

Max Chl Dpth (ft)	192.25	Hydr. Depth (ft)	96.00	184.13	94.29
Conv. Total (cfs)	766102400.0	Conv. (cfs)	312906800.0	80452220.0	372743400.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	15716.40	1367.23	19272.79
Min Ch El (ft)	567.51	Shear (lb/sq ft)	0.46	0.89	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.84	2.49	0.82
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	81938.21	15272.58	98808.59
C & E Loss (ft)	0.00	Cum SA (acres)	700.67	70.59	817.18

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 275054.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	196.75	791.7	640.13
1811.6	746.04	1978.58	743.72	2327.74
3627.86	719.79	3718.84	716.28	3730.12
4253.03	710.69	4406.07	706.28	4780.17
5721.43	686.94	5880.31	680.11	5948.66
6800.32	677.44	7020.16	664.88	7186.43
7456.75	656.7	7674.05	666.76	7736.96
8277.14	670.74	8431.58	678.89	8724.4
9049.54	652.92	9303.56	664.62	9478.14
9991.13	636.83	10008.35	636.52	10097.95
10365.31	610.85	10491.97	639.29	10599.52
11200.81	638.23	11413.46	635.31	11665.62
14061.73	628.84	14302.27	625.12	14920.61
15750.16	633.15	15737.33	629.32	15863.71
17173.97	585.64	17494.27	583.39	17576.91
18324.62	571.57	18449.08	592.56	18535.02
19210.87	633.03	19632.67	633.81	21678.89
22352.05	627.22	23307.88	631.16	23557.29
25961.65	651.21	26591.96	665.64	26809
28769.87	662.56	29326.08	656.28	29556.4
30002.31	645.31	30287.2	652.61	30598.94
33244.52	705.73	33382.78	706.39	33980.65
36569.42	726.63	36760.75	730.51	37101.73
37760.32	761.33	37913.52	764.88	38663.84

Manning's n Values

Sta	n Val	Sta	n Val
0	.15	17083	.1518449.08

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

17083	18449.08	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.82	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.76	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507476.00	251526.00	1817059.00
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	1507476.00	251526.00	1817059.00
Q Total (cfs)	6730000.00	Flow (cfs)	2747777.00	707325.30	3274898.00
Top width (ft)	36339.66	Top width (ft)	15706.45	1366.08	19267.13
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	1.82	2.81	1.80
Max Chl Dpth (ft)	192.25	Hydr. Depth (ft)	95.98	184.12	94.31
Conv. Total (cfs)	766275000.0	Conv. (cfs)	312860800.0	80535760.0	372878500.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	15720.11	1368.77	19272.03
Min Ch El (ft)	567.51	Shear (lb/sq ft)	0.46	0.88	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.84	2.49	0.82
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	81765.18	15243.72	98600.04
C & E Loss (ft)	0.00	Cum SA (acres)	698.87	70.43	814.96

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 275051.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	196.79	791.7	640.27
1812.01	746.04	1979.02	743.71	2328.25
3628.66	719.81	3719.66	716.29	3730.94
4253.97	710.68	4407.05	706.26	4781.24
5722.7	686.92	5881.61	680.09	5949.98
6801.83	677.42	7021.72	664.84	7188.02
7458.4	656.65	7675.75	666.71	7738.67
8278.98	670.75	8433.45	678.95	8726.33
9051.55	652.99	9305.62	664.72	9480.24
9993.35	636.92	10010.57	636.61	10100.19
10367.61	610.9	10494.3	639.33	10601.87
11203.29	638.31	11415.99	635.37	11668.21
14064.85	628.87	14305.44	625.16	14923.92
15753.65	633.21	15760.63	629.39	15867.24
17177.9	585.65	17498.69	583.41	17581.45
18329.77	571.57	18454.39	592.58	18540.33
19216.11	633.19	19637.86	633.77	21683.84
22356.93	627.17	23312.65	631.13	23562.04
25966.12	651.21	26596.36	665.65	26813.38
28774.03	662.58	29330.18	656.29	29560.48
30006.33	645.33	30291.19	652.6	30602.9
33248.18	705.61	33386.42	706.31	33984.23
36572.7	726.56	36764.02	730.45	37104.95
37763.47	761.26	37916.66	764.84	38666.89

Manning's n Values

num=	3
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Sta n Val Sta n Val Sta n Val
 0 .15 17086.8 .1518454.39 .15

Bank Sta: Left Right Lengths: Left Channel Right
 17086.818454.39 5 5 Coeff Contr. Expan.
 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.82	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
w.s. Elev (ft)	759.76	Reach Len. (ft)	5.00	5.00	5.00
Crit w.s. (ft)		Flow Area (sq ft)	1507491.00	251793.30	1817394.00
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	1507491.00	251793.30	1817394.00
Q Total (cfs)	6730000.00	Flow (cfs)	2746805.00	707900.60	3275295.00
Top width (ft)	36343.63	Top width (ft)	15709.93	1367.59	19266.11
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	1.82	2.81	1.80
Max Chl Dpth (ft)	192.25	Hydr. Depth (ft)	95.96	184.11	94.33
Conv. Total (cfs)	766444900.0	Conv. (cfs)	312819400.0	80619140.0	373006300.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15723.60	1370.28	19271.00
Min Ch El (ft)	567.51	Shear (lb/sq ft)	0.46	0.88	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.84	2.49	0.82
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	81592.14	15214.84	98391.45
C & E Loss (ft)	0.00	Cum SA (acres)	697.07	70.28	812.75

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 275048.*

INPUT Description:

Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	196.84	791.69	640.41	774.56	1349.21	761.03
1812.41	746.03	1979.46	743.7	2328.77	743.7	2662.23	741.99
3629.47	719.83	3720.49	716.3	3731.77	716.12	3932.89	716.58
4254.92	710.66	4408.03	706.25	4782.3	697.13	5238.43	690.65
5723.97	686.9	5882.92	680.06	5951.3	673.53	6313.56	672.29
6803.34	677.4	7023.28	664.8	7189.62	658.5	7260.77	652.2
7460.06	656.6	7677.45	666.66	7740.39	666.96	7869.77	670.08
8280.82	670.77	8435.33	679.01	8728.27	667.26	8742.35	665.75
9053.56	653.06	9307.69	664.81	9482.35	664.23	9665.32	651.02
9995.57	637.01	110012.79	636.71	110102.43	624.11	110270.62	605.21
10369.91	610.95	10496.63	639.38	10604.22	654.11	10991.87	648.74
11205.78	638.38	11418.53	635.44	11670.8	639.35	11970.99	635.21
14067.97	628.91	14308.62	625.21	14927.24	625.21	15403.16	631.51
15757.15	633.26	15764.12	629.45	15870.76	627.51	16529.65	600.46
17181.83	585.66	17503.1	583.42	17585.98	576.54	17716.42	567.51
18334.92	571.56	18459.71	592.61	18545.63	608.89	18564.04	611.09
19221.34	632.96	19643.04	633.72	21688.8	628.52	21800.43	628.52
22361.81	627.13	23317.43	631.12	23566.78	637.42	25190.19	643.72
25970.6	651.21	26600.77	665.66	26817.76	666.32	27897.42	666.3
28778.18	662.62	29334.28	656.32	29564.55	652.64	29730.74	650.59
30010.35	645.28	30295.18	652.59	30606.85	655.26	31670.64	671.73
33251.84	705.53	33390.06	706.22	33987.8	687.02	34021.43	687.19
36575.99	726.49	36767.28	730.38	37108.18	745.78	37148.34	746.72
37766.62	761.21	37919.79	764.83	38669.94	790	39344.09	794.19

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .1517090.59 .1518459.71 .15

Bank Sta: Left Right Lengths: Left Channel Right
 17090.5918459.71 5 5 Coeff Contr. Expan.
 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.82	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
w.s. Elev (ft)	759.76	Reach Len. (ft)	5.00	5.00	5.00
Crit w.s. (ft)		Flow Area (sq ft)	1507495.00	252062.80	1817765.00
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	1507495.00	252062.80	1817765.00
Q Total (cfs)	6730000.00	Flow (cfs)	2745780.00	708472.80	3275747.00
Top width (ft)	36347.93	Top width (ft)	15713.44	1369.12	19265.37
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	1.82	2.81	1.80
Max Chl Dpth (ft)	192.25	Hydr. Depth (ft)	95.94	184.11	94.35
Conv. Total (cfs)	766620000.0	Conv. (cfs)	312774100.0	80702730.0	373143100.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15727.12	1371.81	19270.24
Min Ch El (ft)	567.51	Shear (lb/sq ft)	0.46	0.88	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.84	2.48	0.82
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	81419.10	15185.92	98182.82
C & E Loss (ft)	0.00	Cum SA (acres)	695.26	70.12	810.54

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 275045.*

INPUT Description:

Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	196.88	791.69	640.55	774.55	1349.51	761.03
1812.81	746.02	1979.89	743.69	2329.29	743.69	2662.82	741.98
3630.27	719.84	3721.31	716.31	3732.6	716.13	3933.77	716.58
4255.86	710.65	4409.01	706.23	4783.36	697.11	5239.6	690.63
5725.24	686.88	5884.22	680.03	5952.62	673.49	6314.96	672.26
6804.85	677.38	7024.84	664.76	7191.21	658.45	7262.39	652.14
7461.71	656.54	7679.16	666.61	7742.11	666.91	7871.51	670.06
8282.65	670.79	8437.2	679.06	8730.21	667.35	8744.29	665.84
9055.57	653.13	9309.76	664.91	9484.45	664.33	9667.47	651.1
9997.79	637.11	110015.01	636.79	110104.67	624.17	110272.9	605.24

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10372.21	610.9910498.96	639.4310606.58	654.1710994.31	648.811152.45	642.92				
11208.27	638.4611421.06	635.5111673.39	639.411973.65	635.2412608.66	628.93				
14071.09	628.9314311.79	625.2414930.55	625.2415406.57	631.5515466.65	637.86				
15760.65	633.3115767.62	629.5115874.28	627.5616533.32	600.4917094.38	592.62				
17185.76	585.6817507.51	583.4417590.52	576.5517721.15	567.5118209.75	567.51				
18340.08	571.5618465.03	592.6218550.94	608.8918569.35	611.0918800.28	626.98				
19226.57	632.9319648.23	633.6821693.75	628.4521805.38	628.45 22027.7	629.37				
22366.69	627.1 23322.2	631.0723571.53	637.3825194.75	643.6925565.16	646.69				
25975.07	651.226605.17	665.6726822.13	666.3127901.68	666.3128517.09	662.62				
28782.34	662.6229338.37	656.3129568.62	652.6529734.79	650.5929870.41	644.76				
30014.37	645.2730299.17	652.59 30610.8	655.2631674.47	671.67 32317.9	674.9				
33255.5	705.4433393.71	706.1433991.38	687 34025	687.1735568.66	724.44				
36579.27	726.4236770.54	730.32 37111.4	745.737151.55	746.6537448.52	749.93				
37769.77	761.1637922.92	764.7638672.99	79039347.06	794.1939686.98	800				

Manning's n Values	num=	3
Sta n Val Sta n Val	n Val	Sta n Val
0 .1517094.38	.1518465.03	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17094.3818465.03	5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.82	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
w.s. Elev (ft)	759.76	Reach Len. (ft)	5.00	5.00	5.00
Crit w.s. (ft)		Flow Area (sq ft)	1507503.00	252328.10	1818104.00
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	1507503.00	252328.10	1818104.00
Q Total (cfs)	6730000.00	Flow (cfs)	2744809.00	709038.50	3276153.00
Top Width (ft)	36352.22	Top Width (ft)	15716.95	1370.65	19264.62
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	1.82	2.81	1.80
Max Chl Dpth (ft)	192.25	Hydr. Depth (ft)	95.89	184.09	94.40
Conv. Total (cfs)	766783400.0	Conv. (cfs)	312730100.0	80784390.0	373268900.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15730.65	1373.34	19269.49
Min Ch El (ft)	567.51	Shear (lb/sq ft)	0.46	0.88	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.84	2.48	0.82
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	81246.06	15156.97	97974.15
C & E Loss (ft)	0.00	Cum SA (acres)	693.46	69.96	808.33

CROSS SECTION
RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 275042.*

INPUT Description: Station Elevation Data num= 120

Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev
0 800 196.92	791.68 640.7	774.54 1349.81	761.02 1528.24	752.89	
1813.21 746.02 1980.33	743.68 2329.8	743.68 2663.41	741.97 3559.42	723.73	
3631.08 719.86 3722.14	716.32 3733.43	716.14 3934.64	716.57 4114.14	713.68	
4256.81 710.63 4409.99	706.21 4784.42	697.09 5240.76	690.62 5580.37	688.34	
5726.51 686.86 5885.53	680.01 5953.94	673.45 6316.36	672.22 6665.51	675.54	
6806.36 677.36 7026.39	664.72 7192.81	658.4 7264	652.08 7313	652.08	
7463.37 656.49 7680.86	666.55 7743.83	666.86 7873.26	670.03 8236.6	667.49	
8284.49 670.8 8439.07	679.12 8732.14	667.44 8746.23	665.93 8918.9	653.67	
9057.58 653.21 9311.82	665 9486.56	664.42 9669.61	651.18 9855.79	647.18	
10000.01 637.1910017.23	636.8810106.91	624.2410275.18	605.28 10332.5	605.28	
10374.51 611.0410501.29	639.4710608.93	654.2410996.75	648.8611154.93	642.99	
11210.76 638.54 11423.6	635.5811675.98	639.44 11976.3	635.2812611.45	628.96	
14074.21 628.9614314.97	625.2814933.86	625.2815409.99	631.615470.09	637.92	
15764.14 633.3615771.12	629.57 15877.8	627.6216536.99	600.5217098.18	592.64	
17189.69 585.6917511.92	583.4617595.06	576.5617725.89	567.518214.73	567.5	
18345.23 571.5618470.34	592.6418556.25	608.8918574.65	611.0918805.36	626.94	
19231.8 632.8919653.41	633.6421698.71	628.421810.32	628.422032.62	629.33	
22371.57 627.0623326.97	631.0423576.27	637.3625199.32	643.6825569.68	646.68	
25979.55 651.226609.57	665.6826826.51	666.3227905.94	666.3228521.28	662.64	
28786.5 662.6429342.47	656.3129572.69	652.6529738.84	650.5929874.45	644.75	
30018.39 645.2530303.15	652.5830614.76	655.25 31678.3	671.6432321.66	674.88	
33259.15 705.3633397.35	706.0533994.95	686.9834028.57	687.1535572.06	724.35	
36582.55 726.35 36773.8	730.2637114.62	745.6337154.78	746.5837451.71	749.88	
37772.92 761.1237926.05	764.7238676.04	79039350.03	794.239689.92	800	

Manning's n Values	num=	3
Sta n Val Sta n Val	n Val	Sta n Val
0 .1517098.18	.1518470.34	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17098.1818470.34	5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.82	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
w.s. Elev (ft)	759.76	Reach Len. (ft)	5.00	5.00	5.00
Crit w.s. (ft)		Flow Area (sq ft)	1507515.00	252600.10	1818457.00
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	1507515.00	252600.10	1818457.00
Q Total (cfs)	6730000.00	Flow (cfs)	2743791.00	709629.30	3276580.00
Top Width (ft)	36356.45	Top Width (ft)	15720.66	1372.16	19263.64
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	1.82	2.81	1.80
Max Chl Dpth (ft)	192.26	Hydr. Depth (ft)	95.89	184.09	94.40
Conv. Total (cfs)	766957600.0	Conv. (cfs)	312685200.0	80870070.0	373402300.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15734.36	1374.86	19268.49
Min Ch El (ft)	567.50	Shear (lb/sq ft)	0.46	0.88	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.84	2.48	0.82
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	81073.02	15127.99	97765.44
C & E Loss (ft)	0.00	Cum SA (acres)	691.65	69.81	806.12

CROSS SECTION
RIVER: BRAZOS

REACH: UPPER BRAZOS RS: 275039.* SS_Rev3.rep

INPUT Description: Station Elevation Data num= 120. Table with columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Rows include station data from 1813.62 to 37776.07.

Manning's n Values num= 3. Table with columns: Sta, n Val, Sta, n Val, Sta, n Val. Values range from 0 to .1517101.97.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan. Values: 17101.9718475.66, 5, 5, .1, .3

CROSS SECTION OUTPUT Profile #PF 1

Table with columns: E.G. Elev (ft), Vel Head (ft), W.S. Elev (ft), Crit W.S. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft), Vel Total (ft/s), Max Chl Dpth (ft), Conv. Total (cfs), Length wtd. (ft), Min Ch El (ft), Alpha, Frctrn Loss (ft), C & E Loss (ft). Values range from 759.82 to 800.

CROSS SECTION

RIVER: BRAZOS REACH: UPPER BRAZOS RS: 275037.*

INPUT Description: Station Elevation Data num= 120. Table with columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Rows include station data from 1814.02 to 37779.22.

Manning's n Values num= 3. Table with columns: Sta, n Val, Sta, n Val, Sta, n Val. Values range from 0 to .1517105.76.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan. Values: 17105.7618480.98, 5, 5, .1, .3

CROSS SECTION OUTPUT Profile #PF 1

Table with columns: E.G. Elev (ft), Vel Head (ft), W.S. Elev (ft), Crit W.S. (ft), E.G. Slope (ft/ft). Values range from 759.81 to 800.

Summary table with columns for various hydraulic parameters such as Q Total (cfs), Top Width (ft), Vel Total (ft/s), Max Chl Dpth (ft), Conv. Total (cfs), Length wtd. (ft), Min Ch El (ft), Alpha, Frctn Loss (ft), and C & E Loss (ft), along with their respective values and units.

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 275034.*

INPUT

Description: Station Elevation Data num= 120. A multi-column table showing station numbers, elevations, and corresponding hydraulic data points.

Manning's n Values num= 3. A table listing Manning's n values for different station numbers.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
17109.5518486.29 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

Detailed hydraulic data for profile #PF 1, including E.G. Elev (ft), Vel Head (ft), w.s. Elev (ft), Crit w.s. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top Width (ft), Vel Total (ft/s), Max Chl Dpth (ft), Conv. Total (cfs), Length wtd. (ft), Min Ch El (ft), Alpha, Frctn Loss (ft), and C & E Loss (ft) for various station numbers.

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 275031.*

INPUT

Description: Station Elevation Data num= 120. A multi-column table showing station numbers, elevations, and corresponding hydraulic data points for profile #PF 1.

37785.52 760.9437938.59 764.5638688.23 79039361.93 794.2339701.66 800

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Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .1517113.35 .1518491.61 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17113.3518491.61 5 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

	759.81	Element	Left OB	Channel	Right OB
E.G. Elev (ft)	759.81	wt. n-val.	0.150	0.150	0.150
Vel Head (ft)	0.06	Reach Len. (ft)	5.00	5.00	5.00
W.S. Elev (ft)	759.76	Flow Area (sq ft)	1507538.00	253670.60	1819864.00
Crit W.S. (ft)		Area (sq ft)	1507538.00	253670.60	1819864.00
E.G. Slope (ft/ft)	0.000077	Flow (cfs)	2739779.00	711910.00	3278311.00
Q Total (cfs)	6730000.00	Top Width (ft)	15734.86	1378.26	19260.11
Top width (ft)	36373.23	Avg. Vel. (ft/s)	1.82	2.81	1.80
Vel Total (ft/s)	1.88	Hydr. Depth (ft)	95.81	184.05	94.49
Max Chl Dpth (ft)	192.26	Conv. (cfs)	312504300.0	81201780.0	373930300.0
Conv. Total (cfs)	767636300.0	wetted Per. (ft)	15748.62	1380.97	19264.93
Length wtd. (ft)	5.00	Shear (lb/sq ft)	0.46	0.88	0.45
Min Ch El (ft)	567.50	Stream Power (lb/ft s)	0.83	2.47	0.82
Alpha	1.06	Cum Volume (acre-ft)	80380.87	15011.77	96930.20
Frctn Loss (ft)	0.00	Cum SA (acres)	684.43	69.17	797.27
C & E Loss (ft)	0.00				

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 275028.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800 197.14	791.66	641.41	774.48	1351.3	761.01	1529.94	752.85	
1815.22	745.98 1982.53	743.63	2332.39	743.63	2666.37	741.9	3563.37	723.82	
3635.11	719.93 3726.27	716.37	3737.57	716.19	3939	716.55	4118.7	713.63	
4261.53	710.56 4414.88	706.13	4789.73	697	5246.57	690.54	5586.56	688.25	
5732.86	686.77 5892.06	679.87	5960.55	673.27	6323.36	672.06	6672.9	675.43	
6813.91	677.26 7034.19	664.52	7200.79	658.15	7272.05	651.78	7321.11	651.78	
7471.65	656.23 7689.38	666.29	7752.42	666.64	7881.99	669.89	8245.73	667.52	
8293.68	670.89 8448.43	679.4	8741.83	667.88	8755.93	666.37	8928.79	654.03	
9067.62	653.57 9322.15	665.48	9497.08	664.91	9680.34	651.57	9866.72	647.55	
10011.1	637.6510028.35	637.3310118.12	624.5910286.57	605.4810343.96	605.48				
10386.02	611.2910512.94	639.71 10620.7	654.5911008.95	649.17 11167.3	643.33				
11223.19	638.9211436.27	635.9411688.93	639.6811989.59	635.4812625.44	629.11				
14089.83	629.1114330.85	625.4814950.43	625.4815427.08	631.8515487.25	638.22				
15781.63	633.6315788.62	629.8915895.41	627.9316555.33	600.6517117.14	592.74				
17209.34	585.7517533.99	583.5517617.75	576.6117749.56	567.518239.62	567.5				
18370.98	571.5318496.93	592.7418582.79	608.8818601.18	611.0718831.96	626.76				
19257.96	632.7119679.33	633.4321723.48	628.1521835.03	628.15 22057.2	629.08				
22395.97	626.8823350.83	630.8923599.99	637.2625222.12	643.6325592.28	646.65				
26001.92	651.1826631.59	665.7426848.41	666.3727927.22	666.3728542.22	662.74				
28807.3	662.7429362.95	656.3729593.04	652.67 29759.1	650.5829894.63	644.68				
30038.49	645.18 30323.1	652.5430634.53	655.2131697.48	671.4932340.47	674.76				
33277.44	704.9233415.55	705.6234012.82	686.8834046.42	687.0535589.05	723.91				
36598.98	725.9936790.12	729.9437130.75	745.2837170.88	746.2437467.64	749.64				
37788.67	760.8937941.72	764.5238691.28	790 39364.9	794.2339704.59	800				

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .1517117.14 .1518496.93 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17117.1418496.93 5 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

	759.81	Element	Left OB	Channel	Right OB
E.G. Elev (ft)	759.81	wt. n-val.	0.150	0.150	0.150
Vel Head (ft)	0.06	Reach Len. (ft)	5.00	5.00	5.00
W.S. Elev (ft)	759.76	Flow Area (sq ft)	1507538.00	253937.30	1820221.00
Crit W.S. (ft)		Area (sq ft)	1507538.00	253937.30	1820221.00
E.G. Slope (ft/ft)	0.000077	Flow (cfs)	2738773.00	712475.10	3278752.00
Q Total (cfs)	6730000.00	Top Width (ft)	15738.38	1379.79	19259.37
Top width (ft)	36377.53	Avg. Vel. (ft/s)	1.82	2.81	1.80
Vel Total (ft/s)	1.88	Hydr. Depth (ft)	95.79	184.04	94.51
Max Chl Dpth (ft)	192.26	Conv. (cfs)	312457800.0	81283980.0	374062200.0
Conv. Total (cfs)	767804000.0	wetted Per. (ft)	15752.14	1382.50	19264.18
Length wtd. (ft)	5.00	Shear (lb/sq ft)	0.46	0.88	0.45
Min Ch El (ft)	567.50	Stream Power (lb/ft s)	0.83	2.47	0.82
Alpha	1.06	Cum Volume (acre-ft)	80207.83	14982.64	96721.28
Frctn Loss (ft)	0.00	Cum SA (acres)	682.63	69.02	795.06
C & E Loss (ft)	0.00				

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 275025.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800 197.19	791.65	641.55	774.46	1351.6	761.01	1530.27	752.84	
1815.63	745.98 1982.97	743.62	2332.91	743.62	2666.96	741.89	3564.16	723.83	
3635.91	719.95 3727.09	716.38	3738.4	716.2	3939.88	716.54	4119.61	713.62	
4262.47	710.54 4415.86	706.11	4790.79	696.98	5247.73	690.53	5587.8	688.23	
5734.13	686.75 5893.36	679.84	5961.87	673.23	6324.77	672.02	6674.38	675.41	
6815.42	677.24 7035.75	664.48	7202.38	658.1	7273.67	651.72	7322.73	651.72	
7473.3	656.17 7691.09	666.24	7754.13	666.59	7883.74	669.86	8247.56	667.53	

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RIVER: BRAZOS
REACH: UPPER BRAZOS

RS: 275019.*

INPUT

Description:

Table with columns: Station, Elevation, Data, num=, 120, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains a list of station elevations and data points.

Manning's n Values

Table with columns: Sta, n Val, Sta, num=, 3, n Val, Sta, n Val. Contains Manning's n values for different stations.

Table with columns: Bank Sta: Left, Right, Lengths: Left, Channel, Right, Coeff Contr., Expan. Contains bank station data.

CROSS SECTION OUTPUT Profile #PF 1

Table with columns: E.G. Elev (ft), Vel Head (ft), W.S. Elev (ft), Crit W.S. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft), Vel Total (ft/s), Max Chl Dpth (ft), Conv. Total (cfs), Length Wtd. (ft), Min Ch El (ft), Alpha, Frctn Loss (ft), C & E Loss (ft). Contains detailed cross-section output data.

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS

RS: 275016.*

INPUT

Description:

Table with columns: Station, Elevation, Data, num=, 120, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains a list of station elevations and data points.

Manning's n Values

Table with columns: Sta, n Val, Sta, num=, 3, n Val, Sta, n Val. Contains Manning's n values for different stations.

Table with columns: Bank Sta: Left, Right, Lengths: Left, Channel, Right, Coeff Contr., Expan. Contains bank station data.

CROSS SECTION OUTPUT Profile #PF 1

Table with columns: E.G. Elev (ft), Vel Head (ft), Element, Left OB, Channel, Right OB. Contains detailed cross-section output data.

			SS_Rev3.rep		
w.s. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit w.s. (ft)		Flow Area (sq ft)	1507571.00	255013.60	1821616.00
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	1507571.00	255013.60	1821616.00
Q Total (cfs)	6730000.00	Flow (cfs)	2734793.00	714774.80	3280433.00
Top width (ft)	36394.29	Top width (ft)	15752.58	1385.89	19255.82
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	1.81	2.80	1.80
Max Chl Dpth (ft)	192.26	Hydr. Depth (ft)	95.70	184.01	94.60
Conv. Total (cfs)	768485900.0	Conv. (cfs)	312280700.0	81618780.0	374586400.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15776.40	1388.61	19260.60
Min Ch El (ft)	567.49	Shear (lb/sq ft)	0.46	0.88	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.83	2.46	0.82
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	79515.65	14865.80	95885.23
C & E Loss (ft)	0.00	Cum SA (acres)	675.40	68.38	786.22

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 275013.*

INPUT

Description:

Station Elevation Data	num=	120
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
0 800 197.36 791.64 642.12 774.42 1352.8 760.99 1531.63 752.81		
1817.24 745.95 1984.73 743.58 2334.97 743.58 2669.32 741.84 3567.32 723.9		
3639.94 720.01 3730.4 716.42 3741.71 716.24 3943.37 716.52 4123.27 713.58		
4266.25 710.48 4419.77 706.05 4795.03 696.9 5252.38 690.47 5592.75 688.16		
5739.21 686.68 5898.59 679.73 5967.15 673.09 6330.37 671.89 6680.3 675.31		
6821.46 677.16 7041.98 664.32 7208.77 657.9 7280.11 651.48 7329.22 651.48		
7479.93 655.96 7697.9 666.02 7761 666.41 7890.73 669.76 8254.87 667.56		
8302.87 670.98 8457.79 679.69 8751.52 668.33 8765.63 666.81 8938.68 654.38		
9077.67 653.94 9332.48 665.96 9507.6 665.39 9691.06 651.96 9877.65 647.92		
10022.19 638.110039.46 637.7810129.33 624.9410297.97 605.6810355.42 605.68		
10397.53 611.5310524.58 639.9410632.47 654.9411021.15 649.4811179.67 643.67		
11235.62 639.311448.94 636.3111701.88 639.9112002.87 635.6812639.43 629.26		
14105.44 629.2614346.72 625.6814966.99 625.6815444.18 632.115504.41 638.52		
15799.11 633.8915806.11 630.215913.03 628.2316573.67 600.7717136.11 592.84		
17228.99 585.817556.06 583.6417640.44 576.6617773.23 567.4918264.52 567.49		
18396.74 571.5118523.51 592.8418609.32 608.8718627.71 611.0618858.36 626.58		
19284.12 632.5419705.25 633.2221748.25 627.921859.74 627.922081.79 628.84		
22420.36 626.723374.69 630.7423623.71 637.1625244.93 643.5825614.88 646.63		
26024.29 651.1726653.61 665.8 26870.3 666.4227948.51 666.4228563.17 662.84		
28828.09 662.8429383.44 656.4229613.39 652.6929779.36 650.5729914.81 644.62		
30058.6 645.1130343.04 652.5130654.29 655.1731716.65 671.3532359.28 674.64		
33295.72 704.4933433.76 705.2 34030.7 686.7734064.27 686.9435606.04 723.47		
36615.39 725.6336806.43 729.6337146.87 744.9337186.97 745.8937483.57 749.41		
37804.42 760.6637957.38 764.3238706.52 79039379.77 794.2739719.27 800		

Manning's n Values

Sta n Val Sta n Val	num=	3
0 .1517136.11		
		.1518523.51
		.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17136.1118523.51	5 5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
w.s. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit w.s. (ft)		Flow Area (sq ft)	1507578.00	255279.10	1821952.00
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	1507578.00	255279.10	1821952.00
Q Total (cfs)	6730000.00	Flow (cfs)	2733811.00	715345.60	3280844.00
Top width (ft)	36398.74	Top width (ft)	15756.28	1387.40	19255.06
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	1.81	2.80	1.80
Max Chl Dpth (ft)	192.26	Hydr. Depth (ft)	95.68	184.00	94.62
Conv. Total (cfs)	768646700.0	Conv. (cfs)	312234000.0	81701040.0	374711700.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15770.11	1390.12	19259.83
Min Ch El (ft)	567.49	Shear (lb/sq ft)	0.46	0.88	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.83	2.46	0.82
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	79342.60	14836.51	95676.13
C & E Loss (ft)	0.00	Cum SA (acres)	673.59	68.22	784.01

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 275010.*

INPUT

Description:

Station Elevation Data	num=	120
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
0 800 197.4 791.63 642.26 774.4 1353.1 760.99 1531.97 752.81		
1817.64 745.95 1985.17 743.57 2335.49 743.57 2669.91 741.83 3568.11 723.92		
3639.94 720.03 3731.22 716.43 3742.54 716.24 3944.24 716.51 4124.18 713.57		
4267.19 710.47 4420.75 706.03 4796.09 696.88 5253.55 690.46 5593.99 688.14		
5740.49 686.66 5899.89 679.71 5968.47 673.05 6331.77 671.86 6681.77 675.29		
6822.97 677.14 7043.54 664.28 7210.36 657.85 7281.72 651.42 7330.84 651.42		
7481.58 655.91 7699.6 665.97 7762.72 666.36 7892.47 669.73 8256.7 667.56		
8304.71 670.98 8459.66 679.74 8753.45 668.41 8767.57 666.9 8940.66 654.45		
9079.68 654.01 9334.54 666.05 9509.71 665.49 9693.21 652.04 9879.84 648		
10024.41 638.1910041.68 637.8710131.58 625.0110300.25 605.7210357.71 605.72		
10399.83 611.5810526.91 639.9910634.82 655.0111023.59 649.5411182.15 643.74		
11238.11 639.3811451.47 636.3811704.47 639.9612005.53 635.7212642.23 629.29		
14108.56 629.29 14349.9 625.72 14970.3 625.72 15447.6 632.1515507.84 638.58		
15802.61 633.9415809.61 630.2615916.55 628.2916577.34 600.8 17139.9 592.86		
17232.92 585.8217560.47 583.6517644.98 576.6717777.96 567.49 18269.5 567.49		
18401.89 571.5118528.83 592.8618614.63 608.8718633.01 611.0518863.63 626.54		
19289.35 632.519710.44 633.1821753.21 627.8521864.68 627.8522086.71 628.79		
22425.24 626.6623379.46 630.7123628.45 637.1425249.49 643.57 25619.4 646.62		
26028.76 651.1626658.01 665.8126874.68 666.4327952.77 666.4328567.36 662.86		
28832.25 662.8629387.53 656.4329617.47 652.729783.42 650.5729918.85 644.6		

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30062.62	645.130347.03	652.530658.25	655.1731720.48	671.3232363.04	674.61		
33299.38	704.4 33437.4	705.1134034.27	686.7534067.84	686.9235609.43	723.39		
36618.68	725.5636809.69	729.5737150.09	744.8637190.19	745.8237486.76	749.36		
37807.57	760.6237960.52	764.2838709.57	79039382.74	794.27 39722.2	800		

Manning's n Values		num= 3	
Sta	n Val	Sta	n Val
0	.15	17139.9	.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	17139.9	18528.83		5	5		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507578.00	255546.40	1822302.00
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	1507578.00	255546.40	1822302.00
Q Total (cfs)	6730000.00	Flow (cfs)	2732804.00	715911.20	3281285.00
Top width (ft)	36402.73	Top width (ft)	15759.76	1388.93	19254.04
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	1.81	2.80	1.80
Max Chl Dpth (ft)	192.26	Hydr. Depth (ft)	95.66	183.99	94.65
Conv. Total (cfs)	768816300.0	Conv. (cfs)	312187900.0	81783690.0	374844700.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15773.61	1391.65	19258.80
Min Ch El (ft)	567.49	Shear (lb/sq ft)	0.46	0.88	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.83	2.46	0.82
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	79169.55	14807.19	95466.98
C & E Loss (ft)	0.00	Cum SA (acres)	671.78	68.06	781.80

