	14.89	72254.53	14.97	2276.49	15.44	72278	15.48
72280.77	15.48	72281.2	15.48	72284.16	15.48	72287.05	15.48	72314.85	15.04
72360.88	14.93	72367.46	14.97	2368.55	14.97	2376.22	14.92	72377.04	14.93
72377.52	14.93	72603.37	16.55	72635.79	16.63	72738.43	15.51	72820.76	16.52
72838.92	17.17	2843.66	16.41	72878.09	15.34	72878.11	15.34	72905.46	15.08
72949.97	14.93	72950.76	14.96	72953.27	15.03	72960.76	15.32	72964.51	15.52
73002.78	15.72	73162.06	16.19	73163.29	16.18	73170.61	16.23	73172.13	16.24
73173.34	16.24	73263.41	17.53	73313.1	16.36	73423.86	14.37	73442.12	13.96
73495.86	13.34	73499.81	13.31	73504.41	13.31	73504.55	13.31	73505.19	13.31
73514.48	13.31	73524.19	13.37	3524.55	13.37	3563.48	13.12	73584.97	12.98
73645.39	12.98	73646.93		1373647.93	12.97	73661.7	13.24	73665.52	13.31
73675.59	13.57	3675.61	13.57	3681.34	13.54	73685.66	13.56	73743.27	13.89
73746.08	13.76	73747.07	13.71	73756.15	13.47	73806.49	12.82	73821.85	12.38
73826.48	12.25	73826.63	12.26	73829.21	12.36	73856.84	12.76	73858.13	12.77
73866.91	12.78	73872.75	12.76	73876.98	12.74	73877.78	12.74	73924.3	12.09
73927.33		1273933.17	11.83	73936.71	11.61	73937.4	11.56	73943	11.21
73947.47	11.11	73948.15	11.09	73950.2	10.43	73955.9	9.55	73961.4	9.12
73963	8.57	73965.5	7.21	73974.1	6.8	73975.9	7.66	73979.7	8.86
73984.4	10.64	73985.9	10.52	73994.1	11.01	73995.9	11.16	74007.88	11.31
74009.33	11.33	74009.72	11.37	4013.41	11.35	74038.09	11.88	74040.94	11.94
74044.54	11.93	74048.16	11.83	74058.23	11.56	74068.3	11.29	74071.8	11.19
74072.97	11.27	4074.21	11.23	74078.37	11.32	74088.44	11.54	74090.09	11.57
74091.75	11.56	74093.85	11.57	74094.56	11.58	74113.5	11.57	74118.64	11.56
74128.71	11.55	74177.89	11.27	74178.09	11.27	74178.32	11.27	74178.74	11.27
74184.47	11.27	74188.74	11.37	4216.54	11.52	74217.31	11.53	74218.74	11.56
74224.25	11.68	74226.85	12.07	74228.74	12.21	74229.31	12.25	74230.94	12.48
74233.47	12.77	4234.49	12.91	74237.9	13.89	74261.25	13.06	74303.78	12.82

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74318.74   12.9374392.15   13.9174392.27   13.9174392.33   13.9274448.74   13.84
74518.74    13.574521.32   13.4774528.74    13.574534.94   13.5274588.74   14.09
74731.05   13.6574734.71   13.6674738.74   13.6374788.74    13.674790.05   13.46
74798.74   13.4374799.36   13.4374802.91    13.474936.15   13.11 75027.7   13.02
75158.74   13.6175168.74    13.675168.85    13.675178.74   13.6375218.74   14.57
75222.44   14.7675225.05   14.7775228.74   14.7575231.71   14.7375258.74   14.58
75264.22   14.5875265.17   14.5875317.79   14.6675318.74   14.6775321.51   14.68
75415.24   14.8275418.74   14.8175458.05   14.6275504.05   13.9175545.43   14.01
75548.74      1475578.74   13.7675579.66   13.7675675.45   13.6875699.54   13.69
75702.85   13.9775788.74   14.7275789.02   14.7475896.34   13.7276058.74   14.88
76068.74   14.8676070.36   14.8576173.27    13.976178.74   13.5676178.81   13.55
76179.67   13.5776352.89   13.4576358.13   13.4176358.74   13.4176359.89   13.42
76459.95    13.776621.23   13.4376628.74   13.48 76630.8    13.576661.57    13.8
76668.74   13.8776918.74   15.2576948.74   15.2777058.74   16.3177098.74   16.89
77099.37    16.977102.51   16.8777118.74   16.6677206.24   16.5877208.74   16.56
77238.74   16.3877268.74   16.2677278.74   16.2777294.44   16.2977358.74   16.73
77368.74   16.8877369.24   16.88 77372.3   16.8877435.72   16.6977448.74   16.76
77638.39   18.0777638.74   18.0877639.06   18.0877648.74   18.09 77665.1    18.1
77748.74    15.977749.11   15.8677808.74    16.477809.32    16.477884.82   15.87
77888.74   15.8777898.74   15.8677901.43   15.8677918.74   15.9678148.74   18.65
78148.99   18.6678158.74   18.7678159.33   18.7778167.33   18.7578168.74   18.75
78178.74   18.75

Manning's n Values        num=       5
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
69867.68     .1173647.93     .0873948.15     .04 73995.9     .0874216.54      .1

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73948.15 73995.9              135     135     135              .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
69867.6873922.15   17.67       T
74023.8578178.74   15.84       T
Sediment Elevation = 8.8

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: 200

INPUT
Description: 200 FT DOWNSTREAM OF THE PROPOSED CL
Station Elevation Data    num=     263
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
70132.29    15.770133.16   15.7570133.83   15.7970134.33   15.77 70135.7    15.7
70139.57   15.4570142.02   15.07 70145.1   14.2970146.64   13.87 70146.7   14.01
70147.37   14.2670147.95   14.4170164.55   14.8470239.53   15.5370242.72   15.64
70242.93   15.6570266.03   16.1870267.39    16.370268.31   16.3470272.93   16.32
70282.93   16.29 70283.8   16.2870341.37   15.9470342.93    15.970346.51   15.82
70351.99    15.970352.93   15.9170392.93   16.8170394.14   16.8570401.49   16.74
70402.93   16.7670404.66   16.7870842.51   14.5570842.93   14.54 70846.1   14.43
70848.04    14.370848.49   14.3170872.01   14.5170872.93   14.5270873.02   14.52
70873.03   14.5271277.71   14.6771649.59   14.7471992.85   14.7772317.05    14.8
72514.67   14.7672517.98   14.8472521.98   14.8872538.18   15.0172540.07   15.02
72544.49   15.0572548.85    15.272550.07   15.2872556.31   15.6872560.07   15.35
72562.98    15.172564.62   15.0872569.13   15.4172570.07   15.4972571.31   15.59
72600.07   15.0372606.18   15.25 72609.3   15.3672610.07   15.3972610.12   15.39
72610.32    15.472611.31   15.3772736.79   15.6472740.07   15.6772750.07   15.76
72751.71   15.7872752.55   15.7772758.44   15.7572760.07   15.7672763.64   15.76
72767.32   15.7672770.07    15.772770.18   15.6972853.92   15.5572860.07   15.62
72860.74   15.6272863.47   15.6172867.98   15.6172870.07    15.672880.07   15.54
72890.07   15.4872900.07   15.4372904.38    15.472908.18    15.472910.07    15.4
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72920.07   15.4272940.39   15.4672993.82    15.672994.37    15.673142.35   16.64
73142.38   16.6473143.67   16.6473150.97   16.6373153.88   16.6373163.58   16.61
 73164.1   16.6173164.49   16.6173170.61   16.2973174.31    16.173174.67   16.08
73177.11      1673182.72      1673184.53   16.0273190.25    16.173194.75   16.15
 73198.7    16.273204.96   16.16 73209.9   16.1373212.25   16.1273215.18   16.11
 73225.4   16.0873227.74   16.0773229.54   16.0673231.73   16.0573235.61   16.05
73235.85   16.0573242.91   16.3473245.83   16.5473249.19   16.7773256.05   17.25
73257.91   17.3773266.26   17.5373268.31   17.5773268.83   17.5773275.79   17.61
73275.89   17.62 73275.9   17.6173276.03   17.6173276.48   17.5773276.77   17.54
73280.05   17.45 73286.7    17.273288.47   17.1473296.91   16.8273307.13   16.45
73308.12   16.4173314.09   16.1973317.34   16.2573322.18   16.3373327.56   16.42
73327.76   16.4373329.65   16.46   73335   16.4573763.62    13.6 73763.8    13.6
73766.87    13.673772.46   13.5973777.09   13.5173779.56   13.46 73787.3   13.33
73807.73   12.9973828.17   12.6473851.24   12.2573858.13   12.0573858.82   12.03
73864.55   11.86 73868.7   11.8973869.03   11.8873877.78   11.6673878.15   11.65
73879.25   11.6473889.47   11.5973897.42   11.5573899.68   11.54 73909.9   11.49
73917.06   11.4573920.12   11.43 73924.311.4095373930.33   11.38 73931.5   11.38
73936.71   10.8873939.75   10.5573946.65    9.9473950.76    9.5973956.35    9.11
73960.97    8.7273960.98    8.7273964.07    8.86 73971.2    9.5373975.99    9.98
73981.41   10.4973986.68   10.98 74000.5    11.474034.95   11.3674040.9411.33595
74064.81   11.2474073.36   11.2574074.21   11.25 74082.6   11.2774083.58   11.28
74093.09   11.3374093.79   11.3374093.85   11.3374104.01   11.4174107.09   11.43
 74113.5    11.774114.23   11.7374124.44   12.1574125.06   12.1774129.47   12.36
74130.46   12.3674133.14    12.474134.63   12.4274144.63   12.5574154.63   12.68
74197.38   13.1874204.63   13.1874205.47   13.1874212.32   13.2274213.91    13.2
74214.63    13.274224.63    13.274228.94    13.274231.71   13.2574234.63   13.29
74244.63   13.4274250.58    13.574296.38   13.6474304.63   13.7274305.52   13.73
74309.79   13.7974481.52   14.09   74677   14.3474800.95   14.4674984.63   14.52
75009.82   13.8675010.18   13.8575012.33   13.6275013.93   13.5475014.63    13.6
75016.42   13.7375044.63   14.1175087.01   14.3175454.11   14.3675864.12   14.04
76050.06   13.9476193.09    13.876312.27   13.6676350.41   13.5776393.33   13.46
76433.38   13.1976434.63   12.4676437.83   10.5976438.19   10.3576443.33   10.63
76443.47   10.6376444.63   11.2276446.47   12.1576448.92   13.3676504.63   13.78
76514.63   13.8476554.63    13.876703.22   14.2676870.09   14.73 77442.2   16.37
77756.54   17.2777759.49    17.577776.71   18.26

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
70132.29     .11 73931.5     .04 74000.5     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       73931.5 74000.5              100     100     100             .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
70132.2973688.72   17.66       F
74428.0277776.71   15.84       F
Sediment Elevation = 8.75

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: 100

INPUT
Description:
Station Elevation Data    num=     484
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
70171.03   15.3870171.89   15.3970172.55   15.39   70173   15.3870173.04   15.37
70174.39    15.370177.24   15.13 70178.2   15.0770179.73   14.9170180.61   14.82
70183.64   14.3570185.16    14.170185.21   14.1770185.86   14.2870186.44   14.34
70195.12   14.2270196.33   14.0470197.34   13.9970197.58   14.0570198.24   14.18
70202.77   14.2870232.05   14.7170232.34   14.7170232.47   14.7170276.52   14.94
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70279.65	14.9970279.86	1570302.58	15.2870303.91	15.3470304.82	15.36
70309.36	15.35 70319.2	15.3470320.05	15.3370376.67	15.19 70378.2	15.17
70381.73	15.1470387.12	15.1870388.05	15.1870427.39	15.6570428.58	15.67
70435.8	15.6270437.22	15.6370438.92	15.64 70646.2	15.2170869.56	14.69
70869.98	14.6870873.09	14.63 70875	14.5670875.45	14.5770898.58	14.68
70899.48	14.6870899.58	14.6871087.44	14.76 71297.6	14.7771523.83	14.77
71663.36	14.7471863.23	14.6972000.97	14.6672149.32	14.6372319.83	14.53
72352.97	14.5172440.86	14.0472445.36	14.0572448.88	14.0572452.38	14.06
72453.61	14.06 72457.5	14.1472459.41	14.1472466.42	14.1472472.97	14.15
72473.44	14.1572478.12	14.14 72481	14.1672489.03	14.2 72489.5	14.2
72494.5	14.372495.02	14.3172498.17	14.3772501.53	14.3672508.55	14.31
72513.11	14.32 72514.2	14.3272515.58	14.3372515.77	14.3372517.45	14.35
72521.38	14.3672522.59	14.3672526.37	14.3772532.81	14.3372534.25	14.32
72537.31	14.3772539.17	14.4172543.53	14.4972547.81	14.6272549.02	14.68
72555.16	14.9772558.84	14.86 72561.7	14.7872563.32	14.7972567.77	15.02
72568.69	15.0772569.91	15.1472581.78	15.272591.95	15.0872597.08	15.02
72598.19	1572602.12	15.02 72604.2	15.0472606.52	15.0772607.27	15.09
72608.02	15.1272608.07	15.1272608.27	15.1372609.25	15.1372614.33	15.22
72642.67	15.2572642.81	15.2572652.98	15.2472663.15	15.3372673.23	15.42
72673.32	15.4372677.02	15.4372683.48	15.4472691.77	15.4572693.66	15.45
72700.34	15.4472703.83	15.4272704.84	15.41 72714	15.3672719.66	15.33
72724.17	15.3472732.66	15.3772734.34	15.3872735.88	15.3972744.52	15.43
72745.72	15.4372747.33	15.4472747.98	15.4472748.16	15.4372753.95	15.41
72754.68	15.4172755.55	15.4172759.06	15.472762.69	15.472765.39	15.36
72765.5	15.3572777.02	15.3272777.81	15.3172779.03	15.3272785.62	15.32
72807.76	15.3172810.23	15.31 72815.7	15.2872821.55	15.2572825.88	15.27
72847.73	15.3672847.86	15.36 72849.3	15.3772851.59	15.3972853.91	15.44
72854.57	15.4572856.38	15.4772857.25	15.4872861.69	15.5472863.74	15.56
72866.55	15.672867.39	15.672873.58	15.6372874.41	15.6472876.72	15.61
72883.41	15.51 72887.2	15.4672893.25	15.4472897.06	15.4372897.49	15.43
72901.23	15.4272903.09	15.4272907.23	15.4272911.38	15.4272912.92	15.45
72917.41	15.5572918.89	15.5972932.91	15.5972944.52	15.6172947.91	15.56
72985.45	15.53 72986	15.5373131.55	15.7273131.58	15.7273132.84	15.72
73140.02	15.773142.88	15.6973145.06	15.6873148.16	15.6773152.42	15.66
73152.94	15.6673153.32	15.6673159.34	15.4873162.98	15.3873163.33	15.37
73165.73	15.3273169.41	15.3173171.25	15.373173.03	15.3173175.54	15.32
73178.66	15.3573180.03	15.36 73180.3	15.3673183.08	15.3873185.72	15.4
73186.97	15.4173190.65	15.3973193.12	15.3973197.98	15.3773200.29	15.36
73201.27	15.3673203.17	15.3673206.03	15.3673211.88	15.3573213.22	15.35
73215.53	15.34 73216.8	15.34 73217.3	15.3473219.45	15.3473222.52	15.34
73223.27	15.34 73223.5	15.3573230.44	15.5573233.31	15.6873236.62	15.82
73243.37	16.12 73245.2	16.273246.38	16.2273246.67	16.2373249.45	16.33
73253.41	16.4673254.36	16.4973255.43	16.5373255.52	16.5373255.94	16.55
73262.78	16.7573262.88	16.7673263.02	16.7573263.23	16.7573263.46	16.75
73263.75	16.7473264.45	16.75 73265	16.7473265.84	16.7373266.97	16.72
73267.01	16.7273272.56	16.6773273.52	16.6573275.25	16.673275.61	16.59
73275.78	16.5873280.95	16.4373282.54	16.2373283.55	16.1373283.96	16.09
73286.23	15.9673286.47	15.9573287.33	15.973287.36	15.9 73288.3	15.91
73291.02	15.9473293.61	15.8973294.58	15.8873300.45	15.7873303.66	15.81
73308.41	15.86 73313.7	15.9273313.89	15.9273315.76	15.9473321.02	15.95
73365.5	15.8873742.58	13.0373742.76	13.0373745.78	13.0273751.28	12.99
73755.84	12.9373758.27	12.973765.88	12.873780.34	12.6273785.39	12.57
73785.97	12.5773790.17	12.5373791.33	12.5373795.38	12.45 73796	12.44
73806.07	12.2573806.62	12.24 73815.7	12.0673817.25	12.0373827.86	11.83
73828.77	11.8273835.54	11.6573836.03	11.6373836.22	11.6373838.48	11.57
73841.84	11.4973845.94	11.4673846.26	11.45 73849.1	11.3873854.86	11.25
73855.23	11.2473856.31	11.2373856.34	11.2273859.72	11.1873866.36	11.1
73874.19	1173876.41	10.9773880.96	10.9173883.98	10.8873886.45	10.77
73891.58	10.54 73893.5	10.4573894.66	10.4 73896.5	10.3873896.98	10.38
73902.2	10.3373906.55	10.29 73907.7	10.2873912.83	1073916.56	9.83
73917.52	9.7873919.94	9.6773921.66	9.5873924.34	9.4573924.98	9.41
73930	9.173930.48	9.07 73931.59	.00843373933.47	8.8973936.84	8.68
73939.31	8.5373940.62	8.4573942.48	8.3373944.53	8.4973949.25	9.02

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73952.41    9.3873955.62    9.7573955.98    9.7873956.28    9.8173959.47   10.08
73960.52    10.1 73968.2   10.2173973.55   10.2973978.47   10.2973980.14   10.29
73988.72   10.2973991.91   10.2873992.72   10.3573998.98   10.4173999.77   10.42
 74000.510.4273974008.62   10.5174009.23   10.5174019.41    10.674019.49    10.6
74019.62    10.674029.74   10.7174039.03   10.8174040.02   10.8274045.19   10.88
74047.73    10.9 74048.6    10.974050.27   10.9174057.15   10.9574058.14   10.96
74058.66   10.9674060.53   10.9774065.66   11.0174067.83   11.0374068.54   11.03
74068.61   11.0374070.78   11.0574078.95   11.1374081.05   11.1574082.09   11.16
74088.61   11.3474089.35   11.3574099.75   11.6374100.39   11.6474104.88   11.76
74105.88   11.7774108.61   11.8174110.13   11.8274111.81   11.8574117.55   11.91
74120.31   11.9574122.08   11.97 74130.5   12.0774132.33    12.174159.52   12.42
74162.83   12.4674172.31   12.5774172.66   12.5874174.03   12.5974181.41   12.63
74182.27   12.6474189.24    12.774190.86   12.6974191.59    12.774191.95    12.7
 74192.3    12.774194.53   12.6974201.78   12.7374202.12   12.7374206.16   12.75
74208.98   12.7974211.95   12.8274211.97   12.8274211.98   12.8374217.55   12.96
74221.77   13.0274222.15   13.03 74228.2    13.174231.59   13.1374236.02   13.14
 74236.2   13.1474237.09   13.1574274.84   13.3174283.25   13.3774284.16   13.38
 74288.5   13.4274397.88    13.874398.59   13.8174463.38   13.8974522.45   13.95
74662.44   14.0874788.66   14.1874915.85   14.24   74958      14 74975.7   14.08
75001.35   13.8675001.72   13.8675003.91   13.7575005.53   13.7275006.25   13.75
75008.08   13.82 75014.2   13.89 75036.8   14.0475079.95   14.1575445.06    14.2
75453.78    14.2 75871.3   13.8975983.65   13.8276060.66   13.74 76206.3   13.56
76327.66   13.41 76366.5   13.3376391.09   13.28 76410.2   12.3876423.88   11.71
76428.56   13.2876450.99   13.2776452.27    12.976455.52   11.9876455.89   11.86
76461.12   12.0176461.27   12.0176462.45   12.3176464.32   12.7876466.81   13.39
76480.08   13.4876523.55   13.6876533.73   13.7276574.47   13.7476725.77   14.11
 76895.7    14.576953.08   14.6377210.67   15.32 77478.3   16.1677510.41   16.27
77721.16   17.3477798.39   17.8377801.39   17.9677804.14   18.0377807.27   18.22
77807.92   18.2677809.88   18.36 77818.9   18.6577818.93   18.65

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
70171.03      .173912.83     .0473959.47     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73912.8373959.47              100     100     100              .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
70171.03 73478.6   17.67       F
74630.3577818.93   15.84       F

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: 0

INPUT
Description: 400 FT DOWNSTREAM OF THE PROPOSED CL
Station Elevation Data    num=     233
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
70209.78   15.0670211.72   14.9870215.88   14.7570218.33   14.6170233.46   13.81
70234.66   13.4170235.65   13.2970235.88   13.3970236.53   13.6470269.78    14.3
70270.06    14.370270.19    14.3   70677   14.7271110.84   14.9371539.93   14.82
71873.66   14.6272154.95   14.4772355.19   14.2372441.61    13.372446.03   13.32
 72449.5   13.3372452.94   13.3572454.15   13.3572457.98    13.572459.84   13.51
72466.75   13.5272473.19   13.5372473.65   13.5372478.26   13.5272481.08   13.55
72488.98   13.6472489.44   13.6472494.36   13.8372494.87   13.8572497.96   13.98
72501.27   13.9572508.17   13.8672512.66   13.8772515.08   13.8772515.27   13.87
72521.98   13.8372525.69   13.8272532.02   13.6972533.44   13.6572580.18   15.04
72590.18      1572595.21   14.9972600.18   14.87 72604.5    14.872612.18   15.05
72640.05   15.0572640.18   15.0572650.18   15.0272660.18   15.1872670.09   15.34
72670.18   15.3472673.81   15.3572680.18   15.3572688.32   15.3472690.18   15.34
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72696.76   15.3172700.18   15.2672701.17   15.2572710.18   15.1272715.74   15.05
72720.18   15.0672730.18   15.1172740.18   15.1172743.59    15.172750.18   15.07
72772.15   14.9672772.92   14.9672774.12   14.9772780.61   14.9872802.37   15.01
 72804.8   15.0172810.18   14.9672815.93    14.972820.18   14.9572841.67   15.16
72843.22   15.1772845.47   15.1972850.18   15.3272860.18   15.61   72861   15.63
72867.91   15.7472870.18   15.6972880.48   15.4672890.18   15.4672900.18   15.43
72904.25   15.4272910.18   15.6872911.64   15.7472936.84   15.7272940.18   15.63
73134.03   14.7473137.08   14.7373157.96   14.6273163.99   14.5873168.41    14.6
73168.67    14.6   73174   14.6173178.85   14.6173189.29   14.6173193.98   14.61
73199.73   14.6273204.57   14.6273210.18   14.6373210.92   14.6473233.64   15.05
73233.94   15.0773236.67    15.2 73241.5   15.4473242.63    15.573250.23   15.91
73251.42   15.9773251.95   15.9773252.78   15.9773253.93      16 73259.4   16.11
73262.39   16.0573262.56   16.0573267.65   15.94 73269.2   15.61 73270.6   15.38
73272.83    15.273273.07   15.1873273.91   15.1273273.94   15.1273274.87   15.17
73277.54   15.3373350.77   15.6173758.68   12.1573763.63   12.1573768.34   12.15
73769.48   12.1673773.46   12.0773774.07   12.0673784.51   11.8473793.44   11.65
73794.96   11.62 73805.4    11.473813.43   11.2373815.84   11.1873826.28   10.96
73833.41   10.8173836.72   10.7473857.61   10.3173860.58   10.2573868.05    9.62
73871.08    9.3673873.37    9.3373878.49    9.2673888.94    9.1273893.35    9.06
73897.34    9.0173899.38    8.9773902.55    8.9273909.82    8.5973912.838.453415
73913.34    8.4373920.26    8.12 73921.8    8.0573924.01    7.9473930.39    9.06
73930.71    9.0873932.26    9.1873933.32    9.1873941.15    9.1873951.59    9.19
 73953.3    9.1973959.47    9.1973962.03    9.1973965.27    9.19 73966.1    9.32
73972.48    9.4573973.28    9.4773982.92    9.6773993.27    9.8873993.36    9.89
73993.49    9.89 74003.8   10.1474013.25   10.3774014.25   10.3974019.52   10.52
74024.69   10.5674033.23   10.6474035.13   10.6574040.36    10.774045.57   10.76
74056.02   10.8874087.34   11.2574093.18   11.3174097.79   11.3774108.23   11.49
 74135.9   11.8274139.28   11.8674148.93   11.9774149.28   11.9974168.93    12.2
74169.28    12.274171.55   12.1974179.28   12.2674189.28   12.3674189.32   12.36
74194.98   12.5574199.28   12.6374209.28   12.7474213.79   12.7674213.96   12.76
74214.88   12.7874378.55   13.6374379.28   13.6574505.37   13.7374905.84   13.98
74948.75   13.4875005.96   13.9775444.58   14.0575992.85   13.6576407.62   13.06
   76441   10.0576445.77   13.2276498.21    13.576979.73   14.3777241.95   15.02
77547.08   16.0777761.62   17.6277846.09   18.4477849.28   18.6977849.94   18.74
77851.93   18.8577861.12   19.0477861.15   19.04

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
70209.78      .173888.94     .0473932.26     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73888.9473932.26              425     410     250             .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
70209.7873263.04   17.67        T
74887.1677861.15   15.84        T

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -590.*

INPUT
Description:
Station Elevation Data    num=     371
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
68767.19   16.5368769.87   16.4668773.22   16.3568775.62   16.2868778.99   16.18
68799.88   15.6168801.53    15.468802.91   15.3368803.23   15.3868804.12    15.5
68850.03   15.4568850.42   15.4568850.59   15.4569412.23   11.1269568.25    9.89
69828.11    8.93 70011.2    8.7370100.29     8.670227.33    8.5670396.05    8.93
70396.75    8.9470592.88    9.4170599.08    9.4970603.61     9.571064.35    10.2
71126.72    10.371452.72   10.8971564.44   11.0771567.73    11.171729.16   12.09
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71848.47	12.4271854.58	12.4771859.37	12.571864.11	12.5571865.78	12.56
71871.07	12.6771873.65	12.6971883.19	12.7671892.07	12.82 71892.7	12.82
71899.07	12.8671902.97	12.971913.88	13.02 71914.5	13.02 71921.3	13.16
71922	13.1871926.27	13.2771930.84	13.2971940.38	13.371946.56	13.35
71949.91	13.3771950.17	13.3771959.43	13.4171964.55	13.44 71973.3	13.44
71975.25	13.4372039.78	14.5572053.59	14.6272060.54	14.66 72067.4	14.65
72073.36	14.6572083.97	14.8572108.94	15.0172110.73	15.0272122.44	15.02
72122.62	15.0272136.42	15.0172150.23	15.0972163.92	15.1772164.04	15.17
72169.05	15.1872177.84	15.1872189.09	15.1772191.66	15.1772200.73	15.16
72205.45	15.1372206.83	15.1272219.27	15.0672226.95	15.0272233.07	15.03
72246.88	15.0672260.69	15.0672265.39	15.0572274.48	15.0372304.82	14.98
72305.89	14.9872307.53	14.99 72316.5	14.9972346.54	15.0172349.89	15.01
72357.33	14.9872365.27	14.9572371.13	14.98 72400.8	15.0872402.94	15.09
72406.05	15.0972412.55	15.1672426.36	15.3172427.48	15.3272437.02	15.37
72440.16	15.3472454.38	15.2372467.77	15.2372481.58	15.22 72487.2	15.21
72495.39	15.3472497.41	15.37 72532.2	15.36 72536.8	15.3272613.99	15.19
72616.59	15.1572804.44	14.0272808.64	14 72836.7	13.8272837.02	13.81
72837.48	13.81 72845.8	13.7872851.89	13.7872852.27	13.7872859.62	13.78
72866.31	13.7772880.73	13.76 72887.2	13.7572895.14	13.7572901.83	13.74
72909.57	13.7472910.59	13.7472941.96	13.9272942.37	13.9372946.14	13.99
72952.81	14.172954.38	14.1372964.86	14.3272966.51	14.3572967.24	14.35
72968.39	14.3572969.97	14.3672977.52	14.4172981.66	14.3872981.89	14.38
72988.91	14.3172991.06	14.1572992.98	14.0372996.06	13.9472996.39	13.93
72997.55	13.972997.59	13.972998.88	13.9273002.56	1473103.67	14.03
73324.28	13.1373470.48	12.2373473.53	12.1773587.28	11.4473594.56	11.3
73666.83	11.0573673.67	11.0473680.17	11.0473681.73	11.0573687.23	11
73688.08	10.9973696.86	10.9273702.49	10.7573705.34	10.66 73713.8	10.39
73714.82	10.3673716.78	10.3173716.92	10.3173731.33	10.1473742.42	10.01
73745.75	9.9773760.16	9.81 73770	9.6973774.58	9.6473798.93	9.36
73803.42	9.2573807.47	9.1673807.52	9.1573817.83	8.8373822.02	8.7
73825.17	8.6873832.25	8.6473840.31	8.5973841.73	8.5673842.36	8.55
73846.67	8.46 73849.7	8.3973855.88	8.2573856.93	8.2373860.81	8.14
73864.09	8.07 73864.2	8.0773867.45	7.9973868.45	7.9873875.05	7.92
73890.22	7.6873896.48	7.5973897.56	7.5773902.44	7.4973907.44	7.39
73911.98	7.2973914.67	7.24 73915.2	7.22 73919.8	7.1273921.59	7.18
73927.75	7.3673932.84	7.5 73933.9	7.5573940.05	7.873942.12	7.89
73946.27	8.0573949.84	8.273951.34	8.2573952.42	8.2873952.64	8.28
73958.62	8.5273959.69	8.5473962.44	8.59 73967.5	8.6873969.16	8.72
73969.66	8.7373977.92	8.8873979.62	8.9173980.78	8.9373985.78	8.93
73988.34	8.9373991.57	8.93 73992.4	973998.76	9.0673999.56	9.07
74009.18	9.1774019.51	9.2874019.59	9.2874019.73	9.2874030.01	9.41
74039.44	9.5274040.44	9.53 74045.7	9.674050.85	9.6274059.38	9.66
74061.27	9.6774066.48	9.6974071.69	9.7274082.12	9.7874113.37	9.97
74119.19	1074123.79	10.03 74134.2	10.0974161.81	10.2674165.19	10.28
74174.81	10.3474175.17	10.3574194.77	10.4574195.12	10.4574197.38	10.45
74205.09	10.4874215.08	10.5374215.12	10.5374220.76	10.6374225.05	10.67
74235.03	10.7374239.53	10.74 74239.7	10.7474240.62	10.75 74346.6	11.03
74356.32	10.8674364.14	10.7174403.92	10.8374404.66	10.84 74482.6	10.89
74492.33	11.0474493.83	11.0674530.45	11.6774549.75	1274550.66	12.02
74618.71	14.3574620.22	14.3974628.43	14.5174643.97	14.74 74657.5	14.84
74930.03	14.9174972.84	14.6675000.77	14.7775029.92	14.7575080.75	14.5
75467.56	14.4975621.16	14.4175658.05	13.99 75681.2	13.9975691.22	13.97
75701.25	13.9675703.65	13.9675705.34	13.9675751.26	14.4176014.61	14.31
76239.55	14.1576241.55	14.176251.58	13.8876291.66	13.5876311.62	13.36
76321.64	13.2576428.44	10.6976451.73	9.0976461.75	8.5376462.05	8.56
76474.89	10.1176481.67	10.1276534.94	13.5176619.24	13.71 76652	13.76
76656.95	13.8576814.83	15.5876815.56	15.5976888.09	16.1976888.76	16.2
76894.87	16.3276896.27	16.3476920.66	16.3576923.41	16.25 76947.3	15.42
76949.8	15.3776950.53	15.3676955.84	15.2676968.06	15.0477010.77	14.81
77019.81	14.6677029.09	14.577033.98	14.4277035.15	14.477036.19	14.39
77086.23	14.477090.07	14.4777090.62	14.4877095.39	14.5877096.19	14.59
77102.3	14.777108.41	14.82 77297.5	15.3677302.69	15.4677303.06	15.47
77303.36	15.4777510.97	15.88 77515.5	16.0477835.83	16.1577944.77	15.97

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   78351   15.3778635.41    15.578639.56   15.5778666.64   15.6378872.34   16.14
78877.41   16.2378877.47   16.2378883.58   16.3479020.44   16.7379023.86   16.79
79029.97    16.9   79331   17.4379334.78   17.4679347.12   17.5679347.98   17.57
79394.29   17.9679506.59   18.0380097.19   18.8180132.53   18.8780133.32   18.85
80329.73    19.180338.51   19.2280340.31   19.25 80345.8    19.380371.09   19.38
80371.17   19.38

Manning's n Values        num=       7
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
68767.19      .173846.67    .03573958.62     .0873974.56     .0874237.66    .065
74461.25     .0880371.17     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73846.6773958.62              425     410     250              .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
68767.1972576.79   17.67       F
74835.5380371.17   15.84       F

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -1180

INPUT
Description:
Station Elevation Data    num=     145
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 67324.6      18 67332.3   17.85 68346.5       5   68678       369025.21    2.29
69187.27    2.24 69402.5       3 69403.4    3.02 69653.6       4 69661.5    4.16
 70334.6       6   70893    7.76 70897.2    7.83 71587.6   14.97 71589.9      15
 72231.9      15 72235.2   14.94   72516   13.02 72516.4      13   73138      12
 73324.5    11.1 73328.4      11 73473.5   10.24 73482.8      10 73613.3    9.92
 73624.1    9.52 73634.9    9.11 73636.2    9.06 73638.7       9 73743.5    8.34
 73754.4    8.06 73796.3       8 73798.1    7.96 73798.9    7.93 73804.4     7.8
   73809    7.68   73820     7.4 73825.9    7.25 73830.9    7.13   73836       7
 73889.2    6.66 73896.8    6.56 73907.8    6.41 73915.6    6.31 73918.8    6.35
 73929.8    6.48 73938.9    6.58 73940.8    6.63 73951.8    6.91 73955.5       7
 73962.9    7.18 73973.9    7.46 73974.3    7.47   73985    7.86 73988.8       8
 73995.5    8.25   73996    8.27 74007.1    8.67 74372.1    8.73 74381.8    8.33
 74389.6       8 74507.8    8.09 74517.5    8.37   74519    8.41 74574.8   10.25
 74575.7   10.29 74643.6   14.91 74645.1      15 74653.3   15.23 74668.8   15.68
 74682.3   15.88 75024.8   15.83 75104.6   15.03 75643.8   14.89 75680.6   14.06
 75703.7   14.08 75713.7   14.06 75723.7   14.04 75726.1   14.04 75727.8   14.04
 75773.6   14.98 76260.8   14.97 76262.8   14.88 76272.8   14.45 76312.8    13.9
 76332.7   13.49 76342.7   13.28 76472.5    7.23 76482.5    7.01   76483       7
 76515.1       7 76602.3   13.69 76793.9      14   76802   14.18 77060.4   17.53
 77061.6   17.55 77180.3    18.7 77181.4   18.72 77191.4   18.95 77193.7      19
 77233.6      19 77238.1   18.81 77277.2   17.12 77281.3   17.03 77282.5      17
 77291.2    16.8 77311.2   16.35 77381.1   15.86 77395.9   15.55 77411.1   15.24
 77419.1   15.07   77421   15.03 77422.7      15 77504.6      15 77510.9   15.14
 77511.8   15.16 77519.6   15.34 77520.9   15.37 77530.9   15.59 77540.9   15.82
 77850.4   16.78 77858.9   16.98 77859.5   16.99   77860      17 78199.8   17.68
 78207.2      18 78731.5      18 79574.7      16 80040.2      16   80047   16.14
   80428      17 80436.3   17.17 80436.4   17.17 80446.4   17.38 80670.4      18
   80676   18.12   80686   18.32 81178.7      19 81184.9   19.06 81205.1   19.25
 81206.5   19.26 81282.3      20 82490.6      20 82491.9   19.96 82881.2   19.72

Manning's n Values        num=       5
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
 67324.6      .1 73804.4    .035 74007.1     .08 74372.1     .05 74682.3     .08
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Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       73804.4   73985              900     410     410              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
 67324.671890.54   17.67       F
74783.91 82881.2   15.84       F

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -1590.*

INPUT
Description:
Station Elevation Data    num=     265
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 67972.3    14.5 67979.3   14.4368205.73   12.8568362.77   11.2568364.44   11.21
68618.55    6.47 68648.8    5.7968650.58    5.75 68650.7    5.7468813.84    4.61
68900.61    3.9869201.75    2.9269338.81    2.7469517.16    2.5469664.38    2.51
69859.89    2.8969860.71     2.970049.08     3.3   70088    3.3970095.17    3.47
70619.16     4.370706.63    4.4571105.12    5.2571213.89    5.73 71217.7    5.78
71256.84    6.1171260.29    6.1671844.88    9.4971846.96     9.572271.88     9.5
72356.28   10.2572430.16   10.7172433.17    10.772544.12   10.9772688.25   11.26
72688.61   11.2572709.27   11.3672709.94   11.3672715.61   11.4172720.95   11.45
 72723.4   11.4772836.61   11.8272842.84   11.8673253.28   11.92 73320.5   11.81
73321.72   11.8273333.28   11.7973345.41   11.7273357.42   11.6473357.86   11.65
 73364.2   11.71 73422.7   11.5273426.24   11.4773558.05   11.01 73566.5   10.89
   73627   10.8373627.44   10.8373685.05   10.2773687.61    10.273694.86   10.02
73697.06    9.97 73699.5    9.8873704.67    9.6973705.86    9.6573708.12    9.58
73711.52    9.52 73713.3    9.4873737.77     9.4   73745    9.2873747.22    9.25
73803.33     7.973806.49     7.873813.23    7.5573851.29    6.6873852.93    6.62
73853.53     6.673853.66    6.5973858.65     6.473861.69    6.3273868.97    6.13
73870.73    6.0873872.87    6.0373876.17    5.9473879.55    5.8673892.45    5.71
73913.97    5.4673914.73    5.4573919.77    5.3673923.19     5.373927.04    5.24
 73932.2    5.15   73950    5.1573952.97    5.2173958.46    5.3273963.17    5.41
73969.73    5.5373971.62    5.5773973.38    5.6273974.07    5.6373981.01     5.7
73983.59    5.7373987.02    5.7673988.48    5.7873992.28    5.8673993.89     5.9
74003.56    6.1274004.09    6.1374004.47    6.14 74014.4    6.4374017.95    6.52
74024.23    6.67 74024.7    6.6874033.61     6.974035.09    6.9274036.93    6.92
74047.98    6.8774057.53    6.8474067.19    6.8774070.09    6.9174081.02    7.06
74092.08    7.2174157.31    8.2474163.64    8.3574193.67    8.3574201.41    8.47
74271.89    9.6274278.97    9.7874280.69     9.874282.83    9.8474283.91    9.86
74313.95    9.8674315.77    9.8974315.98    9.8974376.88   10.3374385.96    10.2
74393.27   10.0974450.95   10.5274453.52   10.5474461.89   10.6174464.14   10.59
74474.77   10.5474503.95   10.5574513.03   10.6974514.44   10.7174520.58   10.81
74527.66   10.9974566.69   11.9574567.53   11.9874585.06   12.7474590.31   12.97
74622.08   14.1374622.93   14.1574631.12   14.4574632.52   14.49 74640.2   14.61
74654.71   14.8374667.35   14.9374988.07   14.91 75062.8   14.51 75567.7   14.44
75582.92   14.2675586.04   14.1875596.55   13.9375602.13   13.7975602.17   13.79
75607.17   13.73 75623.8   13.5775633.17   13.4775642.53   13.3775644.78   13.35
75646.36   13.3375689.26   13.3975787.09   12.4475983.31   11.4875983.53   11.48
76103.37    8.9976145.47    8.9976147.34    8.94 76156.7    8.7376194.16    8.45
 76212.8    8.2476222.17    8.1476343.71    5.1176353.08    5.0176353.55       5
 76383.6        576440.62     8.976565.91   10.2776571.22   10.4276740.19   13.74
76740.98   13.7576818.59   15.0876819.31    15.176825.86   15.2876827.36   15.32
76853.45   15.5776856.39   15.5176881.97   14.9176884.64   14.8976885.43   14.88
76891.12   14.84 76904.2   14.7476922.06   14.8276933.31   14.87 76943.3   14.92
76947.77   14.9476949.91   14.9376959.58   14.7776969.52   14.6276974.76   14.53
   76976   14.5176977.11    14.577030.67    14.577034.78   14.5777035.38   14.58
77036.33    14.677040.48   14.6977041.33   14.7177047.86   14.8577049.29   14.89
77054.41      1577055.45   15.01 77112.8   15.4277134.03   15.5777139.34   15.61
 77256.8   15.9877262.36   16.0877262.75   16.0977263.08   16.0977485.28    16.6
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77490.12   16.7677749.17   16.9677757.05      1777832.98   17.0378384.38   16.27
78659.56   16.3978661.04   16.3978682.28   16.4978683.56    16.578688.78    16.5
78693.22   16.5878942.38   17.23 78947.8   17.3278947.86   17.3278954.41   17.43
79100.89   17.8779104.55   17.9379106.47   17.9679111.09   18.0579127.71   18.16
79131.33   18.1879433.28   18.8379437.33   18.8679450.55   18.9779451.45   18.98
79488.17   19.2979501.02   19.46 79507.3   19.4979507.92   19.4979508.77    19.5
80291.17   19.8180292.02   19.7980527.27   19.7780536.83   19.81 80546.6   19.86

Manning's n Values        num=       7
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
 67972.3     .0973858.65    .035 74014.4     .0874030.62     .0874298.64    .065
74526.41     .08 80546.6     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73858.65 74014.4              900     410     410              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
 67972.371380.53   17.67       F
75119.44 80546.6   15.84       F

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -2000

INPUT
Description:
Station Elevation Data    num=     126
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68620      11 68829.9      11 68971.1      10 68972.6    9.95 69201.1       4
 69228.3    3.06 69229.9    3.01   69230       3 69376.7       369848.74    2.79
 70487.4    2.77   71000    2.8671436.98    3.11 71573.4    3.94 71576.5       4
 72486.1       4   72562     5.5 72730.9    7.83 72879.4    9.75   72880    9.76
 72885.1    9.86 72889.9    9.96 72892.1      10 72993.9   10.91 72999.5      11
   73429   11.97 73430.1      12 73440.5      12 73451.4   11.92 73462.2   11.84
 73462.6   11.85 73468.3      12 73704.6   11.71   73705    11.7 73759.1   10.58
 73767.6   10.51 73769.8   10.43 73780.6   10.06 73782.2      10 73804.2      10
 73810.7    9.82 73812.7    9.77   73866    7.34 73908.3    5.26 73912.9       5
 73918.8    4.83 73929.4    4.54 73939.9    4.25 73944.4    4.12 73948.8       4
 73984.4       4 73992.2    4.22 74002.6    4.51 74006.6    4.62   74013    4.57
 74019.9    4.52 74023.4    4.59 74033.8     4.8 74043.8       5 74061.7    5.18
 74064.8    5.16 74075.1    5.07   74084       5   74093    5.07 74095.7    5.15
 74105.9    5.44 74116.2    5.74   74177    7.79 74182.9       8 74210.9       8
 74218.1    8.25 74283.8   10.53 74290.4   10.84   74292   10.89   74294   10.96
   74295      11   74323      11 74324.7   11.06 74324.9   11.06 74450.7      13
 74453.1   13.04 74460.9   13.16   74463   13.13 74472.9   13.02 74515.6      13
 74522.2    13.1 74575.7   13.92 74580.6      14 74610.2      14   74611   13.98
 75505.8      14 75508.7   13.92 75518.5   13.66 75523.7   13.52 75528.4   13.39
 75696.1     9.9   75879    7.98 75879.2    7.98 75990.9       3 76252.1       3
 76505.6   13.48 76510.9   13.71 76515.6   13.91 76517.7      14 76559.4      14
 76565.5   14.13 76568.4   14.19 76595.4   14.74 76605.4   14.95 76607.9      15
   76895   15.92 76898.7      16 77323.6   16.77 77324.3   16.78 77334.3   16.99
 77334.9      17   77534   17.74   77544   17.96 77545.7      18 77713.7   18.78
 77722.7   18.99   77723   18.99 77723.4      19 78202.9    19.8 78207.4    19.9
   78212      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68620     .08 73912.9    .035 74043.8     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       73912.9 74043.8           440.82  440.82  440.82              .1       .3
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Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
   6862070870.53   17.67       F
75454.98   78212   15.84       F

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -2400.*

INPUT
Description:
Station Elevation Data    num=     155
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
68789.74      1068793.28    9.9868798.11    9.9468799.06    9.9468804.72    9.92
 68810.5     9.968811.09     9.968816.28    9.8868822.06    9.8668822.53    9.86
68994.45    9.8569132.16    8.9969133.62    8.9569356.47    3.8469382.99    3.04
69384.55    2.9969384.65    2.9869527.73    2.9869988.09    2.7970610.95    2.75
71110.87    2.8271537.03    3.0271670.08    3.72 71673.1    3.78 72560.2    3.75
72634.22    5.0372798.94    7.0372943.77    8.6772944.35    8.6872949.33    8.76
72954.01    8.8572956.16    8.8873055.44    9.66 73060.9    9.7473407.91   10.42
73479.77   10.5673480.84   10.5873490.98   10.5873501.62   10.5173512.16   10.44
73512.54   10.4573518.09   10.5873748.55   10.3373748.95   10.32 73801.7    9.36
   73810     9.373812.14    9.2373822.67    8.9173824.23    8.86 73845.7    8.86
73852.03    8.7173853.98    8.6673905.96    6.5873947.21    4.79 73951.7    4.57
 73957.3    4.3873959.52    4.3173967.36    4.0573971.17    3.9273974.12    3.82
73977.32    3.7173981.59    3.5773985.77    3.4374016.28    3.4374025.41    3.62
74037.59    3.8774042.27    3.9774049.75    3.9374054.64    3.9174057.82    3.93
74059.98    3.9874060.84    4.0174061.91    4.0374065.27    4.1274065.65    4.13
 74070.4    4.2674070.61    4.2674074.09    4.33 74075.9    4.3774081.24    4.48
74085.78    4.5774105.04    4.7374108.37    4.7174119.45    4.6374129.02    4.57
 74138.7    4.6374141.61     4.774152.57    4.9574163.66    5.2174229.04    6.97
74235.38    7.15 74265.5    7.1574273.24    7.36 74343.9    9.32   74351    9.59
74352.72    9.6374354.87    9.6974355.95    9.7274386.06    9.7274387.89    9.78
 74388.1    9.78 74523.4   11.4474525.98   11.4874534.37   11.5874536.62   11.55
74547.27   11.46 74593.2   11.44 74600.3   11.5374657.84   12.24 74663.1    12.3
74694.94   12.31 74695.8   12.2975658.13   12.3475661.26   12.2775671.79   12.05
75677.39   11.9375682.44   11.81 75862.8    8.83 76059.5    7.1976059.72    7.19
76179.84    2.9276460.77    2.93 76733.4   11.9376739.09   12.1276744.15   12.29
76746.41   12.3776791.25   12.3776797.81   12.4876800.93   12.5476829.97   13.01
76840.73   13.1976843.41   13.2377152.19   14.0377156.16    14.177613.13   14.77
77613.88   14.7877624.64   14.9677625.28   14.9777839.41   15.6177850.16    15.8
   77852   15.8478032.68   16.5178042.36   16.6978042.68   16.6978043.11    16.7
78519.75   17.3578520.52   17.3578524.81   17.3878531.77   17.4278538.75   17.46
78545.72    17.578550.43   17.53 78558.8   17.5478563.64   17.6378568.59   17.71

