

APPENDIX F
EXISTING CONDITIONS SCOUR
ANALYSIS DATA

Project Name: Pantano
 Project Number: # 07125 Made by jco Date 5/19/08
 Reference: SMDDFM Checked By _____ Date _____

Scour Below Channel Drops

Eq. 6.13 **1) Free, Unsubmerged overfall**

$$Z_{lsf} = 1.32 q^{0.54} H_t^{0.225} - TW$$

Where

- Z_{lsf} = Depth of Local Scour due to a free-overfall drop, in feet,
measured below the streambed surface downstream of the drop (ft)
- q = Discharge per unit width of the channel bottom (cfs)
- H_t = Total drop in head(measured from the upstram EGL to to the downstream EGL)
- TW = Tailwater elevation (downstream water surface elevation) (ft)

Eq. 6.14 **1) Submerged Drop**

$$Z_{lss} = 0.581 q^{0.667} (h/Y)^{0.411} [1-(h/Y)]^{-0.118}$$

Where

- Z_{lss} = Depth of Local Scour due to a submerged drop, in feet,
measured below the streambed surface downstream of the drop (ft)
- q = Discharge per unit width of the channel bottom (cfs)
- h = Drop in Height (ft)
- Y = Downstream depth of flow (ft)

TW=Y

Grade Control Structure		q (cfs)	H_t (ft)	TW (ft)	Z_{lsf} (ft)	h (ft)	Y (ft)	Z_{lss} (ft)	Scour (ft)
XS	1000	111.97	2.17	11.88	8.20	4	11.88	9.07	9.07
XS	1100	150.21	0.42	10.57	5.69	3	10.57	10.19	10.19
XS	1200	132.33	1.20	12.02	7.21	3	12.02	8.84	8.84
XS	1220	144.80	1.00	10.17	9.21	3	10.17	10.13	10.13

Project Name: Pantano Wash Bank Protection Improvements
 Project Number: # 07125 Made by jco Date 5/19/08
 Reference: SMDDFM Checked By MED Date

Scour Below Channel Drops

Eq. 6.13 **1) Free, Unsubmerged overfall**

$$Z_{lsf} = 1.32 q^{0.54} H_t^{0.225} - TW$$

Where

- Z_{lsf} = Depth of Local Scour due to a free-overfall drop, in feet,
measured below the streambed surface downstream of the drop (ft)
- q = Discharge per unit width of the channel bottom (cfs)
- H_t = Total drop in head(measured from the upstram EGL to to the downstream EGL)
- TW = Tailwater elevation (downstream water surface elevation) (ft)

Eq. 6.14 **1) Submerged Drop**

$$Z_{lss} = 0.581 q^{0.667} (h/Y)^{0.411} [1-(h/Y)]^{-0.118}$$

Where

- Z_{lss} = Depth of Local Scour due to a submerged drop, in feet,
measured below the streambed surface downstream of the drop (ft)
- q = Discharge per unit width of the channel bottom (cfs)
- h = Drop in Height (ft)
- Y = Downstream depth of flow (ft)

Assume $H_t=h$; $TW=Y$

Grade Control Structure	q (cfs)	Ht (ft)	TW (ft)	Z_{lsf} (ft)	h (ft)	Y (ft)	Z_{lss} (ft)	Scour (ft)
XS 290	133.67	5.00	12.00	14.66	5	12.00	11.31	14.66
XS 290	133.67	4.00	12.00	13.36	4	12.00	10.16	13.36
XS 290	133.67	3.00	12.00	11.77	3	12.00	8.90	11.77
XS 290	133.67	2.00	12.00	9.70	2	12.00	7.44	9.70
XS 800	193.93	5.00	10.12	22.48	5	10.12	15.82	22.48
XS 800	193.93	4.00	10.12	20.88	4	10.12	14.13	20.88
XS 800	193.93	3.00	10.12	18.94	3	10.12	12.33	18.94
XS 800	193.93	2.00	10.12	16.40	2	10.12	10.28	16.40

Existing Conditions

Local Scour at Piers (CSU Equation)

$$y_{s/1} = 2.0 K_1 K_2 K_3 K_4 (a/y_1)^{0.65} Fr_1^{0.43}$$

y_s = Depth of scour (ft)

K_1 = Correction factor for pier nose shape

K_2 = Correction factor for angle of attack of flow

K_3 = Correction factor for bed condition

K_4 = Correction factor for armoring of bed material

a = Pier width (ft) (multiplied by 2 to account for debris)

y_1 = Flow depth directly upstream of the pier (ft)

Fr_1 = Froude Number directly upstream of piers.

K_1	=	1
K_2	=	1
K_3	=	1.1
K_4	=	1
a	=	6
y_1	=	12.67
Fr_1	=	0.72

y_s	=	14.89	feet
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Proposed Conditions

Local Scour at Piers (CSU Equation)

$$y_s/y_1 = 2.0 K_1 K_2 K_3 K_4 (a/y_1)^{0.65} Fr_1^{0.43}$$

y_s = Depth of scour (ft)

K_1 = Correction factor for pier nose shape

K_2 = Correction factor for angle of attack of flow

K_3 = Correction factor for bed condition

K_4 = Correction factor for armoring of bed material

a = Pier width (ft)

y_1 = Flow depth directly upstream of the pier (ft)

Fr_1 = Froude Number directly upstream of piers.

K_1	=	1
K_2	=	1
K_3	=	1.1
K_4	=	1
a	=	6
y_1	=	13.14
Fr_1	=	0.63

y_s	=	14.24	feet
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Project Name Pantano Wash
 Project Number 07125-01 Made by jco Date 9/11/2008
 Reference COT SMDDFM Checked By _____ Date _____

NOTES

General Scour $Z_{gs} = Y_{max} \left[\frac{0.0685V_m^{0.8}}{Y_h^{0.4} S_e^{0.3}} - 1 \right]$ General Scour is best estimated by performing a detailed sediment-transport analysis. When not practical this equation (Zeller, 1981) should be used.

Anti-Dune Scour $Z_a = 0.0137V_m^2$ The anti-dune trough depth can never exceed one-half the depth of flow. If the result is greater then one-half the depth of flow, change the results manually.

Low Flow Thawleg To be used when the ratio of the flow width to the flow depth is greater than 1.15 times the average velocity of flow for the 100-year discharge. If the flow width or flow depth exceeds the top width and bank height of the channel, use the topwidth and flow depth at bankfull conditions. If a low flow thawleg is to be used, it should be assumed at least 2 feet deep for regional watercourses and at least 1 foot deep for all other watercourses, unless field observations dictate otherwise.

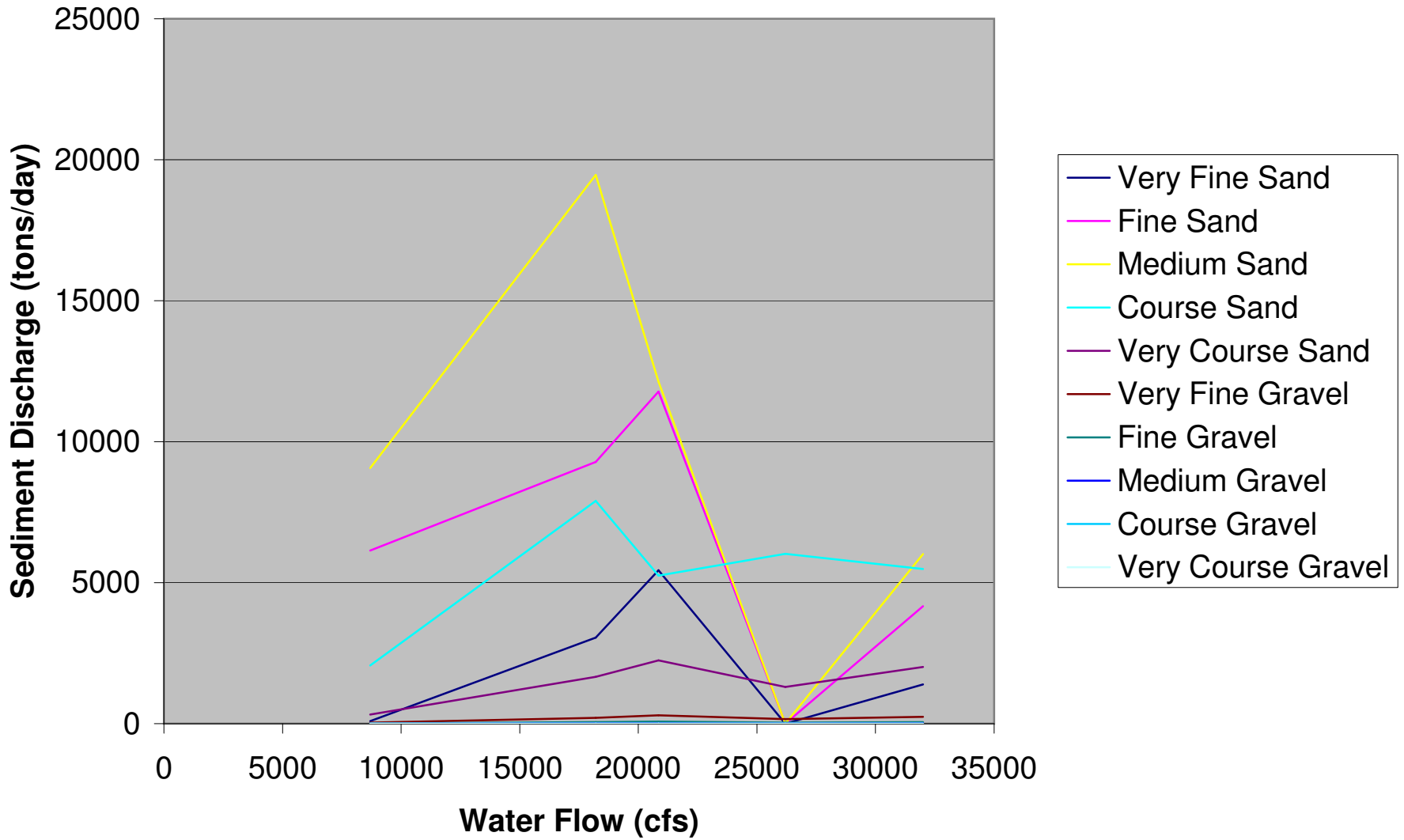
Bend Scour **Bend scour is not applicable for this project**

Total Scour $Z_t = 1.3 (Z_{gs} + Z_a + Z_{bs} + Z_{lft})$ Total scour is the sum of general scour, anti-dune scour, bend scour and the low flow thawleg depths.