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 275007.*

INPUT

Description:		num= 120	
Station	Elevation	Data	
Sta	Elev	Sta	Elev
0	800	197.45	791.63
1818.04	745.94	1985.61	743.56
3640.75	720.04	3732.05	716.44
4268.14	710.45	4421.73	706.01
5741.76	686.64	5901.2	679.68
6824.48	677.12	7045.1	664.24
7483.24	655.86	7701.31	665.92
8306.54	671.01	8461.53	679.8
9081.69	654.08	9336.61	666.15
10026.63	638.28	10043.9	637.96
10402.13	611.63	10529.24	640.03
11240.6	639.46	11454.01	636.45
14111.68	629.32	14353.08	625.76
15806.11	634.15	15813.11	630.33
17236.85	585.83	17564.88	583.67
18407.04	571.51	18534.15	592.88
19294.58	632.47	19715.62	633.14
22430.12	626.62	23384.23	630.68
26033.24	651.16	26662.41	665.83
28836.41	662.88	29391.63	656.44
30066.64	645.08	30351.02	652.5
33303.04	704.32	3441.04	705.03
36621.96	725.49	36812.95	729.53
37810.72	760.57	37965.65	764.24

Manning's n Values		num= 3	
Sta	n Val	Sta	n Val
0	.15	17143.69	.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	17143.69	18534.15		5	5		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507592.00	255816.40	1822639.00
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	1507592.00	255816.40	1822639.00
Q Total (cfs)	6730000.00	Flow (cfs)	2731844.00	716488.90	3281668.00
Top width (ft)	36407.02	Top width (ft)	15763.26	1390.46	19253.29
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	1.81	2.80	1.80
Max Chl Dpth (ft)	192.26	Hydr. Depth (ft)	95.64	183.98	94.67
Conv. Total (cfs)	768984500.0	Conv. (cfs)	312146400.0	81867580.0	374970500.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15777.13	1393.19	19258.04
Min Ch El (ft)	567.49	Shear (lb/sq ft)	0.46	0.88	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.83	2.46	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	78996.51	14777.84	95257.79
C & E Loss (ft)	0.00	Cum SA (acres)	669.97	67.90	779.59

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 275004.*

INPUT

Description:		num= 120	
Station	Elevation	Data	
Sta	Elev	Sta	Elev
0	800	197.49	791.62
1818.44	745.93	1986.04	743.55
3641.55	720.06	3732.87	716.45
4269.08	710.44	4422.71	705.99

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5743.03	686.62	5902.5	679.65	5971.12	672.98	6334.57	671.79	6684.73	675.25
6825.99	677.1	7046.66	664.2	7213.55	657.75	7284.95	651.3	7334.09	651.3
7484.89	655.8	7703.01	665.86	7766.16	666.27	7895.97	669.67	8260.35	667.58
8308.38	671.03	8463.41	679.86	8757.33	668.59	8771.45	667.08	8944.62	654.6
9083.7	654.15	9338.68	666.24	9513.92	665.68	9697.5	652.2	9844.21	648.15
10028.85	638.37	10046.12	638.05	10136.06	625.15	10304.81	605.8	10362.3	605.8
10404.43	611.68	10531.57	640.08	10639.53	655.15	11028.47	649.66	11187.1	643.87
11243.09	639.53	11456.54	636.52	11709.65	640.05	12010.84	635.81	12647.82	629.35
14114.8	629.35	14356.25	625.81	14976.93	625.81	15454.43	632.25	15514.7	638.7
15809.61	634.05	15816.6	630.39	15923.59	628.41	16584.68	600.85	17147.48	592.9
17240.78	585.84	17569.3	583.69	17654.05	576.68	17787.43	567.49	18279.46	567.49
18412.2	571.51	18539.46	592.91	18625.25	608.86	18643.62	611.05	18874.2	626.47
19299.81	632.43	19720.81	633.12	19763.12	627.75	19874.56	627.75	20296.54	628.7
22435	626.59	23389	630.65	23637.94	637.12	25258.62	643.52	25628.44	646.61
26037.71	651.16	26666.82	665.84	26883.44	666.45	27961.29	666.45	28575.73	662.9
28840.57	662.92	29395.72	656.45	29625.61	652.72	29791.52	650.57	29926.92	644.58
30070.66	645.07	30355.01	652.49	30666.16	655.15	31728.15	671.26	32370.57	674.57
33306.69	704.23	33444.68	704.94	34041.42	686.71	34074.98	686.83	35616.23	723.21
36625.25	725.41	36816.21	729.44	37156.54	744.72	37196.63	745.69	37493.13	749.26
37813.88	760.52	37966.79	764.23	38715.67	790.39	39388.68	794.29	39728.07	800

Manning's n Values					
Sta	n Val	Sta	n Val	Sta	n Val
0	.1517147.48		.1518539.46		.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	17147.48	18539.46		5	5		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

	759.81	Element	Left OB	Channel	Right OB
E.G. Elev (ft)	759.81		0.150	0.150	0.150
Vel Head (ft)	0.06	wt. n-Val.	5.00	5.00	5.00
w.s. Elev (ft)	759.75	Reach Len. (ft)	1507602.00	256082.10	1822990.00
Crit w.s. (ft)		Flow Area (sq ft)	1507602.00	256082.10	1822990.00
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	2730867.00	717050.00	3282083.00
Q Total (cfs)	6730000.00	Flow (cfs)	15766.77	1391.98	19252.55
Top width (ft)	36411.31	Top width (ft)	1.81	2.80	1.80
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	95.62	183.97	94.69
Max chl dpth (ft)	192.26	Hydr. Depth (ft)	312103400.0	81949700.0	375100300.0
Conv. Totl (cfs)	769153400.0	Conv. (cfs)	15780.65	1394.71	19257.29
Length Wtd. (ft)	5.00	wetted Per. (ft)	0.46	0.88	0.45
Min Ch El (ft)	567.49	Shear (lb/sq ft)	0.83	2.46	0.81
Alpha	1.06	Stream Power (lb/ft s)	78823.46	14748.47	95048.56
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	668.16	67.74	777.38
C & E Loss (ft)	0.00	Cum SA (acres)			

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 275002.*

INPUT

Description:									
Station Elevation Data									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	197.54	791.62	642.69	774.37	1354	760.98	1532.99	752.78
1818.85	745.93	1986.48	743.54	2337.04	743.54	2671.68	741.79	3570.48	723.97
3642.36	720.08	3733.7	716.46	3745.02	716.27	3946.86	716.5	4126.92	713.54
4270.03	710.42	4423.68	705.98	4799.28	696.82	5257.03	690.41	5597.9	688.08
5744.3	686.6	5903.81	679.62	5972.44	672.94	6335.98	671.76	6686.21	675.22
6827.5	677.08	7048.22	664.16	7215.15	657.7	7286.56	651.24	7335.71	651.24
7486.55	655.75	7704.72	665.81	7767.88	666.22	7897.71	669.65	8262.18	667.58
8310.22	671.04	8465.28	679.91	8759.26	668.68	8773.39	667.17	8946.6	654.67
9085.71	654.23	9340.74	666.34	9516.02	665.78	9699.64	652.27	9886.4	648.22
10031.07	638.46	10048.35	638.14	10138.3	625.22	10307.09	605.84	10364.59	605.84
10406.73	611.73	10533.9	640.13	10641.88	655.22	11030.91	649.72	11189.57	643.94
11245.57	639.61	111459.07	636.59	11712.24	640.1	12013.5	635.84	12650.62	629.38
14117.92	629.38	14359.43	625.84	14980.24	625.84	15457.85	632.31	15518.13	638.76
15813.1	634.1	15820.1	630.45	15927.11	628.41	16588.35	600.88	17151.28	592.92
17244.71	585.85	17573.71	583.71	17658.59	576.69	17792.16	567.49	18284.43	567.49
18417.35	571.51	18544.78	592.92	18630.55	608.86	18648.93	611.05	18879.47	626.49
19305.04	632.41	19725.99	633.06	19768.07	627.72	19879.51	627.72	20101.46	628.65
22439.88	626.52	23393.78	630.62	23642.68	637.08	25263.18	643.52	25632.96	646.61
26042.19	651.15	26671.22	665.85	26887.82	666.46	27965.54	666.46	28579.92	662.92
28844.73	662.92	29399.82	656.46	29629.68	652.71	29795.57	650.56	29930.96	644.57
30074.68	645.05	30359	652.48	30670.11	655.14	31731.99	671.26	32374.33	674.54
33310.35	704.15	33448.32	704.86	34044.99	686.69	34078.55	686.83	35619.62	723.12
36628.53	725.34	36819.48	729.38	37159.76	744.65	37199.85	745.62	37496.32	749.22
37817.02	760.48	37969.92	764.16	38718.72	790.39	39391.66	794.29	39731.01	800

Manning's n Values					
Sta	n Val	Sta	n Val	Sta	n Val
0	.1517151.28		.1518544.78		.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	17151.28	18544.78		5	5		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

	759.81	Element	Left OB	Channel	Right OB
E.G. Elev (ft)	759.81		0.150	0.150	0.150
Vel Head (ft)	0.06	wt. n-Val.	5.00	5.00	5.00
w.s. Elev (ft)	759.75	Reach Len. (ft)	1507601.00	256347.70	1823340.00
Crit w.s. (ft)		Flow Area (sq ft)	1507601.00	256347.70	1823340.00
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	2729844.00	717612.60	3282544.00
Q Total (cfs)	6730000.00	Flow (cfs)	15770.48	1393.50	19251.51
Top width (ft)	36415.49	Top width (ft)	1.81	2.80	1.80
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	95.60	183.96	94.71
Max chl dpth (ft)	192.26	Hydr. Depth (ft)	312054000.0	82031740.0	375234200.0
Conv. Totl (cfs)	769319900.0	Conv. (cfs)	15784.37	1396.23	19256.24
Length Wtd. (ft)	5.00	wetted Per. (ft)	0.46	0.88	0.45
Min Ch El (ft)	567.49	Shear (lb/sq ft)	0.83	2.46	0.81
Alpha	1.06	Stream Power (lb/ft s)	78650.41	14719.06	94839.29
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	666.35	67.58	775.17
C & E Loss (ft)	0.00	Cum SA (acres)			

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CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274999.*

INPUT

Table with columns: Station, Elevation, Data, num=, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains stationing data from Sta 0 to Sta 37820.18.

Manning's n Values table with columns: Sta, n Val, Sta, n Val. Shows values for Sta 0 and Sta 17155.07.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan. Table with values for Sta 17155.07 and 18550.1.

CROSS SECTION OUTPUT Profile #PF 1

Summary table for Profile #PF 1 with columns: E.G. Elev (ft), Vel Head (ft), w.s. Elev (ft), Crit w.s. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft), Vel Total (ft/s), Max chl depth (ft), Conv. Total (cfs), Length Wtd (ft), Min Ch El (ft), Frctn Loss (ft), C & E Loss (ft). Includes sub-headers for Element, Left OB, Channel, Right OB.

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274996.*

INPUT

Table with columns: Station, Elevation, Data, num=, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains stationing data from Sta 0 to Sta 37823.32.

Manning's n Values table with columns: Sta, n Val, Sta, n Val. Shows values for Sta 0 and Sta 17158.86.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan. Table with values for Sta 17158.86 and 18555.42.

CROSS SECTION OUTPUT Profile #PF 1

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E.G. Elev (ft)	759.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507604.00	256885.80	1824023.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507604.00	256885.80	1824023.00
Q Total (cfs)	6730000.00	Flow (cfs)	2727864.00	718761.60	3283374.00
Top Width (ft)	36423.76	Top width (ft)	15777.46	1396.56	19249.73
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	1.81	2.80	1.80
Max Chl Dpth (ft)	192.26	Hydr. Depth (ft)	95.55	183.94	94.76
Conv. Total (cfs)	769653100.0	Conv. (cfs)	311962800.0	82198680.0	375491700.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15791.38	1399.29	19254.44
Min Ch El (ft)	567.49	Shear (lb/sq ft)	0.46	0.88	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.82	2.45	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	78304.32	14660.15	94420.63
C & E Loss (ft)	0.00	Cum SA (acres)	662.73	67.26	770.75

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274993.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	197.67	791.6	643.11
1820.05	745.91	1987.8	743.51	2338.59
3644.77	720.12	3736.18	716.49	3747.51
4272.86	710.38	4426.62	705.93	4802.46
5748.11	686.55	5907.73	679.54	5976.4
6832.03	677.02	7052.89	664.04	7219.93
7491.52	655.59	7709.83	665.65	7773.03
8315.73	671.1	8470.9	680.08	8765.08
9091.74	654.45	9346.94	666.62	9522.33
10037.72	638.73	10055.01	638.41	10145.03
10413.64	611.88	10540.89	640.27	10648.94
11253.03	639.84	11466.68	636.81	11720.01
14127.29	629.47	14368.95	625.96	14990.18
15823.59	634.26	15830.6	630.64	15937.68
17256.5	585.89	17586.95	583.76	17672.21
18432.8	571.48	18560.73	592.98	18664.47
19320.74	632.29	19741.54	632.93	19782.94
22454.52	626.44	23408.09	630.53	23656.91
26055.61	651.14	26684.43	665.88	26900.96
28857.21	662.98	29412.11	656.49	29641.89
30086.74	645.01	30370.96	652.46	30681.97
33321.32	703.89	33459.25	704.63	33405.71
36638.38	725.13	36829.26	729.19	37169.43
37826.47	760.34	37979.32	764.04	38727.87

Manning's n Values

Sta	n Val	Sta	n Val
0	.1517162.66	.1518560.73	.15

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
17162.66	18560.73	5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507616.00	257148.70	1824383.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507616.00	257148.70	1824383.00
Q Total (cfs)	6730000.00	Flow (cfs)	2726883.00	719309.00	3283808.00
Top Width (ft)	36428.04	Top width (ft)	15780.98	1398.07	19248.98
Vel Total (ft/s)	1.88	Avg. Vel. (ft/s)	1.81	2.80	1.80
Max Chl Dpth (ft)	192.26	Hydr. Depth (ft)	95.53	183.93	94.78
Conv. Total (cfs)	769825300.0	Conv. (cfs)	311920300.0	82279680.0	375625300.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15794.91	1400.81	19253.69
Min Ch El (ft)	567.49	Shear (lb/sq ft)	0.46	0.88	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.82	2.45	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	78131.27	14630.64	94211.23
C & E Loss (ft)	0.00	Cum SA (acres)	660.92	67.10	768.54

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274990.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	197.71	791.6	643.25
1820.45	745.9	1988.24	743.5	2339.11
3645.58	720.14	3737	716.5	3748.34
4273.81	710.37	4427.6	705.91	4803.52
5749.38	686.53	5909.03	679.52	5977.72
6833.54	677	7054.45	664	7221.53
7493.17	655.54	7711.53	665.6	7774.75
8317.57	671.11	8472.77	680.14	8767.01
9093.74	654.52	9349	666.72	9524.44
10039.94	638.82	10057.23	638.51	10147.27
10415.94	611.93	10543.22	640.31	10651.29
11255.52	639.92	11469.21	636.88	11722.6
14130.41	629.51	14372.13	626.14	14993.49
15827.09	634.31	15834.1	630.7	15941.2
17260.43	585.91	17591.36	583.78	17676.74
18437.96	571.48	18566.05	593.18	18651.78
19325.97	632.26	19746.73	632.89	19787.89

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1821.26	745.89	1989.12	743.48	2340.14	743.48	2675.23	741.71	3575.22	724.07
3647.19	720.17	3738.65	716.52	3749.99	716.33	3952.1	716.47	4133.39	713.48
4275.69	710.34	4429.55	705.88	4805.65	696.71	5264.01	690.32	5605.13	687.97
5751.92	686.49	5911.64	679.46	5980.36	672.72	6344.38	671.56	6695.08	675.09
6836.56	676.96	7057.57	663.92	7224.72	657.4	7296.23	650.88	7345.44	650.88
7496.48	655.43	7714.94	665.49	7778.18	665.95	7908.19	669.48	8273.14	667.62
8321.25	671.15	8476.51	680.25	8770.89	669.21	8785.03	667.7	8958.47	655.1
9097.76	654.66	9353.14	666.91	9528.65	666.36	9712.51	652.74	9899.52	648.67
10044.38	63910061.68		638.6810151.75		625.6410320.77		606.0810378.34		606.08
10420.54	612.0310547.88		640.41	10656	655.6411045.54		650.0911204.42		644.35
11260.5	640.0711474.28		637.0311727.78		640.3812029.44		636.0812667.41		629.56
14136.66	629.5614378.48		626.0815000.12		626.0815478.36		632.615538.72		639.12
15834.08	634.4215841.09		630.8315948.25		628.8416610.36		601.0317174.04		593.04
17268.29	585.9217600.19		583.8117685.82		576.7517820.57		567.4818314.31		567.48
18448.26	571.4718576.68		593.04	18662.4	608.8518680.76		611.0318911.15		626.21
19336.43	632.19	19757.1	632.81	21797.8	627.421909.16		627.422130.96		628.36
22469.15	626.3323422.41		630.4423671.14		636.9625290.55		643.4825660.08		646.57
26069.03	651.1326697.64		665.9226914.09		666.5227991.09		666.5228605.05		663.04
28869.68	663.04	29424.4	656.52	29654.1	652.7329819.88		650.5529955.18		644.49
30098.8	644.9730382.93		652.4430693.83		655.131754.99		671.06	32396.9	674.4
33332.29	703.6333470.18		704.3434066.44		686.5734099.98		686.7435640.01		722.59
36648.23	724.9136839.05		72937179.11		744.2337219.17		745.237515.43		748.93
37835.93	760.237988.71		763.9238737.01		790	39409.5	794.3339748.62		800

Manning's n Values		num=	3				
Sta	n Val	Sta	n Val				
0	.1517174.04	.1518576.68	.15				
Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
17174.04	18576.68	5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507635.00	257956.80	1825428.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507635.00	257956.80	1825428.00
Q Total (cfs)	6730000.00	Flow (cfs)	2723902.00	721033.10	3285065.00
Top Width (ft)	36440.79	Top Width (ft)	15791.70	1402.64	19246.45
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.81	2.80	1.80
Max Chl Dpth (ft)	192.27	Hydr. Depth (ft)	95.47	183.91	94.84
Conv. Total (cfs)	770333700.0	Conv. (cfs)	311785100.0	82531360.0	376017300.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	15805.68	1405.38	19251.12
Min Ch El (ft)	567.48	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.82	2.44	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	77612.12	14541.95	93582.83
C & E Loss (ft)	0.00	Cum SA (acres)	655.48	66.62	761.92

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274981.*

INPUT

Description:		num=	120						
Station	Elevation	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	197.84	791.59	643.68	774.28	1356.1	760.96	1535.36	752.73
1821.66	745.88	1989.56	743.47	2340.66	743.47	2675.82	741.7	3576.01	724.09
3648	720.18	3739.48	716.53	3750.82	716.34	3952.97	716.46	4133.3	713.47
4276.64	710.32	4430.53	705.86	4806.71	696.69	5265.17	690.31	5606.37	687.95
5753.19	686.47	5912.95	679.43	5981.68	672.69	6345.78	671.53	6696.56	675.06
6838.07	676.94	7059.13	663.88	7226.32	657.35	7297.84	650.82	7347.07	650.82
7498.14	655.38	7716.64	665.44	7779.9	665.9	7909.94	669.46	8274.97	667.63
8323.08	671.16	8478.38	680.31	8772.82	669.3	8786.97	667.79	8960.45	655.17
9099.7	654.74	9355.2	667	9530.75	666.45	9714.66	652.82	9901.7	648.74
10046.59	639.09	10063.9	638.77	10154	625.7110323.04		606.1210380.63		606.12
10422.84	611.0810550.21		640.4510658.35		655.7111047.98		650.1511206.89		644.42
11262.98	640.1511476.81		637.111730.37		640.42	12032.1	636.1212670.21		629.59
14139.78	629.5914381.66		626.1215003.43		626.1215481.78		632.6515542.16		639.18
15837.58	634.4715844.59		630.8915951.77		628.8416614.03		601.0617177.83		593.06
17272.22	585.93	17604.6	583.8317690.36		576.76	17825.3	567.4818319.29		567.48
18453.41	571.47	18582	593.0618667.71		608.8518686.06		611.0218916.43		626.17
19341.66	632.1519762.28		632.7621802.75		627.35	21914.1	627.3522135.88		628.31
22474.03	626.323427.18		630.4123675.89		636.9425295.11		643.47	25664.6	646.57
26073.5	651.1326702.04		665.9326918.47		666.5327995.35		666.5328609.24		663.06
28873.84	663.06	29428.5	656.5329658.17		652.7429823.94		650.5529959.22		644.47
30102.83	644.9530386.92		652.4330697.79		655.0931758.83		671.0332400.67		674.38
33335.95	703.5433473.82		704.2634070.01		686.5534103.55		686.72	35643.4	722.51
36651.52	724.8436842.31		728.9437182.33		744.1637222.39		745.1437518.62		748.88
37839.07	760.1637991.85		763.8838740.06		79039412.47		794.3439751.55		800

Manning's n Values		num=	3				
Sta	n Val	Sta	n Val				
0	.1517177.83	.15	18582	.15			
Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
17177.83	18582	5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507636.00	258223.90	1825769.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507636.00	258223.90	1825769.00
Q Total (cfs)	6730000.00	Flow (cfs)	2722900.00	721598.60	3285502.00
Top Width (ft)	36444.95	Top Width (ft)	15795.37	1404.17	19245.41
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.81	2.79	1.80
Max Chl Dpth (ft)	192.27	Hydr. Depth (ft)	95.45	183.90	94.87
Conv. Total (cfs)	770499100.0	Conv. (cfs)	311737200.0	82613820.0	376148000.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	15809.35	1406.91	19250.08
Min Ch El (ft)	567.48	Shear (lb/sq ft)	0.45	0.87	0.45

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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507645.00	258755.60	1826461.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507645.00	258755.60	1826461.00
Q Total (cfs)	6730000.00	Flow (cfs)	2720932.00	722716.10	3286352.00
Top width (ft)	36453.24	Top width (ft)	15802.39	1407.22	19243.63
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.80	2.79	1.80
Max Chl Dpth (ft)	192.27	Hydr. Depth (ft)	95.41	183.88	94.91
Conv. Total (cfs)	770834400.0	Conv. (cfs)	311647600.0	82777780.0	376409100.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15816.42	1409.97	19248.28
Min Ch El (ft)	567.48	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.82	2.44	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	77092.95	14452.99	92954.05
C & E Loss (ft)	0.00	Cum SA (acres)	650.04	66.14	755.29

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274972.*

INPUT

Description:
Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	197.97	791.57	644.11	774.24	1356.99	760.96	1536.38	752.7
1822.87	745.86	1990.88	743.44	2342.21	743.44	2677.59	741.66	3578.37	724.14
3650.41	720.23	3741.96	716.56	3753.31	716.37	3955.59	716.44	4136.04	713.44
4279.47	710.28	4433.47	705.81	4809.89	696.63	5268.66	690.26	5610.08	687.9
5757	686.42	5916.86	679.35	5985.64	672.58	6349.99	671.43	6701	674.99
6842.59	676.88	7063.8	663.76	7231.1	657.2	7302.67	650.64	7351.93	650.64
7503.1	655.22	7721.76	665.28	7785.06	665.76	7915.18	669.37	8280.45	667.65
8328.6	671.22	8484	680.48	8778.63	669.56	8792.79	668.05	8966.38	655.38
9105.8	654.95	9361.4	667.29	9537.06	666.74	9721.09	653.06	9908.26	648.97
10053.25	639.37	10070.57	639.04	10160.72	625.92	10329.88	606.24	10387.51	606.24
10429.75	612.22	10557.2	640.59	10665.41	655.92	11055.3	650.34	11214.32	644.62
11270.44	640.38	11484.42	637.31	11738.14	640.56	12040.07	636.24	12678.6	629.68
14149.15	629.68	14391.18	626.24	15013.37	626.24	15492.04	632.81	15552.45	639.36
15848.07	634.63	15855.09	631.08	15962.34	629.08	16625.03	601.13	17189.21	593.12
17284.02	585.97	17617.84	583.88	17703.97	576.79	17839.5	567.48	18334.22	567.48
18468.86	571.45	18597.95	593.12	18683.63	608.84	18701.98	611.02	18932.27	626.07
19357.36	632.05	19777.83	632.64	21817.62	627.22	21928.93	627.22	2150.63	628.16
22488.67	626.19	23441.49	630.32	23690.12	636.88	25308.79	643.44	25678.16	646.55
26086.93	651.12	26715.25	665.97	26931.61	666.56	28008.12	666.56	28621.81	663.12
28886.32	663.12	29440.79	656.56	29670.38	652.75	29836.09	650.52	29971.33	644.44
30114.89	644.91	30398.88	652.41	30709.65	655.07	31770.33	670.94	32411.95	674.3
33346.92	703.28	33484.74	704.34	34080.73	686.48	34114.26	686.66	35653.6	722.24
36661.37	724.63	36852.1	728.75	37192	743.95	37232.05	744.93	37528.18	748.74
37848.53	760.02	38001.25	763.76	38749.21	790.39	39421.39	794.36	39760.36	800

Manning's n Values num= 3

Sta	n Val	Sta	n Val
0	.1517189.21	.1518597.95	.15

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

17189.21	18597.95	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507662.00	259024.00	1826815.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507662.00	259024.00	1826815.00
Q Total (cfs)	6730000.00	Flow (cfs)	2719964.00	723282.10	3286754.00
Top width (ft)	36457.52	Top width (ft)	15805.91	1408.74	19242.87
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.80	2.79	1.80
Max Chl Dpth (ft)	192.27	Hydr. Depth (ft)	95.39	183.87	94.93
Conv. Total (cfs)	771009200.0	Conv. (cfs)	311607300.0	82861380.0	376540500.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15819.94	1411.49	19247.51
Min Ch El (ft)	567.48	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.82	2.44	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	76919.90	14423.27	92744.38
C & E Loss (ft)	0.00	Cum SA (acres)	648.23	65.98	753.08

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274969.*

INPUT

Description:
Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	198.02	791.57	644.25	774.23	1357.29	760.95	1536.72	752.7
1823.27	745.86	1991.32	743.43	2342.73	743.43	2678.18	741.65	3579.16	724.16
3651.22	720.25	3742.78	716.57	3754.13	716.38	3956.46	716.44	4136.96	713.43
4280.42	710.26	4434.44	705.79	4810.95	696.61	5269.82	690.25	5611.32	687.88
5758.27	686.4	5918.17	679.33	5986.96	672.54	6351.39	671.39	6702.48	674.97
6844.1	676.86	7065.36	663.72	7232.7	657.15	7304.28	650.58	7353.55	650.58
7504.76	655.17	7723.46	665.23	7786.77	665.72	7916.92	669.35	8282.28	667.66
8330.44	671.23	8485.87	680.54	8780.57	669.65	8794.73	668.14	8968.36	655.46
9107.81	655.03	9363.46	667.38	9539.17	666.84	9723.24	653.14	9910.45	649.04
10055.47	639.46	10072.79	639.13	10162.97	625.99	10332.16	606.28	10389.8	606.28
10432.05	612.27	10559.53	640.64	10667.77	655.99	11057.74	650.41	11216.79	644.69
11272.93	640.45	11486.95	637.39	11740.73	640.61	12042.72	636.28	12681.4	629.71
14152.27	629.71	14439.36	626.28	15016.68	626.28	15495.46	632.85	15555.88	639.42
15851.57	634.68	15858.59	631.14	15965.86	629.14	16628.7	601.16	17193	593.14

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17287.95	585.9817622.26	583.917708.51	576.817844.24	567.48 18339.2	567.48
18474.02	571.4518603.27	593.1418688.93	608.8418707.29	611.0118937.55	626.03
19362.59	632.0119783.02	632.621822.57	627.1521933.87	627.1522155.55	628.11
22493.55	626.1523446.27	630.2923694.87	636.8625313.36	643.4325682.68	646.55
26091.4	651.1226719.66	665.9826935.99	666.5728012.38	666.57 28626	663.14
28890.48	663.1429444.88	656.5729674.46	652.7529840.14	650.5529975.37	644.42
30118.91	644.930402.87	652.4 30713.6	655.0631774.16	670.9132415.71	674.28
33350.57	703.193488.38	703.9234084.31	686.4634117.83	686.6435656.99	722.15
36664.65	724.5636855.36	728.6937195.23	743.8837235.27	744.8637531.37	748.69
37851.68	759.9838004.38	763.7238752.26	79039424.36	794.37 39763.3	800

Manning's n Values					
num=	3				
Sta	n Val	Sta	n Val	Sta	n Val
0	.15	17193	.1518603.27		.15

Bank Sta: Left Right					
1719318603.27	Lengths: Left	Channel	Right	Coeff	Contr.
	5	5	5	.1	Expan. .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507650.00	259291.30	1827164.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507650.00	259291.30	1827164.00
Q Total (cfs)	6730000.00	Flow (cfs)	2718929.00	723848.70	3287223.00
Top Width (ft)	36461.67	Top Width (ft)	15809.57	1410.27	19241.83
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.80	2.79	1.80
Max Chl Dpth (ft)	192.27	Hydr. Depth (ft)	95.34	183.85	94.98
Conv. Total (cfs)	771172900.0	Conv. (cfs)	311554800.0	82943900.0	376674200.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15823.61	1413.02	19246.46
Min Ch El (ft)	567.48	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.82	2.44	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	76746.84	14393.52	92534.67
C & E Loss (ft)	0.00	Cum SA (acres)	646.41	65.81	750.87

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274967.*

INPUT

Description:										
Station	Elevation	Data	num=	120						
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	
0	800	198.06	791.56	644.39	774.22	1357.59	760.95	1537.06	752.69	
1823.67	745.85	1991.76	743.42	2343.24	743.42	2678.77	741.63	3579.95	724.17	
3652.02	720.26	3743.61	716.58	3754.96	716.39	3957.33	716.43	4137.87	713.42	
4281.36	710.25	4435.42	705.78	4812.02	696.59	5270.98	690.23	5612.56	687.86	
5759.54	686.38	5919.48	679.3	5988.29	672.5	6352.79	671.36	6703.95	674.95	
6845.61	676.84	7066.92	663.68	7234.3	657.1	7305.89	650.52	7355.18	650.52	
7506.42	655.11	7725.16	665.18	7788.49	665.67	7918.67	669.32	8284.11	667.67	
8332.27	671.25	8487.74	680.6	8782.51	669.74	8796.67	668.23	8970.34	655.53	
9109.82	655.1	9365.53	667.48	9541.27	666.94	9725.38	653.21	9912.63	649.12	
10057.69	639.55	10075.01	639.22	10165.21	626.06	10334.44	606.32	10392.09	606.72	
10434.25	612.32	10561.86	640.69	10670.12	626.06	10660.18	650.46	11219.27	644.76	
11275.42	640.53	11489.48	637.46	11743.33	640.66	12045.38	636.32	12684.19	629.74	
14155.39	629.74	144397.53	626.32	15020	626.32	15498.87	632.91	15559.31	639.48	
15855.07	634.73	15862.09	631.21	15969.38	629.21	16632.37	601.19	17196.79	593.16	
17291.88	585.99	17626.67	583.92	17713.04	576.81	17848.97	567.48	18344.18	567.48	
18479.17	571.44	18608.59	593.16	18694.24	608.84	18712.59	611.01	18942.83	625.99	
19367.82	631.98	19788.2	632.56	1827.53	627.12	1938.81	627.12	12160.46	628.06	
22498.43	626.11	23451.04	630.26	23699.61	636.84	25317.92	643.42	25687.2	646.54	
26095.87	651.12	26724.06	665.99	26940.37	666.58	28016.64	666.58	28630.19	663.16	
28894.63	663.16	29448.98	656.58	29678.53	652.76	29844.2	650.55	29979.4	644.41	
30122.93	644.88	30406.86	652.43	30717.55	655.05	31778	670.88	32419.48	674.26	
33354.23	703.11	33492.02	703.83	334087.88	686.44	34121.4	686.62	35660.39	722.07	
36667.93	724.48	36858.62	728.62	37198.45	743.81	37238.48	744.79	37534.55	748.64	
37854.82	759.93	38007.51	763.68	38755.3	79039427.34		794.37	39766.23	800	

Manning's n Values					
num=	3				
Sta	n Val	Sta	n Val	Sta	n Val
0	.15	17196.79	.1518608.59		.15

Bank Sta: Left Right					
17196.7918608.59	Lengths: Left	Channel	Right	Coeff	Contr.
	5	5	5	.1	Expan. .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507657.00	259560.00	1827504.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507657.00	259560.00	1827504.00
Q Total (cfs)	6730000.00	Flow (cfs)	2717958.00	724418.60	3287624.00
Top Width (ft)	36465.94	Top Width (ft)	15813.08	1411.80	19241.06
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.80	2.79	1.80
Max Chl Dpth (ft)	192.27	Hydr. Depth (ft)	95.34	183.85	94.98
Conv. Total (cfs)	771330000.0	Conv. (cfs)	311510700.0	83027100.0	376801200.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15827.14	1414.56	19245.68
Min Ch El (ft)	567.48	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.82	2.43	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	76573.79	14363.75	92324.92
C & E Loss (ft)	0.00	Cum SA (acres)	644.60	65.65	748.66

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274964.*

INPUT

Description: Page 382

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Station Elevation Data table with columns: Station, Elev, Sta, num=, Elev, Sta, Elev, Sta, Elev. Contains 30 rows of elevation data.

Manning's n Values table with columns: Sta, n Val, Sta, num=, n Val, Sta, n Val. Contains 1 row of Manning's n values.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan. table with 1 row of bank station data.

CROSS SECTION OUTPUT Profile #PF 1

Cross-section output table with columns: E.G. Elev (ft), Vel Head (ft), W.S. Elev (ft), Crit W.S. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft), Vel Total (ft/s), Max chl Dpth (ft), Conv. Total (cfs), Length wtd. (ft), Min Ch El (ft), Alpha, Frctn Loss (ft), C & E Loss (ft). Includes various hydraulic parameters.

