



NFPS



PO BOX 3823
LAKE CITY, FL 32056

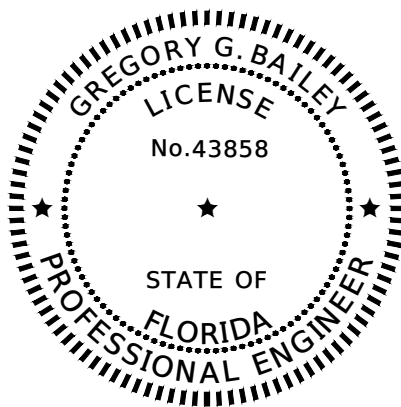


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www.nfps.net

KENNETH CLYATT ZERO RISE STUDY COLUMBIA CO., FL.



Gregory G Bailey

Digitally signed by Gregory G Bailey
DN: CN=Gregory G Bailey,
OU=A01410C00000176F210F37A00010F63,
O=NORTH FLORIDA PROFESSIONAL
SERVICES INC., C=US
Date: 2023.09.06 11:53:36-04'00'

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY GREGORY G. BAILEY ON
THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND
SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

NORTH FLORIDA PROFESSIONAL SERVICES INC.
P.O. BOX 3823
LAKE CITY, FL 32056
CERTIFICATE OF AUTHORIZATION: 29011
GREGORY G. BAILEY, P.E. NO. 43858

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH
RULE 61G15-23.004, F.A.C.

The herein work or development will
not obstruct flows or increase the
100-Year Flood/One Percent Annual
Chance of flood elevation by more
than 0.01 feet.

Trevor Noyes,
Project Manager

Project Description

Existing Conditions (see Figure 1 & 2)

The existing site (Parcel Number 00-00-00-00570-001) consists of 0.87 acres in Columbia County on the Santa Fe River off 536 SW Manatee Terrace in Columbia County FL. The attached aerial photos (Figs. 1-2) show the existing conditions on the site. A grandfathered Dock built prior to the year 2000 was constructed as illustrated in two photos from 1998 and 1999. Attachment A, submitted with this report, comes from the Columbia County Property Appraiser and details that all improvements to the proposed building site were constructed before the year 2000. Attachment B is a statement the current property owner acquired from the previous property owner detailing all improvements to the site were completed before the year 2000.

Proposed Conditions

The applicant has proposed constructing an approximately 2,700 square foot home on the site. The overall dimensions of the home's footprint are 42' x 64' with the entire home to be raised to a minimum of 10' above existing grade and supported by 16" x 16" columns. The attached plan set titled, "Kenneth & Robin Clyatt 24" x 36" Final Plan Set" has been provided to illustrate the floorplan of the house.

To perform the Zero Rise Certification Modeling HEC-RAS 6.3.1 was used. The modeling was performed as follows:

1. ***Obtain the current effective District Model***
 - a. The current effective model shows the 1% flood at an elevation of 33.90 feet at mile marker 11.3.
2. ***Run the current effective model. Verify that results match current effective data for two upstream and two downstream river stations.***
 - a. The existing model was run. Data for existing Cross Sections at Mile Markers (MM's) 13.03, 11.3, 10.06, and 8.43 were used to obtain results from the existing model (See Table 2 labeled *Current Effective Modeling Data*).
3. ***Add the pre-development cross-sections of channel and overbank geometry (without proposed floodway encroachment). Run the model with pre-development cross-sections.***
 - a. The model was run again after adding a Cross Section at MM 10.25. The data for this cross section was updated using topographical survey data of the client's property. This model includes all grandfathered structures. The dock shown in figure 3 illustrates the dock is grandfathered in because it was built prior to the year 2000. Attachments A & B supply additional illustrations of the dock being built before 2000. (See Table 3 labeled *Pre-Condition Modeling Data*).
4. ***Run the model with the existing, permitted, and proposed floodway encroachments.***
 - a. The model was run a final time after the addition of the structures into the Cross Section at MM 10.25. (See Table 4 labeled *Post-Condition Modeling Data*).
5. ***The water surface profile obtained in 4) above should be no greater than 0.01 feet higher than the water surface profile obtained in 3) above.***
 - a. The 100-Yr. profile for MM 8.4, 10.06, 10.25, and 11.3 all remained at the same elevation they did in 3) above. MM 13.03 had an elevation increase of 0.01 feet which is within the tolerance of allowable rise.

Water Station Elevations for Tables 2-4 are summarized in Table 1: *Zero Rise Modeling Summary*

Figure 1. Kenneth Clyatt Property



[illegible]

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Figure 3. Kenneth Clyatt – Grandfathered Dock

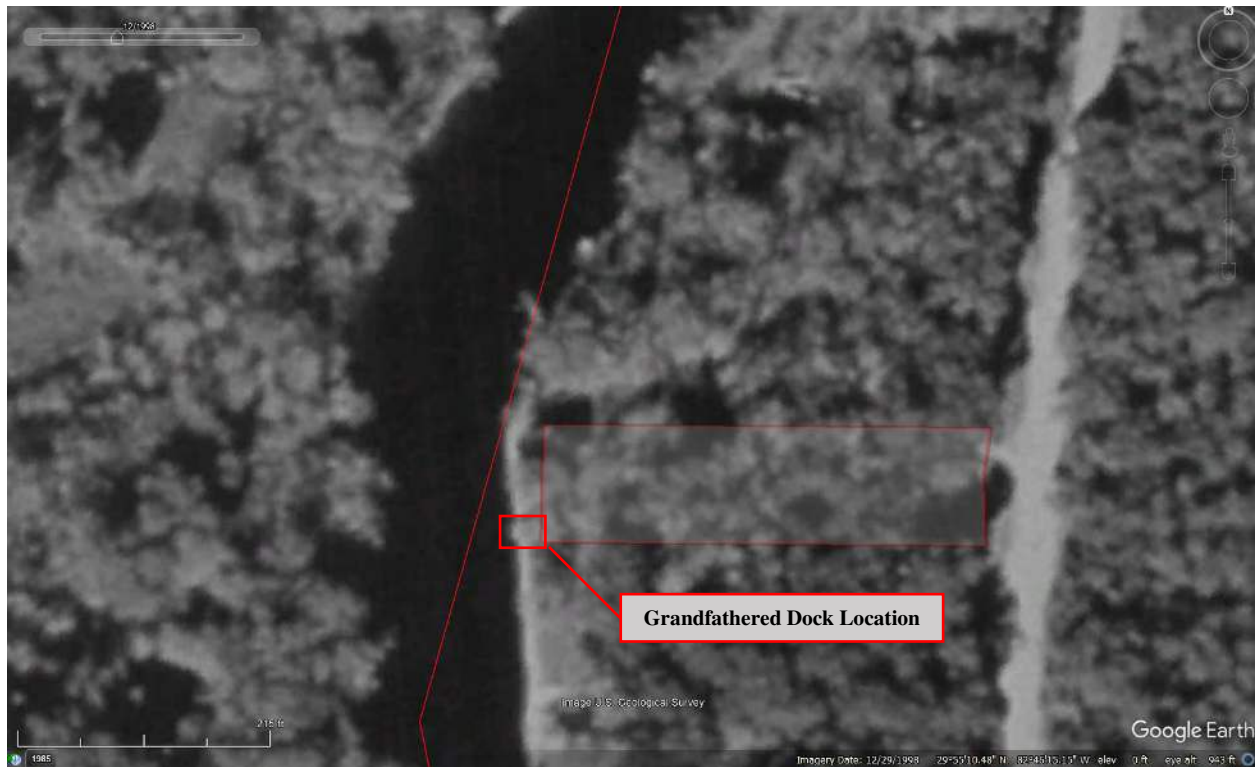


Image has been supplied using Google Earth Pro Historical imagery from 1998.

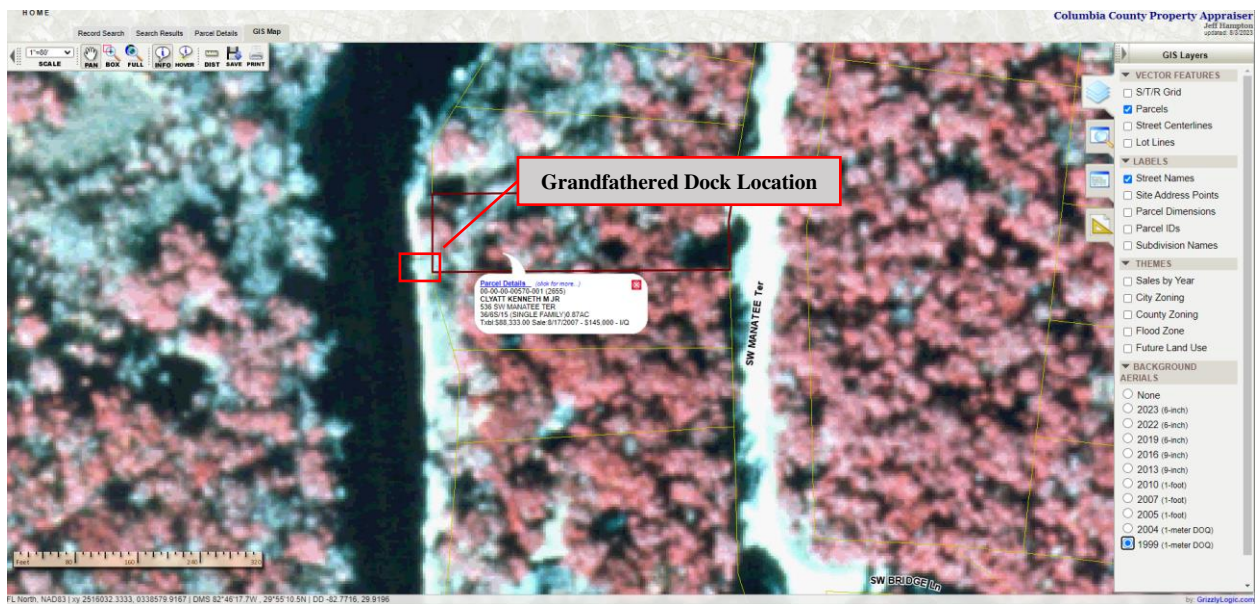


Image has been supplied using historical imagery from the Columbia County Property Appraiser's site (1999).