XS	Q	Channel Invert	WSE		Y _{max}	S _e [*]	V _m	A	T _w	Y _h	Z _{gs}	Z _{mb}	Z _a	Z _{lft}	Z _t	Z _t
	Discharge		Water Surface Elevation	Flow Depth												
	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft)	(ft ²)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1600	32000	2540	2548.55	8.55	0.007045	14.8	2161.58	320.63	6.74	1.87	2.86	3.00	2.00	8.94	10.22	
1500	32000	2532	2545.33	13.33	0.003598	11.87	2695.12	330.1	8.16	2.10	0.71	1.93	2.00	7.85	6.03	
1450	32000	2531	2544.44	13.44	0.003646	12.16	2632.16	313.54	8.39	2.19	0.43	2.03	2.00	8.08	5.79	
1400	32000	2530	2543.83	13.83	0.003083	11.94	2685.53	303.5	8.85	2.49	2.02	1.95	2.00	8.37	7.77	
1350	32000	2530	2543.49	13.49	0.002466	10.98	2913.08	301.3	9.67	1.87	1.77	1.65	2.00	7.18	7.05	
1300	32000	2529	2541.64	12.64	0.003061	11.96	2676.54	287.95	9.30	2.03	2.08	1.96	2.00	7.79	7.85	
1230	32000	2529	2537.84	8.84	0.006801	16.34	1958.6	238.31	8.22	2.05	0	3.66	2.00	10.02	7.36	
1220	32000	2527	2537.17	10.17	0.005458	15.24	2099.44	240.3	8.74	2.18	1.96	3.18	2.00	9.57	9.28	
1200	32000	2526	2535.67	9.66	0.004299	13.72	2331.91	260.29	8.96	1.81	0	2.58	2.00	8.31	5.95	
1120	32000	2524	2536.02	12.02	0.002596	11.78	2715.89	258.96	10.49	1.78	0	1.90	2.00	7.39	5.07	
1110	32000	2523	2532.00	9.00	0.006658	16.5	1939.98	227.66	8.52	2.08	0	3.73	2.00	10.16	7.45	
1100	32000	2520	2530.57	10.57	0.005066	14.97	2137.79	237.27	9.01	2.21	1.22	3.07	2.00	9.47	8.18	
1050	32000	2519	2528.34	9.34	0.006777	15.94	2008.14	254.74	7.88	2.14	0	3.48	2.00	9.91	7.13	
1010	32000	2519	2526.64	7.64	0.006991	14.97	2137.81	307.34	6.96	1.66	0	3.07	2.00	8.75	6.59	
1000	32000	2513	2524.88	11.88	0.003027	11.95	2676.76	287.1	9.32	1.93	0	1.96	2.00	7.66	5.14	
990	32000	2509	2524.60	15.60	0.002465	11.48	2786.35	268.44	10.38	2.30	0	1.81	2.00	7.93	4.95	
975	32000	2508	2523.87	15.87	0.002804	12.2	2623.49	250.47	10.47	2.45	0	2.04	2.00	8.44	5.25	
965	32000	2508	2523.87	15.87	0.001802	10.84	2952.52	243.55	12.12	2.08	0.18	1.61	2.00	7.40	4.93	
950	32000	2508	2523.32	15.32	0.002068	11.55	2771.64	227.94	12.16	2.15	3.97	1.83	2.00	7.78	10.14	
900	32000	2507	2522.18	15.18	0.002596	13.11	2440.28	198.79	12.28	2.65	2.25	2.35	0.00	6.51	5.99	
875	32000	2507	2519.10	12.10	0.006381	17.82	1795.29	183.02	9.81	3.07	8.19	4.35	0.00	9.65	16.30	
865	32000	2507	2518.51	11.51	0.006684	16.84	1901.2	223.03	8.52	2.88	3.99	3.89	2.00	11.39	12.84	
850	32000	2506	2518.39	12.39	0.002612	11.15	2870.84	302.77	9.48	1.76	1.34	1.70	2.00	7.10	6.56	
825	32000	2505	2517.93	12.93	0.002628	10.84	2952.84	329.33	8.97	1.81	1.78	1.61	2.00	7.04	7.01	
800	32000	2505	2517.30	12.30	0.003065	11.67	2742.08	304.82	9.00	1.88	3	1.87	2.00	7.47	8.93	
750	32000	2503	2515.69	12.69	0.003542	13.42	2385.26	240.37	9.92	2.37	2.18	2.47	2.00	8.89	8.64	
700	32000	2502	2515.47	13.47	0.002424	11.63	2751.07	258.19	10.66	2.06	0.1	1.85	2.00	7.69	5.14	
650	32000	2501	2512.76	11.76	0.00705	15.07	2123.45	305.54	6.95	2.61	2.73	3.11	2.00	10.03	10.19	
600	32000	2500	2510.40	10.39	0.007009	15.18	2108.65	299.45	7.04	2.33	0	3.16	2.00	9.74	6.70	
550	32000	2498	2507.96	9.96	0.005387	14.42	2219.5	274.92	8.07	2.03	2.28	2.85	2.00	8.95	9.27	
500	32000	2498	2507.18	9.18	0.005021	14.07	2273.98	277.51	8.19	1.82	0	2.71	2.00	8.50	6.13	
450	32000	2496	2506.53	10.53	0.003383	11.87	2695.67	314.76	8.56	1.65	0	1.93	2.00	7.26	5.11	
400	32000	2494	2505.69	11.69	0.003061	11.64	2748.01	306.13	8.98	1.78	0.33	1.86	2.00	7.32	5.44	
350	32000	2492	2505.08	13.08	0.0026	11.35	2819.05	281.66	10.01	1.82	1.05	1.76	2.00	7.26	6.26	
325	32000	2492	2504.1	12.10	0.0036	12.97	2468.15	258.62	9.54	2.03	2.51	2.30	2.00	8.24	8.86	
300	32000	2491	2503.67	12.66	0.0034	12.91	2477.95	250.23	9.90	2.15	0	2.28	2.00	8.36	5.57	
290	32000	2490	2502.81	12.81	0.0029	12.31	2599.80	251.96	10.32	2.07	2.01	2.08	2.00	7.99	7.91	
275	32000	2490	2502	12.00	0.0037	13.52	2367.30	241.03	9.82	2.21	2.71	2.50	2.00	8.73	9.38	
200	32000	2488	2498.8	10.80	0.0067	17.17	1863.60	204.92	9.09	2.55	3.42	4.04	0.00	8.57	9.70	
150	32000	2486	2497.22	11.22	0.0051	15.11	2117.85	232.94	9.09	2.36	2.44	3.13	2.00	9.73	9.84	
100	32000	2484	2496	12.00	0.0050	14.39	2223.50	261.12	8.52	2.44	0	2.84	2.00	9.46	6.29	

- (1) Cross-sections reporting aggradation were given a value of zero for the purpose of scour calculations
- (2) Includes COT General Scour Value
- (3) Includes HEC-6 value for mobile bed adjustment at Q₁₀₀

XS 1600



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*****
*   SCOUR AND DEPOSITION IN RIVERS AND RESERVOIRS   *   *   U.S. ARMY CORPS OF
ENGINEERS   *
*   Version: 4.2   -   May 2004   *   *   HYDROLOGIC
ENGINEERING CENTER   *
*   INPUT FILE:   exist75t.dat   *   *   609 SECOND STREET
*
*   OUTPUT FILE:   exist75t.out   *   *   DAVIS, CALIFORNIA
95616-4687   *
*   RUN DATE: 11 SEP 08   RUN TIME: 15:16:07   *   *   (530) 756-1104
*
*****
*****

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          X      X  XXXXXXXX   XXXXXX           XXXXXX
          X      X  X          X      X         X      X
          X      X  X          X              X
          XXXXXXXX  XXXX   X          XXXXX  XXXXXXX
          X      X  X          X              X      X
          X      X  X          X      X         X      X
          X      X  XXXXXXXX   XXXXXX           XXXXXX

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*****
*   MAXIMUM LIMITS FOR THIS VERSION ARE:   *
*   10 Stream Segments (Main Stem + Tributaries)   *
*   500 Cross Sections   *
*   200 Elevation/Station Points per Cross Section   *
*   20 Grain Sizes   *
*   20 Control Points   *
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T1          1
T2   Pantano-Sediment Transpo   rt-ex
T3   River #1, Reach #   1

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N values... Left   Channel   Right   Contraction   Expansion
             0.0450   0.0300   0.0400   1.1000   0.7000

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SECTION NO.   100.000
...ELEVATION of Model Bottom =   2474.000 ft.

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N values... Left   Channel   Right   Contraction   Expansion
             0.0500   0.0300   0.0500   1.1000   0.7000

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SECTION NO.   150.000
...ELEVATION of Model Bottom =   2476.000 ft.

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N values... Left   Channel   Right   Contraction   Expansion
             0.0450   0.0300   0.0400   1.1000   0.7000

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SECTION NO.   200.000
...ELEVATION of Model Bottom =   2478.000 ft.

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N values... Left   Channel   Right   Contraction   Expansion
             0.0450   0.0300   0.0400   1.1000   0.7000

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SECTION NO. 275.000
...ELEVATION of Model Bottom = 2480.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0450	0.0300	0.0400	1.1000	0.7000

SECTION NO. 290.000
...ELEVATION of Model Bottom = 2480.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 300.000
...ELEVATION of Model Bottom = 2481.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 325.000
...ELEVATION of Model Bottom = 2482.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 350.000
...ELEVATION of Model Bottom = 2482.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 400.000
...ELEVATION of Model Bottom = 2484.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 450.000
...ELEVATION of Model Bottom = 2486.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 500.000
...ELEVATION of Model Bottom = 2488.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 550.000
...ELEVATION of Model Bottom = 2488.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 600.000
...ELEVATION of Model Bottom = 2490.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 650.000
...ELEVATION of Model Bottom = 2491.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 700.000
...ELEVATION of Model Bottom = 2492.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 750.000
...ELEVATION of Model Bottom = 2493.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 800.000
...ELEVATION of Model Bottom = 2495.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 825.000
...ELEVATION of Model Bottom = 2495.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 850.000
...ELEVATION of Model Bottom = 2496.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 865.000
...ELEVATION of Model Bottom = 2497.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 875.000
...ELEVATION of Model Bottom = 2497.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 900.000
...ELEVATION of Model Bottom = 2497.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 950.000
...ELEVATION of Model Bottom = 2498.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 965.000
...ELEVATION of Model Bottom = 2498.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 975.000
...ELEVATION of Model Bottom = 2498.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 990.000
...ELEVATION of Model Bottom = 2499.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 1000.000
...ELEVATION of Model Bottom = 2513.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 1010.000
...ELEVATION of Model Bottom = 2519.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 1050.000
...ELEVATION of Model Bottom = 2509.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 1100.000
...ELEVATION of Model Bottom = 2510.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 1110.000
...ELEVATION of Model Bottom = 2523.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 1120.000
...ELEVATION of Model Bottom = 2514.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 1200.000
...ELEVATION of Model Bottom = 2526.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 1220.000
...ELEVATION of Model Bottom = 2517.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0500	0.0300	0.0500	1.1000	0.7000

SECTION NO. 1230.000
...ELEVATION of Model Bottom = 2529.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0550	0.0300	0.0550	1.1000	0.7000

SECTION NO. 1300.000
...ELEVATION of Model Bottom = 2519.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0550	0.0300	0.0550	1.1000	0.7000

SECTION NO. 1350.000
...ELEVATION of Model Bottom = 2520.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0550	0.0300	0.0550	1.1000	0.7000

SECTION NO. 1400.000
...ELEVATION of Model Bottom = 2520.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0550	0.0300	0.0550	1.1000	0.7000

SECTION NO. 1450.000
...ELEVATION of Model Bottom = 2521.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0550	0.0300	0.0550	1.1000	0.7000

SECTION NO. 1500.000
...ELEVATION of Model Bottom = 2522.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0550	0.0300	0.0550	1.1000	0.7000

SECTION NO. 1600.000
...ELEVATION of Model Bottom = 2530.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0550	0.0300	0.0550	1.1000	0.7000

SECTION NO. 1700.000
...ELEVATION of Model Bottom = 2530.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0550	0.0300	0.0550	1.1000	0.7000

SECTION NO. 1800.000
...ELEVATION of Model Bottom = 2530.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0550	0.0300	0.0550	1.1000	0.7000

SECTION NO. 1900.000
...ELEVATION of Model Bottom = 2530.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0550	0.0300	0.0550	1.1000	0.7000

SECTION NO. 2000.000
...ELEVATION of Model Bottom = 2530.000 ft.

N values...	Left	Channel	Right	Contraction	Expansion
	0.0550	0.0300	0.0550	1.1000	0.7000

SECTION NO. 2100.000
...ELEVATION of Model Bottom = 2530.000 ft.

NO. OF CROSS SECTIONS IN STREAM SEGMENT= 46
NO. OF INPUT DATA MESSAGES = 0

TOTAL NO. OF CROSS SECTIONS IN THE NETWORK = 46
TOTAL NO. OF STREAM SEGMENTS IN THE NETWORK= 1
END OF GEOMETRIC DATA

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T4 BED GRADATIONS FROM FIELD SAMPLE S.
T5 Use Full Range o f Sandsand Grav els
T6 SEDIMENT TRANSPO RT BYToffalet i [refASCE JOURNAL (YANG
1971)
T7 SEDIMENT INFLOWBY Toffa leti E Q UATI ON
T8

1
Pantano-Sediment Transpo rt-ex
River #1,Reach # 1

SEDIMENT PROPERITES AND PARAMETERS

	SPI	IBG	MNQ	SPGF	ACGR	NFALL	IBSHER
I1	20.	0	1	1.000	32.174	2	1

SANDS - BOULDERS ARE PRESENT

	MTC	IASA	LASA	SPGS	GSF	BSAE	PSI	UWDLB
I4	1	1	10	2.650	0.667	0.500	30.000	93.000

USING TRANSPORT CAPACITY RELATIONSHIP # 1, TOFFALETI
GRAIN SIZES UTILIZED (mean diameter - mm)

VERY FINE SAND....	0.088	VERY FINE GRAVEL..	2.828
FINE SAND.....	0.177	FINE GRAVEL.....	5.657
MEDIUM SAND.....	0.354	MEDIUM GRAVEL.....	11.314
COARSE SAND.....	0.707	COARSE GRAVEL.....	22.627
VERY COARSE SAND..	1.414	VERY COARSE GRAVEL	45.255

COEFFICIENTS FOR COMPUTATION SCHEME WERE SPECIFIED

	DBI	DBN	XID	XIN	XIU	UBI	UBN	JSL
I5	0.000	1.000	0.000	1.000	0.000	0.000	1.000	1

SEDIMENT LOAD TABLE FOR STREAM SEGMENT # 1
LOAD BY GRAIN SIZE CLASS (tons/day)

FLOW	1000.00	3000.00	6000.00	10000.0	15000.0	20000.0
	25000.0	32000.0				

VF SAND	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19
F SAND	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19
M SAND	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19
C SAND	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19
VC SAND	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19
VF GRVL	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19
F GRVL	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19
M GRVL	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19
C GRVL	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19
VC GRVL	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19	0.100000E-19

TOTAL	0.100000E-18	0.100000E-18	0.100000E-18	0.100000E-18	0.100000E-18	0.100000E-18
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REACH GEOMETRY FOR STREAM SEGMENT 1