CROSS SECTION

RIVER: BRAZOS REACH: UPPER BRAZOS RS: 274961.*

INPUT Description:

Station Elevation Data table (repeated) with columns: Station, Elev, Sta, num=, Elev, Sta, Elev, Sta, Elev. Contains 30 rows of elevation data.

Manning's n Values table (repeated) with columns: Sta, n Val, Sta, num=, n Val, Sta, n Val. Contains 1 row of Manning's n values.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan. table (repeated) with 1 row of bank station data.

CROSS SECTION OUTPUT Profile #PF 1

Cross-section output table (repeated) with columns: E.G. Elev (ft), Vel Head (ft), W.S. Elev (ft), Crit W.S. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft), Vel Total (ft/s), Max chl Dpth (ft). Includes various hydraulic parameters.

Conv. Total (cfs)	771677800.0	Conv. (cfs)	311419800.0	83193560.0	377064400.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15834.38	1417.60	19243.87
Min Ch El (ft)	567.47	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.81	2.43	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	76227.68	14304.10	91905.30
C & E Loss (ft)	0.00	Cum SA (acres)	640.97	65.33	744.25

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274958.*

INPUT

Description:

Station Elevation Data	num=	120
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
0 800 198.19 791.55 644.82 774.18 1358.49 760.94 1538.07 752.66		
1824.88 745.83 1993.07 743.39 2344.79 743.39 2680.55 741.6 3582.32 724.22		
3654.44 720.31 3746.09 716.61 3757.45 716.42 3959.95 716.42 4140.61 713.39		
4284.19 710.2 4438.36 705.72 4815.2 696.53 5274.47 690.19 5616.27 687.81		
5763.35 686.32 5923.39 679.22 5992.25 672.39 6356.99 671.26 6708.39 674.88		
6850.14 676.78 7071.6 663.56 7239.08 656.95 7310.73 650.34 7360.04 650.34		
7511.38 654.95 7730.27 665.02 7793.64 665.54 7923.91 669.24 8289.59 667.69		
8337.79 671.3 8493.36 680.77 8788.32 670.01 8802.49 668.49 8976.28 655.74		
9115.85 655.32 9371.73 667.76 9547.59 667.23 9731.82 653.45 9919.19 649.34		
10064.34 639.8210081.68 639.4910171.93 626.2710341.28 606.4410398.97 606.44		
10441.26 612.4710568.85 640.8310677.18 656.27 11067.5 650.6511226.69 644.96		
11282.88 640.7611497.09 637.68 11751.1 640.812053.35 636.4412692.59 629.83		
14164.76 629.8314407.06 626.4415029.93 626.4415509.13 633.0515569.61 639.66		
15865.56 634.8915872.58 631.3915979.95 629.3916643.38 601.2617208.17 593.22		
17303.67 586.0317639.91 583.9717726.66 576.8317863.17 567.4718359.12 567.47		
18494.62 571.4318624.54 593.2218710.16 608.8318728.51 61118958.66 625.88		
19383.51 631.8719803.75 632.4321842.39 626.9521953.64 626.9522175.21 627.92		
22513.06 626.0123465.35 630.1723713.84 636.78 25331.6 643.3925700.76 646.53		
26109.29 651.1126737.27 666.02 26953.5 666.6128029.41 666.6128642.75 663.22		
28907.11 663.2229461.27 656.6129690.74 652.7729856.35 650.5429991.51 644.37		
30134.99 644.8430418.83 652.3830729.42 655.03 31789.5 670.832430.76 674.18		
33365.2 702.8533502.95 703.5834098.61 686.3834132.11 686.5635670.58 721.8		
36677.79 724.2736868.41 728.4337208.12 743.637248.14 744.5937544.11 748.5		
37864.28 759.7938016.91 763.5638764.45 79039436.25 794.3939775.04 800		

Manning's n Values	num=	3
Sta n Val Sta n Val		
0 .1517208.17 .1518624.54 .15		

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17208.1718624.54	5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
w.s. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit w.s. (ft)		Flow Area (sq ft)	1507669.00	260365.80	1828545.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507669.00	260365.80	1828545.00
Q Total (cfs)	6730000.00	Flow (cfs)	2714986.00	726129.40	3288885.00
Top Width (ft)	36478.68	Top Width (ft)	15823.80	1416.37	19238.51
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.80	2.79	1.80
Max chl dpth (ft)	192.28	Hydr. Depth (ft)	95.28	183.83	95.05
Conv. Total (cfs)	771844400.0	conv. (cfs)	311373900.0	83277700.0	377192800.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15837.90	1419.13	19243.11
Min Ch El (ft)	567.47	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.81	2.43	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	76054.63	14274.23	91695.44
C & E Loss (ft)	0.00	Cum SA (acres)	639.15	65.16	742.04

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274955.*

INPUT

Description:

Station Elevation Data	num=	120
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
1825.28 745.83 1993.51 743.38 2345.31 743.38 2681.14 741.58 3583.11 724.24		
3655.25 720.32 3746.91 716.62 3758.28 716.43 3960.82 716.41 4141.52 713.38		
4285.14 710.19 4439.34 705.71 4816.26 696.52 5275.64 690.17 5617.51 687.79		
5764.62 686.3 5924.7 679.19 5993.57 672.36 6358.39 671.23 6709.87 674.86		
6851.65 676.76 7073.16 663.52 7240.68 656.9 7312.34 650.28 7361.67 650.28		
7513.04 654.9 7731.98 664.97 7795.36 665.49 7925.66 669.21 8291.41 667.69		
8339.62 671.32 8495.23 680.82 8790.26 670.1 8804.43 668.58 8978.25 655.81		
9117.86 655.39 9373.79 667.86 9549.69 667.32 9733.96 653.53 9921.38 649.41		
10066.56 639.91 10083.9 639.5810174.18 626.3410343.56 606.4810401.26 606.48		
10443.56 612.5210571.17 640.8710679.53 656.3411069.94 650.7111229.17 645.03		
11285.36 640.8411499.62 637.7511753.69 640.8412056.01 636.4812695.38 629.86		
14167.88 629.8614410.24 626.4815033.25 626.4815512.55 633.115573.04 639.72		
15869.06 634.9515876.08 631.4515983.47 629.4516647.04 601.2917211.97 593.24		
17307.6 586.0417644.32 583.99 17731.2 576.8417867.91 567.47 18364.1 567.47		
18499.77 571.4318629.85 593.2418715.47 608.8318733.81 61118963.94 625.85		
19388.75 631.8419808.94 632.3921847.34 626.921958.58 626.922180.13 627.87		
22517.94 625.9723470.12 630.1423718.58 636.7625335.17 643.3825705.28 646.52		
26113.77 631.126741.67 666.0426957.88 666.6228033.67 666.6228646.94 663.24		
28911.27 663.2429465.37 656.6229694.81 652.78 29860.4 650.5429995.55 644.36		
30139.01 644.8330422.82 652.3730733.37 655.0231793.34 670.7732434.52 674.16		
33368.86 702.7633506.59 703.4934102.18 686.3634135.68 686.5435673.98 721.71		
36681.07 724.236871.68 728.3737211.35 743.5337251.36 744.52 37547.3 748.45		
37867.43 759.7538020.04 763.52 38767.5 79039439.23 794.439777.97 800		

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

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0 .1517211.97 .1518629.85 .15
 Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17211.9718629.85 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

	759.80	Element	Left OB	Channel	Right OB
E.G. Elev (ft)	759.80	wt. n-val.	0.150	0.150	0.150
Vel Head (ft)	0.06	Reach Len. (ft)	5.00	5.00	5.00
W.S. Elev (ft)	759.75	Flow Area (sq ft)	1507672.00	260629.20	1828893.00
Crit W.S. (ft)		Area (sq ft)	1507672.00	260629.20	1828893.00
E.G. Slope (ft/ft)	0.000076	Flow (cfs)	2713997.00	726678.60	3289324.00
Q Total (cfs)	6730000.00	Top width (ft)	15827.29	1417.88	19237.47
Top width (ft)	36482.64	Avg. Vel. (ft/s)	1.80	2.79	1.80
Vel Total (ft/s)	1.87	Hydr. Depth (ft)	95.26	183.82	95.07
Max Chl Dpth (ft)	192.28	Conv. (cfs)	311328800.0	83358970.0	377325900.0
Conv. Total (cfs)	772013700.0	wetted Per. (ft)	15841.41	1420.64	19242.06
Length wtd. (ft)	5.00	Shear (lb/sq ft)	0.45	0.87	0.45
Min Ch El (ft)	567.47	Stream Power (lb/ft s)	0.81	2.43	0.81
Alpha	1.06	Cum Volume (acre-ft)	75881.57	14244.33	91485.53
Frctn Loss (ft)	0.00	Cum SA (acres)	637.34	65.00	739.83
C & E Loss (ft)	0.00				

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274952.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	198.28	791.54	645.1	774.16	1359.09	760.94	1538.75	752.65
1825.68	745.82	1993.95	743.37	2345.83	743.37	2681.73	741.57	3583.9	724.26
3656.05	720.34	3747.74	716.63	3759.1	716.44	3961.7	716.41	4142.43	713.37
4286.08	710.17	4440.31	705.69	4817.32	696.5	5276.8	690.16	5618.75	687.77
5765.89	686.29	5926	679.16	5994.89	672.32	6359.8	671.19	6711.35	674.83
6853.16	676.74	7074.71	663.48	7242.27	656.85	7313.95	650.22	7363.29	650.22
7514.69	654.85	7733.68	664.91	7797.08	665.44	7927.4	669.18	8293.24	667.7
8341.46	671.33	8497.1	680.88	8792.19	670.18	8806.37	668.67	8980.23	655.89
9119.87	655.46	9375.86	667.95	9551.79	667.42	9736.11	653.61	9923.57	649.49
10068.78	640.10086.12		639.6710176.42		626.4110345.84		606.5210403.55		606.52
10445.86	612.57	10573.5	640.9210681.89		656.4111072.38		650.7711231.64		645.1
11287.85	640.9211502.16		637.8211756.28		640.8912058.66		636.5212698.18		629.89
14171	629.8914413.41		626.5215036.56		626.5215515.97		633.1515576.47		639.78
15872.55	635.15879.58		631.5115986.99		629.5116650.71		601.3217215.76		593.26
17311.53	586.0517648.74		584.0117735.73		576.8517872.64		567.4718369.08		567.47
18504.93	571.4218635.17		593.2618720.78		608.8318739.12		61118969.22		625.81
19393.98	631.819814.12		632.35 21852.3		626.8521963.52		626.8522185.05		627.82
22522.82	625.93 23474.9		630.1123723.33		636.7425340.73		643.37 25709.8		646.52
26118.24	651.126746.08		666.0526962.26		666.6328037.93		666.6328651.13		663.26
28915.43	663.2629469.46		656.6329698.88		652.7829864.46		650.5429999.59		644.35
30143.03	644.81 30426.8		652.3630737.32		655.0231797.17		670.7432438.29		674.14
33372.52	702.6833510.23		703.434105.75		686.3434139.25		686.5235677.38		721.63
36684.36	724.1336874.94		728.3137214.57		743.4637254.58		744.4537550.48		748.41
37870.58	759.738023.18		763.4838770.55		790 39442.2		794.4139780.91		800

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .1517215.76 .1518635.17 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17215.7618635.17 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

	759.80	Element	Left OB	Channel	Right OB
E.G. Elev (ft)	759.80	wt. n-val.	0.150	0.150	0.150
Vel Head (ft)	0.06	Reach Len. (ft)	5.00	5.00	5.00
W.S. Elev (ft)	759.75	Flow Area (sq ft)	1507673.00	260897.90	1829219.00
Crit W.S. (ft)		Area (sq ft)	1507673.00	260897.90	1829219.00
E.G. Slope (ft/ft)	0.000076	Flow (cfs)	2713062.00	727259.90	3289678.00
Q Total (cfs)	6730000.00	Top width (ft)	15830.79	1419.41	19237.26
Top width (ft)	36487.46	Avg. Vel. (ft/s)	1.80	2.79	1.80
Vel Total (ft/s)	1.87	Hydr. Depth (ft)	95.24	183.81	95.09
Max Chl Dpth (ft)	192.28	Conv. (cfs)	311283100.0	83442130.0	377441000.0
Conv. Total (cfs)	772166200.0	wetted Per. (ft)	15844.93	1422.18	19241.84
Length wtd. (ft)	5.00	Shear (lb/sq ft)	0.45	0.87	0.45
Min Ch El (ft)	567.47	Stream Power (lb/ft s)	0.81	2.43	0.81
Alpha	1.06	Cum Volume (acre-ft)	75708.52	14214.40	91275.59
Frctn Loss (ft)	0.00	Cum SA (acres)	635.52	64.84	737.62
C & E Loss (ft)	0.00				

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274949.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	198.32	791.54	645.24	774.14	1359.39	760.93	1539.09	752.64
1826.09	745.81	1994.39	743.36	2346.34	743.36	2682.32	741.56	3584.69	724.28
3656.86	720.36	3748.56	716.64	3759.93	716.45	3962.57	716.4	4143.34	713.36
4287.03	710.16	4441.29	705.67	4818.38	696.48	5277.96	690.14	5619.99	687.75
5767.16	686.27	5927.31	679.14	5996.21	672.28	6361.2	671.16	6712.83	674.81
6854.67	676.72	7076.27	663.44	7243.87	656.8	7315.56	650.16	7364.91	650.16
7516.35	654.8	7735.39	664.86	7798.8	665.4	7929.15	669.16	8295.07	667.71
8343.3	671.35	8498.98	680.94	8794.13	670.27	8808.31	668.76	8982.21	655.96
9121.88	655.54	9377.92	668.05	9553.9	667.52	9738.26	653.68	9925.75	649.56
10071	640.0910088.34		639.7610178.66		626.4810348.12		606.5610405.85		606.56
10448.16	612.6210575.83		640.9710684.24		656.4811074.82		650.8311234.11		645.17

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11290.34	640.9911504.69	637.8911758.87	640.9412061.32	636.5612700.98	629.92
14174.12	629.9214416.59	626.5615039.87	626.5615519.38	633.215579.91	639.84
15876.05	635.0515883.08	631.5815990.52	629.5716654.38	601.3417219.55	593.28
17315.46	586.0617653.15	584.0317740.27	576.8617877.38	567.4718374.06	567.47
18510.08	571.4218640.49	593.2818726.09	608.8318744.42	610.99 18974.5	625.77
19399.21	631.7719819.31	632.3121857.25	626.821968.46	626.822189.96	627.77
22527.7	625.923479.67	630.0823728.07	636.7225345.29	643.3625714.32	646.51
26122.72	651.126750.48	666.0626966.64	666.6428042.19	666.6428655.32	663.28
28919.59	663.2829473.56	656.6429702.95	652.7829868.51	650.5430003.62	644.33
30147.05	644.830430.79	652.3630741.28	655.01 31801	670.7132442.05	674.11
33376.17	702.5933513.87	703.3234109.33	686.3234142.82	686.535680.77	721.54
36687.64	724.05 36878.2	728.25 37217.8	743.39 37257.8	744.3837553.67	748.36
37873.73	759.6638026.31	763.44 38773.6	79039445.17	794.4139783.84	800

Manning's n Values

Sta	n Val	Sta	n Val
0	.1517219.55	3	.1518640.49

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

17219.55	18640.49	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507674.00	261164.60	1829572.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507674.00	261164.60	1829572.00
Q Total (cfs)	6730000.00	Flow (cfs)	2712070.00	727823.30	3290107.00
Top width (ft)	36492.12	Top width (ft)	15834.49	1420.94	19236.69
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.80	2.79	1.80
Max Chl Dpth (ft)	192.28	Hydr. Depth (ft)	95.21	183.80	95.11
Conv. Total (cfs)	772329300.0	Conv. (cfs)	311234900.0	83524420.0	377570000.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15848.63	1423.71	19241.27
Min Ch El (ft)	567.47	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.81	2.42	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	75535.46	14184.43	91065.60
C & E Loss (ft)	0.00	Cum SA (acres)	633.70	64.68	735.41

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274946.*

INPUT

Description: Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800 198.37	791.53	645.39	774.13	1359.69	760.93	1539.43	752.63	
1826.49	745.81 1994.83	743.35	2346.86	743.35	2682.91	741.55	3585.48	724.29	
3657.66	720.37 3749.39	716.65	3760.76	716.46	3963.44	716.4	4144.26	713.35	
4287.97	710.14 4442.27	705.66	4819.44	696.46	5279.12	690.13	5621.22	687.73	
5768.43	686.25 5928.62	679.11	5997.53	672.25	6362.6	671.13	6714.3	674.79	
6856.18	676.7 7077.83	663.4	7245.46	656.75	7317.17	650.1	7366.53	650.1	
7518.01	654.74 7737.09	664.81	7800.52	665.35	7930.9	669.13	8296.9	667.71	
8345.14	671.37 8500.85	680.99	8796.07	670.36	8810.25	668.85	8984.19	656.03	
9123.88	655.61 9379.99	668.14	9556	667.61	9740.4	653.76	9927.94	649.64	
10073.21	640.1810090.57	639.85	10180.9	626.55	10350.4	606.610408.14		606.6	
10450.46	612.6610578.16	641.0110686.59		656.5511077.25		650.8911236.59		645.23	
11292.83	641.0711507.22	637.9611761.46		640.9812063.98		636.612703.78		629.95	
14177.23	629.9514419.76	626.615043.19		626.6	15522.8	633.2515583.34		639.9	
15879.55	635.115886.38	631.6415994.04		629.6316658.05		601.3717223.35		593.3	
17319.39	586.0717657.56	584.0417744.81		576.8717882.11		567.4718379.04		567.47	
18515.23	571.42 18645.8	593.318731.39		608.8318749.73		610.9918979.78		625.74	
19404.44	631.7319824.49	632.2621862.21		626.7521973.41		626.7522194.88		627.72	
22532.58	625.8623484.44	630.0523732.81		636.725349.85		643.3525718.84		646.51	
26127.19	651.0926754.88	666.0726971.02		666.6528046.44		666.6528659.51		663.3	
28923.75	663.329477.66	656.6529707.02		652.7929872.56		650.5330007.66		644.32	
30151.07	644.7830434.78	652.3530745.23		65531804.84		670.6832445.81		674.09	
33379.83	702.533517.51	703.23 34112.9		686.334146.39		686.4835684.17		721.45	
36690.92	723.9836881.46	728.1837221.02		743.3237261.02		744.3137556.86		748.31	
37876.88	759.6138029.45	763.438776.65		79039448.14		794.4239786.77		800	

Manning's n Values

Sta	n Val	Sta	n Val
0	.1517223.35	3	.15 18645.8

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

17223.35	18645.8	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.75	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507682.00	261430.40	1829944.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507682.00	261430.40	1829944.00
Q Total (cfs)	6730000.00	Flow (cfs)	2711097.00	728382.50	3290521.00
Top width (ft)	36496.97	Top width (ft)	15838.00	1422.45	19236.52
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.80	2.79	1.80
Max Chl Dpth (ft)	192.28	Hydr. Depth (ft)	95.19	183.79	95.13
Conv. Total (cfs)	772498800.0	Conv. (cfs)	311191600.0	83606930.0	377700300.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15852.16	1425.22	19241.08
Min Ch El (ft)	567.47	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.81	2.42	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	75362.41	14154.44	90855.57
C & E Loss (ft)	0.00	Cum SA (acres)	631.88	64.51	733.20

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274943.*

SS_Rev3.rep

INPUT
Description:
Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800.198.41	791.53	645.53	774.12	1359.99	760.93	1539.77	752.62	
1826.89	745.81995.27	743.34	2347.38	743.34	2683.5	741.53	3586.27	724.31	
3658.47	720.393750.21	716.66	3761.59	716.47	3964.32	716.39	4145.17	713.34	
4288.91	710.134443.25	705.64	4820.51	696.44	5280.29	690.11	5622.46	687.71	
5769.7	686.235929.92	679.08	5998.85	672.21	6364	671.09	6715.78	674.77	
6857.69	676.687079.39	663.36	7247.06	656.7	7318.79	650.04	7368.16	650.04	
7519.66	654.697738.79	664.75	7802.23	665.31	7932.64	669.1	8298.72	667.72	
8346.98	671.398502.72	681.05	8798.01	670.45	8812.19	668.94	8986.17	656.1	
9125.89	655.689382.06	668.24	9558.11	667.71	9742.55	653.84	9930.12	649.71	
10075.43	640.2710092.79	639.9410183.14		626.6210352.68		606.6410410.43		606.64	
10452.76	612.7110580.49	641.0610688.95		656.6211079.69		650.9511239.06		645.3	
11295.31	641.1511509.76	638.0411764.05		641.0312066.63		636.6412706.57		629.98	
14180.37	629.9814422.94	626.64	15046.5	626.6415526.22		633.315586.77		639.96	
15883.04	635.1615890.08	631.715997.56		629.6916661.72		601.3917227.14		593.32	
17323.32	586.0917661.97	584.0617749.35		576.8817886.84		567.4718384.01		567.47	
18520.38	571.4118651.12	593.32	18736.7	608.8218755.03		610.9918985.06		625.7	
19409.67	631.719829.67	632.2221867.56		626.721978.35		626.7	22199.8	627.68	
22537.46	625.8223489.21	630.0223737.56		636.6825354.41		643.3425723.36		646.5	
26131.67	651.0926759.29	666.08	26975.4	666.66	28050.7	666.66	28663.7	663.32	
28927.91	663.3228481.75	656.6629711.09		652.7929876.61		650.53	30011.7	644.31	
30155.09	644.7730438.77	652.3430749.18		654.9931808.67		670.6532449.57		674.06	
33383.49	702.4233521.15	703.1534116.48		686.2834149.96		686.4635687.57		721.36	
36694.21	723.9136884.72	728.1237224.24		743.2537264.24		744.2437560.04		748.26	
37880.03	759.5638032.58	763.36	38779.7	79039451.12		794.4339789.71		800	

Manning's n Values num= 3

Sta	n Val	Sta	n Val
0	.1517227.14	.1518651.12	.15

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

17227.1418651.12	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507692.00	261695.90	1830293.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507692.00	261695.90	1830293.00
Q Total (cfs)	6730000.00	Flow (cfs)	2710160.00	728941.80	3290899.00
Top Width (ft)	36501.82	Top Width (ft)	15841.51	1423.98	19236.33
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.80	2.79	1.80
Max Chl Dpth (ft)	192.27	Hydr. Depth (ft)	95.17	183.78	95.15
Conv. Total (cfs)	772660400.0	Conv. (cfs)	311149000.0	83688620.0	377822800.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15855.69	1426.75	19240.88
Min Ch El (ft)	567.47	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.81	2.42	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	75189.34	14124.42	90645.50
C & E Loss (ft)	0.00	Cum SA (acres)	630.07	64.35	731.00

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274940.*

INPUT
Description:
Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800.198.45	791.52	645.67	774.11	1360.29	760.93	1540.11	752.62	
1827.29	745.81995.71	743.33	2347.89	743.33	2684.09	741.52	3587.06	724.33	
3659.27	720.43751.04	716.67	3762.42	716.48	3965.19	716.38	4146.08	713.33	
4289.86	710.114444.23	705.62	4821.57	696.42	5281.45	690.1	5623.7	687.69	
5770.97	686.215931.23	679.05	6000.17	672.17	6365.4	671.06	6717.26	674.74	
6859.2	676.667080.95	663.32	7248.66	656.65	7320.4	649.98	7369.78	649.98	
7521.32	654.647740.5	664.7	7803.95	665.26	7934.39	669.07	8300.55	667.73	
8348.81	671.48504.59	681.11	8799.94	670.54	8814.13	669.02	8988.15	656.17	
9127.9	655.769384.12	668.33	9560.21	667.81	9744.69	653.92	9932.31	649.79	
10077.65	640.3610095.01	640.0310185.39		626.6910354.96		606.6810412.72		606.68	
10455.06	612.7610582.82	641.1110691.3		656.6911082.13		651.0111241.54		645.37	
11297.8	641.2211512.29	638.1111766.64		641.0712069.29		636.6812709.37		630.01	
14183.49	630.0114426.11	626.6815049.81		626.6815529.64		633.35	15590.2	640.02	
15886.54	635.2115893.57	631.7716001.08		629.7516665.39		601.4217230.93		593.34	
17327.25	586.117666.39	584.0817753.89		576.8917891.58		567.4718388.99		567.47	
18525.53	571.4118656.44	593.3418742.01		608.8218760.34		610.9818990.34		625.66	
19414.9	631.6619834.86	632.1821872.12		626.6521983.29		626.6522204.72		627.63	
22542.34	625.7923493.98	629.99	23742.3	636.6625358.97		643.3325727.88		646.5	
26136.14	651.0926763.69	666.126979.78		666.6728054.96		666.6728667.89		663.34	
28932.07	663.3429485.85	656.6729715.16		652.829880.67		650.5330015.73		644.29	
30159.12	644.7530442.76	652.3330753.14		654.9831812.51		670.6232453.33		674.04	
33387.14	702.3333524.79	703.0634120.05		686.2634153.54		686.4435690.96		721.27	
36697.49	723.8436887.98	728.0637227.47		743.1837267.46		744.1737563.23		748.22	
37883.18	759.5238035.71	763.3238782.75		79039454.09		794.4339792.64		800	

Manning's n Values num= 3

Sta	n Val	Sta	n Val
0	.1517230.93	.1518656.44	.15

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

17230.9318656.44	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507690.00	261962.80	1830632.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507690.00	261962.80	1830632.00
Q Total (cfs)	6730000.00	Flow (cfs)	2709193.00	729507.30	3291300.00

Top width (ft)	36506.24	Top width (ft)	15844.99	1425.51	19235.75
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.80	2.78	1.80
Max Chl Dpth (ft)	192.27	Hydr. Depth (ft)	95.15	183.77	95.17
Conv. Total (cfs)	772820800.0	Conv. (cfs)	311102600.0	83770940.0	377947200.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15859.18	1428.29	19240.29
Min Ch El (ft)	567.47	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.81	2.42	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	75016.28	14094.36	90435.39
C & E Loss (ft)	0.00	Cum SA (acres)	628.25	64.19	728.79

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274937.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	198.5	791.52	645.81
1827.69	745.79	1996.15	743.32	2348.41
3660.08	720.42	3751.87	716.68	3763.24
4290.8	710.1	4445.21	705.61	4822.63
5772.24	686.19	5932.53	679.03	6001.49
6860.71	676.64	7082.51	663.28	7250.25
7522.97	654.58	7742.2	664.65	7805.67
8350.65	671.42	8506.46	681.16	8801.88
9129.91	655.83	9386.19	668.43	9562.32
10079.87	640.45	10097.23	640.12	10187.63
10457.37	612.81	10585.15	641.15	10693.66
11300.29	641.31	11514.83	638.18	11769.23
14186.61	630.04	14429.29	626.72	15053.12
15890.04	635.26	15897.07	631.83	16004.6
17331.18	586.11	17670.8	584.11	17758.42
18530.68	571.41	18661.76	593.36	18747.31
19420.13	631.63	19840.04	632.14	19877.07
22547.22	625.75	22349.76	629.96	23747.05
26140.61	651.08	26768.09	666.11	26984.16
28936.22	663.36	29489.95	656.68	29719.23
30163.13	644.74	30446.75	652.33	30757.09
33390.8	702.24	33528.44	702.98	34123.62
36700.77	723.73	36891.25	727.99	37230.69
37886.33	759.47	38038.84	763.28	38785.79

Manning's n Values

Sta	n Val	Sta	n Val	Sta	n Val
0	.15	17234.72	.15	18661.76	.15

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	17234.	7218661.76		5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)	0.000076	Flow Area (sq ft)	1507694.00	262230.90	1830960.00
E.G. Slope (ft/ft)	6730000.00	Area (sq ft)	1507694.00	262230.90	1830960.00
Q Total (cfs)	36511.26	Flow (cfs)	15848.68	1427.04	19235.54
Top width (ft)	1.87	Top width (ft)	15848.68	1427.04	19235.54
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.80	2.78	1.80
Max Chl Dpth (ft)	192.27	Hydr. Depth (ft)	95.13	183.76	95.19
Conv. Total (cfs)	772972000.0	conv. (cfs)	311055300.0	83853890.0	378062800.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15862.88	1429.82	19240.08
Min Ch El (ft)	567.47	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.06	Stream Power (lb/ft s)	0.81	2.42	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	74843.22	14064.28	90225.24
C & E Loss (ft)	0.00	Cum SA (acres)	626.43	64.02	726.58

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274934.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	198.54	791.51	645.96
1828.1	745.78	1996.59	743.31	2348.93
3660.88	720.43	3752.69	716.69	3764.07
4291.75	710.08	4446.18	705.59	4823.69
5773.51	686.17	5933.84	679	6002.81
6862.22	676.62	7084.07	663.24	7251.85
7524.63	654.53	7743.91	664.59	7807.39
8352.49	671.44	8508.34	681.22	8803.82
9131.92	655.9	9388.25	668.52	9564.42
10082.09	640.54	10099.46	640.21	10189.87
10459.67	612.86	10587.48	641.21	10696.01
11302.77	641.38	11517.36	638.25	11771.82
14189.74	630.07	14432.46	626.76	15056.44
15893.54	635.31	15900.57	631.89	16008.13
17335.11	586.12	17675.21	584.12	17762.96
18535.83	571.41	18667.07	593.38	18752.62
19425.37	631.59	19845.23	632.12	1882.03
22552.1	625.72	223503.53	629.93	23751.79
26145.09	651.08	26772.5	666.12	26988.54
28940.38	663.38	29494.04	656.69	29723.3
30167.16	644.73	30450.74	652.32	30761.04
33394.46	702.16	33532.08	702.89	34127.2
36704.06	723.73	36894.51	727.93	37233.92
37889.48	759.47	38041.98	763.24	38788.84

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Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .1517238.52 .1518667.07 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17238.5218667.07 5 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507703.00	262500.70	1831299.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507703.00	262500.70	1831299.00
Q Total (cfs)	6730000.00	Flow (cfs)	2707296.00	730666.30	3292038.00
Top width (ft)	36515.72	Top width (ft)	15852.20	1428.55	19234.97
Vel total (ft/s)	1.87	Avg. Vel. (ft/s)	1.80	2.78	1.80
Max Chl Dpth (ft)	192.28	Hydr. Depth (ft)	95.11	183.75	95.21
Conv. Total (cfs)	773138200.0	Conv. (cfs)	311012400.0	83938480.0	378187300.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	15866.42	1431.33	19239.49
Min Ch El (ft)	567.46	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.81	2.41	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	74670.16	14034.16	90015.05
C & E Loss (ft)	0.00	Cum SA (acres)	624.61	63.86	724.37

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274931.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800.198.58	791.51	646.1	774.07	1361.19	760.92	1541.12	752.59	
1828.5	745.78 1997.03	743.3	2349.44	743.3	2685.86	741.48	3589.43	724.38	
3661.69	720.45 3753.52	716.7	3764.9	716.51	3967.81	716.37	4148.82	713.3	
4292.69	710.07 4447.16	705.57	4824.75	696.36	5284.94	690.05	5627.41	687.64	
5774.78	686.16 5935.14	678.97	6004.14	672.06	6369.6	670.96	6721.7	674.67	
6863.73	676.16 7085.63	663.2	7253.44	656.5	7325.23	649.8	7374.64	649.8	
7526.28	654.48 7745.61	664.54	7809.1	665.12	7939.63	668.99	8306.03	667.75	
8354.33	671.45 8510.21	681.28	8805.75	670.8	8819.96	669.29	8994.08	656.39	
9133.93	655.97 9390.32	668.62	9566.53	668.1	9751.13	654.15	9938.87	650.01	
10084.31	640.6310101.68	640.310192.11		626.910361.79		606.8	10419.6	606.8	
10461.97	612.9110589.81	641.2510698.36		656.911089.45		651.211248.96		645.57	
11305.26	641.4511519.89	638.3211774.41		641.2112077.26		636.812717.77		630.1	
14192.86	630.114435.64	626.815059.75		626.8	15539.9	633.5	15600.5	640.2	
15897.03	635.3715904.07	631.9516011.65		629.9316676.39		601.517242.31		593.4	
17339.04	586.1317679.63	584.13	17767.5	576.9217905.78		567.4618403.93		567.46	
18540.99	571.3918672.39	593.418757.93		608.8218776.25		610.9719006.18		625.55	
19430.6	631.5619850.41	632.0521886.98		626.521998.12		626.522219.47		627.48	
22556.98	625.68 23508.3	629.923756.53		636.625372.66		643.325741.44		646.48	
26149.56	651.08 26776.9	666.1326992.92		666.728067.73		666.728680.45		663.4	
28944.54	663.429498.14	656.729727.38		652.8129892.82		650.5330027.85		644.26	
30171.18	644.7130454.73	652.31	30765	654.9631824.01		670.5432464.62		673.97	
33398.11	702.0733535.72	702.8134130.77		686.234164.25		686.2335701.16		721.01	
36707.34	723.6336897.77	727.8737237.14		742.9737277.12		743.9737572.79		748.07	
37892.63	759.3838045.11	763.238791.89		79039463.01		794.4539801.45		800	

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .1517242.31 .1518672.39 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17242.3118672.39 5 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507702.00	262770.90	1831668.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507702.00	262770.90	1831668.00
Q Total (cfs)	6730000.00	Flow (cfs)	2706305.00	731239.60	3292456.00
Top width (ft)	36520.53	Top width (ft)	15855.71	1430.08	19234.74
Vel total (ft/s)	1.87	Avg. Vel. (ft/s)	1.79	2.78	1.80
Max Chl Dpth (ft)	192.28	Hydr. Depth (ft)	95.09	183.75	95.23
Conv. Total (cfs)	773306000.0	Conv. (cfs)	310966100.0	84022580.0	378317300.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	15869.94	1432.86	19239.26
Min Ch El (ft)	567.46	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.81	2.41	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	74497.09	14004.02	89804.83
C & E Loss (ft)	0.00	Cum SA (acres)	622.79	63.69	722.16