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
68789.74    .077 73951.7     .0374085.78    .077

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       73951.774085.78           440.82  440.82  440.82             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -2800.*

INPUT
Description:
Station Elevation Data    num=     155
```

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68959.48		968962.93	8.9568967.64		8.8968968.57		8.8868974.08		8.84
68979.71		8.868980.29	8.7968985.35		8.7668990.98		8.7268991.44		8.71
69159		8.769293.22	7.9869294.64		7.9569511.84		3.6869537.69		3.01
69539.21	2.98	69539.3	2.9769678.75		2.9670127.43		2.7870734.48		2.73
71221.73	2.7771637.09		2.9271766.76		3.51	71769.7	3.55	72634.3	3.5
72706.45	4.5772866.98		6.2273008.13		7.5973008.71		7.5973013.55		7.67
73018.12	7.7473020.21		7.7773116.97		8.41	73122.3	8.47	73460.5	9.03
73530.54	9.1473531.59		9.1773541.48		9.1673551.84		9.11	73562.1	9.05
73562.48	9.06	73567.9	9.1673792.51		8.9573792.88		8.9473844.31		8.14
73852.39	8.0973854.48		8.0373864.75		7.7673866.27		7.7273887.18		7.72
73893.36	7.5973895.26		7.5573945.92		5.8273986.12		4.33	73990.5	4.14
73995.8	3.9373997.89		3.8574005.32		3.5574008.92		3.4174011.72		3.3
74014.75	3.1874018.79		3.0174022.74		2.8674048.17		2.8674058.63		3.02
74072.56	3.2474077.92		3.32	74086.5	3.29	74092.1	3.2774095.74		3.33
74098.22	3.41	74099.2	3.4474100.44		3.4874104.27		3.6	74104.7	3.61
74110.15	3.7874110.39		3.7874114.37		3.8774116.45		3.9174122.57		4.04
74127.77	4.1474148.38		4.2774151.94		4.26	74163.8	4.274174.04		4.15
74184.4	4.274187.51		4.2574199.25		4.4674211.11		4.6874281.08		6.14
74287.87	6.374320.09		6.374328.39		6.48	74404	8.1174411.59		8.33
74413.44	8.3774415.74		8.4274416.89		8.4574449.12		8.4574451.08		8.49
74451.3	8.49	74596.1	9.8974598.86		9.9174607.84		1074610.25		9.98
74621.65	9.9	74670.8	9.8974678.39		9.9674739.97		10.5574745.61		10.61
74779.68	10.6174780.59		10.675810.46		10.67	75813.8	10.6275825.09		10.43
75831.07	10.3375836.48		10.2476029.49		7.76	76240	6.476240.23		6.4
76368.79	2.8576669.42		2.8776961.19		10.3776967.28		10.54	76972.7	10.68
76975.12	10.7477023.11		10.7577030.13		10.8477033.47		10.8877064.54		11.28
77076.05	11.4377078.93		11.4677409.37		12.1477413.63		12.277902.67		12.78
77903.47	12.7877914.98		12.9477915.67		12.9478144.83		13.4878156.34		13.64
78158.3	13.6778351.66		14.2478362.02		14.3978362.36		14.3978362.81		14.4
78872.91	14.9678873.73		14.9678878.33		15.0178885.78		15.0878893.24		15.15
78900.7	15.2378905.74		15.28	78914.7	15.2978919.88		15.3678925.17		15.43

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
68959.48	.074	73990.5	.0374127.77		.074

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73990.574	127.77	440.82	440.82	440.82	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -3200.*

INPUT
Description:
Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69129.23		869132.59	7.9369137.17		7.8369138.08		7.8269143.45		7.76
69148.93		7.769149.49	7.6969154.42		7.6469159.91		7.5869160.35		7.57
69323.55	7.5669454.27		6.9769455.66		6.94	69667.2	3.5369692.38		2.99
69693.87	2.9669693.95		2.9569829.77		2.9470266.77		2.7870858.03		2.72
71332.59	2.7371737.14		2.8371863.44		3.29	71866.3	3.33	72708.4	3.25
72778.66	4.172935.02		5.42	73072.5	6.5173073.06		6.5173077.78		6.57
73082.23	6.6373084.27		6.6573178.51		7.16	73183.7	7.2173513.09		7.64
73581.31	7.7373582.34		7.7573591.96		7.7573602.05		7.773612.05		7.65
73612.42	7.66	73617.7	7.7573836.46		7.5673836.83		7.5673886.91		6.91
73894.79	6.8773896.82		6.8373906.82		6.61	73908.3	6.5873928.67		6.58
73934.69	6.4873936.54		6.4573985.88		5.0574025.04		3.86	74029.3	3.71
74034.3	3.4874036.27		3.3974043.28		3.0674046.68		2.974049.31		2.78
74052.17	2.6474055.98		2.4674059.71		2.2974080.05		2.2974091.84		2.42

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74107.55     2.674113.59    2.6774123.25    2.6574129.56    2.6474133.66    2.74
74136.45    2.8474137.55    2.8774138.95    2.9274143.28    3.0774143.77    3.09
 74149.9     3.374150.17     3.374154.66     3.4   74157    3.45 74163.9    3.59
74169.76    3.7174191.72    3.8274195.51    3.8174208.15    3.7674219.06    3.72
 74230.1    3.7674233.41    3.8174245.92    3.9774258.56    4.1474333.12    5.32
74340.35    5.44 74374.7    5.4574383.53    5.59 74464.1     6.9 74472.2    7.08
74474.16    7.1174476.61    7.1574477.84    7.1774512.18    7.1774514.27    7.21
74514.51    7.21 74668.8    8.3374671.74    8.35 74681.3    8.4274683.88     8.4
74696.02    8.3474748.39    8.3374756.48    8.39 74822.1    8.8774828.11    8.91
74864.41    8.9274865.39     8.9 75962.8    9.0175966.36    8.9675978.38    8.82
75984.76    8.7475990.52    8.6676196.19    6.69 76420.5    5.6176420.75    5.61
76557.73    2.7776878.09     2.877188.98    8.8277195.48    8.9577201.25    9.06
77203.83    9.1177254.96    9.1277262.45    9.19   77266    9.2377299.11    9.55
77311.38    9.6777314.45     9.777666.55   10.2577671.09    10.3 78192.2   10.78
78193.05   10.7978205.32   10.9178206.05   10.9178450.24   11.36 78462.5   11.48
78464.59   11.5178670.63   11.9778681.67   12.0978682.04   12.0978682.52    12.1
79226.07   12.5779226.95   12.5779231.84   12.6479239.78   12.7479247.73   12.85
79255.68   12.9579261.05   13.0279270.59   13.0379276.12   13.0979281.76   13.14

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69129.23    .071 74029.3     .0374169.76    .071

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74029.374169.76           440.82  440.82  440.82             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -3600.*

INPUT
Description:
Station Elevation Data    num=     155
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
69298.98       769302.24     6.9 69306.7    6.7869307.58    6.77 69312.8    6.68
69318.15     6.669318.69    6.5969323.49    6.5269328.84    6.4369329.27    6.43
 69488.1    6.4169615.33    5.9669616.68    5.9469822.57    3.3769847.07    2.96
69848.52    2.9469848.61    2.94 69980.8    2.9270406.12    2.7870981.58     2.7
71443.45    2.6871837.19    2.7471960.11    3.0871962.91    3.1172782.49       3
72850.88    3.6473003.07    4.6273136.88    5.4373137.41    5.4373142.02    5.47
73146.33    5.5173148.31    5.5373240.04    5.9173245.09    5.95 73565.7    6.25
73632.09    6.3273633.08    6.3373642.45    6.3373652.27    6.29   73662    6.26
73662.37    6.2673667.49    6.3373880.41    6.1873880.77    6.1873929.52    5.69
73937.18    5.6673939.16    5.63 73948.9    5.4773950.34    5.4473970.16    5.44
73976.02    5.3673977.82    5.3474025.84    4.2974063.95     3.4 74068.1    3.29
 74072.8    3.0374074.66    2.9374081.23    2.5774084.44    2.3974086.91    2.26
 74089.6    2.1174093.19    1.9174096.69    1.7174111.95    1.7174125.05    1.82
74142.52    1.9774149.25    2.02   74160    2.0174167.02    2.0174171.59    2.15
74174.69    2.2674175.92    2.3174177.47    2.3774182.28    2.5574182.82    2.57
74189.65    2.8274189.95    2.8374194.94    2.9374197.55    2.9974205.22    3.15
74211.74    3.2974235.05    3.3774239.09    3.36 74252.5    3.3274264.09    3.29
 74275.8    3.3274279.32    3.3674292.59    3.4874306.01    3.6174385.16     4.5
74392.84    4.5974429.29    4.5974438.67     4.7 74524.2    5.69 74532.8    5.82
74534.88    5.8474537.48    5.8774538.79    5.8974575.24     5.974577.46    5.92
74577.71    5.92 74741.5    6.7774744.62    6.7974754.77    6.8474757.51    6.83
74770.39    6.7874825.99    6.7874834.59    6.8274904.23    7.1874910.61    7.22
74949.15    7.2274950.19    7.2176115.12    7.3576118.91    7.3176131.66     7.2
76138.44    7.1476144.55    7.0976362.89    5.61   76601    4.8276601.27    4.82
76746.69     2.777086.74    2.7377416.77    7.2677423.67    7.36 77429.8    7.45
77432.53    7.4977486.81    7.4977494.76    7.5577498.53    7.5777533.69    7.81
 77546.7    7.9177549.95    7.9377923.73    8.3677928.55     8.478481.73    8.78
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78482.64    8.7978495.66    8.8878496.45    8.8878755.65    9.2378768.67    9.33
78770.89    9.3478989.61     9.779001.33    9.7979001.71    9.7979002.23     9.8
79579.23   10.1779580.16   10.1979585.35   10.2779593.79    10.479602.23   10.54
79610.66   10.6879616.36   10.7779626.49   10.7779632.35   10.8179638.34   10.86

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69298.98    .069 74068.1     .0374211.74    .069

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74068.174211.74           440.82  440.82  440.82             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -4000.*

INPUT
Description:
Station Elevation Data    num=     155
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
69468.72       6 69471.9    5.8869476.23    5.7269477.09    5.7169482.17     5.6
69487.37     5.569487.89    5.4969492.56     5.469497.76    5.2969498.18    5.29
69652.65    5.2669776.38    4.96 69777.7    4.9469977.94    3.2170001.77    2.94
70003.17    2.9270003.26    2.9270131.82     2.970545.47    2.7771105.12    2.68
71554.32    2.6471937.24    2.6572056.79    2.8672059.51    2.8872856.59    2.76
 72923.1    3.1773071.11    3.8273201.24    4.3473201.77    4.3573206.24    4.38
73210.44     4.473212.37    4.4173301.58    4.6673306.48    4.6873618.29    4.87
73682.86     4.973683.82    4.9173692.93    4.9173702.48    4.8973711.95    4.86
 73712.3    4.8773717.29    4.9173924.37     4.873924.72     4.873972.12    4.47
73979.58    4.45 73981.5    4.4373990.97    4.3273992.37     4.374011.65     4.3
74017.34    4.25 74019.1    4.23 74065.8    3.5374102.87    2.93 74106.9    2.86
 74111.3    2.5874113.04    2.47 74119.2    2.07 74122.2    1.8874124.51    1.73
74127.02    1.5774130.38    1.3574133.66    1.1474143.83    1.1474158.27    1.22
74177.51    1.3374184.91    1.3774196.75    1.3774204.48    1.3874209.52    1.55
74212.92    1.6974214.28    1.7474215.98    1.8174221.29    2.0274221.88    2.04
 74229.4    2.3474229.73    2.3574235.23    2.47 74238.1    2.5374246.55    2.71
74253.73    2.8674278.39    2.9174282.66    2.9174296.85    2.8874309.11    2.86
 74321.5    2.8974325.23    2.9174339.27    2.9974353.46    3.08 74437.2    3.68
74445.33    3.7474483.89    3.7474493.81    3.82 74584.3    4.48 74593.4    4.57
 74595.6    4.5874598.35     4.674599.73    4.61 74638.3    4.6274640.65    4.64
74640.91    4.64 74814.2    5.21 74817.5    5.2374828.23    5.2674831.13    5.25
74844.77    5.2274903.59    5.2274912.68    5.2574986.37     5.574993.11    5.52
75033.88    5.5375034.98    5.5276267.46    5.6876271.46    5.6676284.95    5.59
76292.12    5.5576298.59    5.5176529.59    4.54 76781.5    4.0376781.78    4.03
76935.63    2.6277295.41    2.6777644.57    5.7177651.87    5.7777658.34    5.83
77661.24    5.8677718.66    5.8677727.07     5.977731.06    5.9277768.26    6.08
77782.03    6.1477785.47    6.1678180.92    6.4778186.02    6.4978771.27    6.79
78772.23    6.79   78786    6.8578786.83    6.8679061.06     7.179074.84    7.17
79077.19    7.1879308.59    7.4379320.98    7.4979321.39    7.4979321.95    7.49
79932.38    7.7879933.37     7.879938.87    7.9179947.79    8.0779956.72    8.23
79965.64     8.479971.67    8.5179982.39    8.5179988.59    8.5479994.93    8.57

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69468.72    .066 74106.9     .0374253.73    .066

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74106.974253.73           440.82  440.82  440.82             .1       .3

CROSS SECTION
```

RIVER: Walleyleg_Branch
REACH: 1 RS: -4400.*

INPUT
Description:
Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69638.46		569641.55	4.8569645.77		4.6769646.59		4.6569651.53		4.52
69656.58		4.469657.09	4.3869661.63		4.2869666.68		4.1569667.09		4.14
69817.2	4.1169937.45		3.9569938.72		3.94 70133.3		3.0570156.46		2.91
70157.83	2.9170157.91		2.970282.84		2.8870684.81		2.7771228.66		2.66
71665.18	2.59 72037.3		2.5572153.47		2.6572156.11		2.6672930.69		2.51
72995.33	2.7173139.16		3.0173265.61		3.2673266.12		3.2673270.47		3.28
73274.55	3.2973276.42		3.373363.11		3.4173367.88		3.4273670.88		3.48
73733.62	3.4973734.57		3.573743.42		3.49 73752.7		3.48 73761.9		3.47
73762.25	3.4773767.09		3.4973968.32		3.4273968.66		3.4174014.73		3.25
74021.97	3.2474023.84		3.2274033.05		3.1774034.41		3.1674053.13		3.16
74058.67	3.1374060.38		3.1274105.77		2.7774141.78		2.47 74145.7		2.43
74149.8	2.1374151.41		2.0174157.16		1.5874159.95		1.3774162.11		1.21
74164.45	1.0474167.58		.874170.63		.5774175.72		.5774191.48		.63
74212.48	.774220.57		.72 74233.5		.7474241.94		.7474247.44		.96
74251.16	1.1174252.64		1.1874254.51		1.2574260.29		1.574260.94		1.52
74269.15	1.8674269.52		1.8774275.51		274278.66		2.0774287.88		2.26
74295.72	2.4374321.73		2.4674326.23		2.46 74341.2		2.4574354.12		2.44
74367.2	2.4574371.12		2.4674385.95		2.574400.91		2.5574489.24		2.85
74497.81	2.8974538.48		2.8974548.96		2.93 74644.4		3.2774653.99		3.31
74656.32	3.3274659.23		3.3374660.68		3.3474701.36		3.3474703.84		3.35
74704.12	3.35 74886.9		3.6674890.38		3.66 74901.7		3.6874904.76		3.68
74919.14	3.6674981.19		3.6774990.77		3.69 75068.5		3.8175075.62		3.83
75118.62	3.8375119.78		3.8376419.79		4.0276424.01		4.0176438.25		3.97
76445.8	3.9576452.62		3.9476696.28		3.47 76962		3.24 76962.3		3.24
77124.58	2.5577504.06		2.677872.36		4.1577880.05		4.19 77886.9		4.22
77889.95	4.2377950.52		4.2477959.39		4.26 77963.6		4.2778002.83		4.35
78017.35	4.3878020.98		4.39 78438.1		4.5878443.48		4.59 79060.8		4.79
79061.81	4.7979076.34		4.8379077.22		4.8379366.48		4.9779381.01		5.01
79383.48	5.0179627.56		5.1679640.64		5.1979641.07		5.1979641.65		5.19
80285.55	5.3980286.59		5.4180292.38		5.54 80301.8		5.7380311.21		5.93
80320.62	6.1380326.98		6.2680338.29		6.2680344.83		6.2780351.52		6.29

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69638.46	.063	74145.7	.0374295.72		.063

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74145.774295.72		440.82	440.82	440.82	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -4800

INPUT
Description:
Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69808.2		4 69811.2	3.83 69815.3		3.61 69816.1		3.59 69820.9		3.44
69825.8		3.3 69826.3	3.28 69830.7		3.16 69835.6		3.01 69836		3
73723.48	2.09 74184.5		2 74189.8		1.55 74197.7		.86 74199.7		.69
74207.6		0 74279.4	.11 74289.4		.54 74291		.61 74299.3		.97
74300		1 74308.9	1.38 74309.3		1.39 74319.2		1.61 74329.2		1.82
74337.7		2 80638.7	3 80639.8		3.02 80645.9		3.17 80655.8		3.39

```
 80665.7    3.62 80675.6    3.85 80682.3       4 80708.1       4

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 69808.2     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -5233.3*

INPUT
Description:
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
69604.84    3.6769607.98    3.5269612.26    3.34 69613.1    3.3369618.12     3.2
69623.25    3.0869623.77    3.0769628.38    2.9769633.51    2.8469633.92    2.83
73702.05    2.08 74184.5       274187.09    1.7874190.95    1.45 74191.2    1.43
74191.93    1.3674195.78    1.0374196.81     .9574200.58     .68 74201.2     .64
74201.65     .6174203.73     .4874206.53      .374207.08     .2674211.42    -.02
74213.72    -.1774220.62    -.14 74233.9    -.0974238.81    -.0774247.03    -.01
74260.31     .0874273.59     .1774275.71     .1874282.14     .2374286.73     .43
74287.66     .4774291.67     .64 74293.2      .774299.47     .98   74300       1
 74301.1    1.0474301.77    1.0774310.25    1.4174310.63    1.4274313.15    1.48
74320.07    1.6374326.42    1.76 74329.6    1.83 74337.7       275250.84    2.13
76386.18    2.28 76995.6    2.38 77237.7    2.5480637.96       380639.05    3.02
80645.16    3.1480655.05    3.3280664.96    3.5280674.86    3.7180681.55    3.83
80707.35    3.83

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69604.84     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -5666.6*

INPUT
Description:
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
69401.47    3.3369404.75    3.2269409.22    3.07 69410.1    3.0669415.34    2.96
 69420.7    2.8769421.24    2.8569426.06    2.7769431.41    2.6769431.85    2.67
73680.62    2.06 74184.5       274187.63    1.73 74192.3    1.33 74192.6    1.31
74193.48    1.2374198.15     .8274199.39     .7574203.94     .46 74204.7     .42
74205.24      .474207.75     .2774211.15      .1 74211.8     .0774217.06    -.19
74219.84    -.33 74226.4    -.2974239.02    -.21 74243.7    -.1774251.51    -.07
74264.12     .0974276.75     .2474278.77     .2774284.88     .3574289.24     .53
74290.12     .5774293.94     .7474295.39      .874301.36    1.0674301.86    1.08
74302.91    1.1274303.55    1.1474311.61    1.4474311.97    1.4574314.36     1.5
74320.95    1.6574326.98    1.77   74330    1.84 74337.7       275250.73    2.11
76385.94    2.2376995.29    2.3477237.36    2.6180637.22       380638.31    3.01
80644.41    3.1180654.31    3.2680664.21    3.4180674.11    3.57 80680.8    3.67
 80706.6    3.67
```

```
Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69401.47     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -6100.*

INPUT
Description:
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 69198.1       369201.52    2.9169206.19     2.8 69207.1     2.869212.56    2.72
69218.15    2.6569218.72    2.6469223.73    2.5869229.32    2.5169229.77     2.5
 73659.2    2.05 74184.5       274188.17    1.6974193.66    1.21   74194    1.18
74195.04    1.0974200.52     .6274201.97     .54 74207.3     .2474208.19     .21
74208.83     .1874211.78     .0774215.77    -.0974216.53    -.13 74222.7    -.37
74225.95     -.574232.17    -.4474244.14    -.3274248.57    -.2874255.98    -.13
74267.95     .0974279.91     .3274281.83     .3574287.62     .4774291.75     .64
74292.59     .6874296.21     .8374297.59     .8974303.24    1.1474303.72    1.15
74304.72    1.1974305.31    1.2174312.96    1.47 74313.3    1.4874315.57    1.53
74321.81    1.6674327.53    1.7874330.41    1.85 74337.7       275250.62    2.09
 76385.7    2.1876994.98     2.377237.02    2.6980636.48       380637.57    3.01
80643.67    3.0880653.56    3.1980663.47    3.3180673.36    3.4280680.05     3.5
80705.85     3.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 69198.1     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -6533.3*

INPUT
Description:
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
68994.73    2.6768998.29    2.6169003.15    2.54 69004.1    2.5369009.79    2.48
 69015.6    2.43 69016.2    2.4369021.41    2.3969027.23    2.34 69027.7    2.33
73637.78    2.03 74184.5       274188.71    1.64   74195     1.174195.41    1.06
74196.59     .9674202.88     .4174204.55     .3374210.67     .0274211.68    -.01
74212.42    -.04 74215.8    -.1474220.38    -.2974221.25    -.3274228.33    -.55
74232.06    -.6774237.95    -.5974249.26    -.4474253.45    -.3974260.45     -.2
74271.77      .174283.07     .3974284.88     .4474290.36     .5874294.27     .75
74295.06     .7974298.48     .9374299.78     .9974305.12    1.2274305.58    1.23
74306.52    1.2674307.09    1.2874314.31     1.574314.64    1.5174316.78    1.56
74322.68    1.6874328.09     1.8 74330.8    1.85 74337.7       275250.52    2.07
76385.46    2.1376994.66    2.2577236.67    2.7680635.73       380636.83    3.01
80642.93    3.0680652.82    3.1380662.73    3.2180672.62    3.28 80679.3    3.33
 80705.1    3.33
```

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Manning's n Values          num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
68994.73     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -6966.6*

INPUT
Description:
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
68791.37    2.3368795.06    2.3168800.11    2.27 68801.1    2.2768807.02    2.24
68813.05    2.2268813.66    2.2168819.09    2.1968825.13    2.1768825.62    2.17
73616.35    2.02 74184.5       274189.26     1.674196.35     .98 74196.8     .94
74198.15     .8274205.23     .2174207.12     .1274214.03    -.274215.18    -.23
74216.01    -.2574219.83    -.3574224.98    -.4874225.98    -.5274233.97    -.72
74238.18    -.8374243.73    -.7474254.38    -.5674258.33    -.4974264.92    -.26
74275.58      .174286.23     .4774287.95     .52 74293.1      .774296.78     .86
74297.53     .8974300.75    1.0374301.98    1.0874307.02     1.374307.44    1.31
74308.33    1.3474308.86    1.3574315.67    1.5374315.98    1.5474317.99    1.58
74323.55     1.774328.65    1.81 74331.2    1.86 74337.7       275250.41    2.06
76385.22    2.0876994.35    2.2177236.34    2.8480634.99       380636.09       3
80642.19    3.0380652.08    3.0680661.98     3.180671.88    3.1480678.56    3.17
80704.35    3.17

Manning's n Values          num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
68791.37     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -7400

INPUT
Description:
Station Elevation Data    num=      32
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588       2 74184.5       2 74189.8    1.55 74197.7     .86 74199.7     .69
 74207.6       0 74209.7    -.09 74217.4    -.42 74219.6    -.47 74229.6    -.68
 74230.7    -.71 74239.6     -.9 74244.3      -1 74249.5    -.89 74259.5    -.68
 74263.2     -.6 74269.4    -.32 74279.4     .11 74289.4     .54   74291     .61
 74299.3     .97   74300       1 74308.9    1.38 74309.3    1.39 74319.2    1.61
 74329.2    1.82 74337.7       2 75250.3    2.0476384.98    2.0376994.04    2.17
77235.99    2.91 80703.6       3

Manning's n Values          num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3
```

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -7885.7*

INPUT
Description:
Station Elevation Data num= 55

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68588	1.71	74184.5	1.71	74189.73	1.27	74190.2	1.23	74197.55	.59
74198.68	.49	74199.53	.42	74200.84	.31	74207.34	-.26	74209.31	-.36
74209.41	-.36	74211.57	-.46	74217.02	-.69	74219.2	-.74	74219.84	-.76
74222.2	-.81	74226.23	-.92	74229.09	-.99	74230.18	-1.03	74230.97	-1.05
74235.71	-1.27	74238.98	-1.34	74243.62	-1.52	74248.86	-1.34	74253.5	-1.18
74258.93	-1.01	74262.66	-.97	74262.76	-.89	74266.3	-.75	74268.9	-.63
74272.23	-.48	74278.98	-.19	74281.82	-.07	74289.05	.24	74290.66	.31
74291.41	.34	74292.95	.41	74299.02	.67	74299.73	.7	74300.9	.75
74301.57	.78	74308.69	1.09	74309.09	1.17	74310.09	1.12	74310.48	1.13
74319.07	1.32	74319.98	1.34	74329.14	1.53	74329.55	1.54	74337.7	1.71
75250.3	1.75	76384.98	1.74	76994.04	1.88	77235.99	2.62	80703.6	2.71

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
68588	.06	74184.5	.03	74337.7	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74184.5	74337.7	485.71	485.71	485.71	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -8371.4*

INPUT
Description:
Station Elevation Data num= 55

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68588	1.43	74184.5	1.43	74189.68	.99	74190.12	.95	74197.4	.31
74198.52	.22	74199.36	.15	74200.65	.04	74207.08	-.53	74209.03	-.63
74209.13	-.64	74211.26	-.73	74216.65	-.96	74218.8	-1.02	74219.44	-1.04
74221.77	-1.09	74225.75	-1.22	74228.58	-1.31	74229.65	-1.35	74230.43	-1.37
74235.12	-1.58	74238.34	-1.77	74242.94	-2.05	74248.21	-1.79	74252.89	-1.56
74258.36	-1.34	74262.12	-1.27	74262.21	-1.19	74265.79	-1.05	74268.41	-.94
74271.77	-.79	74278.55	-.57	74281.42	-.37	74288.7	-.06	74290.32	.01
74291.07	.04	74292.62	.11	74298.73	.37	74299.45	.47	74300.63	.46
74301.3	.48	74308.48	.79	74308.88	.8	74309.9	.83	74310.28	.84
74318.93	1.03	74319.84	1.05	74329.08	1.25	74329.5	1.25	74337.7	1.43
75250.3	1.47	76384.98	1.46	76994.04	1.67	77235.99	2.34	80703.6	2.43

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
68588	.06	74184.5	.03	74337.7	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74184.5	74337.7	485.71	485.71	485.71	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -8857.1*

```
INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588    1.14 74184.5    1.1474189.62     .7174190.06     .6774197.25     .04
74198.35    -.0574199.19    -.1274200.46    -.2374206.81    -.7974208.74    -.91
74208.84    -.9174210.95      -174216.27   -1.2374218.41   -1.2974219.03   -1.31
74221.34   -1.3674225.27   -1.5274228.06   -1.6274229.12   -1.67 74229.9    -1.7
74234.53   -1.9574237.72   -2.2174242.26   -2.5774247.57   -2.2474252.28   -1.94
74257.79   -1.6874261.57   -1.4974261.67   -1.4974265.27   -1.3674267.91   -1.24
74271.29    -1.174278.12     -.874281.02    -.6874288.34    -.3674289.98    -.29
74290.73    -.26 74292.3    -.1974298.45     .0874299.18     .1174300.37     .16
74301.05     .1974308.27      .574308.67     .51 74309.7     .5474310.09     .55
 74318.8     .7474319.72     .7674329.02     .9674329.44     .97 74337.7    1.14
 75250.3    1.1876384.98    1.1776994.04    1.3177235.99    2.05 80703.6    2.14

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -9342.8*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588     .86 74184.5     .8674189.55     .4374189.99     .39 74197.1    -.23
 74198.2    -.3274199.01    -.3974200.27     -.574206.55   -1.0574208.46   -1.18
74208.55   -1.1874210.64   -1.27 74215.9    -1.5   74218   -1.5774218.62   -1.59
74220.91   -1.6474224.79   -1.8174227.55   -1.94 74228.6   -1.9974229.36   -2.02
74233.94   -2.3274237.09   -2.6474241.57    -3.174246.93   -2.6974251.67   -2.32
74257.22   -2.0174261.03   -1.7974261.12   -1.7974264.75   -1.6774267.41   -1.55
74270.82    -1.4 74277.7   -1.1174280.61    -.9874287.99    -.6674289.64    -.59
74290.41    -.5674291.97    -.4974298.18    -.22 74298.9    -.1974300.09    -.14
74300.78    -.1174308.06      .274308.47     .22 74309.5     .2574309.89     .26
74318.66     .4674319.59     .4874328.95     .6774329.38     .68 74337.7     .86
 75250.3      .976384.98     .8976994.04    1.0377235.99    1.77 80703.6    1.86

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -9828.5*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
```

```
   68588     .57 74184.5     .5774189.49     .1574189.93     .1174196.95     -.5
74198.03     -.674198.84    -.6774200.08    -.7774206.28   -1.3174208.17   -1.45
74208.27   -1.4674210.33   -1.5574215.52   -1.77 74217.6   -1.8474218.21   -1.87
74220.47   -1.92 74224.3   -2.1174227.03   -2.2574228.08   -2.3174228.83   -2.34
74233.35   -2.6974236.47   -3.0874240.89   -3.6274246.29   -3.1474251.06   -2.71
74256.65   -2.3474260.48   -2.0974260.59   -2.0874264.23   -1.9874266.91   -1.86
74270.34   -1.7174277.27   -1.41 74280.2   -1.2874287.64    -.96 74289.3    -.89
74290.07    -.8674291.65    -.79 74297.9    -.5274298.62    -.4974299.83    -.44
74300.52    -.4174307.85    -.0974308.26    -.08 74309.3    -.04 74309.7    -.03
74318.53     .1774319.46     .1974328.89     .3874329.32     .39 74337.7     .57
 75250.3     .6176384.98      .676994.04     .7477235.99    1.48 80703.6    1.57

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -10314.*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588     .29 74184.5     .2974189.44    -.1374189.86    -.17 74196.8    -.78
74197.87    -.8774198.66    -.9474199.89   -1.0474206.02   -1.5874207.89   -1.73
74207.98   -1.7374210.02   -1.8274215.15   -2.04 74217.2   -2.12 74217.8   -2.14
74220.04   -2.1974223.83   -2.4174226.52   -2.5674227.55   -2.6274228.29   -2.67
74232.76   -3.0774235.84   -3.5174240.21   -4.1574245.64   -3.5874250.45   -3.09
74256.08   -2.6774259.95   -2.3974260.04   -2.3874263.72   -2.2974266.41   -2.17
74269.88   -2.0174276.84   -1.71 74279.8   -1.5974287.29   -1.2774288.96   -1.19
74289.73   -1.1674291.32   -1.0974297.62    -.8274298.35    -.7974299.56    -.73
74300.26     -.774307.64    -.3974308.05    -.37 74309.1    -.3374309.49    -.32
74318.39    -.1274319.33     -.174328.83      .174329.27     .11 74337.7     .29
 75250.3     .3376384.98     .3276994.04     .4677235.99     1.2 80703.6    1.29

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -10800

INPUT
Description:
Station Elevation Data    num=      32
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588       0 74184.5       0 74189.8    -.45 74197.7   -1.14 74199.7   -1.31
 74207.6      -2 74209.7   -2.09 74217.4   -2.42 74219.6   -2.4774223.34   -2.71
74227.76   -2.9974232.17   -3.4474239.53   -4.6774249.84   -3.47 74259.5   -2.68
 74263.2    -2.6 74269.4   -2.32 74279.4   -1.89 74289.4   -1.46   74291   -1.39
 74299.3   -1.03   74300      -1 74308.9    -.62 74309.3    -.61 74319.2    -.39
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 74329.2    -.18 74337.7       0 75250.3     .0476384.98     .0376994.04     .17
77235.99     .91 80703.6       1

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7                0       0       0              .1       .3


SUMMARY OF MANNING'S N VALUES

River:Walleyleg_Branch


      Reach          River Sta.       n1        n2        n3        n4        n5
   n6        n7


 1                    800                .11       .04       .11

 1                    700                .11       .04       .11

 1                    600                .11       .04       .11

 1                    465                .11       .08       .04       .08       .11

 1                    388          Bridge

 1                    335                .11       .08       .04       .08        .1

 1                    200                .11       .04       .08

 1                    100                 .1       .04       .08

 1                    0                   .1       .04       .08

 1                    -590.*              .1      .035       .08       .08      .065
     .08       .08
 1                    -1180               .1      .035       .08       .05       .08

 1                    -1590.*            .09      .035       .08       .08      .065
     .08       .08
 1                    -2000              .08      .035       .08