Zero Rise Modeling Results – Kenneth Clyatt Proposed Additions.

Table 1: Zero Rise Modeling Summary

River Section	Effective Model	Pre-Development	Post Development
	(ft.)	(ft.)	(ft.)
MM 13.03 (U)	34.59	34.84	34.85
MM 11.3 (U)	34.26	34.55	34.55
MM 10.25		34.28	34.28
MM 10.06 (D)	33.89	33.89	33.89
MM 8.43 (D)	33.43	33.43	33.43

Table 2: Current Effective Modeling Data

HEC-RAS Plan: MP Locations: User Defined Profile: 100 Year

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Santa Fe	Main	8.43	100 Year	16359.00	-1.66	33.43		33.49	0.000052	2.21	34648.19	5661.33	0.07
Santa Fe	Main	10.06	100 Year	16359.00	1.15	33.89		33.96	0.000068	2.39	21181.91	2550.91	0.08
Santa Fe	Main	11.3	100 Year	16359.00	6.34	34.23		34.26	0.000035	1.70	32793.67	2491.64	0.06
Santa Fe	Main	13.03	100 Year	16359.00	-6.11	34.55		34.59	0.000046	2.06	39549.65	2880.20	0.07

Table 3: Pre-Condition Modeling Data

HEC-RAS Plan: MP Locations: User Defined Profile: 100 Year													
River	Reach	River Sta	Profile	Q (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Santa Fe	Main	8.43	100 Year	16359.00	-1.66	33.43		33.49	0.000052	2.21	34648.19	5661.33	0.07
Santa Fe	Main	10.06	100 Year	16359.00	1.15	33.89		33.96	0.000068	2.39	21181.91	2550.91	0.08
Santa Fe	Main	10.25	100 Year	16359.00	6.34	34.28		34.33	0.000049	1.95	23793.47	2075.43	0.07
Santa Fe	Main	11.3	100 Year	16359.00	6.34	34.55		34.58	0.000033	1.67	33586.99	2528.05	0.06
Santa Fe	Main	13.03	100 Year	16359.00	-6.11	34.84		34.88	0.000044	2.02	40716.70	3900.52	0.07

Figure 4. Precondition Cross-Section of MM 10.25

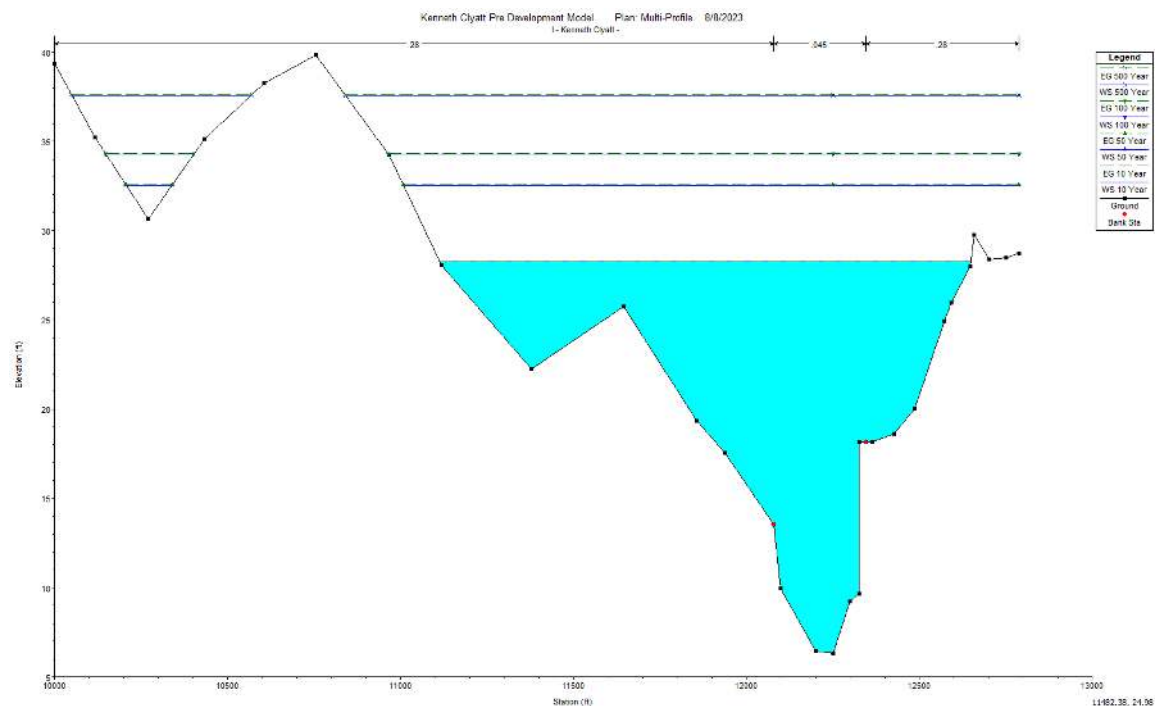
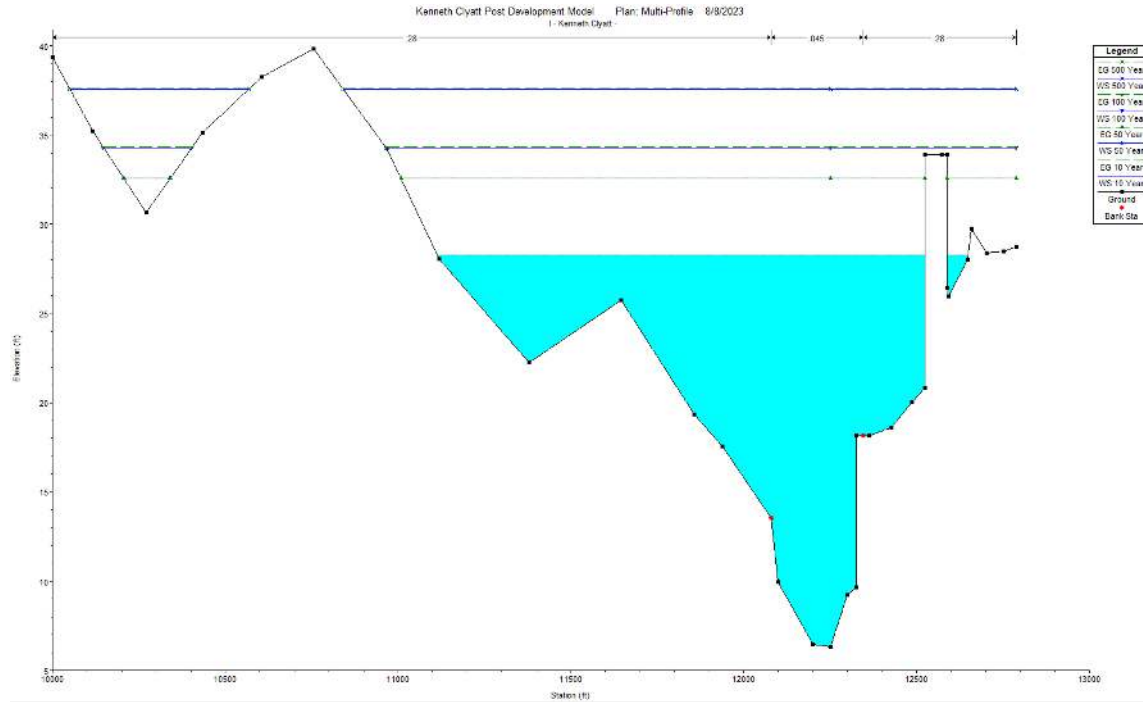


Table 4: Post-Condition Modeling Data

HEC-RAS Plan: MP Locations: User Defined Profile: 100 Year

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)	
Santa Fe	Main	8.43	100 Year	16359.00	-1.66	33.43		33.49	0.000052	2.21	34648.19	5661.33	0.07
Santa Fe	Main	10.06	100 Year	16359.00	1.15	33.89		33.96	0.000068	2.39	21181.91	2550.91	0.08
Santa Fe	Main	10.25	100 Year	16359.00	6.34	34.28		34.33	0.000049	1.96	23196.07	2075.63	0.07
Santa Fe	Main	11.3	100 Year	16359.00	6.34	34.55		34.58	0.000033	1.67	33598.06	2528.55	0.06
Santa Fe	Main	13.03	100 Year	16359.00	-6.11	34.85		34.89	0.000044	2.02	40732.91	3900.66	0.07