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274929.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800.198.63	791.5	646.24	774.06	1361.49	760.91	1541.46	752.59	
1828.9	745.77 1997.47	743.29	2349.96	743.29	2686.46	741.47	3590.22	724.39	
3662.49	720.47 3754.34	716.71	3765.73	716.52	3968.68	716.36	4149.73	713.29	
4293.64	710.05 4448.14	705.56	4825.81	696.34	5286.1	690.04	5628.65	687.62	
5776.06	686.14 5936.45	678.94	6005.46	672.03	6371.01	670.93	6723.18	674.65	
6865.24	676.58 7087.18	663.16	7255.04	656.45	7326.84	649.74	7376.27	649.74	
7527.94	654.42 7747.31	664.49	7810.82	665.08	7941.38	668.97	8307.86	667.75	
8356.17	671.47 8512.08	681.33	8807.69	670.89	8821.9	669.38	8996.06	656.46	

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9135.94	656.05	9392.38	668.71	9568.63	668.19	9753.27	654.23	9941.06	650.09
10086.52	640.72	10103.9	640.3910194.35	626.9710364.07	606.8410421.89	606.84			
10464.27	612.9610592.14	641.2910700.72	656.9711091.89	651.2611251.44	645.64				
11307.75	641.5311522.43	638.4	11777	641.2612079.92	636.8412720.56	630.13			
14195.98	630.1314438.82	626.8415063.06	626.8415543.31	633.5515603.93	640.26				
15900.53	635.4215907.57	632.0216015.17	63016680.06	601.52	17246.1	593.42			
17342.97	586.1417684.04	584.1517772.04	576.9317910.51	567.4618408.91	567.46				
18546.14	571.3918677.71	593.4218763.24	608.8218781.56	610.9719011.46	625.52				
19435.83	631.52	19855.6	632.0121891.94	626.4522003.06	626.4522224.38	627.43			
22561.86	625.6423513.07	629.8723761.28	636.5825377.22	643.2925745.96	646.48				
26154.04	651.07	26781.3	666.1426997.29	666.7128071.99	666.7128684.64	663.42			
28948.7	663.4229502.23	656.7129731.45	652.8129896.87	650.5230031.88	644.24				
30175.2	644.730458.71	652.3130768.95	654.9531827.84	670.5132468.38	673.94				
33401.77	701.9833539.36	702.7234134.35	686.1734167.82	686.3535704.55	720.92				
36710.62	723.5536901.04	727.8137240.36	742.937280.34	743.937575.97	748.02				
37895.78	759.3438048.24	763.1638794.94	79039465.98	794.4639804.39	800				

Manning's n Values					
Sta	n Val	Sta	n Val	Sta	n Val
0	.15	17246.1	.15	18677.71	.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	17246.1	18677.71		5	5		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507699.00	263037.80	1832037.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507699.00	263037.80	1832037.00
Q Total (cfs)	6730000.00	Flow (cfs)	2705290.00	731797.20	3292913.00
Top Width (ft)	36525.13	Top Width (ft)	15859.37	1431.61	19234.15
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.79	2.78	1.80
Max Chl Dpth (ft)	192.28	Hydr. Depth (ft)	95.07	183.74	95.25
Conv. Total (cfs)	773473990.0	conv. (cfs)	310869500.0	84104910.0	378452000.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15877.16	1435.91	19238.43
Min Ch El (ft)	567.46	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.81	2.41	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	74324.03	13973.84	89594.56
C & E Loss (ft)	0.00	Cum SA (acres)	620.97	63.53	719.96

CROSS SECTION
RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274926.*

INPUT Description:

Station Elevation Data num= 120											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	198.67	791.5	646.38	774.05	1361.78	760.91	1541.8	752.58		
1829.3	745.76	1997.91	743.28	2350.48	743.28	2687.05	741.46	3591.01	724.41		
3663.3	720.48	3755.17	716.72	3766.56	716.53	3969.55	716.36	4150.65	713.28		
4294.58	710.04	4449.12	705.54	4826.87	696.32	5287.26	690.02	5629.89	687.6		
5777.33	686.12	5937.75	678.92	6006.78	671.99	6372.41	670.9	6724.66	674.63		
6866.75	676.56	7088.74	663.12	7256.63	656.4	7328.45	649.68	7377.89	649.68		
7529.6	654.37	7749.02	664.44	7812.54	665.03	7943.12	668.94	8309.69	667.76		
8358	671.49	8513.95	681.39	8809.63	670.98	8823.84	669.47	8998.04	656.53		
9137.95	656.12	9394.45	668.81	9570.74	668.29	9755.42	654.31	9943.24	650.16		
10088.74	640.8110106.12	640.48	10196.6	627.0410366.35	606.8810424.18	606.88					
10466.57	613.0110594.47	641.3410703.07	657.041094.33	657.041094.33	651.3211253.91	645.71					
11310.23	641.6111524.96	638.4711779.59	641.3112082.58	636.8812723.36	630.16						
14199.1	630.1614441.99	626.8815066.38	626.8815546.73	633.615607.36	640.32						
15904.03	635.4715911.07	632.0816018.69	630.0616683.73	601.55	17249.9	593.44					
17346.9	586.1617688.46	584.1717776.58	576.9417915.25	567.4618413.89	567.46						
18551.29	571.3918683.02	593.4418768.54	608.8118786.87	610.9719016.74	625.48						
19441.06	631.4919860.78	631.9721896.89	626.4	22008	626.4	22229.3	627.39				
22566.73	625.6123517.84	629.8423766.02	636.5625381.78	643.2825750.48	646.47						
26138.51	651.0726785.71	666.1527001.67	666.7228076.25	666.7228688.83	663.44						
28952.86	663.4429506.33	656.7229735.52	652.8229900.93	650.5230035.92	644.23						
30179.22	644.68	30462.7	652.330772.91	654.9531831.68	670.4832472.14	673.92					
33405.43	701.9	33543	702.6434137.92	686.1534171.39	686.3335707.95	720.83					
36713.91	723.48	36904.3	727.7437243.59	742.8337283.56	743.8337579.16	747.98					
37898.93	759.2938051.38	763.1238797.99	79039468.96	794.4739807.32	800						

Manning's n Values					
Sta	n Val	Sta	n Val	Sta	n Val
0	.15	17249.9	.15	18683.02	.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	17249.9	18683.02		5	5		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507696.00	263298.30	1832365.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507696.00	263298.30	1832365.00
Q Total (cfs)	6730000.00	Flow (cfs)	2704358.00	732351.10	3293291.00
Top Width (ft)	36529.94	Top Width (ft)	15862.89	1433.12	19233.93
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.79	2.78	1.80
Max Chl Dpth (ft)	192.28	Hydr. Depth (ft)	95.05	183.72	95.27
Conv. Total (cfs)	773622500.0	conv. (cfs)	310869500.0	84184740.0	378568200.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15877.16	1435.91	19238.43
Min Ch El (ft)	567.46	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.81	2.41	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	74150.97	13943.63	89384.26
C & E Loss (ft)	0.00	Cum SA (acres)	619.15	63.37	717.75

CROSS SECTION
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SS_Rev3.rep

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274923.*

INPUT

Table with columns: Station, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains 120 rows of station elevation data.

Table with columns: Sta, n Val, Sta, n Val, Sta, n Val. Manning's n values for different station segments.

Table with columns: Bank Sta, Left, Right, Lengths, Left, Channel, Right, Coeff, Contr., Expan. Bank station data.

CROSS SECTION OUTPUT Profile #PF 1

Table with columns: E.G. Elev (ft), Vel Head (ft), W.S. Elev (ft), Crit W.S. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft), Vel Total (ft/s), Max chl Dpth (ft), Conv. Total (cfs), Length wtd. (ft), Min ch El (ft), Alpha, Frctn Loss (ft), C & E Loss (ft). Cross-section output data.

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274920.*

INPUT

Table with columns: Station, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains 120 rows of station elevation data.

Table with columns: Sta, n Val, Sta, n Val, Sta, n Val. Manning's n values for different station segments.

Table with columns: Bank Sta, Left, Right, Lengths, Left, Channel, Right, Coeff, Contr., Expan. Bank station data.

CROSS SECTION OUTPUT Profile #PF 1

Table with columns: E.G. Elev (ft), Vel Head (ft), W.S. Elev (ft). Cross-section output data.

		SS_Rev3.rep			
Crit w.s. (ft)		Flow Area (sq ft)	1507703.00	263836.40	1833055.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507703.00	263836.40	1833055.00
Q Total (cfs)	6730000.00	Flow (cfs)	2702439.00	733493.80	3294067.00
Top width (ft)	36539.16	Top Width (ft)	15869.91	1436.18	19233.08
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.79	2.78	1.80
Max chl Dpth (ft)	192.28	Hydr. Depth (ft)	95.00	183.71	95.31
Conv. Total (cfs)	773948800.0	Conv. (cfs)	310780000.0	84351660.0	378817100.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	15884.21	1438.97	19237.56
Min Ch El (ft)	567.46	Shear (lb/sq ft)	0.45	0.87	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.80	2.41	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	73804.84	13883.12	88963.53
C & E Loss (ft)	0.00	Cum SA (acres)	615.51	63.04	713.33

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274917.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	198.8	791.49	646.81	774.01	1362.68	760.9	1542.82	752.55
1830.51	745.75	1999.22	743.25	2352.03	743.25	2688.82	741.42	3593.38	724.46
3665.72	720.53	3757.65	716.75	3769.04	716.56	3972.17	716.34	4153.38	713.25
4297.41	709.99	4452.05	705.49	4830.06	696.26	5290.75	689.98	5633.6	687.55
5781.14	686.06	5941.67	678.84	6010.74	671.88	6376.61	670.8	6729.09	674.56
6871.28	676.5	7093.42	663	7261.42	656.25	7333.29	649.5	7382.76	649.5
7534.56	654.21	7754.13	664.28	7817.69	664.89	7948.36	668.86	8315.17	667.78
8363.52	671.54	8519.57	681.56	8815.44	671.25	8829.66	669.73	9003.98	656.74
9143.98	656.34	9400.65	669.09	9577.05	668.58	9761.85	654.55	9949.8	650.38
10095.4	641.08	10112.79	640.75	10203.32	627.25	10373.19	607	10431.06	607
10473.48	613.16	10601.46	641.48	10710.13	657.25	11101.65	651.5	111261.33	645.91
11317.69	641.84	11532.57	638.69	11787.36	641.45	12090.55	637	12731.75	630.25
14208.47	630.25	14451.52	627	15076.32	627	15556.99	633.75	15617.66	640.5
15914.52	635.63	15921.56	632.27	16029.26	630.24	16694.73	601.62	17261.28	593.5
17358.69	586.19	17701.7	584.22	17790.19	576.96	17929.45	567.46	18428.82	567.46
18566.74	571.37	18698.97	593.51	18784.47	608.81	18802.78	610.96	19032.58	625.37
19456.76	631.36	19876.33	631.85	19911.75	626.25	2022.83	626.25	22244.05	627.24
22581.37	625.52	23532.16	629.75	23780.25	636.52	25395.47	643.25	25764.04	646.45
26171.93	651.06	26798.92	666.19	27014.81	666.75	28089.02	666.75	28701.4	663.5
28965.34	663.52	29518.62	656.75	29747.73	652.83	29913.08	650.52	30048.03	644.19
30191.28	644.64	30474.67	652.28	30784.77	654.92	31843.18	670.39	32483.43	673.85
33416.4	701.64	33553.93	702.38	34148.64	686.09	34182.1	686.27	35718.14	720.57
36723.76	723.27	36914.09	727.55	37253.26	742.62	37293.22	743.62	37588.72	747.83
37908.38	759.15	38060.77	763	38807.14	790	39477.88	794.49	39816.12	800

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1517261.28		.1518698.97		.15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17261.2818698.97 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

		Element			Left OB	Channel	Right OB
E.G. Elev (ft)	759.80	wt. n-val.	0.150	0.150	0.150	0.150	
Vel Head (ft)	0.06	Reach Len. (ft)	5.00	5.00	5.00	5.00	
W.S. Elev (ft)	759.74	Flow Area (sq ft)	1507707.00	264101.10	1833402.00	1833402.00	
Crit w.s. (ft)		Area (sq ft)	1507707.00	264101.10	1833402.00	1833402.00	
E.G. Slope (ft/ft)	0.000076	Flow (cfs)	2701478.00	734055.80	3294466.00	3294466.00	
Q Total (cfs)	6730000.00	Top width (ft)	15873.61	1437.69	19232.82	19232.82	
Top width (ft)	36544.12	Avg. Vel. (ft/s)	1.79	2.78	1.80	1.80	
Vel Total (ft/s)	1.87	Hydr. Depth (ft)	94.98	183.70	95.33	95.33	
Max chl Dpth (ft)	192.28	Conv. (cfs)	310732900.0	84433500.0	378940300.0	378940300.0	
Conv. Total (cfs)	774106700.0	Wetted Per. (ft)	15887.92	1440.49	19237.30	19237.30	
Length wtd. (ft)	5.00	Shear (lb/sq ft)	0.45	0.87	0.45	0.45	
Min Ch El (ft)	567.46	Stream Power (lb/ft s)	0.80	2.40	0.81	0.81	
Alpha	1.07	Cum Volume (acre-ft)	73631.78	13852.82	88753.11	88753.11	
Frctn Loss (ft)	0.00	Cum SA (acres)	613.68	62.87	711.13	711.13	
C & E Loss (ft)	0.00						

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274914.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	198.85	791.48	646.95	774	1362.98	760.9	1543.16	752.55
1830.91	745.74	1999.66	743.24	2352.55	743.24	2689.41	741.41	3594.17	724.48
3666.52	720.54	3758.47	716.76	3769.87	716.57	3973.04	716.34	4154.3	713.24
4298.36	709.98	4453.03	705.47	4831.12	696.25	5291.91	689.97	5634.84	687.53
5782.41	686.04	5942.98	678.81	6012.06	671.84	6378.01	670.76	6730.57	674.54
6872.79	676.48	7094.98	662.96	7263.02	656.2	7334.9	649.44	7384.38	649.44
7536.22	654.16	7755.83	664.22	7819.41	664.85	7950.11	668.83	8316.99	667.79
8365.35	671.56	8521.44	681.62	8817.38	671.33	8831.6	669.82	9005.95	656.82
9145.99	656.41	9402.71	669.19	9579.15	668.68	9764	654.62	9951.99	650.46
10097.62	641.17	10115.01	640.84	10205.57	627.32	10375.47	607.04	10433.35	607.04
10475.78	613.21	10603.79	641.53	10712.48	657.32	11104.09	651.57	11263.81	645.98
11320.18	641.91	11535.1	638.76	11789.95	641.49	12093.2	637.04	12734.55	630.28
14211.59	630.28	14454.69	627.04	15079.63	627.04	15560.41	633.81	15621.09	640.56
15918.01	635.68	15925.06	632.33	16032.78	630.3	16698.4	601.65	17265.07	593.52
17362.62	586.21	17706.11	584.24	17794.73	576.97	17934.18	567.46	18433.8	567.46
18571.89	571.37	18704.29	593.52	18789.77	608.81	18808.09	610.96	19037.86	625.34
19461.99	631.35	19881.52	631.82	19916.71	626.22	2027.77	626.22	2248.97	627.19
22586.25	625.46	23536.93	629.72	23785	636.48	24500.03	643.24	25768.56	646.45
26176.41	651.06	26803.32	666.22	27019.19	666.76	28093.28	666.76	28705.58	663.52
28969.5	663.52	29522.72	656.76	29751.8	652.83	29917.13	650.52	30052.07	644.18
30195.3	644.63	30478.66	652.27	30788.72	654.92	31847.02	670.36	32487.19	673.82

33420.05	701.5533557.57	702.334152.22	686.0734185.67	686.2535721.54	720.48
36727.04	723.236917.35	727.4937256.48	742.5537296.44	743.5637591.91	747.79
37911.53	759.1138063.91	762.9638810.18	79039480.85	794.4939819.06	800

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Manning's n Values			num=	3
Sta	n Val	Sta	n Val	Sta
0	.1517265.07	.1518704.29	.15	

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
17265.07	18704.29	5	5	5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507700.00	264367.20	1833750.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507700.00	264367.20	1833750.00
Q Total (cfs)	6730000.00	Flow (cfs)	2700499.00	734615.30	3294886.00
Top width (ft)	36548.52	Top width (ft)	15877.08	1439.22	19232.22
Vel Total (ft/s)	1.87	Avg. vel. (ft/s)	1.79	2.78	1.80
Max chl Dpth (ft)	192.28	Hydr. Depth (ft)	94.96	183.68	95.35
Conv. Total (cfs)	774268600.0	Conv. (cfs)	310685200.0	84515540.0	379067800.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	15891.41	1442.02	19236.70
Min Ch El (ft)	567.46	Shear (lb/sq ft)	0.45	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.80	2.40	0.81
Frctn Loss (ft)	0.00	Cum volume (acre-ft)	73458.72	13822.49	88542.64
C & E Loss (ft)	0.00	Cum SA (acres)	611.86	62.71	708.92

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274911.*

INPUT

Description:			num=	120
Station	Elevation	Data	Elev	Sta
0	800	198.93	791.48	647.09
1831.31	745.73	2000.1	743.23	2353.06
3667.33	720.56	3759.3	716.77	3770.7
4299.3	709.97	4454.01	705.45	4832.18
5783.68	686.03	5944.28	678.78	6013.38
6874.3	676.46	7096.54	662.92	7264.61
7537.87	654.11	7757.54	664.17	7821.13
8367.19	671.57	8523.31	681.67	8819.31
9148	656.48	9404.78	669.28	9581.26
10099.83	641.27	10117.23	640.93	10207.81
10478.08	613.25	10606.12	641.57	10714.84
11322.67	641.99	11537.63	638.83	11792.54
14214.71	630.31	114457.87	627.08	115082.94
15921.51	635.74	15928.56	632.39	16036.3
17366.55	586.21	17710.52	584.26	17799.27
18577.05	571.36	18709.61	593.54	18795.08
19467.22	631.31	19886.7	631.76	1921.66
22591.13	625.43	23541.7	629.69	23789.74
26180.88	651.05	26807.72	666.21	27023.57
28973.66	663.54	29526.81	656.77	29755.87
30199.32	644.61	30482.65	652.26	30792.68
33423.71	701.46	33561.21	702.21	34155.79
36730.33	723.12	36920.61	727.43	37259.71
37914.68	759.06	38067.04	762.92	38813.23
			79039483.82	
			794.5	39822

Manning's n Values			num=	3
Sta	n Val	Sta	n Val	Sta
0	.1517268.86	.1518709.61	.15	

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
17268.86	18709.61	5	5	5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507708.00	264635.30	1834111.00
E.G. Slope (ft/ft)	0.000076	Area (sq ft)	1507708.00	264635.30	1834111.00
Q Total (cfs)	6730000.00	Flow (cfs)	2699537.00	735176.50	3295287.00
Top width (ft)	36553.28	Top width (ft)	15880.59	1440.75	19231.94
Vel Total (ft/s)	1.87	Avg. vel. (ft/s)	1.79	2.78	1.80
Max chl Dpth (ft)	192.28	Hydr. Depth (ft)	94.94	183.68	95.37
Conv. Total (cfs)	774436600.0	Conv. (cfs)	310642000.0	84598460.0	379196200.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	15894.93	1443.55	19236.40
Min Ch El (ft)	567.46	Shear (lb/sq ft)	0.45	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.80	2.40	0.81
Frctn Loss (ft)	0.00	Cum volume (acre-ft)	73285.66	13792.13	88332.13
C & E Loss (ft)	0.00	Cum SA (acres)	610.04	62.54	706.71

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274908.*

INPUT

Description:			num=	120
Station	Elevation	Data	Elev	Sta
0	800	198.93	791.47	647.23
1831.72	745.73	2000.54	743.22	2353.58
3668.13	720.57	3760.12	716.78	3771.53
4300.25	709.95	4454.99	705.44	4833.24
5784.95	686.01	5945.59	678.75	6014.7
			671.77	6380.81
			670.7	6733.53

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6875.81	676.44	7098.1	662.88	7266.21	656.1	7338.12	649.32	7387.62	649.32
7539.53	654.05	7759.24	664.12	7822.85	664.76	7953.6	668.77	8320.65	667.8
8369.03	671.59	8525.19	681.73	8821.25	671.51	8835.48	670.9009	91	656.96
9150	656.56	9406.84	669.38	9583.36	668.87	9768.29	654.78	9956.36	650.61
10102.05	641.3610119	46	641.0210210	05	627.4610380	03	607.1210437	94	607.12
10480.38	613.310608	45	641.6210717	19	657.4611108	97	651.6911268	76	646.12
11325.16	642.0711540	17	638.911795	13	641.5912098	52	637.1212740	15	630.34
14217.83	630.3414461	04	627.1215086	25	627.1215567	24	633.915627	95	640.68
15925.01	635.7915932	06	632.4516039	83	630.4216705	74	601.717272	65	593.56
17370.48	586.2317714	93	584.28	17803.8	576.9917943	65	567.4518443	76	567.45
18582.2	571.3618714	93	593.5618800	39	608.8	18818.7	610.9519048	41	625.26
19472.45	631.2819891	88	631.7221926	62	626.122037	65	626.1	22258.8	627.09
22596.01	625.3923546	47	629.6623794	48	636.4425409	15	643.22	25777.6	646.44
26185.35	651.0526812	13	666.2227027	95	666.7828101	79	666.7828713	96	663.56
28977.81	663.5629530	91	656.7829759	94	652.8429925	24	650.5130060	14	644.15
30203.34	644.630486	63	652.2630796	63	654.931854	69	670.332494	72	673.78
33427.37	701.3833564	85	702.1234159	37	686.0334192	81	686.2135728	34	720.3
36733.61	723.0536923	87	727.3737262	93	742.4137302	88	743.4237598	28	747.69
37917.83	759.0238070	17	762.8838816	28	790	39486.8	794.5139824	93	800

Manning's n Values

Sta	n Val	Sta	num=	3
0	.1517272.65	.1518714.93	n Val	n Val
				.15

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

17272.65	17272.65	17272.65	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507709.00	264906.00	1834451.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507709.00	264906.00	1834451.00
Q Total (cfs)	6730000.00	Flow (cfs)	2698557.00	735756.00	3295687.00
Top width (ft)	36557.89	Top width (ft)	15884.28	1442.28	19231.33
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.79	2.78	1.80
Max chl Dpth (ft)	192.29	Hydr. Depth (ft)	94.92	183.67	95.39
Conv. Total (cfs)	774598400.0	Conv. (cfs)	310548600.0	84682820.0	379321600.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15898.65	1445.08	19235.79
Min ch El (ft)	567.45	Shear (lb/sq ft)	0.45	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.80	2.40	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	73112.59	13761.74	88121.59
C & E Loss (ft)	0.00	Cum SA (acres)	608.22	62.38	704.50

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274905.*

INPUT

Description:

Station	Elevation	Data	num=	120					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	198.98	791.47	647.38	773.96	1363.88	760.89	1544.17	752.52
1832.12	745.72	2000.98	743.21	2354.1	743.21	2691.18	741.37	3596.54	724.53
3668.94	720.59	3760.95	716.79	3772.36	716.59	3975.66	716.32	4157.03	713.21
4301.19	709.94	4455.97	705.42	4834.3	696.19	5295.4	689.92	5638.55	687.47
5786.22	685.99	5946.89	678.73	6016.02	671.73	6382.21	670.66	6735.01	674.47
6877.32	676.42	7099.65	662.84	7267.8	656.05	7339.73	649.26	7389.25	649.26
7541.19	654	7760.94	664.07	7824.57	664.71	7955.35	668.75	8322.48	667.81
8370.87	671.61	8527.06	681.79	8823.19	671.6	8837.42	670.09	9011.89	657.03
9152.01	656.63	9408.91	669.47	9585.47	668.97	9770.43	654.86	9958.55	650.68
10104.27	641.45	10121.68	641.11	110212.29	627.53	10382.31	607.16	10440.23	607.16
10482.68	613.35	10610.78	641.67	10719.54	657.53	11111.41	651.75	11271.23	646.19
11327.64	642.14	11542.7	638.97	11797.72	641.63	12101.17	637.16	12742.94	630.37
14220.96	630.37	14464.2	627.16	15089.57	627.16	151570.66	633.95	15631.38	640.74
15928.51	635.84	15935.56	632.52	16043.35	630.48	16709.41	601.73	17276.45	593.58
17374.41	586.24	17719.35	584.29	17808.34	577.17	17948.39	567.45	18448.74	567.45
18587.35	571.36	18720.24	593.58	18805.7	608.8	18824	610.95	19053.69	625.23
19477.68	631.24	19897.07	631.68	19931.57	626.05	22042.6	626.05	22263.72	627.05
22600.89	625.35	23551.25	629.63	23799.23	636.42	25413.71	643.21	25782.12	646.43
26189.83	651.05	26816.53	666.24	27032.33	666.79	28106.05	666.79	28718.15	663.58
28981.97	663.58	29535.01	656.79	29764.01	652.85	29929.29	650.51	30064.18	644.14
30207.36	644.58	30490.62	652.25	30800.58	654.89	31858.52	670.27	32498.48	673.75
33431.03	701.29	33568.49	702.04	34162.94	686.01	34196.38	686.19	35731.73	720.22
36736.89	722.98	36927.13	727.33	37266.16	742.34	37306.1	743.35	37601.46	747.64
37920.98	758.97	38073.3	762.84	38819.33	790	39489.77	794.51	39827.86	800

Manning's n Values

Sta	n Val	Sta	num=	3
0	.1517276.45	.1518720.24	n Val	n Val
				.15

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

17276.45	17276.45	17276.45	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507711.00	265171.40	1834792.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507711.00	265171.40	1834792.00
Q Total (cfs)	6730000.00	Flow (cfs)	2697611.00	736320.50	3296068.00
Top width (ft)	36562.64	Top width (ft)	15887.80	1443.79	19231.05
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.79	2.78	1.80
Max chl Dpth (ft)	192.29	Hydr. Depth (ft)	94.90	183.66	95.41
Conv. Total (cfs)	774756600.0	Conv. (cfs)	310548600.0	84765100.0	379442900.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15902.18	1446.59	19235.50
Min ch El (ft)	567.45	Shear (lb/sq ft)	0.45	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.80	2.40	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	72939.53	13731.32	87911.00
C & E Loss (ft)	0.00	Cum SA (acres)	606.39	62.21	702.30

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CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274902.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.02	791.46	647.52	773.95	1364.18	760.89	1544.51	752.51
1832.52	745.71	2001.42	743.2	2354.61	743.2	2691.77	741.36	3597.32	724.55
3669.74	720.61	3761.77	716.8	3773.18	716.6	3976.54	716.31	4157.95	713.2
4302.13	709.92	4456.96	705.4	4835.37	696.17	5296.56	689.91	5639.79	687.45
5787.49	685.97	5948.2	678.7	6017.34	671.7	6383.62	670.63	6736.48	674.45
6878.83	676.4	7101.21	662.8	7269.4	656	7341.35	649.2	7390.87	649.2
7542.84	653.95	7762.65	664.01	7826.28	664.66	7957.1	668.72	8324.3	667.82
8372.71	671.63	8528.93	681.84	8825.12	671.69	8839.36	670.17	9013.87	657.1
9154.02	656.7	9410.98	669.57	9587.57	669.06	9772.58	654.94	9960.73	650.76
10106.49	641.54	10123.9	641.21	10214.53	627.61	10384.59	607.21	10442.52	607.2
10484.98	613.41	10613.11	641.71	10721.9	657.61	11113.85	651.81	11273.71	646.25
11330.13	642.22	11545.24	639.05	11800.31	641.68	12103.83	637.21	12745.74	630.4
14224.08	630.4	14467.4	627.21	15092.88	627.21	15574.08	63415634.81	640.8	640.8
15932	635.91	15939.06	632.58	16046.87	630.54	16713.08	601.75	17280.24	593.6
17378.34	586.25	17723.76	584.31	17812.88	577.01	17953.12	567.45	18453.72	567.45
18592.5	571.35	18725.56	593.6	18811	608.81	18829.31	610.94	19058.97	625.19
19482.91	631.21	19902.25	631.64	21936.53	6262	2047.54	6262	2268.64	627
22605.77	625.32	23556.02	629.62	23803.97	636.42	25418.28	643.22	25786.64	646.43
26194.3	651.04	26820.93	666.25	27036.71	666.82	28110.31	666.82	28722.34	663.6
28986.13	663.6	29539.1	656.82	29768.08	652.85	29933.34	650.51	30068.21	644.13
30211.38	644.57	30494.61	652.24	30804.54	654.89	31862.35	670.25	32502.24	673.73
33434.68	701.21	33572.13	701.95	34166.52	685.99	34199.95	686.17	35735.13	720.13
36740.18	722.91	36930.39	727.24	37269.38	742.27	37309.32	743.28	37604.65	747.6
37924.13	758.92	38076.44	762.83	38822.38	790	39492.74	794.52	39830.8	800

Manning's n Values num= 3

Sta	n Val	Sta	n Val
0	.1517280.24		.1518725.56
			.15

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

17280.24	18725.56	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507712.00	265439.10	1835115.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507712.00	265439.10	1835115.00
Q Total (cfs)	6730000.00	Flow (cfs)	2696684.00	736894.30	3296422.00
Top Width (ft)	36567.38	Top width (ft)	15891.31	1445.32	19230.75
Vel Total (ft/s)	1.87	Avg. Vel. (ft/s)	1.79	2.78	1.80
Max Chl Dpth (ft)	192.29	Hydr. Depth (ft)	94.88	183.65	95.43
Conv. Total (cfs)	774909200.0	Conv. (cfs)	310503000.0	84847860.0	379558300.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15905.70	1448.13	19235.18
Min Ch El (ft)	567.45	Shear (lb/sq ft)	0.45	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.80	2.40	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	72766.47	13700.87	87700.38
C & E Loss (ft)	0.00	Cum SA (acres)	604.57	62.04	700.09

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274899.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.06	791.46	647.66	773.93	1364.48	760.89	1544.85	752.51
1832.92	745.71	2001.86	743.19	2355.13	743.19	2692.36	741.34	3598.11	724.56
3670.55	720.62	3762.6	716.81	3774.01	716.61	3977.41	716.31	4158.86	713.19
4303.08	709.91	4457.92	705.39	4836.43	696.15	5297.72	689.89	5641.03	687.44
5788.76	685.95	5949.51	678.67	6018.66	671.66	6385.02	670.6	6737.96	674.42
6880.34	676.38	7102.77	662.76	7270.99	655.95	7342.96	649.14	7392.49	649.14
7544.5	653.89	7764.35	663.96	7828	664.62	7958.84	668.69	8326.13	667.82
8374.54	671.64	8530.8	681.9	8827.06	671.78	8841.3	670.26	9015.85	657.17
9156.03	656.77	9413.04	669.66	9589.68	669.16	9774.72	655.02	9962.92	650.83
10108.71	641.63	10126.12	641.29	10216.78	627.67	10386.87	607.24	10444.81	607.24
10487.29	613.45	10615.44	641.76	10724.25	657.67	11116.29	651.88	11276.18	646.32
11332.62	642.31	11547.77	639.12	11802.9	641.73	12106.49	637.24	12748.54	630.43
14227.2	630.43	14470.57	627.24	15096.19	627.24	15577.5	634.05	15638.25	640.86
15935.5	635.91	15942.55	632.64	16050.39	630.61	16716.75	601.78	17284.03	593.62
17382.27	586.26	17728.17	584.33	17817.42	577.02	17957.85	567.45	18458.7	567.45
18597.65	571.35	18730.88	593.62	18816.31	608.81	18834.61	610.94	19064.25	625.15
19488.14	631.17	19907.44	631.62	19941.48	625.95	22052.48	625.95	22273.56	626.95
22610.65	625.28	23560.79	629.57	23808.72	636.38	25422.84	643.19	25791.16	646.42
26198.78	651.04	26825.34	666.26	27041.08	666.81	28114.57	666.81	28726.53	663.62
28990.29	663.62	29543.2	656.81	29772.15	652.85	29937.39	650.51	30072.25	644.11
30215.4	644.55	30498.6	652.24	30808.49	654.88	31866.19	670.22	32506	673.71
33438.34	701.21	33575.77	701.87	34170.09	685.97	34203.52	686.15	35738.53	720.04
36743.46	722.84	36933.66	727.18	37272.61	742.19	37312.54	743.21	37607.84	747.55
37927.28	758.88	38079.57	762.76	38825.43	790	39495.71	794.53	39833.73	800

Manning's n Values num= 3

Sta	n Val	Sta	n Val
0	.1517284.03		.1518730.88
			.15

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

17284.03	18730.88	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

		SS_Rev3.rep			
E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507713.00	265705.70	1835468.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507713.00	265705.70	1835468.00
Q Total (cfs)	6730000.00	Flow (cfs)	2695713.00	737448.90	3296838.00
Top width (ft)	36571.76	Top width (ft)	15894.78	1446.85	19230.13
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.79	2.78	1.80
Max chl Dpth (ft)	192.29	Hydr. Depth (ft)	94.86	183.64	95.45
Conv. Total (cfs)	775076300.0	Conv. (cfs)	310458100.0	84930040.0	379688100.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	15909.19	1449.66	19234.55
Min ch El (ft)	567.45	Shear (lb/sq ft)	0.45	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.80	2.39	0.81
Frctn Loss (ft)	0.00	Cum volume (acre-ft)	72593.41	13670.38	87489.71
C & E Loss (ft)	0.00	Cum SA (acres)	602.74	61.88	697.88