 1                    -2400.*           .077       .03      .077

 1                    -2800.*           .074       .03      .074

 1                    -3200.*           .071       .03      .071

 1                    -3600.*           .069       .03      .069

 1                    -4000.*           .066       .03      .066

 1                    -4400.*           .063       .03      .063

 1                    -4800              .06       .03       .06

 1                    -5233.3*           .06       .03       .06
```

1	-5666.6*	.06	.03	.06
1	-6100.*	.06	.03	.06
1	-6533.3*	.06	.03	.06
1	-6966.6*	.06	.03	.06
1	-7400	.06	.03	.06
1	-7885.7*	.06	.03	.06
1	-8371.4*	.06	.03	.06
1	-8857.1*	.06	.03	.06
1	-9342.8*	.06	.03	.06
1	-9828.5*	.06	.03	.06
1	-10314.*	.06	.03	.06
1	-10800	.06	.03	.06

SUMMARY OF REACH LENGTHS

River: Walleyleg_Branch

Reach	River Sta.	Left	Channel	Right
1	800	100	100	100
1	700	100	100	100
1	600	135	135	135
1	465	130	130	130
1	388	Bridge		
1	335	135	135	135
1	200	100	100	100
1	100	100	100	100
1	0	425	410	250
1	-590.*	425	410	250
1	-1180	900	410	410
1	-1590.*	900	410	410
1	-2000	440.82	440.82	440.82
1	-2400.*	440.82	440.82	440.82
1	-2800.*	440.82	440.82	440.82
1	-3200.*	440.82	440.82	440.82
1	-3600.*	440.82	440.82	440.82
1	-4000.*	440.82	440.82	440.82
1	-4400.*	440.82	440.82	440.82
1	-4800	433.33	433.33	433.33
1	-5233.3*	433.33	433.33	433.33
1	-5666.6*	433.33	433.33	433.33
1	-6100.*	433.33	433.33	433.33
1	-6533.3*	433.33	433.33	433.33
1	-6966.6*	433.33	433.33	433.33
1	-7400	485.71	485.71	485.71
1	-7885.7*	485.71	485.71	485.71
1	-8371.4*	485.71	485.71	485.71

1	-8857.1*	485.71	485.71	485.71
1	-9342.8*	485.71	485.71	485.71
1	-9828.5*	485.71	485.71	485.71
1	-10314.*	485.71	485.71	485.71
1	-10800	0	0	0

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: Walleyleg_Branch

Reach	River Sta.	Contr.	Expan.
1	800	.3	.5
1	700	.3	.5
1	600	.3	.5
1	465	.3	.5
1	388	Bridge	
1	335	.3	.5
1	200	.3	.5
1	100	.3	.5
1	0	.3	.5
1	-590.*	.3	.5
1	-1180	.1	.3
1	-1590.*	.1	.3
1	-2000	.1	.3
1	-2400.*	.1	.3
1	-2800.*	.1	.3
1	-3200.*	.1	.3
1	-3600.*	.1	.3
1	-4000.*	.1	.3
1	-4400.*	.1	.3
1	-4800	.1	.3
1	-5233.3*	.1	.3
1	-5666.6*	.1	.3
1	-6100.*	.1	.3
1	-6533.3*	.1	.3
1	-6966.6*	.1	.3
1	-7400	.1	.3
1	-7885.7*	.1	.3
1	-8371.4*	.1	.3
1	-8857.1*	.1	.3
1	-9342.8*	.1	.3
1	-9828.5*	.1	.3
1	-10314.*	.1	.3
1	-10800	.1	.3

Existing Steady Model

HEC-RAS Plan: Ext_SteadyRiver Locations: User Defined

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)	
Walleyleg_Branch	1	800	2 yr	78.00	9.69	11.20		11.22	0.000528	0.85	107.38	152.71	0.15
Walleyleg_Branch	1	800	25 yr	314.00	9.69	12.64		12.66	0.000336	1.23	414.08	289.47	0.14
Walleyleg_Branch	1	800	100 yr	910.00	9.69	15.69		15.70	0.000055	0.85	3528.73	4370.94	0.06
Walleyleg_Branch	1	800	500 yr	1040.00	9.69	18.21		18.21	0.000006	0.35	15139.35	7482.55	0.02
Walleyleg_Branch	1	600	2 yr	78.00	9.22	11.08	10.16	11.10	0.000659	1.14	87.02	113.17	0.18
Walleyleg_Branch	1	600	25 yr	314.00	9.22	12.54	10.88	12.57	0.000541	1.70	341.19	216.42	0.18
Walleyleg_Branch	1	600	100 yr	910.00	9.22	15.66	11.90	15.68	0.000149	1.48	1969.43	3768.88	0.11
Walleyleg_Branch	1	600	500 yr	1040.00	9.22	18.21	12.05	18.21	0.000003	0.25	21146.77	7727.20	0.02
Walleyleg_Branch	1	465	2 yr	78.00	8.90	10.99	9.65	11.01	0.000592	1.19	65.38	42.70	0.17
Walleyleg_Branch	1	465	25 yr	314.00	8.90	12.38	10.58	12.47	0.001064	2.40	145.02	430.46	0.25
Walleyleg_Branch	1	465	100 yr	910.00	8.90	15.53	11.91	15.62	0.000492	2.69	463.77	3525.02	0.19
Walleyleg_Branch	1	465	500 yr	1040.00	8.90	18.20	12.17	18.21	0.000014	0.58	10593.43	7515.61	0.03
Walleyleg_Branch	1	388		Bridge									
Walleyleg_Branch	1	335	2 yr	78.00	8.80	10.88	9.61	10.78	0.000862	1.33	58.74	43.16	0.20
Walleyleg_Branch	1	335	25 yr	314.00	8.80	12.21	10.64	12.07	0.001235	2.41	160.42	312.84	0.27
Walleyleg_Branch	1	335	100 yr	910.00	8.80	15.40		15.48	0.000468	2.55	485.07	4548.84	0.19
Walleyleg_Branch	1	335	500 yr	1040.00	8.80	18.20		18.20	0.000011	0.52	11527.62	8242.62	0.03
Walleyleg_Branch	1	200	2 yr	78.00	8.75	10.42	9.90	10.50	0.004250	2.23	35.00	40.92	0.42
Walleyleg_Branch	1	200	25 yr	314.00	8.75	11.45	10.83	11.64	0.006227	3.47	102.90	199.68	0.54
Walleyleg_Branch	1	200	100 yr	910.00	8.75	15.41	11.97	15.42	0.000092	1.08	2088.30	5657.06	0.08
Walleyleg_Branch	1	200	500 yr	1040.00	8.75	18.20	12.09	18.20	0.000001	0.15	26652.86	7643.08	0.01
Walleyleg_Branch	1	0	2 yr	78.00	7.94	9.66	9.10	9.69	0.001779	1.56	70.09	114.83	0.28
Walleyleg_Branch	1	0	25 yr	314.00	7.94	10.85		10.90	0.001346	2.29	255.78	231.43	0.27
Walleyleg_Branch	1	0	100 yr	910.00	7.94	15.40		15.41	0.000035	0.78	3923.43	6899.35	0.05
Walleyleg_Branch	1	0	500 yr	1040.00	7.94	18.20		18.20	0.000003	0.29	16650.12	7611.60	0.02

HEC-RAS Plan: Ext_SteadyRiver Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Vel Head	Frctn Loss	C & E Loss	Q Left	Q Channel	Q Right	Top Width
				(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft)
Walleyleg_Branch	1	800	2 yr	11.22	11.20	0.01	0.05	0.00	1.47	75.33	1.20	152.71
Walleyleg_Branch	1	800	25 yr	12.66	12.64	0.02	0.04	0.00	32.36	264.69	16.95	289.47
Walleyleg_Branch	1	800	100 yr	15.70	15.69	0.01	0.01	0.00	200.90	412.22	296.88	4370.94
Walleyleg_Branch	1	800	500 yr	18.21	18.21	0.00	0.00	0.00	173.99	247.11	618.90	7482.55
Walleyleg_Branch	1	600	2 yr	11.10	11.08	0.02	0.09	0.00	2.40	73.22	2.38	113.17
Walleyleg_Branch	1	600	25 yr	12.57	12.54	0.03	0.11	0.00	43.43	230.62	39.95	216.42
Walleyleg_Branch	1	600	100 yr	15.68	15.66	0.02	0.03	0.02	245.15	426.28	238.56	3768.88
Walleyleg_Branch	1	600	500 yr	18.21	18.21	0.00	0.00	0.00	233.59	102.41	704.00	7727.20
Walleyleg_Branch	1	465	2 yr	11.01	10.99	0.02	0.04	0.00		78.00		42.70
Walleyleg_Branch	1	465	25 yr	12.47	12.38	0.09	0.08	0.00	4.20	307.54	2.26	430.46
Walleyleg_Branch	1	465	100 yr	15.62	15.53	0.09	0.05	0.01	78.50	729.38	102.12	3525.02
Walleyleg_Branch	1	465	500 yr	18.21	18.20	0.00	0.00	0.00	57.70	227.56	754.74	7515.61
Walleyleg_Branch	1	388		Bridge								
Walleyleg_Branch	1	335	2 yr	10.78	10.88	0.03	0.13	0.00		78.00		43.16
Walleyleg_Branch	1	335	25 yr	12.07	12.21	0.07	0.20	0.00	6.50	293.02	14.48	312.84
Walleyleg_Branch	1	335	100 yr	15.48	15.40	0.08	0.02	0.04	94.67	699.20	116.13	4548.84
Walleyleg_Branch	1	335	500 yr	18.20	18.20	0.00	0.00	0.00	80.03	210.84	749.12	8242.62
Walleyleg_Branch	1	200	2 yr	10.50	10.42	0.08	0.49	0.00		78.00		40.92
Walleyleg_Branch	1	200	25 yr	11.64	11.45	0.18	0.46	0.02	0.08	309.14	4.78	199.68
Walleyleg_Branch	1	200	100 yr	15.42	15.41	0.01	0.01	0.00	154.98	389.76	365.27	5657.06
Walleyleg_Branch	1	200	500 yr	18.20	18.20	0.00	0.00	0.00	335.73	80.64	623.63	7643.08
Walleyleg_Branch	1	0	2 yr	9.69	9.66	0.03	1.60	0.03	2.61	67.78	7.61	114.83
Walleyleg_Branch	1	0	25 yr	10.90	10.85	0.06	0.07	0.03	23.46	217.18	73.36	231.43
Walleyleg_Branch	1	0	100 yr	15.41	15.40	0.00	0.00	0.00	188.36	228.53	493.11	6899.35
Walleyleg_Branch	1	0	500 yr	18.20	18.20	0.00	0.00	0.00	136.39	119.89	783.71	7611.60

HEC-RAS Plan: Ext_SteadyRiver Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Crit W.S.	Frctn Loss	C & E Loss	Top Width	Q Left	Q Channel	Q Right	Vel Chnl
				(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft/s)
Walleyleg_Branch	1	800	2 yr	11.22	11.20		0.05	0.00	152.71	1.47	75.33	1.20	0.85
Walleyleg_Branch	1	800	25 yr	12.66	12.64		0.04	0.00	289.47	32.36	264.69	16.95	1.23
Walleyleg_Branch	1	800	100 yr	15.70	15.69		0.01	0.00	4370.94	200.90	412.22	296.88	0.85
Walleyleg_Branch	1	800	500 yr	18.21	18.21		0.00	0.00	7482.55	173.99	247.11	618.90	0.35
Walleyleg_Branch	1	600	2 yr	11.10	11.08	10.16	0.09	0.00	113.17	2.40	73.22	2.38	1.14
Walleyleg_Branch	1	600	25 yr	12.57	12.54	10.88	0.11	0.00	216.42	43.43	230.62	39.95	1.70
Walleyleg_Branch	1	600	100 yr	15.68	15.66	11.90	0.03	0.02	3768.88	245.15	426.28	238.56	1.48
Walleyleg_Branch	1	600	500 yr	18.21	18.21	12.05	0.00	0.00	7727.20	233.59	102.41	704.00	0.25
Walleyleg_Branch	1	465	2 yr	11.01	10.99	9.65	0.04	0.00	42.70		78.00		1.19
Walleyleg_Branch	1	465	25 yr	12.47	12.38	10.58	0.08	0.00	430.46	4.20	307.54	2.26	2.40
Walleyleg_Branch	1	465	100 yr	15.62	15.53	11.91	0.05	0.01	3525.02	78.50	729.38	102.12	2.69
Walleyleg_Branch	1	465	500 yr	18.21	18.20	12.17	0.00	0.00	7515.61	57.70	227.56	754.74	0.58
Walleyleg_Branch	1	388 BR U	2 yr	10.97	10.95	9.66	0.03	0.00	39.85		78.00		1.29
Walleyleg_Branch	1	388 BR U	25 yr	12.38	12.28	10.62	0.05	0.00	65.90	3.54	308.46	2.01	2.63
Walleyleg_Branch	1	388 BR U	100 yr	15.57	15.44	12.01	0.03	0.00	76.63	48.82	770.45	90.73	3.07
Walleyleg_Branch	1	388 BR U	500 yr	18.20	18.20	12.25	0.00	0.00	4538.22	27.45	118.40	894.16	0.42
Walleyleg_Branch	1	388 BR D	2 yr	10.94	10.92	9.62	0.03	0.00	41.47		78.00		1.35
Walleyleg_Branch	1	388 BR D	25 yr	12.33	12.24	10.67	0.06	0.00	67.15	6.80	299.42	7.78	2.55
Walleyleg_Branch	1	388 BR D	100 yr	15.53	15.41	12.01	0.03	0.02	76.63	66.81	767.55	75.64	2.96
Walleyleg_Branch	1	388 BR D	500 yr	18.20	18.20	12.21	0.00	0.00	4532.37	29.83	113.65	896.52	0.39
Walleyleg_Branch	1	335	2 yr	10.78	10.88	9.61	0.13	0.00	43.16		78.00		1.33
Walleyleg_Branch	1	335	25 yr	12.07	12.21	10.64	0.20	0.00	312.84	6.50	293.02	14.48	2.41
Walleyleg_Branch	1	335	100 yr	15.48	15.40		0.02	0.04	4548.84	94.67	699.20	116.13	2.55
Walleyleg_Branch	1	335	500 yr	18.20	18.20		0.00	0.00	8242.62	80.03	210.84	749.12	0.52
Walleyleg_Branch	1	200	2 yr	10.50	10.42	9.90	0.49	0.00	40.92		78.00		2.23
Walleyleg_Branch	1	200	25 yr	11.64	11.45	10.83	0.46	0.02	199.68	0.08	309.14	4.78	3.47
Walleyleg_Branch	1	200	100 yr	15.42	15.41	11.97	0.01	0.00	5657.06	154.98	389.76	365.27	1.08
Walleyleg_Branch	1	200	500 yr	18.20	18.20	12.09	0.00	0.00	7643.08	335.73	80.64	623.63	0.15
Walleyleg_Branch	1	0	2 yr	9.69	9.66	9.10	1.60	0.03	114.83	2.61	67.78	7.61	1.56
Walleyleg_Branch	1	0	25 yr	10.90	10.85		0.07	0.03	231.43	23.46	217.18	73.36	2.29
Walleyleg_Branch	1	0	100 yr	15.41	15.40		0.00	0.00	6899.35	188.36	228.53	493.11	0.78
Walleyleg_Branch	1	0	500 yr	18.20	18.20		0.00	0.00	7611.60	136.39	119.89	783.71	0.29

Plan: Ext_SteadyRiver Walleyleg_Branch 1 RS: 388 Profile: 2 yr

E.G. US. (ft)	11.01	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	10.99	E.G. Elev (ft)	10.97	10.94
Q Total (cfs)	78.00	W.S. Elev (ft)	10.95	10.92
Q Bridge (cfs)	78.00	Crit W.S. (ft)	9.66	9.62
Q Weir (cfs)		Max Chl Dpth (ft)	2.05	2.12
Weir Sta Lft (ft)		Vel Total (ft/s)	1.29	1.35
Weir Sta Rgt (ft)		Flow Area (sq ft)	60.53	57.86
Weir Submerg		Froude # Chl	0.18	0.20
Weir Max Depth (ft)		Specif Force (cu ft)	57.66	56.00
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	1.52	1.40
Min El Prs (ft)	16.21	W.P. Total (ft)	45.06	45.96
Delta EG (ft)	0.24	Conv. Total (cfs)	2737.2	2506.0
Delta WS (ft)	0.11	Top Width (ft)	39.85	41.47
BR Open Area (sq ft)	413.02	Frctn Loss (ft)	0.03	0.03
BR Open Vel (ft/s)	1.35	C & E Loss (ft)	0.00	0.00
Coef of Q	1.00	Shear Total (lb/sq ft)	0.07	0.08
Br Sel Method	WSPRO	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SteadyRiver Walleyleg_Branch 1 RS: 388 Profile: 25 yr

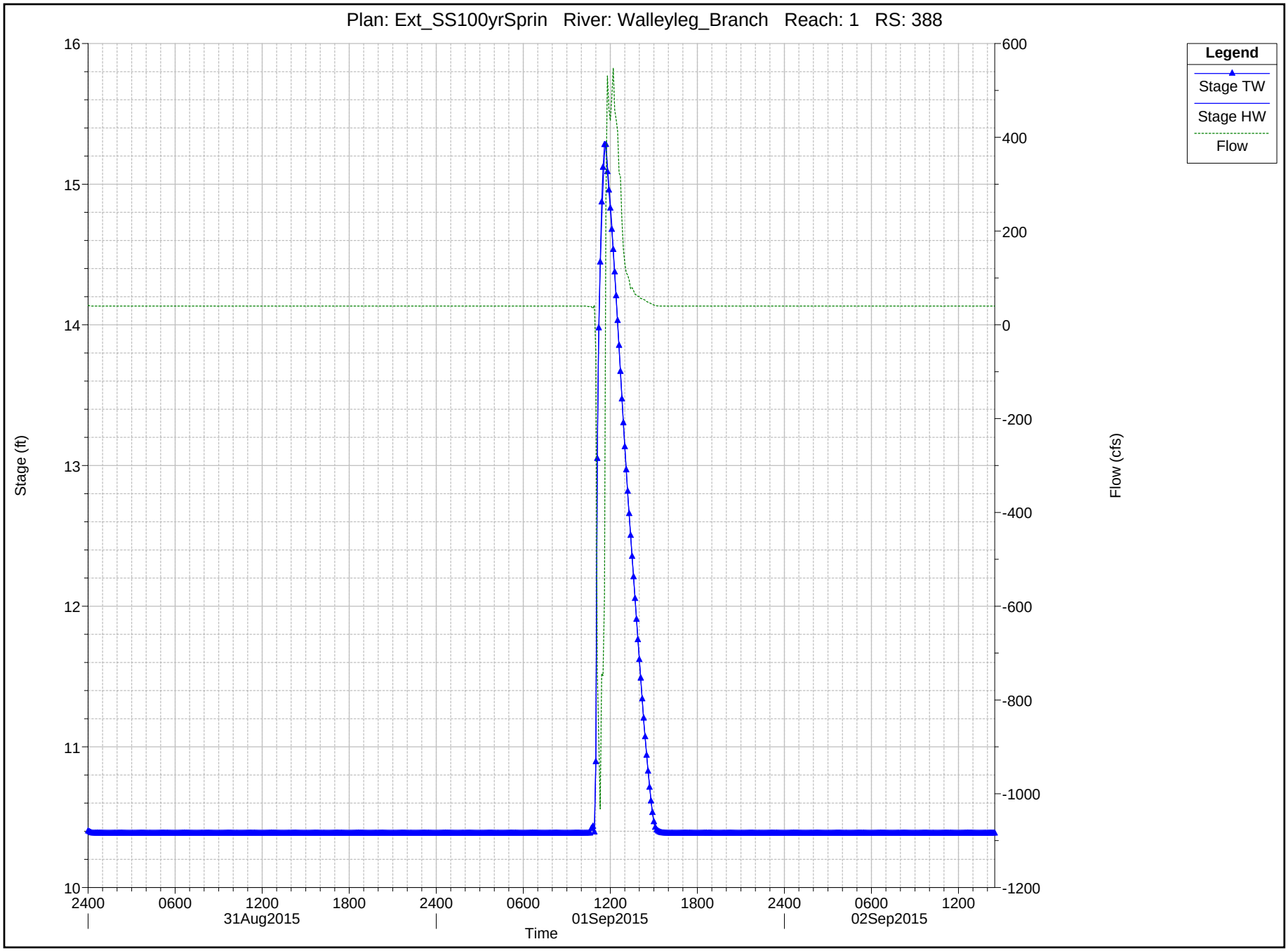
E.G. US. (ft)	12.47	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	12.38	E.G. Elev (ft)	12.38	12.33
Q Total (cfs)	314.00	W.S. Elev (ft)	12.28	12.24
Q Bridge (cfs)	314.00	Crit W.S. (ft)	10.62	10.67
Q Weir (cfs)		Max Chl Dpth (ft)	3.38	3.44
Weir Sta Lft (ft)		Vel Total (ft/s)	2.45	2.28
Weir Sta Rgt (ft)		Flow Area (sq ft)	128.10	137.67
Weir Submerg		Froude # Chl	0.28	0.28
Weir Max Depth (ft)		Specif Force (cu ft)	201.50	202.02
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	1.94	2.05
Min El Prs (ft)	16.21	W.P. Total (ft)	76.73	77.40
Delta EG (ft)	0.40	Conv. Total (cfs)	7475.6	7574.4
Delta WS (ft)	0.17	Top Width (ft)	65.90	67.15
BR Open Area (sq ft)	413.02	Frctn Loss (ft)	0.05	0.06
BR Open Vel (ft/s)	2.45	C & E Loss (ft)	0.00	0.00
Coef of Q	0.95	Shear Total (lb/sq ft)	0.18	0.19
Br Sel Method	WSPRO	Power Total (lb/ft s)	69867.68	69867.68

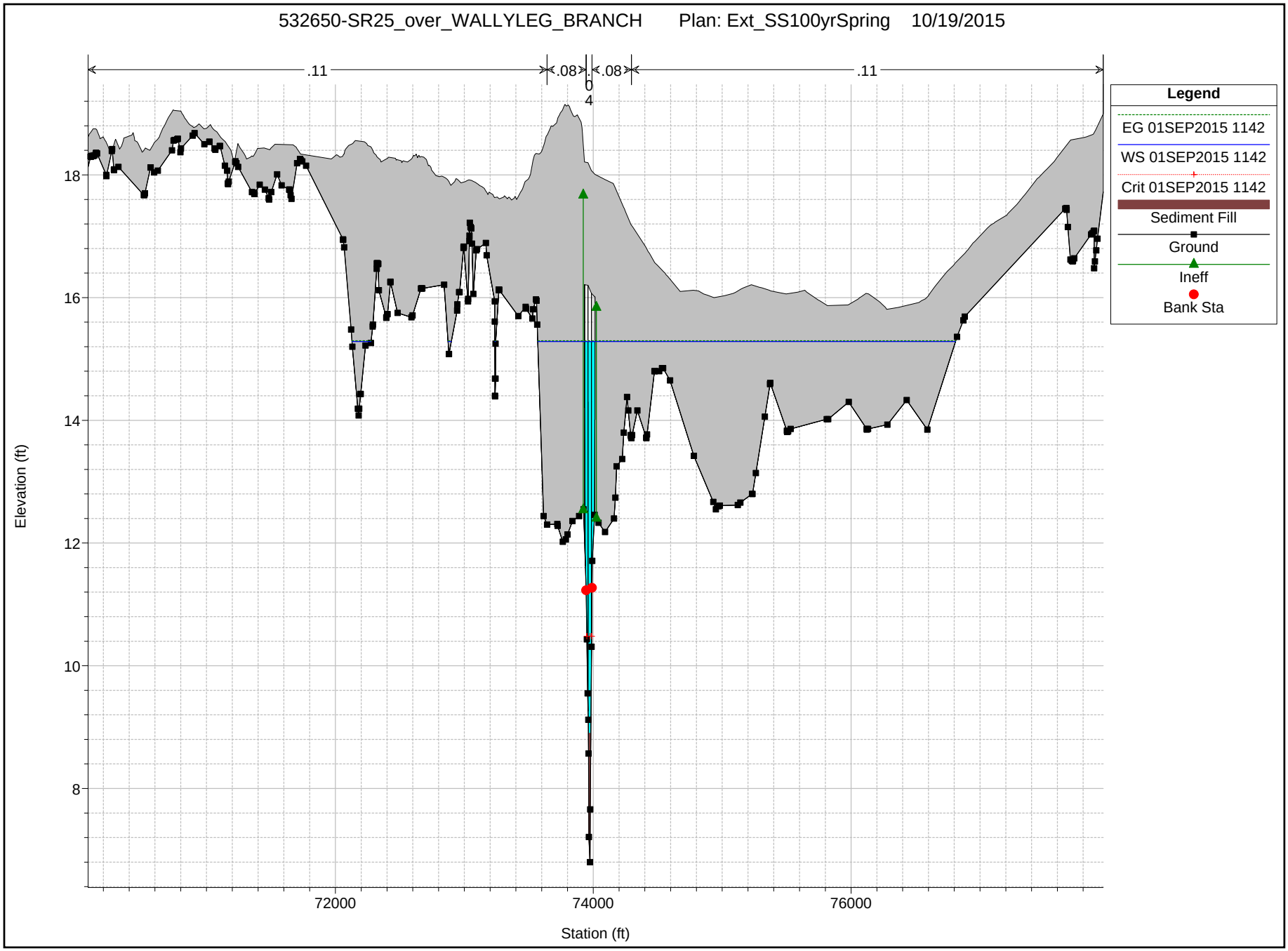
Plan: Ext_SteadyRiver Walleyleg_Branch 1 RS: 388 Profile: 100 yr

E.G. US. (ft)	15.62	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	15.53	E.G. Elev (ft)	15.57	15.53
Q Total (cfs)	910.00	W.S. Elev (ft)	15.44	15.41
Q Bridge (cfs)	910.00	Crit W.S. (ft)	12.01	12.01
Q Weir (cfs)		Max Chl Dpth (ft)	6.54	6.61
Weir Sta Lft (ft)		Vel Total (ft/s)	2.53	2.46
Weir Sta Rgt (ft)		Flow Area (sq ft)	360.24	370.00
Weir Submerg		Froude # Chl	0.20	0.19
Weir Max Depth (ft)		Specif Force (cu ft)	1017.93	1049.59
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	4.70	4.83
Min El Prs (ft)	16.21	W.P. Total (ft)	107.61	107.02
Delta EG (ft)	0.14	Conv. Total (cfs)	26215.5	27323.2
Delta WS (ft)	0.13	Top Width (ft)	76.63	76.63
BR Open Area (sq ft)	413.02	Frctn Loss (ft)	0.03	0.03
BR Open Vel (ft/s)	2.53	C & E Loss (ft)	0.00	0.02
Coef of Q		Shear Total (lb/sq ft)	0.25	0.24
Br Sel Method	Energy only	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SteadyRiver Walleyleg_Branch 1 RS: 388 Profile: 500 yr

E.G. US. (ft)	18.21	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	18.20	E.G. Elev (ft)	18.20	18.20
Q Total (cfs)	1040.00	W.S. Elev (ft)	18.20	18.20
Q Bridge (cfs)	165.39	Crit W.S. (ft)	12.25	12.21
Q Weir (cfs)		Max Chl Dpth (ft)	9.30	9.40
Weir Sta Lft (ft)		Vel Total (ft/s)	0.15	0.15
Weir Sta Rgt (ft)		Flow Area (sq ft)	6741.18	6758.52
Weir Submerg		Froude # Chl	0.01	0.01
Weir Max Depth (ft)		Specif Force (cu ft)	8029.92	8104.15
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	1.49	1.49
Min El Prs (ft)	16.21	W.P. Total (ft)	4727.24	4726.35
Delta EG (ft)	0.00	Conv. Total (cfs)	139296.8	151292.0
Delta WS (ft)	0.00	Top Width (ft)	4538.22	4532.37
BR Open Area (sq ft)	413.02	Frctn Loss (ft)	0.00	0.00
BR Open Vel (ft/s)	0.40	C & E Loss (ft)	0.00	0.00
Coef of Q		Shear Total (lb/sq ft)	0.00	0.00
Br Sel Method	Energy only	Power Total (lb/ft s)	69867.68	69867.68


Plan: Ext_SS100yrSprin River: Walleyleg_Branch Reach: 1 RS: 388
Legend
Stage TW
Stage HW
Flow
Stage (ft)
Flow (cfs)
Time
16
15
14
13
12
11
10
600
400
200
0
-200
-400
-600
-800
-1000
-1200
2400
0600
1200
1800
2400
0600
1200
1800
2400
0600
1200
31Aug2015
01Sep2015
02Sep2015


532650-SR25_over_WALLYLEG_BRANCH Plan: Ext_SS100yrSpring 10/19/2015
.11
.08
.08
.11
0
4
18
16
14
12
10
8
Elevation (ft)
72000
74000
76000
Station (ft)
Legend
EG 01SEP2015 1142
WS 01SEP2015 1142
Crit 01SEP2015 1142
Sediment Fill
Ground
Ineff
Bank Sta

Existing 100 year Unsteady Model

HEC-RAS Plan: Ext_SS100yrSprin Locations: User Defined

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)	
Walleyleg_Branch	1	800	01SEP2015 1100	40.00	9.69	10.75		10.76	0.001092	0.83	48.90	100.38	0.20
Walleyleg_Branch	1	800	01SEP2015 1106	40.00	9.69	12.91		12.91	0.000004	0.14	497.22	330.28	0.01
Walleyleg_Branch	1	800	01SEP2015 1112	40.00	9.69	13.86		13.86	0.000001	0.10	980.56	2102.73	0.01
Walleyleg_Branch	1	800	01SEP2015 1118	40.00	9.69	14.35		14.35	0.000001	0.07	1593.69	2984.25	0.01
Walleyleg_Branch	1	800	01SEP2015 1124	40.00	9.69	14.71		14.71	0.000000	0.06	2078.47	3804.95	0.00
Walleyleg_Branch	1	800	01SEP2015 1130	40.00	9.69	14.97		14.97	0.000000	0.05	2455.85	4002.87	0.00
Walleyleg_Branch	1	800	01SEP2015 1136	40.00	9.69	15.21		15.21	0.000000	0.05	2794.56	4142.76	0.00
Walleyleg_Branch	1	600	01SEP2015 1100	-28.84	9.22	10.81		10.82	0.000209	-0.55	60.14	88.07	0.10
Walleyleg_Branch	1	600	01SEP2015 1106	-260.10	9.22	12.92		12.94	0.000252	-1.27	436.37	308.02	0.13
Walleyleg_Branch	1	600	01SEP2015 1112	-562.42	9.22	13.87		13.90	0.000367	-1.82	789.97	1507.73	0.16
Walleyleg_Branch	1	600	01SEP2015 1118	-623.22	9.22	14.35		14.38	0.000282	-1.72	1044.64	2403.13	0.14
Walleyleg_Branch	1	600	01SEP2015 1124	-443.99	9.22	14.71		14.72	0.000095	-1.05	1275.74	3021.22	0.08
Walleyleg_Branch	1	600	01SEP2015 1130	-445.22	9.22	14.97		14.98	0.000071	-0.94	1459.87	3105.70	0.07
Walleyleg_Branch	1	600	01SEP2015 1136	-352.29	9.22	15.21		15.21	0.000035	-0.68	1626.78	3185.09	0.05
Walleyleg_Branch	1	465	01SEP2015 1100	-63.12	8.90	10.89		10.91	0.000467	-1.03	61.25	41.70	0.15
Walleyleg_Branch	1	465	01SEP2015 1106	-741.97	8.90	12.98		13.27	0.002868	-4.49	204.68	949.72	0.43
Walleyleg_Branch	1	465	01SEP2015 1112	-880.23	8.90	13.93		14.13	0.001543	-3.87	301.16	1737.71	0.33
Walleyleg_Branch	1	465	01SEP2015 1118	-1032.42	8.90	14.40		14.61	0.001421	-3.98	349.18	2889.98	0.32
Walleyleg_Branch	1	465	01SEP2015 1124	-743.63	8.90	14.72		14.81	0.000574	-2.64	381.88	3101.73	0.20
Walleyleg_Branch	1	465	01SEP2015 1130	-748.00	8.90	14.99		15.07	0.000479	-2.49	408.87	3276.46	0.19
Walleyleg_Branch	1	465	01SEP2015 1136	-578.45	8.90	15.21		15.25	0.000245	-1.83	431.56	3350.75	0.14
Walleyleg_Branch	1	388		Bridge									
Walleyleg_Branch	1	335	01SEP2015 1100	-63.12	8.80	10.89		10.91	0.000554	-1.07	59.20	43.38	0.16
Walleyleg_Branch	1	335	01SEP2015 1106	-741.97	8.80	13.05		13.26	0.002281	-3.97	245.85	622.05	0.38
Walleyleg_Branch	1	335	01SEP2015 1112	-880.23	8.80	13.98		14.13	0.001271	-3.48	340.27	2473.69	0.30
Walleyleg_Branch	1	335	01SEP2015 1118	-1032.42	8.80	14.44		14.61	0.001186	-3.60	387.86	2917.31	0.29
Walleyleg_Branch	1	335	01SEP2015 1124	-743.63	8.80	14.87		14.94	0.000447	-2.34	431.31	3557.14	0.18
Walleyleg_Branch	1	335	01SEP2015 1130	-748.00	8.80	15.12		15.18	0.000381	-2.23	456.42	3986.37	0.17
Walleyleg_Branch	1	335	01SEP2015 1136	-578.45	8.80	15.28		15.31	0.000204	-1.66	472.79	4311.70	0.12
Walleyleg_Branch	1	200	01SEP2015 1100	-102.64	8.75	11.07		11.11	0.001448	-1.58	65.03	62.23	0.26
Walleyleg_Branch	1	200	01SEP2015 1106	-967.71	8.75	13.35		13.44	0.001329	-2.93	685.80	493.10	0.29
Walleyleg_Branch	1	200	01SEP2015 1112	-1293.54	8.75	14.16		14.24	0.000877	-2.77	1164.50	1883.80	0.24
Walleyleg_Branch	1	200	01SEP2015 1118	-1481.95	8.75	14.62		14.68	0.000602	-2.47	1505.46	3561.10	0.21
Walleyleg_Branch	1	200	01SEP2015 1124	-1260.29	8.75	14.93		14.96	0.000298	-1.81	1733.27	5170.39	0.15
Walleyleg_Branch	1	200	01SEP2015 1130	-1108.77	8.75	15.18		15.19	0.000175	-1.44	1914.65	5404.20	0.11
Walleyleg_Branch	1	200	01SEP2015 1136	-734.11	8.75	15.31		15.32	0.000067	-0.90	2013.06	5528.40	0.07
Walleyleg_Branch	1	0	01SEP2015 1100	-429.44	7.94	11.31		11.37	0.001110	-2.37	372.85	299.47	0.26
Walleyleg_Branch	1	0	01SEP2015 1106	-1551.34	7.94	13.57		13.63	0.000829	-3.08	1466.32	1343.27	0.25
Walleyleg_Branch	1	0	01SEP2015 1112	-2055.29	7.94	14.30		14.36	0.000709	-3.13	2329.08	3748.81	0.23
Walleyleg_Branch	1	0	01SEP2015 1118	-2263.96	7.94	14.73		14.77	0.000479	-2.70	2924.53	5094.42	0.19
Walleyleg_Branch	1	0	01SEP2015 1124	-2174.12	7.94	14.98		15.01	0.000321	-2.27	3294.98	6362.35	0.16
Walleyleg_Branch	1	0	01SEP2015 1130	-1683.48	7.94	15.21		15.22	0.000148	-1.58	3625.49	6698.72	0.11
Walleyleg_Branch	1	0	01SEP2015 1136	-908.69	7.94	15.32		15.32	0.000038	-0.81	3791.13	6793.10	0.06

HEC-RAS Plan: Ext_SS100yrSprin Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Vel Head	Frctn Loss	C & E Loss	Q Left	Q Channel	Q Right	Top Width
				(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft)
Walleyleg_Branch	1	800	01SEP2015 1100	10.76	10.75	0.01	0.03		0.01	39.98	0.01	100.38
Walleyleg_Branch	1	800	01SEP2015 1106	12.91	12.91	0.00	0.00		4.61	32.93	2.45	330.28
Walleyleg_Branch	1	800	01SEP2015 1112	13.86	13.86	0.00	0.00		6.06	31.13	2.80	2102.73
Walleyleg_Branch	1	800	01SEP2015 1118	14.35	14.35	0.00	0.00		7.18	26.87	5.95	2984.25
Walleyleg_Branch	1	800	01SEP2015 1124	14.71	14.71	0.00	0.00		7.69	23.81	8.50	3804.95
Walleyleg_Branch	1	800	01SEP2015 1130	14.97	14.97	0.00	0.00		8.03	21.91	10.06	4002.87
Walleyleg_Branch	1	800	01SEP2015 1136	15.21	15.21	0.00	0.00		8.30	20.50	11.20	4142.76
Walleyleg_Branch	1	600	01SEP2015 1100	10.82	10.81	0.00	0.05		-0.35	-28.16	-0.33	88.07
Walleyleg_Branch	1	600	01SEP2015 1106	12.94	12.92	0.02	0.15		-30.35	-195.18	-34.57	308.02
Walleyleg_Branch	1	600	01SEP2015 1112	13.90	13.87	0.03	0.10		-105.97	-365.17	-91.28	1507.73
Walleyleg_Branch	1	600	01SEP2015 1118	14.38	14.35	0.03	0.09		-138.20	-385.92	-99.10	2403.13
Walleyleg_Branch	1	600	01SEP2015 1124	14.72	14.71	0.01	0.03		-104.68	-253.29	-86.02	3021.22
Walleyleg_Branch	1	600	01SEP2015 1130	14.98	14.97	0.01	0.03		-109.44	-239.07	-96.72	3105.70
Walleyleg_Branch	1	600	01SEP2015 1136	15.21	15.21	0.00	0.01		-89.66	-179.98	-82.65	3185.09
Walleyleg_Branch	1	465	01SEP2015 1100	10.91	10.89	0.02				-63.12		41.70
Walleyleg_Branch	1	465	01SEP2015 1106	13.27	12.98	0.29			-23.11	-696.56	-22.29	949.72
Walleyleg_Branch	1	465	01SEP2015 1112	14.13	13.93	0.21			-51.30	-767.99	-60.94	1737.71
Walleyleg_Branch	1	465	01SEP2015 1118	14.61	14.40	0.21			-70.62	-874.49	-87.31	2889.98
Walleyleg_Branch	1	465	01SEP2015 1124	14.81	14.72	0.09			-55.24	-618.78	-69.60	3101.73
Walleyleg_Branch	1	465	01SEP2015 1130	15.07	14.99	0.08			-58.82	-614.15	-75.03	3276.46
Walleyleg_Branch	1	465	01SEP2015 1136	15.25	15.21	0.04			-47.41	-470.01	-61.03	3350.75
Walleyleg_Branch	1	388		Bridge								
Walleyleg_Branch	1	335	01SEP2015 1100	10.91	10.89	0.02	0.13			-63.12		43.38
Walleyleg_Branch	1	335	01SEP2015 1106	13.26	13.05	0.21	0.22		-40.51	-640.79	-60.67	622.05
Walleyleg_Branch	1	335	01SEP2015 1112	14.13	13.98	0.16	0.14		-70.50	-716.46	-93.27	2473.69
Walleyleg_Branch	1	335	01SEP2015 1118	14.61	14.44	0.17	0.10		-92.39	-821.76	-118.27	2917.31
Walleyleg_Branch	1	335	01SEP2015 1124	14.94	14.87	0.07	0.05		-71.86	-581.77	-89.99	3557.14
Walleyleg_Branch	1	335	01SEP2015 1130	15.18	15.12	0.06	0.03		-75.00	-580.05	-92.95	3986.37
Walleyleg_Branch	1	335	01SEP2015 1136	15.31	15.28	0.03	0.01		-59.27	-446.17	-73.02	4311.70
Walleyleg_Branch	1	200	01SEP2015 1100	11.11	11.07	0.04	0.11			-102.64		62.23
Walleyleg_Branch	1	200	01SEP2015 1106	13.44	13.35	0.09	0.12		-95.05	-645.18	-227.49	493.10
Walleyleg_Branch	1	200	01SEP2015 1112	14.24	14.16	0.07	0.08		-160.52	-764.14	-368.88	1883.80
Walleyleg_Branch	1	200	01SEP2015 1118	14.68	14.62	0.05	0.06		-216.99	-759.56	-505.40	3561.10
Walleyleg_Branch	1	200	01SEP2015 1124	14.96	14.93	0.03	0.03		-198.34	-597.36	-464.59	5170.39
Walleyleg_Branch	1	200	01SEP2015 1130	15.19	15.18	0.02	0.02		-182.40	-497.64	-428.73	5404.20
Walleyleg_Branch	1	200	01SEP2015 1136	15.32	15.31	0.01	0.01		-123.26	-320.67	-290.19	5528.40
Walleyleg_Branch	1	0	01SEP2015 1100	11.37	11.31	0.06	1.80		-39.79	-271.84	-117.81	299.47
Walleyleg_Branch	1	0	01SEP2015 1106	13.63	13.57	0.07	0.20		-269.06	-655.47	-626.80	1343.27
Walleyleg_Branch	1	0	01SEP2015 1112	14.36	14.30	0.06	0.12		-430.25	-765.53	-859.51	3748.81
Walleyleg_Branch	1	0	01SEP2015 1118	14.77	14.73	0.04	0.07		-467.25	-709.52	-1087.19	5094.42
Walleyleg_Branch	1	0	01SEP2015 1124	15.01	14.98	0.03	0.05		-447.83	-622.28	-1104.00	6362.35
Walleyleg_Branch	1	0	01SEP2015 1130	15.22	15.21	0.01	0.03		-347.28	-448.33	-887.88	6698.72
Walleyleg_Branch	1	0	01SEP2015 1136	15.32	15.32	0.00	0.00		-187.76	-234.05	-486.87	6793.10

HEC-RAS Plan: Ext_SS100yrSprin Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Crit W.S.	Frctn Loss	C & E Loss	Top Width	Q Left	Q Channel	Q Right	Vel Chnl
				(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft/s)
Walleyleg_Branch	1	388 BR U	01SEP2015 1100	10.91	10.89				39.32		-63.12		-1.08
Walleyleg_Branch	1	388 BR U	01SEP2015 1106	13.32	12.98				70.11	-16.22	-704.21	-21.53	-4.77
Walleyleg_Branch	1	388 BR U	01SEP2015 1112	14.19	13.93				73.90	-30.18	-798.37	-51.68	-4.24
Walleyleg_Branch	1	388 BR U	01SEP2015 1118	14.67	14.40				76.63	-39.44	-918.98	-74.00	-4.41
Walleyleg_Branch	1	388 BR U	01SEP2015 1124	14.84	14.72				76.63	-32.38	-650.81	-60.43	-2.94
Walleyleg_Branch	1	388 BR U	01SEP2015 1130	15.09	14.99				76.63	-35.58	-646.18	-66.24	-2.78
Walleyleg_Branch	1	388 BR U	01SEP2015 1136	15.27	15.21				76.63	-29.33	-494.60	-54.53	-2.05
Walleyleg_Branch	1	388 BR D	01SEP2015 1100	10.91	10.89				41.00		-63.12		-1.11
Walleyleg_Branch	1	388 BR D	01SEP2015 1106	13.33	13.05				70.38	-27.85	-682.26	-31.85	-4.43
Walleyleg_Branch	1	388 BR D	01SEP2015 1112	14.20	13.98				74.09	-45.94	-781.98	-52.31	-3.98
Walleyleg_Branch	1	388 BR D	01SEP2015 1118	14.69	14.44				76.63	-58.94	-905.01	-68.48	-4.17
Walleyleg_Branch	1	388 BR D	01SEP2015 1124	14.97	14.87				76.63	-48.31	-639.96	-55.35	-2.71
Walleyleg_Branch	1	388 BR D	01SEP2015 1130	15.21	15.12				76.63	-51.64	-637.55	-58.81	-2.59
Walleyleg_Branch	1	388 BR D	01SEP2015 1136	15.33	15.28				76.63	-41.37	-490.12	-46.96	-1.93

Plan: Ext_SS100yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1100

E.G. US. (ft)	10.91	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	10.89	E.G. Elev (ft)	10.91	10.91
Q Total (cfs)	-63.12	W.S. Elev (ft)	10.89	10.89
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	1.99	2.09
Weir Sta Lft (ft)		Vel Total (ft/s)	-1.08	-1.11
Weir Sta Rgt (ft)		Flow Area (sq ft)	58.50	56.90
Weir Submerg		Froude # Chl	0.16	0.17
Weir Max Depth (ft)		Specif Force (cu ft)	53.60	53.57
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	1.49	1.39
Min El Prs (ft)	16.21	W.P. Total (ft)	44.32	45.39
Delta EG (ft)		Conv. Total (cfs)	2614.9	2457.3
Delta WS (ft)	0.00	Top Width (ft)	39.32	41.00
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.05	0.05
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SS100yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1106

E.G. US. (ft)	13.27	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	12.98	E.G. Elev (ft)	13.32	13.33
Q Total (cfs)	-741.97	W.S. Elev (ft)	12.98	13.05
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	4.08	4.25
Weir Sta Lft (ft)		Vel Total (ft/s)	-4.21	-3.84
Weir Sta Rgt (ft)		Flow Area (sq ft)	176.43	193.23
Weir Submerg		Froude # Chl	0.45	0.42
Weir Max Depth (ft)		Specif Force (cu ft)	389.23	408.66
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	2.52	2.75
Min El Prs (ft)	16.21	W.P. Total (ft)	84.07	84.25
Delta EG (ft)		Conv. Total (cfs)	10961.8	11891.3
Delta WS (ft)	-0.07	Top Width (ft)	70.11	70.38
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.60	0.56
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SS100yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1112

E.G. US. (ft)	14.13	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	13.93	E.G. Elev (ft)	14.19	14.20
Q Total (cfs)	-880.23	W.S. Elev (ft)	13.93	13.98
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	5.03	5.18
Weir Sta Lft (ft)		Vel Total (ft/s)	-3.60	-3.38
Weir Sta Rgt (ft)		Flow Area (sq ft)	244.73	260.29
Weir Submerg		Froude # Chl	0.36	0.34
Weir Max Depth (ft)		Specif Force (cu ft)	591.57	623.72
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	3.31	3.51
Min El Prs (ft)	16.21	W.P. Total (ft)	92.11	92.10
Delta EG (ft)		Conv. Total (cfs)	16494.4	17669.0
Delta WS (ft)	-0.05	Top Width (ft)	73.90	74.09
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.47	0.44
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SS100yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1118

E.G. US. (ft)	14.61	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	14.40	E.G. Elev (ft)	14.67	14.69
Q Total (cfs)	-1032.42	W.S. Elev (ft)	14.40	14.44
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	5.50	5.64
Weir Sta Lft (ft)		Vel Total (ft/s)	-3.68	-3.49
Weir Sta Rgt (ft)		Flow Area (sq ft)	280.84	296.20
Weir Submerg		Froude # Chl	-0.32	-0.29
Weir Max Depth (ft)		Specif Force (cu ft)	738.16	775.94
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	3.67	3.87
Min El Prs (ft)	16.21	W.P. Total (ft)	101.39	101.24
Delta EG (ft)		Conv. Total (cfs)	19087.1	20366.1
Delta WS (ft)	-0.04	Top Width (ft)	76.63	76.63
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.51	0.47
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SS100yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1124

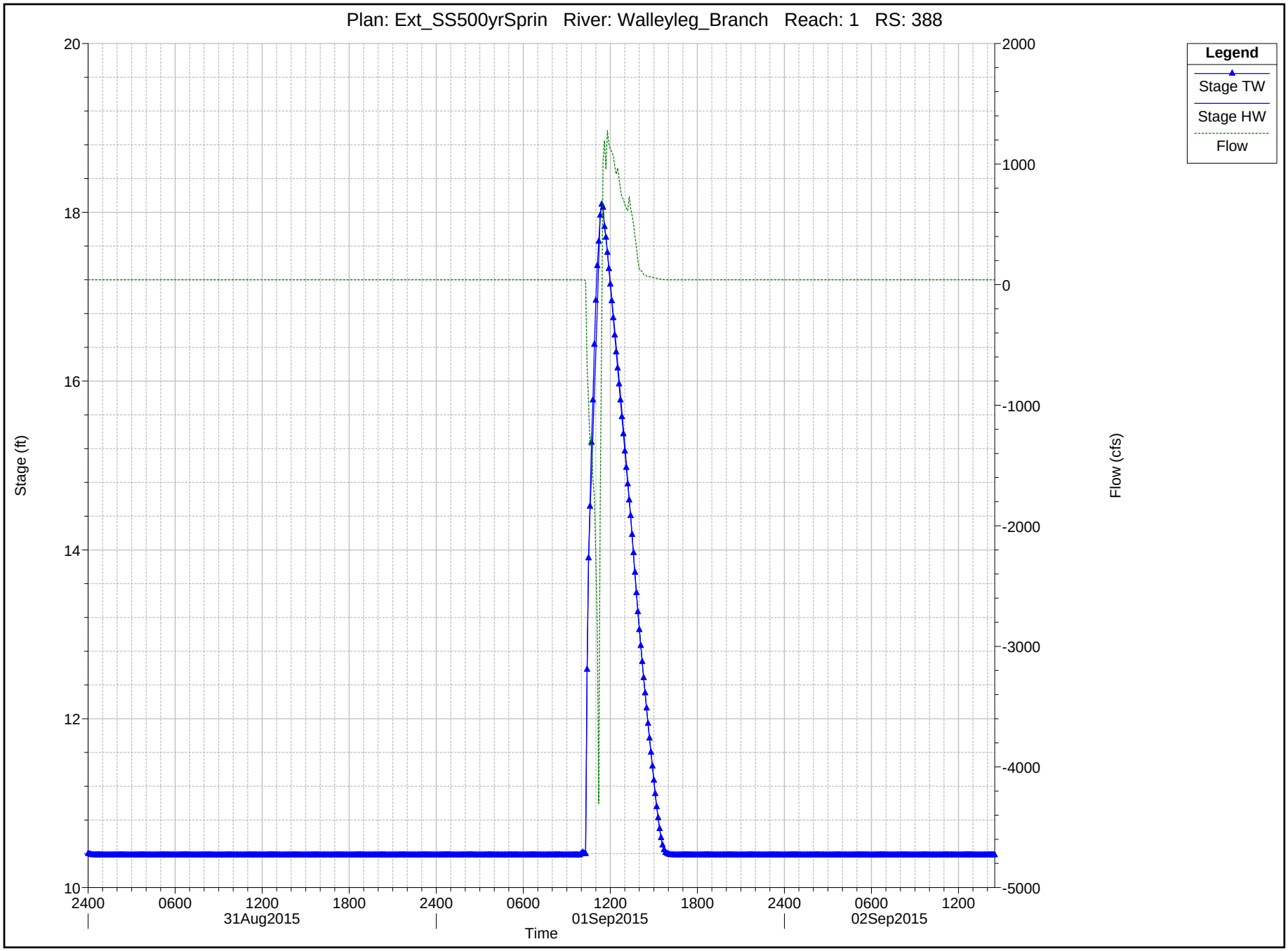
E.G. US. (ft)	14.81	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	14.72	E.G. Elev (ft)	14.84	14.97
Q Total (cfs)	-743.63	W.S. Elev (ft)	14.72	14.87
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	5.82	6.07
Weir Sta Lft (ft)		Vel Total (ft/s)	-2.43	-2.26
Weir Sta Rgt (ft)		Flow Area (sq ft)	305.48	328.93
Weir Submerg		Froude # Chl	-0.20	-0.18
Weir Max Depth (ft)		Specif Force (cu ft)	763.58	843.52
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	3.99	4.29
Min El Prs (ft)	16.21	W.P. Total (ft)	103.32	103.81
Delta EG (ft)		Conv. Total (cfs)	21218.1	23375.0
Delta WS (ft)	-0.15	Top Width (ft)	76.63	76.63
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.23	0.20
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

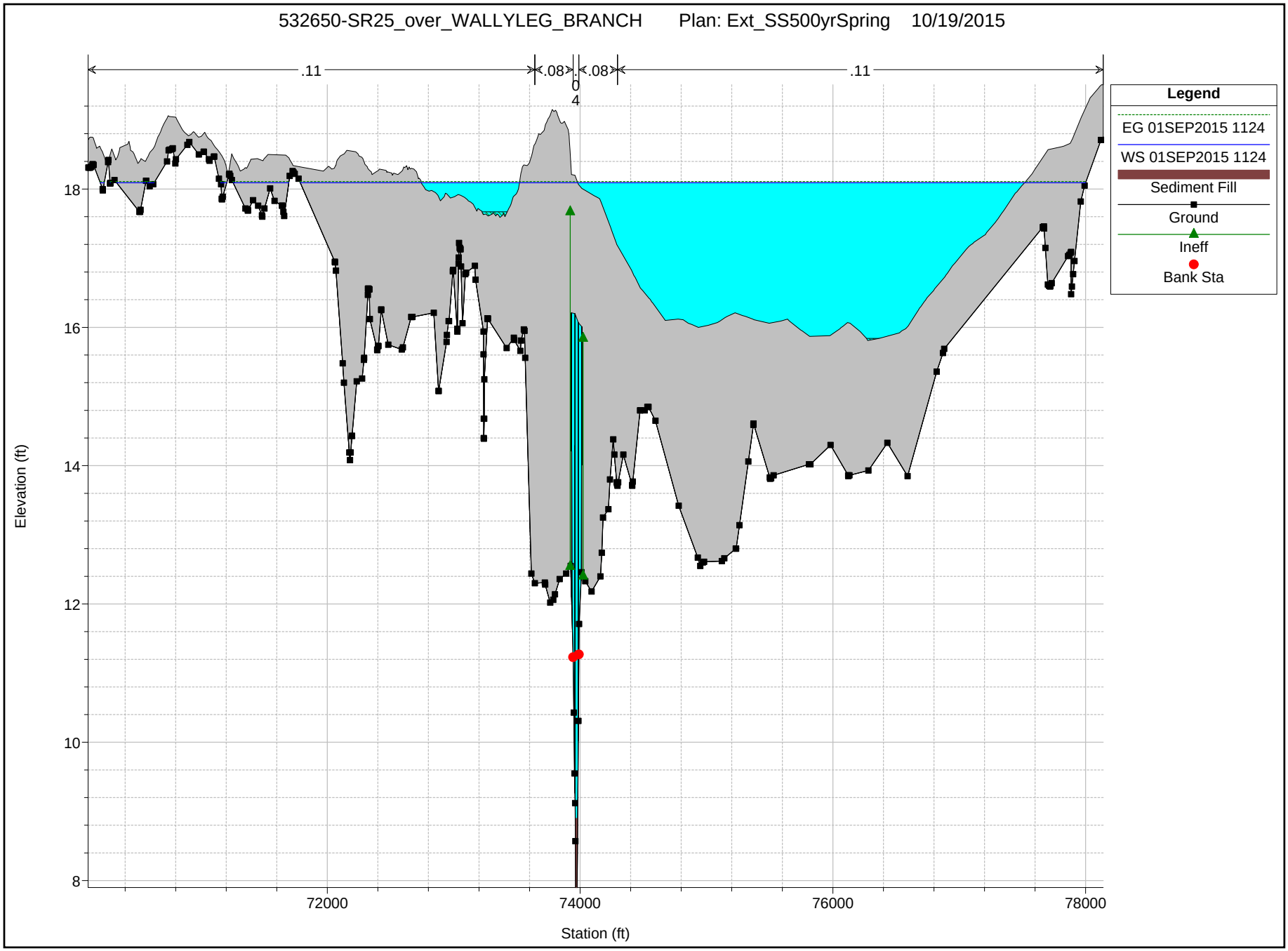
Plan: Ext_SS100yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1130

E.G. US. (ft)	15.07	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	14.99	E.G. Elev (ft)	15.09	15.21
Q Total (cfs)	-748.00	W.S. Elev (ft)	14.99	15.12
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	6.09	6.32
Weir Sta Lft (ft)		Vel Total (ft/s)	-2.30	-2.15
Weir Sta Rgt (ft)		Flow Area (sq ft)	325.81	347.85
Weir Submerg		Froude # Chl	-0.19	-0.17
Weir Max Depth (ft)		Specif Force (cu ft)	844.03	924.49
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	4.25	4.54
Min El Prs (ft)	16.21	W.P. Total (ft)	104.91	105.29
Delta EG (ft)		Conv. Total (cfs)	23033.9	25171.1
Delta WS (ft)	-0.13	Top Width (ft)	76.63	76.63
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.20	0.18
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SS100yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1136

E.G. US. (ft)	15.25	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	15.21	E.G. Elev (ft)	15.27	15.33
Q Total (cfs)	-578.45	W.S. Elev (ft)	15.21	15.28
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	6.31	6.48
Weir Sta Lft (ft)		Vel Total (ft/s)	-1.69	-1.61
Weir Sta Rgt (ft)		Flow Area (sq ft)	342.91	360.19
Weir Submerg		Froude # Chl	-0.13	-0.13
Weir Max Depth (ft)		Specif Force (cu ft)	892.99	958.24
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	4.48	4.70
Min El Prs (ft)	16.21	W.P. Total (ft)	106.25	106.25
Delta EG (ft)		Conv. Total (cfs)	24597.7	26363.7
Delta WS (ft)	-0.07	Top Width (ft)	76.63	76.63
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.11	0.10
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68


Plan: Ext_SS500yrSprin River: Walleyleg_Branch Reach: 1 RS: 388
Legend
Stage TW
Stage HW
Flow
Stage (ft)
Flow (cfs)
Time
20
18
16
14
12
10
2000
1000
0
-1000
-2000
-3000
-4000
-5000
2400
0600
1200
1800
2400
0600
1200
1800
2400
0600
1200
31Aug2015
01Sep2015
02Sep2015


532650-SR25_over_WALLYLEG_BRANCH Plan: Ext_SS500yrSpring 10/19/2015
.11
.08
.08
.11
0
4
Legend
EG 01SEP2015 1124
WS 01SEP2015 1124
Sediment Fill
Ground
Ineff
Bank Sta
Elevation (ft)
18
16
14
12
10
8
72000
74000
76000
78000
Station (ft)

Existing 500 year Unsteady Model

HEC-RAS Plan: Ext_SS500yrSprin Locations: User Defined

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)	
Walleyleg_Branch	1	800	01SEP2015 1054	40.00	9.69	15.82		15.82	0.000000	0.04	3724.80	4558.13	0.00
Walleyleg_Branch	1	800	01SEP2015 1100	40.00	9.69	16.29		16.29	0.000000	0.03	5440.62	5614.81	0.00
Walleyleg_Branch	1	800	01SEP2015 1106	40.00	9.69	16.79		16.79	0.000000	0.02	7488.88	6588.77	0.00
Walleyleg_Branch	1	800	01SEP2015 1112	40.00	9.69	17.41		17.41	0.000000	0.02	10044.66	7450.87	0.00
Walleyleg_Branch	1	800	01SEP2015 1118	40.00	9.69	17.96		17.96	0.000000	0.02	13293.30	7482.55	0.00
Walleyleg_Branch	1	800	01SEP2015 1124	40.00	9.69	18.09		18.09	0.000000	0.01	14283.91	7482.55	0.00
Walleyleg_Branch	1	800	01SEP2015 1130	40.00	9.69	18.06		18.06	0.000000	0.01	14037.44	7482.55	0.00
Walleyleg_Branch	1	600	01SEP2015 1054	-1101.02	9.22	15.82		15.84	0.000189	-1.70	2097.47	3911.70	0.12
Walleyleg_Branch	1	600	01SEP2015 1100	-1378.15	9.22	16.29		16.29	0.000035	-0.77	8327.74	4908.09	0.05
Walleyleg_Branch	1	600	01SEP2015 1106	-1802.44	9.22	16.80		16.80	0.000036	-0.82	10298.64	5538.63	0.05
Walleyleg_Branch	1	600	01SEP2015 1112	-2751.92	9.22	17.41		17.41	0.000045	-0.96	12727.05	6559.90	0.06
Walleyleg_Branch	1	600	01SEP2015 1118	-1094.95	9.22	17.96		17.96	0.000004	-0.29	19241.61	7697.22	0.02
Walleyleg_Branch	1	600	01SEP2015 1124	-209.45	9.22	18.09		18.09	0.000000	-0.05	20263.90	7727.20	0.00
Walleyleg_Branch	1	600	01SEP2015 1130	624.76	9.22	18.06		18.06	0.000001	0.16	20007.44	7727.20	0.01
Walleyleg_Branch	1	465	01SEP2015 1054	-1753.54	8.90	15.89		16.27	0.001728	-5.25	651.70	4119.38	0.37
Walleyleg_Branch	1	465	01SEP2015 1100	-2258.56	8.90	16.34		16.58	0.001323	-4.81	2077.45	4869.82	0.33
Walleyleg_Branch	1	465	01SEP2015 1106	-2830.96	8.90	16.83		16.95	0.000832	-4.00	3740.38	5382.56	0.26
Walleyleg_Branch	1	465	01SEP2015 1112	-4302.82	8.90	17.44		17.52	0.000710	-3.89	6059.53	5984.04	0.24
Walleyleg_Branch	1	465	01SEP2015 1118	-1813.60	8.90	17.96		17.97	0.000061	-1.19	8856.27	6918.81	0.07
Walleyleg_Branch	1	465	01SEP2015 1124	-372.80	8.90	18.09		18.09	0.000002	-0.22	9758.22	7229.51	0.01
Walleyleg_Branch	1	465	01SEP2015 1130	1027.16	8.90	18.06	12.15	18.06	0.000017	0.63	9508.20	7122.86	0.04
Walleyleg_Branch	1	388		Bridge									
Walleyleg_Branch	1	335	01SEP2015 1054	-1753.54	8.80	16.43		16.53	0.000587	-3.19	2460.06	7295.33	0.22
Walleyleg_Branch	1	335	01SEP2015 1100	-2258.56	8.80	16.95		17.00	0.000368	-2.66	4370.84	7834.16	0.17
Walleyleg_Branch	1	335	01SEP2015 1106	-2830.95	8.80	17.36		17.39	0.000287	-2.43	5968.36	7995.42	0.15
Walleyleg_Branch	1	335	01SEP2015 1112	-4302.82	8.80	17.65		17.70	0.000428	-3.04	7126.88	8091.84	0.19
Walleyleg_Branch	1	335	01SEP2015 1118	-1813.60	8.80	17.96		17.97	0.000050	-1.07	9570.16	8174.66	0.07
Walleyleg_Branch	1	335	01SEP2015 1124	-372.80	8.80	18.09		18.09	0.000002	-0.20	10631.80	8219.34	0.01
Walleyleg_Branch	1	335	01SEP2015 1130	1027.16	8.80	18.06		18.06	0.000014	0.56	10342.95	8199.98	0.03
Walleyleg_Branch	1	200	01SEP2015 1054	-3479.65	8.75	16.49		16.50	0.000107	-1.31	9208.13	7162.02	0.09
Walleyleg_Branch	1	200	01SEP2015 1100	-3505.56	8.75	16.99		16.99	0.000063	-1.06	11149.92	7486.31	0.07
Walleyleg_Branch	1	200	01SEP2015 1106	-3953.68	8.75	17.39		17.39	0.000054	-1.02	12770.64	7603.25	0.07
Walleyleg_Branch	1	200	01SEP2015 1112	-5224.90	8.75	17.69		17.70	0.000039	-0.89	22787.16	7631.61	0.06
Walleyleg_Branch	1	200	01SEP2015 1118	-2511.55	8.75	17.96		17.96	0.000007	-0.38	24843.79	7637.71	0.02
Walleyleg_Branch	1	200	01SEP2015 1124	-538.84	8.75	18.09		18.09	0.000000	-0.08	25815.03	7640.59	0.00
Walleyleg_Branch	1	200	01SEP2015 1130	1472.00	8.75	18.05		18.05	0.000002	0.22	25533.64	7639.76	0.01
Walleyleg_Branch	1	0	01SEP2015 1054	-5668.85	7.94	16.52		16.57	0.000581	-3.53	7552.33	7399.98	0.22
Walleyleg_Branch	1	0	01SEP2015 1100	-5288.87	7.94	17.01		17.02	0.000252	-2.42	9671.30	7466.94	0.15
Walleyleg_Branch	1	0	01SEP2015 1106	-5536.82	7.94	17.40		17.42	0.000169	-2.05	11434.66	7521.89	0.12
Walleyleg_Branch	1	0	01SEP2015 1112	-6400.84	7.94	17.71		17.72	0.000217	-2.37	12910.88	7560.82	0.14
Walleyleg_Branch	1	0	01SEP2015 1118	-3513.49	7.94	17.96		17.96	0.000046	-1.12	14836.48	7587.01	0.06
Walleyleg_Branch	1	0	01SEP2015 1124	-768.04	7.94	18.09		18.09	0.000002	-0.23	15809.07	7600.20	0.01
Walleyleg_Branch	1	0	01SEP2015 1130	2132.15	7.94	18.05		18.05	0.000015	0.65	15507.96	7596.13	0.04

HEC-RAS Plan: Ext_SS500yrSprin Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Vel Head	Frctn Loss	C & E Loss	Q Left	Q Channel	Q Right	Top Width
				(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft)
Walleyleg_Branch	1	800	01SEP2015 1054	15.82	15.82	0.00	0.00		8.96	17.61	13.43	4558.13
Walleyleg_Branch	1	800	01SEP2015 1100	16.29	16.29	0.00	0.00		10.36	17.55	12.09	5614.81
Walleyleg_Branch	1	800	01SEP2015 1106	16.79	16.79	0.00	0.00		9.92	14.11	15.97	6588.77
Walleyleg_Branch	1	800	01SEP2015 1112	17.41	17.41	0.00	0.00		9.48	11.15	19.37	7450.87
Walleyleg_Branch	1	800	01SEP2015 1118	17.96	17.96	0.00	0.00		5.34	10.59	24.07	7482.55
Walleyleg_Branch	1	800	01SEP2015 1124	18.09	18.09	0.00	0.00		6.09	9.98	23.93	7482.55
Walleyleg_Branch	1	800	01SEP2015 1130	18.06	18.06	0.00	0.00		5.91	10.13	23.97	7482.55
Walleyleg_Branch	1	600	01SEP2015 1054	15.84	15.82	0.02	0.07		-301.00	-502.16	-297.87	3911.70
Walleyleg_Branch	1	600	01SEP2015 1100	16.29	16.29	0.00	0.02		-176.36	-245.38	-956.41	4908.09
Walleyleg_Branch	1	600	01SEP2015 1106	16.80	16.80	0.00	0.02		-243.17	-282.07	-1277.21	5538.63
Walleyleg_Branch	1	600	01SEP2015 1112	17.41	17.41	0.00	0.02		-366.77	-359.47	-2025.68	6559.90
Walleyleg_Branch	1	600	01SEP2015 1118	17.96	17.96	0.00	0.00		-217.31	-116.09	-761.55	7697.22
Walleyleg_Branch	1	600	01SEP2015 1124	18.09	18.09	0.00	0.00		-44.83	-21.44	-143.17	7727.20
Walleyleg_Branch	1	600	01SEP2015 1130	18.06	18.06	0.00	0.00		131.73	64.72	428.31	7727.20
Walleyleg_Branch	1	465	01SEP2015 1054	16.27	15.89	0.37			-172.99	-1507.85	-72.71	4119.38
Walleyleg_Branch	1	465	01SEP2015 1100	16.58	16.34	0.24			-181.68	-1480.61	-596.27	4869.82
Walleyleg_Branch	1	465	01SEP2015 1106	16.95	16.83	0.12			-171.94	-1318.29	-1340.73	5382.56
Walleyleg_Branch	1	465	01SEP2015 1112	17.52	17.44	0.08			-193.26	-1391.80	-2717.76	5984.04
Walleyleg_Branch	1	465	01SEP2015 1118	17.97	17.96	0.01			-51.46	-454.69	-1307.45	6918.81
Walleyleg_Branch	1	465	01SEP2015 1124	18.09	18.09	0.00			-15.68	-86.84	-270.27	7229.51
Walleyleg_Branch	1	465	01SEP2015 1130	18.06	18.06	0.00			39.21	244.04	743.91	7122.86
Walleyleg_Branch	1	388		Bridge								
Walleyleg_Branch	1	335	01SEP2015 1054	16.53	16.43	0.10	0.02		-158.95	-1031.84	-562.75	7295.33
Walleyleg_Branch	1	335	01SEP2015 1100	17.00	16.95	0.05	0.01		-149.54	-924.67	-1184.35	7834.16
Walleyleg_Branch	1	335	01SEP2015 1106	17.39	17.36	0.03	0.01		-149.46	-894.39	-1787.10	7995.42
Walleyleg_Branch	1	335	01SEP2015 1112	17.70	17.65	0.04	0.01		-198.19	-1161.58	-2943.06	8091.84
Walleyleg_Branch	1	335	01SEP2015 1118	17.97	17.96	0.00	0.00		-74.26	-422.42	-1316.92	8174.66
Walleyleg_Branch	1	335	01SEP2015 1124	18.09	18.09	0.00	0.00		-22.46	-80.36	-269.97	8219.34
Walleyleg_Branch	1	335	01SEP2015 1130	18.06	18.06	0.00	0.00		56.37	225.89	744.90	8199.98
Walleyleg_Branch	1	200	01SEP2015 1054	16.50	16.49	0.01	0.01		-297.57	-573.27	-2608.81	7162.02
Walleyleg_Branch	1	200	01SEP2015 1100	16.99	16.99	0.00	0.01		-282.40	-499.36	-2723.80	7486.31
Walleyleg_Branch	1	200	01SEP2015 1106	17.39	17.39	0.00	0.01		-304.06	-507.52	-3142.09	7603.25
Walleyleg_Branch	1	200	01SEP2015 1112	17.70	17.69	0.00	0.00		-1606.28	-464.46	-3154.16	7631.61
Walleyleg_Branch	1	200	01SEP2015 1118	17.96	17.96	0.00	0.00		-794.11	-206.88	-1510.56	7637.71
Walleyleg_Branch	1	200	01SEP2015 1124	18.09	18.09	0.00	0.00		-172.35	-42.94	-323.55	7640.59
Walleyleg_Branch	1	200	01SEP2015 1130	18.05	18.05	0.00	0.00		469.30	118.41	884.29	7639.76
Walleyleg_Branch	1	0	01SEP2015 1054	16.57	16.52	0.05	0.07		-1428.94	-1203.93	-3035.99	7399.98
Walleyleg_Branch	1	0	01SEP2015 1100	17.02	17.01	0.02	0.04		-1203.62	-875.71	-3209.54	7466.94
Walleyleg_Branch	1	0	01SEP2015 1106	17.42	17.40	0.01	0.03		-1178.55	-775.44	-3582.83	7521.89
Walleyleg_Branch	1	0	01SEP2015 1112	17.72	17.71	0.02	0.01		-497.40	-929.31	-4974.13	7560.82
Walleyleg_Branch	1	0	01SEP2015 1118	17.96	17.96	0.00	0.00		-374.69	-450.56	-2688.24	7587.01
Walleyleg_Branch	1	0	01SEP2015 1124	18.09	18.09	0.00	0.00		-92.26	-92.91	-582.86	7600.20
Walleyleg_Branch	1	0	01SEP2015 1130	18.05	18.05	0.00	0.00		247.41	262.55	1622.19	7596.13

HEC-RAS Plan: Ext_SS500yrSprin Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Crit W.S.	Frctn Loss	C & E Loss	Top Width	Q Left	Q Channel	Q Right	Vel Chnl
				(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft/s)
Walleyleg_Branch	1	388 BR U	01SEP2015 1054	16.28	15.89				76.63	-103.43	-1457.84	-192.27	-5.41
Walleyleg_Branch	1	388 BR U	01SEP2015 1100	16.97	16.34					-131.88	-1903.37	-223.30	-6.80
Walleyleg_Branch	1	388 BR U	01SEP2015 1106	17.81	16.83					-165.31	-2385.76	-279.90	-8.52
Walleyleg_Branch	1	388 BR U	01SEP2015 1112	19.70	17.44					-251.25	-3626.15	-425.42	-12.95
Walleyleg_Branch	1	388 BR U	01SEP2015 1118	18.36	17.96					-105.90	-1528.39	-179.31	-5.46
Walleyleg_Branch	1	388 BR U	01SEP2015 1124	18.11	18.09					-21.77	-314.17	-36.86	-1.12
Walleyleg_Branch	1	388 BR U	01SEP2015 1130	18.06	18.06	12.23			4376.70	19.67	155.04	852.45	0.55
Walleyleg_Branch	1	388 BR D	01SEP2015 1054	16.78	16.43					-137.47	-1472.37	-143.70	-5.07
Walleyleg_Branch	1	388 BR D	01SEP2015 1100	17.53	16.95					-177.06	-1896.41	-185.09	-6.53
Walleyleg_Branch	1	388 BR D	01SEP2015 1106	18.26	17.36					-221.94	-2377.03	-232.00	-8.18
Walleyleg_Branch	1	388 BR D	01SEP2015 1112	19.73	17.65					-337.33	-3612.88	-352.61	-12.43
Walleyleg_Branch	1	388 BR D	01SEP2015 1118	18.33	17.96					-142.18	-1522.80	-148.62	-5.24
Walleyleg_Branch	1	388 BR D	01SEP2015 1124	18.11	18.09					-29.23	-313.02	-30.55	-1.08
Walleyleg_Branch	1	388 BR D	01SEP2015 1130	18.06	18.06	12.20			4374.22	22.98	145.30	858.88	0.50

Plan: Ext_SS500yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1054

E.G. US. (ft)	16.27	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	15.89	E.G. Elev (ft)	16.28	16.78
Q Total (cfs)	-1753.54	W.S. Elev (ft)	15.89	16.43
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	6.99	7.63
Weir Sta Lft (ft)		Vel Total (ft/s)	-4.44	-4.13
Weir Sta Rgt (ft)		Flow Area (sq ft)	395.03	425.09
Weir Submerg		Froude # Chl	-0.34	-0.30
Weir Max Depth (ft)		Specif Force (cu ft)	1376.99	1639.05
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	5.16	
Min El Prs (ft)	16.21	W.P. Total (ft)	110.33	187.96
Delta EG (ft)		Conv. Total (cfs)	29555.9	23687.2
Delta WS (ft)	-0.54	Top Width (ft)	76.63	
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.79	0.77
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SS500yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1100

E.G. US. (ft)	16.58	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	16.34	E.G. Elev (ft)	16.97	17.53
Q Total (cfs)	-2258.56	W.S. Elev (ft)	16.34	16.95
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	7.44	8.15
Weir Sta Lft (ft)		Vel Total (ft/s)	-5.47	-5.31
Weir Sta Rgt (ft)		Flow Area (sq ft)	413.02	425.09
Weir Submerg		Froude # Chl	-0.41	-0.38
Weir Max Depth (ft)		Specif Force (cu ft)	1726.34	2025.70
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)		
Min El Prs (ft)	16.21	W.P. Total (ft)	188.37	187.96
Delta EG (ft)		Conv. Total (cfs)	22739.3	23687.2
Delta WS (ft)	-0.61	Top Width (ft)		
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	1.35	1.28
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SS500yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1106

E.G. US. (ft)	16.95	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	16.83	E.G. Elev (ft)	17.81	18.26