Figure 5. Post-Condition Cross-Section of MM 10.25



CROSS SECTIONS

MM 10.25 Elevations Without Structures

STATION	ELEVATION	DESCRIPTION	MANNINGS #
10000	39.34	Existing Grade	0.28
10116	35.24	Existing Grade	0.28
10270	30.64	Existing Grade	0.28
10433	35.14	Existing Grade	0.28
10605	38.24	Existing Grade	0.28
10755	39.84	Existing Grade	0.28
10968	34.24	Existing Grade	0.28
11118	28.04	Existing Grade	0.28
11379	22.24	Existing Grade	0.28
11645	25.74	Existing Grade	0.28
11856	19.34	Existing Grade	0.28
11938	17.54	Existing Grade	0.28
12080	13.54	River Bottom	0.045
12100	9.94	River Bottom	0.045
12200	6.44	River Bottom	0.045
12250	6.34	River Bottom	0.045
12300	9.24	River Bottom	0.045
12324.9	9.67	River Bottom	0.045
12325	18.14	Grandfathered Dock Structure (1994)	0.045
12345	18.14	Grandfathered Dock Structure (1994)	0.045
12363	18.14	Grandfathered Dock Structure (1994)	0.28
12427	18.62	Existing Grade	0.28
12487	20.03	Existing Grade	0.28
12573	24.95	Existing Grade	0.28
12593	25.97	Existing Grade	0.28
12648	28.02	Existing Grade	0.28
12658	29.76	Existing Grade	0.28
12703	28.37	Existing Grade	0.28
12750	28.49	Existing Grade	0.28
12788	28.74	Existing Grade	0.28

Mile Marker 10.25 Elevations with Proposed Structure

STATION	ELEVATION	DESCRIPTION	MANNINGS #
10000	39.34	Existing Grade	0.28
10116	35.24	Existing Grade	0.28
10270	30.64	Existing Grade	0.28
10433	35.14	Existing Grade	0.28
10605	38.24	Existing Grade	0.28
10755	39.84	Existing Grade	0.28
10968	34.24	Existing Grade	0.28
11118	28.04	Existing Grade	0.28
11379	22.24	Existing Grade	0.28
11645	25.74	Existing Grade	0.28
11856	19.34	Existing Grade	0.28
11938	17.54	Existing Grade	0.28
12080	13.54	River Bottom	0.045
12100	9.94	River Bottom	0.045
12200	6.44	River Bottom	0.045
12250	6.34	River Bottom	0.045
12300	9.24	River Bottom	0.045
12324.9	9.67	River Bottom	0.045
12325	18.14	Grandfathered Dock Structure (1994)	0.045
12345	18.14	Grandfathered Dock Structure (1994)	0.045
12363	18.14	Grandfathered Dock Structure (1994)	0.28
12427	18.62	Existing Grade	0.28
12487	20.03	Existing Grade	0.28
12524.9	20.85	Existing Grade	0.28
12525	33.9	Proposed Structure	0.28
12573	33.9	Proposed Structure	0.28
12588	33.9	Proposed Structure	0.28
12588.1	26.43	Existing Grade	0.28
12593	25.97	Existing Grade	0.28
12648	28.02	Existing Grade	0.28
12658	29.76	Existing Grade	0.28
12703	28.37	Existing Grade	0.28
12750	28.49	Existing Grade	0.28
12788	28.74	Existing Grade	0.28

Pre-Development Model Report

HEC-RAS HEC-RAS 6.3.1 September 2022
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
XXXXXXXX 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      XXXX
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PROJECT DATA

Project Title: Kenneth Clyatt Pre Development Model

Project File : KennethClyattPred.prj

Run Date and Time: 8/8/2023 2:58:38 PM

Project in English units

Project Description:

Upper Suwannee River Floodplain Model 10, 50, 100, 500

Taylor

Engineering

Adapted from HEC-2 Provided by SRWMD

Model was truncated to

only include: Dixie, Gilchrist and LaFayette Counties. Converted to HEC-RAS 3.1.3, with some updates to structures and adjacent cross sections August 2005 by Dewberry and Davis LLC - Atlanta Office

The flodoway did not require any

adjustments to width following updated survey data. Floodway stations were moved to account for new stationing on some sections.

PLAN DATA

Plan Title: Multi-Profile

Plan File : x:\2023\L230523CLY\D.Final Design\Permitting\SRWMD\Current Hec Ras Model\KennethClyattPred.p01

Geometry Title: Updated 2005
 Geometry File : x:\2023\L230523CLY\D.Final
 Design\Permitting\SRWMD\Current Hec Ras Model\KennethClyattPred.g01

Flow Title : HEC-2 Flows
 Flow File : x:\2023\L230523CLY\D.Final
 Design\Permitting\SRWMD\Current Hec Ras Model\KennethClyattPred.f01

Plan Summary Information:

Number of:	Cross Sections = 298	Multiple Openings = 0
	Culverts = 0	Inline Structures = 0
	Bridges = 27	Lateral Structures = 0

Computational Information

Water surface calculation tolerance	= 0.003
Critical depth calculation tolerance	= 0.003
Maximum number of iterations	= 20
Maximum difference tolerance	= 0.1
Flow tolerance factor	= 0.001

Computation Options

Critical depth computed only where necessary
Conveyance Calculation Method: Between every coordinate point (HEC2 Style)
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: HEC-2 Flows
 Flow File : x:\2023\L230523CLY\D.Final Design\Permitting\SRWMD\Current Hec Ras Model\KennethClyattPred.f01

Flow Data (cfs)

River	Reach	RS	10 Year	50 Year
100 Year	500 Year			
Santa Fe	Main	79.85	90	275
374	686			
Santa Fe	Main	73.36	1344	2310
2965	4380			
Santa Fe	Main	67.11	2690	3881
4665	6830			
Santa Fe	Main	57.21	3103	6404
8767	12834			
Santa Fe	Main	49.61	12824	20748
25162	36500			

Santa Fe 23767	Main 35515	44.02	12268	19399
Santa Fe 32800	Main 46533	39.81	17113	26905
Santa Fe 32569	Main 46251	37.25	16995	26655
Santa Fe 24427	Main 34688	33.85	12746	19991
Santa Fe 23206	Main 32954	28.94	12109	18991
Santa Fe 20910	Main 32030	27.79	9705	16793
Santa Fe 19587	Main 29700	25.19	9264	15766
Santa Fe 16717	Main 22200	19.62	9192	13791
Santa Fe 16359	Main 22200	15.66	8457	13409
Suwannee 76500	WtoSF 104000	127.51	41000	65300
Suwannee 71400	WtoSF 97950	124.93	38650	62000
Suwannee 69500	WtoSF 96050	112.92	37800	60750
Suwannee 67800	WtoSF 93750	106.69	36900	59400
Suwannee 66300	WtoSF 91700	101.82	36100	58150
Suwannee 64900	WtoSF 89800	98.23	35350	57000
Suwannee 63900	WtoSF 88500	91.48	35350	56150
Suwannee 63250	WtoSF 87400	86.73	35125	55400
Suwannee 62950	WtoSF 86050	82.16	34900	54500
Suwannee 62100	WtoSF 84750	76.12	34650	53650
Suwannee 62100	WtoSF 84000	70.98	34250	53150
Suwannee 67300	BelowSF 91900	65.66	37900	57900

Boundary Conditions

River Downstream	Reach	Profile	Upstream
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Suwannee	BelowSF	10 Year
Known WS = 1.87		
Suwannee	BelowSF	50 Year
Known WS = 1.87		
Suwannee	BelowSF	100 Year
Known WS = 1.87		
Suwannee	BelowSF	500 Year
Known WS = 1.87		

Observed Water Surface Marks

River	Reach	RS	10 Year	50 Year
100 Year	500 Year			
RIVER-1	Reach-1	97	58	
RIVER-1	Reach-1	96	58	
RIVER-1	Reach-1	95	57	
RIVER-1	Reach-1	94	56.9	
RIVER-1	Reach-1	93	56.9	
RIVER-1	Reach-1	92	56.9	
RIVER-1	Reach-1	91	56.8	
RIVER-1	Reach-1	90	56.8	
RIVER-1	Reach-1	89	56.8	
RIVER-1	Reach-1	88	56.8	
RIVER-1	Reach-1	87	56.7	
RIVER-1	Reach-1	86	56.6	
RIVER-1	Reach-1	85	56.5	
RIVER-1	Reach-1	84	56.3	
RIVER-1	Reach-1	83	56	
RIVER-1	Reach-1	82	55.8	