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274896.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.11	791.45	647.8	773.92	1364.78	760.88	1545.19	752.5
1833.33	745.7	2002.3	743.18	2355.65	743.18	2692.95	741.33	3598.9	724.58
3671.36	720.64	3762.3	716.82	3774.84	716.62	3978.28	716.3	4159.77	713.18
4304.02	709.89	4458.9	705.37	4837.49	696.13	5298.89	689.88	5642.27	687.42
5790.03	685.93	5950.81	678.65	6019.98	671.63	6386.42	670.56	6739.44	674.4
6883.9	676.36	7104.33	662.72	7272.99	655.9	7344.57	649.08	7394.11	649.08
7546.15	653.84	7766.06	663.91	7829.72	664.57	7960.59	668.67	8327.96	667.83
8376.38	671.66	8532.67	681.96	8829	671.86	8843.24	670.35	9017.83	657.25
9158.04	656.85	9415.11	669.76	9591.78	669.26	9776.87	655.09	9965.11	650.91
10110.93	641.72	10128.34	641.38	10219.02	627.74	10389.15	607.28	10447.1	607.28
10489.59	613.51	10617.77	641.81	10726.6	657.74	11118.73	651.94	11278.66	646.39
11335.1	642.37	11550.3	639.19	11805.49	641.77	12109.14	637.28	12175.1	630.46
14230.32	630.46	14473.75	627.28	15099.51	627.28	15580.92	634.11	15641.68	640.92
15939	636.15	15946.05	632.71	16053.92	630.66	16720.41	601.81	17287.83	593.64
17386.2	586.27	17732.59	584.35	17821.96	577.03	17962.59	567.45	18463.68	567.45
18602.8	571.34	18736.19	593.64	18821.62	608.81	18839.92	610.94	19069.53	625.12
19493.38	631.14	19912.62	631.55	21946.44	625.92	22057.42	625.92	2278.47	626.9
22615.53	625.24	2323565.56	629.54	23813.46	636.36	25427.4	643.18	25795.68	646.42
26203.25	651.04	26829.74	666.27	27045.46	666.82	28118.83	666.82	28730.72	663.64
28994.45	663.64	29547.3	656.82	29776.22	652.86	29941.45	650.51	30076.29	644.1
30219.43	644.54	30502.59	652.23	30812.44	654.87	31870.02	670.19	32509.77	673.68
33442	701.03	33579.41	701.78	34173.66	685.95	34207.09	686.13	35741.93	719.95
36746.75	722.77	36936.92	727.11	37275.83	742.12	37315.75	743.14	37611.02	747.5
37930.43	758.83	38082.7	762.72	38828.48	79039	498.69	794.53	39836.67	800

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1517287.83				
			.1518736.19		.15

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	17287.83	18736.19		5	5	5	.1		.3

CROSS SECTION OUTPUT Profile #PF 1

		SS_Rev3.rep			
E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507715.00	265969.50	1835834.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507715.00	265969.50	1835834.00
Q Total (cfs)	6730000.00	Flow (cfs)	2694728.00	738000.30	3297272.00
Top width (ft)	36576.66	Top width (ft)	15898.48	1448.36	19229.82
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.79	2.77	1.80
Max chl Dpth (ft)	192.29	Hydr. Depth (ft)	94.83	183.64	95.47
Conv. Total (cfs)	775240400.0	Conv. (cfs)	310410400.0	85011540.0	379818400.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	15912.91	1451.17	19234.24
Min ch El (ft)	567.45	Shear (lb/sq ft)	0.45	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.80	2.39	0.81
Frctn Loss (ft)	0.00	Cum volume (acre-ft)	72420.34	13639.87	87279.01
C & E Loss (ft)	0.00	Cum SA (acres)	600.92	61.71	695.67

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274894.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.15	791.45	647.94	773.91	1365.08	760.88	1545.53	752.49
1833.73	745.69	2002.74	743.17	2356.16	743.17	2693.55	741.32	3599.69	724.6
3672.16	720.65	3764.25	716.83	3775.67	716.63	3979.15	716.3	4160.68	713.17
4304.97	709.88	4459.88	705.35	4838.55	696.11	5300.05	689.86	5643.51	687.4
5791.3	685.91	5952.12	678.62	6021.31	671.59	6387.82	670.53	6740.92	674.38
6883.36	676.34	7105.89	662.68	7274.19	655.85	7346.18	649.02	7395.73	649.02
7547.81	653.79	7767.67	663.85	7831.44	664.53	7962.33	668.64	8329.78	667.84
8378.22	671.68	8534.55	682.01	8830.94	671.95	8845.18	670.44	9019.8	657.32
9160.05	656.92	9417.17	669.85	9593.88	669.35	9779.01	655.17	9967.29	650.98
10113.14	641.81	10130.57	641.47	10221.26	627.81	10391.43	607.32	10449.4	607.32
10491.89	613.55	10620.1	641.85	10728.96	657.81	11121.17	652.11	11281.13	646.46
11337.59	642.45	11552.84	639.26	11808.08	641.82	12111.8	637.32	12175.13	630.49
14233.45	630.49	14476.92	627.32	15102.82	627.32	15584.34	634.15	15645.11	640.98
15942.49	636.05	15949.55	632.71	16057.44	630.73	16724.08	601.83	17291.62	593.66
17390.13	586.28	17737	584.36	17826.49	577.04	17967.32	567.45	18468.66	567.45
18607.96	571.34	18741.51	593.66	18826.93	608.79	18845.22	610.94	19074.81	625.08
19498.61	631.1	19917.8	631.51	21951.39	625.85	22062.36	625.85	22283.39	626.85
22620.4	625.21	233570.33	629.51	23818.2	636.34	25431.96	643.17	25800.2	646.41

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26207.72	651.0326834.14	666.2827049.84	666.8328123.08	666.8328734.91	663.66
28998.61	663.6629551.39	656.8329780.29	652.86 29945.5	650.5130080.32	644.09
30223.45	644.5330506.58	652.22 30816.4	654.8631873.86	670.1632513.53	673.66
33445.65	700.9533583.05	701.734177.24	685.9334210.66	686.1135745.32	719.86
36750.03	722.6936940.18	727.0537279.05	742.0537318.97	743.0837614.21	747.45
37933.58	758.7938085.84	762.6838831.53	79039501.66	794.5439839.61	800

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .1517291.62 .1518741.51 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17291.6218741.51 5 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
w.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit w.S. (ft)		Flow Area (sq ft)	1507713.00	266238.50	1836181.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507713.00	266238.50	1836181.00
Q Total (cfs)	6730000.00	Flow (cfs)	2693750.00	738567.30	3297682.00
Top width (ft)	36581.08	Top width (ft)	15901.99	1449.89	19229.20
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.79	2.77	1.80
Max Chl Dpth (ft)	192.29	Hydr. Depth (ft)	94.81	183.63	95.49
Conv. Total (cfs)	775405600.0	Conv. (cfs)	310363900.0	85094980.0	379946700.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15916.43	1452.70	19233.61
Min Ch El (ft)	567.45	Shear (lb/sq ft)	0.45	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.80	2.39	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	72247.28	13609.33	87068.27
C & E Loss (ft)	0.00	Cum SA (acres)	599.09	61.55	693.47

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274891.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.2	791.44	648.09	773.9	1365.38	760.88	1545.87	752.48
1834.13	745.69	2003.18	743.16	2356.68	743.16	2694.14	741.3	3600.48	724.62
3672.97	720.67	3765.08	716.84	3776.5	716.64	3980.03	716.29	4161.6	713.16
4305.91	709.86	4460.86	705.34	4839.61	696.09	5301.21	689.85	5644.74	687.38
5792.57	685.89	5953.42	678.59	6022.63	671.55	6389.22	670.5	6742.4	674.35
6884.87	676.32	7107.45	662.64	7275.78	655.8	7347.79	648.96	7397.36	648.96
7549.46	653.73	7769.46	663.8	7833.16	664.48	7964.08	668.61	8331.61	667.84
8380.06	671.69	8536.42	682.07	8832.87	672.04	8847.12	670.53	9021.78	657.39
9162.06	656.99	9419.24	669.95	9595.99	669.45	9781.16	655.25	9969.48	651.06
10115.36	641.91	10132.79	641.56	10223.5	627.88	10393.71	607.36	10451.69	607.36
10494.19	613.61	10622.43	641.91	10731.31	657.88	1123.61	652.06	11283.61	646.53
11340.08	642.53	11555.37	639.33	11810.67	641.87	12114.46	637.36	12756.93	630.52
14236.57	630.52	14480.1	627.36	15106.13	627.36	15587.75	634.21	15648.54	641.04
15945.99	636.11	15953.05	632.83	16060.96	630.79	16727.75	601.86	17295.41	593.68
17394.06	586.31	17741.41	584.38	17831.03	577.05	17972.06	567.45	18473.64	567.45
18613.11	571.33	18746.83	593.68	18832.23	608.79	18850.53	610.93	19080.09	625.04
19503.84	631.07	19922.99	631.47	1956.35	625.8	22067.3	625.82	2288.31	626.8
22625.28	625.17	23575.11	629.48	23822.95	636.32	25436.52	643.16	25804.72	646.41
26212.2	651.03	26838.55	666.29	27054.22	666.84	28127.34	666.84	28739.09	663.68
29002.77	663.68	29555.49	656.84	29784.37	652.87	29949.55	650.53	30084.36	644.08
30227.47	644.53	30510.57	652.22	30820.35	654.86	31877.69	670.13	32517.29	673.63
33449.31	700.95	33586.7	701.61	34180.81	685.91	34214.23	686.09	35748.72	719.78
36753.31	722.62	36943.45	726.99	37282.28	741.98	37322.2	743.01	37617.39	747.41
37936.73	758.74	38088.97	762.64	38834.57	79039504.64		794.55	39842.54	800

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .1517295.41 .1518746.83 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17295.4118746.83 5 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
w.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit w.S. (ft)		Flow Area (sq ft)	1507711.00	266503.80	1836514.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507711.00	266503.80	1836514.00
Q Total (cfs)	6730000.00	Flow (cfs)	2692812.00	739127.90	3298060.00
Top width (ft)	36585.78	Top width (ft)	15905.50	1451.42	19228.87
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.79	2.77	1.80
Max Chl Dpth (ft)	192.29	Hydr. Depth (ft)	94.79	183.62	95.51
Conv. Total (cfs)	775559700.0	Conv. (cfs)	310317500.0	85176500.0	380065700.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15919.95	1454.24	19233.27
Min Ch El (ft)	567.45	Shear (lb/sq ft)	0.45	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.80	2.39	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	72074.22	13578.75	86857.48
C & E Loss (ft)	0.00	Cum SA (acres)	597.27	61.38	691.26

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274888.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.24	791.44	648.23	773.88	1365.68	760.88	1546.21	752.48
1834.53	745.68	2003.62	743.15	2357.2	743.15	2694.73	741.29	3601.27	724.63

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Table with 10 columns of numerical data representing stationing and values for a cross-section profile.

Manning's n Values table with columns for Station (Sta), Value (n Val), and Manning's n.

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

CROSS SECTION OUTPUT Profile #PF 1

Table with 7 columns: E.G. Elev (ft), Vel Head (ft), W.S. Elev (ft), Crit W.S. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft), Vel Total (ft/s), Max Chl Dpth (ft), Conv. Total (cfs), Length Wtd. (ft), Min Ch El (ft), Alpha, Frctn Loss (ft), C & E Loss (ft), Element, Left OB, Channel, Right OB.

CROSS SECTION

RIVER: BRAZOS REACH: UPPER BRAZOS RS: 274885.*

INPUT

Table with 10 columns: Station, Elevation, Data, num=120, Elev, Sta, Elev, Sta, Elev, Sta, Elev.

Manning's n Values table with columns for Station (Sta), Value (n Val), and Manning's n.

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

CROSS SECTION OUTPUT Profile #PF 1

Table with 7 columns: E.G. Elev (ft), Vel Head (ft), W.S. Elev (ft), Crit W.S. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft), Vel Total (ft/s), Max Chl Dpth (ft), Conv. Total (cfs), Length Wtd. (ft), Min Ch El (ft), Alpha, Element, Left OB, Channel, Right OB.

Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	71728.09	13517.51	86435.80
C & E Loss (ft)	0.00	Cum SA (acres)	593.62	61.05	686.85

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274882.*

INPUT

Description:

Station	Elevation	Data	num=	120	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.33	791.43	648.51	773.86	1366.28	760.87	1546.89	752.46		
1835.34	745.67	2004.5	743.13	2358.23	743.13	2695.91	741.27	3602.85	724.67		
3675.38	720.71	3767.55	716.87	3778.98	716.67	3982.65	716.28	4164.34	713.13		
4308.74	709.82	4463.79	705.29	4842.79	696.03	5304.7	689.8	5648.46	687.33		
5796.38	685.84	5957.34	678.51	6026.59	671.44	6393.42	670.4	6746.83	674.29		
6889.4	676.26	7112.12	662.52	7280.57	655.65	7352.63	648.78	7402.22	648.78		
7554.43	653.58	7774.58	663.64	7838.31	664.34	7969.32	668.53	8337.09	667.86		
8385.57	671.75	8542.03	682.24	8838.69	672.31	8852.94	670.79	9027.72	657.6		
9168.09	657.21	9425.44	670.23	9602.3	669.74	9787.59	655.49	9976.04	651.28		
10122.02	642.17	10139.46	641.83	10230.23	628.09	10400.54	607.48	10458.56	607.48		
10501.09	613.75	10629.41	642.04	10738.37	658.09	11130.92	652.24	11291.03	646.73		
11347.54	642.76	11562.98	639.55	11818.44	642.01	12122.43	637.48	12765.33	630.61		
14245.93	630.61	14489.63	627.48	15116.07	627.48	15598.01	634.35	15658.84	641.22		
15956.48	636.27	15963.55	633.02	16071.53	630.97	16738.76	601.93	17306.79	593.74		
17405.85	586.33	17754.65	584.44	17844.64	577.08	17986.26	567.44	18488.57	567.44		
18628.56	571.32	18762.78	593.74	18848.15	608.79	18866.44	610.92	19095.93	624.93		
19519.53	630.96	19938.54	631.35	21971.21	625.65	22082.13	625.65	22303.06	626.66		
22639.92	625.06	23589.42	629.39	23837.18	636.26	24540.21	643.13	25818.29	646.39		
26225.62	651.02	26851.76	666.33	27067.36	666.87	28140.12	666.87	28751.66	663.74		
29015.25	663.74	29567.78	656.87	29796.58	652.88	29961.71	650.53	30096.47	644.04		
30239.53	644.47	30522.53	652.19	30832.21	654.83	31889.19	670.04	32528.58	673.56		
33460.28	700.63	33597.62	701.36	34191.54	685.85	34224.95	686.03	35758.91	719.51		
36763.16	722.41	36953.23	726.83	37291.95	741.77	37331.85	742.83	37626.95	747.26		
37946.18	758.63	38098.37	762.52	38843.72	79039	39513.55	794.57	39851.34	800		

Manning's n Values

Sta	n Val	Sta	n Val	Sta	n Val
0	.15	17306.79	.15	18762.78	.15

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

17306.79	18762.78	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
w.s. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit w.s. (ft)		Flow Area (sq ft)	1507707.00	267307.00	1837558.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507707.00	267307.00	1837558.00
Q Total (cfs)	6730000.00	Flow (cfs)	2689904.00	740824.60	3299272.00
Top width (ft)	36599.72	Top width (ft)	15916.18	1455.99	19227.55
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.78	2.77	1.80
Max chl Dpth (ft)	192.30	Hydr. Depth (ft)	94.73	183.59	95.57
Conv. Total (cfs)	776046300.0	Conv. (cfs)	310176800.0	85425580.0	380443900.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15930.69	1458.81	19231.93
Min Ch El (ft)	567.44	Shear (lb/sq ft)	0.44	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.79	2.38	0.81
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	71555.03	13486.84	86224.91
C & E Loss (ft)	0.00	Cum SA (acres)	591.79	60.88	684.64

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274879.*

INPUT

Description:

Station	Elevation	Data	num=	120	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.37	791.43	648.66	773.85	1366.58	760.87	1547.23	752.45		
1835.74	745.66	2004.94	743.12	2358.75	743.12	2696.5	741.25	3603.64	724.68		
3676.19	720.73	3768.38	716.88	3779.81	716.68	3983.52	716.27	4165.25	713.12		
4309.69	709.8	4464.77	705.27	4843.86	696.01	5305.86	689.79	5649.7	687.31		
5797.65	685.82	5958.65	678.48	6027.91	671.41	6394.83	670.36	6748.31	674.26		
6890.91	676.24	7113.68	662.48	7282.16	655.6	7354.24	648.72	7403.85	648.72		
7556.09	653.52	7776.28	663.59	7840.03	664.3	7971.07	668.5	8338.92	667.87		
8387.41	671.76	8543.91	682.3	8840.62	672.4	8854.88	670.88	9029.7	657.67		
9170.1	657.28	9427.5	670.33	9604.41	669.84	9789.74	655.56	9978.23	651.36		
10124.24	642.26	10141.68	641.92	10232.47	628.16	10402.82	607.52	10460.86	607.52		
10503.4	613.79	10631.74	642.09	10740.72	658.16	11133.36	652.31	11293.5	646.8		
11350.03	642.84	11565.51	639.62	11821.03	642.05	12125.08	637.52	12768.12	630.64		
14249.06	630.64	14492.8	627.52	15119.38	627.52	15601.43	634.41	15662.27	641.28		
15959.98	636.32	15967.04	633.08	16075.05	631.03	16742.43	601.96	17310.58	593.76		
17409.78	586.34	17759.07	584.45	17849.18	577.09	17990.99	567.44	18493.55	567.44		
18633.71	571.32	18768.1	593.76	18853.46	608.79	18871.75	610.92	19101.21	624.9		
19524.77	630.93	19943.73	631.32	1976.16	625.62	2087.07	625.62	22307.98	626.61		
22644.8	625.03	23594.19	629.36	23841.92	636.24	24544.77	643.12	25822.8	646.39		
26230.1	651.02	26856.16	666.34	27071.74	666.88	28144.37	666.88	28755.85	663.76		
29019.4	663.76	29571.88	656.88	29800.65	652.88	29965.76	650.53	30100.51	644.04		
30243.55	644.45	30526.52	652.19	30836.17	654.83	31893.03	670.01	32532.34	673.54		
33463.94	700.51	33601.26	701.27	34195.11	685.82	34228.52	686.01	35762.31	719.42		
36766.45	722.34	36956.5	726.74	37295.17	741.73	37335.07	742.73	37630.14	747.21		
37949.33	758.56	38101.5	762.48	38846.77	79039	39516.53	794.57	39854.28	800		

Manning's n Values

Sta	n Val	Sta	n Val	Sta	n Val
0	.15	17310.58	.15	18768.1	.15

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

17310.58	18768.1	5	5	5	.1	.3
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SS_Rev3.rep

CROSS SECTION OUTPUT Profile #PF 1

Table with 6 columns: Parameter, Value, Element, Left OB, Channel, Right OB. Rows include E.G. Elev (ft), Vel Head (ft), w.s. Elev (ft), Crit w.s. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top Width (ft), Vel Total (ft/s), Max Chl Dpth (ft), Conv. Total (cfs), Length wtd. (ft), Min Ch El (ft), Alpha, Frctn Loss (ft), C & E Loss (ft).

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274876.*

INPUT

Table with 10 columns: Station, Elev, Data, num=, Elev, Sta, Elev, Sta, Elev. Rows show stationing data from 1836.14 to 37952.48.

Manning's n Values

Table with 4 columns: Sta, n Val, Sta, n Val. Shows Manning's n values for stations 0 and 1517314.38.

Table with 6 columns: Bank, Sta, Left, Right, Lengths, Left, Channel, Right, Coeff, Contr., Expan. Shows channel dimensions and coefficients.

CROSS SECTION OUTPUT Profile #PF 1

Table with 6 columns: Parameter, Value, Element, Left OB, Channel, Right OB. Rows include E.G. Elev (ft), Vel Head (ft), w.s. Elev (ft), Crit w.s. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top Width (ft), Vel Total (ft/s), Max Chl Dpth (ft), Conv. Total (cfs), Length wtd. (ft), Min Ch El (ft), Alpha, Frctn Loss (ft), C & E Loss (ft).

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274873.*

INPUT

Table with 10 columns: Station, Elev, Data, num=, Elev, Sta, Elev, Sta, Elev. Rows show stationing data from 1836.54 to 17417.64.

SS_Rev3.rep					
18644.02	571.3118778.73	593.818864.08	608.7818882.36	610.9219111.77	624.82
19535.23	630.86 19954.1	631.2221986.07	625.522096.96	625.522317.81	626.51
22654.56	624.9523603.74	629.323851.41	636.225463.89	643.125831.84	646.38
26239.04	651.0126864.97	666.36 27080.5	666.928152.89	666.928764.23	663.8
29027.72	663.829580.07	656.929808.79	652.8929973.86	650.4930108.58	644
30251.59	644.43 30534.5	652.1730844.07	654.81 31900.7	669.9632539.86	673.49
33471.25	700.3433608.55	701.134202.26	685.7834235.66	685.97 35769.1	719.25
36773.02	722.1936963.02	726.6137301.62	741.5637341.51	742.5937636.51	747.12
37955.63	758.4738107.77	762.438852.87	79039522.48	794.5939860.15	800

Manning's n Values		num= 3	
Sta	n Val	Sta	n Val
0	.1517318.17	.1518778.73	.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	17318.17	1718778.73		5	5		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

			Left OB	Channel	Right OB
E.G. Elev (ft)	759.79	Element	0.150	0.150	0.150
Vel Head (ft)	0.06	wt. n-val.	5.00	5.00	5.00
w.s. Elev (ft)	759.74	Reach Len. (ft)	1507707.00	268104.70	1838592.00
Crit w.s. (ft)		Flow Area (sq ft)	1507707.00	268104.70	1838592.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	2687014.00	742495.30	3300490.00
Q Total (cfs)	6730000.00	Flow (cfs)	15926.88	1460.56	19225.91
Top width (ft)	36613.34	Top width (ft)	1.78	2.77	1.80
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	94.66	183.56	95.63
Max Chl Dpth (ft)	192.30	Hydr. Depth (ft)	310037400.0	85671810.0	380822600.0
Conv. Total (cfs)	776531800.0	Conv. (cfs)	15941.42	1463.39	19230.26
Length wtd. (ft)	5.00	wetted Per. (ft)	0.44	0.86	0.45
Min Ch El (ft)	567.44	Shear (lb/sq ft)	0.79	2.38	0.80
Alpha	1.07	Stream Power (lb/ft s)	71035.84	13394.66	85591.95
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	586.31	60.38	678.02
C & E Loss (ft)	0.00	Cum SA (acres)			

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274870.*

INPUT

Description:		Station Elevation Data		num= 120	
Sta	Elev	Sta	Elev	Sta	Elev
0	800 199.5	791.41	649.08	773.81	1367.47
1836.95	745.64 2006.25	743.09	2360.3	743.09	2698.27
3678.6	720.78 3770.86	716.91	3782.29	716.71	3986.14
4312.52	709.76 4467.71	705.22	4847.04	695.96	5309.35
5801.46	685.76 5962.56	678.4	6031.87	671.3	6399.03
6895.44	676.18 7118.36	662.36	7286.95	655.45	7359.07
7561.05	653.36 7781.39	663.43	7845.18	664.16	7976.31
8392.92	671.81 8549.52	682.47	8846.43	672.66	8860.7
9176.13	657.5 9433.7	670.61	9610.72	670.13	9796.17
10130.89	642.5310148.34	642.19	10239.2	628.3710409.66	607.6410467.73
10510.3	613.9410638.73	642.2310747.78	658.3711140.68	658.3711140.68	652.4911300.93
11357.49	643.0711573.11	639.84	11828.8	642.1912133.05	637.6412776.52
14258.42	630.7314502.33	627.6415129.32	627.6415611.68	634.5515672.56	641.46
15970.47	636.4815977.94	633.2716085.62	631.2116753.43	602.0417321.96	593.82
17421.57	586.3817772.31	584.5117862.79	577.1118005.19	567.4418508.49	567.44
18649.17	571.3118784.05	593.8218869.38	608.7818887.67	610.9119117.04	624.79
19540.46	630.8219959.28	631.1821991.03	625.45 22101.9	625.4522322.73	626.46
22659.44	624.9223608.51	629.2723856.15	636.1825468.45	643.0925836.37	646.37
26243.52	651.0126869.37	666.3827084.88	666.9128157.15	666.9128768.42	663.82
29031.88	663.8229584.17	656.9129812.86	652.929977.91	650.4930112.62	643.98
30255.61	644.4130538.49	652.1730848.03	654.831904.53	669.9332543.62	673.47
33474.91	700.2533612.19	701.0134205.83	685.7634239.23	685.95 35772.5	719.16
36776.3	722.1236966.28	726.5537304.85	741.4937344.73	742.53 37639.7	747.07
37958.78	758.42 38110.9	762.3638855.92	79039525.45	794.5939863.09	800

Manning's n Values		num= 3	
Sta	n Val	Sta	n Val
0	.1517321.96	.1518784.05	.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	17321.96	18784.05		5	5		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

			Left OB	Channel	Right OB
E.G. Elev (ft)	759.79	Element	0.150	0.150	0.150
Vel Head (ft)	0.06	wt. n-val.	5.00	5.00	5.00
w.s. Elev (ft)	759.74	Reach Len. (ft)	1507707.00	268370.80	1838931.00
Crit w.s. (ft)		Flow Area (sq ft)	1507707.00	268370.80	1838931.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	2686070.00	743054.10	3300876.00
Q Total (cfs)	6730000.00	Flow (cfs)	15930.38	1462.09	19225.53
Top width (ft)	36618.00	Top width (ft)	1.78	2.77	1.79
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	94.64	183.55	95.65
Max Chl Dpth (ft)	192.30	Hydr. Depth (ft)	309991700.0	85753770.0	380944700.0
Conv. Total (cfs)	776690200.0	Conv. (cfs)	15944.95	1464.92	19229.87
Length wtd. (ft)	5.00	wetted Per. (ft)	0.44	0.86	0.45
Min Ch El (ft)	567.44	Shear (lb/sq ft)	0.79	2.38	0.80
Alpha	1.07	Stream Power (lb/ft s)	70862.78	13363.87	85380.89
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	584.48	60.21	675.81
C & E Loss (ft)	0.00	Cum SA (acres)			

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274867.*

INPUT

Description:		Station Elevation Data		num= 120	
Sta	Elev	Sta	Elev	Sta	Elev

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Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.55	791.41	649.22	773.8	1367.77	760.86	1548.58	752.42		
1837.35	745.64	2006.69	743.08	2360.81	743.08	2698.86	741.2	3606.8	724.75		
3679.41	720.79	3771.68	716.92	3783.12	716.72	3987.01	716.25	4168.9	713.08		
4313.47	709.74	4468.68	705.2	4848.1	695.94	5310.51	689.73	5654.65	687.23		
5802.73	685.75	5963.87	678.37	6033.19	671.26	6400.43	670.23	6754.23	674.17		
6896.95	676.16	7119.92	662.32	7288.55	655.4	7360.68	648.48	7410.33	648.48		
7562.71	653.31	7783.1	663.38	7846.9	664.11	7978.05	668.39	8346.23	667.9		
8394.76	671.83	8551.4	682.52	8848.37	672.75	8862.64	671.24	9037.61	657.96		
9178.13	657.58	9435.76	670.71	9618.83	670.22	9798.32	655.88	9986.97	651.65		
10133.11	642.62	10150.57	642.28	10241.44	628.44	10411.94	607.68	10470.03	607.68		
10512.6	613.99	10641.06	642.27	10750.14	658.44	11143.12	652.55	11303.4	647.07		
11359.97	643.14	11575.65	639.91	11831.39	642.24	12135.71	637.68	12779.31	630.76		
14261.54	630.76	14505.5	627.68	15132.63	627.68	15615.1	634.6	15676	641.52		
15973.97	636.53	15981.04	633.33	16089.14	631.27	16757.1	602.06	17325.76	593.84		
17425.5	586.39	17776.72	584.52	17867.33	577.12	18009.93	567.44	18513.47	567.44		
18654.32	571.31	18789.36	593.84	18874.69	608.78	18892.97	610.91	19122.32	624.75		
19545.69	630.79	19964.46	631.14	19955.98	625.42	2106.84	625.42	2327.64	626.41		
22664.31	624.88	23613.28	629.24	23860.9	636.16	25473.02	643.08	25840.88	646.36		
26247.99	6512	26873.77	666.39	27089.25	666.92	28161.4	666.92	28772.6	663.84		
29036.04	663.84	29588.26	656.92	29816.93	652.92	29981.97	650.49	30116.65	643.97		
30259.63	644.43	30542.48	652.16	30851.98	654.83	31908.37	669.93	32547.39	673.44		
33478.57	700.17	33615.83	700.93	34209.41	685.74	34242.8	685.93	35775.9	719.07		
36779.59	722.05	36969.54	726.49	37308.07	741.42	37347.95	742.46	37642.89	747.02		
37961.93	758.33	38114.04	762.32	38858.96	790	39528.42	794.63	39866.02	800		

Manning's n	Values	num=	3
Sta	n Val	Sta	n Val
0	.1517325.76	.1518789.36	.15

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
17325.76	18789.36	5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.74	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507717.00	268636.90	1839278.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507717.00	268636.90	1839278.00
Q Total (cfs)	6730000.00	Flow (cfs)	2685120.00	743609.20	3301271.00
Top width (ft)	36622.39	Top width (ft)	15933.90	1463.60	19224.89
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.78	2.77	1.79
Max Chl Dpth (ft)	192.29	Hydr. Depth (ft)	94.62	183.55	95.67
Conv. Total (cfs)	776859000.0	Conv. (cfs)	309994900.0	85836480.0	381073200.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	15948.48	1466.43	19229.23
Min Ch El (ft)	567.44	Shear (lb/sq ft)	0.44	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.79	2.38	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	70689.72	13333.05	85169.79
C & E Loss (ft)	0.00	Cum SA (acres)	582.65	60.04	673.60

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274864.*

INPUT

Station	Elevation	Data	num=	120					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.55	791.4	649.37	773.79	1368.07	760.85	1548.92	752.41
1837.75	745.63	2007.13	743.07	2361.33	743.07	2699.45	741.19	3607.59	724.77
3680.22	720.81	3772.51	716.93	3783.95	716.73	3987.88	716.24	4169.81	713.07
4314.41	709.73	4469.66	705.18	4849.16	695.92	5311.68	689.71	5655.89	687.21
5804	685.73	5965.17	678.35	6034.51	671.22	6401.83	670.2	6755.71	674.15
6898.46	676.14	7121.48	662.28	7290.14	655.35	7362.29	648.42	7411.96	648.42
7564.36	653.26	7784.8	663.32	7848.62	664.07	7979.8	668.37	8348.06	667.9
8396.6	671.85	8553.27	682.58	8850.31	672.84	8864.58	671.32	9039.59	658.03
9180.14	657.65	9437.83	670.81	9614.93	670.32	9800.46	655.96	9989.16	651.73
10135.33	642.71	10152.79	642.37	10243.68	628.51	10414.22	607.72	10472.32	607.72
10514.9	614.04	10643.39	642.32	10752.49	658.51	11145.56	652.61	11305.88	647.14
11362.46	643.22	11578.18	639.98	11833.98	642.29	12138.37	637.72	12782.11	630.79
14264.67	630.79	14508.68	627.72	15135.95	627.72	15618.52	634.65	15679.43	641.58
15977.46	636.58	15984.54	633.39	16092.66	631.33	16760.77	602.09	17329.55	593.86
17429.43	586.41	17781.13	584.54	17871.87	577.13	18014.66	567.44	18518.45	567.44
18659.47	571.31	18794.68	593.86	18880	608.78	18898.28	610.91	19127.6	624.72
19550.92	630.75	19969.65	631.12	20000.94	625.35	2111.78	625.35	2332.56	626.37
22669.2	624.84	23618.05	629.21	23865.64	636.14	25477.58	643.07	25845.4	646.36
26252.46	6512	26878.18	666.42	27093.63	666.93	28165.66	666.93	28776.79	663.86
29040.2	663.84	29592.36	656.93	29821	652.92	29986.02	650.49	30120.69	643.96
30263.65	644.43	30546.47	652.15	30855.94	654.79	31912.2	669.87	32551.15	673.42
33482.22	700.17	33619.47	700.84	34212.98	685.72	34246.37	685.93	35779.29	718.98
36782.87	721.98	36972.81	726.42	37311.29	741.35	37351.17	742.39	37646.07	746.98
37965.08	758.33	38117.17	762.28	38862.02	790	39531.39	794.61	39868.95	800

Manning's n	Values	num=	3
Sta	n Val	Sta	n Val
0	.1517329.55	.1518794.68	.15

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
17329.55	18794.68	5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507710.00	268902.90	1839624.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507710.00	268902.90	1839624.00
Q Total (cfs)	6730000.00	Flow (cfs)	2684142.00	744169.10	3301689.00
Top width (ft)	36627.21	Top width (ft)	15937.59	1465.13	19224.49
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.78	2.77	1.79
Max Chl Dpth (ft)	192.29	Hydr. Depth (ft)	94.60	183.54	95.69
Conv. Total (cfs)	777015300.0	Conv. (cfs)	309898900.0	85918380.0	381198000.0

Length Wtd. (ft)	5.00	wetted Per. (ft)	15952.20	1467.96	19228.82
Min Ch El (ft)	567.44	Shear (lb/sq ft)	0.44	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.79	2.37	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	70516.66	13302.20	84958.65
C & E Loss (ft)	0.00	Cum SA (acres)	580.82	59.87	671.40