Q Total (cfs)	-2830.96	W.S. Elev (ft)	16.83	17.36
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	7.93	8.56
Weir Sta Lft (ft)		Vel Total (ft/s)	-6.85	-6.66
Weir Sta Rgt (ft)		Flow Area (sq ft)	413.02	425.09
Weir Submerg		Froude # Chl	-0.50	-0.46
Weir Max Depth (ft)		Specif Force (cu ft)	2175.06	2436.44
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)		
Min El Prs (ft)	16.21	W.P. Total (ft)	188.37	187.96
Delta EG (ft)		Conv. Total (cfs)	22739.3	23687.2
Delta WS (ft)	-0.53	Top Width (ft)		
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	2.12	2.02
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SS500yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1112

E.G. US. (ft)	17.52	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	17.44	E.G. Elev (ft)	19.70	19.73
Q Total (cfs)	-4302.82	W.S. Elev (ft)	17.44	17.65
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	8.54	8.85
Weir Sta Lft (ft)		Vel Total (ft/s)	-10.42	-10.12
Weir Sta Rgt (ft)		Flow Area (sq ft)	413.02	425.09
Weir Submerg		Froude # Chl	-0.73	-0.69
Weir Max Depth (ft)		Specif Force (cu ft)	3313.45	3413.17
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)		
Min El Prs (ft)	16.21	W.P. Total (ft)	188.37	187.96
Delta EG (ft)		Conv. Total (cfs)	22739.3	23687.2
Delta WS (ft)	-0.21	Top Width (ft)		
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	4.90	4.66
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SS500yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1118

E.G. US. (ft)	17.97	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	17.96	E.G. Elev (ft)	18.36	18.33
Q Total (cfs)	-1813.60	W.S. Elev (ft)	17.96	17.96
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	9.06	9.16
Weir Sta Lft (ft)		Vel Total (ft/s)	-4.39	-4.27
Weir Sta Rgt (ft)		Flow Area (sq ft)	413.02	425.09
Weir Submerg		Froude # Chl	-0.30	-0.28
Weir Max Depth (ft)		Specif Force (cu ft)	2241.41	2306.71
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)		
Min El Prs (ft)	16.21	W.P. Total (ft)	188.37	187.96
Delta EG (ft)		Conv. Total (cfs)	22739.3	23687.2
Delta WS (ft)	0.00	Top Width (ft)		
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.87	0.83
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

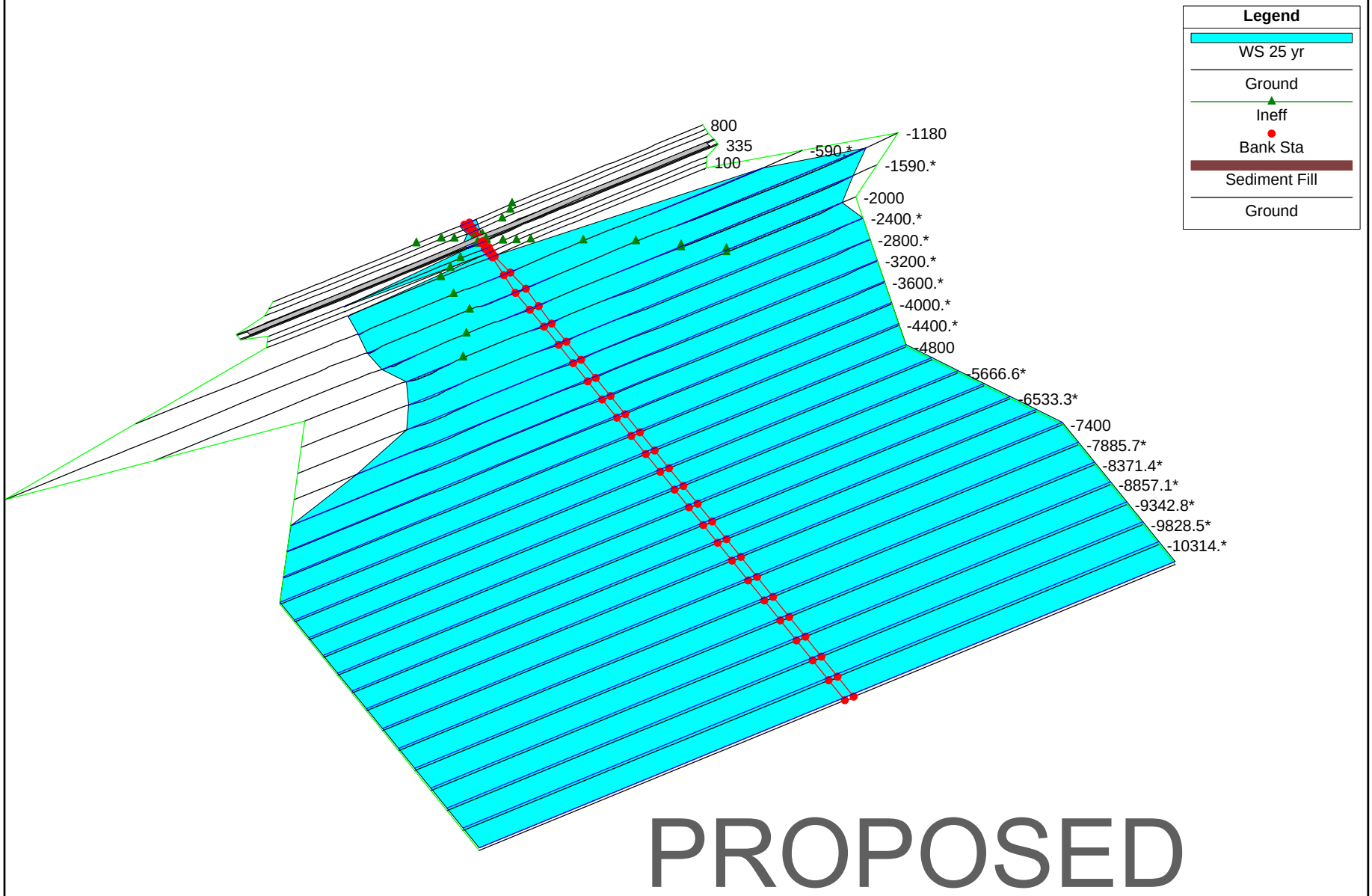
Plan: Ext_SS500yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1124

E.G. US. (ft)	18.09	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	18.09	E.G. Elev (ft)	18.11	18.11
Q Total (cfs)	-372.80	W.S. Elev (ft)	18.09	18.09
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	9.19	9.29
Weir Sta Lft (ft)		Vel Total (ft/s)	-0.90	-0.88
Weir Sta Rgt (ft)		Flow Area (sq ft)	413.02	425.09
Weir Submerg		Froude # Chl	-0.06	-0.06
Weir Max Depth (ft)		Specif Force (cu ft)	2028.52	2105.71
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)		
Min El Prs (ft)	16.21	W.P. Total (ft)	188.37	187.96
Delta EG (ft)		Conv. Total (cfs)	22739.3	23687.2
Delta WS (ft)	0.00	Top Width (ft)		
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.04	0.03
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Ext_SS500yrSprin Walleyleg_Branch 1 RS: 388 Profile: 01SEP2015 1130

E.G. US. (ft)	18.06	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	18.06	E.G. Elev (ft)	18.06	18.06
Q Total (cfs)	1027.16	W.S. Elev (ft)	18.06	18.06
Q Bridge (cfs)	183.31	Crit W.S. (ft)	12.23	12.20
Q Weir (cfs)		Max Chl Dpth (ft)	9.16	9.26
Weir Sta Lft (ft)		Vel Total (ft/s)	0.17	0.17
Weir Sta Rgt (ft)		Flow Area (sq ft)	6101.36	6117.95
Weir Submerg		Froude # Chl	0.01	0.01
Weir Max Depth (ft)		Specif Force (cu ft)	7108.93	7179.08
Min El Weir Flow (ft)	15.85	Hydr Depth (ft)	1.39	1.40
Min El Prs (ft)	16.21	W.P. Total (ft)	4565.43	4567.91
Delta EG (ft)	0.01	Conv. Total (cfs)	126962.7	137169.0
Delta WS (ft)	0.00	Top Width (ft)	4376.70	4374.22
BR Open Area (sq ft)	413.02	Frctn Loss (ft)		
BR Open Vel (ft/s)	0.44	C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.01	0.00
Br Sel Method	Energy only	Power Total (lb/ft s)	69867.68	69867.68

532650-SR25_over_WALLYLEG_BRANCH Plan: Pro_SteadyRiver 10/19/2015



532650-SR25WALLEYLEG.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  X        X    X       X   X     X  X    X
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X     X  X        X            X  X     X    X        X
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PROJECT DATA
Project Title: 532650-SR25_over_WALLYLEG_BRANCH
Project File : 532650-SR25WALLEYLEG.prj
Run Date and Time: 10/20/2015 7:16:27 AM

Project in English units

Project Description:
532560 - SR 25 (US 17) over WALLEYLEG CREEK, GLYNN COUNTY

PLAN DATA

Plan Title: Pro_SS100yrSpring
Plan File : C:\Users\tonguyen\Desktop\working\Bridge Hydraulics\532650\New folder\532650-SR25WALLEYLEG.p14

Geometry Title: Proposed02
Geometry File : C:\Users\tonguyen\Desktop\working\Bridge Hydraulics\532650\New folder\532650-SR25WALLEYLEG.g07

Flow Title :
Flow File :

Plan Summary Information:

Number of:	Cross Sections	= 32	Multiple Openings	=	0
	Culverts	= 0	Inline Structures	=	0
	Bridges	= 1	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

GEOMETRY DATA

Geometry Title: Proposed02
Geometry File : C:\Users\tonguyen\Desktop\working\Bridge Hydraulics\532650\New folder\532650-SR25WALLEYLEG.g07

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 800

INPUT
Description:
Station Elevation Data num= 200

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69869.36	17.969	70609.09	17.876	70910.39	16.87	70647	17.42	70654	17.23
70654.05	17.23	70654.1	17.237	70683.01	17.37	70704.1	17.25	70724.1	16.93
70804.1	14.567	70804.78	14.517	1148.88	14.517	1281.26	14.517	1429.09	14.51
71434.1	14.717	1509.94	16.587	1514.06	16.68	71514.1	16.68	71594.1	16.72
71595.87	16.737	2124.65	15.657	2125.06	15.657	2125.47	15.657	2896.63	16.81
72899.55	16.32	72899.8	16.327	2912.79	16.27	72969.8	16.177	2973.22	16.13
72974.18	16.147	3051.44	16.257	3113.88	16.247	3123.48	16.27	3128.71	16.18
73128.73	16.187	3183.41	16.457	3186.65	16.457	3186.75	16.457	3189.86	16.51
73190.63	16.5	73193.6	16.487	3706.27	13.17	3707.04	13.097	3708.19	13.11
73708.68	13.127	3714.94	13.257	3722.95	13.467	3723.67	13.48	73723.7	13.48
73747.06	13.47	3749.26	13.417	3756.65	13.58	73758.7	13.637	3766.13	13.51
73766.24	13.5	73766.8	13.57	3775.84	13.177	3776.46	13.147	3785.43	13.01
73785.45	13.027	3785.63	13.04	73833.4	12.297	3842.99	12.06	73843.4	12.05
73852.58	11.837	3859.45	11.677	3862.18	11.637	3862.72	11.627	3871.77	11.48
73881.36	11.347	3882.03	11.337	3890.96	11.197	3900.55	11.057	3910.14	10.9
73919.74	10.787	3920.66	10.777	3929.33	10.697	3929.64	10.697	3935.49	10.46
73938.93	10.457	3958.11	10.17	73959.3	10.147	3967.71	9.927	3976.73	9.69
73977.3	9.77	3978.61	9.747	3986.89	9.947	3996.49	10.187	3997.93	10.21
74000.28	10.277	4006.08	10.44	74011.1	10.587	4015.67	10.657	4017.24	10.67
74025.27	10.797	4034.86	10.947	4036.37	10.967	4036.56	10.977	4044.45	11.27
74051.9	11.567	4054.05	11.667	4055.88	11.757	4063.64	12.137	4075.19	12.36
74082.83	12.447	4092.42	12.557	4102.01	12.667	4111.61	12.787	4113.82	12.8
74114.98	12.81	74121.2	12.88	74130.8	12.98	74160.7	13.23	74180.7	13.39
74190.7	13.47	74191	13.477	4245.53	13.677	4315.26	13.787	4460.07	13.84
74615.62	13.97	4851.61	13.987	4964.24	13.797	5119.79	13.56	75323.6	13.28
75451.89	13.287	5482.88	13.21	75484.3	13.21	75517.9	13.13	75520.7	13.14
75542.06	13.197	5543.33	13.19	75550.7	13.21	75620.7	13.347	5718.15	13.49
75914.07	13.82	75960.7	13.72	75980.7	13.67	5981.39	13.67	6016.61	13.75
76018.97	13.717	6019.09	13.71	76050.7	13.71	76070.6	14.13	76070.7	14.13
76160.7	14.227	6200.96	14.227	6207.79	14.3	76230.7	14.12	76250.7	13.98
76252.23	13.97	76270.7	14.1	76271.8	14.1	76280.7	14.11	76290.7	14.12
76293.32	14.12	76300.7	14.527	6302.86	14.63	76340.7	14.75	76344.8	14.78
76360.7	14.367	6369.25	14.13	76370.7	14.13	76390.7	14.06	76400.7	14.05
76425.11	14.177	6449.08	13.67	76450.7	13.68	76470.7	13.83	76560.7	14.25
76561.55	14.27	76570.7	14.52	76580.7	14.8	76590.7	15.07	6598.28	15.28
76600.7	15.29	76610.7	15.32	76640.7	15.12	6667.79	15.07	76670.7	15.05
76801.69	14.53	76810.7	14.56	76870.7	14.93	76930.7	15.87	6931.16	15.8
76980.7	16.01	7044.25	16.01	77060.7	16.09	7063.99	16.1	77200.7	16.68
77202.34	16.69	77220.7	16.67	7220.96	16.6	77255.8	16.41	77260.7	16.41
77270.7	16.41	7272.42	16.41	7326.19	16.72	7336.96	17.25	7351.91	17.35

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69869.36	.117	3929.33	.047	4017.24	.11

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73929.3	374017.24	100	100	100	.3	.5

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
69869.3	673188.91	17.19	T
74853.8	877351.91	16.71	T

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 700

INPUT
Description:
Station Elevation Data num= 476

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69868.52	17.83	69869.25	17.79	69870.88	17.74	69872.19	17.76	9872.42	17.74
69872.88	17.78	69873.06	17.77	69873.34	17.76	69909.56	17.09	70013.87	16.49
70014.23	16.49	70139.12	16.53	70140.24	16.53	70227.79	16.83	70235.44	16.86
70237.79	16.85	70297.77	16.63	70298.95	16.63	70300.41	16.74	70307.77	17.86
70311.33	17.86	70347.77	17.36	70387.75	17.07	70388.52	17.06	70430.85	17.25
70437.73	17.26	70521.54	17.73	70557.29	17.33	70646.35	17.49	70653.35	17.41
70653.4	17.41	70653.45	17.41	70682.37	17.52	70703.47	17.49	70707.67	17.46
70717.67	17.35	70723.47	17.37	70727.67	17.36	70727.92	17.35	70737.66	17.22
70738.15	17.22	70803.49	16.18	70804.17	16.16	70816.39	16.15	70817.64	16.16
70842.7	16.44	70867.63	16.17	70867.87	16.17	70877.33	15.99	70877.62	15.99
70899.84	16.02	70922.23	15.94	70923.36	15.94	70927.62	15.97	71107.58	16.15
71109.02	16.15	71128.51	16.17	71147.56	16.11	71148.36	16.11	71175.95	16.07
71176.3	16.07	71178.4	16.08	71280.77	15.96	71311.77	15.92	71367.52	16.06
71406.52	16.4	71407.5	16.47	71409.72	16.39	71427.5	16.27	71428.64	16.19
71433.65	16.24	71440.34	16.25	71440.89	16.25	71447.97	16.24	71505.5	16.2
71507.48	16.22	71509.5	16.23	71510.7	16.24	71513.62	16.31	71513.67	16.31
71517.47	16.36	71578.92	16.97	71593.69	16.97	71595.45	16.98	71599.41	17
71617.45	16.93	71647.44	16.82	71677.44	16.62	71680.86	16.62	71696.49	16.47
71699.14	16.32	71785.57	16.18	71795.4	16.51	71806.55	16.46	71817.4	15.76
71817.64	15.75	71880.56	15.77	71974.79	15.69	71976.48	15.69	71977.59	15.68
72000.66	15.64	72001.67	15.64	72077.23	15.53	72081.41	15.53	72124.36	15.52
72124.78	15.52	72125.19	15.52	72219.94	15.66	72228.34	15.65	72229.25	15.65
72231.37	15.66	72245.12	15.47	72247.44	15.16	72248.94	15.01	72253.53	15.11
72254.44	15.13	72254.55	15.13	72257.38	15.09	72260.21	15.34	72261.92	15.41
72265.98	15.56	72457.62	16.09	72462.09	16.02	72463.41	16.02	72483.38	15.91
72753.78	16.77	72758.97	16.79	72760.02	16.79	72770.02	16.83	72840	16.97
72845.92	17.09	72896.54	16.74	72899.45	16.47	72899.7	16.47	72901.84	16.45
72908.25	16.33	72909.25	16.34	72909.98	16.34	72912.7	16.33	72914.81	16.33
72919.98	16.41	72969.72	16.43	72973.14	16.41	72974.11	16.42	73000.88	16.47
73025.52	16.36	73032.2	16.06	73033.48		1673046.88	16.59	73051.38	16.56
73051.49	16.55	73070.55	16.15	73070.81	16.15	73087.54	16.45	73109.44	16.67
73113.84	16.77	73123.44	16.74	73128.67	16.77	73128.69	16.77	73147.88	16.95
73148.05	16.95	73167.38	17.07	73169.59	17.08	73183.38	17.04	73186.62	17.02
73186.67	17.02	73186.73	17.02	73188.67	17.05	73189.84	17.06	73190.61	17.06
73193.38	17.05	73193.58	17.05	73521.27	14.94	73534.28	14.84	73706.38	13.47
73707.14	13.46	73708.3	13.47	73708.78	13.47	73715.05	13.51	73723.06	13.57
73723.78	13.58	73723.81	13.58	73738.97	13.48	73747.18	13.39	73749.38	13.37
73756.77	13.39	73758.82	13.39	73763.06	13.32	73766.02	13.27	73766.25	13.27
73766.36	13.26	73766.92	13.26	73775.97	13.04	73776.58	13.02	73782.63	12.94
73785.55	12.91	73785.58	12.91	73785.76	12.92	73792.44	12.84	73794.66	12.82
73804.64	12.74	73809.41	12.77	73812.01	12.69	73833.53	12.58	73836.72	12.55
73843.13	12.43	73843.26	12.43	73843.54	12.42	73848.44	12.24	73850.31	12.12
73852.06	11.99	73852.72	11.97	73859.59	11.75	73860.09	11.74	73862.33	11.69
73862.86	11.67	73870.75	11.57	73871.92	11.48	73878.42	11.37	73880.54	11.34
73881.51	11.33	73882.18	11.32	73891.11	11.18	73900.12	11.05	73900.7	11.04

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 73901.2   11.0373909.91   10.87 73910.3   10.86 73919.7    10.7 73919.9   10.69
 73920.5   10.6873920.81   10.6873923.22   10.6473924.34   10.5773927.75   10.52
73929.48   10.49 73929.7   10.4973933.82   10.3573934.27   10.3573936.23   10.31
73946.45   10.0273947.38    9.9973949.72    9.9373950.55     9.973956.47    9.68
 73962.8    9.4573963.23    9.46 73963.3    9.4773964.44     9.573971.62    9.72
 73974.8    9.8273975.11    9.8373977.69     9.973979.94    9.9573981.19    9.97
73983.22   10.0273985.36   10.0773986.36   10.1173988.25    10.273990.98   10.32
 73992.6   10.3773996.56   10.4873997.92   10.5173998.96   10.54 74006.3   10.67
74007.34   10.6974016.28   10.8774016.49   10.8774016.76   10.8774017.86   10.89
74018.06    10.974026.16   11.1474026.28   11.1574034.05   11.3974036.28   11.47
 74038.2   11.5474046.28   11.8374049.62    11.974052.94   11.9874054.39   12.02
74058.31   12.11 74063.8   12.2274066.28   12.27 74069.7   12.3474073.22   12.41
74076.28   12.4874082.63    12.674086.27   12.6674096.28   12.8374098.58   12.86
74099.78   12.8874101.31    12.974101.45    12.974106.28   12.9774109.31   13.01
74116.27   13.0974147.45   13.4274167.78   13.6374168.29   13.6474178.71   13.71
74179.02   13.71   74187   13.7574229.23   13.9374230.94   13.9474235.86   13.95
74293.21   14.0674308.52    14.1 74349.7   14.1674350.38   14.1774459.45   14.19
74621.56   14.2274661.67   14.2374785.39   13.9674862.71   13.7774867.52   13.76
74984.91   13.4775027.66   13.3675146.22   13.3175147.03   13.3175292.22   13.26
75301.83   13.3475311.45   13.4275321.05    13.575329.31   13.5675330.66   13.55
75359.45    13.575369.11   13.4975370.97    13.575417.16    13.475493.16    13.6
75525.45   13.6475526.92   13.6575532.48   13.6575561.95   13.6475564.88   13.65
75587.13   13.6975588.45    13.775596.14   13.7175599.77   13.7275669.09   13.61
75695.88   13.5775770.66   13.9175791.98   14.0175804.12   13.7975812.79   13.99
75820.81   13.9775822.43   13.9775839.42   13.6775840.03   13.7375849.64   13.77
75850.17   13.6775874.06   14.0475874.67   14.0475878.47   13.9575974.84   13.69
75980.05   13.6775988.73   13.6875991.69   13.6776020.25   13.7476022.63   13.72
76023.45   13.71 76044.3   13.6276045.01   13.6276051.47   13.6276070.69    13.5
 76070.7    13.576081.72   13.5676084.17   13.55 76084.3   13.5576089.91   13.57
76094.25   13.5676117.25   13.6276129.41   13.7776137.98   13.8976138.09   13.89
76214.84   14.1976222.48   14.2476224.45   14.2276231.89   14.1876246.89   14.08
76273.85   14.1176280.97   14.1676285.59   14.1576298.64   14.1276301.34   14.13
76304.84   14.1376320.56   14.17 76325.7   14.0876327.28   14.0576330.44   14.02
76346.54   14.0976347.68   14.0976356.96   14.1176367.38   14.1376370.11   14.13
 76377.8   14.3476380.05    14.476416.67    14.576419.49   14.5876421.36   14.64
76423.77   14.6476426.28   14.5976426.53   14.5976429.19   14.4476440.34   14.11
76444.19   13.9976449.25   13.9776450.77   13.9876471.61   14.1376482.03   14.22
 76486.9   14.2876493.55   14.3376507.47   14.38   76532   14.1776532.45   14.17
76534.14   14.1876554.98   14.3176648.78   14.7776649.66   14.79 76659.2   14.94
76669.62    15.176680.05   15.2776687.95   15.3976690.47    15.476700.89   15.45
 76724.2   15.4476732.16   15.4476736.38   15.4676760.39   15.6276763.43   15.64
76770.86   15.6876772.27   15.6876781.88   15.6776786.85   15.6776791.48   15.65
76865.02   15.2476868.37   15.2576877.98   15.2776887.59   15.4376899.94   15.47
76909.34   15.5476926.03   15.6876928.11    15.776940.09   15.6476971.88   15.52
76974.09   15.5377034.41   15.9577034.88   15.9577086.52   16.0677152.75   16.06
77169.89    16.177171.62   16.1177173.33    16.177195.12   16.0177195.56   16.02
77204.27   16.0277204.55   16.0277204.73   16.0277214.35   16.1277223.96   16.22
77315.81   16.9777317.52   16.9977336.66   17.0677336.92   17.0677373.23   17.19
77377.73   17.2277378.34   17.2277387.34   17.2377388.77   17.2377388.82   17.23
77390.55   17.2277435.39   17.1877437.62   17.1877446.59   17.1977457.81   17.45
77473.39   17.48

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69868.52     .1173929.48     .0473997.92     .11

Bank Sta: Left   Right    Lengths: Left Channel   Right      Coeff Contr.   Expan.
      73929.4873997.92              100     100     100              .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
69868.5273270.56   17.19       F
74467.3377473.39   16.71       F
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CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 600

INPUT
Description: 200 FT UPSTREAM OF THE PROPOSED CL
Station Elevation Data num= 214

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	17.75	69870.03	17.65	69871.35	17.66	9871.58	17.68	69872.03	17.78
69872.22	17.77	69872.5	17.75	70013.06	16.04	70013.42	16.04	70138.34	16.01
70139.47	16.01	70227.04	16.56	70234.69	16.67	0237.04	16.58	70297.04	16.11
70298.22	16.17	0299.68	16.32	70347.04	17.52	70387.04	16.91	70387.81	16.9
70430.15	17.25	70437.04	17.25	70707.04	17.74	70717.04	17.68	70727.04	17.91
70727.29	17.91	70737.04	17.94	70737.52	17.94	70815.78	17.78	70817.04	17.81
70867.04	17.82	70867.27	17.82	70899.25	17.53	70927.04	17.43	71107.04	17.78
71108.48	17.78	71127.98	17.82	71147.04	17.71	71175.44	17.62	71175.77	17.63
71177.88	17.64	71311.29	17.33	71367.04	17.67	1427.04	17.89	71439.88	17.62
71440.44	17.61	71447.52	17.42	71578.51	17.09	71617.04	17.18	71647.04	17.01
71677.04	16.67	71680.46	16.69	71696.1	16.42	71698.75	16.13	71785.2	16.01
71974.47	15.43	71976.16	15.43	71977.27	15.42	72000.34	15.38	72001.35	15.38
72076.93	15.31	72081.11	15.32	72219.68	15.52	72228.08	15.57	2228.99	15.5
72231.11	15.51	72244.87	14.97	72247.19	14.48	72248.69	14.18	72253.27	14.38
72254.19	14.42	72254.3	14.42	72257.13	14.33	72259.96	14.83	72261.67	14.96
72265.73	15.26	72457.42	16.03	72753.66	16.81	72758.84	16.97	72759.89	16.98
72769.89	17.04	72839.89	17.21	73000.81	16.76	73046.81	16.94	73051.44	16.86
73109.39	17.09	73147.85	17.62	73148.02	17.62	73167.34	17.76	73169.56	17.78
73186.65	17.59	73188.65	17.61	73193.36	17.62	73521.32	15.56	73534.34	15.45
73739.08	13.54	73763.18	13.07	73766.13	13.03	73782.76	12.83	73792.56	12.75
73794.79	12.74	73804.77	12.74	73809.54	12.74	73812.14	12.75	73836.86	12.89
73843.4	12.87	73848.58	12.54	73850.45	12.35	73852.2	12.14	73860.24	11.81
73870.9	11.57	73878.57	11.36	73880.69	11.33	73900.27	11.04	73901.35	11.02
73910.07	10.83	73919.86	10.61	73920.66	10.59	73923.38	10.53	73924.5	10.41
73927.91	10.33	73929.65	10.37	3932.41	10.24	73939.44	9.87	3939.98	9.77
73948.88	9.22	73949.24	9.23	73959.03	9.6	73959.3	9.61	73961.48	9.69
73967.98	9.79	73968.82	9.85	73972.73	10.11	73978.61	10.35	73979.69	10.39
73988.41	10.58	73997.93	10.8	73998.2	10.87	4007.99	11.02	74032.4	11.61
74035.84	11.77	4037.37	11.75	74047.16	12.03	74053.3	12.21	74056.95	12.31
74066.75	12.59	74086.19	12.98	74086.33	12.98	74094.51	13.11	74155.34	13.88
74175.34	14	74219.28	14.22	74221.06	14.22	74285.86	14.37	74344.64	14.52
74345.34	14.54	74669.25	14.54	74797.98	13.96	74878.43	13.56	75050.06	13
75173.42	13.05	75335.34	13.33	75345.34	13.49	75355.34	13.66	75363.94	13.8
75365.34	13.78	75405.34	13.71	75407.28	13.72	75455.34	13.53	75575.34	14.11
75645.34	14.22	75745.34	13.76	75867	14.42	75875.34	14.37	75877.03	14.36
75935.34	14.24	76041.04	13.53	76050.07	13.56	76053.14	13.55	76082.87	13.75
76085.34	13.71	76115.34	13.62	76135.34	13.37	6135.37	13.37	6155.34	13.42
76159.87	13.41	76196.45	13.59	76358.95	14.04	76568.42	14.48	76575.34	14.55
76615.34	14.67	76815.34	15.77	6828.01	15.87	6863.89	16.34	76865.34	16.34
76875.34	16.36	76880.52	16.37	76885.34	16.36	76961.85	15.81	76965.34	15.84
76975.34	15.92	76985.34	16.28	77025.34	16.71	77027.51	16.72	77039.97	16.54
77075.34	16.09	77280.89	16.12	77335.34	16.14	77495.34	18.03	77505.34	18.05
77506.88	18.05	77555.34	17.77	7557.66	17.68	77594.88	17.61		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69867.68	.11	73929.65	.04	73978.61	.11

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73929.65	73978.61	135	135	135	.3	.5

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
69867.68	73456.23	17.19	F

74288.5377594.88 16.71 F
Sediment Elevation = 9.22

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 465

INPUT
Description: 105 FT DOWNSTREAM OF BRIDGE
Station Elevation Data num= 321

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	15.94	69869.97	15.94	69879.9	15.93	69887.28	15.92	69889.83	15.91
69899.76	15.96	69906.87	15.89	69909.7	15.89	69919.58	15.88	69919.63	15.88
69921.85	15.87	69924.29	15.85	69926.47	15.92	69928.22	15.99	69929.56	15.99
69934.28	16.01	69938.14	15.79	69939.45	15.65	69965.66	14.99	69968.93	14.76
69969.28	14.76	69972.74	14.86	69978.62	15.17	69979.22	15.16	70142.02	15.82
70148	15.95	70148.05	15.95	70155.04	15.98	70157.99	15.93	70161.61	15.87
70197.71	15.46	70200.8	15.45	70207.69	15.42	70208.22	15.41	70237.69	15.86
70281.11	15.87	70290.53	15.81	70300.56	15.83	70367.69	16.11	70731.82	14.96
70757.69	15.47	70807.69	15.21	70852.36	14.84	70857.69	14.97	70907.69	15.27
71089.86	15.72	71287.69	16.47	71289.53	16.48	71295.59	16.45	71297.69	16.47
71302.76	16.49	71307.69	16.47	71465.31	15.71	71467.69	15.73	71617.69	16.5
71625.89	16.52	71627.69	16.51	71787.69	16.37	71915.93	16.41	71916.98	16.41
71919.91	16.41	71922.16	16.39	71923.6	16.47	71925.03	16.41	71925.9	16.41
71926.56	16.43	71926.61	16.43	71927.55	16.43	72059.25	15.48	72182.94	16.31
72184.43	16.31	72185.35	16.31	72188.81	16.31	72192.11	16.31	72192.54	16.31
72207.45	14.79	72208.19	14.78	72214.1	14.76	72215.12	14.76	72215.64	14.76
72223.69	14.82	72253.48	15.03	72254.53	15.04	72276.49	15.58	72278	15.62
72280.77	15.62	72281.2	15.62	72284.16	15.62	72287.05	15.62	72314.85	15.18
72360.88	15.07	72367.46	15.04	72368.55	15.04	72376.22	15.06	72377.04	15.07
72377.52	15.07	72603.37	16.69	72635.79	16.77	72738.43	15.65	72820.76	16.66
72838.92	17.24	72843.66	16.55	72878.09	15.48	72878.11	15.48	72905.46	15.22
72949.97	15.07	72950.76	15.17	72953.27	15.17	72960.76	15.46	72964.51	15.66
73002.78	15.86	73162.06	16.33	73163.29	16.32	73170.61	16.37	73172.13	16.38
73173.34	16.38	73263.41	17.67	73313.1	16.57	3423.86	14.51	73442.12	14.1
73495.86	13.48	73499.81	13.45	73504.41	13.45	73504.55	13.45	73505.19	13.45
73514.48	13.45	73524.19	13.44	73524.55	13.44	73563.48	13.26	73584.97	13.12
73645.39	13.12	73646.93	13.14	73647.93	13.11	73661.7	13.38	73665.52	13.45
73675.59	13.64	73675.61	13.64	73681.34	13.68	73685.66	13.77	73743.27	14.03
73746.08	13.97	73747.07	13.85	73756.15	13.61	73806.49	12.96	73821.85	12.52
73826.48	12.39	73826.63	12.47	73829.21	12.57	73856.84	12.97	73858.13	12.91
73866.91	12.92	73872.75	12.97	73876.98	12.88	73877.78	12.88	73924.3	12.23
73927.33	12.14	73933.17	11.97	73936.71	11.75	73937.4	11.7	73943	11.35
73947.47	11.25	73948.15	11.23	73950.2	10.57	73955.9	9.69	73961.4	9.26
73963	8.71	73965.5	7.35	73974.1	6.94	73975.9	7.8	73979.7	9
73984.4	10.78	73985.9	10.66	73994.1	11.15	73995.9	11.37	4007.88	11.45
74009.33	11.47	74009.72	11.44	74013.41	11.49	74038.09	12.02	74040.94	12.08
74044.54	12.07	74048.16	11.97	74058.23	11.7	74068.3	11.43	74071.8	11.33
74072.97	11.34	74074.21	11.37	74078.37	11.46	74088.44	11.68	74090.09	11.71
74091.75	11.77	4093.85	11.71	74094.56	11.72	74113.5	11.71	74118.64	11.7
74128.71	11.69	74177.89	11.41	74178.09	11.41	74178.32	11.41	74178.74	11.41
74184.47	11.41	74188.74	11.44	74216.54	11.66	74217.31	11.67	74218.74	11.7
74224.25	11.82	74226.85	12.21	74228.74	12.35	74229.31	12.39	74230.94	12.62
74233.47	12.84	74234.49	13.05	74237.9	14.03	74261.25	13.27	4303.78	12.96
74318.74	13.07	74392.15	14.05	74392.27	14.05	74392.33	14.06	74448.74	13.98
74518.74	13.64	74521.32	13.61	74528.74	13.64	74534.94	13.66	74588.74	14.23
74731.05	13.79	74734.71	13.87	4738.74	13.77	74788.74	13.74	74790.05	13.6
74798.74	13.57	74799.36	13.57	74802.91	13.54	74936.15	13.25	75027.7	13.16
75158.74	13.75	75168.74	13.74	75168.85	13.74	75178.74	13.77	75218.74	14.71
75222.44	14.97	5225.05	14.91	75228.74	14.89	75231.71	14.87	75258.74	14.72
75264.22	14.72	75265.17	14.72	75317.79	14.87	5318.74	14.81	75321.51	14.82

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75415.24   14.9675418.74   14.9575458.05   14.7675504.05   14.0575545.43   14.15
75548.74   14.1475578.74    13.975579.66    13.975675.45   13.8275699.54   13.83
75702.85   14.1175788.74   14.8675789.02   14.8875896.34   13.8676058.74   15.02
76068.74      1576070.36   14.9976173.27   14.0476178.74    13.776178.81   13.69
76179.67   13.7176352.89   13.5976358.13   13.5576358.74   13.5576359.89   13.56
76459.95   13.8476621.23   13.5776628.74   13.62 76630.8   13.6476661.57   13.94
76668.74   14.0176918.74   15.3976948.74   15.4177058.74   16.4577098.74   17.03
77099.37   17.0477102.51   17.0177118.74    16.877206.24   16.7277208.74    16.7
77238.74   16.5277268.74    16.477278.74   16.4177294.44   16.4377358.74   16.87
77368.74   17.0277369.24   17.02 77372.3   17.0277435.72   16.8377448.74    16.9
77638.39   18.2177638.74   18.2277639.06   18.2277648.74   18.23 77665.1   18.24
77748.74   16.0477749.11      1677808.74   16.5477809.32   16.5477884.82   16.01
77888.74   16.0177898.74      1677901.43      1677918.74    16.178148.74   18.79
78148.99    18.878158.74    18.978159.33   18.9178167.33   18.8978168.74   18.89
78178.74   18.89

Manning's n Values        num=       5
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
69867.68     .1173647.93     .0873948.15     .04 73995.9     .0874216.54      .1

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73948.15 73995.9              130     130     130              .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
69867.68   73900   17.19       T
   7404578178.74   16.71       T
Sediment Elevation = 8.9

BRIDGE


RIVER: Walleyleg_Branch
REACH: 1                  RS: 400

INPUT
Description:
Distance from Upstream XS =      21
Deck/Roadway Width        =      88
Weir Coefficient          =     2.6
Upstream  Deck/Roadway Coordinates
    num=     165
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   70000   20.06           70050   20.04           70100   20.02
   70150   20.01           70200   19.99           70250   19.97
   70300   19.95           70350   19.94           70400   19.92
   70450    19.9           70500   19.88           70550   19.87
   70600   19.85           70650   20.07           70700   20.28
   70750    20.5           70800    20.5           70850    20.5
   70900    20.5           70950    20.5           71000    20.5
   71050    20.5           71100    20.5           71150    20.5
   71200    20.5           71250    20.5           71300   20.36
   71350   20.21           71400   20.07           71450   19.93
   71500   19.79           71550   19.67           71600   19.66
   71650   19.78           71700      20           71750   20.25
   71800    20.5           71850   20.75           71900      21
   71950   21.25           72000    21.5           72050   21.75
   72100      22           72150   22.22           72200   22.29
   72250   22.22           72300      22           72350   21.75
   72400    21.5           72450   21.25           72500      21
   72550   20.75           72600    20.5           72650   20.25
   72700      20           72750   19.75           72800    19.5
   72850   19.25           72900      19           72950   18.75
   73000    18.5           73050   18.25           73100      18
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73150	17.75		73200	17.5		73250	17.28	
73300	17.19		73350	17.25		73400	17.44	
73450	17.66		73500	17.88		73550	18.1	
73600	18.32		73650	18.54		73700	18.75	
73750	18.97		73800	19.19		73850	19.41	
73900	19.63		73910	19.67	0	73910	19.67	16.34
73950	19.79	16.45	73995	19.81	16.48	74035	19.75	16.41
74035	19.75	0	74050	19.7		74100	19.48	
74150	19.26		74200	19.03		74250	18.81	
74300	18.59		74350	18.36		74400	18.14	
74450	17.92		74500	17.69		74550	17.47	
74600	17.25		74650	17.04		74700	16.89	
74750	16.8		74800	16.78		74850	16.77	
74900	16.76		74950	16.76		75000	16.75	
75050	16.74		75100	16.73		75150	16.72	
75200	16.71		75250	16.72		75300	16.75	
75350	16.79		75400	16.85		75450	16.9	
75500	16.95		75550	17		75600	17.05	
75650	17.1		75700	17.15		75750	17.2	
75800	17.25		75850	17.3		75900	17.35	
75950	17.4		76000	17.45		76050	17.5	
76100	17.55		76150	17.61		76200	17.66	
76250	17.71		76300	17.75		76350	17.81	
76400	17.86		76450	17.91		76500	17.96	
76550	18.01		76600	18.06		76650	18.11	
76700	18.16		76750	18.21		76800	18.26	
76850	18.31		76900	18.36		76950	18.42	
77000	18.47		77050	18.52		77100	18.57	
77150	18.62		77200	18.67		77250	18.72	
77300	18.77		77350	18.82		77400	18.87	
77450	18.92		77500	18.97		77550	19.02	
77600	19.07		77650	19.12		77700	19.17	
77750	19.23		77800	19.28		77850	19.33	
77900	19.38		77950	19.43		78000	19.48	

Upstream Bridge Cross Section Data
Station Elevation Data num= 321

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	15.94	69867.97	15.94	69879.9	15.93	69887.28	15.92	69889.83	15.91
69899.76	15.96	69906.87	15.89	69909.7	15.89	69919.58	15.88	69919.63	15.88
69921.85	15.87	69924.29	15.85	69926.47	15.92	69928.22	15.99	69929.56	15.99
69934.28	16.01	69938.14	15.79	69939.45	15.65	69965.66	14.99	69968.93	14.76
69969.28	14.76	69972.74	14.86	69978.62	15.17	69979.22	15.16	70142.02	15.82
70148	15.95	70148.05	15.95	70155.04	15.98	70157.99	15.93	70161.61	15.87
70197.71	15.46	70200.8	15.45	70207.69	15.42	70208.22	15.41	70237.69	15.86
70281.11	15.87	70290.53	15.81	70300.56	15.83	70367.69	16.11	70731.82	14.96
70757.69	15.47	70807.69	15.21	70852.36	14.84	70857.69	14.97	70907.69	15.27
71089.86	15.72	71287.69	16.47	71289.53	16.48	71295.59	16.45	71297.69	16.47
71302.76	16.49	71307.69	16.47	71465.31	15.71	71467.69	15.73	71617.69	16.5
71625.89	16.52	71627.69	16.51	71787.69	16.37	71915.93	16.41	71916.98	16.41
71919.91	16.41	71922.16	16.39	71923.6	16.47	71925.03	16.41	71925.9	16.41
71926.56	16.43	71926.61	16.43	71927.55	16.43	72059.25	15.48	72182.94	16.31
72184.43	16.31	72185.35	16.31	72188.81	16.31	72192.11	16.31	72192.54	16.31
72207.45	14.79	72208.19	14.78	72214.1	14.76	72215.12	14.76	72215.64	14.76
72223.69	14.82	72253.48	15.03	72254.53	15.04	72276.49	15.58	72278	15.62
72280.77	15.62	72281.2	15.62	72284.16	15.62	72287.05	15.62	72314.85	15.18
72360.88	15.07	72367.46	15.04	72368.55	15.04	72376.22	15.06	72377.04	15.07
72377.52	15.07	72603.37	16.69	72635.79	16.77	72738.43	15.65	72820.76	16.66
72838.92	17.24	72843.66	16.55	72878.09	15.48	72878.11	15.48	72905.46	15.22
72949.97	15.07	72950.76	15.17	72953.27	15.17	72960.76	15.46	72964.51	15.66
73002.78	15.86	73162.06	16.33	73163.29	16.32	73170.61	16.37	73172.13	16.38
73173.34	16.38	73263.41	17.67	73313.1	16.57	73423.86	14.51	73442.12	14.1
73495.86	13.48	73499.81	13.45	73504.41	13.45	73504.55	13.45	73505.19	13.45

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73514.48   13.4573524.19   13.4473524.55   13.4473563.48   13.2673584.97   13.12
73645.39   13.1273646.93   13.1473647.93   13.11 73661.7   13.3873665.52   13.45
73675.59   13.6473675.61   13.6473681.34   13.6873685.66    13.773743.27   14.03
73746.08    13.973747.07   13.8573756.15   13.6173806.49   12.9673821.85   12.52
73826.48   12.3973826.63    12.473829.21    12.573856.84    12.973858.13   12.91
73866.91   12.9273872.75    12.973876.98   12.8873877.78   12.88 73924.3   12.23
73927.33   12.1473933.17   11.9773936.71   11.75 73937.4    11.7   73943   11.35
73947.47   11.2573948.15   11.23 73950.2   10.57 73955.9    9.69 73961.4    9.26
   73963    8.71 73965.5    7.35 73974.1    6.94 73975.9     7.8 73979.7       9
 73984.4   10.78 73985.9   10.66 73994.1   11.15 73995.9    11.374007.88   11.45
74009.33   11.4774009.72   11.4474013.41   11.4974038.09   12.0274040.94   12.08
74044.54   12.0774048.16   11.9774058.23    11.7 74068.3   11.43 74071.8   11.33
74072.97   11.3474074.21   11.3774078.37   11.4674088.44   11.6874090.09   11.71
74091.75    11.774093.85   11.7174094.56   11.72 74113.5   11.7174118.64    11.7
74128.71   11.6974177.89   11.4174178.09   11.4174178.32   11.4174178.74   11.41
74184.47   11.4174188.74   11.4474216.54   11.6674217.31   11.6774218.74    11.7
74224.25   11.8274226.85   12.2174228.74   12.3574229.31   12.3974230.94   12.62
74233.47   12.8474234.49   13.05 74237.9   14.0374261.25    13.274303.78   12.96
74318.74   13.0774392.15   14.0574392.27   14.0574392.33   14.0674448.74   13.98
74518.74   13.6474521.32   13.6174528.74   13.6474534.94   13.6674588.74   14.23
74731.05   13.7974734.71    13.874738.74   13.7774788.74   13.7474790.05    13.6
74798.74   13.5774799.36   13.5774802.91   13.5474936.15   13.25 75027.7   13.16
75158.74   13.7575168.74   13.7475168.85   13.7475178.74   13.7775218.74   14.71
75222.44    14.975225.05   14.9175228.74   14.8975231.71   14.8775258.74   14.72
75264.22   14.7275265.17   14.7275317.79    14.875318.74   14.8175321.51   14.82
75415.24   14.9675418.74   14.9575458.05   14.7675504.05   14.0575545.43   14.15
75548.74   14.1475578.74    13.975579.66    13.975675.45   13.8275699.54   13.83
75702.85   14.1175788.74   14.8675789.02   14.8875896.34   13.8676058.74   15.02
76068.74      1576070.36   14.9976173.27   14.0476178.74    13.776178.81   13.69
76179.67   13.7176352.89   13.5976358.13   13.5576358.74   13.5576359.89   13.56
76459.95   13.8476621.23   13.5776628.74   13.62 76630.8   13.6476661.57   13.94
76668.74   14.0176918.74   15.3976948.74   15.4177058.74   16.4577098.74   17.03
77099.37   17.0477102.51   17.0177118.74    16.877206.24   16.7277208.74    16.7
77238.74   16.5277268.74    16.477278.74   16.4177294.44   16.4377358.74   16.87
77368.74   17.0277369.24   17.02 77372.3   17.0277435.72   16.8377448.74    16.9
77638.39   18.2177638.74   18.2277639.06   18.2277648.74   18.23 77665.1   18.24
77748.74   16.0477749.11      1677808.74   16.5477809.32   16.5477884.82   16.01
77888.74   16.0177898.74      1677901.43      1677918.74    16.178148.74   18.79
78148.99    18.878158.74    18.978159.33   18.9178167.33   18.8978168.74   18.89
78178.74   18.89

Manning's n Values        num=       5
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
69867.68     .1173647.93     .0873948.15     .04 73995.9     .0874216.54      .1

Bank Sta: Left   Right    Coeff Contr.   Expan.
      73948.15 73995.9             .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
69867.68   73900   17.19       T
   7404578178.74   16.71       T
Sediment Elevation = 8.9

Downstream  Deck/Roadway Coordinates
    num=     165
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   70000   20.06           70050   20.04           70100   20.02
   70150   20.01           70200   19.99           70250   19.97
   70300   19.95           70350   19.94           70400   19.92
   70450    19.9           70500   19.88           70550   19.87
   70600   19.85           70650   20.07           70700   20.28
   70750    20.5           70800    20.5           70850    20.5
   70900    20.5           70950    20.5           71000    20.5
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71050	20.5		71100	20.5		71150	20.5		
71200	20.5		71250	20.5		71300	20.36		
71350	20.21		71400	20.07		71450	19.93		
71500	19.79		71550	19.67		71600	19.66		
71650	19.78		71700	20		71750	20.25		
71800	20.5		71850	20.75		71900	21		
71950	21.25		72000	21.5		72050	21.75		
72100	22		72150	22.22		72200	22.29		
72250	22.22		72300	22		72350	21.75		
72400	21.5		72450	21.25		72500	21		
72550	20.75		72600	20.5		72650	20.25		
72700	20		72750	19.75		72800	19.5		
72850	19.25		72900	19		72950	18.75		
73000	18.5		73050	18.25		73100	18		
73150	17.75		73200	17.5		73250	17.28		
73300	17.19		73350	17.25		73400	17.44		
73450	17.66		73500	17.88		73550	18.1		
73600	18.32		73650	18.54		73700	18.75		
73750	18.97		73800	19.19		73850	19.41		
73900	19.63		73910	19.67	0	73910	19.67	16.34	
73950	19.79	16.45	73995	19.81	16.48	74035	19.75	16.41	
74035	19.75	0	74050	19.7		74100	19.48		
74150	19.26		74200	19.03		74250	18.81		
74300	18.59		74350	18.36		74400	18.14		
74450	17.92		74500	17.69		74550	17.47		
74600	17.25		74650	17.04		74700	16.89		
74750	16.8		74800	16.78		74850	16.77		
74900	16.76		74950	16.76		75000	16.75		
75050	16.74		75100	16.73		75150	16.72		
75200	16.71		75250	16.72		75300	16.75		
75350	16.79		75400	16.85		75450	16.9		
75500	16.95		75550	17		75600	17.05		
75650	17.1		75700	17.15		75750	17.2		
75800	17.25		75850	17.3		75900	17.35		
75950	17.4		76000	17.45		76050	17.5		
76100	17.55		76150	17.61		76200	17.66		
76250	17.71		76300	17.75		76350	17.81		
76400	17.86		76450	17.91		76500	17.96		
76550	18.01		76600	18.06		76650	18.11		
76700	18.16		76750	18.21		76800	18.26		
76850	18.31		76900	18.36		76950	18.42		
77000	18.47		77050	18.52		77100	18.57		
77150	18.62		77200	18.67		77250	18.72		
77300	18.77		77350	18.82		77400	18.87		
77450	18.92		77500	18.97		77550	19.02		
77600	19.07		77650	19.12		77700	19.17		
77750	19.23		77800	19.28		77850	19.33		
77900	19.38		77950	19.43		78000	19.48		

Downstream Bridge Cross Section Data
Station Elevation Data num= 321

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69867.68	15.86	9869.97	15.8	69879.9	15.79	69887.28	15.78	69889.83	15.77
69899.76	15.76	69906.87	15.75	69909.7	15.75	69919.58	15.74	69919.63	15.74
69921.85	15.73	69924.29	15.71	69926.47	15.78	69928.22	15.85	69929.56	15.85
69934.28	15.87	69938.14	15.65	69939.45	15.51	69965.66	14.85	69968.93	14.62
69969.28	14.62	69972.74	14.66	69978.62	15.03	69979.22	15.02	70142.02	15.68
70148	15.81	70148.05	15.81	70155.04	15.84	70157.99	15.79	70161.61	15.73
70197.71	15.32	70200.8	15.31	70207.69	15.28	70208.22	15.27	70237.69	15.72
70281.11	15.73	70290.53	15.67	70300.56	15.69	70367.69	15.97	70731.82	14.82
70757.69	15.33	70807.69	15.07	70852.36	14.77	70857.69	14.83	70907.69	15.13
71089.86	15.58	71287.69	16.33	71289.53	16.34	71295.59	16.31	71297.69	16.33
71302.76	16.35	71307.69	16.33	71465.31	15.57	71467.69	15.59	71617.69	16.36

71625.89	16.3871627.69	16.3771787.69	16.2371915.93	16.2771916.98	16.27
71919.91	16.2771922.16	16.25 71923.6	16.2671925.03	16.27 71925.9	16.27
71926.56	16.2971926.61	16.2971927.55	16.2972059.25	15.3472182.94	16.17
72184.43	16.1772185.35	16.1772188.81	16.1772192.11	16.1772192.54	16.17
72207.45	14.6572208.19	14.64 72214.1	14.6272215.12	14.6272215.64	14.62
72223.69	14.6872253.48	14.8972254.53	14.972276.49	15.44 72278	15.48
72280.77	15.48 72281.2	15.4872284.16	15.4872287.05	15.4872314.85	15.04
72360.88	14.9372367.46	14.972368.55	14.972376.22	14.9272377.04	14.93
72377.52	14.9372603.37	16.5572635.79	16.6372738.43	15.5172820.76	16.52
72838.92	17.172843.66	16.4172878.09	15.3472878.11	15.3472905.46	15.08
72949.97	14.9372950.76	14.9672953.27	15.0372960.76	15.3272964.51	15.52
73002.78	15.7273162.06	16.1973163.29	16.1873170.61	16.2373172.13	16.24
73173.34	16.2473263.41	17.53 73313.1	16.3673423.86	14.3773442.12	13.96
73495.86	13.3473499.81	13.3173504.41	13.3173504.55	13.3173505.19	13.31
73514.48	13.3173524.19	13.373524.55	13.373563.48	13.1273584.97	12.98
73645.39	12.9873646.93	1373647.93	12.97 73661.7	13.2473665.52	13.31
73675.59	13.573675.61	13.573681.34	13.5473685.66	13.5673743.27	13.89
73746.08	13.7673747.07	13.7173756.15	13.4773806.49	12.8273821.85	12.38
73826.48	12.2573826.63	12.2673829.21	12.3673856.84	12.7673858.13	12.77
73866.91	12.7873872.75	12.7673876.98	12.7473877.78	12.74 73924.3	12.09
73927.33	1273933.17	11.8373936.71	11.61 73937.4	11.56 73943	11.21
73947.47	11.1173948.15	11.09 73950.2	10.43 73955.9	9.55 73961.4	9.12
73963	8.57 73965.5	7.21 73974.1	6.8 73975.9	7.66 73979.7	8.86
73984.4	10.64 73985.9	10.52 73994.1	11.01 73995.9	11.1674007.88	11.31
74009.33	11.3374009.72	11.374013.41	11.3574038.09	11.8874040.94	11.94
74044.54	11.9374048.16	11.8374058.23	11.56 74068.3	11.29 74071.8	11.19
74072.97	11.274074.21	11.2374078.37	11.3274088.44	11.5474090.09	11.57
74091.75	11.5674093.85	11.5774094.56	11.58 74113.5	11.5774118.64	11.56
74128.71	11.5574177.89	11.2774178.09	11.2774178.32	11.2774178.74	11.27
74184.47	11.2774188.74	11.374216.54	11.5274217.31	11.5374218.74	11.56
74224.25	11.6874226.85	12.0774228.74	12.2174229.31	12.2574230.94	12.48
74233.47	12.774234.49	12.91 74237.9	13.8974261.25	13.0674303.78	12.82
74318.74	12.9374392.15	13.9174392.27	13.9174392.33	13.9274448.74	13.84
74518.74	13.574521.32	13.4774528.74	13.574534.94	13.5274588.74	14.09
74731.05	13.6574734.71	13.6674738.74	13.6374788.74	13.674790.05	13.46
74798.74	13.4374799.36	13.4374802.91	13.474936.15	13.11 75027.7	13.02
75158.74	13.6175168.74	13.675168.85	13.675178.74	13.6375218.74	14.57
75222.44	14.7675225.05	14.7775228.74	14.7575231.71	14.7375258.74	14.58
75264.22	14.5875265.17	14.5875317.79	14.6675318.74	14.6775321.51	14.68
75415.24	14.8275418.74	14.8175458.05	14.6275504.05	13.9175545.43	14.01
75548.74	1475578.74	13.7675579.66	13.7675675.45	13.6875699.54	13.69
75702.85	13.9775788.74	14.7275789.02	14.7475896.34	13.7276058.74	14.88
76068.74	14.8676070.36	14.8576173.27	13.976178.74	13.5676178.81	13.55
76179.67	13.5776352.89	13.4576358.13	13.4176358.74	13.4176359.89	13.42
76459.95	13.776621.23	13.4376628.74	13.48 76630.8	13.576661.57	13.8
76668.74	13.8776918.74	15.2576948.74	15.2777058.74	16.3177098.74	16.89
77099.37	16.977102.51	16.8777118.74	16.6677206.24	16.5877208.74	16.56
77238.74	16.3877268.74	16.2677278.74	16.2777294.44	16.2977358.74	16.73
77368.74	16.8877369.24	16.88 77372.3	16.8877435.72	16.6977448.74	16.76
77638.39	18.0777638.74	18.0877639.06	18.0877648.74	18.09 77665.1	18.1
77748.74	15.977749.11	15.8677808.74	16.477809.32	16.477884.82	15.87
77888.74	15.8777898.74	15.8677901.43	15.8677918.74	15.9678148.74	18.65
78148.99	18.6678158.74	18.7678159.33	18.7778167.33	18.7578168.74	18.75
78178.74	18.75				

Manning's n Values num= 5

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
69867.68	.11	73647.93	.08	73948.15	.04	73995.9	.08	74216.54	.1

Bank Sta: Left Right Coeff Contr. Expan.

73948.15 73995.9 .3 .5

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent

```
69867.68   73900   17.19       T
   7404578178.74   16.71       T
Sediment Elevation = 8.8

Upstream Embankment side slope              =       2 horiz. to 1.0 vertical
Downstream Embankment side slope            =       2 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .98
Elevation at which weir flow begins         =   16.71
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Abutments =  2

Abutment Data
Upstream     num=       4
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   73910   16.34   73910   14.34   73912   14.34   73932    4.34
Downstream     num=       4
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   73910   16.34   73910   14.34   73912   14.34   73932    4.34

Abutment Data
Upstream     num=       4
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   74013    4.41   74033   14.41   74035   14.41   74035   16.41
Downstream     num=       4
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   74013    4.41   74033   14.41   74035   14.41   74035   16.41

Number of Piers =  2

Pier Data
Pier Station     Upstream=   73950    Downstream=   73950
Upstream     num=       2
    Width   Elev    Width   Elev
       2       0       2    16.8
Downstream     num=       2
    Width   Elev    Width   Elev
       2       0       2    16.8

Pier Data
Pier Station     Upstream=   73995    Downstream=   73995
Upstream     num=       2
    Width   Elev    Width   Elev
       2       0       2    16.8
Downstream     num=       2
    Width   Elev    Width   Elev
       2       0       2    16.8

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       W.S. Pro Method

  W.S.Pro Data
    Left Embankment
       El of the top of the embankment = 19.67
       El of the toe of the abutment   = 12.52
    Right Embankment
       El of the top of the embankment = 19.75
       El of the toe of the abutment   = 12.38
    Abtument Type                      = 3 Sloping abutments and sloping embankments
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    Slope of abutments                  = 2
    Top with of embankment              = 30
    Centroid station of bridge opening =
    Wing Wall Type                      = No wing walls present
       Width                            =
       Angle                            =
       Radius                           =
    Guide Banks Type                    = No Guide Bank present
       Length                           =
       Offset                           =
       Angle                            =

Selected Low Flow Methods = W.S.Pro Method

High Flow Method
       Pressure and Weir flow
           Submerged Inlet Cd           =
           Submerged Inlet + Outlet Cd =      .8
           Max Low Cord                 =

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: 335

INPUT
Description:
Station Elevation Data    num=     321
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
69867.68    15.869869.97    15.8 69879.9   15.7969887.28   15.7869889.83   15.77
69899.76   15.7669906.87   15.75 69909.7   15.7569919.58   15.7469919.63   15.74
69921.85   15.7369924.29   15.7169926.47   15.7869928.22   15.8569929.56   15.85
69934.28   15.8769938.14   15.6569939.45   15.5169965.66   14.8569968.93   14.62
69969.28   14.6269972.74   14.6669978.62   15.0369979.22   15.0270142.02   15.68
   70148   15.8170148.05   15.8170155.04   15.8470157.99   15.7970161.61   15.73
70197.71   15.32 70200.8   15.3170207.69   15.2870208.22   15.2770237.69   15.72
70281.11   15.7370290.53   15.6770300.56   15.6970367.69   15.9770731.82   14.82
70757.69   15.3370807.69   15.0770852.36    14.770857.69   14.8370907.69   15.13
71089.86   15.5871287.69   16.3371289.53   16.3471295.59   16.3171297.69   16.33
71302.76   16.3571307.69   16.3371465.31   15.5771467.69   15.5971617.69   16.36
71625.89   16.3871627.69   16.3771787.69   16.2371915.93   16.2771916.98   16.27
71919.91   16.2771922.16   16.25 71923.6   16.2671925.03   16.27 71925.9   16.27
71926.56   16.2971926.61   16.2971927.55   16.2972059.25   15.3472182.94   16.17
72184.43   16.1772185.35   16.1772188.81   16.1772192.11   16.1772192.54   16.17
72207.45   14.6572208.19   14.64 72214.1   14.6272215.12   14.6272215.64   14.62
72223.69   14.6872253.48   14.8972254.53    14.972276.49   15.44   72278   15.48
72280.77   15.48 72281.2   15.4872284.16   15.4872287.05   15.4872314.85   15.04
72360.88   14.9372367.46    14.972368.55    14.972376.22   14.9272377.04   14.93
72377.52   14.9372603.37   16.5572635.79   16.6372738.43   15.5172820.76   16.52
72838.92    17.172843.66   16.4172878.09   15.3472878.11   15.3472905.46   15.08
72949.97   14.9372950.76   14.9672953.27   15.0372960.76   15.3272964.51   15.52
73002.78   15.7273162.06   16.1973163.29   16.1873170.61   16.2373172.13   16.24
73173.34   16.2473263.41   17.53 73313.1   16.3673423.86   14.3773442.12   13.96
73495.86   13.3473499.81   13.3173504.41   13.3173504.55   13.3173505.19   13.31
73514.48   13.3173524.19    13.373524.55    13.373563.48   13.1273584.97   12.98
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73645.39   12.9873646.93      1373647.93   12.97 73661.7   13.2473665.52   13.31
73675.59    13.573675.61    13.573681.34   13.5473685.66   13.5673743.27   13.89
73746.08   13.7673747.07   13.7173756.15   13.4773806.49   12.8273821.85   12.38
73826.48   12.2573826.63   12.2673829.21   12.3673856.84   12.7673858.13   12.77
73866.91   12.7873872.75   12.7673876.98   12.7473877.78   12.74 73924.3   12.09
73927.33      1273933.17   11.8373936.71   11.61 73937.4   11.56   73943   11.21
73947.47   11.1173948.15   11.09 73950.2   10.43 73955.9    9.55 73961.4    9.12
   73963    8.57 73965.5    7.21 73974.1     6.8 73975.9    7.66 73979.7    8.86
 73984.4   10.64 73985.9   10.52 73994.1   11.01 73995.9   11.1674007.88   11.31
74009.33   11.3374009.72    11.374013.41   11.3574038.09   11.8874040.94   11.94
74044.54   11.9374048.16   11.8374058.23   11.56 74068.3   11.29 74071.8   11.19
74072.97    11.274074.21   11.2374078.37   11.3274088.44   11.5474090.09   11.57
74091.75   11.5674093.85   11.5774094.56   11.58 74113.5   11.5774118.64   11.56
74128.71   11.5574177.89   11.2774178.09   11.2774178.32   11.2774178.74   11.27
74184.47   11.2774188.74    11.374216.54   11.5274217.31   11.5374218.74   11.56
74224.25   11.6874226.85   12.0774228.74   12.2174229.31   12.2574230.94   12.48
74233.47    12.774234.49   12.91 74237.9   13.8974261.25   13.0674303.78   12.82
74318.74   12.9374392.15   13.9174392.27   13.9174392.33   13.9274448.74   13.84
74518.74    13.574521.32   13.4774528.74    13.574534.94   13.5274588.74   14.09
74731.05   13.6574734.71   13.6674738.74   13.6374788.74    13.674790.05   13.46
74798.74   13.4374799.36   13.4374802.91    13.474936.15   13.11 75027.7   13.02
75158.74   13.6175168.74    13.675168.85    13.675178.74   13.6375218.74   14.57
75222.44   14.7675225.05   14.7775228.74   14.7575231.71   14.7375258.74   14.58
75264.22   14.5875265.17   14.5875317.79   14.6675318.74   14.6775321.51   14.68
75415.24   14.8275418.74   14.8175458.05   14.6275504.05   13.9175545.43   14.01
75548.74      1475578.74   13.7675579.66   13.7675675.45   13.6875699.54   13.69
75702.85   13.9775788.74   14.7275789.02   14.7475896.34   13.7276058.74   14.88
76068.74   14.8676070.36   14.8576173.27    13.976178.74   13.5676178.81   13.55
76179.67   13.5776352.89   13.4576358.13   13.4176358.74   13.4176359.89   13.42
76459.95    13.776621.23   13.4376628.74   13.48 76630.8    13.576661.57    13.8
76668.74   13.8776918.74   15.2576948.74   15.2777058.74   16.3177098.74   16.89
77099.37    16.977102.51   16.8777118.74   16.6677206.24   16.5877208.74   16.56
77238.74   16.3877268.74   16.2677278.74   16.2777294.44   16.2977358.74   16.73
77368.74   16.8877369.24   16.88 77372.3   16.8877435.72   16.6977448.74   16.76
77638.39   18.0777638.74   18.0877639.06   18.0877648.74   18.09 77665.1    18.1
77748.74    15.977749.11   15.8677808.74    16.477809.32    16.477884.82   15.87
77888.74   15.8777898.74   15.8677901.43   15.8677918.74   15.9678148.74   18.65
78148.99   18.6678158.74   18.7678159.33   18.7778167.33   18.7578168.74   18.75
78178.74   18.75

Manning's n Values        num=       5
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
69867.68     .1173647.93     .0873948.15     .04 73995.9     .0874216.54      .1

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73948.15 73995.9              135     135     135              .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
69867.68   73900   17.19       T
   7404578178.74   16.71       T
Sediment Elevation = 8.8

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: 200

INPUT
Description: 200 FT DOWNSTREAM OF THE PROPOSED CL
Station Elevation Data    num=     263
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
70132.29   15.770133.16   15.7570133.83   15.7970134.33   15.77 70135.7    15.7
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70139.57   15.4570142.02   15.07 70145.1   14.2970146.64   13.87 70146.7   14.01
70147.37   14.2670147.95   14.4170164.55   14.8470239.53   15.5370242.72   15.64
70242.93   15.6570266.03   16.1870267.39    16.370268.31   16.3470272.93   16.32
70282.93   16.29 70283.8   16.2870341.37   15.9470342.93    15.970346.51   15.82
70351.99    15.970352.93   15.9170392.93   16.8170394.14   16.8570401.49   16.74
70402.93   16.7670404.66   16.7870842.51   14.5570842.93   14.54 70846.1   14.43
70848.04    14.370848.49   14.3170872.01   14.5170872.93   14.5270873.02   14.52
70873.03   14.5271277.71   14.6771649.59   14.7471992.85   14.7772317.05    14.8
72514.67   14.7672517.98   14.8472521.98   14.8872538.18   15.0172540.07   15.02
72544.49   15.0572548.85    15.272550.07   15.2872556.31   15.6872560.07   15.35
72562.98    15.172564.62   15.0872569.13   15.4172570.07   15.4972571.31   15.59
72600.07   15.0372606.18   15.25 72609.3   15.3672610.07   15.3972610.12   15.39
72610.32    15.472611.31   15.3772736.79   15.6472740.07   15.6772750.07   15.76
72751.71   15.7872752.55   15.7772758.44   15.7572760.07   15.7672763.64   15.76
72767.32   15.7672770.07    15.772770.18   15.6972853.92   15.5572860.07   15.62
72860.74   15.6272863.47   15.6172867.98   15.6172870.07    15.672880.07   15.54
72890.07   15.4872900.07   15.4372904.38    15.472908.18    15.472910.07    15.4
72920.07   15.4272940.39   15.4672993.82    15.672994.37    15.673142.35   16.64
73142.38   16.6473143.67   16.6473150.97   16.6373153.88   16.6373163.58   16.61
 73164.1   16.6173164.49   16.6173170.61   16.2973174.31    16.173174.67   16.08
73177.11      1673182.72      1673184.53   16.0273190.25    16.173194.75   16.15
 73198.7    16.273204.96   16.16 73209.9   16.1373212.25   16.1273215.18   16.11
 73225.4   16.0873227.74   16.0773229.54   16.0673231.73   16.0573235.61   16.05
73235.85   16.0573242.91   16.3473245.83   16.5473249.19   16.7773256.05   17.25
73257.91   17.3773266.26   17.5373268.31   17.5773268.83   17.5773275.79   17.61
73275.89   17.62 73275.9   17.6173276.03   17.6173276.48   17.5773276.77   17.54
73280.05   17.45 73286.7    17.273288.47   17.1473296.91   16.8273307.13   16.45
73308.12   16.4173314.09   16.1973317.34   16.2573322.18   16.3373327.56   16.42
73327.76   16.4373329.65   16.46   73335   16.4573763.62    13.6 73763.8    13.6
73766.87    13.673772.46   13.5973777.09   13.5173779.56   13.46 73787.3   13.33
73807.73   12.9973828.17   12.6473851.24   12.2573858.13   12.0573858.82   12.03
73864.55   11.86 73868.7   11.8973869.03   11.8873877.78   11.6673878.15   11.65
73879.25   11.6473889.47   11.5973897.42   11.5573899.68   11.54 73909.9   11.49
73917.06   11.4573920.12   11.43 73924.311.4095373930.33   11.38 73931.5   11.38
73936.71   10.8873939.75   10.5573946.65    9.9473950.76    9.5973956.35    9.11
73960.97    8.7273960.98    8.7273964.07    8.86 73971.2    9.5373975.99    9.98
73981.41   10.4973986.68   10.98 74000.5    11.474034.95   11.3674040.9411.33595
74064.81   11.2474073.36   11.2574074.21   11.25 74082.6   11.2774083.58   11.28
74093.09   11.3374093.79   11.3374093.85   11.3374104.01   11.4174107.09   11.43
 74113.5    11.774114.23   11.7374124.44   12.1574125.06   12.1774129.47   12.36
74130.46   12.3674133.14    12.474134.63   12.4274144.63   12.5574154.63   12.68
74197.38   13.1874204.63   13.1874205.47   13.1874212.32   13.2274213.91    13.2
74214.63    13.274224.63    13.274228.94    13.274231.71   13.2574234.63   13.29
74244.63   13.4274250.58    13.574296.38   13.6474304.63   13.7274305.52   13.73
74309.79   13.7974481.52   14.09   74677   14.3474800.95   14.4674984.63   14.52
75009.82   13.8675010.18   13.8575012.33   13.6275013.93   13.5475014.63    13.6
75016.42   13.7375044.63   14.1175087.01   14.3175454.11   14.3675864.12   14.04
76050.06   13.9476193.09    13.876312.27   13.6676350.41   13.5776393.33   13.46
76433.38   13.1976434.63   12.4676437.83   10.5976438.19   10.3576443.33   10.63
76443.47   10.6376444.63   11.2276446.47   12.1576448.92   13.3676504.63   13.78
76514.63   13.8476554.63    13.876703.22   14.2676870.09   14.73 77442.2   16.37
77756.54   17.2777759.49    17.577776.71   18.26