CROSS CHANNEL DISTANCE SECTION DOWNSTREAM NO. (miles)	REACH LENGTH (ft)	MOVABLE BED WIDTH	INITIAL BED-ELEVATIONS			ACCUMULATED FROM (ft)
			LEFT SIDE (ft)	THALWEG (ft)	RIGHT SIDE (ft)	
	0.000					
100.000 0.000		457.380	2501.000	2484.000	2502.000	0.000
	287.450					
150.000 0.054		358.900	2502.000	2486.000	2502.000	287.450
	293.940					
200.000 0.110		914.950	2507.000	2488.000	2514.000	581.390
	264.000					
275.000 0.160		316.550	2509.000	2490.000	2507.000	845.390
	85.000					
290.000 0.176		313.580	2511.000	2490.000	2510.000	930.390
	142.740					
300.000 0.203		326.780	2511.000	2491.000	2512.000	1073.130
	128.000					
325.000 0.227		595.080	2513.000	2492.000	2512.000	1201.130
	102.000					
350.000 0.247		410.830	2512.000	2492.000	2509.000	1303.130
	246.380					
400.000 0.293		870.860	2512.000	2494.000	2510.000	1549.510
	275.960					
450.000 0.346		427.130	2513.000	2496.000	2510.000	1825.470
	311.970					
500.000 0.405		852.010	2515.000	2498.000	2515.000	2137.440
	170.220					
550.000 0.437		497.230	2515.000	2498.000	2513.000	2307.660
	292.590					
600.000 0.492		815.390	2516.000	2500.000	2516.000	2600.250
	219.620					
650.000 0.534		461.500	2516.000	2501.000	2516.000	2819.870
	294.120					
700.000 0.590		548.150	2518.000	2502.000	2518.000	3113.990
	245.160					
750.000 0.636		382.010	2518.000	2503.000	2519.000	3359.150

800.000 0.685	259.430	733.080	2522.000	2505.000	2522.000	3618.580
825.000 0.706	110.490	357.950	2523.000	2505.000	2521.000	3729.070
850.000 0.745	201.980	346.100	2524.000	2506.000	2523.000	3931.050
865.000 0.773	153.000	584.460	2525.000	2507.000	2523.000	4084.050
875.000 0.801	143.000	354.100	2525.000	2507.000	2530.000	4227.050
900.000 0.829	151.890	431.720	2526.000	2507.000	2524.000	4378.940
950.000 0.868	206.230	586.790	2527.000	2508.000	2536.000	4585.170
965.000 0.896	148.000	347.990	2529.000	2508.000	2537.000	4733.170
975.000 0.925	151.000	462.200	2529.000	2508.000	2538.000	4884.170
990.000 0.957	168.000	764.810	2529.000	2509.000	2538.000	5052.170
1000.000 0.985	147.000	655.410	2530.000	2513.000	2540.000	5199.170
1010.000 0.998	71.920	733.300	2533.000	2519.000	2537.000	5271.090
1050.000 1.029	162.000	813.150	2535.000	2519.000	2540.000	5433.090
1100.000 1.085	294.000	527.910	2538.000	2520.000	2537.000	5727.090
1110.000 1.092	36.390	590.040	2538.000	2523.000	2532.000	5763.480
1120.000 1.176	443.730	868.760	2539.000	2524.000	2533.000	6207.210
1200.000 1.186	56.560	443.870	2540.000	2526.000	2539.000	6263.770
1220.000 1.264	411.790	514.100	2542.000	2527.000	2539.000	6675.560
1230.000 1.273	47.440	522.090	2543.000	2529.000	2539.000	6723.000

1300.000	383.380	506.550	2545.000	2529.000	2546.000	7106.380
1.346						
1350.000	277.240	348.110	2544.000	2530.000	2549.000	7383.620
1.398						
1400.000	211.150	810.240	2547.000	2530.000	2548.000	7594.770
1.438						
1450.000	198.710	391.360	2546.000	2531.000	2547.000	7793.480
1.476						
1500.000	214.530	873.220	2552.000	2532.000	2550.000	8008.010
1.517						
1600.000	679.460	449.020	2560.000	2540.000	2555.000	8687.470
1.645						
1700.000	200.000	449.020	2560.000	2540.000	2555.000	8887.470
1.683						
1800.000	200.000	449.020	2560.000	2540.000	2555.000	9087.470
1.721						
1900.000	200.000	449.020	2560.000	2540.000	2555.000	9287.470
1.759						
2000.000	200.000	449.020	2560.000	2540.000	2555.000	9487.470
1.797						
2100.000	200.000	449.020	2560.000	2540.000	2555.000	9687.470
1.835						

BED MATERIAL GRADATION

SECNO	SAE	DMAX (ft)	DXPI (ft)	XPI	TOTAL BED	BED MATERIAL FRACTIONS per grain size					
100.000	32.000	0.328	0.210	0.997	0.997	VF SAND	0.042	VC SAND	0.190		
M GRVL	0.057										
C GRVL	0.025					F SAND	0.088	VF GRVL	0.102		
VC GRVL	0.005					M SAND	0.190	F GRVL	0.088		
						C SAND	0.206				
150.000	32.000	0.328	0.210	0.996	0.992	VF SAND	0.042	VC SAND	0.191		
M GRVL	0.057										
C GRVL	0.026					F SAND	0.086	VF GRVL	0.104		
VC GRVL	0.006					M SAND	0.187	F GRVL	0.090		
						C SAND	0.203				

200.000	32.000	0.328	0.210	0.996	0.991	VF SAND	0.042	VC SAND	0.193
M	GRVL	0.058				F SAND	0.083	VF GRVL	0.107
C	GRVL	0.027				M SAND	0.183	F GRVL	0.092
VC	GRVL	0.007				C SAND	0.200		
275.000	32.000	0.328	0.210	0.995	0.991	VF SAND	0.041	VC SAND	0.194
M	GRVL	0.059				F SAND	0.082	VF GRVL	0.109
C	GRVL	0.029				M SAND	0.181	F GRVL	0.093
VC	GRVL	0.007				C SAND	0.197		
290.000	32.000	0.328	0.210	0.995	0.991	VF SAND	0.041	VC SAND	0.194
M	GRVL	0.059				F SAND	0.081	VF GRVL	0.110
C	GRVL	0.029				M SAND	0.180	F GRVL	0.094
VC	GRVL	0.007				C SAND	0.196		
300.000	32.000	0.328	0.210	0.995	0.990	VF SAND	0.041	VC SAND	0.195
M	GRVL	0.059				F SAND	0.080	VF GRVL	0.111
C	GRVL	0.029				M SAND	0.178	F GRVL	0.095
VC	GRVL	0.008				C SAND	0.194		
325.000	32.000	0.328	0.210	0.995	0.990	VF SAND	0.041	VC SAND	0.195
M	GRVL	0.059				F SAND	0.079	VF GRVL	0.112
C	GRVL	0.030				M SAND	0.177	F GRVL	0.096
VC	GRVL	0.008				C SAND	0.193		
350.000	32.000	0.328	0.210	0.995	0.990	VF SAND	0.041	VC SAND	0.196
M	GRVL	0.060				F SAND	0.078	VF GRVL	0.113
C	GRVL	0.030				M SAND	0.176	F GRVL	0.096
VC	GRVL	0.008				C SAND	0.192		
400.000	32.000	0.328	0.210	0.994	0.989	VF SAND	0.040	VC SAND	0.197
M	GRVL	0.060				F SAND	0.076	VF GRVL	0.115
C	GRVL	0.031				M SAND	0.173	F GRVL	0.098
VC	GRVL	0.009				C SAND	0.189		

450.000	32.000	0.328	0.210	0.994	0.989	VF SAND	0.040	VC SAND	0.198
M	GRVL	0.061				F SAND	0.074	VF GRVL	0.117
C	GRVL	0.032				M SAND	0.170	F GRVL	0.100
VC	GRVL	0.009				C SAND	0.187		
500.000	32.000	0.328	0.210	0.993	0.988	VF SAND	0.040	VC SAND	0.199
M	GRVL	0.062				F SAND	0.072	VF GRVL	0.120
C	GRVL	0.034				M SAND	0.167	F GRVL	0.102
VC	GRVL	0.010				C SAND	0.183		
550.000	32.000	0.328	0.210	0.993	0.988	VF SAND	0.039	VC SAND	0.200
M	GRVL	0.062				F SAND	0.071	VF GRVL	0.121
C	GRVL	0.034				M SAND	0.165	F GRVL	0.103
VC	GRVL	0.011				C SAND	0.182		
600.000	32.000	0.328	0.210	0.993	0.988	VF SAND	0.039	VC SAND	0.202
M	GRVL	0.063				F SAND	0.068	VF GRVL	0.123
C	GRVL	0.036				M SAND	0.162	F GRVL	0.105
VC	GRVL	0.011				C SAND	0.178		
650.000	32.000	0.328	0.210	0.992	0.987	VF SAND	0.039	VC SAND	0.203
M	GRVL	0.063				F SAND	0.067	VF GRVL	0.125
C	GRVL	0.036				M SAND	0.160	F GRVL	0.106
VC	GRVL	0.012				C SAND	0.176		
700.000	32.000	0.328	0.210	0.992	0.987	VF SAND	0.039	VC SAND	0.204
M	GRVL	0.064				F SAND	0.065	VF GRVL	0.128
C	GRVL	0.038				M SAND	0.157	F GRVL	0.108
VC	GRVL	0.012				C SAND	0.173		
750.000	32.000	0.328	0.210	0.992	0.986	VF SAND	0.038	VC SAND	0.205
M	GRVL	0.065				F SAND	0.063	VF GRVL	0.130
C	GRVL	0.039				M SAND	0.154	F GRVL	0.110
VC	GRVL	0.013				C SAND	0.170		

800.000	32.000	0.328	0.210	0.991	0.986	VF SAND	0.038	VC SAND	0.206
M	GRVL	0.065				F SAND	0.061	VF GRVL	0.132
C	GRVL	0.040				M SAND	0.151	F GRVL	0.112
VC	GRVL	0.014				C SAND	0.168		
825.000	32.000	0.328	0.210	0.991	0.986	VF SAND	0.038	VC SAND	0.207
M	GRVL	0.066				F SAND	0.060	VF GRVL	0.133
C	GRVL	0.040				M SAND	0.150	F GRVL	0.112
VC	GRVL	0.014				C SAND	0.167		
850.000	32.000	0.328	0.210	0.991	0.985	VF SAND	0.038	VC SAND	0.207
M	GRVL	0.066				F SAND	0.058	VF GRVL	0.134
C	GRVL	0.041				M SAND	0.148	F GRVL	0.114
VC	GRVL	0.014				C SAND	0.164		
865.000	32.000	0.328	0.210	0.991	0.985	VF SAND	0.037	VC SAND	0.208
M	GRVL	0.066				F SAND	0.057	VF GRVL	0.136
C	GRVL	0.042				M SAND	0.146	F GRVL	0.115
VC	GRVL	0.015				C SAND	0.163		
875.000	32.000	0.328	0.210	0.990	0.985	VF SAND	0.037	VC SAND	0.209
M	GRVL	0.067				F SAND	0.056	VF GRVL	0.137
C	GRVL	0.042				M SAND	0.145	F GRVL	0.116
VC	GRVL	0.015				C SAND	0.161		
900.000	32.000	0.328	0.210	0.990	0.990	VF SAND	0.037	VC SAND	0.209
M	GRVL	0.067				F SAND	0.055	VF GRVL	0.138
C	GRVL	0.043				M SAND	0.143	F GRVL	0.117
VC	GRVL	0.015				C SAND	0.160		
950.000	32.000	0.328	0.210	0.990	0.985	VF SAND	0.037	VC SAND	0.209
M	GRVL	0.066				F SAND	0.056	VF GRVL	0.136
C	GRVL	0.042				M SAND	0.146	F GRVL	0.115
VC	GRVL	0.015				C SAND	0.163		