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274861.*

INPUT

Description:
Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.63	791.4	649.51	773.77	1368.37	760.85	1549.26	752.4		
1838.15	745.63	2007.57	743.06	2361.85	743.06	2700.04	741.18	3608.38	724.79		
3681.02	720.82	3773.33	716.94	3784.78	716.74	3988.76	716.24	4170.72	713.06		
4315.35	709.71	4470.64	705.17	4850.22	695.9	5312.84	689.7	5657.12	687.2		
5805.27	685.71	5966.48	678.32	6035.83	671.19	6403.23	670.16	6757.19	674.13		
6899.97	676.12	7123.03	662.24	7291.74	655.3	7363.91	648.36	7413.58	648.36		
7566.02	653.2	7786.5	663.27	7850.33	664.02	7981.55	668.34	8349.88	667.91		
8398.44	671.86	8535.14	682.64	8832.25	672.93	8866.52	671.41	9041.57	658.1		
9182.15	657.72	9439.9	670.9	9617.03	670.42	9802.61	656.03	9991.34	651.8		
10137.55	642.810155	01	642.4610245	.92	628.58	10416.5	607.7610474	.61	607.76		
10517.2	614.0910645	.72	642.3710754	.84	658.58	11148	652.6711308	.35	647.21		
11364.95	643.311580	.71	640.0611836	.57	642.3312141	.02	637.7612784	.91	630.82		
14267.79	630.8214511	.85	627.7615139	.26	627.7615621	.94	634.715682	.86	641.64		
15980.96	636.6315988	.04	633.4616096	.18	631.3916764	.44	602.1117333	.34	593.88		
17433.36	586.4117785	.55	584.5617876	.41	577.14	18019.4	567.4418523	.43	567.44		
18664.62	571.29	18800	593.8818885	.31	608.7818903	.58	610.919132	.88	624.68		
19556.15	630.7219974	.83	631.0522005	.89	625.322116	.73	625.322337	.48	626.32		
22674.07	624.8123622	.82	629.1823870	.39	636.1225482	.14	643.0625849	.92	646.35		
26256.94	65126882	.58	666.4127098	.01	666.9428169	.92	666.9428780	.98	663.88		
29044.36	663.8829596	.46	656.9429825	.07	652.9129990	.07	650.4930124	.73	643.95		
30267.67	644.3730550	.46	652.1430859	.89	654.7831916	.04	669.8432554	.91	673.39		
33485.88	699.9933623	.11	700.7634216	.55	685.734249	.94	685.8935782	.69	718.9		
36786.15	721.9136976	.07	726.3637314	.52	741.2837354	.39	742.3237649	.26	746.93		
37968.23	758.28	38120.3	762.2438865	.06	79039534	.37	794.6139871	.89	800		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1517333	.34	.15	18800	.15

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	17333.34	18800		5	5	5		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507707.00	269170.50	1839972.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507707.00	269170.50	1839972.00
Q Total (cfs)	6730000.00	Flow (cfs)	2683382.00	744729.60	3302089.00
Top width (ft)	36631.84	Top width (ft)	15941.09	1466.66	19224.09
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.78	2.77	1.79
Max Chl Dpth (ft)	192.29	Hydr. Depth (ft)	94.58	183.53	95.71
Conv. Total (cfs)	777176800.0	conv. (cfs)	309852400.0	86000980.0	381323500.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15955.71	1469.50	19228.41
Min Ch El (ft)	567.44	Shear (lb/sq ft)	0.44	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.79	2.37	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	70343.59	13271.32	84747.47
C & E Loss (ft)	0.00	Cum SA (acres)	578.99	59.70	669.19

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274859.*

INPUT

Description:
Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.68	791.39	649.65	773.76	1368.67	760.85	1549.6	752.4		
1838.55	745.62	2008.01	743.05	2362.37	743.05	2700.64	741.16	3609.17	724.8		
3681.83	720.84	3774.16	716.95	3785.61	716.75	3989.63	716.23	4171.64	713.05		
4316.3	709.7	4471.62	705.15	4851.29	695.88	5314	689.68	5658.36	687.18		
5806.54	685.69	5967.78	678.29	6037.16	671.15	6404.63	670.13	6758.66	674.1		
6901.48	676.1	7124.59	662.2	7293.33	655.25	7365.52	648.3	7415.2	648.3		
7567.68	653.15	7788.21	663.22	7852.05	663.98	7983.29	668.31	8351.11	667.92		
8400.27	671.88	8557.01	682.69	8854.18	673.02	8868.46	671.5	9043.55	658.18		
9184.16	657.79	9441.96	671.9619	14	670.51	9804.75	656.11	9993.53	651.88		
10139.77	642.8910157	.23	642.5510248	.17	628.6510418	.78	607.8	10476.9	607.8		
10519.5	614.1410648	.05	642.41	10757.2	658.6511150	.44	652.7411310	.83	647.27		
11367.43	643.3711583	.25	640.1311839	.16	642.3812143	.68	637.812787	.71	630.85		
14270.91	630.8514515	.03	627.815142	.57	627.815625	.36	634.7515886	.29	641.7		
15984.46	636.6915991	.54	633.5216099	.71	631.4516768	.11	602.1417337	.13	593.9		
17437.29	586.4317789	.96	584.5817880	.95	577.1518024	.13	567.44	18528.4	567.44		
18669.78	571.2918805	.31	593.918890	.61	608.7718908	.89	610.919138	.16	624.64		
19561.38	630.6819980	.02	631.0122010	.85	625.2522121	.67	625.25	22342.4	626.27		
22678.95	624.77	23627.6	629.1523875	.13	636.1	25486.7	643.0525854	.45	646.35		
26261.41	650.9926886	.98	666.4227102	.39	666.9528174	.18	666.9528785	.17	663.9		
29048.52	663.929600	.55	656.9529829	.14	652.9129994	.12	650.4930128	.77	643.93		
30271.69	644.3530554	.44	652.1430863	.84	654.7731919	.87	669.8132558	.67	673.37		
33489.54	699.9133626	.75	700.6734220	.13	685.6834253	.51	685.8735786	.09	718.81		
36789.44	721.8436979	.33	726.337317	.74	741.2137357	.61	742.2537652	.45	746.88		
37971.38	758.2438123	.43	762.238868	.11	79039537	.34	794.6239874	.82	800		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1517333	.13	.15	18805.31	.15

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Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17337.1318805.31 5 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507711.00	269432.50	1840322.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507711.00	269432.50	1840322.00
Q Total (cfs)	6730000.00	Flow (cfs)	2682229.00	745264.80	3302507.00
Top width (ft)	36636.19	Top width (ft)	15944.57	1468.18	19223.44
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.78	2.77	1.79
Max chl Dpth (ft)	192.29	Hydr. Depth (ft)	94.56	183.51	95.73
Conv. Total (cfs)	777342900.0	Conv. (cfs)	309808500.0	86081180.0	381453200.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15959.21	1471.02	19227.76
Min Ch El (ft)	567.44	Shear (lb/sq ft)	0.44	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.79	2.37	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	70170.53	13240.40	84536.25
C & E Loss (ft)	0.00	Cum SA (acres)	577.16	59.54	666.98

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274856.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	199.72	791.39	649.79
1838.96	745.61	2008.45	743.04	2362.88
3682.63	720.85	3774.99	716.96	3786.43
4317.24	709.68	4472.6	705.13	4852.35
5807.81	685.67	5969.09	678.27	6038.48
6902.99	676.08	7126.15	662.16	7294.93
7569.33	653.1	7789.91	663.17	7853.77
8402.11	671.9	8558.88	682.75	8856.12
9186.17	657.87	9444.03	671.09	9621.24
10141.98	642.98	10159.46	642.64	10250.41
10521.81	614.19	10650.38	642.46	10759.55
11369.92	643.45	11585.78	640.21	11841.75
14274.03	630.88	14518.21	627.84	15145.89
15987.96	636.74	15995.03	633.58	16103.23
17441.22	586.44	17794.37	584.61	17885.48
18674.93	571.28	18810.63	593.92	18895.92
19566.62	630.65	19985.2	630.97	22015.8
22683.83	624.74	23632.37	629.12	23879.87
22625.89	650.99	226891.39	666.44	27106.77
29052.68	663.92	229604.65	656.96	29833.21
30275.71	644.34	30358.43	652.13	30867.8
33493.19	699.82	33630.39	700.59	34223.71
36792.72	721.76	36982.59	726.23	37320.96
37974.54	758.19	38126.57	762.16	38871.16
				79039540.31

Manning's n Values	num=	3
Sta	n Val	Sta
0	.1517340.93	.1518810.63

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17340.9318810.63 5 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507702.00	269705.00	1840656.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507702.00	269705.00	1840656.00
Q Total (cfs)	6730000.00	Flow (cfs)	2681250.00	745857.00	3302893.00
Top width (ft)	36641.00	Top width (ft)	15948.27	1469.70	19223.03
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.78	2.77	1.79
Max chl Dpth (ft)	192.30	Hydr. Depth (ft)	94.54	183.51	95.75
Conv. Total (cfs)	777498100.0	Conv. (cfs)	309757300.0	86166780.0	381574000.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15962.92	1472.55	19227.34
Min Ch El (ft)	567.43	Shear (lb/sq ft)	0.44	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.79	2.37	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	69997.47	13209.46	84324.99
C & E Loss (ft)	0.00	Cum SA (acres)	575.33	59.37	664.78

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274853.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	199.76	791.38	649.93
1839.36	745.61	2008.89	743.03	2363.4
3683.44	720.87	3775.81	716.97	3787.26
4318.19	709.67	4473.58	705.12	4853.41
5809.08	685.65	5970.4	678.24	6039.8
6904.5	676.06	7127.71	662.12	7296.52
7570.99	653.05	7791.62	663.11	7855.49
8403.95	671.92	8560.76	682.81	8858.06
9188.18	657.94	9446.09	671.19	9623.35
10144.2	643.08	10161.68	642.73	10252.65
10524.11	614.24	10652.71	642.51	10761.91
11372.41	643.53	11588.32	640.27	11844.34
				12149

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14277.16	630.9114521.38	627.88 15149.2	627.8815632.19	634.8515693.16	641.82				
15991.45	636.7915998.53	633.6416106.75	631.5816775.44	602.1917344.72	593.94				
17445.15	586.4517798.79	584.6117890.02	577.17 18033.6	567.4318538.36	567.43				
18680.08	571.2818815.95	593.9418901.23	608.77 18919.5	610.8919148.72	624.57				
19571.85	630.6119990.38	630.9322020.76	625.1522131.55	625.1522352.23	626.17				
22688.71	624.723637.14	629.0923884.62	636.0625495.82	643.0325863.48	646.34				
26270.36	650.926895.79	666.4527111.15	666.9728182.69	666.9728793.55	663.94				
29056.83	663.9429608.74	656.9729837.28	652.9230002.23	650.4830136.84	643.91				
30279.73	644.3330562.42	652.1230871.75	654.7631927.54	669.75 32566.2	673.32				
33496.85	699.7433634.04	700.534227.28	685.6434260.65	685.8335792.88	718.63				
36796	721.6936985.86	726.1737324.19	741.0737364.05	742.1137658.82	746.79				
37977.68	758.15 38129.7	762.1238874.21	79039543.29	794.63 39880.7	800				

Manning's n Values		num= 3	
Sta	n Val	Sta	n Val
0	.1517344.72	.1518815.95	.15

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
17344.72	18815.95		5	5	5		.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507697.00	269972.70	1841005.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507697.00	269972.70	1841005.00
Q Total (cfs)	6730000.00	Flow (cfs)	2680271.00	746415.90	3303314.00
Top Width (ft)	36645.37	Top width (ft)	15951.77	1471.23	19222.36
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.78	2.76	1.79
Max Chl Dpth (ft)	192.30	Hydr. Depth (ft)	94.52	183.50	95.77
Conv. Total (cfs)	777663400.0	Conv. (cfs)	309710000.0	86249670.0	381703700.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15966.45	1474.07	19226.66
Min Ch El (ft)	567.43	Shear (lb/sq ft)	0.44	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.37	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	69824.41	13178.49	84113.70
C & E Loss (ft)	0.00	Cum SA (acres)	573.50	59.20	662.57

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274850.*

INPUT

Description:		num= 120	
Station	Elevation Data	Sta	Elev
0	800 199.81	791.38	650.08
1839.76	745.6 2009.33	743.02	2363.92
3684.24	720.89 3776.64	716.98	3788.09
4319.13	709.65 4474.55	705.1	4854.47
5810.35	685.63 5971.7	678.21	6041.12
6906.01	676.04 7129.27	662.08	7298.12
7572.64	652.99 7793.32	663.06	7857.21
8405.79	671.93 8562.63	682.86	8859.99
9190.19	658.01 9448.16	671.2	9625.45
10146.42	643.17 10163.9	642.82	10256.89
10526.41	614.2910655.04	642.55	10764.26
11374.89	643.611590.85	640.34	11846.93
14280.28	630.9414524.56	627.92	15152.51
15994.95	636.8516002.03	633.71	116110.27
17449.08	586.46 17803.2	584.63	17894.56
18685.23	571.2818821.27	593.96	18906.54
19577.08	630.5819995.57	630.89	22025.71
22693.59	624.6623641.91	629.06	23889.36
26274.84	650.9826900.19	666.46	27115.53
29060.99	663.9629612.84	656.98	29841.36
30283.76	644.3130566.41	652.12	30875.7
33500.51	699.6533637.68	700.42	34230.86
36799.29	721.6236989.12	726.17	37327.41
37980.83	758.138132.83	762.08	38877.26

Manning's n Values		num= 3	
Sta	n Val	Sta	n Val
0	.1517348.51	.1518821.27	.15

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
17348.51	18821.27		5	5	5		.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507703.00	270238.80	1841356.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507703.00	270238.80	1841356.00
Q Total (cfs)	6730000.00	Flow (cfs)	2679325.00	746966.10	3303709.00
Top Width (ft)	36649.97	Top width (ft)	15955.28	1472.76	19221.93
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.78	2.76	1.79
Max Chl Dpth (ft)	192.30	Hydr. Depth (ft)	94.50	183.49	95.79
Conv. Total (cfs)	777828600.0	Conv. (cfs)	309666500.0	86331580.0	381830500.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15969.97	1475.61	19226.22
Min Ch El (ft)	567.43	Shear (lb/sq ft)	0.44	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.37	0.80
Frctn Loss (ft)	0.00	Cum volume (acre-ft)	69651.34	13147.48	83902.36
C & E Loss (ft)	0.00	Cum SA (acres)	571.67	59.03	660.36

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274847.*

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INPUT
Description:
Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.85	791.37	650.22	773.71	1369.87	760.84	1550.96	752.37
1840.16	745.59	2009.77	743.01	2364.43	743.01	2703	741.11	3613.33	724.87
3685.05	720.9	3777.46	716.99	3788.92	716.79	3993.12	716.21	4175.29	713.01
4320.08	709.64	4475.53	705.08	4855.53	695.8	5318.65	689.62	5663.31	687.1
5811.62	685.61	5973.01	678.18	6042.44	671	6410.24	670	6764.58	674.01
6907.52	676.02	7130.83	662.04	7299.72	655.05	7371.96	648.06	7421.69	648.06
7574.3	652.94	7795.02	663.01	7858.92	663.79	7990.28	668.2	8359.02	667.95
8407.62	671.95	8564.5	682.92	8861.93	673.37	8876.22	671.86	9051.46	658.46
9192.2	658.09	9450.22	671.38	9627.56	670.9	9813.33	656.4310002	2.8	652.18
10148.64	643.2610166.12	642.9110257.13	642.9110257.13	628.93	10427.9	607.9610486.07	607.96		
10528.71	614.3310657.37	642.610766.61	658.93	11160.2	652.9811320.72	647.55			
11377.38	643.6811593.39	640.4211849.52	642.5712154.31	637.96	12798.9	630.97			
14283.4	630.9714527.73	627.9615155.82	627.9615639.03	634.9515700.02	641.94				
15998.45	636.916005.53	633.7716113.79	631.716782.78	602.2417352.31	593.98				
17453.01	586.4717807.61	584.65	17899.1	577.1918043.07	567.4318548.32	567.43			
18690.38	571.2718826.58	593.9818911.84	608.7718930.11	610.8919159.28	624.5				
19582.31	630.5420000.75	630.8522030.66	625.0522141.44	625.0522362.06	626.07				
22698.47	624.6323646.68	629.0323894.11	636.0225504.95	643.0125872.53	646.33				
26279.31	650.98	26904.6	666.4727119.91	666.9928191.21	666.9928801.93	663.98			
29065.15	663.9829616.94	656.9929845.43	652.9330010.33	650.4830144.91	643.88				
30287.78	644.3	30570.4	652.1130879.66	654.7431935.21	669.6932573.72	673.27			
33504.16	699.5633641.32	700.3334234.43	685.634267.79	685.7835799.68	718.46				
36802.57	721.5536992.38	726.0537330.64	740.9337370.49	741.9837665.19	746.69				
37983.98	758.0638135.96	762.0438880.31	79039549.23	794.6539886.57	800				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1517352.31	.1518826.58	.15		

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

17352.31	18826.58	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507704.00	270502.70	1841697.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507704.00	270502.70	1841697.00
Q Total (cfs)	6730000.00	Flow (cfs)	2678372.00	747513.90	3304114.00
Top Width (ft)	36654.31	Top width (ft)	15958.77	1474.27	19221.28
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.78	2.76	1.79
Max Chl Dpth (ft)	192.30	Hydr. Depth (ft)	94.47	183.48	95.82
Conv. Total (cfs)	777991900.0	Conv. (cfs)	309621300.0	86413030.0	381957500.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	15973.47	1477.12	19225.55
Min Ch El (ft)	567.43	Shear (lb/sq ft)	0.44	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.36	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	69478.28	13116.45	83690.98
C & E Loss (ft)	0.00	Cum SA (acres)	569.84	58.86	658.16

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274844.*

INPUT
Description:
Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	199.89	791.37	650.36	773.7	1370.17	760.83	1551.29	752.36
1840.57	745.59	2010.21	743	2364.95	743	2703.59	741.1	3613.12	724.89
3685.85	720.92	3778.29	717	3789.75	716.8	3993.99	716.21	4176.2	713
4321.02	709.62	4476.51	705.07	4856.59	695.78	5319.81	689.61	5664.55	687.09
5812.9	685.6	5974.31	678.16	6043.76	670.97	6411.64	669.97	6766.06	673.99
6909.03	676	7132.39	662	7301.31	655	7373.57	648	7423.31	648
7575.95	652.89	7796.73	662.95	7860.64	663.75	7992.03	668.18	8360.85	667.95
8409.46	671.97	8566.37	682.98	8863.87	673.46	8878.16	671.94	9053.44	658.53
9194.21	658.16	9452.29	671.47	9629.66	671	9815.48	656.5100004	46	652.25
10150.86	643.3510168.34	64310259.38	62910430.18	60810488.36	608				
10531.01	614.38	10659.7	642.6510768.97	65911162.64	653.04	11323.2	647.61		
11379.87	643.7611595.92	640.4911852.11	642.6112156.96	638	12801.7	631			
14286.52	63114530.91	62815159.14	62815642.45	63515703.45	642				
16001.94	636.9516009.03	633.8316117.32	631.7616786.45	602.27	17356.1	594			
17456.94	586.4817812.03	584.6717903.64	577.2	18047.8	567.43	18553.3	567.43		
18695.53	571.27	18831.9	59418917.15	608.7618935.41	610.8919164.56	624.46			
19587.54	630.5120005.94	630.822035.62	62522146.38	62522366.98	626.03				
22703.35	624.5923651.45	62923898.85	63625509.51	64325877.04	646.32				
26283.78	650.98	26909	666.4827124.29	66728195.47	664				
29069.31	66429621.04	657	29849.5	652.9330014.38	650.4830148.95	643.87			
30291.8	644.2830574.39	652.130883.61	654.7431939.04	669.6632577.48	673.25				
33507.82	699.4833644.96	700.25	34238	685.5834271.36	685.7635803.07	718.37			
36805.86	721.4836995.64	725.9837333.86	740.8637373.71	741.9137668.38	746.64				
37987.13	758.01	38139.1	76238883.36	79039552.21	794.65	39889.5	800		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.15	17356.1	.15	18831.9	.15

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

17356.1	18831.9	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507689.00	270768.70	1842046.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507689.00	270768.70	1842046.00
Q Total (cfs)	6730000.00	Flow (cfs)	2677380.00	748072.70	3304548.00
Top Width (ft)	36659.09	Top width (ft)	15962.46	1475.80	19220.83

Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.78	2.76	1.79
Max Chl Dpth (ft)	192.30	Hydr. Depth (ft)	94.45	183.47	95.84
Conv. Total (cfs)	778147000.0	Conv. (cfs)	309568300.0	86494880.0	382083800.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15977.18	1478.65	19225.11
Min Ch El (ft)	567.43	Shear (lb/sq ft)	0.44	0.86	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.36	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	69305.22	13085.39	83479.57
C & E Loss (ft)	0.00	Cum SA (acres)	568.01	58.69	655.95

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CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274841.*

INPUT

Description:

Station Elevation Data	num=	120
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
0 800 199.94 791.37 650.5 773.69 1370.47 760.83 1551.63 752.35		
1840.97 745.58 2010.65 742.99 2365.47 742.99 2704.18 741.09 3613.91 724.91		
3686.66 720.93 3779.11 717.01 3790.58 716.81 3994.87 716.2 4177.11 712.99		
4321.97 709.61 4477.49 705.05 4857.65 695.76 5320.98 689.59 5665.79 687.07		
5814.17 685.58 5975.62 678.13 6045.08 670.93 6413.04 669.93 6767.54 673.97		
6910.54 675.98 7133.95 661.96 7302.91 654.95 7375.19 647.94 7424.94 647.94		
7577.61 672.83 7798.43 662.9 7862.36 663.7 7993.77 668.15 8362.67 667.96		
8411.3 671.98 8568.24 683.04 8865.8 673.55 8880.1 672.03 9055.42 658.6		
9196.22 658.23 9454.36 671.57 9631.76 671.09 9817.62 656.5810006.65 652.33		
10153.08 643.4410170.57 643.0910261.62 629.0710432.46 608.0410490.65 608.04		
10533.31 614.4310662.03 642.6910771.32 659.0711165.08 653.1111325.67 647.68		
11382.36 643.8311598.45 640.56 11854.7 642.6612159.62 638.0412804.49 631.03		
14289.64 631.0314534.08 628.0415162.45 628.0415645.87 635.0515706.88 642.06		
16005.44 63716012.53 633.8916120.84 631.8216790.12 602.2917359.89 594.02		
17460.87 586.517816.44 584.6817908.17 577.2118052.53 567.4318558.28 567.43		
18700.68 571.2618837.22 594.0218922.46 608.7618940.72 610.8819169.84 624.42		
19592.78 630.4720011.12 630.7622040.57 624.9522151.32 624.95 22371.9 625.98		
22708.23 624.5523656.23 628.9723903.59 635.9825514.07 642.9925881.56 646.32		
26288.26 650.98 26913.4 666.4927128.66 667.0128199.72 667.01 28810.3 664.02		
29073.47 664.0229625.13 657.0129853.57 652.9430018.44 650.4830152.99 643.86		
30295.82 644.2730578.38 652.130887.56 654.7331942.88 669.6432581.25 673.23		
33511.48 699.39 33648.6 700.1634241.58 685.5634274.93 685.7435806.47 718.28		
36809.14 721.4136998.91 725.9237537.09 740.7937376.93 741.8437671.56 746.6		
37990.29 757.9638142.23 761.9638886.41 79039555.18 794.6639892.43 800		

Manning's n Values

Sta n Val Sta n Val	num=	3
0 .1517359.89		
		.1518837.22
		.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17359.8918837.22	5 5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit w.S. (ft)		Flow Area (sq ft)	1507695.00	271035.90	1842381.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507695.00	271035.90	1842381.00
Q Total (cfs)	6730000.00	Flow (cfs)	2676451.00	748631.40	3304918.00
Top width (ft)	36663.67	Top Width (ft)	15965.96	1477.33	19220.38
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.78	2.76	1.79
Max Chl Dpth (ft)	192.30	Hydr. Depth (ft)	94.43	183.46	95.86
Conv. Total (cfs)	778308500.0	Conv. (cfs)	309525200.0	86577440.0	382205900.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15980.71	1480.18	19224.64
Min Ch El (ft)	567.43	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.36	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	69132.16	13054.29	83268.12
C & E Loss (ft)	0.00	Cum SA (acres)	566.17	58.52	653.75

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274838.*

INPUT

Description:

Station Elevation Data	num=	120
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
0 800 199.98 791.36 650.65 773.68 1370.77 760.83 1551.97 752.34		
1841.37 745.58 2011.09 742.98 2365.98 742.98 2704.77 741.08 3614.7 724.92		
3687.47 720.95 3779.94 717.02 3791.4 716.82 3995.74 716.19 4178.03 712.98		
4322.91 709.59 4478.47 705.03 4858.71 695.74 5322.14 689.58 5667.03 687.05		
5815.44 685.56 5976.92 678.1 6046.4 670.89 6414.44 669.9 6769.01 673.94		
6912.05 675.96 7135.5 661.92 7304.5 654.9 7376.8 647.88 7426.56 647.88		
7579.26 652.78 7800.13 662.85 7864.08 663.66 7995.52 668.12 8364.5 667.97		
8413.14 672 8570.12 683.09 8867.74 673.63 8882.04 672.12 9057.4 658.68		
9198.23 658.3 9456.42 671.66 9633.87 671.19 9819.77 656.6610008.83 652.4		
10155.29 643.5310172.79 643.1810263.86 629.1410434.74 608.0810492.95 608.08		
10535.62 614.4810664.36 642.7410773.67 659.1411167.52 653.1711328.15 647.75		
11384.84 643.9111600.99 640.6311857.29 642.7112162.28 638.0812807.29 631.06		
14292.77 631.0614537.26 628.0815165.76 628.0815649.29 635.115710.31 642.12		
16008.94 637.0616016.03 633.9616124.36 631.8816793.79 602.3217363.69 594.04		
17464.8 586.5117820.85 584.717912.71 577.2218057.27 567.4318563.26 567.43		
18705.84 571.2618842.53 594.0418927.77 608.7618946.02 610.8819175.12 624.39		
19598.01 630.44 20016.3 630.7222045.53 624.922156.26 624.922376.82 625.93		
22713.11 624.52 23661 628.9423908.34 635.9625518.63 642.9825886.09 646.31		
26292.73 650.972917.81 666.5127133.04 667.0228203.98 667.0228814.49 664.04		
29077.63 664.0429629.23 657.0229857.64 652.9430022.49 650.4830157.02 643.84		
30299.84 644.2530582.37 652.0930891.52 654.7231946.71 669.6132585.01 673.2		
33515.13 699.3933652.24 700.0834245.15 685.54 34278.5 685.7235809.87 718.19		
36812.42 721.3337002.17 725.8637340.31 740.7237380.15 741.7737674.75 746.55		
37993.43 757.9238145.36 761.9238889.45 79039558.15 794.6739895.37 800		

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Manning's n Values	num=	3					
Sta n Val Sta	n Val Sta	n Val					
0 .1517363.69	.1518842.53	.15					

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff	Contr.	Expan.
17363.6918842.53	5 5 5	.1		.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507693.00	271298.30	1842735.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507693.00	271298.30	1842735.00
Q Total (cfs)	6730000.00	Flow (cfs)	2675480.00	749169.90	3305350.00
Top Width (ft)	36668.03	Top Width (ft)	15969.48	1478.84	19219.71
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.77	2.76	1.79
Max Chl Dpth (ft)	192.30	Hydr. Depth (ft)	94.41	183.45	95.88
Conv. Total (cfs)	778474400.0	Conv. (cfs)	309478900.0	86658180.0	382337300.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15984.24	1481.70	19223.98
Min Ch El (ft)	567.43	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.36	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	68959.09	13023.16	83056.62
C & E Loss (ft)	0.00	Cum SA (acres)	564.34	58.35	651.54

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274835.*

INPUT

Description:

Station Elevation Data	num=	120					
Sta Elev Sta	Elev Sta	Elev Sta	Elev Sta	Elev Sta	Elev		
0 800 200.03	791.36 650.79	773.66 1371.07	760.83 1552.31	752.33			
1841.77 745.57 2011.52	742.97 2366.5	742.97 2705.36	741.06 3615.49	724.94			
3688.27 720.96 3780.77	717.03 3792.23	716.83 3996.61	716.19 4178.94	712.97			
4323.85 709.58 4479.45	705.02 4859.78	695.72 5323.3	689.56 5668.27	687.03			
5816.71 685.54 5978.23	678.07 6047.72	670.86 6415.84	669.87 6770.49	673.92			
6913.56 675.94 7137.06	661.88 7306.1	654.85 7378.41	647.82 7428.18	647.82			
7580.92 652.73 7801.84	662.8 7865.79	663.61 7997.27	668.09 8366.33	667.97			
8414.98 672.02 8571.99	683.15 8869.68	673.72 8883.98	672.21 9059.37	658.75			
9200.24 658.38 9458.49	671.76 9635.97	671.29 9821.91	656.7410011.02	652.47			
10157.51 643.6210175.01	643.27 10266.1	629.2110437.02	608.1210495.24	608.12			
10537.92 614.5310666.69	642.7910776.03	659.2111169.96	653.2311330.62	647.82			
11387.33 643.9911603.52	640.711859.88	642.7512164.94	638.1212810.09	631.09			
14295.89 631.0914540.43	628.1215169.08	628.1215652.71	635.1515713.75	642.18			
16012.43 637.1116019.52	634.0216127.88	631.9416797.45	602.3517367.48	594.06			
17468.73 586.5217825.27	584.7217917.25	577.23 18062	567.4318568.24	567.43			
18710.99 571.2518847.85	594.0618933.07	608.7618951.33	610.88 19180.4	624.35			
19603.24 630.420021.49	630.6822050.48	624.8522161.21	624.8522381.73	625.88			
22717.98 624.4823665.77	628.9123913.08	635.9425523.19	642.9725890.61	646.31			
26297.21 650.9726922.21	666.5227137.42	667.0328208.24	667.0328818.68	664.06			
29081.79 664.0629633.32	657.0329861.71	652.9530026.54	650.4730161.06	643.83			
30303.86 644.2430586.35	652.0830895.47	654.7131950.54	669.5832588.77	673.18			
33518.79 699.2233655.88	699.9934248.73	685.5234282.07	685.7335813.27	718.1			
36815.71 721.2637005.43	725.7937343.54	740.6537383.37	741.737677.93	746.5			
37996.59 757.87 38148.5	761.88 38892.5	79039561.12	794.67 39898.3	800			

Manning's n Values	num=	3			
Sta n Val Sta	n Val Sta	n Val			
0 .1517367.48	.1518847.85	.15			

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff	Contr.	Expan.
17367.4818847.85	5 5 5	.1		.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507690.00	271565.30	1843083.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507690.00	271565.30	1843083.00
Q Total (cfs)	6730000.00	Flow (cfs)	2674521.00	749726.30	3305753.00
Top Width (ft)	36672.60	Top Width (ft)	15972.98	1480.37	19219.25
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.77	2.76	1.79
Max Chl Dpth (ft)	192.30	Hydr. Depth (ft)	94.39	183.44	95.90
Conv. Total (cfs)	778636500.0	Conv. (cfs)	309432300.0	86740590.0	382463600.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	15987.76	1483.23	19223.51
Min Ch El (ft)	567.43	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.36	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	68786.03	12992.01	82845.08
C & E Loss (ft)	0.00	Cum SA (acres)	562.51	58.18	649.33

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274832.*

INPUT

Description:

Station Elevation Data	num=	120					
Sta Elev Sta	Elev Sta	Elev Sta	Elev Sta	Elev Sta	Elev		
0 800 200.07	791.35 650.93	773.65 1371.37	760.82 1552.65	752.33			
1842.17 745.56 2011.96	742.96 2367.02	742.96 2705.95	741.05 3616.28	724.96			
3689.08 720.98 3781.59	717.04 3793.06	716.84 3997.48	716.18 4179.85	712.96			
4324.8 709.57 4480.42	705 4860.84	695.71 5324.46	689.55 5669.5	687.01			
5817.98 685.52 5979.53	678.05 6049.04	670.82 6417.25	669.83 6771.97	673.9			
6915.07 675.92 7138.62	661.84 7307.69	654.8 7380.02	647.76 7429.8	647.76			
7582.58 652.67 7803.54	662.74 7867.51	663.57 7999.01	668.07 8368.16	667.98			
8416.81 672.04 8573.86	683.21 8871.62	673.81 8885.92	672.3 9061.35	658.82			
9202.25 658.45 9460.55	671.85 9638.08	671.39 9824.06	656.8210013.21	652.55			

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10159.73	643.7110177.23	643.3610268.34	629.2810439.29	608.1610497.53	608.16
10540.22	614.5810669.02	642.8310778.38	659.2811172.39	653.29 11333.1	647.89
11389.82	644.0611606.06	640.7811862.47	642.812167.59	638.1612812.89	631.12
14299.01	631.1214543.61	628.1615172.39	628.1615656.12	635.215717.18	642.24
16015.93	637.1616023.02	634.0816131.41	63216801.12	602.3717371.27	594.08
17472.66	586.5317829.68	584.7417921.79	577.2418066.74	567.4318573.22	567.43
18716.14	571.2518853.17	594.0818938.38	608.7618956.63	610.8719185.68	624.31
19608.47	630.3720026.67	630.6422055.44	624.822166.15	624.822386.65	625.83
22722.86	624.4523670.54	628.8823917.82	635.9225527.75	642.9625895.12	646.3
26301.68	650.9726926.61	666.53 27141.8	667.04 28212.5	667.0428822.87	664.08
29085.95	664.0829637.42	657.0429865.78	652.9530030.59	650.47 30165.1	643.82
30307.88	644.2330590.34	652.0730899.43	654.7131954.38	669.5532592.53	673.16
33522.45	699.1333659.52	699.9 34252.3	685.4934285.64	685.6835816.66	718.02
36818.99	721.1937008.69	725.7337346.76	740.5837386.59	741.6337681.12	746.45
37999.73	757.8338151.63	761.8438895.55	790 39564.1	794.6839901.24	800

Manning's n Values

num=	3
Sta	n Val
0	.1517371.27
	.1518853.17
	.15

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

17371.27	18853.17	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507681.00	271831.30	1843408.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507681.00	271831.30	1843408.00
Q Total (cfs)	6730000.00	Flow (cfs)	2673558.00	750285.90	3306156.00
Top Width (ft)	36677.11	Top Width (ft)	15976.64	1481.90	19218.56
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.77	2.76	1.79
Max Chl Dpth (ft)	192.30	Hydr. Depth (ft)	94.37	183.43	95.92
Conv. Total (cfs)	778789600.0	Conv. (cfs)	309381800.0	86822410.0	382585400.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15991.44	1484.76	19222.81
Min Ch El (ft)	567.43	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.36	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	68612.98	12960.82	82633.50
C & E Loss (ft)	0.00	Cum SA (acres)	560.67	58.01	647.13

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274829.*

INPUT

Description:

Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200.11	791.35	651.07	773.64	1371.67	760.82	1552.99	752.32
1842.58	745.56	2012.4	742.95	2367.53	742.95	2706.54	741.04	3617.06	724.97
3689.88	721	3782.42	717.05	3793.89	716.85	3998.36	716.18	4180.76	712.95
4325.74	709.55	4481.4	704.98	4861.9	695.69	5325.63	689.54	5670.74	686.99
5819.25	685.5	5980.84	678.02	6050.36	670.78	6418.65	669.8	6773.45	673.87
6916.58	675.9	7140.18	661.8	7309.29	654.75	7381.63	647.7	7431.42	647.7
7584.23	662.62	7805.25	662.69	7869.23	663.52	8000.76	668.04	8369.98	667.99
8418.55	672.05	8575.73	683.26	8873.55	673.9	8887.86	672.39	9063.33	658.89
9204.26	658.52	9462.62	671.95	9640.18	671.48	9826.2	656.89	10015.39	652.62
10161.95	643.8	10179.45	643.45	10270.59	629.35	10441.57	608.21	10499.82	608.2
10542.52	614.63	10671.35	642.88	10780.73	659.35	11174.83	653.35	11335.57	647.95
11392.3	644.14	11608.59	640.85	11865.06	642.85	12170.25	638.21	12815.68	631.15
14302.13	631.15	151546.79	628.2	15175.7	628.21	15659.54	635.25	15720.61	642.3
16019.43	637.22	16026.52	634.14	16134.93	632.06	16804.79	602.41	17375.06	594.1
17476.59	586.54	17834.09	584.76	17926.33	577.24	18071.47	567.42	18578.2	567.42
18721.29	571.25	18858.48	594.11	18943.69	608.76	18961.94	610.87	19190.96	624.28
19613.7	630.33	20031.86	630.62	2060.39	624.75	22171.09	624.75	22391.57	625.78
22727.74	624.43	23675.31	628.85	23922.57	635.92	25532.32	642.95	25899.64	646.3
26306.15	650.96	26931.02	666.54	27146.18	667.05	28216.76	667.05	28827.06	664.1
29090.11	664.12	29641.52	657.05	29869.85	652.96	30034.64	650.47	30169.13	643.8
30311.9	644.23	30594.33	652.07	30903.38	654.73	31958.21	669.55	32596.29	673.13
33526.11	699.04	33663.17	699.82	34255.88	685.47	34289.21	685.66	35820.06	717.93
36822.27	721.12	37011.96	725.67	37349.98	740.51	37389.8	741.56	37684.3	746.4
38002.89	757.78	38154.77	761.8	38898.6	790	39567.07	794.68	39904.18	800

Manning's n Values

num=	3
Sta	n Val
0	.1517375.06
	.1518858.48
	.15

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

17375.06	18858.48	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507681.00	272102.90	1843765.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507681.00	272102.90	1843765.00
Q Total (cfs)	6730000.00	Flow (cfs)	2672583.00	750859.30	3306558.00
Top Width (ft)	36681.67	Top Width (ft)	15980.15	1483.42	19218.10
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.77	2.76	1.79
Max Chl Dpth (ft)	192.31	Hydr. Depth (ft)	94.35	183.43	95.94
Conv. Total (cfs)	778958700.0	Conv. (cfs)	309336100.0	86907630.0	382715000.0
Length wtd. (ft)	5.00	wetted Per. (ft)	15994.96	1486.28	19222.34
Min Ch El (ft)	567.42	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.35	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	68439.92	12929.60	82421.88
C & E Loss (ft)	0.00	Cum SA (acres)	558.84	57.84	644.92

CROSS SECTION

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RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274826.*

INPUT Description: Station Elevation Data num= 120. Table with columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains 120 rows of station and elevation data.