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
70132.29     .11 73931.5     .04 74000.5     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       73931.5 74000.5              100     100     100              .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
70132.2973688.72   17.19       F
74428.0277776.71   16.71       F
```

Sediment Elevation = 8.75

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: 100

INPUT
Description:
Station Elevation Data num= 484

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
70171.03	15.387	0171.89	15.397	0172.55	15.39	70173	15.387	0173.04	15.37
70174.39	15.37	0177.24	15.13	70178.2	15.077	0179.73	14.917	0180.61	14.82
70183.64	14.357	0185.16	14.17	0185.21	14.177	0185.86	14.287	0186.44	14.34
70195.12	14.227	0196.33	14.047	0197.34	13.997	0197.58	14.057	0198.24	14.18
70202.77	14.287	0232.05	14.717	0232.34	14.717	0232.47	14.717	0276.52	14.94
70279.65	14.997	0279.86		157	0302.58	15.287	0303.91	15.347	0304.82	15.36
70309.36	15.35	70319.2	15.347	0320.05	15.337	0376.67	15.19	70378.2	15.17
70381.73	15.147	0387.12	15.187	0388.05	15.187	0427.39	15.657	0428.58	15.67
70435.8	15.627	0437.22	15.637	0438.92	15.64	70646.2	15.217	0869.56	14.69
70869.98	14.687	0873.09	14.63	70875	14.567	0875.45	14.577	0898.58	14.68
70899.48	14.687	0899.58	14.687	1087.44	14.76	71297.6	14.777	1523.83	14.77
71663.36	14.747	1863.23	14.697	2000.97	14.667	2149.32	14.637	2319.83	14.53
72352.97	14.517	2440.86	14.047	2445.36	14.057	2448.88	14.057	2452.38	14.06
72453.61	14.06	72457.5	14.147	2459.41	14.147	2466.42	14.147	2472.97	14.15
72473.44	14.157	2478.12	14.14	72481	14.167	2489.03	14.2	72489.5	14.2
72494.5	14.37	2495.02	14.317	2498.17	14.377	2501.53	14.367	2508.55	14.31
72513.11	14.32	72514.2	14.327	2515.58	14.337	2515.77	14.337	2517.45	14.35
72521.38	14.367	2522.59	14.367	2526.37	14.377	2532.81	14.337	2534.25	14.32
72537.31	14.377	2539.17	14.417	2543.53	14.497	2547.81	14.627	2549.02	14.68
72555.16	14.977	2558.84	14.86	72561.7	14.787	2563.32	14.797	2567.77	15.02
72568.69	15.077	2569.91	15.147	2581.78	15.27	2591.95	15.087	2597.08	15.02
72598.19		157	2602.12	15.02	72604.2	15.047	2606.52	15.077	2607.27	15.09
72608.02	15.127	2608.07	15.127	2608.27	15.137	2609.25	15.137	2614.33	15.22
72642.67	15.257	2642.81	15.257	2652.98	15.247	2663.15	15.337	2673.23	15.42
72673.32	15.437	2677.02	15.437	2683.48	15.447	2691.77	15.457	2693.66	15.45
72700.34	15.447	2703.83	15.427	2704.84	15.41	72714	15.367	2719.66	15.33
72724.17	15.347	2732.66	15.377	2734.34	15.387	2735.88	15.397	2744.52	15.43
72745.72	15.437	2747.33	15.447	2747.98	15.447	2748.16	15.437	2753.95	15.41
72754.68	15.417	2755.55	15.417	2759.06	15.47	2762.69	15.47	2765.39	15.36
72765.5	15.357	2777.02	15.327	2777.81	15.317	2779.03	15.327	2785.62	15.32
72807.76	15.317	2810.23	15.31	72815.7	15.287	2821.55	15.257	2825.88	15.27
72847.73	15.367	2847.86	15.36	72849.3	15.377	2851.59	15.397	2853.91	15.44
72854.57	15.457	2856.38	15.477	2857.25	15.487	2861.69	15.547	2863.74	15.56
72866.55	15.67	2867.39	15.67	2873.58	15.637	2874.41	15.647	2876.72	15.61
72883.41	15.51	72887.2	15.467	2893.25	15.447	2897.06	15.437	2897.49	15.43
72901.23	15.427	2903.09	15.427	2907.23	15.427	2911.38	15.427	2912.92	15.45
72917.41	15.557	2918.89	15.597	2932.91	15.597	2944.52	15.617	2947.91	15.56
72985.45	15.53	72986	15.537	3131.55	15.727	3131.58	15.727	3132.84	15.72
73140.02	15.77	3142.88	15.697	3145.06	15.687	3148.16	15.677	3152.42	15.66
73152.94	15.667	3153.32	15.667	3159.34	15.487	3162.98	15.387	3163.33	15.37
73165.73	15.327	3169.41	15.317	3171.25	15.37	3173.03	15.317	3175.54	15.32
73178.66	15.357	3180.03	15.36	73180.3	15.367	3183.08	15.387	3185.72	15.4
73186.97	15.417	3190.65	15.397	3193.12	15.397	3197.98	15.377	3200.29	15.36
73201.27	15.367	3203.17	15.367	3206.03	15.367	3211.88	15.357	3213.22	15.35
73215.53	15.34	73216.8	15.34	73217.3	15.347	3219.45	15.347	3222.52	15.34
73223.27	15.34	73223.5	15.357	3230.44	15.557	3233.31	15.687	3236.62	15.82
73243.37	16.12	73245.2	16.27	3246.38	16.227	3246.67	16.237	3249.45	16.33
73253.41	16.467	3254.36	16.497	3255.43	16.537	3255.52	16.537	3255.94	16.55
73262.78	16.757	3262.88	16.767	3263.02	16.757	3263.23	16.757	3263.46	16.75
73263.75	16.747	3264.45	16.75	73265	16.747	3265.84	16.737	3266.97	16.72
73267.01	16.727	3272.56	16.677	3273.52	16.657	3275.25	16.67	3275.61	16.59

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73275.78   16.5873280.95   16.4373282.54   16.2373283.55   16.1373283.96   16.09
73286.23   15.9673286.47   15.9573287.33    15.973287.36    15.9 73288.3   15.91
73291.02   15.9473293.61   15.8973294.58   15.8873300.45   15.7873303.66   15.81
73308.41   15.86 73313.7   15.9273313.89   15.9273315.76   15.9473321.02   15.95
 73365.5   15.8873742.58   13.0373742.76   13.0373745.78   13.0273751.28   12.99
73755.84   12.9373758.27    12.973765.88    12.873780.34   12.6273785.39   12.57
73785.97   12.5773790.17   12.5373791.33   12.5373795.38   12.45   73796   12.44
73806.07   12.2573806.62   12.24 73815.7   12.0673817.25   12.0373827.86   11.83
73828.77   11.8273835.54   11.6573836.03   11.6373836.22   11.6373838.48   11.57
73841.84   11.4973845.94   11.4673846.26   11.45 73849.1   11.3873854.86   11.25
73855.23   11.2473856.31   11.2373856.34   11.2273859.72   11.1873866.36    11.1
73874.19      1173876.41   10.9773880.96   10.9173883.98   10.8873886.45   10.77
73891.58   10.54 73893.5   10.4573894.66    10.4 73896.5   10.3873896.98   10.38
 73902.2   10.3373906.55   10.29 73907.7   10.2873912.83      1073916.56    9.83
73917.52    9.7873919.94    9.6773921.66    9.5873924.34    9.4573924.98    9.41
   73930     9.173930.48    9.07 73931.59.00843373933.47    8.8973936.84    8.68
73939.31    8.5373940.62    8.4573942.48    8.3373944.53    8.4973949.25    9.02
73952.41    9.3873955.62    9.7573955.98    9.7873956.28    9.8173959.47   10.08
73960.52    10.1 73968.2   10.2173973.55   10.2973978.47   10.2973980.14   10.29
73988.72   10.2973991.91   10.2873992.72   10.3573998.98   10.4173999.77   10.42
 74000.510.4273974008.62   10.5174009.23   10.5174019.41    10.674019.49    10.6
74019.62    10.674029.74   10.7174039.03   10.8174040.02   10.8274045.19   10.88
74047.73    10.9 74048.6    10.974050.27   10.9174057.15   10.9574058.14   10.96
74058.66   10.9674060.53   10.9774065.66   11.0174067.83   11.0374068.54   11.03
74068.61   11.0374070.78   11.0574078.95   11.1374081.05   11.1574082.09   11.16
74088.61   11.3474089.35   11.3574099.75   11.6374100.39   11.6474104.88   11.76
74105.88   11.7774108.61   11.8174110.13   11.8274111.81   11.8574117.55   11.91
74120.31   11.9574122.08   11.97 74130.5   12.0774132.33    12.174159.52   12.42
74162.83   12.4674172.31   12.5774172.66   12.5874174.03   12.5974181.41   12.63
74182.27   12.6474189.24    12.774190.86   12.6974191.59    12.774191.95    12.7
 74192.3    12.774194.53   12.6974201.78   12.7374202.12   12.7374206.16   12.75
74208.98   12.7974211.95   12.8274211.97   12.8274211.98   12.8374217.55   12.96
74221.77   13.0274222.15   13.03 74228.2    13.174231.59   13.1374236.02   13.14
 74236.2   13.1474237.09   13.1574274.84   13.3174283.25   13.3774284.16   13.38
 74288.5   13.4274397.88    13.874398.59   13.8174463.38   13.8974522.45   13.95
74662.44   14.0874788.66   14.1874915.85   14.24   74958      14 74975.7   14.08
75001.35   13.8675001.72   13.8675003.91   13.7575005.53   13.7275006.25   13.75
75008.08   13.82 75014.2   13.89 75036.8   14.0475079.95   14.1575445.06    14.2
75453.78    14.2 75871.3   13.8975983.65   13.8276060.66   13.74 76206.3   13.56
76327.66   13.41 76366.5   13.3376391.09   13.28 76410.2   12.3876423.88   11.71
76428.56   13.2876450.99   13.2776452.27    12.976455.52   11.9876455.89   11.86
76461.12   12.0176461.27   12.0176462.45   12.3176464.32   12.7876466.81   13.39
76480.08   13.4876523.55   13.6876533.73   13.7276574.47   13.7476725.77   14.11
 76895.7    14.576953.08   14.6377210.67   15.32 77478.3   16.1677510.41   16.27
77721.16   17.3477798.39   17.8377801.39   17.9677804.14   18.0377807.27   18.22
77807.92   18.2677809.88   18.36 77818.9   18.6577818.93   18.65

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
70171.03      .173912.83     .0473959.47     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73912.8373959.47              100     100     100              .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
70171.03 73478.6   17.19       F
74630.3577818.93   16.71       F

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: 0
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INPUT
Description: 400 FT DOWNSTREAM OF THE PROPOSED CL
Station Elevation Data num= 233

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
70209.78	15.06	70211.72	14.98	70215.88	14.75	70218.33	14.61	70233.46	13.81
70234.66	13.41	70235.65	13.29	70235.88	13.39	70236.53	13.64	70269.78	14.3
70270.06	14.3	70270.19	14.3	70677	14.72	71110.84	14.93	71539.93	14.82
71873.66	14.62	72154.95	14.47	72355.19	14.23	72441.61	13.3	72446.03	13.32
72449.5	13.33	72452.94	13.35	72454.15	13.35	72457.98	13.5	72459.84	13.51
72466.75	13.52	72473.19	13.53	72473.65	13.53	72478.26	13.52	72481.08	13.55
72488.98	13.64	72489.44	13.64	72494.36	13.83	72494.87	13.85	72497.96	13.98
72501.27	13.95	72508.17	13.86	72512.66	13.87	72515.08	13.87	72515.27	13.87
72521.98	13.83	72525.69	13.82	72532.02	13.69	72533.44	13.65	72580.18	15.04
72590.18		72595.21	14.99	72600.18	14.87	72604.5	14.8	72612.18	15.05
72640.05	15.05	72640.18	15.05	72650.18	15.02	72660.18	15.18	72670.09	15.34
72670.18	15.34	72673.81	15.35	72680.18	15.35	72688.32	15.34	72690.18	15.34
72696.76	15.31	72700.18	15.26	72701.17	15.25	72710.18	15.12	72715.74	15.05
72720.18	15.06	72730.18	15.11	72740.18	15.11	72743.59	15.1	72750.18	15.07
72772.15	14.96	72772.92	14.96	72774.12	14.97	72780.61	14.98	72802.37	15.01
72804.8	15.01	72810.18	14.96	72815.93	14.9	72820.18	14.95	72841.67	15.16
72843.22	15.17	72845.47	15.19	72850.18	15.32	72860.18	15.61	72861	15.63
72867.91	15.74	72870.18	15.69	72880.48	15.46	72890.18	15.46	72900.18	15.43
72904.25	15.42	72910.18	15.68	72911.64	15.74	72936.84	15.72	72940.18	15.63
73134.03	14.74	73137.08	14.73	73157.96	14.62	73163.99	14.58	73168.41	14.6
73168.67	14.6	73174	14.61	73178.85	14.61	73189.29	14.61	73193.98	14.61
73199.73	14.62	73204.57	14.62	73210.18	14.63	73210.92	14.64	73233.64	15.05
73233.94	15.07	73236.67	15.2	73241.5	15.44	73242.63	15.5	73250.23	15.91
73251.42	15.97	73251.95	15.97	73252.78	15.97	73253.93	16	73259.4	16.11
73262.39	16.05	73262.56	16.05	73267.65	15.94	73269.2	15.61	73270.6	15.38
73272.83	15.2	73273.07	15.18	73273.91	15.12	73273.94	15.12	73274.87	15.17
73277.54	15.33	73350.77	15.61	73758.68	12.15	73763.63	12.15	73768.34	12.15
73769.48	12.16	73773.46	12.07	73774.07	12.06	73784.51	11.84	73793.44	11.65
73794.96	11.62	73805.4	11.4	73813.43	11.23	73815.84	11.18	73826.28	10.96
73833.41	10.81	73836.72	10.74	73857.61	10.31	73860.58	10.25	73868.05	9.62
73871.08	9.36	73873.37	9.33	73878.49	9.26	73888.94	9.12	73893.35	9.06
73897.34	9.01	73899.38	8.97	73902.55	8.92	73909.82	8.59	73912.83	8.45
73913.34	8.43	73920.26	8.12	73921.8	8.05	73924.01	7.94	73930.39	9.06
73930.71	9.08	73932.26	9.18	73933.32	9.18	73941.15	9.18	73951.59	9.19
73953.3	9.19	73959.47	9.19	73962.03	9.19	73965.27	9.19	73966.1	9.32
73972.48	9.45	73973.28	9.47	73982.92	9.67	73993.27	9.88	73993.36	9.89
73993.49	9.89	74003.8	10.14	74013.25	10.37	74014.25	10.39	74019.52	10.52
74024.69	10.56	74033.23	10.64	74035.13	10.65	74040.36	10.7	74045.57	10.76
74056.02	10.88	74087.34	11.25	74093.18	11.31	74097.79	11.37	74108.23	11.49
74135.9	11.82	74139.28	11.86	74148.93	11.97	74149.28	11.99	74168.93	12.2
74169.28	12.2	74171.55	12.19	74179.28	12.26	74189.28	12.36	74189.32	12.36
74194.98	12.55	74199.28	12.63	74209.28	12.74	74213.79	12.76	74213.96	12.76
74214.88	12.78	74378.55	13.63	74379.28	13.65	74505.37	13.73	74905.84	13.98
74948.75	13.48	75005.96	13.97	75444.58	14.05	75992.85	13.65	76407.62	13.06
76441	10.05	76445.77	13.22	76498.21	13.5	76979.73	14.37	77241.95	15.02
77547.08	16.07	77761.62	17.62	77846.09	18.44	77849.28	18.69	77849.94	18.74
77851.93	18.85	77861.12	19.04	77861.15	19.04				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
70209.78	.17	73888.94	.04	73932.26	.08

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73888.94	73932.26	425	410	250	.3	.5

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
70209.78	73263.04	17.19	T
74829.56	77861.15	16.73	T

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -590.*

INPUT
Description:
Station Elevation Data num= 371

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68767.19	16.5368	769.87	16.4668	773.22	16.3568	775.62	16.2868	778.99	16.18
68799.88	15.6168	801.53	15.468	802.91	15.3368	803.23	15.3868	804.12	15.5
68850.03	15.4568	850.42	15.4568	850.59	15.4569	412.23	11.1269	568.25	9.89
69828.11	8.93	70011.2	8.7370	100.29	8.670	227.33	8.5670	396.05	8.93
70396.75	8.9470	592.88	9.4170	599.08	9.4970	603.61	9.571	064.35	10.2
71126.72	10.371	452.72	10.8971	564.44	11.0771	567.73	11.171	729.16	12.09
71848.47	12.4271	854.58	12.4771	859.37	12.571	864.11	12.5571	865.78	12.56
71871.07	12.6771	873.65	12.6971	883.19	12.7671	892.07	12.82	71892.7	12.82
71899.07	12.8671	902.97	12.971	913.88	13.02	71914.5	13.02	71921.3	13.16
71922	13.1871	926.27	13.2771	930.84	13.2971	940.38	13.371	946.56	13.35
71949.91	13.3771	950.17	13.3771	959.43	13.4171	964.55	13.44	71973.3	13.44
71975.25	13.4372	039.78	14.5572	053.59	14.6272	060.54	14.66	72067.4	14.65
72073.36	14.6572	083.97	14.8572	108.94	15.0172	110.73	15.0272	122.44	15.02
72122.62	15.0272	136.42	15.0172	150.23	15.0972	163.92	15.1772	164.04	15.17
72169.05	15.1872	177.84	15.1872	189.09	15.1772	191.66	15.1772	200.73	15.16
72205.45	15.1372	206.83	15.1272	219.27	15.0672	226.95	15.0272	233.07	15.03
72246.88	15.0672	260.69	15.0672	265.39	15.0572	274.48	15.0372	304.82	14.98
72305.89	14.9872	307.53	14.99	72316.5	14.9972	346.54	15.0172	349.89	15.01
72357.33	14.9872	365.27	14.9572	371.13	14.98	72400.8	15.0872	402.94	15.09
72406.05	15.0972	412.55	15.1672	426.36	15.3172	427.48	15.3272	437.02	15.37
72440.16	15.3472	454.38	15.2372	467.77	15.2372	481.58	15.22	72487.2	15.21
72495.39	15.3472	497.41	15.37	72532.2	15.36	72536.8	15.3272	613.99	15.19
72616.59	15.1572	804.44	14.0272	808.64	14	72836.7	13.8272	837.02	13.81
72837.48	13.81	72845.8	13.7872	851.89	13.7872	852.27	13.7872	859.62	13.78
72866.31	13.7772	880.73	13.76	72887.2	13.7572	895.14	13.7572	901.83	13.74
72909.57	13.7472	910.59	13.7472	941.96	13.9272	942.37	13.9372	946.14	13.99
72952.81	14.172	954.38	14.1372	964.86	14.3272	966.51	14.3572	967.24	14.35
72968.39	14.3572	969.97	14.3672	977.52	14.4172	981.66	14.3872	981.89	14.38
72988.91	14.3172	991.06	14.1572	992.98	14.0372	996.06	13.9472	996.39	13.93
72997.55	13.972	997.59	13.972	998.88	13.9273	002.56	1473	103.67	14.03
73324.28	13.1373	470.48	12.2373	473.53	12.1773	587.28	11.4473	594.56	11.3
73666.83	11.0573	673.67	11.0473	680.17	11.0473	681.73	11.0573	687.23	11
73688.08	10.9973	696.86	10.9273	702.49	10.7573	705.34	10.66	73713.8	10.39
73714.82	10.3673	716.78	10.3173	716.92	10.3173	731.33	10.1473	742.42	10.01
73745.75	9.9773	760.16	9.81	73770	9.6973	774.58	9.6473	798.93	9.36
73803.42	9.2573	807.47	9.1673	807.52	9.1573	817.83	8.8373	822.02	8.7
73825.17	8.6873	832.25	8.6473	840.31	8.5973	841.73	8.5673	842.36	8.55
73846.67	8.46	73849.7	8.3973	855.88	8.2573	856.93	8.2373	860.81	8.14
73864.09	8.07	73864.2	8.0773	867.45	7.9973	868.45	7.9873	875.05	7.92
73890.22	7.6873	896.48	7.5973	897.56	7.5773	902.44	7.4973	907.44	7.39
73911.98	7.2973	914.67	7.24	73915.2	7.22	73919.8	7.1273	921.59	7.18
73927.75	7.3673	932.84	7.5	73933.9	7.5573	940.05	7.873	942.12	7.89
73946.27	8.0573	949.84	8.273	951.34	8.2573	952.42	8.2873	952.64	8.28
73958.62	8.5273	959.69	8.5473	962.44	8.59	73967.5	8.6873	969.16	8.72
73969.66	8.7373	977.92	8.8873	979.62	8.9173	980.78	8.9373	985.78	8.93
73988.34	8.9373	991.57	8.93	73992.4	973	998.76	9.0673	999.56	9.07
74009.18	9.1774	019.51	9.2874	019.59	9.2874	019.73	9.2874	030.01	9.41
74039.44	9.5274	040.44	9.53	74045.7	9.674	050.85	9.6274	059.38	9.66
74061.27	9.6774	066.48	9.6974	071.69	9.7274	082.12	9.7874	113.37	9.97
74119.19	1074	123.79	10.03	74134.2	10.0974	161.81	10.2674	165.19	10.28
74174.81	10.3474	175.17	10.3574	194.77	10.4574	195.12	10.4574	197.38	10.45
74205.09	10.4874	215.08	10.5374	215.12	10.5374	220.76	10.6374	225.05	10.67

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74235.03   10.7374239.53   10.74 74239.7   10.7474240.62   10.75 74346.6   11.03
74356.32   10.8674364.14   10.7174403.92   10.8374404.66   10.84 74482.6   10.89
74492.33   11.0474493.83   11.0674530.45   11.6774549.75      1274550.66   12.02
74618.71   14.3574620.22   14.3974628.43   14.5174643.97   14.74 74657.5   14.84
74930.03   14.9174972.84   14.6675000.77   14.7775029.92   14.7575080.75    14.5
75467.56   14.4975621.16   14.4175658.05   13.99 75681.2   13.9975691.22   13.97
75701.25   13.9675703.65   13.9675705.34   13.9675751.26   14.4176014.61   14.31
76239.55   14.1576241.55    14.176251.58   13.8876291.66   13.5876311.62   13.36
76321.64   13.2576428.44   10.6976451.73    9.0976461.75    8.5376462.05    8.56
76474.89   10.1176481.67   10.1276534.94   13.5176619.24   13.71   76652   13.76
76656.95   13.8576814.83   15.5876815.56   15.5976888.09   16.1976888.76    16.2
76894.87   16.3276896.27   16.3476920.66   16.3576923.41   16.25 76947.3   15.42
 76949.8   15.3776950.53   15.3676955.84   15.2676968.06   15.0477010.77   14.81
77019.81   14.6677029.09    14.577033.98   14.4277035.15    14.477036.19   14.39
77086.23    14.477090.07   14.4777090.62   14.4877095.39   14.5877096.19   14.59
 77102.3    14.777108.41   14.82 77297.5   15.3677302.69   15.4677303.06   15.47
77303.36   15.4777510.97   15.88 77515.5   16.0477835.83   16.1577944.77   15.97
   78351   15.3778635.41    15.578639.56   15.5778666.64   15.6378872.34   16.14
78877.41   16.2378877.47   16.2378883.58   16.3479020.44   16.7379023.86   16.79
79029.97    16.9   79331   17.4379334.78   17.4679347.12   17.5679347.98   17.57
79394.29   17.9679506.59   18.0380097.19   18.8180132.53   18.8780133.32   18.85
80329.73    19.180338.51   19.2280340.31   19.25 80345.8    19.380371.09   19.38
80371.17   19.38

Manning's n Values        num=       7
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
68767.19      .173846.67    .03573958.62     .0873974.56     .0874237.66    .065
74461.25     .0880371.17     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73846.6773958.62              425     410     250              .3       .5
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
68767.1972576.79   17.19       F
74835.5380371.17   16.73       F

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -1180

INPUT
Description:
Station Elevation Data    num=     145
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 67324.6      18 67332.3   17.85 68346.5       5   68678       369025.21    2.29
69187.27    2.24 69402.5       3 69403.4    3.02 69653.6       4 69661.5    4.16
 70334.6       6   70893    7.76 70897.2    7.83 71587.6   14.97 71589.9      15
 72231.9      15 72235.2   14.94   72516   13.02 72516.4      13   73138      12
 73324.5    11.1 73328.4      11 73473.5   10.24 73482.8      10 73613.3    9.92
 73624.1    9.52 73634.9    9.11 73636.2    9.06 73638.7       9 73743.5    8.34
 73754.4    8.06 73796.3       8 73798.1    7.96 73798.9    7.93 73804.4     7.8
   73809    7.68   73820     7.4 73825.9    7.25 73830.9    7.13   73836       7
 73889.2    6.66 73896.8    6.56 73907.8    6.41 73915.6    6.31 73918.8    6.35
 73929.8    6.48 73938.9    6.58 73940.8    6.63 73951.8    6.91 73955.5       7
 73962.9    7.18 73973.9    7.46 73974.3    7.47   73985    7.86 73988.8       8
 73995.5    8.25   73996    8.27 74007.1    8.67 74372.1    8.73 74381.8    8.33
 74389.6       8 74507.8    8.09 74517.5    8.37   74519    8.41 74574.8   10.25
 74575.7   10.29 74643.6   14.91 74645.1      15 74653.3   15.23 74668.8   15.68
 74682.3   15.88 75024.8   15.83 75104.6   15.03 75643.8   14.89 75680.6   14.06
 75703.7   14.08 75713.7   14.06 75723.7   14.04 75726.1   14.04 75727.8   14.04
 75773.6   14.98 76260.8   14.97 76262.8   14.88 76272.8   14.45 76312.8    13.9
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76332.7	13.49	76342.7	13.28	76472.5	7.23	76482.5	7.01	76483	7
76515.1	7	76602.3	13.69	76793.9	14	76802	14.18	77060.4	17.53
77061.6	17.55	77180.3	18.7	77181.4	18.72	77191.4	18.95	77193.7	19
77233.6	19	77238.1	18.81	77277.2	17.12	77281.3	17.03	77282.5	17
77291.2	16.8	77311.2	16.35	77381.1	15.86	77395.9	15.55	77411.1	15.24
77419.1	15.07	77421	15.03	77422.7	15	77504.6	15	77510.9	15.14
77511.8	15.16	77519.6	15.34	77520.9	15.37	77530.9	15.59	77540.9	15.82
77850.4	16.78	77858.9	16.98	77859.5	16.99	77860	17	78199.8	17.68
78207.2	18	78731.5	18	79574.7	16	80040.2	16	80047	16.14
80428	17	80436.3	17.17	80436.4	17.17	80446.4	17.38	80670.4	18
80676	18.12	80686	18.32	81178.7	19	81184.9	19.06	81205.1	19.25
81206.5	19.26	81282.3	20	82490.6	20	82491.9	19.96	82881.2	19.72

Manning's n Values num= 5

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
67324.6	.1	73804.4	.035	74007.1	.08	74372.1	.05	74682.3	.08

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73804.4	73985	900	410	410	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
67324.67	1890.54	17.19	F
74783.91	82881.2	16.73	F

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -1590.*

INPUT
Description:
Station Elevation Data num= 265

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
67972.3	14.5	67979.3	14.43	68205.73	12.85	68362.77	11.25	68364.44	11.21
68618.55	6.47	68648.8	5.79	68650.58	5.75	68650.7	5.74	68813.84	4.61
68900.61	3.98	69201.75	2.92	69338.81	2.74	69517.16	2.54	69664.38	2.51
69859.89	2.89	69860.71	2.97	70049.08	3.3	70088	3.39	70095.17	3.47
70619.16	4.37	70706.63	4.45	71105.12	5.25	71213.89	5.73	71217.7	5.78
71256.84	6.11	71260.29	6.16	71844.88	9.49	71846.96	9.57	72271.88	9.5
72356.28	10.25	72430.16	10.71	72433.17	10.77	72544.12	10.97	72688.25	11.26
72688.61	11.25	72709.27	11.36	72709.94	11.36	72715.61	11.41	72720.95	11.45
72723.4	11.47	72836.61	11.82	72842.84	11.86	73253.28	11.92	73320.5	11.81
73321.72	11.82	73333.28	11.79	73345.41	11.72	73357.42	11.64	73357.86	11.65
73364.2	11.71	73422.7	11.52	73426.24	11.47	73558.05	11.01	73566.5	10.89
73627	10.83	73627.44	10.83	73685.05	10.27	73687.61	10.27	73694.86	10.02
73697.06	9.97	73699.5	9.88	73704.67	9.69	73705.86	9.65	73708.12	9.58
73711.52	9.52	73713.3	9.48	73737.77	9.4	73745	9.28	73747.22	9.25
73803.33	7.97	73806.49	7.87	73813.23	7.55	73851.29	6.68	73852.93	6.62
73853.53	6.67	73853.66	6.59	73858.65	6.47	73861.69	6.32	73868.97	6.13
73870.73	6.08	73872.87	6.03	73876.17	5.94	73879.55	5.86	73892.45	5.71
73913.97	5.46	73914.73	5.45	73919.77	5.36	73923.19	5.37	73927.04	5.24
73932.2	5.15	73950	5.15	73952.97	5.21	73958.46	5.32	73963.17	5.41
73969.73	5.53	73971.62	5.57	73973.38	5.62	73974.07	5.63	73981.01	5.7
73983.59	5.73	73987.02	5.76	73988.48	5.78	73992.28	5.86	73993.89	5.9
74003.56	6.12	74004.09	6.13	74004.47	6.14	74014.4	6.43	74017.95	6.52
74024.23	6.67	74024.7	6.68	74033.61	6.97	74035.09	6.92	74036.93	6.92
74047.98	6.87	74057.53	6.84	74067.19	6.87	74070.09	6.91	74081.02	7.06
74092.08	7.21	74157.31	8.24	74163.64	8.35	74193.67	8.35	74201.41	8.47
74271.89	9.62	74278.97	9.78	74280.69	9.87	74282.83	9.84	74283.91	9.86
74313.95	9.86	74315.77	9.89	74315.98	9.89	74376.88	10.33	74385.96	10.2
74393.27	10.09	74450.95	10.52	74453.52	10.54	74461.89	10.61	74464.14	10.59
74474.77	10.54	74503.95	10.55	74513.03	10.69	74514.44	10.71	74520.58	10.81

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74527.66   10.9974566.69   11.9574567.53   11.9874585.06   12.7474590.31   12.97
74622.08   14.1374622.93   14.1574631.12   14.4574632.52   14.49 74640.2   14.61
74654.71   14.8374667.35   14.9374988.07   14.91 75062.8   14.51 75567.7   14.44
75582.92   14.2675586.04   14.1875596.55   13.9375602.13   13.7975602.17   13.79
75607.17   13.73 75623.8   13.5775633.17   13.4775642.53   13.3775644.78   13.35
75646.36   13.3375689.26   13.3975787.09   12.4475983.31   11.4875983.53   11.48
76103.37    8.9976145.47    8.9976147.34    8.94 76156.7    8.7376194.16    8.45
 76212.8    8.2476222.17    8.1476343.71    5.1176353.08    5.0176353.55       5
 76383.6       576440.62     8.976565.91   10.2776571.22   10.4276740.19   13.74
76740.98   13.7576818.59   15.0876819.31    15.176825.86   15.2876827.36   15.32
76853.45   15.5776856.39   15.5176881.97   14.9176884.64   14.8976885.43   14.88
76891.12   14.84 76904.2   14.7476922.06   14.8276933.31   14.87 76943.3   14.92
76947.77   14.9476949.91   14.9376959.58   14.7776969.52   14.6276974.76   14.53
   76976   14.5176977.11    14.577030.67    14.577034.78   14.5777035.38   14.58
77036.33    14.677040.48   14.6977041.33   14.7177047.86   14.8577049.29   14.89
77054.41      1577055.45   15.01 77112.8   15.4277134.03   15.5777139.34   15.61
 77256.8   15.9877262.36   16.0877262.75   16.0977263.08   16.0977485.28    16.6
77490.12   16.7677749.17   16.9677757.05      1777832.98   17.0378384.38   16.27
78659.56   16.3978661.04   16.3978682.28   16.4978683.56    16.578688.78    16.5
78693.22   16.5878942.38   17.23 78947.8   17.3278947.86   17.3278954.41   17.43
79100.89   17.8779104.55   17.9379106.47   17.9679111.09   18.0579127.71   18.16
79131.33   18.1879433.28   18.8379437.33   18.8679450.55   18.9779451.45   18.98
79488.17   19.2979501.02   19.46 79507.3   19.4979507.92   19.4979508.77    19.5
80291.17   19.8180292.02   19.7980527.27   19.7780536.83   19.81 80546.6   19.86

Manning's n Values        num=       7
     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val     Sta   n Val
 67972.3     .0973858.65    .035 74014.4     .0874030.62     .0874298.64    .065
74526.41     .08 80546.6     .08

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      73858.65 74014.4              900     410     410              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev  Permanent
 67972.371380.53   17.19       F
75119.44 80546.6   16.73       F

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -2000

INPUT
Description:
Station Elevation Data    num=     126
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68620      11 68829.9      11 68971.1      10 68972.6    9.95 69201.1       4
 69228.3    3.06 69229.9    3.01   69230       3 69376.7       369848.74    2.79
 70487.4    2.77   71000    2.8671436.98    3.11 71573.4    3.94 71576.5       4
 72486.1       4   72562     5.5 72730.9    7.83 72879.4    9.75   72880    9.76
 72885.1    9.86 72889.9    9.96 72892.1      10 72993.9   10.91 72999.5      11
   73429   11.97 73430.1      12 73440.5      12 73451.4   11.92 73462.2   11.84
 73462.6   11.85 73468.3      12 73704.6   11.71   73705    11.7 73759.1   10.58
 73767.6   10.51 73769.8   10.43 73780.6   10.06 73782.2      10 73804.2      10
 73810.7    9.82 73812.7    9.77   73866    7.34 73908.3    5.26 73912.9       5
 73918.8    4.83 73929.4    4.54 73939.9    4.25 73944.4    4.12 73948.8       4
 73984.4       4 73992.2    4.22 74002.6    4.51 74006.6    4.62   74013    4.57
 74019.9    4.52 74023.4    4.59 74033.8     4.8 74043.8       5 74061.7    5.18
 74064.8    5.16 74075.1    5.07   74084       5   74093    5.07 74095.7    5.15
 74105.9    5.44 74116.2    5.74   74177    7.79 74182.9       8 74210.9       8
 74218.1    8.25 74283.8   10.53 74290.4   10.84   74292   10.89   74294   10.96
   74295      11   74323      11 74324.7   11.06 74324.9   11.06 74450.7      13
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74453.1	13.04	74460.9	13.16	74463	13.13	74472.9	13.02	74515.6	13
74522.2	13.1	74575.7	13.92	74580.6	14	74610.2	14	74611	13.98
75505.8	14	75508.7	13.92	75518.5	13.66	75523.7	13.52	75528.4	13.39
75696.1	9.9	75879	7.98	75879.2	7.98	75990.9	3	76252.1	3
76505.6	13.48	76510.9	13.71	76515.6	13.91	76517.7	14	76559.4	14
76565.5	14.13	76568.4	14.19	76595.4	14.74	76605.4	14.95	76607.9	15
76895	15.92	76898.7	16	77323.6	16.77	77324.3	16.78	77334.3	16.99
77334.9	17	77534	17.74	77544	17.96	77545.7	18	77713.7	18.78
77722.7	18.99	77723	18.99	77723.4	19	78202.9	19.8	78207.4	19.9
78212	20								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
68620	.08	73912.9	.035	74043.8	.08

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
73912.9	74043.8	440.82	440.82	440.82	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
68620	70870.53	17.19	F
75454.98	78212	16.73	F

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -2400.*

INPUT
Description:
Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68789.74	10	68793.28	9.98	68798.11	9.94	68799.06	9.94	68804.72	9.92
68810.5	9.96	68811.09	9.96	68816.28	9.88	68822.06	9.86	68822.53	9.86
68994.45	9.85	69132.16	8.99	69133.62	8.95	69356.47	3.84	69382.99	3.04
69384.55	2.99	69384.65	2.98	69527.73	2.98	69988.09	2.79	70610.95	2.75
71110.87	2.82	71537.03	3.02	71670.08	3.72	71673.1	3.78	72560.2	3.75
72634.22	5.03	72798.94	7.03	72943.77	8.67	72944.35	8.68	72949.33	8.76
72954.01	8.85	72956.16	8.88	73055.44	9.66	73060.9	9.74	73407.91	10.42
73479.77	10.56	73480.84	10.58	73490.98	10.58	73501.62	10.51	73512.16	10.44
73512.54	10.45	73518.09	10.58	73748.55	10.33	73748.95	10.32	73801.7	9.36
73810	9.37	73812.14	9.23	73822.67	8.91	73824.23	8.86	73845.7	8.86
73852.03	8.71	73853.98	8.66	73905.96	6.58	73947.21	4.79	73951.7	4.57
73957.3	4.38	73959.52	4.31	73967.36	4.05	73971.17	3.92	73974.12	3.82
73977.32	3.71	73981.59	3.57	73985.77	3.43	74016.28	3.43	74025.41	3.62
74037.59	3.87	74042.27	3.97	74049.75	3.93	74054.64	3.91	74057.82	3.93
74059.98	3.98	74060.84	4.01	74061.91	4.03	74065.27	4.12	74065.65	4.13
74070.4	4.26	74070.61	4.26	74074.09	4.33	74075.9	4.37	74081.24	4.48
74085.78	4.57	74105.04	4.73	74108.37	4.71	74119.45	4.63	74129.02	4.57
74138.7	4.63	74141.61	4.77	74152.57	4.95	74163.66	5.21	74229.04	6.97
74235.38	7.15	74265.5	7.15	74273.24	7.36	74343.9	9.32	74351	9.59
74352.72	9.63	74354.87	9.69	74355.95	9.72	74386.06	9.72	74387.89	9.78
74388.1	9.78	74523.4	11.44	74525.98	11.48	74534.37	11.58	74536.62	11.55
74547.27	11.46	74593.2	11.44	74600.3	11.53	74657.84	12.24	74663.1	12.3
74694.94	12.31	74695.8	12.29	75658.13	12.34	75661.26	12.27	75671.79	12.05
75677.39	11.93	75682.44	11.81	75862.8	8.83	76059.5	7.19	76059.72	7.19
76179.84	2.92	76460.77	2.93	76733.4	11.93	76739.09	12.12	76744.15	12.29
76746.41	12.37	76791.25	12.37	76797.81	12.48	76800.93	12.54	76829.97	13.01
76840.73	13.19	76843.41	13.23	77152.19	14.03	77156.16	14.17	77613.13	14.77
77613.88	14.78	77624.64	14.96	77625.28	14.97	77839.41	15.61	77850.16	15.8
77852	15.84	78032.68	16.51	78042.36	16.69	78042.68	16.69	78043.11	16.7
78519.75	17.35	78520.52	17.35	78524.81	17.38	78531.77	17.42	78538.75	17.46
78545.72	17.57	78550.43	17.53	78558.8	17.54	78563.64	17.63	78568.59	17.71

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Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
68789.74    .077 73951.7     .0374085.78    .077

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       73951.774085.78           440.82  440.82  440.82             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -2800.*

INPUT
Description:
Station Elevation Data    num=     155
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
68959.48       968962.93    8.9568967.64    8.8968968.57    8.8868974.08    8.84
68979.71     8.868980.29    8.7968985.35    8.7668990.98    8.7268991.44    8.71
   69159     8.769293.22    7.9869294.64    7.9569511.84    3.6869537.69    3.01
69539.21    2.98 69539.3    2.9769678.75    2.9670127.43    2.7870734.48    2.73
71221.73    2.7771637.09    2.9271766.76    3.51 71769.7    3.55 72634.3     3.5
72706.45    4.5772866.98    6.2273008.13    7.5973008.71    7.5973013.55    7.67
73018.12    7.7473020.21    7.7773116.97    8.41 73122.3    8.47 73460.5    9.03
73530.54    9.1473531.59    9.1773541.48    9.1673551.84    9.11 73562.1    9.05
73562.48    9.06 73567.9    9.1673792.51    8.9573792.88    8.9473844.31    8.14
73852.39    8.0973854.48    8.0373864.75    7.7673866.27    7.7273887.18    7.72
73893.36    7.5973895.26    7.5573945.92    5.8273986.12    4.33 73990.5    4.14
 73995.8    3.9373997.89    3.8574005.32    3.5574008.92    3.4174011.72     3.3
74014.75    3.1874018.79    3.0174022.74    2.8674048.17    2.8674058.63    3.02
74072.56    3.2474077.92    3.32 74086.5    3.29 74092.1    3.2774095.74    3.33
74098.22    3.41 74099.2    3.4474100.44    3.4874104.27     3.6 74104.7    3.61
74110.15    3.7874110.39    3.7874114.37    3.8774116.45    3.9174122.57    4.04
74127.77    4.1474148.38    4.2774151.94    4.26 74163.8     4.274174.04    4.15
 74184.4     4.274187.51    4.2574199.25    4.4674211.11    4.6874281.08    6.14
74287.87     6.374320.09     6.374328.39    6.48   74404    8.1174411.59    8.33
74413.44    8.3774415.74    8.4274416.89    8.4574449.12    8.4574451.08    8.49
 74451.3    8.49 74596.1    9.8974598.86    9.9174607.84      1074610.25    9.98
74621.65     9.9 74670.8    9.8974678.39    9.9674739.97   10.5574745.61   10.61
74779.68   10.6174780.59    10.675810.46   10.67 75813.8   10.6275825.09   10.43
75831.07   10.3375836.48   10.2476029.49    7.76   76240     6.476240.23     6.4
76368.79    2.8576669.42    2.8776961.19   10.3776967.28   10.54 76972.7   10.68
76975.12   10.7477023.11   10.7577030.13   10.8477033.47   10.8877064.54   11.28
77076.05   11.4377078.93   11.4677409.37   12.1477413.63    12.277902.67   12.78
77903.47   12.7877914.98   12.9477915.67   12.9478144.83   13.4878156.34   13.64
 78158.3   13.6778351.66   14.2478362.02   14.3978362.36   14.3978362.81    14.4
78872.91   14.9678873.73   14.9678878.33   15.0178885.78   15.0878893.24   15.15
 78900.7   15.2378905.74   15.28 78914.7   15.2978919.88   15.3678925.17   15.43

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
68959.48    .074 73990.5     .0374127.77    .074

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       73990.574127.77           440.82  440.82  440.82             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -3200.*
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INPUT
Description:
Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69129.23		869132.59	7.9369137.17		7.8369138.08		7.8269143.45		7.76
69148.93		7.769149.49	7.6969154.42		7.6469159.91		7.5869160.35		7.57
69323.55		7.5669454.27	6.9769455.66		6.94 69667.2		3.5369692.38		2.99
69693.87		2.9669693.95	2.9569829.77		2.9470266.77		2.7870858.03		2.72
71332.59		2.7371737.14	2.8371863.44		3.29 71866.3		3.33 72708.4		3.25
72778.66		4.172935.02	5.42 73072.5		6.5173073.06		6.5173077.78		6.57
73082.23		6.6373084.27	6.6573178.51		7.16 73183.7		7.2173513.09		7.64
73581.31		7.7373582.34	7.7573591.96		7.7573602.05		7.773612.05		7.65
73612.42		7.66 73617.7	7.7573836.46		7.5673836.83		7.5673886.91		6.91
73894.79		6.8773896.82	6.8373906.82		6.61 73908.3		6.5873928.67		6.58
73934.69		6.4873936.54	6.4573985.88		5.0574025.04		3.86 74029.3		3.71
74034.3		3.4874036.27	3.3974043.28		3.0674046.68		2.974049.31		2.78
74052.17		2.6474055.98	2.4674059.71		2.2974080.05		2.2974091.84		2.42
74107.55		2.674113.59	2.6774123.25		2.6574129.56		2.6474133.66		2.74
74136.45		2.8474137.55	2.8774138.95		2.9274143.28		3.0774143.77		3.09
74149.9		3.374150.17	3.374154.66		3.4 74157		3.45 74163.9		3.59
74169.76		3.7174191.72	3.8274195.51		3.8174208.15		3.7674219.06		3.72
74230.1		3.7674233.41	3.8174245.92		3.9774258.56		4.1474333.12		5.32
74340.35		5.44 74374.7	5.4574383.53		5.59 74464.1		6.9 74472.2		7.08
74474.16		7.1174476.61	7.1574477.84		7.1774512.18		7.1774514.27		7.21
74514.51		7.21 74668.8	8.3374671.74		8.35 74681.3		8.4274683.88		8.4
74696.02		8.3474748.39	8.3374756.48		8.39 74822.1		8.8774828.11		8.91
74864.41		8.9274865.39	8.9 75962.8		9.0175966.36		8.9675978.38		8.82
75984.76		8.7475990.52	8.6676196.19		6.69 76420.5		5.6176420.75		5.61
76557.73		2.7776878.09	2.877188.98		8.8277195.48		8.9577201.25		9.06
77203.83		9.1177254.96	9.1277262.45		9.19 77266		9.2377299.11		9.55
77311.38		9.6777314.45	9.777666.55		10.2577671.09		10.3 78192.2		10.78
78193.05		10.7978205.32	10.9178206.05		10.9178450.24		11.36 78462.5		11.48
78464.59		11.5178670.63	11.9778681.67		12.0978682.04		12.0978682.52		12.1
79226.07		12.5779226.95	12.5779231.84		12.6479239.78		12.7479247.73		12.85
79255.68		12.9579261.05	13.0279270.59		13.0379276.12		13.0979281.76		13.14

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69129.23	.071	74029.3	.0374169.76		.071

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74029.3	74169.76	440.82	440.82	440.82	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -3600.*

INPUT
Description:
Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69298.98		769302.24	6.9 69306.7		6.7869307.58		6.77 69312.8		6.68
69318.15		6.669318.69	6.5969323.49		6.5269328.84		6.4369329.27		6.43
69488.1		6.4169615.33	5.9669616.68		5.9469822.57		3.3769847.07		2.96
69848.52		2.9469848.61	2.94 69980.8		2.9270406.12		2.7870981.58		2.7
71443.45		2.6871837.19	2.7471960.11		3.0871962.91		3.1172782.49		3
72850.88		3.6473003.07	4.6273136.88		5.4373137.41		5.4373142.02		5.47
73146.33		5.5173148.31	5.5373240.04		5.9173245.09		5.95 73565.7		6.25
73632.09		6.3273633.08	6.3373642.45		6.3373652.27		6.29 73662		6.26
73662.37		6.2673667.49	6.3373880.41		6.1873880.77		6.1873929.52		5.69
73937.18		5.6673939.16	5.63 73948.9		5.4773950.34		5.4473970.16		5.44

73976.02	5.3673977.82	5.3474025.84	4.2974063.95	3.4 74068.1	3.29
74072.8	3.0374074.66	2.9374081.23	2.5774084.44	2.3974086.91	2.26
74089.6	2.1174093.19	1.9174096.69	1.7174111.95	1.7174125.05	1.82
74142.52	1.9774149.25	2.02 74160	2.0174167.02	2.0174171.59	2.15
74174.69	2.2674175.92	2.3174177.47	2.3774182.28	2.5574182.82	2.57
74189.65	2.8274189.95	2.8374194.94	2.9374197.55	2.9974205.22	3.15
74211.74	3.2974235.05	3.3774239.09	3.36 74252.5	3.3274264.09	3.29
74275.8	3.3274279.32	3.3674292.59	3.4874306.01	3.6174385.16	4.5
74392.84	4.5974429.29	4.5974438.67	4.7 74524.2	5.69 74532.8	5.82
74534.88	5.8474537.48	5.8774538.79	5.8974575.24	5.974577.46	5.92
74577.71	5.92 74741.5	6.7774744.62	6.7974754.77	6.8474757.51	6.83
74770.39	6.7874825.99	6.7874834.59	6.8274904.23	7.1874910.61	7.22
74949.15	7.2274950.19	7.2176115.12	7.3576118.91	7.3176131.66	7.2
76138.44	7.1476144.55	7.0976362.89	5.61 76601	4.8276601.27	4.82
76746.69	2.777086.74	2.7377416.77	7.2677423.67	7.36 77429.8	7.45
77432.53	7.4977486.81	7.4977494.76	7.5577498.53	7.5777533.69	7.81
77546.7	7.9177549.95	7.9377923.73	8.3677928.55	8.478481.73	8.78
78482.64	8.7978495.66	8.8878496.45	8.8878755.65	9.2378768.67	9.33
78770.89	9.3478989.61	9.779001.33	9.7979001.71	9.7979002.23	9.8
79579.23	10.1779580.16	10.1979585.35	10.2779593.79	10.479602.23	10.54
79610.66	10.6879616.36	10.7779626.49	10.7779632.35	10.8179638.34	10.86

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69298.98	.069	74068.1	.037	4211.74	.069

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74068.1	74211.74	440.82	440.82	440.82	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -4000.*

INPUT
Description:
Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69468.72	6	69471.9	5.886	9476.23	5.726	9477.09	5.716	9482.17	5.6
69487.37	5.569	487.89	5.496	9492.56	5.469	497.76	5.296	9498.18	5.29
69652.65	5.266	9776.38	4.96	69777.7	4.946	9977.94	3.217	0001.77	2.94
70003.17	2.927	0003.26	2.927	0131.82	2.970	545.47	2.777	1105.12	2.68
71554.32	2.647	1937.24	2.657	2056.79	2.867	2059.51	2.887	2856.59	2.76
72923.1	3.177	3071.11	3.827	3201.24	4.347	3201.77	4.357	3206.24	4.38
73210.44	4.47	3212.37	4.417	3301.58	4.667	3306.48	4.687	3618.29	4.87
73682.86	4.97	3683.82	4.917	3692.93	4.917	3702.48	4.897	3711.95	4.86
73712.3	4.877	3717.29	4.917	3924.37	4.87	3924.72	4.87	3972.12	4.47
73979.58	4.45	73981.5	4.437	3990.97	4.327	3992.37	4.37	4011.65	4.3
74017.34	4.25	74019.1	4.23	74065.8	3.537	4102.87	2.93	74106.9	2.86
74111.3	2.587	4113.04	2.47	74119.2	2.07	74122.2	1.887	4124.51	1.73
74127.02	1.577	4130.38	1.357	4133.66	1.147	4143.83	1.147	4158.27	1.22
74177.51	1.337	4184.91	1.377	4196.75	1.377	4204.48	1.387	4209.52	1.55
74212.92	1.697	4214.28	1.747	4215.98	1.817	4221.29	2.027	4221.88	2.04
74229.4	2.347	4229.73	2.357	4235.23	2.47	74238.1	2.537	4246.55	2.71
74253.73	2.867	4278.39	2.917	4282.66	2.917	4296.85	2.887	4309.11	2.86
74321.5	2.897	4325.23	2.917	4339.27	2.997	4353.46	3.08	74437.2	3.68
74445.33	3.747	4483.89	3.747	4493.81	3.82	74584.3	4.48	74593.4	4.57
74595.6	4.587	4598.35	4.67	4599.73	4.61	74638.3	4.627	4640.65	4.64
74640.91	4.64	74814.2	5.21	74817.5	5.237	4828.23	5.267	4831.13	5.25
74844.77	5.227	4903.59	5.227	4912.68	5.257	4986.37	5.57	4993.11	5.52
75033.88	5.537	5034.98	5.527	6267.46	5.687	6271.46	5.667	6284.95	5.59
76292.12	5.557	6298.59	5.517	6529.59	4.54	76781.5	4.037	6781.78	4.03

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76935.63    2.6277295.41    2.6777644.57    5.7177651.87    5.7777658.34    5.83
77661.24    5.8677718.66    5.8677727.07     5.977731.06    5.9277768.26    6.08
77782.03    6.1477785.47    6.1678180.92    6.4778186.02    6.4978771.27    6.79
78772.23    6.79   78786    6.8578786.83    6.8679061.06     7.179074.84    7.17
79077.19    7.1879308.59    7.4379320.98    7.4979321.39    7.4979321.95    7.49
79932.38    7.7879933.37     7.879938.87    7.9179947.79    8.0779956.72    8.23
79965.64     8.479971.67    8.5179982.39    8.5179988.59    8.5479994.93    8.57

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69468.72    .066 74106.9     .0374253.73    .066

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74106.974253.73           440.82  440.82  440.82             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -4400.*

INPUT
Description:
Station Elevation Data    num=     155
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
69638.46       569641.55    4.8569645.77    4.6769646.59    4.6569651.53    4.52
69656.58     4.469657.09    4.3869661.63    4.2869666.68    4.1569667.09    4.14
 69817.2    4.1169937.45    3.9569938.72    3.94 70133.3    3.0570156.46    2.91
70157.83    2.9170157.91     2.970282.84    2.8870684.81    2.7771228.66    2.66
71665.18    2.59 72037.3    2.5572153.47    2.6572156.11    2.6672930.69    2.51
72995.33    2.7173139.16    3.0173265.61    3.2673266.12    3.2673270.47    3.28
73274.55    3.2973276.42     3.373363.11    3.4173367.88    3.4273670.88    3.48
73733.62    3.4973734.57     3.573743.42    3.49 73752.7    3.48 73761.9    3.47
73762.25    3.4773767.09    3.4973968.32    3.4273968.66    3.4174014.73    3.25
74021.97    3.2474023.84    3.2274033.05    3.1774034.41    3.1674053.13    3.16
74058.67    3.1374060.38    3.1274105.77    2.7774141.78    2.47 74145.7    2.43
 74149.8    2.1374151.41    2.0174157.16    1.5874159.95    1.3774162.11    1.21
74164.45    1.0474167.58      .874170.63     .5774175.72     .5774191.48     .63
74212.48      .774220.57     .72 74233.5     .7474241.94     .7474247.44     .96
74251.16    1.1174252.64    1.1874254.51    1.2574260.29     1.574260.94    1.52
74269.15    1.8674269.52    1.8774275.51       274278.66    2.0774287.88    2.26
74295.72    2.4374321.73    2.4674326.23    2.46 74341.2    2.4574354.12    2.44
 74367.2    2.4574371.12    2.4674385.95     2.574400.91    2.5574489.24    2.85
74497.81    2.8974538.48    2.8974548.96    2.93 74644.4    3.2774653.99    3.31
74656.32    3.3274659.23    3.3374660.68    3.3474701.36    3.3474703.84    3.35
74704.12    3.35 74886.9    3.6674890.38    3.66 74901.7    3.6874904.76    3.68
74919.14    3.6674981.19    3.6774990.77    3.69 75068.5    3.8175075.62    3.83
75118.62    3.8375119.78    3.8376419.79    4.0276424.01    4.0176438.25    3.97
 76445.8    3.9576452.62    3.9476696.28    3.47   76962    3.24 76962.3    3.24
77124.58    2.5577504.06     2.677872.36    4.1577880.05    4.19 77886.9    4.22
77889.95    4.2377950.52    4.2477959.39    4.26 77963.6    4.2778002.83    4.35
78017.35    4.3878020.98    4.39 78438.1    4.5878443.48    4.59 79060.8    4.79
79061.81    4.7979076.34    4.8379077.22    4.8379366.48    4.9779381.01    5.01
79383.48    5.0179627.56    5.1679640.64    5.1979641.07    5.1979641.65    5.19
80285.55    5.3980286.59    5.4180292.38    5.54 80301.8    5.7380311.21    5.93
80320.62    6.1380326.98    6.2680338.29    6.2680344.83    6.2780351.52    6.29

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69638.46    .063 74145.7     .0374295.72    .063

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74145.774295.72           440.82  440.82  440.82             .1       .3
```

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -4800

INPUT
Description:
Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69808.2	4	69811.2	3.83	69815.3	3.61	69816.1	3.59	69820.9	3.44
69825.8	3.3	69826.3	3.28	69830.7	3.16	69835.6	3.01	69836	3
73723.48	2.09	74184.5	2	74189.8	1.55	74197.7	.86	74199.7	.69
74207.6	0	74279.4	.11	74289.4	.54	74291	.61	74299.3	.97
74300	1	74308.9	1.38	74309.3	1.39	74319.2	1.61	74329.2	1.82
74337.7	2	80638.7	3	80639.8	3.02	80645.9	3.17	80655.8	3.39
80665.7	3.62	80675.6	3.85	80682.3	4	80708.1	4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69808.2	.06	74184.5	.03	74337.7	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74184.5	74337.7	433.33	433.33	433.33	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -5233.3*