RIVER-1	Reach-1	81	55.2
RIVER-1	Reach-1	80	55
RIVER-1	Reach-1	79	54.7
RIVER-1	Reach-1	78	54.2
RIVER-1	Reach-1	77	54
RIVER-1	Reach-1	76	53.8
RIVER-1	Reach-1	75	53.3
RIVER-1	Reach-1	74	53
RIVER-1	Reach-1	73	52.9
RIVER-1	Reach-1	72	52.5
RIVER-1	Reach-1	71	52.1
RIVER-1	Reach-1	70	52
RIVER-1	Reach-1	69	51.5
RIVER-1	Reach-1	68	51.2
RIVER-1	Reach-1	67	51
RIVER-1	Reach-1	66	51
RIVER-1	Reach-1	65	50.8
RIVER-1	Reach-1	64	50.2
RIVER-1	Reach-1	63	49.9
RIVER-1	Reach-1	62	49.8
RIVER-1	Reach-1	61	49.6
RIVER-1	Reach-1	60	49.6
RIVER-1	Reach-1	59	49.5
RIVER-1	Reach-1	58	48.8
RIVER-1	Reach-1	57	47.8

RIVER-1	Reach-1	56	47.2
RIVER-1	Reach-1	55	47.1
RIVER-1	Reach-1	54	47.1
RIVER-1	Reach-1	53	46.2
RIVER-1	Reach-1	52	45.8
RIVER-1	Reach-1	51	45.3
RIVER-1	Reach-1	50	45
RIVER-1	Reach-1	49	44.2
RIVER-1	Reach-1	48	43.8
RIVER-1	Reach-1	47	43
RIVER-1	Reach-1	46	42.2
RIVER-1	Reach-1	45	42
RIVER-1	Reach-1	44	41.5
RIVER-1	Reach-1	43	41.2
RIVER-1	Reach-1	42	40.8
RIVER-1	Reach-1	41	40.1
RIVER-1	Reach-1	40	39.5
RIVER-1	Reach-1	39	38.9
RIVER-1	Reach-1	38	38.5
RIVER-1	Reach-1	37	38.2
RIVER-1	Reach-1	36	37.8
RIVER-1	Reach-1	35	37.3
RIVER-1	Reach-1	34	37
RIVER-1	Reach-1	33	36.8
RIVER-1	Reach-1	32	36.5

RIVER-1	Reach-1	31	36.2
RIVER-1	Reach-1	30	36
RIVER-1	Reach-1	29	36
RIVER-1	Reach-1	28	35.9
RIVER-1	Reach-1	27	35.7
RIVER-1	Reach-1	26	35.6
RIVER-1	Reach-1	25	35.2
RIVER-1	Reach-1	24	35.1
RIVER-1	Reach-1	23	35.1
RIVER-1	Reach-1	22	35
RIVER-1	Reach-1	21	35
RIVER-1	Reach-1	20	35
RIVER-1	Reach-1	19	34.9
RIVER-1	Reach-1	18	34.8
RIVER-1	Reach-1	17	34.6
RIVER-1	Reach-1	16	34.2
RIVER-1	Reach-1	15	34
RIVER-1	Reach-1	14	33.9
RIVER-1	Reach-1	13	33.4
Upper Suwannee	Upper	112.932	58
Upper Suwannee	Upper	112.922	58
Upper Suwannee	Upper	112.912	57
Upper Suwannee	Upper	112.902	56.9
Upper Suwannee	Upper	112.892	56.9
Upper Suwannee	Upper	112.872	56.9

Upper	Suwannee	Upper	112.842	56.8
Upper	Suwannee	Upper	112.812	56.8
Upper	Suwannee	Upper	112.802	56.8
Upper	Suwannee	Upper	112.792	56.8
Upper	Suwannee	Upper	112.782	56.7
Upper	Suwannee	Upper	112.732	56.6
Upper	Suwannee	Upper	112.472	56.5
Upper	Suwannee	Upper	112.182	56.3
Upper	Suwannee	Upper	111.192	56
Upper	Suwannee	Upper	110.702	55.8
Upper	Suwannee	Upper	109.882	55.2
Upper	Suwannee	Upper	109.232	55
Upper	Suwannee	Upper	108.582	54.7
Upper	Suwannee	Upper	107.892	54.2
Upper	Suwannee	Upper	107.352	54
Upper	Suwannee	Upper	106.702	53.8
Upper	Suwannee	Upper	105.892	53.3
Upper	Suwannee	Upper	105.372	53
Upper	Suwannee	Upper	104.602	52.9
Upper	Suwannee	Upper	104.042	52.5
Upper	Suwannee	Upper	103.312	52.1
Upper	Suwannee	Upper	102.902	52
Upper	Suwannee	Upper	101.832	51.5
Upper	Suwannee	Upper	101.492	51.2
Upper	Suwannee	Upper	100.521	51

Upper Suwannee	Upper	100.242	51
Upper Suwannee	Upper	99.192	50.8
Upper Suwannee	Upper	98.242	50.2
Upper Suwannee	Upper	98.202	49.9
Upper Suwannee	Upper	98.192	49.8
Upper Suwannee	Upper	98.186	49.6
Upper Suwannee	Upper	98.182	49.6
Upper Suwannee	Upper	98.132	49.5
Upper Suwannee	Upper	97.382	48.8
Upper Suwannee	Upper	96.611	47.8
Upper Suwannee	Upper	95.921	47.2
Upper Suwannee	Upper	95.551	47.1
Upper Suwannee	Upper	95.549	47.1
Upper Suwannee	Upper	93.860	46.2
Upper Suwannee	Upper	92.900	45.8
Upper Suwannee	Upper	92.210	45.3
Upper Suwannee	Upper	91.490	45
Upper Suwannee	Upper	90.120	44.2
Upper Suwannee	Upper	89.250	43.8
Upper Suwannee	Upper	88.250	43
Upper Suwannee	Upper	87.460	42.2
Upper Suwannee	Upper	86.740	42
Upper Suwannee	Upper	85.960	41.5
Upper Suwannee	Upper	85.710	41.2
Upper Suwannee	Upper	84.860	40.8

Upper	Suwannee	Upper	84.210	40.1
Upper	Suwannee	Upper	83.090	39.5
Upper	Suwannee	Upper	82.170	38.9
Upper	Suwannee	Upper	81.600	38.5
Upper	Suwannee	Upper	81.330	38.2
Upper	Suwannee	Upper	80.212	37.8
Upper	Suwannee	Upper	79.532	37.3
Upper	Suwannee	Upper	79.022	37
Upper	Suwannee	Upper	78.512	36.8
Upper	Suwannee	Upper	78.002	36.5
Upper	Suwannee	Upper	77.502	36.2
Upper	Suwannee	Upper	77.072	36
Upper	Suwannee	Upper	76.782	36
Upper	Suwannee	Upper	76.522	35.9
Upper	Suwannee	Upper	76.162	35.7
Upper	Suwannee	Upper	76.132	35.6
Upper	Suwannee	Upper	76.122	35.2
Upper	Suwannee	Upper	76.117	35.1
Upper	Suwannee	Upper	76.112	35.1
Upper	Suwannee	Upper	76.072	35
Upper	Suwannee	Upper	75.852	35
Upper	Suwannee	Upper	75.592	35
Upper	Suwannee	Upper	75.082	34.9
Upper	Suwannee	Upper	74.722	34.8
Upper	Suwannee	Upper	74.282	34.6

Upper Suwannee	Upper	73.562	34.2
Upper Suwannee	Upper	73.102	34
Upper Suwannee	Upper	72.782	33.9
Upper Suwannee	Upper	71.972	33.4
Suwannee	UpstreamEnd	112.932	58
Suwannee	UpstreamEnd	112.922	58
Suwannee	UpstreamEnd	112.912	57
Suwannee	UpstreamEnd	112.902	56.9
Suwannee	UpstreamEnd	112.892	56.9
Suwannee	UpstreamEnd	112.872	56.9
Suwannee	UpstreamEnd	112.842	56.8
Suwannee	UpstreamEnd	112.812	56.8
Suwannee	UpstreamEnd	112.802	56.8
Suwannee	UpstreamEnd	112.792	56.8
Suwannee	UpstreamEnd	112.782	56.7
Suwannee	UpstreamEnd	112.732	56.6
Suwannee	UpstreamEnd	112.472	56.5
Suwannee	UpstreamEnd	112.182	56.3
Suwannee	UpstreamEnd	111.192	56
Suwannee	UpstreamEnd	110.702	55.8
Suwannee	UpstreamEnd	109.882	55.2
Suwannee	UpstreamEnd	109.232	55
Suwannee	UpstreamEnd	108.582	54.7
Suwannee	UpstreamEnd	107.892	54.2
Suwannee	UpstreamEnd	107.352	54