Manning's n values num= 3. Table with columns: Sta, n Val, Sta, n Val, Sta, n Val. Contains 3 rows of Manning's n values.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan. Table with 6 columns and 2 rows of bank and channel data.

CROSS SECTION OUTPUT Profile #PF 1

Table with 6 columns: E.G. Elev (ft), Vel Head (ft), w.s. Elev (ft), Crit w.s. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft), Vel total (ft/s), Max chl dpth (ft), Conv. Total (cfs), Length wtd. (ft), Min Ch El (ft), Alpha, Frctn Loss (ft), C & E Loss (ft). Contains 15 rows of cross-section data.

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274824.*

INPUT Description: Station Elevation Data num= 120. Table with columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains 120 rows of station and elevation data.

Manning's n values num= 3. Table with columns: Sta, n Val, Sta, n Val, Sta, n Val. Contains 3 rows of Manning's n values.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan. Table with 6 columns and 2 rows of bank and channel data.

CROSS SECTION OUTPUT Profile #PF 1

Table with 6 columns: E.G. Elev (ft), Vel Head (ft), w.s. Elev (ft), Crit w.s. (ft), Element, Left OB, Channel, Right OB. Contains 4 rows of cross-section data.

E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507678.00	272633.80	1844465.00
Q Total (cfs)	6730000.00	Flow (cfs)	2670646.00	751956.30	3307398.00
Top width (ft)	36690.74	Top width (ft)	15987.35	1486.47	19216.92
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.77	2.76	1.79
Max Chl Dpth (ft)	192.31	Hydr. Depth (ft)	94.30	183.41	95.98
Conv. Total (cfs)	779286300.0	Conv. (cfs)	309241900.0	87071220.0	382973200.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16002.20	1489.34	19221.14
Min Ch El (ft)	567.42	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.35	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	68093.81	12867.08	81998.53
C & E Loss (ft)	0.00	Cum SA (acres)	555.17	57.50	640.51

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274821.*

INPUT

Description:
Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev			
0	800	200	2.24	791.33	651.5	773.6	1372.56	760.81	1554.01	752.29
1843.78	745.54	2013.72	742.92	2369.08	742.92	2708.32	741	3619.43	725.02	
3692.3	721.04	3784.89	717.08	3796.37	716.88	4000.98	716.16	4183.5	712.92	
4328.58	709.51	4484.34	704.93	4865.08	695.63	5329.11	689.49	5674.45	686.94	
5823.06	685.45	5984.76	677.94	6054.33	670.67	6422.85	669.7	6777.89	673.8	
6921.11	675.84	7144.86	661.68	7314.08	654.6	7386.47	647.52	7436.29	647.52	
7589.2	652.46	7810.36	662.53	7874.38	663.38	8006	667.96	8375.46	668.01	
8424.16	672.1	8581.35	683.43	8879.36	674.17	8893.68	672.65	9069.27	659.11	
9210.28	658.74	9468.82	672.23	9646.5	671.77	9832.64	657.1310021.95	652.85		
10168.6	644.0710186.12	643.7210277.31	629.5610448.41	629.5611182.15	653.54	11343	608.32	10506.7	608.32	
10549.42	614.7810678.33	643.0210787.79	659.5611182.15	653.54	11343	648.16	638.3212824.08	631.24		
11399.76	644.3711616.19	641.0711872.83	642.9912178.22	638.3212824.08	631.24	642.48	635.415730.91	642.48		
14311.5	631.2414556.31	628.3215185.64	628.32	15669.8	635.415730.91	642.48	602.4717386.44	594.16		
16029.92	637.3716037.02	634.33	16145.5	632.2516815.79	607.4218593.13	567.42	577.2718085.67	567.42		
17488.38	586.5817847.33	584.8117939.94	594.1618959.61	608.7518977.86	610.8619206.79	624.17	624.622406.32	625.64		
18736.75	571.2318874.44	594.1618959.61	630.4722075.26	624.622185.91	624.622406.32	625.64	642.9225913.21	646.28		
19629.39	630.2320047.41	630.4722075.26	628.76	23936.8	635.84	25546	667.0828839.62	664.16		
22742.38	624.323689.63	628.76	23936.8	635.84	25546	642.9225913.21	646.28	664.16		
26319.58	650.9526944.23	666.5827159.32	666.5827159.32	667.0828229.53	667.0828229.53	664.16	650.4730181.24	643.77		
29102.58	664.1629653.81	657.0829882.06	652.97	30046.8	650.4730181.24	643.77	669.4332607.58	673.06		
30323.96	644.17	30606.3	652.0530915.24	654.6831969.71	685.635830.25	717.66	741.3637693.86	746.26		
33537.07	698.7833674.09	699.56	34266.6	685.4134299.93	685.635830.25	717.66	794.7139912.98	800		
36832.12	720.937021.74	725.4837359.66	725.4837359.66	740.337399.46	740.337399.46	746.26				
38012.34	757.6538164.16	761.6838907.75	761.6838907.75	79039575.99	794.7139912.98	800				

Manning's n Values num= 3

Sta	n Val	Sta	n Val
0	.1517386.44		
			.1518874.44
			.15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
17386.4418874.44 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
w.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit w.S. (ft)		Flow Area (sq ft)	1507674.00	272901.20	1844805.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507674.00	272901.20	1844805.00
Q Total (cfs)	6730000.00	Flow (cfs)	2669685.00	752512.20	3307803.00
Top width (ft)	36695.10	Top width (ft)	15990.87	1488.00	19216.24
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.77	2.76	1.79
Max Chl Dpth (ft)	192.31	Hydr. Depth (ft)	94.28	183.40	96.00
Conv. Total (cfs)	779449000.0	Conv. (cfs)	309195200.0	87153780.0	383100100.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16005.73	1490.87	19220.45
Min Ch El (ft)	567.42	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.35	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	67920.76	12835.77	81786.80
C & E Loss (ft)	0.00	Cum SA (acres)	553.33	57.33	638.30

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274818.*

INPUT

Description:
Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev			
0	800	200	2.29	791.33	651.64	773.59	1372.86	760.81	1554.35	752.29
1844.19	745.53	2014.16	742.91	2369.6	742.91	2708.91	740.99	3620.22	725.04	
3693.1	721.06	3785.72	717.09	3797.2	716.89	4001.85	716.16	4184.41	712.91	
4329.52	709.49	4485.32	704.91	4866.14	695.61	5330.28	689.48	5675.69	686.92	
5824.33	685.43	5986.06	677.91	6055.65	670.64	6424.25	669.67	6779.37	673.78	
6922.62	675.82	7146.42	661.64	7315.67	654.55	7388.08	647.46	7437.91	647.46	
7590.85	652.41	7812.06	662.48	7876.1	663.34	8007.75	667.93	8377.29	668.01	
8426	672.12	8583.22	683.49	8881.3	674.25	8895.62	672.74	9071.25	659.18	
9212.29	658.81	9470.88	672.33	9648.6	671.87	9834.78	657.2110024.14	652.92		
10170.82	644.1610188.34	643.8110279.55	629.6310450.69	629.6311184.59	653.611345.47	648.23	608.3610508.99	608.36		
10551.73	614.8310680.67	643.0610790.15	659.6311184.59	653.611345.47	648.23	642.54	638.3612826.88	631.27		
11402.25	644.4511618.73	641.1411875.42	643.0312180.88	628.3615188.95	628.3615188.95	642.54	635.4515734.34	642.54		
14314.62	631.2714559.49	628.3615188.95	632.3116819.46	602.517390.24	594.18	17492.31	586.5917851.74	567.42		
16033.42	637.4316040.52	634.416149.02	632.3116819.46	602.517390.24	594.18	18741.9	571.2318879.75	624.13		
17492.31	586.5917851.74	584.8317944.48	577.2818090.41	567.4218598.11	567.42	19634.63	630.1920052.59	625.59		
18741.9	571.2318879.75	594.1818964.92	608.7518983.16	610.8619212.07	624.13	22747.26	624.26	23694.4	646.28	
19634.63	630.1920052.59	630.4322080.21	624.5522190.86	624.5522411.24	625.59	26324.05	650.9526948.63	664.18		
22747.26	624.26	23694.4	628.7323941.54	635.8225550.56	642.9125917.73	646.28	666.59	27163.7	667.0928233.79	664.18
26324.05	650.9526948.63	666.59	27163.7	667.0928233.79	667.0928233.79	664.18	657.0929886.13	652.9730050.85	650.4630185.28	643.75
29106.74	664.18	29657.9	652.04	30919.2	652.04	30919.2	654.6731973.53	669.432611.34	673.04	
30327.98	644.1530610.29	652.04	30919.2	652.04	30919.2	654.6731973.53	669.432611.34	673.04		
33540.73	698.733677.73	699.4834270.17	685.39	34303.5	685.39	34303.5	685.5835833.65	717.58		

36835.41 720.83 37025 725.4237362.88 740.2337402.68 741.2937697.05 746.21
 38015.48 757.6 38167.3 761.64 38910.8 79039578.96 794.7139915.91 800

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Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .1517390.24 .1518879.75 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17390.2418879.75 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507664.00	273163.30	1845140.00
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	1507664.00	273163.30	1845140.00
Q Total (cfs)	6730000.00	Flow (cfs)	2668736.00	753059.00	3308205.00
Top width (ft)	36699.60	Top width (ft)	15994.35	1489.51	19215.74
Vel Total (ft/s)	1.86	Avg. vel. (ft/s)	1.77	2.76	1.79
Max Chl Dpth (ft)	192.31	Hydr. Depth (ft)	94.26	183.39	96.02
Conv. Total (cfs)	779603400.0	Conv. (cfs)	309146500.0	87234380.0	38322600.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	16009.24	1492.38	19219.95
Min Ch El (ft)	567.42	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.78	2.35	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	67747.70	12804.43	81575.02
C & E Loss (ft)	0.00	Cum SA (acres)	551.50	57.16	636.10

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274815.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200.33	791.33	651.78	773.58	1373.16	760.81	1554.68	752.28
1844.59	745.52	2014.6	742.9	2370.12	742.9	2709.5	740.97	3621.01	725.06
3693.91	721.07	3786.55	717.1	3798.03	716.9	4002.72	716.15	4185.33	712.9
4330.46	709.48	4486.29	704.9	4867.21	695.59	5331.44	689.46	5676.93	686.9
5825.6	685.41	5987.37	677.88	6056.97	670.6	6425.65	669.63	6780.84	673.76
6924.13	675.8	7147.97	661.6	7317.27	654.5	7389.69	647.4	7439.54	647.4
7592.51	652.36	7813.77	662.42	7877.82	663.29	8009.49	667.9	8379.12	668.02
8427.84	672.14	8585.09	683.55	8883.24	674.34	8897.57	672.83	9073.22	659.25
9214.3	658.89	9472.95	672.42	9650.71	671.97	9836.93	657.29	10026.33	653
10173.04	644.25	10190.57	643.9	10281.8	629.71	10452.97	608.41	10511.28	608.4
10554.03	614.87	10682.99	643.11	10792.5	659.71	11187.03	653.66	11347.95	648.29
11404.74	644.53	11621.26	641.21	11878.01	643.08	12183.53	638.41	12829.67	631.3
14317.74	631.31	14562.66	628.41	15192.27	628.41	15676.64	635.51	15737.77	642.6
16036.91	637.48	16044.01	634.46	16152.54	632.37	16823.13	602.53	17394.03	594.2
17496.25	586.61	17856.16	584.84	17949.02	577.29	18095.14	567.42	18603.09	567.42
18747.05	571.23	18885.07	594.21	18970.22	608.75	18988.46	610.86	19217.35	624.09
19639.86	630.16	20057.78	630.39	20285.17	624.5	22195.8	624.52	22416.15	625.54
22752.14	624.23	232699.17	628.72	3946.29	635.82	5555.12	642.92	5922.25	646.27
26328.52	650.95	26953.03	666.62	27168.07	667.12	28238.04	667.1	28848	664.2
29110.9	664.2	29662	657.1	29890.2	652.98	30054.9	650.46	30189.32	643.74
30332	644.14	30614.27	652.03	30923.15	654.66	31977.38	669.37	32615.11	673.01
33544.39	698.61	33681.38	699.39	34273.75	685.37	34307.07	685.56	35837.05	717.49
36838.69	720.76	37028.27	725.35	37366.11	740.16	37405.9	741.22	37700.24	746.17
38018.64	757.55	38170.43	761.63	38913.84	79039581.94		794.72	39918.85	800

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .1517394.03 .1518885.07 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17394.0318885.07 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507664.00	273431.40	1845488.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507664.00	273431.40	1845488.00
Q Total (cfs)	6730000.00	Flow (cfs)	2667780.00	753615.20	3308605.00
Top width (ft)	36704.13	Top width (ft)	15997.86	1491.04	19215.23
Vel Total (ft/s)	1.86	Avg. vel. (ft/s)	1.77	2.76	1.79
Max Chl Dpth (ft)	192.31	Hydr. Depth (ft)	94.24	183.38	96.04
Conv. Total (cfs)	779768800.0	Conv. (cfs)	309101300.0	87317330.0	383350200.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	16012.76	1493.92	19219.43
Min Ch El (ft)	567.42	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.77	2.35	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	67574.65	12773.06	81363.21
C & E Loss (ft)	0.00	Cum SA (acres)	549.66	56.99	633.89

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274812.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200.38	791.32	651.92	773.56	1373.46	760.8	1555.02	752.27
1844.99	745.52	2015.04	742.89	2370.63	742.89	2710.09	740.96	3621.8	725.08
3694.71	721.09	3787.37	717.11	3798.86	716.91	4003.59	716.15	4186.24	712.89
4331.41	709.46	4487.27	704.88	4868.27	695.57	5332.6	689.45	5678.17	686.88
5826.87	685.39	5988.67	677.86	6058.29	670.57	6427.05	669.6	6782.32	673.74
6925.64	675.78	7149.53	661.56	7318.86	654.45	7391.3	647.34	7441.16	647.34

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7594.17	652.3	7815.47	662.37	7879.54	663.24	8011.24	667.88	8380.95	668.03
8429.68	672.16	8586.96	683.6	8885.18	674.43	8899.5	672.92	9075.2	659.32
9216.31	658.96	9475.01	672.52	9652.81	672.06	9839.07	657.36	10028.51	653.07
10175.26	644.34	10192.79	643.99	10284.04	629.77	10455.25	608.44	10513.58	608.44
10556.33	614.92	10685.32	643.16	10794.85	643.16	11189.47	659.77	11189.47	648.36
11407.22	644.6	11623.8	641.28	11880.6	643.12	12186.19	638.44	12350.42	631.33
14320.87	631.33	14565.84	628.44	15195.58	628.44	15680.05	635.55	15741.2	642.66
16040.41	637.33	16047.51	634.52	16156.06	632.43	16826.8	602.55	17397.82	594.22
17500.18	586.61	17860.57	584.86	17953.55	577.31	18099.87	567.42	18608.07	567.42
18752.2	571.22	18890.39	594.22	18975.53	608.75	18993.77	610.85	19222.63	624.06
19645.09	630.12	20062.96	630.34	22090.12	624.45	22200.74	624.45	22421.07	625.49
22757.02	624.19	23703.94	628.67	23951.03	635.78	25559.69	642.89	25926.77	646.27
26333	650.94	26957.44	666.61	27172.45	667.11	28242.3	667.11	28852.19	664.22
29115.06	664.22	29666.1	657.11	29894.27	652.98	30058.96	650.46	30193.36	643.73
30336.03	644.13	30618.26	652.03	30927.1	654.65	31981.22	669.35	32618.87	672.99
33548.05	698.52	33685.02	699.31	34277.32	685.35	34310.64	685.54	35840.45	717.4
36841.98	720.69	37031.53	725.29	37369.33	740.09	37409.12	741.15	37703.42	746.12
38021.79	757.51	38173.56	761.56	38916.89	79039	584.91	794.73	39924.72	800

Manning's n Values

num=	3		
Sta	n Val	Sta	n Val
0	.1517397.82	.1518890.39	.15

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

17397.82	18890.39	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507662.00	273698.30	1845836.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507662.00	273698.30	1845836.00
Q Total (cfs)	6730000.00	Flow (cfs)	2666802.00	754167.60	3309030.00
Top width (ft)	36708.65	Top width (ft)	16001.55	1492.57	19214.53
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.77	2.76	1.79
Max Chl Dpth (ft)	192.31	Hydr. Depth (ft)	94.22	183.37	96.06
Conv. Total (cfs)	779932800.0	Conv. (cfs)	309053000.0	87399700.0	383480100.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16016.44	1495.45	19218.72
Min Ch El (ft)	567.42	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.77	2.34	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	67401.59	12741.66	81151.36
C & E Loss (ft)	0.00	Cum SA (acres)	547.83	56.82	631.69

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274809.*

INPUT

Description: Station Elevation Data

num=	120								
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev		
0	800	200.42	791.32	652.07	773.55	1373.76	760.8	1555.36	752.26
1845.39	745.51	2015.48	742.88	2371.15	742.88	2710.68	740.95	3622.59	725.09
3695.52	721.1	3788.2	717.12	3799.69	716.91	4004.47	716.14	4187.15	712.88
4332.35	709.45	4488.25	704.86	4869.33	695.55	5333.77	689.43	5679.41	686.86
5828.14	685.37	5989.98	677.83	6059.61	670.53	6428.45	669.57	6783.8	673.71
6927.15	675.76	7151.09	661.52	7320.46	654.4	7392.91	647.28	7442.78	647.28
7595.82	652.25	7817.17	662.32	7881.26	663.2	8012.99	667.85	8382.77	668.03
8431.52	672.17	8588.84	683.66	8887.11	674.52	8901.45	673.01	9077.18	659.39
9218.32	659.03	9477.08	672.61	9654.91	672.16	9841.22	657.44	10030.7	653.15
10177.48	644.43	10195.01	644.08	10286.28	629.84	10457.53	608.48	10515.87	608.48
10558.63	614.97	10687.65	643.21	10797.21	659.84	11191.91	653.78	11352.89	648.43
11409.71	644.68	11626.33	641.35	11883.19	643.17	12188.85	638.48	12835.27	631.36
14323.99	631.36	14569.01	628.48	15198.89	628.48	15683.47	635.61	15744.63	642.72
16043.91	637.58	16051.01	634.58	16159.58	632.49	16830.47	602.58	17401.62	594.24
17504.11	586.62	17864.98	584.88	17958.09	577.31	18104.61	567.42	18613.05	567.42
18757.35	571.22	18895.7	594.24	18980.84	608.74	18999.08	610.85	19227.91	624.06
19650.32	630.09	20068.15	630.32	2095.07	624.42	2205.68	624.42	2245.99	625.44
22761.9	624.15	23708.71	628.64	23955.78	635.76	25564.25	642.88	25931.29	646.26
26337.47	650.94	26961.84	666.62	27176.83	667.12	28246.56	667.12	28856.38	664.24
29119.22	664.24	29670.19	657.12	29898.35	652.98	30063.01	650.46	30197.39	643.71
30340.04	644.13	30622.25	652.03	30931.06	654.65	31985.05	669.32	32622.63	672.96
33551.7	698.44	34368.66	699.22	34280.89	685.33	34314.21	685.52	35843.84	717.31
36845.26	720.62	37034.79	725.23	37372.55	740.02	37412.34	741.08	37706.61	746.07
38024.94	757.46	38176.7	761.52	38919.94	79039	587.88	794.73	39924.72	800

Manning's n Values

num=	3		
Sta	n Val	Sta	n Val
0	.1517401.62	.1518895.7	.15

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

17401.62	18895.7	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507668.00	273960.30	1846187.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507668.00	273960.30	1846187.00
Q Total (cfs)	6730000.00	Flow (cfs)	2665862.00	754702.60	3309436.00
Top width (ft)	36713.16	Top width (ft)	16005.06	1494.08	19214.02
Vel Total (ft/s)	1.86	Avg. Vel. (ft/s)	1.77	2.75	1.79
Max Chl Dpth (ft)	192.31	Hydr. Depth (ft)	94.20	183.36	96.09
Conv. Total (cfs)	780098000.0	Conv. (cfs)	309009500.0	87480240.0	383608400.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16020.00	1496.96	19218.21
Min Ch El (ft)	567.42	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.77	2.34	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	67228.54	12710.22	80939.47
C & E Loss (ft)	0.00	Cum SA (acres)	545.99	56.65	629.48

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CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274806.*

INPUT

Table with columns: Station, Elevation, Data, num=, 120, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains stationing data from 1845.8 to 38028.09.

Manning's n Values table with columns: Sta, n Val, Sta, n Val, Sta, n Val. Values range from 0 to .1517405.41.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan. Values: 17405.4118901.02, 5, 5, .1, .3

CROSS SECTION OUTPUT Profile #PF 1

Table with columns: E.G. Elev (ft), Vel Head (ft), w.s. Elev (ft), Crit w.s. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft), Vel Total (ft/s), Max Chl Dpth (ft), Conv. Total (cfs), Length wtd. (ft), Min Ch El (ft), Alpha, Frctn, Loss (ft), C & E Loss (ft). Includes Element, Left OB, Channel, Right OB, wt. n-val, Reach Len., Flow Area, Area, Flow, Top width, Avg. Vel., Hydr. Depth, Conv., wetted Per., Shear, Stream Power, Cum Volume, Cum SA.

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274803.*

INPUT

Table with columns: Station, Elevation, Data, num=, 120, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains stationing data from 1846.2 to 38031.24.

Manning's n Values table with columns: Sta, n Val, Sta, n Val, Sta, n Val. Values range from 0 to .1517409.2.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan. Values: 17409.218906.34, 5, 5, .1, .3

CROSS SECTION OUTPUT Profile #PF 1

Table with columns: E.G. Elev (ft), Element, Left OB, Channel, Right OB. Values: 759.78, Page 414

		SS_Rev3.rep		
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507655.00	274497.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507655.00	274497.00
Q Total (cfs)	6730000.00	Flow (cfs)	2663947.00	755830.40
Top Width (ft)	36722.14	Top Width (ft)	16012.23	1497.14
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.77	2.75
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	94.16	183.35
Conv. Total (cfs)	780413700.0	Conv. (cfs)	308912400.0	87646420.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16027.20	1500.03
Min Ch El (ft)	567.41	Shear (lb/sq ft)	0.44	0.85
Alpha	1.07	Stream Power (lb/ft s)	0.77	2.34
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	66882.43	12647.27
C & E Loss (ft)	0.00	Cum SA (acres)	542.31	56.30

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274800.*

INPUT

Description: Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200	55	791.3	652.49	773.51	1374.66	760.79	1556.38
1846.6	745.49	2016.8	742.84	2372.7	742.85	2712.45	740.91	3624.96	
3697.94	721.15	3790.67	717.15	3802.37	716.94	4007.09	716.12	4189.89	
4335.19	709.4	4491.19	704.81	4872.51	695.49	5337.25	689.39	5683.12	
5831.95	685.32	5993.9	677.75	6063.57	670.42	6432.66	669.47	6788.24	
6931.68	675.7	7155.77	661.4	7325.25	654.25	7397.75	647.1	7447.65	
7600.79	652.09	7822.29	662.16	7886.41	663.06	8018.23	667.77	8388.25	
8437.03	672.22	8594.45	683.83	8892.92	674.78	8907.27	673.27	9083.12	
9224.35	659.25	9483.27	672.9	9661.23	672.45	9847.65	657.68	10037.26	
10184.13	644.71	10201.68	644.35	10293.01	630.05	10464.37	608.61	10522.74	
10565.53	615.12	10694.64	643.34	10804.27	660.05	11199.23	653.97	11360.32	
11417.17	644.91	11633.93	641.57	11890.96	643.31	12196.82	638.61	12843.66	
14333.36	631.45	14578.54	628.61	15208.83	628.61	15693.73	635.75	15754.93	
16054.4	637.74	16061.51	634.77	16170.15	632.67	16841.47	602.66	17412.99	
17515.9	586.66	17878.22	584.93	17971.71	577.34	18118.81	567.41	18627.98	
18772.81	571.21	18911.65	594.31	18996.76	608.74	19014.99	610.84	19243.75	
19666.02	629.98	20083.7	630.18	22109.94	624.25	22220.51	624.25	22440.74	
22776.53	624.05	23723.03	628.52	23970.01	635.72	2577.93	642.85	25944.85	
26350.89	650.93	26975.05	666.66	27189.97	667.15	28259.33	667.15	28868.95	
29131.7	664.32	29682.48	657.15	29910.56	653.30	30075.16	650.45	30209.5	
30352.11	644.07	30364.22	652.30	30942.92	654.62	31996.56	669.23	32633.92	
33562.68	698.18	33699.58	698.97	34291.62	685.27	34324.92	685.46	35854.04	
36855.11	720.43	37044.58	725.04	37382.22	739.81	37422	740.88	37716.17	
38034.39	757.33	38186.09	761.43	38929.09	790	39596.8	794.75	39933.52	

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1517412.99				

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

17412.99	18911.65	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

		Left OB			Channel			Right OB		
E.G. Elev (ft)	759.78	Element	0.150	0.150	0.150	0.150	0.150	0.150	0.150	
Vel Head (ft)	0.06	wt. n-Val.	5.00	5.00	5.00	5.00	5.00	5.00	5.00	
W.S. Elev (ft)	759.73	Reach Len. (ft)	1507650.00	274764.50	1847203.00	1507650.00	274764.50	1847203.00	1507650.00	
Crit W.S. (ft)		Flow Area (sq ft)	1507650.00	274764.50	1847203.00	1507650.00	274764.50	1847203.00	1507650.00	
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	2662970.00	756384.20	3310646.00	2662970.00	756384.20	3310646.00	2662970.00	
Q Total (cfs)	6730000.00	Flow (cfs)	16015.74	1498.66	19212.08	16015.74	1498.66	19212.08	16015.74	
Top Width (ft)	36726.47	Top Width (ft)	1.77	2.75	1.79	1.77	2.75	1.79	1.77	
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	94.14	183.34	96.15	94.14	183.34	96.15	94.14	
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	308865400.0	87729460.0	383986300.0	308865400.0	87729460.0	383986300.0	308865400.0	
Conv. Total (cfs)	780581200.0	Conv. (cfs)	16030.73	1501.55	19216.24	16030.73	1501.55	19216.24	16030.73	
Length wtd. (ft)	5.00	wetted Per. (ft)	0.44	0.85	0.45	0.44	0.85	0.45	0.44	
Min Ch El (ft)	567.41	Shear (lb/sq ft)	0.77	2.34	0.80	0.77	2.34	0.80	0.77	
Alpha	1.07	Stream Power (lb/ft s)	66709.38	12615.75	80303.56	66709.38	12615.75	80303.56	66709.38	
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	540.48	56.13	622.87	540.48	56.13	622.87	540.48	
C & E Loss (ft)	0.00	Cum SA (acres)								

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274797.*

INPUT

Description: Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200	59	791.3	652.64	773.5	1374.96	760.79	1556.72
1847	745.49	2017.24	742.84	2373.22	742.84	2713.04	740.9	3625.75	
3698.74	721.17	3791.5	717.16	3803	716.95	4007.96	716.12	4190.8	
4336.13	709.39	4492.16	704.8	4873.57	695.47	5338.42	689.37	5684.36	
5833.22	685.3	5995.2	677.72	6064.89	670.38	6434.06	669.43	6789.72	
6933.19	675.68	7157.33	661.36	7326.84	654.2	7399.36	647.04	7449.27	
7602.44	652.04	7823.99	662.11	7888.13	663.02	8019.97	667.74	8390.08	
8438.87	672.24	8596.33	683.89	8894.86	674.87	8909.21	673.36	9085.1	
9226.36	659.32	9485.34	672.99	9663.33	672.55	9849.8	657.76	10039.44	
10186.35	644.79	10203.9	644.44	10295.25	630.12	10466.65	608.64	10525.04	
10567.64	615.17	10696.97	643.39	10806.62	660.12	11201.67	654.03	11362.79	
11419.66	644.99	11636.47	641.64	11893.55	643.36	12199.47	638.64	12846.46	
14336.48	631.48	14581.72	628.64	15212.14	628.64	15697.15	635.81	15758.36	
16057.9	637.81	16065.01	634.83	16173.67	632.73	16845.14	602.68	17416.79	
17519.83	586.67	17882.64	584.95	17976.24	577.35	18123.54	567.41	18632.96	
18777.96	571.21	18916.97	594.32	19002.07	608.74	19020.3	610.84	19249.03	
19671.25	629.95	20088.88	630.14	22114.89	624.22	22225.45	624.22	22445.66	
22781.41	624.01	23727.8	628.52	23974.75	635.68	25582.49	642.84	25949.37	
26355.37	650.93	26979.45	666.67	27194.35	667.16	28263.59	667.16	28873.13	

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29135.86	664.3229686.58	657.1629914.63	65330079.22	650.4530213.54	643.66
30356.13	644.0530638.21	651.9930946.87	654.6232000.39	669.232637.68	672.87
33566.33	698.0933703.22	698.8834295.19	685.2534328.49	685.4435857.43	716.96
36858.39	720.3337047.84	724.9837385.45	739.7437425.22	740.8137719.36	745.88
38037.54	757.2838189.23	761.3638932.14	79039599.78	794.7639936.46	800

Manning's n Values					
Sta	n Val	Sta	n Val	Sta	n Val
0	.1517416.79	.1518916.97	.15		

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
17416.7918916.97			5	5	5		.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507643.00	275028.60	1847541.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507643.00	275028.60	1847541.00
Q Total (cfs)	6730000.00	Flow (cfs)	2662020.00	756930.80	3311050.00
Top Width (ft)	36730.96	Top Width (ft)	16019.25	1500.18	19211.53
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.77	2.75	1.79
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	94.11	183.33	96.17
Conv. Total (cfs)	780739500.0	Conv. (cfs)	308817800.0	87810660.0	384111000.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16034.26	1503.07	19215.69
Min Ch El (ft)	567.41	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.77	2.34	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	66536.32	12584.19	80091.52
C & E Loss (ft)	0.00	Cum SA (acres)	538.64	55.96	620.66