965.000	32.000	0.328	0.210	0.991	0.985	VF SAND	0.036	VC SAND	0.208
M	GRVL	0.066				F SAND	0.057	VF GRVL	0.135
C	GRVL	0.041				M SAND	0.149	F GRVL	0.114
VC	GRVL	0.015				C SAND	0.165		
975.000	32.000	0.328	0.210	0.991	0.986	VF SAND	0.036	VC SAND	0.207
M	GRVL	0.066				F SAND	0.058	VF GRVL	0.133
C	GRVL	0.041				M SAND	0.151	F GRVL	0.112
VC	GRVL	0.014				C SAND	0.167		
990.000	32.000	0.328	0.210	0.991	0.986	VF SAND	0.036	VC SAND	0.207
M	GRVL	0.065				F SAND	0.060	VF GRVL	0.131
C	GRVL	0.040				M SAND	0.153	F GRVL	0.111
VC	GRVL	0.014				C SAND	0.170		
1000.000	32.000	0.328	0.210	0.991	0.986	VF SAND	0.035	VC SAND	0.206
M	GRVL	0.065				F SAND	0.061	VF GRVL	0.130
C	GRVL	0.039				M SAND	0.156	F GRVL	0.109
VC	GRVL	0.013				C SAND	0.172		
1010.000	32.000	0.328	0.210	0.991	0.987	VF SAND	0.035	VC SAND	0.206
M	GRVL	0.064				F SAND	0.061	VF GRVL	0.129
C	GRVL	0.039				M SAND	0.157	F GRVL	0.109
VC	GRVL	0.013				C SAND	0.173		
1050.000	32.000	0.328	0.210	0.992	0.987	VF SAND	0.035	VC SAND	0.205
M	GRVL	0.064				F SAND	0.062	VF GRVL	0.127
C	GRVL	0.038				M SAND	0.159	F GRVL	0.107
VC	GRVL	0.013				C SAND	0.176		
1100.000	32.000	0.328	0.210	0.992	0.988	VF SAND	0.034	VC SAND	0.204
M	GRVL	0.063				F SAND	0.064	VF GRVL	0.125
C	GRVL	0.037				M SAND	0.164	F GRVL	0.104
VC	GRVL	0.012				C SAND	0.180		

1110.000	32.000	0.328	0.210	0.992	0.988	VF SAND	0.034	VC SAND	0.204
M GRVL	0.063								
						F SAND	0.064	VF GRVL	0.124
C GRVL	0.037								
						M SAND	0.164	F GRVL	0.104
VC GRVL	0.012								
						C SAND	0.180		
1120.000	32.000	0.328	0.210	0.993	0.989	VF SAND	0.033	VC SAND	0.202
M GRVL	0.062								
						F SAND	0.067	VF GRVL	0.120
C GRVL	0.035								
						M SAND	0.171	F GRVL	0.100
VC GRVL	0.011								
						C SAND	0.187		
1200.000	32.000	0.328	0.210	0.993	0.989	VF SAND	0.033	VC SAND	0.202
M GRVL	0.061								
						F SAND	0.068	VF GRVL	0.119
C GRVL	0.035								
						M SAND	0.172	F GRVL	0.100
VC GRVL	0.011								
						C SAND	0.188		
1220.000	32.000	0.328	0.210	0.994	0.990	VF SAND	0.032	VC SAND	0.200
M GRVL	0.060								
						F SAND	0.071	VF GRVL	0.115
C GRVL	0.033								
						M SAND	0.178	F GRVL	0.096
VC GRVL	0.010								
						C SAND	0.194		
1230.000	32.000	0.328	0.210	0.994	0.990	VF SAND	0.032	VC SAND	0.200
M GRVL	0.060								
						F SAND	0.071	VF GRVL	0.115
C GRVL	0.033								
						M SAND	0.179	F GRVL	0.095
VC GRVL	0.010								
						C SAND	0.195		
1300.000	32.000	0.328	0.210	0.994	0.991	VF SAND	0.031	VC SAND	0.199
M GRVL	0.059								
						F SAND	0.073	VF GRVL	0.111
C GRVL	0.032								
						M SAND	0.185	F GRVL	0.092
VC GRVL	0.009								
						C SAND	0.200		
1350.000	32.000	0.328	0.210	0.995	0.991	VF SAND	0.031	VC SAND	0.198
M GRVL	0.058								
						F SAND	0.075	VF GRVL	0.108
C GRVL	0.030								
						M SAND	0.189	F GRVL	0.089
VC GRVL	0.008								
						C SAND	0.205		

1400.000	32.000	0.328	0.210	0.995	0.992	VF SAND	0.030	VC SAND	0.197
M	GRVL	0.057				F SAND	0.077	VF GRVL	0.106
C	GRVL	0.030				M SAND	0.192	F GRVL	0.087
VC	GRVL	0.008				C SAND	0.208		
1450.000	32.000	0.328	0.210	0.995	0.992	VF SAND	0.030	VC SAND	0.196
M	GRVL	0.057				F SAND	0.078	VF GRVL	0.104
C	GRVL	0.029				M SAND	0.195	F GRVL	0.086
VC	GRVL	0.007				C SAND	0.211		
1500.000	32.000	0.328	0.210	0.996	0.992	VF SAND	0.029	VC SAND	0.195
M	GRVL	0.056				F SAND	0.080	VF GRVL	0.102
C	GRVL	0.028				M SAND	0.198	F GRVL	0.084
VC	GRVL	0.007				C SAND	0.214		
1600.000	32.000	0.328	0.210	0.997	0.997	VF SAND	0.028	VC SAND	0.193
M	GRVL	0.054				F SAND	0.084	VF GRVL	0.095
C	GRVL	0.025				M SAND	0.209	F GRVL	0.078
VC	GRVL	0.005				C SAND	0.224		
1700.000	32.000	0.328	0.210	0.997	0.997	VF SAND	0.028	VC SAND	0.193
M	GRVL	0.054				F SAND	0.084	VF GRVL	0.095
C	GRVL	0.025				M SAND	0.209	F GRVL	0.078
VC	GRVL	0.005				C SAND	0.224		
1800.000	32.000	0.328	0.210	0.997	0.997	VF SAND	0.028	VC SAND	0.193
M	GRVL	0.054				F SAND	0.084	VF GRVL	0.095
C	GRVL	0.025				M SAND	0.209	F GRVL	0.078
VC	GRVL	0.005				C SAND	0.224		
1900.000	32.000	0.328	0.210	0.997	0.997	VF SAND	0.028	VC SAND	0.193
M	GRVL	0.054				F SAND	0.084	VF GRVL	0.095
C	GRVL	0.025				M SAND	0.209	F GRVL	0.078
VC	GRVL	0.005				C SAND	0.224		

2000.000	32.000	0.328	0.210	0.997	0.997	VF SAND	0.028	VC SAND	0.193
M GRVL	0.054					F SAND	0.084	VF GRVL	0.095
C GRVL	0.025					M SAND	0.209	F GRVL	0.078
VC GRVL	0.005					C SAND	0.224		
2100.000	32.000	0.328	0.210	0.997	0.997	VF SAND	0.028	VC SAND	0.193
M GRVL	0.054					F SAND	0.084	VF GRVL	0.095
C GRVL	0.025					M SAND	0.209	F GRVL	0.078
VC GRVL	0.005					C SAND	0.224		

BED SEDIMENT CONTROL VOLUMES

STREAM SEGMENT # 1: 1						
SECTION	LENGTH	WIDTH	DEPTH	V O L U M E		
NUMBER	(ft)	(ft)	(ft)	(cu.ft)	(cu.yd)	
100.000	143.725	424.553	10.000	610189.	22599.6	
150.000	290.695	468.840	10.000	0.136289E+07	50477.5	
200.000	278.970	722.920	10.000	0.201673E+07	74693.7	
275.000	174.500	467.195	10.000	815255.	30194.6	
290.000	113.870	316.707	10.000	360635.	13356.8	
300.000	135.370	366.742	10.000	496459.	18387.4	
325.000	115.000	518.071	10.000	595782.	22066.0	
350.000	174.190	537.259	10.000	935851.	34661.1	
400.000	261.170	720.387	10.000	0.188144E+07	69682.8	
450.000	293.965	571.706	10.000	0.168062E+07	62245.0	
500.000	241.095	718.632	10.000	0.173259E+07	64169.9	
550.000	231.405	607.773	10.000	0.140642E+07	52089.5	
600.000	256.105	704.230	10.000	0.180357E+07	66798.8	
650.000	256.870	528.464	10.000	0.135747E+07	50276.5	
700.000	269.640	507.221	10.000	0.136767E+07	50654.5	
750.000	252.295	469.083	10.000	0.118347E+07	43832.4	
800.000	184.960	613.661	10.000	0.113503E+07	42038.1	
825.000	156.235	399.612	10.000	624334.	23123.5	
850.000	177.490	382.593	10.000	679064.	25150.5	
865.000	148.000	506.295	10.000	749317.	27752.5	
875.000	147.445	404.663	10.000	596655.	22098.3	
900.000	179.060	450.513	10.000	806688.	29877.4	
950.000	177.115	523.439	10.000	927089.	34336.6	
965.000	149.500	406.617	10.000	607892.	22514.5	
975.000	159.500	497.302	10.000	793197.	29377.7	
990.000	157.500	693.995	10.000	0.109304E+07	40483.0	
1000.000	109.460	688.426	0.000	0.00000	0.00000	
1010.000	116.960	743.751	0.000	0.00000	0.00000	
1050.000	228.000	742.392	10.000	0.169265E+07	62690.9	
1100.000	165.195	614.799	10.000	0.101562E+07	37615.4	
1110.000	240.060	674.335	0.000	0.00000	0.00000	
1120.000	250.145	770.345	10.000	0.192698E+07	71369.6	
1200.000	234.175	481.557	0.000	0.00000	0.00000	
1220.000	229.615	493.383	10.000	0.113288E+07	41958.6	

1230.000	215.410	517.187	0.000	0.00000	0.00000
1300.000	330.310	487.392	10.000	0.160991E+07	59626.1
1350.000	244.195	444.689	10.000	0.108591E+07	40218.8
1400.000	204.930	663.186	10.000	0.135907E+07	50335.8
1450.000	206.620	541.885	10.000	0.111964E+07	41468.3
1500.000	446.995	727.208	10.000	0.325058E+07	120392.
1600.000	439.730	558.264	10.000	0.245485E+07	90920.5
1700.000	200.000	449.020	10.000	898040.	33260.7
1800.000	200.000	449.020	10.000	898040.	33260.7
1900.000	200.000	449.020	10.000	898040.	33260.7
2000.000	200.000	449.020	10.000	898040.	33260.7
2100.000	100.000	449.020	10.000	449020.	16630.4

NO. OF INPUT DATA MESSAGES= 0
 END OF SEDIMENT DATA

=====
 \$H YD
 BEGIN COMPUTATIONS.

=====
 TIME STEP # 1
 * B
 COMPUTING FROM TIME= 0.0000 DAYS TO TIME= 0.0167 DAYS IN 2
 COMPUTATION STEPS

 1
 ACCUMULATED TIME (yrs).... 0.000
 FLOW DURATION (days)..... 0.007

UPSTREAM BOUNDARY CONDITIONS

Stream Segment #	DISCHARGE	SEDIMENT LOAD	TEMPERATURE
Section No.	(cfs)	(tons/day)	(deg F)
1	8700.00	0.00	75.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1

1
 ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT

TIME	ENTRY *	SAND	*
DAYS	POINT *	INFLOW	OUTFLOW TRAP EFF *
0.01	2100.000 *	0.00	*
TOTAL=	100.000 *	0.00	0.29***** *

TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	0.00	VERY FINE GRAVEL..	0.00
FINE SAND.....	0.00	FINE GRAVEL.....	0.00
MEDIUM SAND.....	0.00	MEDIUM GRAVEL.....	0.00
COARSE SAND.....	0.00	COARSE GRAVEL.....	0.00
VERY COARSE SAND..	0.00	VERY COARSE GRAVEL	0.00
			TOTAL =
			0.00

SEDIMENT OUTFLOW from the Downstream Boundary

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	16824.18	VERY FINE GRAVEL..	62.54
FINE SAND.....	11934.71	FINE GRAVEL.....	13.35
MEDIUM SAND.....	9322.25	MEDIUM GRAVEL.....	2.80
COARSE SAND.....	2830.37	COARSE GRAVEL.....	0.52
VERY COARSE SAND..	551.30	VERY COARSE GRAVEL	0.07
			TOTAL =
			41542.08

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 0.014 DAYS

SECTION (tons/day)	BED CHANGE (ft)	WS ELEV (ft)	THALWEG (ft)	Q (cfs)	TRANSPORT RATE SAND
2100.000	-0.03	2547.18	2539.97	8700.	1532.
2000.000	-0.02	2546.94	2539.98	8700.	3269.
1900.000	-0.01	2546.65	2539.99	8700.	4653.
1800.000	-0.01	2546.29	2539.99	8700.	7602.
1700.000	-0.01	2545.80	2539.99	8700.	10557.
1600.000	-0.02	2543.95	2539.98	8700.	17742.
1500.000	-0.02	2539.84	2531.98	8700.	24373.
1450.000	0.04	2538.77	2531.04	8700.	15774.
1400.000	-0.01	2537.72	2529.99	8700.	17667.
1350.000	0.00	2536.98	2530.00	8700.	17431.
1300.000	-0.01	2535.92	2528.99	8700.	21323.
1230.000	0.00	2533.01	2529.00	8700.	21320.
1220.000	-0.16	2532.67	2526.84	8700.	37973.
1200.000	0.01	2529.80	2526.01	8700.	34108.
1120.000	-0.07	2530.01	2523.93	8700.	48672.
1110.000	0.00	2526.92	2523.00	8700.	48561.
1100.000	-0.30	2526.07	2519.70	8700.	54017.
1050.000	0.29	2523.77	2519.29	8700.	19314.
1010.000	0.00	2522.52	2519.00	8700.	19317.
1000.000	0.00	2518.00	2513.00	8700.	19318.
990.000	-0.06	2517.50	2508.94	8700.	25804.
975.000	0.15	2516.17	2508.15	8700.	18249.
965.000	0.03	2516.11	2508.03	8700.	17894.
950.000	0.05	2515.57	2508.05	8700.	15285.
900.000	0.01	2514.96	2507.01	8700.	16009.
875.000	-0.02	2514.09	2506.98	8700.	19557.
865.000	-0.03	2512.76	2506.97	8700.	23332.
850.000	-0.03	2512.95	2505.97	8700.	29327.
825.000	0.02	2512.08	2505.02	8700.	26526.
800.000	-0.01	2510.88	2504.99	8700.	29984.