INPUT
Description:
Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
69604.84	3.676	9607.98	3.526	9612.26	3.34	69613.1	3.336	9618.12	3.2
69623.25	3.086	9623.77	3.076	9628.38	2.976	9633.51	2.846	9633.92	2.83
73702.05	2.08	74184.5		274187.09	1.787	4190.95	1.45	74191.2	1.43
74191.93	1.367	4195.78	1.037	4196.81	.957	4200.58	.68	74201.2	.64
74201.65	.617	4203.73	.487	4206.53	.37	4207.08	.267	4211.42	-.02
74213.72	-.177	4220.62	-.14	74233.9	-.097	4238.81	-.077	4247.03	-.01
74260.31	.087	4273.59	.177	4275.71	.187	4282.14	.237	4286.73	.43
74287.66	.477	4291.67	.64	74293.2	.77	4299.47	.98	74300	1
74301.1	1.047	4301.77	1.077	4310.25	1.417	4310.63	1.427	4313.15	1.48
74320.07	1.637	4326.42	1.76	74329.6	1.83	74337.7		275250.84	2.13
76386.18	2.28	76995.6	2.38	77237.7	2.548	0637.96		380639.05	3.02
80645.16	3.148	0655.05	3.328	0664.96	3.528	0674.86	3.718	0681.55	3.83
80707.35	3.83								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
69604.84	.06	74184.5	.03	74337.7	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74184.5	74337.7	433.33	433.33	433.33	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -5666.6*

```
INPUT
Description:
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
69401.47    3.3369404.75    3.2269409.22    3.07 69410.1    3.0669415.34    2.96
 69420.7    2.8769421.24    2.8569426.06    2.7769431.41    2.6769431.85    2.67
73680.62    2.06 74184.5       274187.63    1.73 74192.3    1.33 74192.6    1.31
74193.48    1.2374198.15     .8274199.39     .7574203.94     .46 74204.7     .42
74205.24      .474207.75     .2774211.15      .1 74211.8     .0774217.06    -.19
74219.84    -.33 74226.4    -.2974239.02    -.21 74243.7    -.1774251.51    -.07
74264.12     .0974276.75     .2474278.77     .2774284.88     .3574289.24     .53
74290.12     .5774293.94     .7474295.39      .874301.36    1.0674301.86    1.08
74302.91    1.1274303.55    1.1474311.61    1.4474311.97    1.4574314.36     1.5
74320.95    1.6574326.98    1.77   74330    1.84 74337.7       275250.73    2.11
76385.94    2.2376995.29    2.3477237.36    2.6180637.22       380638.31    3.01
80644.41    3.1180654.31    3.2680664.21    3.4180674.11    3.57 80680.8    3.67
 80706.6    3.67

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
69401.47     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -6100.*

INPUT
Description:
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 69198.1       369201.52    2.9169206.19     2.8 69207.1     2.869212.56    2.72
69218.15    2.6569218.72    2.6469223.73    2.5869229.32    2.5169229.77     2.5
 73659.2    2.05 74184.5       274188.17    1.6974193.66    1.21   74194    1.18
74195.04    1.0974200.52     .6274201.97     .54 74207.3     .2474208.19     .21
74208.83     .1874211.78     .0774215.77    -.0974216.53    -.13 74222.7    -.37
74225.95     -.574232.17    -.4474244.14    -.3274248.57    -.2874255.98    -.13
74267.95     .0974279.91     .3274281.83     .3574287.62     .4774291.75     .64
74292.59     .6874296.21     .8374297.59     .8974303.24    1.1474303.72    1.15
74304.72    1.1974305.31    1.2174312.96    1.47 74313.3    1.4874315.57    1.53
74321.81    1.6674327.53    1.7874330.41    1.85 74337.7       275250.62    2.09
 76385.7    2.1876994.98     2.377237.02    2.6980636.48       380637.57    3.01
80643.67    3.0880653.56    3.1980663.47    3.3180673.36    3.4280680.05     3.5
80705.85     3.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 69198.1     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           433.33  433.33  433.33             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -6533.3*

INPUT
```

Description:
Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68994.73	2.67	68998.29	2.61	69003.15	2.54	69004.1	2.53	69009.79	2.48
69015.6	2.43	69016.2	2.43	69021.41	2.39	69027.23	2.34	69027.7	2.33
73637.78	2.03	74184.5		274188.71	1.64	74195	1.17	4195.41	1.06
74196.59	.96	74202.88	.41	74204.55	.33	74210.67	.02	74211.68	-.01
74212.42	-.04	74215.8	-.14	74220.38	-.29	74221.25	-.32	74228.33	-.55
74232.06	-.67	74237.95	-.59	74249.26	-.44	74253.45	-.39	74260.45	-.2
74271.77	.17	4283.07	.39	74284.88	.44	74290.36	.58	74294.27	.75
74295.06	.79	74298.48	.93	74299.78	.99	74305.12	1.22	74305.58	1.23
74306.52	1.26	74307.09	1.28	74314.31	1.57	4314.64	1.51	74316.78	1.56
74322.68	1.68	74328.09	1.8	74330.8	1.85	74337.7		275250.52	2.07
76385.46	2.13	76994.66	2.25	77236.67	2.76	80635.73		380636.83	3.01
80642.93	3.06	80652.82	3.13	80662.73	3.21	80672.62	3.28	80679.3	3.33
80705.1	3.33								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
68994.73	.06	74184.5	.03	74337.7	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74184.5	74337.7	433.33	433.33	433.33	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -6966.6*

INPUT
Description:
Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
68791.37	2.33	68795.06	2.31	68800.11	2.27	68801.1	2.27	68807.02	2.24
68813.05	2.22	68813.66	2.21	68819.09	2.19	68825.13	2.17	68825.62	2.17
73616.35	2.02	74184.5		274189.26	1.67	4196.35	.98	74196.8	.94
74198.15	.82	74205.23	.21	74207.12	.12	74214.03	-.27	4215.18	-.23
74216.01	-.25	74219.83	-.35	74224.98	-.48	74225.98	-.52	74233.97	-.72
74238.18	-.83	74243.73	-.74	74254.38	-.56	74258.33	-.49	74264.92	-.26
74275.58	.17	4286.23	.47	74287.95	.52	74293.1	.77	4296.78	.86
74297.53	.89	74300.75	1.03	74301.98	1.08	74307.02	1.37	4307.44	1.31
74308.33	1.34	74308.86	1.35	74315.67	1.53	74315.98	1.54	74317.99	1.58
74323.55	1.77	4328.65	1.81	74331.2	1.86	74337.7		275250.41	2.06
76385.22	2.08	76994.35	2.21	77236.34	2.84	80634.99		380636.09	3
80642.19	3.03	80652.08	3.06	80661.98	3.18	0671.88	3.14	80678.56	3.17
80704.35	3.17								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
68791.37	.06	74184.5	.03	74337.7	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
74184.5	74337.7	433.33	433.33	433.33	.1	.3

CROSS SECTION

RIVER: Walleyleg_Branch
REACH: 1 RS: -7400

INPUT
Description:

```
Station Elevation Data    num=      32
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588       2 74184.5       2 74189.8    1.55 74197.7     .86 74199.7     .69
 74207.6       0 74209.7    -.09 74217.4    -.42 74219.6    -.47 74229.6    -.68
 74230.7    -.71 74239.6     -.9 74244.3      -1 74249.5    -.89 74259.5    -.68
 74263.2     -.6 74269.4    -.32 74279.4     .11 74289.4     .54   74291     .61
 74299.3     .97   74300       1 74308.9    1.38 74309.3    1.39 74319.2    1.61
 74329.2    1.82 74337.7       2 75250.3    2.0476384.98    2.0376994.04    2.17
77235.99    2.91 80703.6       3

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -7885.7*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588    1.71 74184.5    1.7174189.73    1.27 74190.2    1.2374197.55     .59
74198.68     .4974199.53     .4274200.84     .3174207.34    -.2674209.31    -.36
74209.41    -.3674211.57    -.4674217.02    -.69 74219.2    -.7474219.84    -.76
 74222.2    -.8174226.23    -.9274229.09    -.9974230.18   -1.0374230.97   -1.05
74235.71    -1.274238.98   -1.3474243.62   -1.5274248.86   -1.34 74253.5   -1.18
74258.93   -1.0174262.66     -.974262.76    -.89 74266.3    -.75 74268.9    -.63
74272.23    -.4874278.98    -.1974281.82    -.0774289.05     .2474290.66     .31
74291.41     .3474292.95     .4174299.02     .6774299.73      .7 74300.9     .75
74301.57     .7874308.69    1.0974309.09     1.174310.09    1.1274310.48    1.13
74319.07    1.3274319.98    1.3474329.14    1.5374329.55    1.54 74337.7    1.71
 75250.3    1.7576384.98    1.7476994.04    1.8877235.99    2.62 80703.6    2.71

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -8371.4*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588    1.43 74184.5    1.4374189.68     .9974190.12     .95 74197.4     .31
74198.52     .2274199.36     .1574200.65     .0474207.08    -.5374209.03    -.63
74209.13    -.6474211.26    -.7374216.65    -.96 74218.8   -1.0274219.44   -1.04
74221.77   -1.0974225.75   -1.2274228.58   -1.3174229.65   -1.3574230.43   -1.37
74235.12   -1.5874238.34   -1.7774242.94   -2.0574248.21   -1.7974252.89   -1.56
74258.36   -1.3474262.12    -1.274262.21   -1.1974265.79   -1.0574268.41    -.94
74271.77    -.7974278.55     -.574281.42    -.37 74288.7    -.0674290.32     .01
```

```
74291.07     .0474292.62     .1174298.73     .3774299.45      .474300.63     .46
 74301.3     .4874308.48     .7974308.88      .8 74309.9     .8374310.28     .84
74318.93    1.0374319.84    1.0574329.08    1.25 74329.5    1.25 74337.7    1.43
 75250.3    1.4776384.98    1.4676994.04     1.677235.99    2.34 80703.6    2.43

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -8857.1*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588    1.14 74184.5    1.1474189.62     .7174190.06     .6774197.25     .04
74198.35    -.0574199.19    -.1274200.46    -.2374206.81    -.7974208.74    -.91
74208.84    -.9174210.95      -174216.27   -1.2374218.41   -1.2974219.03   -1.31
74221.34   -1.3674225.27   -1.5274228.06   -1.6274229.12   -1.67 74229.9    -1.7
74234.53   -1.9574237.72   -2.2174242.26   -2.5774247.57   -2.2474252.28   -1.94
74257.79   -1.6874261.57   -1.4974261.67   -1.4974265.27   -1.3674267.91   -1.24
74271.29    -1.174278.12     -.874281.02    -.6874288.34    -.3674289.98    -.29
74290.73    -.26 74292.3    -.1974298.45     .0874299.18     .1174300.37     .16
74301.05     .1974308.27      .574308.67     .51 74309.7     .5474310.09     .55
 74318.8     .7474319.72     .7674329.02     .9674329.44     .97 74337.7    1.14
 75250.3    1.1876384.98    1.1776994.04    1.3177235.99    2.05 80703.6    2.14

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -9342.8*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588     .86 74184.5     .8674189.55     .4374189.99     .39 74197.1    -.23
 74198.2    -.3274199.01    -.3974200.27     -.574206.55   -1.0574208.46   -1.18
74208.55   -1.1874210.64   -1.27 74215.9    -1.5   74218   -1.5774218.62   -1.59
74220.91   -1.6474224.79   -1.8174227.55   -1.94 74228.6   -1.9974229.36   -2.02
74233.94   -2.3274237.09   -2.6474241.57    -3.174246.93   -2.6974251.67   -2.32
74257.22   -2.0174261.03   -1.7974261.12   -1.7974264.75   -1.6774267.41   -1.55
74270.82    -1.4 74277.7   -1.1174280.61    -.9874287.99    -.6674289.64    -.59
74290.41    -.5674291.97    -.4974298.18    -.22 74298.9    -.1974300.09    -.14
74300.78    -.1174308.06      .274308.47     .22 74309.5     .2574309.89     .26
74318.66     .4674319.59     .4874328.95     .6774329.38     .68 74337.7     .86
 75250.3      .976384.98     .8976994.04    1.0377235.99    1.77 80703.6    1.86
```

```
Manning's n Values          num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -9828.5*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588     .57 74184.5     .5774189.49     .1574189.93     .1174196.95     -.5
74198.03     -.674198.84    -.6774200.08    -.7774206.28   -1.3174208.17   -1.45
74208.27   -1.4674210.33   -1.5574215.52   -1.77 74217.6   -1.8474218.21   -1.87
74220.47   -1.92 74224.3   -2.1174227.03   -2.2574228.08   -2.3174228.83   -2.34
74233.35   -2.6974236.47   -3.0874240.89   -3.6274246.29   -3.1474251.06   -2.71
74256.65   -2.3474260.48   -2.0974260.59   -2.0874264.23   -1.9874266.91   -1.86
74270.34   -1.7174277.27   -1.41 74280.2   -1.2874287.64    -.96 74289.3    -.89
74290.07    -.8674291.65    -.79 74297.9    -.5274298.62    -.4974299.83    -.44
74300.52    -.4174307.85    -.0974308.26    -.08 74309.3    -.04 74309.7    -.03
74318.53     .1774319.46     .1974328.89     .3874329.32     .39 74337.7     .57
 75250.3     .6176384.98      .676994.04     .7477235.99    1.48 80703.6    1.57

Manning's n Values          num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -10314.*

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588     .29 74184.5     .2974189.44    -.1374189.86    -.17 74196.8    -.78
74197.87    -.8774198.66    -.9474199.89   -1.0474206.02   -1.5874207.89   -1.73
74207.98   -1.7374210.02   -1.8274215.15   -2.04 74217.2   -2.12 74217.8   -2.14
74220.04   -2.1974223.83   -2.4174226.52   -2.5674227.55   -2.6274228.29   -2.67
74232.76   -3.0774235.84   -3.5174240.21   -4.1574245.64   -3.5874250.45   -3.09
74256.08   -2.6774259.95   -2.3974260.04   -2.3874263.72   -2.2974266.41   -2.17
74269.88   -2.0174276.84   -1.71 74279.8   -1.5974287.29   -1.2774288.96   -1.19
74289.73   -1.1674291.32   -1.0974297.62    -.8274298.35    -.7974299.56    -.73
74300.26     -.774307.64    -.3974308.05    -.37 74309.1    -.3374309.49    -.32
74318.39    -.1274319.33     -.174328.83      .174329.27     .11 74337.7     .29
 75250.3     .3376384.98     .3276994.04     .4677235.99     1.2 80703.6    1.29

Manning's n Values          num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
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       74184.5 74337.7           485.71  485.71  485.71             .1       .3

CROSS SECTION


RIVER: Walleyleg_Branch
REACH: 1                  RS: -10800

INPUT
Description:
Station Elevation Data    num=      32
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   68588       0 74184.5       0 74189.8    -.45 74197.7   -1.14 74199.7   -1.31
 74207.6      -2 74209.7   -2.09 74217.4   -2.42 74219.6   -2.4774223.34   -2.71
74227.76   -2.9974232.17   -3.4474239.53   -4.6774249.84   -3.47 74259.5   -2.68
 74263.2    -2.6 74269.4   -2.32 74279.4   -1.89 74289.4   -1.46   74291   -1.39
 74299.3   -1.03   74300      -1 74308.9    -.62 74309.3    -.61 74319.2    -.39
 74329.2    -.18 74337.7       0 75250.3     .0476384.98     .0376994.04     .17
77235.99     .91 80703.6       1

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   68588     .06 74184.5     .03 74337.7     .06

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       74184.5 74337.7                0       0       0             .1       .3


SUMMARY OF MANNING'S N VALUES

River:Walleyleg_Branch


      Reach          River Sta.       n1        n2        n3        n4        n5
   n6        n7


 1                    800                .11       .04       .11

 1                    700                .11       .04       .11

 1                    600                .11       .04       .11

 1                    465                .11       .08       .04       .08        .1

 1                    400          Bridge

 1                    335                .11       .08       .04       .08        .1

 1                    200                .11       .04       .08

 1                    100                 .1       .04       .08

 1                    0                   .1       .04       .08

 1                    -590.*              .1      .035       .08       .08      .065
     .08       .08
 1                    -1180               .1      .035       .08       .05       .08

 1                    -1590.*            .09      .035       .08       .08      .065
     .08       .08
 1                    -2000              .08      .035       .08
```

1	-2400.*	.077	.03	.077
1	-2800.*	.074	.03	.074
1	-3200.*	.071	.03	.071
1	-3600.*	.069	.03	.069
1	-4000.*	.066	.03	.066
1	-4400.*	.063	.03	.063
1	-4800	.06	.03	.06
1	-5233.3*	.06	.03	.06
1	-5666.6*	.06	.03	.06
1	-6100.*	.06	.03	.06
1	-6533.3*	.06	.03	.06
1	-6966.6*	.06	.03	.06
1	-7400	.06	.03	.06
1	-7885.7*	.06	.03	.06
1	-8371.4*	.06	.03	.06
1	-8857.1*	.06	.03	.06
1	-9342.8*	.06	.03	.06
1	-9828.5*	.06	.03	.06
1	-10314.*	.06	.03	.06
1	-10800	.06	.03	.06

SUMMARY OF REACH LENGTHS

River: Walleyleg_Branch

Reach	River Sta.	Left	Channel	Right
1	800	100	100	100
1	700	100	100	100
1	600	135	135	135
1	465	130	130	130
1	400	Bridge		
1	335	135	135	135
1	200	100	100	100
1	100	100	100	100
1	0	425	410	250
1	-590.*	425	410	250
1	-1180	900	410	410

1	-1590.*	900	410	410
1	-2000	440.82	440.82	440.82
1	-2400.*	440.82	440.82	440.82
1	-2800.*	440.82	440.82	440.82
1	-3200.*	440.82	440.82	440.82
1	-3600.*	440.82	440.82	440.82
1	-4000.*	440.82	440.82	440.82
1	-4400.*	440.82	440.82	440.82
1	-4800	433.33	433.33	433.33
1	-5233.3*	433.33	433.33	433.33
1	-5666.6*	433.33	433.33	433.33
1	-6100.*	433.33	433.33	433.33
1	-6533.3*	433.33	433.33	433.33
1	-6966.6*	433.33	433.33	433.33
1	-7400	485.71	485.71	485.71
1	-7885.7*	485.71	485.71	485.71
1	-8371.4*	485.71	485.71	485.71
1	-8857.1*	485.71	485.71	485.71
1	-9342.8*	485.71	485.71	485.71
1	-9828.5*	485.71	485.71	485.71
1	-10314.*	485.71	485.71	485.71
1	-10800	0	0	0

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: Walleyleg_Branch

Reach	River Sta.	Contr.	Expan.
1	800	.3	.5
1	700	.3	.5
1	600	.3	.5
1	465	.3	.5
1	400	Bridge	
1	335	.3	.5
1	200	.3	.5
1	100	.3	.5
1	0	.3	.5
1	-590.*	.3	.5
1	-1180	.1	.3
1	-1590.*	.1	.3
1	-2000	.1	.3
1	-2400.*	.1	.3
1	-2800.*	.1	.3
1	-3200.*	.1	.3
1	-3600.*	.1	.3
1	-4000.*	.1	.3
1	-4400.*	.1	.3
1	-4800	.1	.3
1	-5233.3*	.1	.3
1	-5666.6*	.1	.3
1	-6100.*	.1	.3
1	-6533.3*	.1	.3
1	-6966.6*	.1	.3
1	-7400	.1	.3
1	-7885.7*	.1	.3
1	-8371.4*	.1	.3
1	-8857.1*	.1	.3
1	-9342.8*	.1	.3
1	-9828.5*	.1	.3

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1                    -10314.*        .1        .3
1                    -10800          .1        .3
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Proposed Steady Model

HEC-RAS Plan: Pro_StreadyRiver Locations: User Defined

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)	
Walleyleg_Branch	1	800	2 yr	78.00	9.69	11.22		11.23	0.000498	0.84	109.94	154.21	0.15
Walleyleg_Branch	1	800	25 yr	314.00	9.69	12.63		12.65	0.000340	1.24	411.69	288.21	0.14
Walleyleg_Branch	1	800	100 yr	910.00	9.69	15.62		15.62	0.000059	0.88	3411.12	4296.27	0.07
Walleyleg_Branch	1	800	500 yr	1040.00	9.69	18.23		18.23	0.000007	0.38	14836.50	7482.55	0.02
Walleyleg_Branch	1	600	2 yr	78.00	9.22	11.11	10.16	11.12	0.000616	1.12	89.77	115.78	0.17
Walleyleg_Branch	1	600	25 yr	314.00	9.22	12.53	10.88	12.56	0.000549	1.71	339.12	215.99	0.18
Walleyleg_Branch	1	600	100 yr	910.00	9.22	15.58	11.90	15.60	0.000160	1.52	1908.06	3695.53	0.11
Walleyleg_Branch	1	600	500 yr	1040.00	9.22	18.23	12.05	18.23	0.000003	0.25	21326.71	7727.20	0.01
Walleyleg_Branch	1	465	2 yr	78.00	8.90	10.99	9.72	11.02	0.000873	1.34	58.21	42.61	0.20
Walleyleg_Branch	1	465	25 yr	314.00	8.90	12.37	10.76	12.45	0.001160	2.36	173.27	314.88	0.26
Walleyleg_Branch	1	465	100 yr	910.00	8.90	15.50	12.18	15.56	0.000366	2.25	625.50	4472.44	0.17
Walleyleg_Branch	1	465	500 yr	1040.00	8.90	18.23	12.38	18.23	0.000017	0.62	10920.51	8213.45	0.04
Walleyleg_Branch	1	400		Bridge									
Walleyleg_Branch	1	335	2 yr	78.00	8.80	10.88	9.61	10.78	0.000862	1.33	58.74	43.16	0.20
Walleyleg_Branch	1	335	25 yr	314.00	8.80	12.22	10.64	12.07	0.001207	2.39	170.63	313.59	0.26
Walleyleg_Branch	1	335	100 yr	910.00	8.80	15.41		15.47	0.000355	2.23	632.20	4570.02	0.16
Walleyleg_Branch	1	335	500 yr	1040.00	8.80	18.20		18.20	0.000017	0.63	10807.28	8242.60	0.04
Walleyleg_Branch	1	200	2 yr	78.00	8.75	10.42	9.90	10.50	0.004250	2.23	35.00	40.92	0.42
Walleyleg_Branch	1	200	25 yr	314.00	8.75	11.45	10.83	11.64	0.006227	3.47	102.90	199.68	0.54
Walleyleg_Branch	1	200	100 yr	910.00	8.75	15.41	11.97	15.42	0.000092	1.08	2088.34	5657.21	0.08
Walleyleg_Branch	1	200	500 yr	1040.00	8.75	18.20	12.09	18.20	0.000001	0.15	26653.80	7643.08	0.01
Walleyleg_Branch	1	0	2 yr	78.00	7.94	9.66	9.10	9.69	0.001779	1.56	70.09	114.83	0.28
Walleyleg_Branch	1	0	25 yr	314.00	7.94	10.85		10.90	0.001346	2.29	255.78	231.43	0.27
Walleyleg_Branch	1	0	100 yr	910.00	7.94	15.40		15.41	0.000036	0.79	3839.69	6899.32	0.05
Walleyleg_Branch	1	0	500 yr	1040.00	7.94	18.20		18.20	0.000004	0.35	15565.46	7611.59	0.02

HEC-RAS Plan: Pro_StreadyRiver Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Vel Head	Frctn Loss	C & E Loss	Q Left	Q Channel	Q Right	Top Width
				(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft)
Walleyleg_Branch	1	800	2 yr	11.23	11.22	0.01	0.05	0.00	1.54	75.20	1.25	154.21
Walleyleg_Branch	1	800	25 yr	12.65	12.63	0.02	0.04	0.00	32.24	264.87	16.89	288.21
Walleyleg_Branch	1	800	100 yr	15.62	15.62	0.01	0.01	0.00	199.06	419.72	291.22	4296.27
Walleyleg_Branch	1	800	500 yr	18.23	18.23	0.00	0.00	0.00	303.37	270.01	466.62	7482.55
Walleyleg_Branch	1	600	2 yr	11.12	11.11	0.02	0.10	0.00	2.53	72.95	2.52	115.78
Walleyleg_Branch	1	600	25 yr	12.56	12.53	0.03	0.11	0.00	43.26	230.95	39.79	215.99
Walleyleg_Branch	1	600	100 yr	15.60	15.58	0.02	0.03	0.01	243.57	431.97	234.46	3695.53
Walleyleg_Branch	1	600	500 yr	18.23	18.23	0.00	0.00	0.00	235.74	101.62	702.64	7727.20
Walleyleg_Branch	1	465	2 yr	11.02	10.99	0.03	0.02	0.00		78.00		42.61
Walleyleg_Branch	1	465	25 yr	12.45	12.37	0.08	0.03	0.00	5.92	290.99	17.08	314.88
Walleyleg_Branch	1	465	100 yr	15.56	15.50	0.06	0.01	0.01	133.07	613.62	163.31	4472.44
Walleyleg_Branch	1	465	500 yr	18.23	18.23	0.00	0.00	0.00	282.28	251.18	506.54	8213.45
Walleyleg_Branch	1	400		Bridge								
Walleyleg_Branch	1	335	2 yr	10.78	10.88	0.03	0.13	0.00		78.00		43.16
Walleyleg_Branch	1	335	25 yr	12.07	12.22	0.06	0.20	0.00	5.85	291.34	16.81	313.59
Walleyleg_Branch	1	335	100 yr	15.47	15.41	0.06	0.02	0.02	134.37	611.15	164.48	4570.02
Walleyleg_Branch	1	335	500 yr	18.20	18.20	0.00	0.00	0.00	276.16	258.65	505.19	8242.60
Walleyleg_Branch	1	200	2 yr	10.50	10.42	0.08	0.49	0.00		78.00		40.92
Walleyleg_Branch	1	200	25 yr	11.64	11.45	0.18	0.46	0.02	0.08	309.14	4.78	199.68
Walleyleg_Branch	1	200	100 yr	15.42	15.41	0.01	0.01	0.00	154.98	389.75	365.27	5657.21
Walleyleg_Branch	1	200	500 yr	18.20	18.20	0.00	0.00	0.00	335.73	80.64	623.63	7643.08
Walleyleg_Branch	1	0	2 yr	9.69	9.66	0.03	1.60	0.03	2.61	67.78	7.61	114.83
Walleyleg_Branch	1	0	25 yr	10.90	10.85	0.06	0.07	0.03	23.46	217.18	73.36	231.43
Walleyleg_Branch	1	0	100 yr	15.41	15.40	0.00	0.00	0.00	190.12	230.67	489.21	6899.32
Walleyleg_Branch	1	0	500 yr	18.20	18.20	0.00	0.00	0.00	263.34	145.62	631.04	7611.59

HEC-RAS Plan: Pro_StreadyRiver Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Crit W.S.	Frctn Loss	C & E Loss	Top Width	Q Left	Q Channel	Q Right	Vel Chnl
				(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft/s)
Walleyleg_Branch	1	800	2 yr	11.23	11.22		0.05	0.00	154.21	1.54	75.20	1.25	0.84
Walleyleg_Branch	1	800	25 yr	12.65	12.63		0.04	0.00	288.21	32.24	264.87	16.89	1.24
Walleyleg_Branch	1	800	100 yr	15.62	15.62		0.01	0.00	4296.27	199.06	419.72	291.22	0.88
Walleyleg_Branch	1	800	500 yr	18.23	18.23		0.00	0.00	7482.55	303.37	270.01	466.62	0.38
Walleyleg_Branch	1	600	2 yr	11.12	11.11	10.16	0.10	0.00	115.78	2.53	72.95	2.52	1.12
Walleyleg_Branch	1	600	25 yr	12.56	12.53	10.88	0.11	0.00	215.99	43.26	230.95	39.79	1.71
Walleyleg_Branch	1	600	100 yr	15.60	15.58	11.90	0.03	0.01	3695.53	243.57	431.97	234.46	1.52
Walleyleg_Branch	1	600	500 yr	18.23	18.23	12.05	0.00	0.00	7727.20	235.74	101.62	702.64	0.25
Walleyleg_Branch	1	465	2 yr	11.02	10.99	9.72	0.02	0.00	42.61		78.00		1.34
Walleyleg_Branch	1	465	25 yr	12.45	12.37	10.76	0.03	0.00	314.88	5.92	290.99	17.08	2.36
Walleyleg_Branch	1	465	100 yr	15.56	15.50	12.18	0.01	0.01	4472.44	133.07	613.62	163.31	2.25
Walleyleg_Branch	1	465	500 yr	18.23	18.23	12.38	0.00	0.00	8213.45	282.28	251.18	506.54	0.62
Walleyleg_Branch	1	400 BR U	2 yr	11.00	10.97	9.73	0.08	0.00	40.21		78.00		1.37
Walleyleg_Branch	1	400 BR U	25 yr	12.43	12.33	10.73	0.12	0.00	107.95	6.10	292.15	15.75	2.52
Walleyleg_Branch	1	400 BR U	100 yr	15.54	15.47	12.19	0.06	0.00	121.00	128.61	639.59	141.80	2.52
Walleyleg_Branch	1	400 BR U	500 yr	18.23	18.22	12.44	0.02	0.00	3130.28	143.90	338.08	558.02	1.14
Walleyleg_Branch	1	400 BR D	2 yr	10.93	10.90	9.62	0.02	0.00	41.52		78.00		1.33
Walleyleg_Branch	1	400 BR D	25 yr	12.30	12.24	10.63	0.03	0.00	108.45	6.85	290.44	16.70	2.48
Walleyleg_Branch	1	400 BR D	100 yr	15.48	15.41	12.05	0.01	0.01	121.00	130.03	637.40	142.56	2.49
Walleyleg_Branch	1	400 BR D	500 yr	18.21	18.20	12.31	0.00	0.00	3105.88	145.08	346.64	548.28	1.15
Walleyleg_Branch	1	335	2 yr	10.78	10.88	9.61	0.13	0.00	43.16		78.00		1.33
Walleyleg_Branch	1	335	25 yr	12.07	12.22	10.64	0.20	0.00	313.59	5.85	291.34	16.81	2.39
Walleyleg_Branch	1	335	100 yr	15.47	15.41		0.02	0.02	4570.02	134.37	611.15	164.48	2.23
Walleyleg_Branch	1	335	500 yr	18.20	18.20		0.00	0.00	8242.60	276.16	258.65	505.19	0.63
Walleyleg_Branch	1	200	2 yr	10.50	10.42	9.90	0.49	0.00	40.92		78.00		2.23
Walleyleg_Branch	1	200	25 yr	11.64	11.45	10.83	0.46	0.02	199.68	0.08	309.14	4.78	3.47
Walleyleg_Branch	1	200	100 yr	15.42	15.41	11.97	0.01	0.00	5657.21	154.98	389.75	365.27	1.08
Walleyleg_Branch	1	200	500 yr	18.20	18.20	12.09	0.00	0.00	7643.08	335.73	80.64	623.63	0.15
Walleyleg_Branch	1	0	2 yr	9.69	9.66	9.10	1.60	0.03	114.83	2.61	67.78	7.61	1.56
Walleyleg_Branch	1	0	25 yr	10.90	10.85		0.07	0.03	231.43	23.46	217.18	73.36	2.29
Walleyleg_Branch	1	0	100 yr	15.41	15.40		0.00	0.00	6899.32	190.12	230.67	489.21	0.79
Walleyleg_Branch	1	0	500 yr	18.20	18.20		0.00	0.00	7611.59	263.34	145.62	631.04	0.35

Plan: Pro_StreadyRiver Walleyleg_Branch 1 RS: 400 Profile: 2 yr

E.G. US. (ft)	11.02	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	10.99	E.G. Elev (ft)	11.00	10.93
Q Total (cfs)	78.00	W.S. Elev (ft)	10.97	10.90
Q Bridge (cfs)	78.00	Crit W.S. (ft)	9.73	9.62
Q Weir (cfs)		Max Chl Dpth (ft)	2.08	2.10
Weir Sta Lft (ft)		Vel Total (ft/s)	1.37	1.33
Weir Sta Rgt (ft)		Flow Area (sq ft)	56.74	58.76
Weir Submerg		Froude # Chl	0.20	0.20
Weir Max Depth (ft)		Specif Force (cu ft)	54.17	56.44
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	1.41	1.42
Min El Prs (ft)	16.48	W.P. Total (ft)	41.25	42.69
Delta EG (ft)	0.25	Conv. Total (cfs)	2607.0	2700.8
Delta WS (ft)	0.11	Top Width (ft)	40.21	41.52
BR Open Area (sq ft)	636.65	Frctn Loss (ft)	0.08	0.02
BR Open Vel (ft/s)	1.37	C & E Loss (ft)	0.00	0.00
Coef of Q	1.00	Shear Total (lb/sq ft)	0.08	0.07
Br Sel Method	WSPRO	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_StreadyRiver Walleyleg_Branch 1 RS: 400 Profile: 25 yr

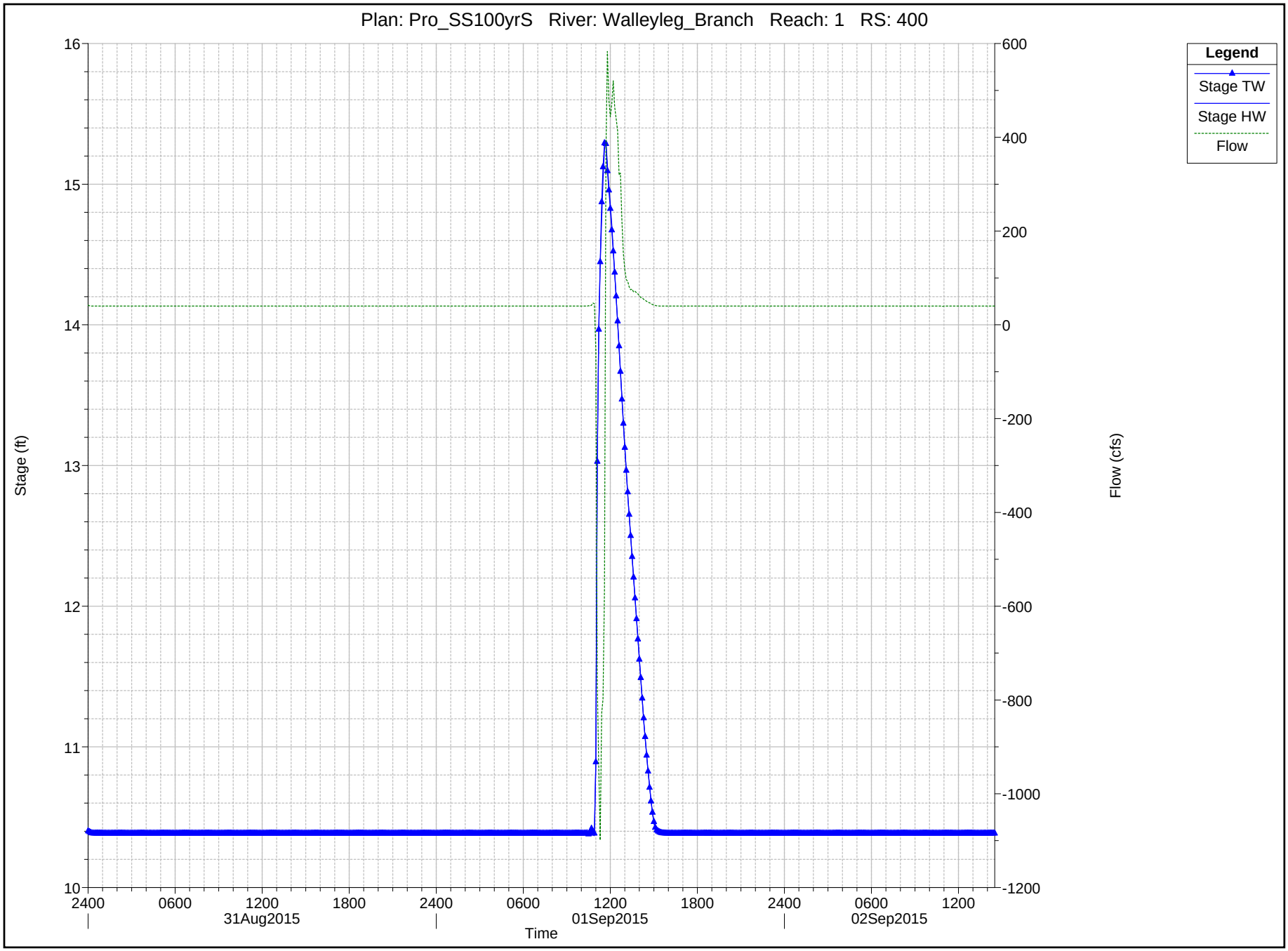
E.G. US. (ft)	12.45	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	12.37	E.G. Elev (ft)	12.43	12.30
Q Total (cfs)	314.00	W.S. Elev (ft)	12.33	12.24
Q Bridge (cfs)	314.00	Crit W.S. (ft)	10.73	10.63
Q Weir (cfs)		Max Chl Dpth (ft)	3.43	3.44
Weir Sta Lft (ft)		Vel Total (ft/s)	2.00	1.95
Weir Sta Rgt (ft)		Flow Area (sq ft)	156.82	160.68
Weir Submerg		Froude # Chl	0.27	0.27
Weir Max Depth (ft)		Specif Force (cu ft)	207.78	208.80
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	1.45	1.48
Min El Prs (ft)	16.48	W.P. Total (ft)	114.14	114.81
Delta EG (ft)	0.38	Conv. Total (cfs)	8244.4	8425.3
Delta WS (ft)	0.16	Top Width (ft)	107.95	108.45
BR Open Area (sq ft)	636.65	Frctn Loss (ft)	0.12	0.03
BR Open Vel (ft/s)	2.00	C & E Loss (ft)	0.00	0.00
Coef of Q	0.97	Shear Total (lb/sq ft)	0.12	0.12
Br Sel Method	WSPRO	Power Total (lb/ft s)	69867.68	69867.68

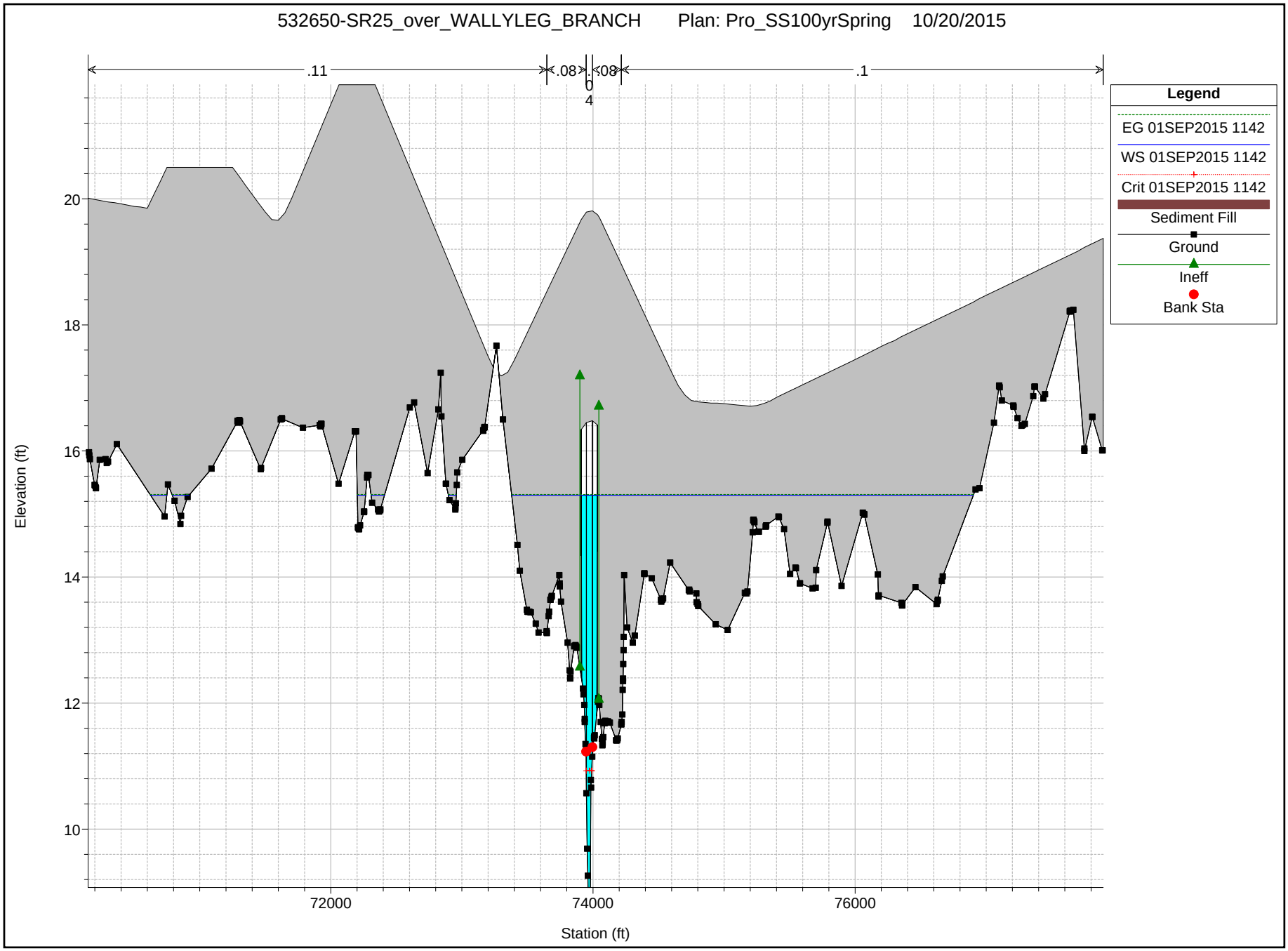
Plan: Pro_StreadyRiver Walleyleg_Branch 1 RS: 400 Profile: 100 yr

E.G. US. (ft)	15.56	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	15.50	E.G. Elev (ft)	15.54	15.48
Q Total (cfs)	910.00	W.S. Elev (ft)	15.47	15.41
Q Bridge (cfs)	910.00	Crit W.S. (ft)	12.19	12.05
Q Weir (cfs)		Max Chl Dpth (ft)	6.57	6.61
Weir Sta Lft (ft)		Vel Total (ft/s)	1.75	1.73
Weir Sta Rgt (ft)		Flow Area (sq ft)	519.51	527.23
Weir Submerg		Froude # Chl	0.19	0.18
Weir Max Depth (ft)		Specif Force (cu ft)	1291.13	1326.61
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	4.29	4.36
Min El Prs (ft)	16.48	W.P. Total (ft)	142.86	143.15
Delta EG (ft)	0.09	Conv. Total (cfs)	35698.6	36442.2
Delta WS (ft)	0.09	Top Width (ft)	121.00	121.00
BR Open Area (sq ft)	636.65	Frctn Loss (ft)	0.06	0.01
BR Open Vel (ft/s)	1.75	C & E Loss (ft)	0.00	0.01
Coef of Q		Shear Total (lb/sq ft)	0.15	0.14
Br Sel Method	Energy only	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_StreadyRiver Walleyleg_Branch 1 RS: 400 Profile: 500 yr

E.G. US. (ft)	18.23	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	18.23	E.G. Elev (ft)	18.23	18.21
Q Total (cfs)	1040.00	W.S. Elev (ft)	18.22	18.20
Q Bridge (cfs)	494.55	Crit W.S. (ft)	12.44	12.31
Q Weir (cfs)		Max Chl Dpth (ft)	9.32	9.40
Weir Sta Lft (ft)		Vel Total (ft/s)	0.31	0.32
Weir Sta Rgt (ft)		Flow Area (sq ft)	3301.65	3270.57
Weir Submerg		Froude # Chl	0.04	0.04
Weir Max Depth (ft)		Specif Force (cu ft)	4419.58	4468.98
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	1.05	1.05
Min El Prs (ft)	16.48	W.P. Total (ft)	3406.44	3383.01
Delta EG (ft)	0.03	Conv. Total (cfs)	67912.6	68099.7
Delta WS (ft)	0.03	Top Width (ft)	3130.28	3105.88
BR Open Area (sq ft)	636.65	Frctn Loss (ft)	0.02	0.00
BR Open Vel (ft/s)	0.78	C & E Loss (ft)	0.00	0.00
Coef of Q		Shear Total (lb/sq ft)	0.01	0.01
Br Sel Method	Energy only	Power Total (lb/ft s)	69867.68	69867.68


Plan: Pro_SS100yrS River: Walleyleg_Branch Reach: 1 RS: 400
Legend
Stage TW
Stage HW
Flow
Stage (ft)
Flow (cfs)
Time
16
15
14
13
12
11
10
600
400
200
0
-200
-400
-600
-800
-1000
-1200
2400
0600
1200
1800
2400
0600
1200
1800
2400
0600
1200
31Aug2015
01Sep2015
02Sep2015


532650-SR25_over_WALLYLEG_BRANCH Plan: Pro_SS100yrSpring 10/20/2015
.11
.08
.08
.1
0
4
Legend
EG 01SEP2015 1142
WS 01SEP2015 1142
Crit 01SEP2015 1142
Sediment Fill
Ground
Ineff
Bank Sta
Elevation (ft)
20
18
16
14
12
10
72000
74000
76000
Station (ft)

Proposed 100 year Unsteady Model

HEC-RAS Plan: Pro_SS100yrS Locations: User Defined

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)	
Walleyleg_Branch	1	800	01SEP2015 1100	40.00	9.69	10.74		10.75	0.001215	0.85	47.20	97.37	0.21
Walleyleg_Branch	1	800	01SEP2015 1106	40.00	9.69	12.92		12.92	0.000004	0.14	501.06	332.13	0.01
Walleyleg_Branch	1	800	01SEP2015 1112	40.00	9.69	13.88		13.88	0.000001	0.10	1000.70	2179.49	0.01
Walleyleg_Branch	1	800	01SEP2015 1118	40.00	9.69	14.39		14.39	0.000001	0.07	1641.20	2992.91	0.01
Walleyleg_Branch	1	800	01SEP2015 1124	40.00	9.69	14.73		14.73	0.000000	0.06	2106.82	3825.81	0.00
Walleyleg_Branch	1	800	01SEP2015 1130	40.00	9.69	15.01		15.01	0.000000	0.05	2513.85	4026.47	0.00
Walleyleg_Branch	1	800	01SEP2015 1136	40.00	9.69	15.25		15.25	0.000000	0.05	2855.89	4162.84	0.00
Walleyleg_Branch	1	600	01SEP2015 1100	-15.95	9.22	10.77		10.77	0.000074	-0.32	56.42	83.98	0.06
Walleyleg_Branch	1	600	01SEP2015 1106	-346.72	9.22	12.91		12.95	0.000452	-1.69	434.15	307.05	0.17
Walleyleg_Branch	1	600	01SEP2015 1112	-568.24	9.22	13.89		13.92	0.000367	-1.83	799.54	1540.32	0.16
Walleyleg_Branch	1	600	01SEP2015 1118	-651.62	9.22	14.39		14.42	0.000298	-1.78	1066.69	2462.21	0.15
Walleyleg_Branch	1	600	01SEP2015 1124	-501.04	9.22	14.73		14.74	0.000118	-1.17	1290.32	3027.95	0.09
Walleyleg_Branch	1	600	01SEP2015 1130	-462.70	9.22	15.01		15.02	0.000073	-0.96	1488.21	3119.38	0.07
Walleyleg_Branch	1	600	01SEP2015 1136	-327.27	9.22	15.25		15.25	0.000029	-0.62	1656.79	3199.08	0.05
Walleyleg_Branch	1	465	01SEP2015 1100	-54.47	8.90	10.88		10.90	0.000524	-1.02	53.54	40.38	0.16
Walleyleg_Branch	1	465	01SEP2015 1106	-768.30	8.90	13.05		13.28	0.002603	-4.14	270.83	464.73	0.40
Walleyleg_Branch	1	465	01SEP2015 1112	-942.05	8.90	13.95		14.10	0.001416	-3.58	400.32	2159.66	0.31
Walleyleg_Branch	1	465	01SEP2015 1118	-1098.84	8.90	14.43		14.58	0.001225	-3.59	470.53	2794.05	0.29
Walleyleg_Branch	1	465	01SEP2015 1124	-828.41	8.90	14.75		14.82	0.000533	-2.47	516.23	3076.97	0.20
Walleyleg_Branch	1	465	01SEP2015 1130	-798.02	8.90	15.02		15.08	0.000398	-2.21	556.51	3576.91	0.17
Walleyleg_Branch	1	465	01SEP2015 1136	-562.42	8.90	15.25		15.27	0.000167	-1.48	589.04	3970.74	0.11
Walleyleg_Branch	1	400		Bridge									
Walleyleg_Branch	1	335	01SEP2015 1100	-54.47	8.80	10.89		10.91	0.000413	-0.92	59.15	43.36	0.14
Walleyleg_Branch	1	335	01SEP2015 1106	-768.30	8.80	13.03		13.23	0.002276	-3.95	286.66	586.66	0.38
Walleyleg_Branch	1	335	01SEP2015 1112	-942.05	8.80	13.97		14.11	0.001222	-3.41	422.74	2456.95	0.29
Walleyleg_Branch	1	335	01SEP2015 1118	-1098.84	8.80	14.45		14.58	0.001079	-3.44	492.38	2919.41	0.28
Walleyleg_Branch	1	335	01SEP2015 1124	-828.41	8.80	14.87		14.93	0.000435	-2.31	554.18	3559.95	0.18
Walleyleg_Branch	1	335	01SEP2015 1130	-798.02	8.80	15.12		15.17	0.000335	-2.09	590.16	3990.97	0.16
Walleyleg_Branch	1	335	01SEP2015 1136	-562.42	8.80	15.29		15.31	0.000147	-1.42	614.78	4335.91	0.11
Walleyleg_Branch	1	100	01SEP2015 1100	-197.94	8.33	11.16		11.21	0.000996	-1.82	180.94	220.91	0.23
Walleyleg_Branch	1	100	01SEP2015 1106	-1277.31	8.33	13.43		13.52	0.001171	-3.31	1011.37	760.31	0.28
Walleyleg_Branch	1	100	01SEP2015 1112	-1641.75	8.33	14.22		14.29	0.000844	-3.15	1661.69	3239.27	0.25
Walleyleg_Branch	1	100	01SEP2015 1118	-1915.89	8.33	14.66		14.71	0.000623	-2.86	2131.96	4054.82	0.22
Walleyleg_Branch	1	100	01SEP2015 1124	-1671.68	8.33	14.96		14.99	0.000327	-2.15	2467.09	5498.23	0.16
Walleyleg_Branch	1	100	01SEP2015 1130	-1457.90	8.33	15.19		15.20	0.000189	-1.68	2728.22	5784.41	0.12
Walleyleg_Branch	1	100	01SEP2015 1136	-842.81	8.33	15.31		15.32	0.000054	-0.91	2875.14	6074.26	0.07
Walleyleg_Branch	1	0	01SEP2015 1100	-408.68	7.94	11.25		11.30	0.001115	-2.33	355.33	289.64	0.26
Walleyleg_Branch	1	0	01SEP2015 1106	-1526.54	7.94	13.54		13.60	0.000829	-3.07	1443.63	1285.55	0.24
Walleyleg_Branch	1	0	01SEP2015 1112	-2087.41	7.94	14.30		14.36	0.000730	-3.17	2298.12	3732.40	0.24
Walleyleg_Branch	1	0	01SEP2015 1118	-2339.91	7.94	14.71		14.76	0.000521	-2.81	2862.20	5042.96	0.20
Walleyleg_Branch	1	0	01SEP2015 1124	-2125.41	7.94	14.98		15.01	0.000309	-2.23	3238.69	6366.98	0.16
Walleyleg_Branch	1	0	01SEP2015 1130	-1748.12	7.94	15.20		15.21	0.000163	-1.66	3545.36	6694.13	0.11
Walleyleg_Branch	1	0	01SEP2015 1136	-936.39	7.94	15.31		15.32	0.000041	-0.84	3709.65	6791.20	0.06