Suwannee	UpstreamEnd	106.702	53.8
Suwannee	UpstreamEnd	105.892	53.3
Suwannee	UpstreamEnd	105.372	53
Suwannee	UpstreamEnd	104.602	52.9
Suwannee	UpstreamEnd	104.042	52.5
Suwannee	UpstreamEnd	103.312	52.1
Suwannee	UpstreamEnd	102.902	52
Suwannee	UpstreamEnd	101.832	51.5
Suwannee	UpstreamEnd	101.492	51.2
Suwannee	UpstreamEnd	100.521	51
Suwannee	UpstreamEnd	100.242	51
Suwannee	UpstreamEnd	99.192	50.8
Suwannee	UpstreamEnd	98.242	50.2
Suwannee	UpstreamEnd	98.202	49.9
Suwannee	UpstreamEnd	98.192	49.8
Suwannee	UpstreamEnd	98.186	49.6
Suwannee	UpstreamEnd	98.182	49.6
Suwannee	UpstreamEnd	98.132	49.5
Suwannee	UpstreamEnd	97.382	48.8
Suwannee	UpstreamEnd	96.611	47.8
Suwannee	UpstreamEnd	95.921	47.2
Suwannee	UpstreamEnd	95.551	47.1
Suwannee	UpstreamEnd	95.549	47.1
Suwannee	UpstreamEnd	93.860	46.2
Suwannee	UpstreamEnd	92.900	45.8

Suwannee	UpstreamEnd	92.210	45.3
Suwannee	UpstreamEnd	91.490	45
Suwannee	UpstreamEnd	90.120	44.2
Suwannee	UpstreamEnd	89.250	43.8
Suwannee	UpstreamEnd	88.250	43
Suwannee	UpstreamEnd	87.460	42.2
Suwannee	UpstreamEnd	86.740	42
Suwannee	UpstreamEnd	85.960	41.5
Suwannee	UpstreamEnd	85.710	41.2
Suwannee	UpstreamEnd	84.860	40.8
Suwannee	UpstreamEnd	84.210	40.1
Suwannee	UpstreamEnd	83.090	39.5
Suwannee	UpstreamEnd	82.170	38.9
Suwannee	UpstreamEnd	81.600	38.5
Suwannee	UpstreamEnd	81.330	38.2
Suwannee	UpstreamEnd	80.212	37.8
Suwannee	UpstreamEnd	79.532	37.3
Suwannee	UpstreamEnd	79.022	37
Suwannee	UpstreamEnd	78.512	36.8
Suwannee	UpstreamEnd	78.002	36.5
Suwannee	UpstreamEnd	77.502	36.2
Suwannee	UpstreamEnd	77.072	36
Suwannee	UpstreamEnd	76.782	36
Suwannee	UpstreamEnd	76.522	35.9
Suwannee	UpstreamEnd	76.162	35.7

Suwannee	UpstreamEnd	76.132	35.6
Suwannee	UpstreamEnd	76.122	35.2
Suwannee	UpstreamEnd	76.117	35.1
Suwannee	UpstreamEnd	76.112	35.1
Suwannee	UpstreamEnd	76.072	35
Suwannee	UpstreamEnd	75.852	35
Suwannee	UpstreamEnd	75.592	35
Suwannee	UpstreamEnd	75.082	34.9
Suwannee	UpstreamEnd	74.722	34.8
Suwannee	UpstreamEnd	74.282	34.6
Suwannee	UpstreamEnd	73.562	34.2
Suwannee	UpstreamEnd	73.102	34
Suwannee	UpstreamEnd	72.782	33.9
Suwannee	UpstreamEnd	71.972	33.4

GEOMETRY DATA

Geometry Title: Updated 2005
Geometry File : x:\2023\L230523CLY\D.Final Design\Permitting\SRWMD\Current Hec Ras Model\KennethClyattPred.g01

Reach Connection Table

River	Reach	Upstream Boundary	Downstream Boundary
Santa Fe	Main		Santa Fe
Suwannee	WtoSF		Santa Fe
Suwannee	BelowSF	Santa Fe	

JUNCTION INFORMATION

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	12118	12361		5700	5280	4000		.1	.3

CROSS SECTION

RIVER: Santa Fe
 REACH: Main RS: 14.08

INPUT

Description: K - GILCHRIST FIS -

Station	Elevation	Data	num=	38
Sta	Elev	Sta	Elev	Sta
10000	39.34	10089	37.24	10283
10770	33.24	11030	33.34	11183
11508	19.84	11699	20.04	11981
12443	19.74	12471	15.34	12500
12600	13.04	12624	15.34	12650
12838	15.94	12878	22.94	12930
13172	32.74	13298	33.84	13507
13612	36.34	13835	38.54	13910

Manning's	n	Values	num=	3
Sta	n	Val	Sta	n
10000	.28	12443	.045	12650

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	12443	12650		4700	5540	5500		.1	.3

CROSS SECTION

RIVER: Santa Fe
 REACH: Main RS: 13.03

INPUT

Description: J - GILCHRIST FIS -

Station	Elevation	Data	num=	31
Sta	Elev	Sta	Elev	Sta
10000	39.34	10118	37.74	10251
10479	33.34	10562	30.84	10858
11746	26.74	11961	26.14	12415
12868	19.04	12920	12.64	12950
13085	12.64	13185	15.94	13381
13810	19.34	13901	21.54	14050
14369	39.34			

Manning's	n	Values	num=	3
Sta	n	Val	Sta	n

10000 .28 12920 .045 13085 .28

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	12920	13085		6100 9130	5400		.1	.3

CROSS SECTION

RIVER: Santa Fe

REACH: Main RS: 11.3

INPUT

Description: I - GILCHRIST FIS -

Station Elevation Data				num=	28				
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
10000	39.34	10116	35.24	10270	30.64	10433	35.14	10605	38.24
10755	39.84	10968	34.24	11118	28.04	11379	22.24	11645	25.74
11856	19.34	11938	17.54	12080	13.54	12100	9.94	12200	6.44
12250	6.34	12300	9.24	12345	13.54	12376	19.54	12427	20.04
12548	18.84	12597	16.64	12861	15.54	13001	16.34	13088	19.44
13173	29.54	13249	39.34	13294	41.04				

Manning's n Values				num=	3
Sta	n Val	Sta	n Val	Sta	n Val
10000	.28	12080	.045	12345	.28

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	12080	12345		5900 6550	4400		.1	.3

CROSS SECTION

RIVER: Santa Fe

REACH: Main RS: 10.25

INPUT

Description: I - Kenneth Clyatt -

Station Elevation Data				num=	30				
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
10000	39.34	10116	35.24	10270	30.64	10433	35.14	10605	38.24
10755	39.84	10968	34.24	11118	28.04	11379	22.24	11645	25.74
11856	19.34	11938	17.54	12080	13.54	12100	9.94	12200	6.44
12250	6.34	12300	9.24	12324.9	9.67	12325	18.14	12345	18.14
12363	18.14	12427	18.62	12487	20.03	12573	24.95	12593	25.97
12648	28.02	12658	29.76	12703	28.37	12750	28.49	12788	28.74

Manning's n Values				num=	3
Sta	n Val	Sta	n Val	Sta	n Val
10000	.28	12080	.045	12345	.28

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	12080	12345		5900	6550	4400		.1	.3

CROSS SECTION

RIVER: Santa Fe

REACH: Main RS: 10.06

INPUT

Description: H - GILCHRIST FIS -

Station Elevation Data				num=	36				
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
10000	37.34	10243	30.54	10362	27.64	10472	25.74	10548	23.64
10608	12.04	10650	10.65	10689	12.04	10751	15.84	10828	19.04
10926	20.24	10972	18.64	10989	12.04	11000	3.65	11050	1.15
11100	4.14	11133	12.04	11175	15.64	11255	27.24	11288	30.84
11415	30.04	11478	28.64	11498	27.14	11570	27.84	11646	27.94
11859	29.74	12154	30.64	12428	31.34	12570	34.34	12697	36.14
12751	35.04	12769	36.64	12846	37.74	13166	35.14	13344	32.44
13443	37.34								

Manning's n Values				num=	3	
Sta	n Val	Sta	n Val	Sta	n Val	
10000	.28	10972	.045	11175	.28	

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	10972	11175		5500	8600	6200		.1	.3

CROSS SECTION

RIVER: Santa Fe

REACH: Main RS: 8.43

INPUT

Description: G - GILCHRIST FIS -

Station Elevation Data				num=	74				
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
10000	37.34	10181	35.54	10431	35.34	10664	35.34	10849	33.14
11010	33.24	11014	32.04	11041	32.04	11046	32.54	11193	33.34
11328	31.54	11429	30.64	11538	30.44	11623	30.44	11707	29.64
11781	30.84	11819	32.04	11835	32.54	11855	31.54	11863	31.24
11891	31.14	12019	30.34	12206	30.14	12304	28.34	12359	27.54
12362	26.24	12369	26.44	12375	26.34	12378	26.64	12415	25.34
12472	24.34	12515	22.74	12537	20.44	12559	16.74	12579	13.54
12592	11.44	12610	10.07	12638	11.44	12647	15.04	12677	15.04
12702	15.14	12710	15.14	12714	14.54	12720	11.44	12730	4.01
12800	-1.66	12830	2.11	12884	11.44	12896	17.94	12942	17.04
13004	17.04	13180	16.94	13277	24.04	13305	27.64	13322	26.64

13330	25.74	13333	24.64	13335	25.84	13355	27.04	13541	28.34
13705	26.04	13891	26.34	14100	26.64	14310	26.94	14510	27.74
14856	29.54	15078	30.64	15386	29.54	15582	30.04	15779	30.54
16054	30.04	16257	29.64	16376	30.64	16639	37.34		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
10000	.28	12714	.045	12896	.28