750.000	0.01	2509.76	2503.01	8700.	27768.
700.000	0.01	2509.33	2502.01	8700.	25603.
650.000	-0.01	2507.04	2500.99	8700.	27657.
600.000	-0.04	2505.56	2499.96	8700.	33980.
550.000	-0.02	2503.34	2497.98	8700.	37057.
500.000	0.03	2502.44	2498.03	8700.	30844.
450.000	0.00	2501.13	2496.00	8700.	32037.
400.000	0.01	2499.86	2494.01	8700.	29429.
350.000	0.00	2498.96	2492.00	8700.	30206.
325.000	-0.04	2498.14	2491.96	8700.	34535.
300.000	-0.02	2496.72	2490.98	8700.	37242.
290.000	0.01	2496.50	2490.01	8700.	36417.
275.000	0.01	2495.77	2490.01	8700.	34461.
200.000	0.00	2493.39	2488.00	8700.	35721.
150.000	-0.01	2492.28	2485.99	8700.	37697.
100.000	-0.03	2490.20	2483.97	8700.	41542.

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TIME STEP #          2
*      B
COMPUTING FROM TIME=      0.0139 DAYS TO TIME=      0.0969 DAYS IN      12
COMPUTATION STEPS

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1
ACCUMULATED TIME (yrs)....      0.000
FLOW DURATION (days).....      0.007

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UPSTREAM BOUNDARY CONDITIONS

Stream Segment #	DISCHARGE	SEDIMENT LOAD	TEMPERATURE
Section No.	(cfs)	(tons/day)	(deg F)
1	18200.00	0.00	75.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1

1
ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT

```

*****
TIME          ENTRY *          SAND          *
DAYS          POINT *          INFLOW      OUTFLOW    TRAP EFF *
0.10         2100.000 *          0.00              *
TOTAL=       100.000 *          0.00              3.70***** *
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TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	0.00	VERY FINE GRAVEL..	0.00
FINE SAND.....	0.00	FINE GRAVEL.....	0.00
MEDIUM SAND.....	0.00	MEDIUM GRAVEL.....	0.00

COARSE SAND.....	0.00		COARSE GRAVEL.....	0.00
VERY COARSE SAND..	0.00		VERY COARSE GRAVEL	0.00

				TOTAL = 0.00

SEDIMENT OUTFLOW from the Downstream Boundary

GRAIN SIZE	LOAD (tons/day)		GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	9937.79		VERY FINE GRAVEL..	77.91
FINE SAND.....	18823.68		FINE GRAVEL.....	18.65
MEDIUM SAND.....	5520.92		MEDIUM GRAVEL.....	4.35
COARSE SAND.....	2695.10		COARSE GRAVEL.....	0.82
VERY COARSE SAND..	624.39		VERY COARSE GRAVEL	0.08

				TOTAL = 37703.68

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 0.097 DAYS

SECTION (tons/day)	BED CHANGE (ft)	WS ELEV (ft)	THALWEG (ft)	Q (cfs)	TRANSPORT RATE SAND
2100.000	-0.05	2550.13	2539.95	18200.	128.
2000.000	-0.03	2549.81	2539.97	18200.	514.
1900.000	-0.03	2549.44	2539.97	18200.	702.
1800.000	-0.03	2548.97	2539.97	18200.	962.
1700.000	-0.26	2548.42	2539.74	18200.	41398.
1600.000	-0.05	2546.13	2539.95	18200.	41633.
1500.000	-0.27	2542.62	2531.73	18200.	117717.
1450.000	0.51	2540.92	2531.51	18200.	50289.
1400.000	0.02	2540.04	2530.02	18200.	40562.
1350.000	0.04	2539.32	2530.04	18200.	32881.
1300.000	-0.28	2538.50	2528.72	18200.	74948.
1230.000	0.00	2535.29	2529.00	18200.	74927.
1220.000	-1.73	2535.57	2525.27	18200.	83774.
1200.000	0.53	2532.51	2526.53	18200.	90830.
1120.000	-1.03	2532.74	2522.97	18200.	101646.
1110.000	0.00	2529.30	2523.00	18200.	101896.
1100.000	-0.46	2530.36	2519.54	18200.	99787.
1050.000	1.94	2527.73	2520.94	18200.	60441.
1010.000	0.00	2524.46	2519.00	18200.	60441.
1000.000	0.00	2521.45	2513.00	18200.	60441.
990.000	-0.12	2521.22	2508.88	18200.	60863.
975.000	0.38	2519.25	2508.38	18200.	52878.
965.000	0.15	2519.39	2508.15	18200.	49671.
950.000	0.12	2518.71	2508.12	18200.	46999.
900.000	0.08	2517.34	2507.08	18200.	45479.
875.000	-0.52	2515.98	2506.48	18200.	44479.
865.000	-0.74	2515.57	2506.26	18200.	43799.
850.000	-0.69	2516.36	2505.31	18200.	47517.
825.000	0.83	2514.05	2505.83	18200.	41508.
800.000	0.10	2513.77	2505.10	18200.	39598.
750.000	0.09	2512.56	2503.09	18200.	42337.
700.000	0.08	2512.22	2502.08	18200.	42963.
650.000	-0.53	2509.26	2500.47	18200.	46241.
600.000	-0.83	2508.25	2499.17	18200.	59507.
550.000	0.84	2505.78	2498.84	18200.	42070.
500.000	0.18	2504.60	2498.18	18200.	42467.

450.000	0.06	2503.52	2496.06	18200.	46307.
400.000	0.06	2502.27	2494.06	18200.	46466.
350.000	0.04	2501.41	2492.04	18200.	45651.
325.000	-0.55	2501.16	2491.45	18200.	46520.
300.000	0.17	2499.32	2491.17	18200.	43477.
290.000	0.22	2499.16	2490.22	18200.	42028.
275.000	0.07	2497.48	2490.07	18200.	41380.
200.000	-0.52	2495.95	2487.48	18200.	49255.
150.000	0.11	2493.80	2486.11	18200.	37489.
100.000	-0.91	2492.40	2483.09	18200.	37704.

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TIME STEP #      3
*      B
COMPUTING FROM TIME=      0.0972 DAYS TO TIME=      0.1392 DAYS IN      6
COMPUTATION STEPS

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1
ACCUMULATED TIME (yrs)....      0.000
FLOW DURATION (days).....      0.007

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UPSTREAM BOUNDARY CONDITIONS

Stream Segment # 1	DISCHARGE	SEDIMENT LOAD	TEMPERATURE
Section No. 2100.000	(cfs)	(tons/day)	(deg F)
INFLOW	20850.00	0.00	75.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1

```

1
ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT
*****
TIME          ENTRY *          SAND          *
DAYS          POINT *    INFLOW    OUTFLOW    TRAP EFF *
0.14    2100.000 *        0.00          4.51***** *
TOTAL=    100.000 *        0.00          4.51***** *
*****

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TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	0.00	VERY FINE GRAVEL..	0.00
FINE SAND.....	0.00	FINE GRAVEL.....	0.00
MEDIUM SAND.....	0.00	MEDIUM GRAVEL.....	0.00
COARSE SAND.....	0.00	COARSE GRAVEL.....	0.00
VERY COARSE SAND..	0.00	VERY COARSE GRAVEL	0.00
			TOTAL = 0.00

SEDIMENT OUTFLOW from the Downstream Boundary

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
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VERY FINE SAND....	8096.38		VERY FINE GRAVEL..	82.46
FINE SAND.....	16836.33		FINE GRAVEL.....	19.33
MEDIUM SAND.....	8810.82		MEDIUM GRAVEL.....	4.42
COARSE SAND.....	2492.31		COARSE GRAVEL.....	0.82
VERY COARSE SAND..	647.59		VERY COARSE GRAVEL	0.08

TOTAL = 36990.54

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 0.139 DAYS

SECTION (tons/day)	BED CHANGE (ft)	WS ELEV (ft)	THALWEG (ft)	Q (cfs)	TRANSPORT RATE SAND
2100.000	-0.05	2550.76	2539.95	20850.	156.
2000.000	-0.04	2550.41	2539.96	20850.	667.
1900.000	-0.03	2550.00	2539.97	20850.	888.
1800.000	-0.03	2549.49	2539.97	20850.	1058.
1700.000	-0.41	2549.06	2539.59	20850.	4233.
1600.000	-0.10	2546.64	2539.90	20850.	37231.
1500.000	-0.45	2543.73	2531.55	20850.	41355.
1450.000	0.68	2541.36	2531.68	20850.	29669.
1400.000	0.07	2540.55	2530.07	20850.	29513.
1350.000	0.05	2539.79	2530.05	20850.	31114.
1300.000	-0.44	2539.16	2528.56	20850.	32521.
1230.000	0.00	2535.84	2529.00	20850.	32521.
1220.000	-1.78	2536.04	2525.22	20850.	35884.
1200.000	0.32	2532.84	2526.32	20850.	49881.
1120.000	-1.10	2533.60	2522.90	20850.	51564.
1110.000	0.22	2530.02	2523.22	20850.	36745.
1100.000	-0.58	2531.35	2519.42	20850.	38742.
1050.000	2.12	2528.55	2521.12	20850.	43379.
1010.000	0.00	2524.90	2519.00	20850.	43379.
1000.000	0.00	2522.37	2513.00	20850.	43379.
990.000	-0.46	2522.27	2508.54	20850.	72597.
975.000	0.67	2519.87	2508.67	20850.	53596.
965.000	0.24	2520.17	2508.24	20850.	49043.
950.000	0.17	2519.49	2508.17	20850.	46086.
900.000	0.11	2518.12	2507.11	20850.	44623.
875.000	-0.51	2516.50	2506.49	20850.	44003.
865.000	-0.75	2516.14	2506.25	20850.	44220.
850.000	-0.78	2517.10	2505.22	20850.	47392.
825.000	0.98	2514.63	2505.98	20850.	40109.
800.000	0.12	2514.47	2505.12	20850.	39119.
750.000	0.09	2513.18	2503.09	20850.	39114.
700.000	0.07	2512.86	2502.07	20850.	40060.
650.000	-0.58	2509.88	2500.42	20850.	43733.
600.000	-0.92	2509.06	2499.08	20850.	47673.
550.000	0.99	2506.50	2498.99	20850.	38003.
500.000	0.18	2505.10	2498.18	20850.	39313.
450.000	0.06	2504.08	2496.06	20850.	39362.
400.000	0.05	2502.92	2494.05	20850.	39411.
350.000	0.03	2502.14	2492.03	20850.	40468.
325.000	-0.60	2501.91	2491.40	20850.	44076.
300.000	0.21	2499.95	2491.21	20850.	41962.
290.000	0.22	2499.86	2490.22	20850.	41656.

275.000	0.08	2498.17	2490.08	20850.	41091.
200.000	-0.59	2496.71	2487.41	20850.	45761.
150.000	0.25	2494.52	2486.25	20850.	35368.
100.000	-0.92	2492.90	2483.08	20850.	36991.