HEC-RAS Plan: Pro_SS100yrS Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Vel Head	Frctn Loss	C & E Loss	Q Left	Q Channel	Q Right	Top Width
				(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft)
Walleyleg_Branch	1	800	01SEP2015 1100	10.75	10.74	0.01	0.05		0.00	39.99	0.01	97.37
Walleyleg_Branch	1	800	01SEP2015 1106	12.92	12.92	0.00	0.00		4.63	32.90	2.47	332.13
Walleyleg_Branch	1	800	01SEP2015 1112	13.88	13.88	0.00	0.00		6.15	31.09	2.76	2179.49
Walleyleg_Branch	1	800	01SEP2015 1118	14.39	14.39	0.00	0.00		7.24	26.54	6.23	2992.91
Walleyleg_Branch	1	800	01SEP2015 1124	14.73	14.73	0.00	0.00		7.72	23.65	8.63	3825.81
Walleyleg_Branch	1	800	01SEP2015 1130	15.01	15.01	0.00	0.00		8.07	21.65	10.27	4026.47
Walleyleg_Branch	1	800	01SEP2015 1136	15.25	15.25	0.00	0.00		8.35	20.27	11.39	4162.84
Walleyleg_Branch	1	600	01SEP2015 1100	10.77	10.77	0.00	0.04		-0.16	-15.64	-0.15	83.98
Walleyleg_Branch	1	600	01SEP2015 1106	12.95	12.91	0.03	0.17		-40.26	-260.47	-45.99	307.05
Walleyleg_Branch	1	600	01SEP2015 1112	13.92	13.89	0.03	0.10		-107.78	-367.97	-92.49	1540.32
Walleyleg_Branch	1	600	01SEP2015 1118	14.42	14.39	0.03	0.09		-145.86	-401.45	-104.31	2462.21
Walleyleg_Branch	1	600	01SEP2015 1124	14.74	14.73	0.01	0.04		-118.54	-284.40	-98.10	3027.95
Walleyleg_Branch	1	600	01SEP2015 1130	15.02	15.01	0.01	0.02		-114.43	-246.28	-101.99	3119.38
Walleyleg_Branch	1	600	01SEP2015 1136	15.25	15.25	0.00	0.01		-83.79	-165.79	-77.69	3199.08
Walleyleg_Branch	1	465	01SEP2015 1100	10.90	10.88	0.02				-54.47		40.38
Walleyleg_Branch	1	465	01SEP2015 1106	13.28	13.05	0.23			-44.04	-644.57	-79.70	464.73
Walleyleg_Branch	1	465	01SEP2015 1112	14.10	13.95	0.16			-95.68	-711.41	-134.97	2159.66
Walleyleg_Branch	1	465	01SEP2015 1118	14.58	14.43	0.15			-130.57	-795.09	-173.18	2794.05
Walleyleg_Branch	1	465	01SEP2015 1124	14.82	14.75	0.07			-106.21	-585.35	-136.85	3076.97
Walleyleg_Branch	1	465	01SEP2015 1130	15.08	15.02	0.06			-108.13	-553.42	-136.47	3576.91
Walleyleg_Branch	1	465	01SEP2015 1136	15.27	15.25	0.02			-79.19	-384.68	-98.54	3970.74
Walleyleg_Branch	1	400		Bridge								
Walleyleg_Branch	1	335	01SEP2015 1100	10.91	10.89	0.01	0.10			-54.47		43.36
Walleyleg_Branch	1	335	01SEP2015 1106	13.23	13.03	0.20	0.22		-49.47	-633.80	-85.04	586.66
Walleyleg_Branch	1	335	01SEP2015 1112	14.11	13.97	0.14	0.14		-101.84	-699.86	-140.36	2456.95
Walleyleg_Branch	1	335	01SEP2015 1118	14.58	14.45	0.14	0.11		-136.30	-784.48	-178.06	2919.41
Walleyleg_Branch	1	335	01SEP2015 1124	14.93	14.87	0.06	0.05		-112.35	-574.14	-141.92	3559.95
Walleyleg_Branch	1	335	01SEP2015 1130	15.17	15.12	0.05	0.03		-112.91	-544.71	-140.40	3990.97
Walleyleg_Branch	1	335	01SEP2015 1136	15.31	15.29	0.02	0.01		-81.65	-380.19	-100.58	4335.91
Walleyleg_Branch	1	100	01SEP2015 1100	11.21	11.16	0.04	0.11		-7.12	-165.62	-25.21	220.91
Walleyleg_Branch	1	100	01SEP2015 1106	13.52	13.43	0.09	0.10		-180.12	-650.19	-447.00	760.31
Walleyleg_Branch	1	100	01SEP2015 1112	14.29	14.22	0.07	0.08		-298.47	-736.10	-607.18	3239.27
Walleyleg_Branch	1	100	01SEP2015 1118	14.71	14.66	0.05	0.06		-358.48	-727.52	-829.89	4054.82
Walleyleg_Branch	1	100	01SEP2015 1124	14.99	14.96	0.03	0.03		-320.75	-575.51	-775.42	5498.23
Walleyleg_Branch	1	100	01SEP2015 1130	15.20	15.19	0.02	0.02		-292.26	-466.50	-699.15	5784.41
Walleyleg_Branch	1	100	01SEP2015 1136	15.32	15.31	0.00	0.00		-173.45	-259.30	-410.06	6074.26
Walleyleg_Branch	1	0	01SEP2015 1100	11.30	11.25	0.06	1.79		-36.82	-261.77	-110.10	289.64
Walleyleg_Branch	1	0	01SEP2015 1106	13.60	13.54	0.07	0.21		-262.68	-648.68	-615.18	1285.55
Walleyleg_Branch	1	0	01SEP2015 1112	14.36	14.30	0.06	0.12		-434.07	-774.77	-878.57	3732.40
Walleyleg_Branch	1	0	01SEP2015 1118	14.76	14.71	0.04	0.08		-483.20	-737.10	-1119.61	5042.96
Walleyleg_Branch	1	0	01SEP2015 1124	15.01	14.98	0.03	0.05		-439.68	-610.50	-1075.23	6366.98
Walleyleg_Branch	1	0	01SEP2015 1130	15.21	15.20	0.01	0.03		-363.13	-469.61	-915.38	6694.13
Walleyleg_Branch	1	0	01SEP2015 1136	15.32	15.31	0.00	0.00		-195.10	-243.35	-497.95	6791.20

HEC-RAS Plan: Pro_SS100yrS Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Crit W.S.	Frctn Loss	C & E Loss	Top Width	Q Left	Q Channel	Q Right	Vel Chnl
				(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft/s)
Walleyleg_Branch	1	400 BR U	01SEP2015 1100	10.90	10.88				38.61		-54.47		-1.03
Walleyleg_Branch	1	400 BR U	01SEP2015 1106	13.32	13.05				111.73	-45.11	-654.41	-68.79	-4.43
Walleyleg_Branch	1	400 BR U	01SEP2015 1112	14.14	13.95				115.29	-91.51	-735.60	-114.94	-3.94
Walleyleg_Branch	1	400 BR U	01SEP2015 1118	14.63	14.43				121.00	-121.85	-832.23	-144.75	-4.00
Walleyleg_Branch	1	400 BR U	01SEP2015 1124	14.84	14.75				121.00	-100.55	-611.67	-116.19	-2.76
Walleyleg_Branch	1	400 BR U	01SEP2015 1130	15.10	15.02				121.00	-103.48	-577.37	-117.17	-2.47
Walleyleg_Branch	1	400 BR U	01SEP2015 1136	15.28	15.25				121.00	-76.37	-400.79	-85.26	-1.64
Walleyleg_Branch	1	400 BR D	01SEP2015 1100	10.91	10.89				41.36		-54.47		-0.93
Walleyleg_Branch	1	400 BR D	01SEP2015 1106	13.27	13.03				111.61	-49.58	-646.10	-72.63	-4.25
Walleyleg_Branch	1	400 BR D	01SEP2015 1112	14.14	13.97				115.36	-96.83	-726.24	-118.98	-3.76
Walleyleg_Branch	1	400 BR D	01SEP2015 1118	14.63	14.45				121.00	-126.89	-823.50	-148.45	-3.85
Walleyleg_Branch	1	400 BR D	01SEP2015 1124	14.95	14.87				121.00	-106.64	-601.06	-120.72	-2.58
Walleyleg_Branch	1	400 BR D	01SEP2015 1130	15.19	15.12				121.00	-108.18	-569.29	-120.55	-2.34
Walleyleg_Branch	1	400 BR D	01SEP2015 1136	15.32	15.29				121.00	-78.69	-396.89	-86.84	-1.58

Plan: Pro_SS100yrS Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1100

E.G. US. (ft)	10.90	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	10.88	E.G. Elev (ft)	10.90	10.91
Q Total (cfs)	-54.47	W.S. Elev (ft)	10.88	10.89
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	1.98	2.09
Weir Sta Lft (ft)		Vel Total (ft/s)	-1.03	-0.93
Weir Sta Rgt (ft)		Flow Area (sq ft)	53.09	58.41
Weir Submerg		Froude # Chl	0.15	0.14
Weir Max Depth (ft)		Specif Force (cu ft)	47.49	54.31
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	1.38	1.41
Min El Prs (ft)	16.48	W.P. Total (ft)	39.53	42.51
Delta EG (ft)		Conv. Total (cfs)	2400.9	2681.9
Delta WS (ft)	-0.01	Top Width (ft)	38.61	41.36
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.04	0.04
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_SS100yrS Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1106

E.G. US. (ft)	13.28	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	13.05	E.G. Elev (ft)	13.32	13.27
Q Total (cfs)	-768.30	W.S. Elev (ft)	13.05	13.03
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	4.16	4.23
Weir Sta Lft (ft)		Vel Total (ft/s)	-3.25	-3.10
Weir Sta Rgt (ft)		Flow Area (sq ft)	236.29	247.73
Weir Submerg		Froude # Chl	0.43	0.40
Weir Max Depth (ft)		Specif Force (cu ft)	420.74	440.64
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	2.11	2.22
Min El Prs (ft)	16.48	W.P. Total (ft)	121.13	121.51
Delta EG (ft)		Conv. Total (cfs)	13072.5	13832.4
Delta WS (ft)	0.03	Top Width (ft)	111.73	111.61
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.42	0.39
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_SS100yrS Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1112

E.G. US. (ft)	14.10	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	13.95	E.G. Elev (ft)	14.14	14.14
Q Total (cfs)	-942.05	W.S. Elev (ft)	13.95	13.97
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	5.05	5.17
Weir Sta Lft (ft)		Vel Total (ft/s)	-2.79	-2.66
Weir Sta Rgt (ft)		Flow Area (sq ft)	337.66	354.23
Weir Submerg		Froude # Chl	0.34	0.32
Weir Max Depth (ft)		Specif Force (cu ft)	680.88	726.46
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	2.93	3.07
Min El Prs (ft)	16.48	W.P. Total (ft)	128.69	129.46
Delta EG (ft)		Conv. Total (cfs)	20399.8	21713.2
Delta WS (ft)	-0.02	Top Width (ft)	115.29	115.36
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.35	0.32
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_SS100yrS Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1118

E.G. US. (ft)	14.58	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	14.43	E.G. Elev (ft)	14.63	14.63
Q Total (cfs)	-1098.84	W.S. Elev (ft)	14.43	14.45
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	5.53	5.65
Weir Sta Lft (ft)		Vel Total (ft/s)	-2.79	-2.68
Weir Sta Rgt (ft)		Flow Area (sq ft)	394.16	410.38
Weir Submerg		Froude # Chl	0.32	0.31
Weir Max Depth (ft)		Specif Force (cu ft)	874.48	926.52
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	3.26	3.39
Min El Prs (ft)	16.48	W.P. Total (ft)	136.65	137.35
Delta EG (ft)		Conv. Total (cfs)	24722.2	26081.7
Delta WS (ft)	-0.02	Top Width (ft)	121.00	121.00
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.36	0.33
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_SS100yrS Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1124

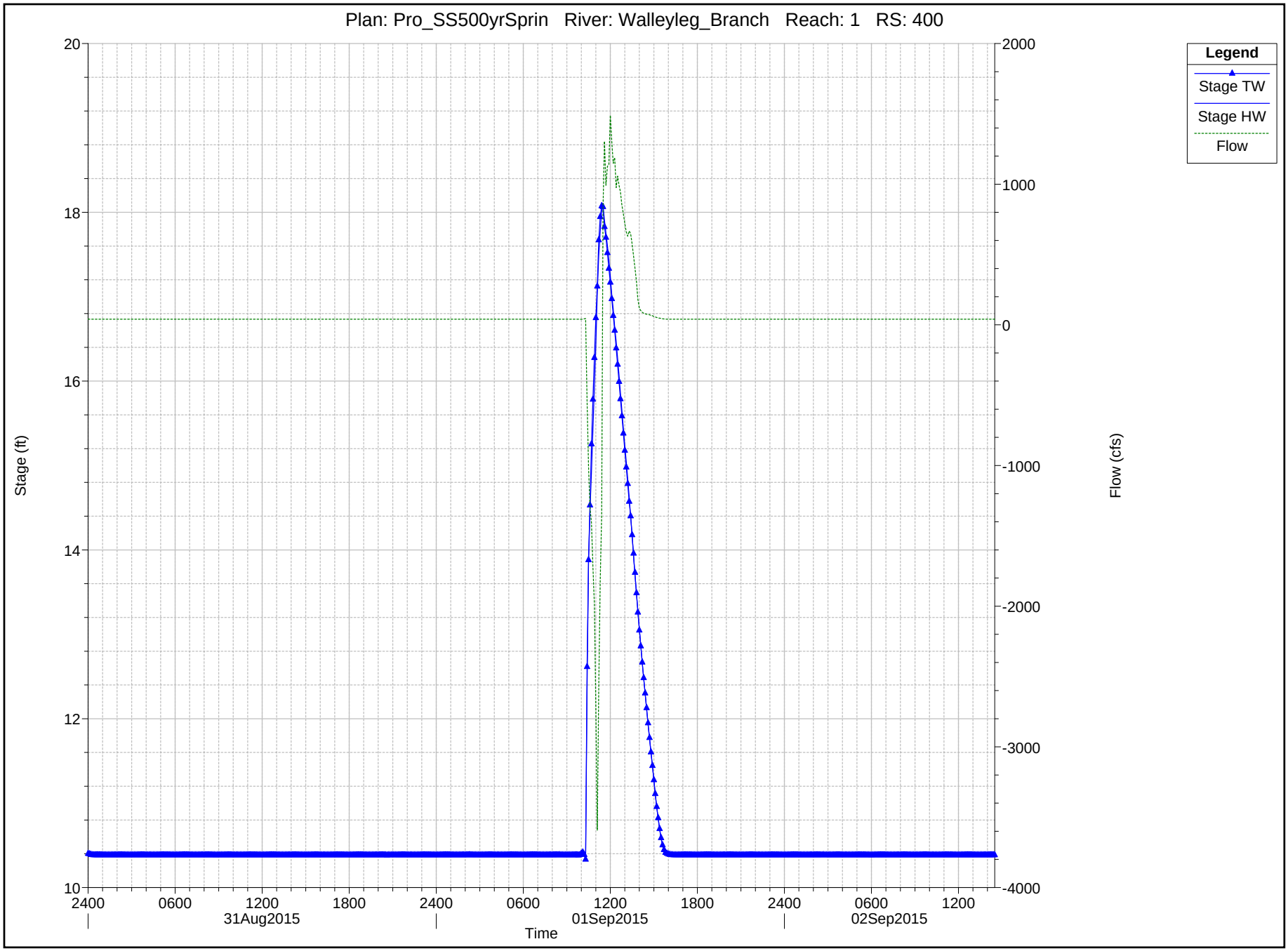
E.G. US. (ft)	14.82	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	14.75	E.G. Elev (ft)	14.84	14.95
Q Total (cfs)	-828.41	W.S. Elev (ft)	14.75	14.87
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	5.85	6.07
Weir Sta Lft (ft)		Vel Total (ft/s)	-1.92	-1.79
Weir Sta Rgt (ft)		Flow Area (sq ft)	432.30	461.95
Weir Submerg		Froude # Chl	0.22	0.20
Weir Max Depth (ft)		Specif Force (cu ft)	948.78	1057.27
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	3.57	3.82
Min El Prs (ft)	16.48	W.P. Total (ft)	138.54	139.91
Delta EG (ft)		Conv. Total (cfs)	27911.1	30506.0
Delta WS (ft)	-0.13	Top Width (ft)	121.00	121.00
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.17	0.15
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

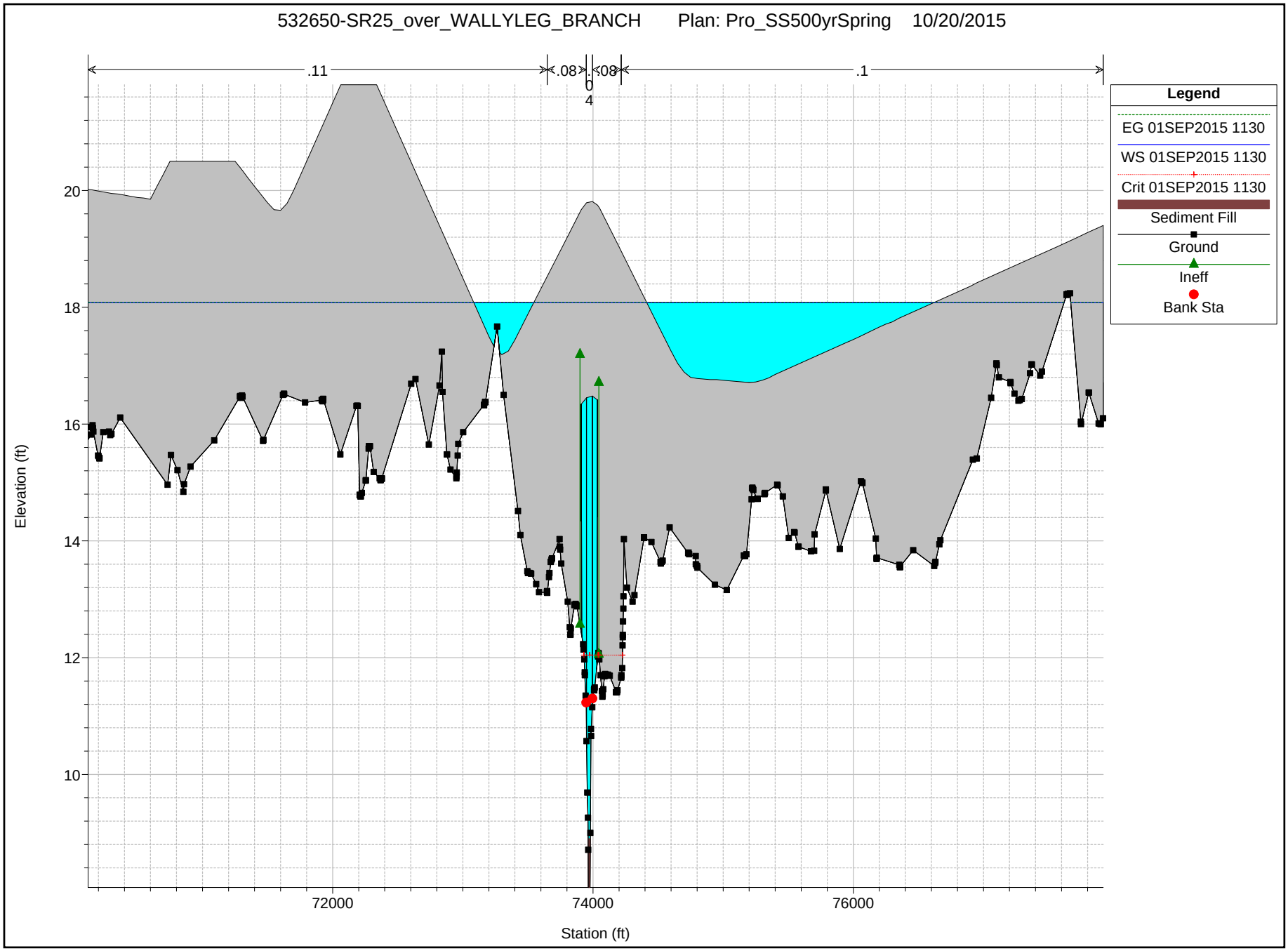
Plan: Pro_SS100yrS Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1130

E.G. US. (ft)	15.08	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	15.02	E.G. Elev (ft)	15.10	15.19
Q Total (cfs)	-798.02	W.S. Elev (ft)	15.02	15.12
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	6.13	6.32
Weir Sta Lft (ft)		Vel Total (ft/s)	-1.71	-1.62
Weir Sta Rgt (ft)		Flow Area (sq ft)	465.91	491.97
Weir Submerg		Froude # Chl	0.19	0.17
Weir Max Depth (ft)		Specif Force (cu ft)	1064.96	1168.24
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	3.85	4.07
Min El Prs (ft)	16.48	W.P. Total (ft)	140.21	141.40
Delta EG (ft)		Conv. Total (cfs)	30833.5	33191.2
Delta WS (ft)	-0.10	Top Width (ft)	121.00	121.00
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.14	0.13
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_SS100yrS Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1136

E.G. US. (ft)	15.27	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	15.25	E.G. Elev (ft)	15.28	15.32
Q Total (cfs)	-562.42	W.S. Elev (ft)	15.25	15.29
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	6.35	6.49
Weir Sta Lft (ft)		Vel Total (ft/s)	-1.14	-1.10
Weir Sta Rgt (ft)		Flow Area (sq ft)	493.06	512.52
Weir Submerg		Froude # Chl	0.12	0.12
Weir Max Depth (ft)		Specif Force (cu ft)	1145.50	1228.43
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	4.07	4.24
Min El Prs (ft)	16.48	W.P. Total (ft)	141.55	142.42
Delta EG (ft)		Conv. Total (cfs)	33267.5	35073.6
Delta WS (ft)	-0.04	Top Width (ft)	121.00	121.00
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.06	0.06
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68


Plan: Pro_SS500yrSprin River: Walleyleg_Branch Reach: 1 RS: 400
Legend
Stage TW
Stage HW
Flow
Stage (ft)
Flow (cfs)
Time
20
18
16
14
12
10
2000
1000
0
-1000
-2000
-3000
-4000
2400
0600
1200
1800
2400
0600
1200
1800
2400
0600
1200
31Aug2015
01Sep2015
02Sep2015


532650-SR25_over_WALLYLEG_BRANCH Plan: Pro_SS500yrSpring 10/20/2015
.11
.08
.08
.1
0
4
Legend
EG 01SEP2015 1130
WS 01SEP2015 1130
Crit 01SEP2015 1130
Sediment Fill
Ground
Ineff
Bank Sta
Elevation (ft)
20
18
16
14
12
10
72000
74000
76000
Station (ft)

Proposed 500 year Unsteady Model

HEC-RAS Plan: Pro_SS500yrSprin Locations: User Defined

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)	
Walleyleg_Branch	1	800	01SEP2015 1048	40.00	9.69	15.37		15.37	0.000000	0.04	3037.99	4223.42	0.00
Walleyleg_Branch	1	800	01SEP2015 1054	40.00	9.69	15.88		15.88	0.000000	0.03	3811.34	4647.54	0.00
Walleyleg_Branch	1	800	01SEP2015 1100	40.00	9.69	16.34		16.34	0.000000	0.03	4556.94	5722.79	0.00
Walleyleg_Branch	1	800	01SEP2015 1106	40.00	9.69	16.94		16.94	0.000000	0.03	6128.89	6706.48	0.00
Walleyleg_Branch	1	800	01SEP2015 1112	40.00	9.69	17.46		17.46	0.000000	0.03	9096.20	7465.39	0.00
Walleyleg_Branch	1	800	01SEP2015 1118	40.00	9.69	17.77		17.77	0.000000	0.02	11357.08	7477.59	0.00
Walleyleg_Branch	1	800	01SEP2015 1124	40.00	9.69	18.01		18.01	0.000000	0.02	13155.50	7482.55	0.00
Walleyleg_Branch	1	600	01SEP2015 1048	-972.82	9.22	15.37		15.40	0.000224	-1.75	1751.17	3381.73	0.13
Walleyleg_Branch	1	600	01SEP2015 1054	-1112.20	9.22	15.88		15.90	0.000184	-1.68	2143.96	3972.43	0.12
Walleyleg_Branch	1	600	01SEP2015 1100	-1211.62	9.22	16.34		16.35	0.000142	-1.55	2524.50	4976.39	0.11
Walleyleg_Branch	1	600	01SEP2015 1106	-2185.56	9.22	16.94		16.94	0.000045	-0.93	10874.52	5736.88	0.06
Walleyleg_Branch	1	600	01SEP2015 1112	-1550.03	9.22	17.46		17.46	0.000012	-0.49	15625.81	6681.36	0.03
Walleyleg_Branch	1	600	01SEP2015 1118	-1067.66	9.22	17.77		17.77	0.000004	-0.30	17763.10	7428.02	0.02
Walleyleg_Branch	1	600	01SEP2015 1124	-780.83	9.22	18.01		18.01	0.000002	-0.20	19592.37	7707.38	0.01
Walleyleg_Branch	1	465	01SEP2015 1048	-1720.45	8.90	15.41		15.63	0.001388	-4.34	613.07	4302.34	0.32
Walleyleg_Branch	1	465	01SEP2015 1054	-1983.09	8.90	15.91		16.13	0.001319	-4.48	685.47	5482.98	0.32
Walleyleg_Branch	1	465	01SEP2015 1100	-2717.44	8.90	16.41		16.74	0.001832	-5.56	757.03	6860.27	0.38
Walleyleg_Branch	1	465	01SEP2015 1106	-3593.71	8.90	17.05		17.48	0.002195	-6.47	2064.11	7815.92	0.42
Walleyleg_Branch	1	465	01SEP2015 1112	-2574.61	8.90	17.49		17.57	0.000537	-3.33	4938.85	7989.00	0.21
Walleyleg_Branch	1	465	01SEP2015 1118	-1820.29	8.90	17.77		17.79	0.000134	-1.70	7217.00	8085.97	0.11
Walleyleg_Branch	1	465	01SEP2015 1124	-1353.88	8.90	18.01		18.01	0.000044	-0.99	9124.79	8149.13	0.06
Walleyleg_Branch	1	400		Bridge									
Walleyleg_Branch	1	335	01SEP2015 1048	-1720.45	8.80	15.78		15.95	0.000992	-3.88	686.06	5508.48	0.28
Walleyleg_Branch	1	335	01SEP2015 1054	-1983.09	8.80	16.28		16.45	0.000975	-4.05	757.55	6908.41	0.28
Walleyleg_Branch	1	335	01SEP2015 1100	-2717.44	8.80	16.75	13.78	17.14	0.001807	-5.78	961.56	7668.23	0.38
Walleyleg_Branch	1	335	01SEP2015 1106	-3593.71	8.80	17.12	14.34	17.47	0.001818	-6.00	2393.78	7903.64	0.39
Walleyleg_Branch	1	335	01SEP2015 1112	-2574.61	8.80	17.67		17.71	0.000326	-2.66	6481.79	8096.29	0.17
Walleyleg_Branch	1	335	01SEP2015 1118	-1820.29	8.80	17.95		17.96	0.000087	-1.41	8723.33	8170.38	0.09
Walleyleg_Branch	1	335	01SEP2015 1124	-1353.88	8.80	18.07		18.08	0.000037	-0.93	9763.46	8204.15	0.06
Walleyleg_Branch	1	200	01SEP2015 1048	-2827.66	8.75	15.93		15.98	0.000549	-2.79	2467.30	6475.41	0.20
Walleyleg_Branch	1	200	01SEP2015 1054	-3160.65	8.75	16.42		16.47	0.000452	-2.68	2836.27	7098.77	0.19
Walleyleg_Branch	1	200	01SEP2015 1100	-3349.44	8.75	16.93		16.93	0.000061	-1.04	10913.10	7462.99	0.07
Walleyleg_Branch	1	200	01SEP2015 1106	-5137.79	8.75	17.30		17.30	0.000058	-1.05	19792.74	7597.48	0.07
Walleyleg_Branch	1	200	01SEP2015 1112	-3730.32	8.75	17.70		17.70	0.000020	-0.64	22803.64	7631.66	0.04
Walleyleg_Branch	1	200	01SEP2015 1118	-2329.97	8.75	17.95		17.95	0.000006	-0.36	24765.20	7637.48	0.02
Walleyleg_Branch	1	200	01SEP2015 1124	-1574.11	8.75	18.08		18.08	0.000002	-0.23	25700.57	7640.25	0.01
Walleyleg_Branch	1	0	01SEP2015 1048	-4831.00	7.94	16.02		16.07	0.000553	-3.30	4792.57	7313.48	0.21
Walleyleg_Branch	1	0	01SEP2015 1054	-5051.62	7.94	16.50		16.54	0.000390	-2.89	5548.66	7397.09	0.18
Walleyleg_Branch	1	0	01SEP2015 1100	-5534.68	7.94	16.96		17.02	0.000641	-3.85	6897.39	7459.91	0.24
Walleyleg_Branch	1	0	01SEP2015 1106	-6613.29	7.94	17.33		17.41	0.000780	-4.37	9004.04	7512.08	0.26
Walleyleg_Branch	1	0	01SEP2015 1112	-5255.71	7.94	17.70		17.73	0.000246	-2.52	11808.58	7560.57	0.15
Walleyleg_Branch	1	0	01SEP2015 1118	-3044.48	7.94	17.96		17.96	0.000055	-1.21	13708.62	7586.42	0.07
Walleyleg_Branch	1	0	01SEP2015 1124	-1872.78	7.94	18.08		18.08	0.000017	-0.69	14620.19	7598.79	0.04

HEC-RAS Plan: Pro_SS500yrSprin Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Vel Head	Frctn Loss	C & E Loss	Q Left	Q Channel	Q Right	Top Width
				(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft)
Walleyleg_Branch	1	800	01SEP2015 1048	15.37	15.37	0.00	0.00		8.48	19.62	11.90	4223.42
Walleyleg_Branch	1	800	01SEP2015 1054	15.88	15.88	0.00	0.00		9.02	17.39	13.59	4647.54
Walleyleg_Branch	1	800	01SEP2015 1100	16.34	16.34	0.00	0.00		9.49	15.82	14.69	5722.79
Walleyleg_Branch	1	800	01SEP2015 1106	16.94	16.94	0.00	0.00		12.66	17.11	10.23	6706.48
Walleyleg_Branch	1	800	01SEP2015 1112	17.46	17.46	0.00	0.00		7.12	16.10	16.78	7465.39
Walleyleg_Branch	1	800	01SEP2015 1118	17.77	17.77	0.00	0.00		9.26	13.30	17.45	7477.59
Walleyleg_Branch	1	800	01SEP2015 1124	18.01	18.01	0.00	0.00		10.61	11.63	17.76	7482.55
Walleyleg_Branch	1	600	01SEP2015 1048	15.40	15.37	0.02	0.08		-253.67	-480.26	-238.89	3381.73
Walleyleg_Branch	1	600	01SEP2015 1054	15.90	15.88	0.02	0.07		-305.76	-502.50	-303.94	3972.43
Walleyleg_Branch	1	600	01SEP2015 1100	16.35	16.34	0.02	0.08		-365.96	-499.25	-346.41	4976.39
Walleyleg_Branch	1	600	01SEP2015 1106	16.94	16.94	0.00	0.03		-293.97	-326.18	-1565.42	5736.88
Walleyleg_Branch	1	600	01SEP2015 1112	17.46	17.46	0.00	0.01		-297.99	-186.11	-1065.93	6681.36
Walleyleg_Branch	1	600	01SEP2015 1118	17.77	17.77	0.00	0.00		-222.86	-116.69	-728.11	7428.02
Walleyleg_Branch	1	600	01SEP2015 1124	18.01	18.01	0.00	0.00		-158.66	-81.50	-540.66	7707.38
Walleyleg_Branch	1	465	01SEP2015 1048	15.63	15.41	0.21			-248.50	-1165.60	-306.35	4302.34
Walleyleg_Branch	1	465	01SEP2015 1054	16.13	15.91	0.22			-305.61	-1309.46	-368.02	5482.98
Walleyleg_Branch	1	465	01SEP2015 1100	16.74	16.41	0.34			-440.55	-1755.87	-521.02	6860.27
Walleyleg_Branch	1	465	01SEP2015 1106	17.48	17.05	0.42			-607.49	-2243.62	-742.59	7815.92
Walleyleg_Branch	1	465	01SEP2015 1112	17.57	17.49	0.08			-306.55	-1222.86	-1045.20	7989.00
Walleyleg_Branch	1	465	01SEP2015 1118	17.79	17.77	0.02			-346.07	-648.07	-826.15	8085.97
Walleyleg_Branch	1	465	01SEP2015 1124	18.01	18.01	0.00			-320.83	-389.67	-643.38	8149.13
Walleyleg_Branch	1	400		Bridge								
Walleyleg_Branch	1	335	01SEP2015 1048	15.95	15.78	0.17	0.09		-266.05	-1134.14	-320.27	5508.48
Walleyleg_Branch	1	335	01SEP2015 1054	16.45	16.28	0.18	0.08		-322.45	-1279.39	-381.25	6908.41
Walleyleg_Branch	1	335	01SEP2015 1100	17.14	16.75	0.39	0.02		-521.46	-1953.88	-242.11	7668.23
Walleyleg_Branch	1	335	01SEP2015 1106	17.47	17.12	0.35	0.02		-592.60	-2135.59	-865.52	7903.64
Walleyleg_Branch	1	335	01SEP2015 1112	17.71	17.67	0.04	0.01		-425.50	-1017.00	-1132.11	8096.29
Walleyleg_Branch	1	335	01SEP2015 1118	17.96	17.95	0.01	0.00		-408.13	-555.99	-856.17	8170.38
Walleyleg_Branch	1	335	01SEP2015 1124	18.08	18.07	0.00	0.00		-333.30	-371.58	-649.01	8204.15
Walleyleg_Branch	1	200	01SEP2015 1048	15.98	15.93	0.05	0.06		-510.05	-1110.09	-1207.52	6475.41
Walleyleg_Branch	1	200	01SEP2015 1054	16.47	16.42	0.05	0.04		-593.45	-1157.82	-1409.38	7098.77
Walleyleg_Branch	1	200	01SEP2015 1100	16.93	16.93	0.00	0.01		-271.60	-484.79	-2593.05	7462.99
Walleyleg_Branch	1	200	01SEP2015 1106	17.30	17.30	0.00	0.01		-1513.41	-517.34	-3107.04	7597.48
Walleyleg_Branch	1	200	01SEP2015 1112	17.70	17.70	0.00	0.00		-1147.09	-331.39	-2251.85	7631.66
Walleyleg_Branch	1	200	01SEP2015 1118	17.95	17.95	0.00	0.00		-735.97	-192.45	-1401.54	7637.48
Walleyleg_Branch	1	200	01SEP2015 1124	18.08	18.08	0.00	0.00		-502.83	-125.91	-945.37	7640.25
Walleyleg_Branch	1	0	01SEP2015 1048	16.07	16.02	0.05	0.12		-1031.70	-1051.79	-2747.52	7313.48
Walleyleg_Branch	1	0	01SEP2015 1054	16.54	16.50	0.03	0.09		-1157.20	-981.88	-2912.55	7397.09
Walleyleg_Branch	1	0	01SEP2015 1100	17.02	16.96	0.06	0.05		-1874.69	-1383.24	-2276.75	7459.91
Walleyleg_Branch	1	0	01SEP2015 1106	17.41	17.33	0.08	0.01		-994.11	-1642.71	-3976.47	7512.08
Walleyleg_Branch	1	0	01SEP2015 1112	17.73	17.70	0.02	0.01		-1074.36	-989.33	-3192.01	7560.57
Walleyleg_Branch	1	0	01SEP2015 1118	17.96	17.96	0.00	0.00		-705.49	-488.80	-1850.19	7586.42
Walleyleg_Branch	1	0	01SEP2015 1124	18.08	18.08	0.00	0.00		-454.77	-280.56	-1137.45	7598.79

HEC-RAS Plan: Pro_SS500yrSprin Locations: User Defined

River	Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Crit W.S.	Frctn Loss	C & E Loss	Top Width	Q Left	Q Channel	Q Right	Vel Chnl
				(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft/s)
Walleyleg_Branch	1	400 BR U	01SEP2015 1048	15.69	15.41				121.00	-240.91	-1213.15	-266.38	-4.83
Walleyleg_Branch	1	400 BR U	01SEP2015 1054	16.20	15.91				121.00	-300.43	-1358.58	-324.08	-4.98
Walleyleg_Branch	1	400 BR U	01SEP2015 1100	16.89	16.41				96.59	-332.63	-1900.10	-484.71	-6.45
Walleyleg_Branch	1	400 BR U	01SEP2015 1106	17.83	17.05					-537.26	-2456.72	-599.73	-8.27
Walleyleg_Branch	1	400 BR U	01SEP2015 1112	17.89	17.49					-384.90	-1760.05	-429.66	-5.92
Walleyleg_Branch	1	400 BR U	01SEP2015 1118	17.97	17.77					-272.13	-1244.38	-303.77	-4.19
Walleyleg_Branch	1	400 BR U	01SEP2015 1124	18.12	18.01					-202.41	-925.54	-225.94	-3.11
Walleyleg_Branch	1	400 BR D	01SEP2015 1048	16.00	15.78				121.00	-260.24	-1179.91	-280.30	-4.33
Walleyleg_Branch	1	400 BR D	01SEP2015 1054	16.51	16.28				121.00	-319.39	-1326.51	-337.19	-4.51
Walleyleg_Branch	1	400 BR D	01SEP2015 1100	17.17	16.75					-411.56	-1849.15	-456.74	-6.11
Walleyleg_Branch	1	400 BR D	01SEP2015 1106	17.87	17.12					-544.27	-2445.43	-604.02	-8.08
Walleyleg_Branch	1	400 BR D	01SEP2015 1112	18.05	17.67					-389.93	-1751.95	-432.73	-5.79
Walleyleg_Branch	1	400 BR D	01SEP2015 1118	18.14	17.95					-275.68	-1238.66	-305.95	-4.09
Walleyleg_Branch	1	400 BR D	01SEP2015 1124	18.18	18.07					-205.05	-921.28	-227.55	-3.04

Plan: Pro_SS500yrSprin Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1048

E.G. US. (ft)	15.63	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	15.41	E.G. Elev (ft)	15.69	16.00
Q Total (cfs)	-1720.45	W.S. Elev (ft)	15.41	15.78
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	6.52	6.98
Weir Sta Lft (ft)		Vel Total (ft/s)	-3.35	-3.01
Weir Sta Rgt (ft)		Flow Area (sq ft)	513.11	572.00
Weir Submerg		Froude # Chl	0.36	0.31
Weir Max Depth (ft)		Specif Force (cu ft)	1417.68	1661.13
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	4.24	4.73
Min El Prs (ft)	16.48	W.P. Total (ft)	142.55	145.37
Delta EG (ft)		Conv. Total (cfs)	35105.0	40712.6
Delta WS (ft)	-0.37	Top Width (ft)	121.00	121.00
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.54	0.44
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_SS500yrSprin Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1054

E.G. US. (ft)	16.13	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	15.91	E.G. Elev (ft)	16.20	16.51
Q Total (cfs)	-1983.09	W.S. Elev (ft)	15.91	16.28
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	7.01	7.48
Weir Sta Lft (ft)		Vel Total (ft/s)	-3.46	-3.14
Weir Sta Rgt (ft)		Flow Area (sq ft)	573.53	631.65
Weir Submerg		Froude # Chl	0.35	0.31
Weir Max Depth (ft)		Specif Force (cu ft)	1726.72	1994.33
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	4.74	5.22
Min El Prs (ft)	16.48	W.P. Total (ft)	145.54	148.33
Delta EG (ft)		Conv. Total (cfs)	40836.3	46632.8
Delta WS (ft)	-0.36	Top Width (ft)	121.00	121.00
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.58	0.48
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_SS500yrSprin Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1100

E.G. US. (ft)	16.74	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	16.41	E.G. Elev (ft)	16.89	17.17
Q Total (cfs)	-2717.44	W.S. Elev (ft)	16.41	16.75
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	7.51	7.95
Weir Sta Lft (ft)		Vel Total (ft/s)	-4.30	-4.17
Weir Sta Rgt (ft)		Flow Area (sq ft)	632.42	651.00
Weir Submerg		Froude # Chl	-0.36	-0.33
Weir Max Depth (ft)		Specif Force (cu ft)	2217.35	2493.40
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)	6.55	
Min El Prs (ft)	16.48	W.P. Total (ft)	172.84	270.28
Delta EG (ft)		Conv. Total (cfs)	44697.4	33356.4
Delta WS (ft)	-0.34	Top Width (ft)	96.59	
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.84	1.00
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_SS500yrSprin Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1106

E.G. US. (ft)	17.48	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	17.05	E.G. Elev (ft)	17.83	17.87
Q Total (cfs)	-3593.71	W.S. Elev (ft)	17.05	17.12
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	8.15	8.32
Weir Sta Lft (ft)		Vel Total (ft/s)	-5.64	-5.52
Weir Sta Rgt (ft)		Flow Area (sq ft)	636.65	651.00
Weir Submerg		Froude # Chl	-0.44	-0.42
Weir Max Depth (ft)		Specif Force (cu ft)	2932.98	3050.02
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)		
Min El Prs (ft)	16.48	W.P. Total (ft)	269.67	270.28
Delta EG (ft)		Conv. Total (cfs)	32294.2	33356.4
Delta WS (ft)	-0.07	Top Width (ft)		
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	1.83	1.75
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_SS500yrSprin Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1112

E.G. US. (ft)	17.57	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	17.49	E.G. Elev (ft)	17.89	18.05
Q Total (cfs)	-2574.61	W.S. Elev (ft)	17.49	17.67
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	8.59	8.87
Weir Sta Lft (ft)		Vel Total (ft/s)	-4.04	-3.95
Weir Sta Rgt (ft)		Flow Area (sq ft)	636.65	651.00
Weir Submerg		Froude # Chl	-0.31	-0.29
Weir Max Depth (ft)		Specif Force (cu ft)	2845.87	3050.52
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)		
Min El Prs (ft)	16.48	W.P. Total (ft)	269.67	270.28
Delta EG (ft)		Conv. Total (cfs)	32294.2	33356.4
Delta WS (ft)	-0.18	Top Width (ft)		
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.94	0.90
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_SS500yrSprin Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1118

E.G. US. (ft)	17.79	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	17.77	E.G. Elev (ft)	17.97	18.14
Q Total (cfs)	-1820.29	W.S. Elev (ft)	17.77	17.95
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	8.87	9.15
Weir Sta Lft (ft)		Vel Total (ft/s)	-2.86	-2.80
Weir Sta Rgt (ft)		Flow Area (sq ft)	636.65	651.00
Weir Submerg		Froude # Chl	-0.21	-0.20
Weir Max Depth (ft)		Specif Force (cu ft)	2834.88	3042.57
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)		
Min El Prs (ft)	16.48	W.P. Total (ft)	269.67	270.28
Delta EG (ft)		Conv. Total (cfs)	32294.2	33356.4
Delta WS (ft)	-0.17	Top Width (ft)		
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.47	0.45
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68

Plan: Pro_SS500yrSprin Walleyleg_Branch 1 RS: 400 Profile: 01SEP2015 1124

E.G. US. (ft)	18.01	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	18.01	E.G. Elev (ft)	18.12	18.18
Q Total (cfs)	-1353.88	W.S. Elev (ft)	18.01	18.07
Q Bridge (cfs)		Crit W.S. (ft)		
Q Weir (cfs)		Max Chl Dpth (ft)	9.11	9.27
Weir Sta Lft (ft)		Vel Total (ft/s)	-2.13	-2.08
Weir Sta Rgt (ft)		Flow Area (sq ft)	636.65	651.00
Weir Submerg		Froude # Chl	-0.16	-0.15
Weir Max Depth (ft)		Specif Force (cu ft)	2898.88	3041.60
Min El Weir Flow (ft)	16.72	Hydr Depth (ft)		
Min El Prs (ft)	16.48	W.P. Total (ft)	269.67	270.28
Delta EG (ft)		Conv. Total (cfs)	32294.2	33356.4
Delta WS (ft)	-0.07	Top Width (ft)		
BR Open Area (sq ft)		Frctn Loss (ft)		
BR Open Vel (ft/s)		C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.26	0.25
Br Sel Method	Energy/Weir	Power Total (lb/ft s)	69867.68	69867.68