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	12714	12896		2600 4170	4600		.1	.3

CROSS SECTION

RIVER: Santa Fe
 REACH: Main RS: 7.64

INPUT

Description: F - GILCHRIST FIS -

Station Elevation Data num= 59									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
10000	37.34	10083	34.24	10106	34.24	10112	33.64	10114	32.74
10127	32.74	10130	34.24	10135	34.04	10139	33.14	10207	33.94
10267	33.84	10282	33.44	10310	33.54	10329	33.64	10394	33.04
10561	32.94	10875	32.74	11000	31.24	11330	31.24	11668	30.44
11785	30.44	11999	29.64	12182	29.64	12527	15.74	12750	15.74
12958	17.74	13084	17.74	13100	11.64	13166	2.09	13236	9.39
13252	11.74	13266	14.94	13305	15.94	13336	17.04	13359	20.04
13380	22.64	13414	23.94	13458	24.34	13472	24.14	13481	23.74
13497	23.94	13511	23.34	13516	22.34	13521	22.94	13542	23.84
13630	21.64	13858	22.34	14088	22.14	14397	28.54	14848	30.64
15206	31.24	15230	30.94	15240	30.94	15294	31.34	15347	32.44
15390	32.54	15405	32.54	15461	32.84	15720	37.34		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
10000	.28	13084	.045	13266	.28

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	13084	13266		4950 6230	4900		.1	.3