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=====
TIME STEP #          4
*   B
COMPUTING FROM TIME=      0.1389 DAYS TO TIME=      0.1809 DAYS IN      6
COMPUTATION STEPS
  
```

```

- - - - -
- - - - -
1
ACCUMULATED TIME (yrs).... 0.000
FLOW DURATION (days)..... 0.007
  
```

UPSTREAM BOUNDARY CONDITIONS

Stream Segment #	1	DISCHARGE	SEDIMENT LOAD	TEMPERATURE
Section No.	2100.000	(cfs)	(tons/day)	(deg F)
	INFLOW	26200.00	0.00	75.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1

1
ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT

```

*****
TIME          ENTRY *          SAND          *
DAYS         POINT *    INFLOW  OUTFLOW  TRAP EFF *
0.18      2100.000 *      0.00          *
TOTAL=     100.000 *      0.00      5.41***** *
*****
  
```

TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	0.00	VERY FINE GRAVEL..	0.00
FINE SAND.....	0.00	FINE GRAVEL.....	0.00
MEDIUM SAND.....	0.00	MEDIUM GRAVEL.....	0.00
COARSE SAND.....	0.00	COARSE GRAVEL.....	0.00
VERY COARSE SAND..	0.00	VERY COARSE GRAVEL	0.00
			TOTAL = 0.00

SEDIMENT OUTFLOW from the Downstream Boundary

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	7291.30	VERY FINE GRAVEL..	98.17
FINE SAND.....	17427.30	FINE GRAVEL.....	22.19
MEDIUM SAND.....	13801.97	MEDIUM GRAVEL.....	4.90
COARSE SAND.....	2564.45	COARSE GRAVEL.....	0.90
VERY COARSE SAND..	758.20	VERY COARSE GRAVEL	0.08

TOTAL = 41969.46

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 0.181 DAYS

SECTION (tons/day)	BED CHANGE	WS ELEV	THALWEG	Q	TRANSPORT RATE
NUMBER	(ft)	(ft)	(ft)	(cfs)	SAND
2100.000	-0.06	2551.79	2539.94	26200.	225.
2000.000	-0.05	2551.39	2539.95	26200.	280.
1900.000	-0.04	2550.89	2539.96	26200.	1232.
1800.000	-0.04	2550.24	2539.96	26200.	1640.
1700.000	-0.44	2549.69	2539.56	26200.	3025.
1600.000	-0.47	2547.20	2539.53	26200.	7534.
1500.000	-0.48	2545.51	2531.52	26200.	17047.
1450.000	1.00	2542.63	2532.00	26200.	25031.
1400.000	0.10	2541.68	2530.10	26200.	26288.
1350.000	0.07	2541.00	2530.07	26200.	30197.
1300.000	-0.42	2540.44	2528.58	26200.	30817.
1230.000	0.00	2536.84	2529.00	26200.	30817.
1220.000	-1.82	2537.27	2525.18	26200.	32180.
1200.000	0.31	2533.73	2526.31	26200.	33172.
1120.000	-1.14	2535.00	2522.86	26200.	35514.
1110.000	0.16	2531.16	2523.16	26200.	38364.
1100.000	-0.63	2532.61	2519.37	26200.	40065.
1050.000	2.14	2529.53	2521.14	26200.	45421.
1010.000	0.00	2525.79	2519.00	26200.	45421.
1000.000	0.00	2524.15	2513.00	26200.	45420.
990.000	-1.10	2524.23	2507.90	26200.	83393.
975.000	1.14	2521.27	2509.14	26200.	58658.
965.000	0.34	2521.81	2508.34	26200.	53643.
950.000	0.23	2521.15	2508.23	26200.	50608.
900.000	0.14	2519.76	2507.14	26200.	49317.
875.000	-0.53	2517.29	2506.47	26200.	50515.
865.000	-0.85	2517.04	2506.15	26200.	53978.
850.000	-0.85	2518.34	2505.15	26200.	57899.
825.000	1.17	2515.87	2506.17	26200.	45628.
800.000	0.13	2515.85	2505.13	26200.	45643.
750.000	0.12	2514.19	2503.12	26200.	44298.
700.000	0.08	2513.88	2502.08	26200.	43565.
650.000	-0.61	2511.30	2500.39	26200.	44722.
600.000	-0.98	2510.38	2499.02	26200.	51116.
550.000	1.15	2507.60	2499.15	26200.	38475.
500.000	0.17	2506.04	2498.17	26200.	40126.
450.000	0.05	2505.22	2496.05	26200.	40029.
400.000	0.05	2504.19	2494.05	26200.	41648.
350.000	0.04	2503.45	2492.04	26200.	41846.
325.000	-0.69	2503.23	2491.31	26200.	45012.
300.000	0.24	2501.11	2491.24	26200.	43352.
290.000	0.20	2501.11	2490.20	26200.	43574.
275.000	0.08	2499.14	2490.08	26200.	44943.
200.000	-0.63	2497.84	2487.37	26200.	45598.
150.000	0.35	2495.72	2486.35	26200.	40328.
100.000	-0.95	2493.90	2483.05	26200.	41969.


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=====
TIME STEP #          5
*      B
COMPUTING FROM TIME=      0.1805 DAYS TO TIME=      0.2225 DAYS IN      6
COMPUTATION STEPS

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```

-----
1
ACCUMULATED TIME (yrs)....      0.001
FLOW DURATION (days).....      0.007

```

UPSTREAM BOUNDARY CONDITIONS

```

-----
Stream Segment # 1      | DISCHARGE | SEDIMENT LOAD | TEMPERATURE
Section No.  2100.000 | (cfs)    | (tons/day)   | (deg F)
-----
                INFLOW |      32000.00 |      0.00 |      75.00

```

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1

```

1
ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT
*****
TIME          ENTRY *          SAND          *
DAYS         POINT *          INFLOW    OUTFLOW  TRAP EFF *
0.22        2100.000 *          0.00          0.00    *
TOTAL=      100.000 *          0.00          6.32***** *
*****

```

TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

```

-----
GRAIN SIZE          LOAD (tons/day) | GRAIN SIZE          LOAD (tons/day)
-----
VERY FINE SAND....      0.00 | VERY FINE GRAVEL..      0.00
FINE SAND.....          0.00 | FINE GRAVEL.....          0.00
MEDIUM SAND.....          0.00 | MEDIUM GRAVEL.....          0.00
COARSE SAND.....          0.00 | COARSE GRAVEL.....          0.00
VERY COARSE SAND..          0.00 | VERY COARSE GRAVEL          0.00
-----
TOTAL =                      0.00

```

SEDIMENT OUTFLOW from the Downstream Boundary

```

-----
GRAIN SIZE          LOAD (tons/day) | GRAIN SIZE          LOAD (tons/day)
-----
VERY FINE SAND....      1387.47 | VERY FINE GRAVEL..      129.93
FINE SAND.....          17803.79 | FINE GRAVEL.....          28.19
MEDIUM SAND.....          17980.17 | MEDIUM GRAVEL.....          5.96
COARSE SAND.....          3275.95 | COARSE GRAVEL.....          1.07
VERY COARSE SAND..          978.52 | VERY COARSE GRAVEL          0.10
-----
TOTAL =                      41591.17

```

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 0.222 DAYS

SECTION (tons/day)	BED CHANGE (ft)	WS ELEV (ft)	THALWEG (ft)	Q (cfs)	TRANSPORT RATE SAND
2100.000	-0.25	2553.01	2539.75	32000.	14177.
2000.000	-0.04	2552.55	2539.96	32000.	12927.
1900.000	-0.05	2552.03	2539.95	32000.	13050.
1800.000	-0.04	2551.34	2539.96	32000.	13564.
1700.000	-0.46	2550.76	2539.54	32000.	15065.
1600.000	-0.49	2548.09	2539.51	32000.	19381.
1500.000	-0.50	2546.73	2531.50	32000.	21143.
1450.000	0.99	2543.68	2531.99	32000.	18257.
1400.000	0.07	2542.84	2530.07	32000.	19596.
1350.000	0.04	2542.24	2530.04	32000.	22877.
1300.000	-0.43	2541.73	2528.57	32000.	26504.
1230.000	0.00	2537.90	2529.00	32000.	26504.
1220.000	-1.84	2538.39	2525.16	32000.	28094.
1200.000	0.29	2535.18	2526.29	32000.	31044.
1120.000	-1.16	2536.43	2522.84	32000.	33322.
1110.000	0.07	2532.18	2523.07	32000.	53209.
1100.000	-0.62	2533.68	2519.38	32000.	46211.
1050.000	2.03	2530.42	2521.03	32000.	47640.
1010.000	0.00	2526.70	2519.00	32000.	47640.
1000.000	0.00	2525.47	2513.00	32000.	47640.
990.000	-0.74	2525.51	2508.26	32000.	27776.
975.000	1.03	2522.70	2509.03	32000.	33128.
965.000	0.28	2523.22	2508.28	32000.	34504.
950.000	0.21	2522.49	2508.21	32000.	34568.
900.000	0.12	2521.02	2507.12	32000.	35692.
875.000	-0.74	2518.49	2506.26	32000.	42946.
865.000	-1.07	2518.18	2505.93	32000.	47658.
850.000	-0.88	2519.59	2505.12	32000.	48580.
825.000	1.36	2517.13	2506.36	32000.	39827.
800.000	0.14	2517.23	2505.14	32000.	40720.
750.000	0.14	2515.14	2503.14	32000.	40409.
700.000	0.09	2514.81	2502.09	32000.	40150.
650.000	-0.63	2512.37	2500.37	32000.	41332.
600.000	-1.03	2511.76	2498.97	32000.	42400.
550.000	1.29	2508.72	2499.29	32000.	33128.
500.000	0.15	2507.13	2498.15	32000.	35113.
450.000	0.04	2506.43	2496.04	32000.	35297.
400.000	0.05	2505.48	2494.05	32000.	36084.
350.000	0.04	2504.77	2492.04	32000.	36388.
325.000	-0.73	2504.54	2491.27	32000.	37564.
300.000	0.28	2502.30	2491.28	32000.	35255.
290.000	0.16	2502.41	2490.16	32000.	36141.
275.000	0.06	2500.25	2490.06	32000.	36600.
200.000	-0.64	2498.75	2487.36	32000.	37216.
150.000	0.36	2496.85	2486.36	32000.	37243.
100.000	-1.00	2494.90	2483.00	32000.	41591.

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TIME STEP #

* B

6

COMPUTING FROM TIME= 0.2222 DAYS TO TIME= 0.2642 DAYS IN 6
 COMPUTATION STEPS

 1
 ACCUMULATED TIME (yrs).... 0.001
 FLOW DURATION (days)..... 0.007

UPSTREAM BOUNDARY CONDITIONS

Stream Segment # 1	DISCHARGE	SEDIMENT LOAD	TEMPERATURE
Section No. 2100.000	(cfs)	(tons/day)	(deg F)
INFLOW	29350.00	0.00	75.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1

1
 ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT

TIME	ENTRY *	SAND	*
DAYS	POINT *	INFLOW	OUTFLOW TRAP EFF *
0.26	2100.000 *	0.00	*
TOTAL=	100.000 *	0.00	7.00***** *

TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	0.00	VERY FINE GRAVEL..	0.00
FINE SAND.....	0.00	FINE GRAVEL.....	0.00
MEDIUM SAND.....	0.00	MEDIUM GRAVEL.....	0.00
COARSE SAND.....	0.00	COARSE GRAVEL.....	0.00
VERY COARSE SAND..	0.00	VERY COARSE GRAVEL	0.00
			TOTAL = 0.00

SEDIMENT OUTFLOW from the Downstream Boundary

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	0.00	VERY FINE GRAVEL..	182.48
FINE SAND.....	11307.21	FINE GRAVEL.....	41.77
MEDIUM SAND.....	13334.36	MEDIUM GRAVEL.....	9.21
COARSE SAND.....	1883.05	COARSE GRAVEL.....	1.68
VERY COARSE SAND..	1256.64	VERY COARSE GRAVEL	0.16
			TOTAL = 28016.55

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 0.264 DAYS

SECTION	BED CHANGE	WS ELEV	THALWEG	Q	TRANSPORT RATE
(tons/day)	(ft)	(ft)	(ft)	(cfs)	SAND
NUMBER 2100.000	-0.39	2552.50	2539.61	29350.	789.

2000.000	-0.04	2552.00	2539.96	29350.	1092.
1900.000	-0.05	2551.50	2539.95	29350.	1303.
1800.000	-0.05	2550.81	2539.95	29350.	1400.
1700.000	-0.47	2550.25	2539.53	29350.	1704.
1600.000	-0.51	2547.68	2539.49	29350.	3520.
1500.000	-0.51	2546.19	2531.49	29350.	5157.
1450.000	0.98	2543.15	2531.98	29350.	8152.
1400.000	0.05	2542.27	2530.05	29350.	9601.
1350.000	0.03	2541.66	2530.03	29350.	10095.
1300.000	-0.49	2541.16	2528.51	29350.	14507.
1230.000	0.00	2537.43	2529.00	29350.	14504.
1220.000	-1.85	2537.87	2525.15	29350.	15801.
1200.000	0.25	2534.38	2526.25	29350.	18745.
1120.000	-1.17	2535.67	2522.83	29350.	19396.
1110.000	0.01	2531.59	2523.01	29350.	21765.
1100.000	-0.57	2532.91	2519.43	29350.	22373.
1050.000	1.81	2529.81	2520.81	29350.	39817.
1010.000	0.00	2526.29	2519.00	29350.	39817.
1000.000	0.00	2524.79	2513.00	29350.	39816.
990.000	-0.29	2524.70	2508.71	29350.	19811.
975.000	0.90	2521.95	2508.90	29350.	26220.
965.000	0.25	2522.46	2508.25	29350.	27469.
950.000	0.22	2521.68	2508.22	29350.	27221.
900.000	0.11	2519.90	2507.11	29350.	27362.
875.000	-0.86	2518.15	2506.14	29350.	29882.
865.000	-1.13	2518.24	2505.87	29350.	32665.
850.000	-0.89	2519.33	2505.11	29350.	33414.
825.000	1.46	2516.65	2506.46	29350.	27657.
800.000	0.15	2516.59	2505.15	29350.	28425.
750.000	0.11	2514.72	2503.11	29350.	29764.
700.000	0.08	2514.40	2502.08	29350.	30633.
650.000	-0.64	2511.87	2500.36	29350.	31740.
600.000	-1.05	2511.37	2498.95	29350.	32811.
550.000	1.37	2508.34	2499.37	29350.	28214.
500.000	0.15	2506.63	2498.15	29350.	29917.
450.000	0.04	2505.94	2496.04	29350.	28236.
400.000	0.04	2505.00	2494.04	29350.	28764.
350.000	0.03	2504.32	2492.03	29350.	28675.
325.000	-0.77	2504.13	2491.23	29350.	29470.
300.000	0.36	2501.60	2491.36	29350.	26751.
290.000	0.14	2501.80	2490.14	29350.	26933.
275.000	0.06	2499.74	2490.06	29350.	26908.
200.000	-0.65	2498.42	2487.35	29350.	27555.
150.000	0.36	2496.36	2486.36	29350.	26898.
100.000	-1.08	2494.50	2482.92	29350.	28017.