CROSS SECTION

RIVER: Santa Fe
 REACH: Main RS: 6.46

INPUT

Description: E - GILCHRIST FIS -

Post-Development Model Report

HEC-RAS HEC-RAS 6.3.1 September 2022
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       X
XXXXXXXX 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       XXXX
```

PROJECT DATA

Project Title: Kenneth Clyatt Post Development Model

Project File : KennethClyattPost.prj

Run Date and Time: 8/8/2023 3:04:13 PM

Project in English units

Project Description:

Upper Suwannee River Floodplain Model 10, 50, 100, 500

Taylor

Engineering

Adapted from HEC-2 Provided by SRWMD

Model was truncated to

only include: Dixie, Gilchrist and LaFayette Counties. Converted to HEC-RAS 3.1.3, with some updates to structures and adjacent cross sections August 2005 by Dewberry and Davis LLC - Atlanta Office

The flodoway did not require any

adjustments to width following updated survey data. Floodway stations were moved to account for new stationing on some sections.

PLAN DATA

Plan Title: Multi-Profile

Plan File : x:\2023\L230523CLY\D.Final Design\Permitting\SRWMD\Current Hec Ras Model\KennethClyattPost.p01

Geometry Title: Updated 2005
 Geometry File : x:\2023\L230523CLY\D.Final
 Design\Permitting\SRWMD\Current Hec Ras Model\KennethClyattPost.g01

Flow Title : HEC-2 Flows
 Flow File : x:\2023\L230523CLY\D.Final
 Design\Permitting\SRWMD\Current Hec Ras Model\KennethClyattPost.f01

Plan Summary Information:

Number of:	Cross Sections = 298	Multiple Openings = 0
	Culverts = 0	Inline Structures = 0
	Bridges = 27	Lateral Structures = 0

Computational Information

Water surface calculation tolerance	= 0.003
Critical depth calculation tolerance	= 0.003
Maximum number of iterations	= 20
Maximum difference tolerance	= 0.1
Flow tolerance factor	= 0.001

Computation Options

Critical depth computed only where necessary
Conveyance Calculation Method: Between every coordinate point (HEC2 Style)
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: HEC-2 Flows
 Flow File : x:\2023\L230523CLY\D.Final Design\Permitting\SRWMD\Current Hec Ras Model\KennethClyattPost.f01

Flow Data (cfs)

River	Reach	RS	10 Year	50 Year
100 Year	500 Year			
Santa Fe	Main	79.85	90	275
374	686			
Santa Fe	Main	73.36	1344	2310
2965	4380			
Santa Fe	Main	67.11	2690	3881
4665	6830			
Santa Fe	Main	57.21	3103	6404
8767	12834			
Santa Fe	Main	49.61	12824	20748
25162	36500			

Santa Fe 23767	Main 35515	44.02	12268	19399
Santa Fe 32800	Main 46533	39.81	17113	26905
Santa Fe 32569	Main 46251	37.25	16995	26655
Santa Fe 24427	Main 34688	33.85	12746	19991
Santa Fe 23206	Main 32954	28.94	12109	18991
Santa Fe 20910	Main 32030	27.79	9705	16793
Santa Fe 19587	Main 29700	25.19	9264	15766
Santa Fe 16717	Main 22200	19.62	9192	13791
Santa Fe 16359	Main 22200	15.66	8457	13409
Suwannee 76500	WtoSF 104000	127.51	41000	65300
Suwannee 71400	WtoSF 97950	124.93	38650	62000
Suwannee 69500	WtoSF 96050	112.92	37800	60750
Suwannee 67800	WtoSF 93750	106.69	36900	59400
Suwannee 66300	WtoSF 91700	101.82	36100	58150
Suwannee 64900	WtoSF 89800	98.23	35350	57000
Suwannee 63900	WtoSF 88500	91.48	35350	56150
Suwannee 63250	WtoSF 87400	86.73	35125	55400
Suwannee 62950	WtoSF 86050	82.16	34900	54500
Suwannee 62100	WtoSF 84750	76.12	34650	53650
Suwannee 62100	WtoSF 84000	70.98	34250	53150
Suwannee 67300	BelowSF 91900	65.66	37900	57900

Boundary Conditions

River Downstream	Reach	Profile	Upstream
---------------------	-------	---------	----------

Suwannee	BelowSF	10 Year
Known WS = 1.87		
Suwannee	BelowSF	50 Year
Known WS = 1.87		
Suwannee	BelowSF	100 Year
Known WS = 1.87		
Suwannee	BelowSF	500 Year
Known WS = 1.87		

Observed Water Surface Marks

River	Reach	RS	10 Year	50 Year
100 Year	500 Year			
RIVER-1	Reach-1	97	58	
RIVER-1	Reach-1	96	58	
RIVER-1	Reach-1	95	57	
RIVER-1	Reach-1	94	56.9	
RIVER-1	Reach-1	93	56.9	
RIVER-1	Reach-1	92	56.9	
RIVER-1	Reach-1	91	56.8	
RIVER-1	Reach-1	90	56.8	
RIVER-1	Reach-1	89	56.8	
RIVER-1	Reach-1	88	56.8	
RIVER-1	Reach-1	87	56.7	
RIVER-1	Reach-1	86	56.6	
RIVER-1	Reach-1	85	56.5	
RIVER-1	Reach-1	84	56.3	
RIVER-1	Reach-1	83	56	
RIVER-1	Reach-1	82	55.8	

RIVER-1	Reach-1	81	55.2
RIVER-1	Reach-1	80	55
RIVER-1	Reach-1	79	54.7
RIVER-1	Reach-1	78	54.2
RIVER-1	Reach-1	77	54
RIVER-1	Reach-1	76	53.8
RIVER-1	Reach-1	75	53.3
RIVER-1	Reach-1	74	53
RIVER-1	Reach-1	73	52.9
RIVER-1	Reach-1	72	52.5
RIVER-1	Reach-1	71	52.1
RIVER-1	Reach-1	70	52
RIVER-1	Reach-1	69	51.5
RIVER-1	Reach-1	68	51.2
RIVER-1	Reach-1	67	51
RIVER-1	Reach-1	66	51
RIVER-1	Reach-1	65	50.8
RIVER-1	Reach-1	64	50.2
RIVER-1	Reach-1	63	49.9
RIVER-1	Reach-1	62	49.8
RIVER-1	Reach-1	61	49.6
RIVER-1	Reach-1	60	49.6
RIVER-1	Reach-1	59	49.5
RIVER-1	Reach-1	58	48.8
RIVER-1	Reach-1	57	47.8

RIVER-1	Reach-1	56	47.2
RIVER-1	Reach-1	55	47.1
RIVER-1	Reach-1	54	47.1
RIVER-1	Reach-1	53	46.2
RIVER-1	Reach-1	52	45.8
RIVER-1	Reach-1	51	45.3
RIVER-1	Reach-1	50	45
RIVER-1	Reach-1	49	44.2
RIVER-1	Reach-1	48	43.8
RIVER-1	Reach-1	47	43
RIVER-1	Reach-1	46	42.2
RIVER-1	Reach-1	45	42
RIVER-1	Reach-1	44	41.5
RIVER-1	Reach-1	43	41.2
RIVER-1	Reach-1	42	40.8
RIVER-1	Reach-1	41	40.1
RIVER-1	Reach-1	40	39.5
RIVER-1	Reach-1	39	38.9
RIVER-1	Reach-1	38	38.5
RIVER-1	Reach-1	37	38.2
RIVER-1	Reach-1	36	37.8
RIVER-1	Reach-1	35	37.3
RIVER-1	Reach-1	34	37
RIVER-1	Reach-1	33	36.8
RIVER-1	Reach-1	32	36.5

RIVER-1	Reach-1	31	36.2
RIVER-1	Reach-1	30	36
RIVER-1	Reach-1	29	36
RIVER-1	Reach-1	28	35.9
RIVER-1	Reach-1	27	35.7
RIVER-1	Reach-1	26	35.6
RIVER-1	Reach-1	25	35.2
RIVER-1	Reach-1	24	35.1
RIVER-1	Reach-1	23	35.1
RIVER-1	Reach-1	22	35
RIVER-1	Reach-1	21	35
RIVER-1	Reach-1	20	35
RIVER-1	Reach-1	19	34.9
RIVER-1	Reach-1	18	34.8
RIVER-1	Reach-1	17	34.6
RIVER-1	Reach-1	16	34.2
RIVER-1	Reach-1	15	34
RIVER-1	Reach-1	14	33.9
RIVER-1	Reach-1	13	33.4
Upper Suwannee	Upper	112.932	58
Upper Suwannee	Upper	112.922	58
Upper Suwannee	Upper	112.912	57
Upper Suwannee	Upper	112.902	56.9
Upper Suwannee	Upper	112.892	56.9
Upper Suwannee	Upper	112.872	56.9

Upper	Suwannee	Upper	112.842	56.8
Upper	Suwannee	Upper	112.812	56.8
Upper	Suwannee	Upper	112.802	56.8
Upper	Suwannee	Upper	112.792	56.8
Upper	Suwannee	Upper	112.782	56.7
Upper	Suwannee	Upper	112.732	56.6
Upper	Suwannee	Upper	112.472	56.5
Upper	Suwannee	Upper	112.182	56.3
Upper	Suwannee	Upper	111.192	56
Upper	Suwannee	Upper	110.702	55.8
Upper	Suwannee	Upper	109.882	55.2
Upper	Suwannee	Upper	109.232	55
Upper	Suwannee	Upper	108.582	54.7
Upper	Suwannee	Upper	107.892	54.2
Upper	Suwannee	Upper	107.352	54
Upper	Suwannee	Upper	106.702	53.8
Upper	Suwannee	Upper	105.892	53.3
Upper	Suwannee	Upper	105.372	53
Upper	Suwannee	Upper	104.602	52.9
Upper	Suwannee	Upper	104.042	52.5
Upper	Suwannee	Upper	103.312	52.1
Upper	Suwannee	Upper	102.902	52
Upper	Suwannee	Upper	101.832	51.5
Upper	Suwannee	Upper	101.492	51.2
Upper	Suwannee	Upper	100.521	51

Upper Suwannee	Upper	100.242	51
Upper Suwannee	Upper	99.192	50.8
Upper Suwannee	Upper	98.242	50.2
Upper Suwannee	Upper	98.202	49.9
Upper Suwannee	Upper	98.192	49.8
Upper Suwannee	Upper	98.186	49.6
Upper Suwannee	Upper	98.182	49.6
Upper Suwannee	Upper	98.132	49.5
Upper Suwannee	Upper	97.382	48.8
Upper Suwannee	Upper	96.611	47.8
Upper Suwannee	Upper	95.921	47.2
Upper Suwannee	Upper	95.551	47.1
Upper Suwannee	Upper	95.549	47.1
Upper Suwannee	Upper	93.860	46.2
Upper Suwannee	Upper	92.900	45.8
Upper Suwannee	Upper	92.210	45.3
Upper Suwannee	Upper	91.490	45
Upper Suwannee	Upper	90.120	44.2
Upper Suwannee	Upper	89.250	43.8
Upper Suwannee	Upper	88.250	43
Upper Suwannee	Upper	87.460	42.2
Upper Suwannee	Upper	86.740	42
Upper Suwannee	Upper	85.960	41.5
Upper Suwannee	Upper	85.710	41.2
Upper Suwannee	Upper	84.860	40.8

Upper	Suwannee	Upper	84.210	40.1
Upper	Suwannee	Upper	83.090	39.5
Upper	Suwannee	Upper	82.170	38.9
Upper	Suwannee	Upper	81.600	38.5
Upper	Suwannee	Upper	81.330	38.2
Upper	Suwannee	Upper	80.212	37.8
Upper	Suwannee	Upper	79.532	37.3
Upper	Suwannee	Upper	79.022	37
Upper	Suwannee	Upper	78.512	36.8
Upper	Suwannee	Upper	78.002	36.5
Upper	Suwannee	Upper	77.502	36.2
Upper	Suwannee	Upper	77.072	36
Upper	Suwannee	Upper	76.782	36
Upper	Suwannee	Upper	76.522	35.9
Upper	Suwannee	Upper	76.162	35.7
Upper	Suwannee	Upper	76.132	35.6
Upper	Suwannee	Upper	76.122	35.2
Upper	Suwannee	Upper	76.117	35.1
Upper	Suwannee	Upper	76.112	35.1
Upper	Suwannee	Upper	76.072	35
Upper	Suwannee	Upper	75.852	35
Upper	Suwannee	Upper	75.592	35
Upper	Suwannee	Upper	75.082	34.9
Upper	Suwannee	Upper	74.722	34.8
Upper	Suwannee	Upper	74.282	34.6

Upper Suwannee	Upper	73.562	34.2
Upper Suwannee	Upper	73.102	34
Upper Suwannee	Upper	72.782	33.9
Upper Suwannee	Upper	71.972	33.4
Suwannee	UpstreamEnd	112.932	58
Suwannee	UpstreamEnd	112.922	58
Suwannee	UpstreamEnd	112.912	57
Suwannee	UpstreamEnd	112.902	56.9
Suwannee	UpstreamEnd	112.892	56.9
Suwannee	UpstreamEnd	112.872	56.9
Suwannee	UpstreamEnd	112.842	56.8
Suwannee	UpstreamEnd	112.812	56.8
Suwannee	UpstreamEnd	112.802	56.8
Suwannee	UpstreamEnd	112.792	56.8
Suwannee	UpstreamEnd	112.782	56.7
Suwannee	UpstreamEnd	112.732	56.6
Suwannee	UpstreamEnd	112.472	56.5
Suwannee	UpstreamEnd	112.182	56.3
Suwannee	UpstreamEnd	111.192	56
Suwannee	UpstreamEnd	110.702	55.8
Suwannee	UpstreamEnd	109.882	55.2
Suwannee	UpstreamEnd	109.232	55
Suwannee	UpstreamEnd	108.582	54.7
Suwannee	UpstreamEnd	107.892	54.2
Suwannee	UpstreamEnd	107.352	54

Suwannee	UpstreamEnd	106.702	53.8
Suwannee	UpstreamEnd	105.892	53.3
Suwannee	UpstreamEnd	105.372	53
Suwannee	UpstreamEnd	104.602	52.9
Suwannee	UpstreamEnd	104.042	52.5
Suwannee	UpstreamEnd	103.312	52.1
Suwannee	UpstreamEnd	102.902	52
Suwannee	UpstreamEnd	101.832	51.5
Suwannee	UpstreamEnd	101.492	51.2
Suwannee	UpstreamEnd	100.521	51
Suwannee	UpstreamEnd	100.242	51
Suwannee	UpstreamEnd	99.192	50.8
Suwannee	UpstreamEnd	98.242	50.2
Suwannee	UpstreamEnd	98.202	49.9
Suwannee	UpstreamEnd	98.192	49.8
Suwannee	UpstreamEnd	98.186	49.6
Suwannee	UpstreamEnd	98.182	49.6
Suwannee	UpstreamEnd	98.132	49.5
Suwannee	UpstreamEnd	97.382	48.8
Suwannee	UpstreamEnd	96.611	47.8
Suwannee	UpstreamEnd	95.921	47.2
Suwannee	UpstreamEnd	95.551	47.1
Suwannee	UpstreamEnd	95.549	47.1
Suwannee	UpstreamEnd	93.860	46.2
Suwannee	UpstreamEnd	92.900	45.8

Suwannee	UpstreamEnd	92.210	45.3
Suwannee	UpstreamEnd	91.490	45
Suwannee	UpstreamEnd	90.120	44.2
Suwannee	UpstreamEnd	89.250	43.8
Suwannee	UpstreamEnd	88.250	43
Suwannee	UpstreamEnd	87.460	42.2
Suwannee	UpstreamEnd	86.740	42
Suwannee	UpstreamEnd	85.960	41.5
Suwannee	UpstreamEnd	85.710	41.2
Suwannee	UpstreamEnd	84.860	40.8
Suwannee	UpstreamEnd	84.210	40.1
Suwannee	UpstreamEnd	83.090	39.5
Suwannee	UpstreamEnd	82.170	38.9
Suwannee	UpstreamEnd	81.600	38.5
Suwannee	UpstreamEnd	81.330	38.2
Suwannee	UpstreamEnd	80.212	37.8
Suwannee	UpstreamEnd	79.532	37.3
Suwannee	UpstreamEnd	79.022	37
Suwannee	UpstreamEnd	78.512	36.8
Suwannee	UpstreamEnd	78.002	36.5
Suwannee	UpstreamEnd	77.502	36.2
Suwannee	UpstreamEnd	77.072	36
Suwannee	UpstreamEnd	76.782	36
Suwannee	UpstreamEnd	76.522	35.9
Suwannee	UpstreamEnd	76.162	35.7

Suwannee	UpstreamEnd	76.132	35.6
Suwannee	UpstreamEnd	76.122	35.2
Suwannee	UpstreamEnd	76.117	35.1
Suwannee	UpstreamEnd	76.112	35.1
Suwannee	UpstreamEnd	76.072	35
Suwannee	UpstreamEnd	75.852	35
Suwannee	UpstreamEnd	75.592	35
Suwannee	UpstreamEnd	75.082	34.9
Suwannee	UpstreamEnd	74.722	34.8
Suwannee	UpstreamEnd	74.282	34.6
Suwannee	UpstreamEnd	73.562	34.2
Suwannee	UpstreamEnd	73.102	34
Suwannee	UpstreamEnd	72.782	33.9
Suwannee	UpstreamEnd	71.972	33.4

GEOMETRY DATA

Geometry Title: Updated 2005
Geometry File : x:\2023\L230523CLY\D.Final Design\Permitting\SRWMD\Current Hec Ras Model\KennethClyattPost.g01

Reach Connection Table

River	Reach	Upstream Boundary	Downstream Boundary
Santa Fe	Main		Santa Fe
Suwannee	WtoSF		Santa Fe
Suwannee	BelowSF	Santa Fe	

JUNCTION INFORMATION

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	12118	12361		5700	5280	4000		.1	.3

CROSS SECTION

RIVER: Santa Fe
 REACH: Main RS: 14.08

INPUT

Description: K - GILCHRIST FIS -

Station Elevation Data	num=	38
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
10000 39.34 10089 37.24 10283 35.04 10472 31.64 10610 31.24		
10770 33.24 11030 33.34 11183 29.34 11374 25.34 11475 21.24		
11508 19.84 11699 20.04 11981 20.84 12090 22.44 12353 24.64		
12443 19.74 12471 15.34 12500 12.14 12550 9.94 12575 9.84		
12600 13.04 12624 15.34 12650 19.04 12734 22.94 12782 22.94		
12838 15.94 12878 22.94 12930 23.94 12985 23.54 13064 30.24		
13172 32.74 13298 33.84 13507 35.74 13550 35.94 13572 34.74		
13612 36.34 13835 38.54 13910 39.34		

Manning's n Values	num=	3
Sta n Val Sta n Val Sta n Val		
10000 .28 12443 .045 12650 .28		

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	12443	12650		4700	5540	5500		.1	.3

CROSS SECTION

RIVER: Santa Fe
 REACH: Main RS: 13.03

INPUT

Description: J - GILCHRIST FIS -

Station Elevation Data	num=	31
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
10000 39.34 10118 37.74 10251 38.34 10333 38.64 10366 37.44		
10479 33.34 10562 30.84 10858 29.24 11233 28.84 11574 30.04		
11746 26.74 11961 26.14 12415 31.64 12535 29.74 12667 22.64		
12868 19.04 12920 12.64 12950 7.84 12975 -6.11 13025 6.79		
13085 12.64 13185 15.94 13381 16.24 13544 18.44 13733 17.84		
13810 19.34 13901 21.54 14050 22.14 14187 23.54 14265 24.24		
14369 39.34		

Manning's n Values	num=	3
Sta n Val Sta n Val Sta n Val		

10000 .28 12920 .045 13085 .28

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	12920	13085		6100 9130	5400		.1	.3

CROSS SECTION

RIVER: Santa Fe

REACH: Main RS: 11.3

INPUT

Description: I - GILCHRIST FIS -

Station Elevation Data				num=	28				
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
10000	39.34	10116	35.24	10270	30.64	10433	35.14	10605	38.24
10755	39.84	10968	34.24	11118	28.04	11379	22.24	11645	25.74
11856	19.34	11938	17.54	12080	13.54	12100	9.94	12200	6.44
12250	6.34	12300	9.24	12345	13.54	12376	19.54	12427	20.04
12548	18.84	12597	16.64	12861	15.54	13001	16.34	13088	19.44
13173	29.54	13249	39.34	13294	41.04				

Manning's n Values				num=	3
Sta	n Val	Sta	n Val	Sta	n Val
10000	.28	12080	.045	12345	.28

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	12080	12345		5900 6550	4400		.1	.3

CROSS SECTION

RIVER: Santa Fe

REACH: Main RS: 10.25

INPUT

Description: I - Kenneth Clyatt -

Station Elevation Data				num=	34				
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
10000	39.34	10116	35.24	10270	30.64	10433	35.14	10605	38.24
10755	39.84	10968	34.24	11118	28.04	11379	22.24	11645	25.74
11856	19.34	11938	17.54	12080	13.54	12100	9.94	12200	6.44
12250	6.34	12300	9.24	12324.9	9.67	12325	18.14	12345	18.14
12363	18.14	12427	18.62	12487	20.03	12524.9	20.85	12525	33.9
12573	33.9	12588	33.9	12588.1	26.43	12593	25.97	12648	28.02
12658	29.76	12703	28.37	12750	28.49	12788	28.74		

Manning's n Values				num=	3
Sta	n Val	Sta	n Val	Sta	n Val
10000	.28	12080	.045	12345	.28

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	12080	12345		5900 6550	4400		.1	.3

CROSS SECTION

RIVER: Santa Fe
 REACH: Main

RS: 10.06

INPUT

Description: H - GILCHRIST FIS -

Station Elevation Data	num=	36
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
10000 37.34 10243 30.54 10362 27.64 10472 25.74 10548 23.64		
10608 12.04 10650 10.65 10689 12.04 10751 15.84 10828 19.04		
10926 20.24 10972 18.64 10989 12.04 11000 3.65 11050 1.15		
11100 4.14 11133 12.04 11175 15.64 11255 27.24 11288 30.84		
11415 30.04 11478 28.64 11498 27.14 11570 27.84 11646 27.94		
11859 29.74 12154 30.64 12428 31.34 12570 34.34 12697 36.14		
12751 35.04 12769 36.64 12846 37.74 13166 35.14 13344 32.44		
13443 37.34		

Manning's n Values	num=	3
Sta n Val Sta n Val Sta n Val		
10000 .28 10972 .045 11175 .28		

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	10972	11175		5500 8600	6200		.1	.3

CROSS SECTION

RIVER: Santa Fe
 REACH: Main

RS: 8.43

INPUT

Description: G - GILCHRIST FIS -

Station Elevation Data	num=	74
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
10000 37.34 10181 35.54 10431 35.34 10664 35.34 10849 33.14		
11010 33.24 11014 32.04 11041 32.04 11046 32.54 11193 33.34		
11328 31.54 11429 30.64 11538 30.44 11623 30.44 11707 29.64		
11781 30.84 11819 32.04 11835 32.54 11855 31.54 11863 31.24		
11891 31.14 12019 30.34 12206 30.14 12304 28.34 12359 27.54		
12362 26.24 12369 26.44 12375 26.34 12378 26.64 12415 25.34		
12472 24.34 12515 22.74 12537 20.44 12559 16.74 12579 13.54		
12592 11.44 12610 10.07 12638 11.44 12647 15.04 12677 15.04		
12702 15.14 12710 15.14 12714 14.54 12720 11.44 12730 4.01		
12800 -1.66 12830 2.11 12884 11.44 12896 17.94 12942 17.04		

13004	17.04	13180	16.94	13277	24.04	13305	27.64	13322	26.64
13330	25.74	13333	24.64	13335	25.84	13355	27.04	13541	28.34
13705	26.04	13891	26.34	14100	26.64	14310	26.94	14510	27.74
14856	29.54	15078	30.64	15386	29.54	15582	30.04	15779	30.54
16054	30.04	16257	29.64	16376	30.64	16639	37.34		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
10000	.28	12714	.045	12896	.28

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	12714	12896		2600 4170	4600		.1	.3

CROSS SECTION

RIVER: Santa Fe
REACH: Main RS: 7.64

INPUT

Description: F - GILCHRIST FIS -

Station Elevation Data				num= 59					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
10000	37.34	10083	34.24	10106	34.24	10112	33.64	10114	32.74
10127	32.74	10130	34.24	10135	34.04	10139	33.14	10207	33.94
10267	33.84	10282	33.44	10310	33.54	10329	33.64	10394	33.04
10561	32.94	10875	32.74	11000	31.24	11330	31.24	11668	30.44
11785	30.44	11999	29.64	12182	29.64	12527	15.74	12750	15.74
12958	17.74	13084	17.74	13100	11.64	13166	2.09	13236	9.39
13252	11.74	13266	14.94	13305	15.94	13336	17.04	13359	20.04
13380	22.64	13414	23.94	13458	24.34	13472	24.14	13481	23.74
13497	23.94	13511	23.34	13516	22.34	13521	22.94	13542	23.84
13630	21.64	13858	22.34	14088	22.14	14397	28.54	14848	30.64
15206	31.24	15230	30.94	15240	30.94	15294	31.34	15347	32.44
15390	32.54	15405	32.54	15461	32.84	15720	37.34		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
10000	.28	13084	.045	13266	.28

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	13084	13266		4950 6230	4900		.1	.3

CROSS SECTION

RIVER: Santa Fe
REACH: Main RS: 6.46

INPUT