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TIME STEP # 7

* B

COMPUTING FROM TIME= 0.2639 DAYS TO TIME= 0.3059 DAYS IN 6

COMPUTATION STEPS

ACCUMULATED TIME (yrs).... 0.001
 FLOW DURATION (days)..... 0.007

UPSTREAM BOUNDARY CONDITIONS

Stream Segment # 1	DISCHARGE	SEDIMENT LOAD	TEMPERATURE
Section No. 2100.000	(cfs)	(tons/day)	(deg F)
INFLOW	22150.00	0.00	75.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1

ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT

TIME	ENTRY *	SAND	*
DAYS	POINT *	INFLOW	OUTFLOW TRAP EFF *
0.31	2100.000 *	0.00	*
TOTAL=	100.000 *	0.00	7.46***** *

TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	0.00	VERY FINE GRAVEL..	0.00
FINE SAND.....	0.00	FINE GRAVEL.....	0.00
MEDIUM SAND.....	0.00	MEDIUM GRAVEL.....	0.00
COARSE SAND.....	0.00	COARSE GRAVEL.....	0.00
VERY COARSE SAND..	0.00	VERY COARSE GRAVEL	0.00
TOTAL =			0.00

SEDIMENT OUTFLOW from the Downstream Boundary

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	5249.52	VERY FINE GRAVEL..	179.41
FINE SAND.....	8075.72	FINE GRAVEL.....	45.41
MEDIUM SAND.....	10845.50	MEDIUM GRAVEL.....	10.73
COARSE SAND.....	1388.71	COARSE GRAVEL.....	2.02
VERY COARSE SAND..	1041.92	VERY COARSE GRAVEL	0.19
TOTAL =			26839.14

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 0.306 DAYS

SECTION	BED CHANGE	WS ELEV	THALWEG	Q	TRANSPORT RATE
(tons/day)	(ft)	(ft)	(ft)	(cfs)	SAND
NUMBER					
2100.000	-0.40	2550.90	2539.60	22150.	705.
2000.000	-0.05	2550.44	2539.95	22150.	972.
1900.000	-0.05	2549.97	2539.95	22150.	1157.
1800.000	-0.05	2549.32	2539.95	22150.	1226.
1700.000	-0.48	2548.80	2539.52	22150.	1507.
1600.000	-0.52	2546.44	2539.48	22150.	3216.
1500.000	-0.52	2544.49	2531.48	22150.	4404.

1450.000	0.96	2541.87	2531.96	22150.	5408.
1400.000	0.03	2540.80	2530.03	22150.	7587.
1350.000	0.03	2540.05	2530.03	22150.	6899.
1300.000	-0.53	2539.48	2528.47	22150.	8993.
1230.000	0.00	2536.10	2529.00	22150.	8993.
1220.000	-1.96	2536.15	2525.04	22150.	41161.
1200.000	0.12	2532.84	2526.12	22150.	45204.
1120.000	-1.14	2533.81	2522.86	22150.	42895.
1110.000	0.00	2530.11	2523.00	22150.	42827.
1100.000	-0.56	2531.13	2519.44	22150.	42499.
1050.000	1.64	2528.29	2520.64	22150.	45274.
1010.000	0.00	2525.14	2519.00	22150.	45274.
1000.000	0.00	2522.99	2513.00	22150.	45273.
990.000	0.11	2522.75	2509.11	22150.	27792.
975.000	0.78	2520.14	2508.78	22150.	28091.
965.000	0.22	2520.56	2508.22	22150.	30758.
950.000	0.22	2519.79	2508.22	22150.	31936.
900.000	0.12	2517.96	2507.12	22150.	31875.
875.000	-0.89	2517.41	2506.11	22150.	33282.
865.000	-1.11	2517.35	2505.89	22150.	32491.
850.000	-0.90	2518.03	2505.10	22150.	33028.
825.000	1.54	2515.61	2506.54	22150.	27051.
800.000	0.13	2514.79	2505.13	22150.	26628.
750.000	0.08	2513.38	2503.08	22150.	27844.
700.000	0.06	2513.04	2502.06	22150.	28889.
650.000	-0.66	2510.33	2500.34	22150.	29846.
600.000	-1.06	2509.89	2498.94	22150.	30942.
550.000	1.37	2507.14	2499.37	22150.	29777.
500.000	0.17	2505.34	2498.17	22150.	28965.
450.000	0.05	2504.42	2496.05	22150.	29010.
400.000	0.04	2503.41	2494.04	22150.	29202.
350.000	0.03	2502.74	2492.03	22150.	28537.
325.000	-0.78	2502.60	2491.22	22150.	28862.
300.000	0.41	2500.24	2491.41	22150.	27095.
290.000	0.17	2500.20	2490.17	22150.	26566.
275.000	0.07	2498.46	2490.07	22150.	25766.
200.000	-0.67	2497.26	2487.33	22150.	27057.
150.000	0.38	2494.97	2486.38	22150.	25839.
100.000	-1.11	2493.20	2482.89	22150.	26839.

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TIME STEP # 8

* B

COMPUTING FROM TIME= 0.3055 DAYS TO TIME= 0.3475 DAYS IN 6

COMPUTATION STEPS

- - - - -

1

ACCUMULATED TIME (yrs).... 0.001

FLOW DURATION (days)..... 0.007

UPSTREAM BOUNDARY CONDITIONS

Stream Segment # 1 | DISCHARGE | SEDIMENT LOAD | TEMPERATURE

Section No.	2100.000	(cfs)	(tons/day)	(deg F)
	INFLOW	17100.00	0.00	75.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1

1

ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT

TIME	ENTRY *	SAND	*
DAYS	POINT *	INFLOW	OUTFLOW TRAP EFF *
0.35	2100.000 *	0.00	*
TOTAL=	100.000 *	0.00	7.96***** *

TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	0.00	VERY FINE GRAVEL..	0.00
FINE SAND.....	0.00	FINE GRAVEL.....	0.00
MEDIUM SAND.....	0.00	MEDIUM GRAVEL.....	0.00
COARSE SAND.....	0.00	COARSE GRAVEL.....	0.00
VERY COARSE SAND..	0.00	VERY COARSE GRAVEL	0.00
			TOTAL = 0.00

SEDIMENT OUTFLOW from the Downstream Boundary

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	3217.72	VERY FINE GRAVEL..	173.37
FINE SAND.....	5868.57	FINE GRAVEL.....	47.77
MEDIUM SAND.....	11834.28	MEDIUM GRAVEL.....	11.88
COARSE SAND.....	1452.95	COARSE GRAVEL.....	2.29
VERY COARSE SAND..	874.39	VERY COARSE GRAVEL	0.22
			TOTAL = 23483.44

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 0.347 DAYS

SECTION (tons/day)	BED CHANGE (ft)	WS ELEV (ft)	THALWEG (ft)	Q (cfs)	TRANSPORT RATE SAND
2100.000	-0.42	2549.63	2539.58	17100.	614.
2000.000	-0.05	2549.20	2539.95	17100.	657.
1900.000	-0.05	2548.76	2539.95	17100.	813.
1800.000	-0.05	2548.15	2539.95	17100.	859.
1700.000	-0.48	2547.65	2539.52	17100.	1127.
1600.000	-0.53	2545.43	2539.47	17100.	2723.
1500.000	-0.53	2543.23	2531.47	17100.	3290.
1450.000	0.95	2540.89	2531.95	17100.	4170.
1400.000	-0.01	2539.72	2529.99	17100.	6305.
1350.000	0.05	2538.84	2530.05	17100.	4865.
1300.000	-0.55	2538.22	2528.45	17100.	5910.
1230.000	0.00	2535.04	2529.00	17100.	5912.
1220.000	-2.44	2534.82	2524.56	17100.	45523.

1200.000	0.07	2531.78	2526.07	17100.	48836.
1120.000	-1.11	2532.43	2522.89	17100.	47412.
1110.000	0.01	2529.03	2523.01	17100.	47103.
1100.000	-0.55	2529.94	2519.45	17100.	47062.
1050.000	1.71	2527.31	2520.71	17100.	39476.
1010.000	0.00	2524.25	2519.00	17100.	39476.
1000.000	0.00	2521.75	2513.00	17100.	39475.
990.000	0.49	2521.34	2509.49	17100.	22299.
975.000	0.72	2519.17	2508.72	17100.	23322.
965.000	0.20	2519.10	2508.20	17100.	24131.
950.000	0.22	2518.35	2508.22	17100.	24534.
900.000	0.12	2516.98	2507.12	17100.	24419.
875.000	-0.93	2516.64	2506.07	17100.	25570.
865.000	-1.04	2516.50	2505.96	17100.	23575.
850.000	-0.91	2516.97	2505.09	17100.	23882.
825.000	1.61	2514.66	2506.61	17100.	20252.
800.000	0.13	2513.39	2505.13	17100.	20335.
750.000	0.08	2512.14	2503.08	17100.	20266.
700.000	0.06	2511.74	2502.06	17100.	20314.
650.000	-0.67	2508.81	2500.33	17100.	21023.
600.000	-1.07	2508.67	2498.93	17100.	22024.
550.000	1.32	2506.10	2499.32	17100.	25668.
500.000	0.20	2504.38	2498.20	17100.	24294.
450.000	0.06	2503.29	2496.06	17100.	24074.
400.000	0.05	2502.18	2494.05	17100.	23469.
350.000	0.04	2501.47	2492.04	17100.	23104.
325.000	-0.79	2501.37	2491.21	17100.	23442.
300.000	0.44	2499.21	2491.44	17100.	20848.
290.000	0.18	2498.86	2490.18	17100.	20561.
275.000	0.00	2497.33	2490.00	17100.	23733.
200.000	-0.68	2496.24	2487.32	17100.	24046.
150.000	0.39	2493.88	2486.39	17100.	22666.
100.000	-1.13	2492.20	2482.87	17100.	23483.

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TIME STEP # 9

* B

COMPUTING FROM TIME= 0.3472 DAYS TO TIME= 0.4302 DAYS IN 12

COMPUTATION STEPS

1

ACCUMULATED TIME (yrs)..... 0.001

FLOW DURATION (days)..... 0.007

UPSTREAM BOUNDARY CONDITIONS

Stream Segment #	DISCHARGE	SEDIMENT LOAD	TEMPERATURE
Section No.	(cfs)	(tons/day)	(deg F)
1	11125.00	0.00	75.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1

ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT

```

*****
TIME          ENTRY *          SAND          *
DAYS         POINT *    INFLOW    OUTFLOW    TRAP EFF *
0.43        2100.000 *        0.00
TOTAL=      100.000 *        0.00        8.87***** *
*****
    
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TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	0.00	VERY FINE GRAVEL..	0.00
FINE SAND.....	0.00	FINE GRAVEL.....	0.00
MEDIUM SAND.....	0.00	MEDIUM GRAVEL.....	0.00
COARSE SAND.....	0.00	COARSE GRAVEL.....	0.00
VERY COARSE SAND..	0.00	VERY COARSE GRAVEL	0.00
			TOTAL = 0.00

SEDIMENT OUTFLOW from the Downstream Boundary

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	2190.06	VERY FINE GRAVEL..	149.32
FINE SAND.....	4232.48	FINE GRAVEL.....	49.14
MEDIUM SAND.....	8617.96	MEDIUM GRAVEL.....	13.30
COARSE SAND.....	1079.52	COARSE GRAVEL.....	2.65
VERY COARSE SAND..	130.01	VERY COARSE GRAVEL	0.26
			TOTAL = 16464.69

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 0.431 DAYS

SECTION (tons/day)	BED CHANGE (ft)	WS ELEV (ft)	THALWEG (ft)	Q (cfs)	TRANSPORT RATE SAND
2100.000	-0.43	2547.81	2539.57	11125.	165.
2000.000	-0.05	2547.44	2539.95	11125.	181.
1900.000	-0.06	2547.05	2539.94	11125.	343.
1800.000	-0.05	2546.50	2539.95	11125.	352.
1700.000	-0.49	2546.03	2539.51	11125.	586.
1600.000	-0.55	2544.04	2539.45	11125.	2071.
1500.000	-0.53	2541.58	2531.47	11125.	2085.
1450.000	0.92	2539.57	2531.92	11125.	2999.
1400.000	-0.47	2538.74	2529.53	11125.	12283.
1350.000	0.30	2537.26	2530.30	11125.	8185.
1300.000	-0.56	2536.55	2528.44	11125.	8774.
1230.000	0.00	2533.65	2529.00	11125.	8772.
1220.000	-2.91	2532.93	2524.09	11125.	23046.
1200.000	0.00	2530.42	2526.00	11125.	23071.
1120.000	-1.08	2530.58	2522.92	11125.	24071.
1110.000	0.00	2527.60	2523.00	11125.	24051.
1100.000	-0.53	2528.14	2519.47	11125.	23862.
1050.000	1.59	2525.90	2520.59	11125.	26932.
1010.000	0.00	2523.06	2519.00	11125.	26932.

1000.000	0.00	2520.54	2513.00	11125.	26923.
990.000	1.26	2519.07	2510.26	11125.	12758.
975.000	0.74	2517.12	2508.74	11125.	12891.
965.000	0.25	2517.00	2508.25	11125.	11657.
950.000	0.12	2516.36	2508.12	11125.	12794.
900.000	0.10	2515.44	2507.10	11125.	13052.
875.000	-0.94	2515.23	2506.06	11125.	13218.
865.000	-0.95	2515.06	2506.05	11125.	12327.
850.000	-0.91	2515.32	2505.09	11125.	12714.
825.000	1.59	2513.39	2506.59	11125.	13958.
800.000	0.08	2511.71	2505.08	11125.	16705.
750.000	0.12	2510.33	2503.12	11125.	15591.
700.000	0.08	2509.76	2502.08	11125.	15263.
650.000	-0.68	2506.96	2500.32	11125.	15432.
600.000	-1.09	2506.92	2498.91	11125.	16218.
550.000	1.13	2504.65	2499.13	11125.	19845.
500.000	0.28	2503.13	2498.28	11125.	18259.
450.000	0.08	2501.84	2496.08	11125.	18051.
400.000	0.07	2500.56	2494.07	11125.	18051.
350.000	0.06	2499.69	2492.06	11125.	17971.
325.000	-0.81	2499.62	2491.19	11125.	18308.
300.000	0.41	2497.81	2491.41	11125.	20894.
290.000	0.16	2496.13	2490.16	11125.	22985.
275.000	-0.80	2495.85	2489.20	11125.	32665.
200.000	-0.68	2495.07	2487.32	11125.	31029.
150.000	0.74	2492.75	2486.74	11125.	16267.
100.000	-1.16	2490.90	2482.84	11125.	16465.

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TIME STEP # 10

* B

COMPUTING FROM TIME= 0.4305 DAYS TO TIME= 0.4472 DAYS IN 2

COMPUTATION STEPS

1

ACCUMULATED TIME (yrs).... 0.001

FLOW DURATION (days)..... 0.007

UPSTREAM BOUNDARY CONDITIONS

Stream Segment #	DISCHARGE	SEDIMENT LOAD	TEMPERATURE
Section No.	(cfs)	(tons/day)	(deg F)
1	5500.00	0.00	75.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1

1

ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT

TIME	ENTRY *	SAND	*
DAYS	POINT *	INFLOW	OUTFLOW TRAP EFF *
0.44	2100.000 *	0.00	*
TOTAL=	100.000 *	0.00	8.96***** *

TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	0.00	VERY FINE GRAVEL..	0.00
FINE SAND.....	0.00	FINE GRAVEL.....	0.00
MEDIUM SAND.....	0.00	MEDIUM GRAVEL.....	0.00
COARSE SAND.....	0.00	COARSE GRAVEL.....	0.00
VERY COARSE SAND..	0.00	VERY COARSE GRAVEL	0.00

TOTAL = 0.00

SEDIMENT OUTFLOW from the Downstream Boundary

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	1227.40	VERY FINE GRAVEL..	102.35
FINE SAND.....	3033.84	FINE GRAVEL.....	41.30
MEDIUM SAND.....	6892.60	MEDIUM GRAVEL.....	12.09
COARSE SAND.....	773.30	COARSE GRAVEL.....	2.48
VERY COARSE SAND..	93.25	VERY COARSE GRAVEL	0.27

TOTAL = 12178.87

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 0.444 DAYS

SECTION NUMBER	BED CHANGE (ft)	WS ELEV (ft)	THALWEG (ft)	Q (cfs)	TRANSPORT RATE SAND
2100.000	-0.43	2545.53	2539.57	5500.	130.
2000.000	-0.05	2545.25	2539.95	5500.	133.
1900.000	-0.06	2544.93	2539.94	5500.	250.
1800.000	-0.05	2544.48	2539.95	5500.	258.
1700.000	-0.49	2544.08	2539.51	5500.	340.
1600.000	-0.56	2542.41	2539.44	5500.	1114.
1500.000	-0.52	2539.64	2531.48	5500.	553.
1450.000	0.92	2538.12	2531.92	5500.	1548.
1400.000	-0.49	2537.05	2529.51	5500.	5836.
1350.000	0.32	2535.58	2530.32	5500.	2954.
1300.000	-0.56	2534.65	2528.44	5500.	3243.
1230.000	0.00	2532.05	2529.00	5500.	3243.
1220.000	-2.92	2530.79	2524.08	5500.	5815.
1200.000	0.00	2528.90	2526.00	5500.	5849.
1120.000	-1.08	2528.44	2522.92	5500.	6284.
1110.000	0.00	2525.95	2523.00	5500.	6498.
1100.000	-0.53	2526.03	2519.47	5500.	5876.
1050.000	1.53	2524.33	2520.53	5500.	16850.
1010.000	0.00	2521.65	2519.00	5500.	16850.
1000.000	0.00	2517.78	2513.00	5500.	16853.
990.000	1.38	2516.55	2510.38	5500.	6383.
975.000	0.72	2515.12	2508.72	5500.	7854.
965.000	0.24	2514.66	2508.24	5500.	8473.
950.000	0.15	2513.80	2508.15	5500.	5829.
900.000	0.09	2513.04	2507.09	5500.	6129.

875.000	-0.94	2512.89	2506.06	5500.	6308.
865.000	-0.94	2512.70	2506.06	5500.	5720.
850.000	-0.90	2512.77	2505.10	5500.	4939.
825.000	1.53	2510.69	2506.53	5500.	10220.
800.000	0.04	2509.81	2505.04	5500.	15007.
750.000	0.15	2508.25	2503.15	5500.	9062.
700.000	0.09	2507.08	2502.09	5500.	8228.
650.000	-0.68	2505.23	2500.32	5500.	8356.
600.000	-1.09	2505.06	2498.91	5500.	8490.
550.000	1.10	2503.14	2499.10	5500.	14567.
500.000	0.28	2501.66	2498.28	5500.	13993.
450.000	0.10	2500.25	2496.10	5500.	8826.
400.000	0.08	2498.87	2494.08	5500.	8208.
350.000	0.06	2497.59	2492.06	5500.	7241.
325.000	-0.81	2497.54	2491.19	5500.	7392.
300.000	0.32	2496.14	2491.32	5500.	16044.
290.000	0.11	2494.47	2490.11	5500.	19902.
275.000	-0.83	2493.85	2489.17	5500.	23575.
200.000	-0.66	2493.17	2487.34	5500.	20763.
150.000	0.78	2491.17	2486.78	5500.	12033.
100.000	-1.16	2489.30	2482.84	5500.	12179.

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TIME STEP # 11

* B

COMPUTING FROM TIME= 0.4444 DAYS TO TIME= 0.4694 DAYS IN 3

COMPUTATION STEPS

1

ACCUMULATED TIME (yrs).... 0.001

FLOW DURATION (days)..... 0.007

UPSTREAM BOUNDARY CONDITIONS

Stream Segment #	DISCHARGE	SEDIMENT LOAD	TEMPERATURE
Section No.	(cfs)	(tons/day)	(deg F)
1	2050.00	0.00	75.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1

1					
ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT					

TIME	ENTRY *	SAND		*	
DAYS	POINT *	INFLOW	OUTFLOW	TRAP EFF	*
0.47	2100.000 *	0.00			*
TOTAL=	100.000 *	0.00	9.00*****		*

TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	0.00	VERY FINE GRAVEL..	0.00
FINE SAND.....	0.00	FINE GRAVEL.....	0.00
MEDIUM SAND.....	0.00	MEDIUM GRAVEL.....	0.00
COARSE SAND.....	0.00	COARSE GRAVEL.....	0.00
VERY COARSE SAND..	0.00	VERY COARSE GRAVEL	0.00
			TOTAL =
			0.00

SEDIMENT OUTFLOW from the Downstream Boundary

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
VERY FINE SAND....	162.17	VERY FINE GRAVEL..	23.21
FINE SAND.....	1923.06	FINE GRAVEL.....	11.15
MEDIUM SAND.....	2623.79	MEDIUM GRAVEL.....	3.43
COARSE SAND.....	154.78	COARSE GRAVEL.....	0.72
VERY COARSE SAND..	22.96	VERY COARSE GRAVEL	0.14
			TOTAL =
			4925.41

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 0.465 DAYS

SECTION (tons/day)	BED CHANGE (ft)	WS ELEV (ft)	THALWEG (ft)	Q (cfs)	TRANSPORT RATE SAND
2100.000	-0.43	2543.42	2539.57	2050.	43.
2000.000	-0.05	2543.23	2539.95	2050.	72.
1900.000	-0.06	2542.99	2539.94	2050.	97.
1800.000	-0.05	2542.64	2539.95	2050.	178.
1700.000	-0.49	2542.33	2539.51	2050.	111.
1600.000	-0.56	2540.95	2539.44	2050.	1165.
1500.000	-0.52	2537.61	2531.48	2050.	127.
1450.000	0.91	2536.30	2531.91	2050.	640.
1400.000	-0.50	2535.14	2529.50	2050.	1239.
1350.000	0.32	2533.90	2530.32	2050.	1441.
1300.000	-0.56	2533.10	2528.44	2050.	1507.
1230.000	0.00	2530.74	2529.00	2050.	1506.
1220.000	-2.92	2528.87	2524.08	2050.	1018.
1200.000	0.00	2527.68	2526.00	2050.	1022.
1120.000	-1.08	2526.58	2522.92	2050.	1146.
1110.000	0.00	2524.62	2523.00	2050.	1145.
1100.000	-0.52	2524.05	2519.48	2050.	737.
1050.000	1.49	2522.93	2520.49	2050.	7214.
1010.000	0.00	2520.50	2519.00	2050.	7140.
1000.000	0.00	2515.31	2513.00	2050.	7083.
990.000	1.42	2514.27	2510.42	2050.	4607.
975.000	0.74	2513.08	2508.74	2050.	3936.
965.000	0.23	2512.68	2508.23	2050.	4499.
950.000	0.17	2511.53	2508.17	2050.	3619.
900.000	0.10	2510.36	2507.10	2050.	3434.
875.000	-0.92	2510.19	2506.08	2050.	2998.
865.000	-0.93	2510.02	2506.07	2050.	2534.
850.000	-0.89	2509.98	2505.11	2050.	1982.
825.000	1.41	2508.69	2506.41	2050.	7459.
800.000	-0.04	2507.96	2504.96	2050.	12235.
750.000	0.22	2506.88	2503.22	2050.	5396.

700.000	0.08	2505.07	2502.08	2050.	5789.
650.000	-0.68	2503.44	2500.32	2050.	5845.
600.000	-1.07	2503.19	2498.93	2050.	3878.
550.000	1.06	2501.78	2499.06	2050.	7743.
500.000	0.26	2500.27	2498.26	2050.	10310.
450.000	0.12	2498.72	2496.12	2050.	6425.
400.000	0.09	2497.01	2494.09	2050.	5170.
350.000	0.08	2495.71	2492.08	2050.	3990.
325.000	-0.80	2495.63	2491.20	2050.	3755.
300.000	0.22	2494.37	2491.22	2050.	8282.
290.000	0.03	2492.85	2490.03	2050.	11950.
275.000	-0.84	2491.97	2489.16	2050.	12488.
200.000	-0.61	2491.29	2487.39	2050.	8201.
150.000	0.78	2489.55	2486.78	2050.	7416.
100.000	-1.10	2487.70	2482.90	2050.	4925.

\$\$ END

0 DATA ERRORS DETECTED.

TOTAL NO. OF TIME STEPS READ = 11
TOTAL NO. OF WS PROFILES = 67
ITERATIONS IN EXNER EQ = 61640

COMPUTATIONS COMPLETED
RUN TIME = 0 HOURS, 0 MINUTES & 1.00 SECONDS