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274794.*

INPUT

Description:											
Station	Elevation	Data	num=	120							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200.64	791.29	652.78	773.49	1375.26	760.79	1557.06	752.22		
1847.4	745.48	2017.68	742.83	2373.74	742.83	2713.63	740.88	3626.54	725.18		
3699.55	721.18	3792.32	717.17	3803.83	716.96	4008.83	716.11	4191.72	712.83		
4337.07	709.37	4493.14	704.78	4874.64	695.46	5339.58	689.36	5685.6	686.77		
5834.49	685.28	5996.51	677.69	6066.21	670.35	6435.46	669.4	6791.19	673.6		
6934.7	675.66	7158.88	661.32	7328.44	654.15	7400.97	646.98	7450.89	646.98		
7604.1	651.99	7825.69	662.05	7889.84	662.97	8021.72	667.71	8391.91	668.07		
8440.7	672.26	8598.2	683.94	8896.8	674.96	8911.15	673.45	9087.07	659.75		
9228.37	659.4	9487.41	673.09	9665.44	672.64	9851.94	657.8310041.63	653.52			
10188.57	644.8910206.12		644.5310297.49		630.1910468.93		608.6810527.33	608.68			
10570.14	615.22	10699.3	643.4410808.97		660.1911204.11		654.0911365.27	648.77			
11422.15	645.06	11639	641.7111896.14		643.412202.13		638.6812849.26	631.51			
14339.16	631.5114584.89		628.6815215.46		628.6815700.56		635.8515761.79	643.02			
16061.39	637.85	16068.5	634.9	16177.2	632.7916848.81		602.7117420.58	594.34			
17523.76	586.6817887.05		584.9717980.78		577.3618128.28		567.4118637.94	567.41			
18783.11	571.218922.29		594.3419007.38		608.73	19025.6	610.8419254.31	623.84			
19676.48	629.9120094.07		630.0922119.85		624.1522230.39		624.1522450.57	625.2			
22786.29	623.9723732.57		628.4923979.49		635.6625587.06		642.8325953.89	646.23			
26359.84	650.9226983.86		666.6827198.73		667.1728267.85		667.1728877.32	664.34			
29140.01	664.3429690.68		657.17	29918.7	653.0130083.27		650.4530217.58	643.65			
30360.15	644.04	30642.2	651.9830950.82		654.6132004.22		669.1732641.44	672.84			
33569.99	698.0133706.86		698.834298.77		685.2334332.06		685.4235860.83	716.87			
36861.68	720.26	37051.1	724.9137388.67		739.7437428.44		740.7437722.54	745.83			
38040.69	757.2338192.36		761.3238935.19		79039602.75		794.7739939.39	800			

Manning's n Values					
Sta	n Val	Sta	n Val	Sta	n Val
0	.1517420.58	.1518922.29	.15		

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
17420.5818922.29			5	5	5		.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507640.00	275293.50	1847912.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507640.00	275293.50	1847912.00
Q Total (cfs)	6730000.00	Flow (cfs)	2661037.00	757466.40	3311497.00
Top Width (ft)	36735.43	Top Width (ft)	16022.75	1501.71	19210.96
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.77	2.75	1.79
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	94.09	183.32	96.19
Conv. Total (cfs)	780910700.0	Conv. (cfs)	308771500.0	87892060.0	384247200.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16037.78	1504.60	19215.12
Min Ch El (ft)	567.41	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.77	2.33	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	66363.27	12552.61	79879.43
C & E Loss (ft)	0.00	Cum SA (acres)	536.80	55.79	618.46

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274791.*

INPUT

Description:											
Station	Elevation	Data	num=	120							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200.68	791.29	652.92	773.48	1375.56	760.78	1557.4	752.2		
1847.81	745.47	2018.11	742.82	2374.25	742.82	2714.22	740.87	3627.33	725.2		
3700.35	721.2	3793.15	717.18	3804.66	716.97	4009.7	716.11	4192.63	712.82		

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4338.02	709.36	4494.12	704.76	4875.7	695.44	5340.74	689.34	5686.83	686.75
5835.76	685.26	5997.81	677.67	6067.53	670.31	6436.86	669.37	6792.67	673.58
6936.21	675.64	7160.44	661.28	7330.03	654.1	7402.58	646.92	7452.51	646.92
7605.76	651.93	7827.4	662	7891.56	662.92	8023.47	667.68	8393.74	668.07
8442.54	672.28	8600.07	684	8898.74	675.05	8913.09	673.54	9089.05	659.82
9230.38	659.47	9489.47	673.18	9667.54	672.74	9854.09	657.9110043	82	653.59
10190.79	644.9810208	34	644.6210299	73	630.2610471	21	608.7210529	62	608.72
10572.44	615.2710701	63	643.4810811	33	660.2611206	55	654.1511367	74	648.84
11424.63	645.1411641	54	641.7911898	73	643.4512204	79	638.7212852	05	631.54
14342.72	631.5414588	07	628.7215218	77	628.7215703	98	635.915765	22	643.08
16064.89	637.9	16072	634.9616180	72	632.8516852	48	602.7317424	37	594.36
17527.69	586.6917891	46	584.9917985	32	577.3718133	01	567.4118642	92	567.41
18788.26	571.1918927	61	594.3619012	68	608.7319030	91	610.8319259	59	623.8
19681.71	629.8820099	25	630.05	22124.8	624.122235	34	624.122455	49	625.15
22791.17	623.9423737	35	628.4623984	24	635.6425591	62	642.8225958	41	646.23
26364.32	650.9226988	26	666.6927203	11	667.1828272	11	667.1828881	51	664.36
29144.17	664.3629694	77	657.1829922	77	653.0130087	32	650.4530221	61	643.64
30364.17	644.0330646	18	651.9830954	78	654.632008	06	669.14	32645.2	672.82
33573.64	697.92	33710.5	698.7134302	34	685.2134335	63	685.435864	23	716.78
36864.96	720.1937054	37	724.85	37391.9	739.637431	66	740.6737725	73	745.78
38043.84	757.1938195	49	761.2838938	23	79039605	72	794.7739942	33	800

Manning's n Values

num=	3		
Sta	n Val	Sta	n Val
0	.1517424	37	.1518927

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

17424.37	17424.37	18927.61	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507637.00	275560.50	1848247.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507637.00	275560.50	1848247.00
Q Total (cfs)	6730000.00	Flow (cfs)	2660076.00	758020.80	3311903.00
Top width (ft)	36739.91	Top width (ft)	16026.41	1503.24	19210.25
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.76	2.75	1.79
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	94.07	183.31	96.21
Conv. Total (cfs)	781070600.0	Conv. (cfs)	308723200.0	87974400.0	384372900.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16041.46	1506.14	19214.39
Min Ch El (ft)	567.41	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.77	2.33	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	66190.21	12520.99	79667.30
C & E Loss (ft)	0.00	Cum SA (acres)	534.96	55.61	616.25

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274789.*

INPUT

Description:

Station Elevation Data	num=	120							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200.72	791.28	653.06	773.47	1375.86	760.78	1557.74	752.21
1848.21	745.47	2018.55	742.81	2374.77	742.81	2714.82	740.86	3628.12	742.21
3701.16	721.21	3793.98	717.19	3805.48	716.98	4010.58	716.1	4193.54	715.81
4338.96	709.36	4495.1	704.75	4876.76	695.42	5341.9	689.33	5688.07	686.74
5837.03	685.24	5999.12	677.64	6068.85	670.27	6438.26	669.33	6794.15	673.55
6937.72	675.62	7162	661.24	7331.63	654.05	7404.19	646.86	7454.14	646.86
7607.41	651.88	7829.1	661.95	7893.28	662.88	8025.21	667.66	8395.56	668.08
8444.38	672.29	8601.94	684.06	8900.67	675.14	8915.03	673.63	9091.03	659.89
9232.39	659.54	9491.54	673.28	9669.65	672.84	9856.23	657.99	10046	653.67
10193.01	645.0710210	37	644.7110301	97	630.3310473	49	608.7610531	91	608.76
10574.74	615.3210703	56	643.5310813	68	660.3311208	99	654.2111370	22	648.91
11427.12	645.2211644	07	641.8611901	32	643.512207	44	638.7612854	85	631.57
14345.84	631.5714591	24	628.7615222	08	628.76	15707.4	635.9515768	66	643.14
16068.39	637.95	16075.5	635.0216184	24	632.9116856	15	602.7617428	17	594.38
17531.62	586.7117895	88	58517989	86	577.3818137	75	567.41	18647.9	567.41
18793.41	571.1918932	92	594.3819017	99	608.7319036	21	610.8319264	87	623.77
19686.94	629.8420104	44	630.0122129	76	624.0522240	28	624.0522460	41	625.1
22796.05	623.923742	12	628.4323988	98	635.6225596	18	642.8125962	93	646.22
26368.79	650.9226992	66	666.727207	49	667.1928276	37	667.19	28885.7	664.38
29148.33	664.3829698	87	657.1929926	84	653.0130091	37	650.4530225	65	643.62
30368.19	644.0330650	17	651.9730958	73	654.5932011	89	669.1132648	96	672.8
33577.3	697.8333714	14	698.6234305	91	685.19	34339.2	685.3835867	62	716.69
36868.25	720.1237057	63	724.7937395	12	739.5337434	88	740.637728	91	745.74
38046.99	757.1438198	62	761.2438941	29	790	39608.7	794.7839945	27	800

Manning's n Values

num=	3		
Sta	n Val	Sta	n Val
0	.1517428	17	.1518932

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

17428.17	17428.17	18932.92	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.73	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507627.00	275822.30	1848599.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507627.00	275822.30	1848599.00
Q Total (cfs)	6730000.00	Flow (cfs)	2659107.00	758557.70	3312336.00
Top width (ft)	36744.36	Top width (ft)	16029.93	1504.75	19209.69
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.76	2.75	1.79
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	94.05	183.30	96.23
Conv. Total (cfs)	781231600.0	Conv. (cfs)	308674400.0	88054860.0	384502400.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16044.99	1507.65	19213.82
Min Ch El (ft)	567.41	Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.77	2.33	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	66017.16	12489.35	79455.13

C & E Loss (ft) 0.00 Cum SA (acres) SS_Rev3.rep 533.12 55.44 614.05

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274786.*

INPUT

Description:

Station Elevation Data		num= 120		Elev Sta		Elev Sta		Elev Sta		Elev Sta	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200	77	791.28	653.2	773.45	1376.16	760.78	1558.07	752.2	
1848.61	745.46	2018.99	742.8	2375.29	742.8	2715.41	740.85	3628.91	725.23		
3701.96	721.23	3794.8	717.2	3806.31	717.2	3806.31	716.99	4011.45	712.8		
4339.91	709.33	4496.08	704.73	4877.82	695.4	5343.07	689.31	5689.31	686.72		
5838.3	685.22	6000.42	677.61	6070.18	670.24	6439.66	669.3	6795.63	673.53		
6939.23	675.6	7163.56	661.2	7333.22	654	7405.8	646.8	7455.76	646.8		
7609.07	651.83	7830.8	661.9	7895	662.83	8026.96	667.63	8397.39	668.09		
8446.22	672.31	8603.81	684.11	8902.61	675.23	8916.97	673.71	9093.01	659.96		
9234.4	659.61	9493.6	673.37	9671.75	672.93	9858.38	658.07	10048.19	653.74		
10195.22	645.16	10212.79	644.81	10304.22	630	410475.77	608	810534.21	608.8		
10577.04	615.37	10706.29	643.58	10816.03	660	411211.43	654	2711372.69	648.98		
11429.61	645.29	11646.6	641.93	11903.92	643.54	12210.1	638.81	2857.65	631.6		
14348.97	631.61	14594.42	628.81	15225.39	628.81	15710.82	636	15772.09	643.2		
16071.88	638.01	16079	635.08	16187.76	632.97	16859.82	602.78	17431.96	594.4		
17535.55	586.72	17900.29	585.02	17994.39	577.38	18142.48	567.41	18652.88	567.41		
18798.56	571.18	18938.24	594.4	19023.3	608.73	19041.52	610.83	19270.15	623.73		
19692.17	629.81	20109.62	629.97	22134.71	624	22245.22	624	22465.32	625.06		
22800.93	623.86	23746.89	628.42	23993.73	635.62	25600.74	642.82	25967.45	646.22		
26373.27	650.91	26997.07	666.72	27211.87	667.22	28280.62	667.22	28889.89	664.4		
29152.49	664.42	29702.96	657.22	29930.91	653.02	30095.42	650.45	30229.69	643.61		
30372.21	644	30654.16	651.96	30962.69	654.59	32015.73	669.08	32652.73	672.77		
33580.96	697.75	33717.79	698.54	34309.49	685.17	34342.77	685.36	35871.02	716.61		
36871.53	720.05	37060.89	724.72	37398.34	739.46	37438.1	740.53	37732.1	745.69		
38050.14	757.13	38201.76	761.23	38944.33	790	39611.67	794.79	39948.2	800		

Manning's n values		num= 3		n Val Sta		n Val	
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.1517431.96			.1518938.24		.15	

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	17431.96	18938.24		5	5	5	.1		.3

CROSS SECTION OUTPUT Profile #PF 1

	E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06		wt. n-val.	0.150	0.150	0.150
w.s. Elev (ft)	759.73		Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)			Flow Area (sq ft)	1507629.00	276090.30	1848920.00
E.G. Slope (ft/ft)	0.000074		Area (sq ft)	1507629.00	276090.30	1848920.00
Q Total (cfs)	6730000.00		Flow (cfs)	2658182.00	759116.80	3312702.00
Top width (ft)	36748.69		Top width (ft)	16033.43	1506.28	19208.97
Vel total (ft/s)	1.85		Avg. vel. (ft/s)	1.76	2.75	1.79
Max Ch Dpth (ft)	192.32		Hydr. depth (ft)	94.03	183.29	96.25
conv. total (cfs)	7813911.00		Conv. (cfs)	308630000.0	88137760.0	384623400.0
length Wtd. (ft)	5.00		Wetted Per. (ft)	16048.52	1509.18	19213.11
Min Ch El (ft)	567.41		Shear (lb/sq ft)	0.44	0.85	0.45
Alpha	1.07		Stream Power (lb/ft s)	0.77	2.33	0.80
Frctn Loss (ft)	0.00		Cum volume (acre-ft)	65844.10	12457.67	79242.91
C & E Loss (ft)	0.00		Cum SA (acres)	531.28	55.27	611.84

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274783.*

INPUT

Description:

Station Elevation Data		num= 120		Elev Sta		Elev Sta		Elev Sta		Elev Sta	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200	81	791.27	653.35	773.44	1376.46	760.78	1558.41	752.19	
1849.01	745.46	2019.43	742.79	2375.8	742.79	2716	740.83	3629.7	725.25		
3702.77	721.24	3795.63	717.21	3807.14	717	4012.32	716.09	4195.37	712.79		
4340.85	709.31	4497.06	704.71	4878.88	695.38	5344.23	689.3	5690.55	686.7		
5839.57	685.2	6001.73	677.59	6071.5	670.2	6441.07	669.27	6797.11	673.51		
6940.74	675.58	7165.12	661.16	7334.82	653.95	7407.41	646.74	7457.38	646.74		
7610.72	651.77	7832.51	661.84	7896.72	662.79	8028.71	667.6	8399.22	668.1		
8448.06	672.33	8605.69	684.17	8904.55	675.32	8918.91	673.8	9094.99	660.04		
9236.41	659.69	9495.67	673.47	9673.85	673.03	9860.52	658.15	10050.38	653.82		
10197.44	645.25	10215.01	644.89	10306.46	630.47	10478.04	608.84	10536.5	608.84		
10579.34	615.42	10708.62	643.62	10818.39	660.47	11213.87	654.34	11375.17	649.04		
11432.09	645.37	11649.14	642	11906.5	643.59	12212.76	638.84	12860.45	631.63		
14352.09	631.63	14597.6	628.84	15228.71	628.84	15714.24	636.05	15775.52	643.26		
16075.38	638.06	16082.5	635.15	16191.29	633.04	16863.49	602.81	17435.75	594.42		
17539.48	586.73	17904.7	585.04	17998.93	577.39	18147.21	567.41	18657.86	567.41		
18803.71	571.18	18943.56	594.42	19028.61	608.73	19046.82	610.82	19275.43	623.69		
19697.4	629.77	20134.8	629.93	22139.67	623.93	22250.16	623.93	22470.24	625.01		
22805.81	623.83	23751.66	628.37	23998.47	635.58	25605.3	642.79	25971.97	646.21		
26377.74	650.91	27001.47	666.73	27216.24	667.21	28284.88	667.21	28894.08	664.42		
29156.65	664.42	29707.06	657.21	29934.98	653.02	30099.48	650.44	30233.72	643.6		
30376.23	643.98	30658.15	651.96	30966.64	654.58	32019.56	669.05	32656.49	672.75		
33584.62	697.66	33721.43	698.54	34313.06	685.14	34346.34	685.34	35874.42	716.52		
36874.82	719.97	37064.15	724.66	37401.57	739.39	37441.32	740.46	37735.29	745.64		
38053.29	757.05	38204.89	761.16	38947.38	790	39614.64	794.79	39951.14	800		

Manning's n Values		num= 3		n Val Sta		n Val	
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.1517435.75			.1518943.56		.15	

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	17435.75	18943.56		5	5	5	.1		.3

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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507612.00	276355.80	1849278.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507612.00	276355.80	1849278.00
Q Total (cfs)	6730000.00	Flow (cfs)	2657190.00	759661.60	3313149.00
Top Width (ft)	36753.13	Top width (ft)	16036.94	1507.81	19208.39
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.76	2.75	1.79
Max Chl Dpth (ft)	192.31	Hydr. Depth (ft)	94.01	183.28	96.27
Conv. Total (cfs)	781553500.0	Conv. (cfs)	308578900.0	88219350.0	384755300.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16052.03	1510.71	19212.51
Min Ch El (ft)	567.41	Shear (lb/sq ft)	0.43	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.77	2.33	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	65671.05	12425.97	79030.66
C & E Loss (ft)	0.00	Cum SA (acres)	529.44	55.10	609.64

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274780.*

INPUT

Description:

Station	Elevation	Data	num=	120	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200.86	791.27	653.49	773.43	1376.76	760.77	1558.75	752.18	
1849.42	745.45	2019.87	742.78	2376.32	742.78	2716.59	740.82	3630.49	725.26	
3703.58	721.26	3796.45	717.22	3807.97	717.01	4013.2	716.09	4196.28	712.78	
4341.8	709.3	4498.03	704.69	4879.94	695.36	5345.39	689.28	5691.79	686.68	
5840.84	685.19	6003.04	677.56	6072.82	670.16	6442.47	669.23	6798.59	673.48	
6942.25	675.56	7166.68	661.12	7336.42	653.9	7409.03	646.68	7459	646.68	
7612.38	651.72	7834.21	661.79	7898.43	662.74	8030.45	667.58	8401.04	668.1	
8449.89	672.34	8607.56	684.23	8906.48	675.4	8920.85	673.89	9096.97	660.11	
9238.41	659.76	9497.73	673.56	9675.96	673.13	9862.67	658.23	10052.56	653.89	
10199.66	645.34	10217.23	644.98	10308.7	630.54	10480.32	608.88	10538.79	608.88	
10581.64	615.46	10710.95	643.67	10820.74	660.54	11216.31	654.41	11377.64	649.11	
11434.58	645.45	11651.67	642.08	11909.09	643.64	12215.41	638.88	12863.25	631.66	
14355.21	631.66	14600.77	628.88	15232.02	628.88	15717.66	636.11	15778.95	643.32	
16078.88	638.11	16086	635.21	16194.81	633.11	16867.15	602.84	17439.55	594.44	
17543.41	586.74	17909.12	585.06	18003.47	577.41	18151.95	567.41	18662.84	567.41	
18808.87	571.17	18948.87	594.44	19033.91	608.73	19052.13	610.82	19280.71	623.66	
19702.64	629.74	20119.99	629.89	22144.62	623.9	22255.1	623.92	22475.16	624.96	
22810.69	623.79	23756.43	628.34	24003.21	635.56	25609.86	642.78	25976.49	646.21	
26382.21	650.91	27005.87	666.74	27220.62	667.22	28289.14	667.22	28898.27	664.44	
29160.81	664.44	29711.16	657.22	29939.05	653.03	30103.53	650.44	30237.76	643.59	
30380.25	643.93	30662.14	651.95	30970.59	654.57	32023.4	669.03	32660.25	672.72	
33588.27	697.57	33725.07	698.37	34316.64	685.12	34349.91	685.32	35877.82	716.43	
36878.1	719.93	37067.41	724.63	37404.79	739.32	37444.54	740.43	37738.47	745.59	
38056.44	757.01	38208.02	761.12	38950.43	790.39	39617.62	794.83	39954.07	800	

Manning's n Values

Sta	n Val	Sta	n Val	Sta	n Val
0	.1517439.55		.1518948.87		.15

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	17439.55	18948.87		5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507614.00	276618.70	1849610.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507614.00	276618.70	1849610.00
Q Total (cfs)	6730000.00	Flow (cfs)	2656245.00	760204.60	3313550.00
Top Width (ft)	36757.63	Top width (ft)	16040.64	1509.32	19207.68
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.76	2.75	1.79
Max Chl Dpth (ft)	192.31	Hydr. Depth (ft)	93.99	183.27	96.30
Conv. Total (cfs)	781712800.0	Conv. (cfs)	308532100.0	88300390.0	384880300.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16055.75	1512.22	19211.79
Min Ch El (ft)	567.41	Shear (lb/sq ft)	0.43	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.77	2.33	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	65498.00	12394.23	78818.38
C & E Loss (ft)	0.00	Cum SA (acres)	527.60	54.92	607.43

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274777.*

INPUT

Description:

Station	Elevation	Data	num=	120	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200.9	791.27	653.63	773.42	1377.06	760.77	1559.09	752.18	
1849.82	745.44	2020.31	742.77	2376.84	742.77	2717.18	740.81	3631.28	725.28	
3704.38	721.28	3797.28	717.23	3808.8	717.02	4014.07	716.08	4197.19	712.77	
4342.74	709.28	4499.01	704.68	4881	695.34	5346.55	689.27	5693.02	686.66	
5842.11	685.17	6004.34	677.53	6074.14	670.13	6443.87	669.2	6800.07	673.46	
6943.76	675.54	7168.24	661.08	7338.01	653.85	7410.64	646.62	7460.63	646.62	
7614.03	651.67	7835.92	661.74	7900.15	662.69	8032.2	667.55	8402.87	668.11	
8451.73	672.36	8609.43	684.28	8908.42	675.49	8922.79	673.98	9098.95	660.18	
9240.42	659.83	9499.8	673.66	9678.06	673.22	9864.81	658.31	10054.75	653.97	
10201.88	645.43	10219.45	645.07	10310.94	630.61	10482.6	608.92	10541.08	608.92	
10583.95	615.51	10713.28	643.72	10823.09	660.61	11218.75	654.46	11380.11	649.18	
11437.07	645.52	11654.21	642.15	11911.69	643.68	12218.07	638.92	12866.04	631.66	
14358.33	631.69	14603.95	628.92	15235.33	628.92	15721.08	636.15	15782.38	643.38	
16082.38	638.17	16089.5	635.27	16198.33	633.16	16870.82	602.86	17443.34	594.46	
17547.34	751.75	17913.53	585.08	18008.01	577.41	18156.68	567.41	18667.82	567.4	
18814.02	571.17	18954.19	594.46	19039.22	608.72	19057.43	610.82	19285.98	623.62	

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19707.87	629.720125.17	629.8422149.58	623.8522260.05	623.8522480.08	624.91
22615.57	623.7623761.21	628.3124007.96	635.5425614.43	642.7725981.01	646.2
26386.69	630.927010.28	666.75 27225	667.23 28293.4	667.2328902.46	664.46
29164.97	664.4629715.26	657.2329943.12	653.0330107.58	650.44 30241.8	643.57
30384.27	643.9530666.13	651.9430974.55	654.5632027.23	66932664.01	672.7
33591.93	697.4933728.71	698.2834320.21	685.134353.48	685.335881.21	716.34
36881.38	719.8337070.68	724.5437408.02	739.2537447.76	740.3337741.66	745.55
38059.59	756.9638211.16	761.0838953.48	79039620.59	794.81 39957	800

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1517443.34		.1518954.19		.15

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

17443.34	18954.19	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507607.00	276890.70	1849970.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507607.00	276890.70	1849970.00
Q Total (cfs)	6730000.00	Flow (cfs)	2655260.00	760770.30	3313970.00
Top width (ft)	36762.04	Top width (ft)	16044.11	1510.85	19207.08
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.76	2.75	1.79
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	93.97	183.27	96.32
Conv. Total (cfs)	781883500.0	Conv. (cfs)	308485000.0	88385400.0	385013100.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	16059.25	1513.76	19211.19
Min Ch El (ft)	567.40	Shear (lb/sq ft)	0.43	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.76	2.32	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	65324.95	12362.46	78606.05
C & E Loss (ft)	0.00	Cum SA (acres)	525.76	54.75	605.23

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274774.*

INPUT

Description:

Station	Elevation	Data	num=	120					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	200.94	791.26	653.77	773.4	1377.36	760.77	1559.43	752.17
1850.22	745.44	2020.75	742.76	2377.35	742.76	2717.77	740.8	3632.07	725.3
3705.19	721.29	3798.1	717.24	3809.62	717.03	4014.94	716.08	4198.1	712.76
4343.68	709.27	4499.99	704.66	4882.06	695.32	5347.72	689.25	5694.26	686.64
5843.38	685.15	6005.65	677.5	6075.46	670.09	6445.27	669.17	6801.54	673.44
6945.27	675.52	7169.8	661.04	7339.61	653.8	7412.25	646.56	7462.25	646.56
7615.69	651.61	7837.62	661.68	7901.87	662.65	8033.94	667.52	8404.7	668.12
8453.57	672.38	8611.3	684.34	8910.36	675.58	8924.73	674.07	9100.92	660.25
9242.43	659.91	9501.87	673.75	9680.17	673.32	9866.96	658.38	10056.93	654.04
10204.1	645.52	10221.68	645.16	10313.19	630.68	10484.88	608.96	10545.37	608.96
10586.25	615.56	10715.61	643.76	10825.45	660.68	11221.18	654.52	11382.59	649.25
11439.56	645.61	11656.74	642.22	11914.28	643.73	12220.73	638.96	12868.84	631.72
14361.45	631.72	14607.12	628.96	15238.65	628.96	15724.49	636.21	15785.81	643.44
16085.87	638.22	16092.99	635.33	16201.85	633.22	16874.49	602.89	17447.13	594.48
17551.27	586.77	17197.94	585.09	18012.54	577.42	18161.42	567.4	18672.8	567.4
18819.17	571.17	18959.51	594.48	19044.53	608.72	19062.74	610.81	19291.27	623.58
19713.1	629.62	20130.36	629.82	2154.53	623.82	2264.99	623.82	2484.99	624.86
22820.45	623.72	23765.98	628.28	24012.7	635.52	25618.99	642.76	25985.53	646.2
26391.16	650.92	27014.68	666.76	27229.38	667.24	28297.65	667.24	28906.64	664.48
29169.13	664.48	29719.35	657.24	29947.19	653.03	30111.63	650.44	30245.83	643.56
30388.29	643.94	30670.12	651.93	30978.5	654.56	32031.06	668.97	32667.78	672.68
33595.59	697.49	33732.35	698.28	34323.79	685.08	34357.05	685.28	35884.61	716.25
36884.67	719.83	37073.94	724.47	37411.24	739.18	37450.98	740.26	37744.84	745.5
38062.74	756.91	38214.29	761.04	38956.53	790396	23.56	794.81	39959.94	800

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1517447.13		.1518959.51		.15

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

17447.13	18959.51	5	5	5	.1	.3
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CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507597.00	277155.80	1850308.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507597.00	277155.80	1850308.00
Q Total (cfs)	6730000.00	Flow (cfs)	2654304.00	761317.60	3314379.00
Top width (ft)	36766.47	Top width (ft)	16047.62	1512.38	19206.47
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.76	2.75	1.79
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	93.95	183.26	96.34
Conv. Total (cfs)	782041900.0	Conv. (cfs)	308436400.0	88466900.0	385138600.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	16062.78	1515.29	19210.58
Min Ch El (ft)	567.40	Shear (lb/sq ft)	0.43	0.85	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.76	2.32	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	65151.90	12330.67	78393.68
C & E Loss (ft)	0.00	Cum SA (acres)	523.91	54.58	603.02

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274771.*

INPUT

Description:

Station	Elevation	Data	num=	120					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev

Min Ch El (ft)	567.40	Shear (lb/sq ft)	0.43	0.84	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.76	2.32	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	64805.80	12266.98	77968.83
C & E Loss (ft)	0.00	Cum SA (acres)	520.23	54.23	598.61

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274765.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	201.12	791.24	654.34
1851.43	745.41	2022.51	742.72	2379.42
3707.6	721.35	3801.41	717.28	3812.94
4346.52	709.21	4503.9	704.59	4886.31
5847.19	685.09	6009.56	677.4	6080.74
6949.8	675.44	7176.03	660.88	7345.99
7620.66	651.45	7842.73	661.47	7908.74
8459.08	672.43	8616.92	684.57	8918.11
9248.46	660.12	9508.06	674.13	9688.59
10210.75	645.7910228.34		645.5210322.15	630.96
10593.15	615.71	10722.6	643.9510834.86	660.9611230.94
11447.02	645.8311664.34		642.5111924.64	643.9212231.36
14370.82	631.8114616.65		629.1215251.9	629.1215738.17
16096.36	638.3816103.49		635.5816215.94	633.4616889.17
17563.06	586.817931.18		585.1618030.7	577.4618180.35
18834.62	571.1518975.46		594.5619065.76	608.7219083.96
19728.79	629.5620145.91		629.6422174.35	623.622284.76
22835.08	623.6123780.29		628.1624031.68	635.4425637.23
26404.58	650.8927027.89		666.8127246.9	667.2828314.69
29181.6	664.5429731.64		657.2829963.48	653.0530127.84
30400.36	643.930682.08		651.9130994.32	654.5332046.4
33606.56	697.1433743.28		697.8634338.08	68534371.34
36894.52	719.5437083.73		724.2237424.14	738.937463.86
38072.19	756.7838223.69		760.8838968.72	79039635.45

Manning's n values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1517458.51		.1518975.46		.15

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
17458.51	118975.46	5	5	5	.1		.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507583.00	277951.10	1851340.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507583.00	277951.10	1851340.00
Q Total (cfs)	6730000.00	Flow (cfs)	2651425.00	762947.70	3315628.00
Top width (ft)	36779.66	Top width (ft)	16058.30	1516.95	19204.41
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.76	2.74	1.79
Max Ch Dpth (ft)	192.32	Hydr. Depth (ft)	93.88	183.23	96.40
Conv. Total (cfs)	782530200.0	Conv. (cfs)	308294200.0	88711690.0	385524400.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16073.52	1519.87	19208.49
Min Ch El (ft)	567.40	Shear (lb/sq ft)	0.43	0.84	0.45
Alpha	1.07	Stream Power (lb/ft s)	0.76	2.32	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	64632.75	12235.09	77756.34
C & E Loss (ft)	0.00	Cum SA (acres)	518.39	54.05	596.41

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274762.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	201.12	791.24	654.34
1851.83	745.41	2022.51	742.72	2379.42
3708.41	721.35	3801.41	717.28	3812.94
4347.46	709.21	4503.9	704.59	4886.31
5848.46	685.07	6010.87	677.4	6080.74
6951.31	675.44	7176.03	660.88	7345.99
7622.31	651.4	7844.44	661.47	7908.74
8460.92	672.45	8618.79	684.57	8918.11
9250.47	660.2	9510.13	674.13	9688.59
10212.97	645.8810230.56		645.5210322.15	630.96
10595.45	615.7610724.93		643.9510834.86	660.9611230.94
11449.5	645.9111666.88		642.5111924.64	643.9212231.36
14373.94	631.8414619.82		629.1215251.9	629.1215738.17
16099.86	638.4316106.99		635.5816215.94	633.4616889.17
17566.99	586.81	17935.6	585.16	18030.7
18839.78	571.1518980.78		594.5619065.76	608.7219083.96
19734.03	629.5320151.09		629.6422174.35	623.622284.76
22839.96	623.5723785.06		628.1624031.68	635.4425637.23
26409.06	650.8927032.29		666.8127246.9	667.2828314.69
29185.76	664.5629735.74		657.2829963.48	653.0530127.84
30404.38	643.8830686.07		651.9130994.32	654.5332046.4
33610.21	697.0633746.92		697.8634338.08	68534371.34
36897.8	719.4737086.99		724.2237424.14	738.937463.86
38075.34	756.7338226.82		760.8838968.72	79039635.45

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.15	17462.3	.1518980.78		.15

Bank Sta: Left Right Lengths: Left Channel Right SS_Rev3.rep
 17462.318980.78 5 5 Coeff Contr. Expan.
 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

		Element	Left OB	Channel	Right OB
E.G. Elev (ft)	759.78	Element	0.150	0.150	0.150
Vel Head (ft)	0.06	Wt. n-Val.	5.00	5.00	5.00
W.S. Elev (ft)	759.72	Reach Len. (ft)	1507580.00	278218.20	1851667.00
Crit w.S. (ft)		Flow Area (sq ft)	1507580.00	278218.20	1851667.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	2650490.00	763503.20	3316008.00
Q Total (cfs)	6730000.00	Flow (cfs)	16061.81	1518.48	19203.78
Top Width (ft)	36784.06	Top Width (ft)	1.76	2.74	1.79
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	93.86	183.22	96.42
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	308248000.0	88794270.0	385646700.0
Conv. Total (cfs)	782688900.0	Conv. (cfs)	16077.04	1521.40	19207.85
Length wtd. (ft)	5.00	wetted Per. (ft)	0.43	0.84	0.44
Min Ch El (ft)	567.40	Shear (lb/sq ft)	0.76	2.31	0.80
Alpha	1.07	Stream Power (lb/ft s)	64459.70	12203.17	77543.82
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	516.54	53.88	594.20
C & E Loss (ft)	0.00	Cum SA (acres)			

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274759.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	201.16	791.24	654.48	773.34	1378.85	760.75	1561.13	752.13
1852.23	745.4	2022.95	742.71	2379.94	742.71	2720.72	740.73	3636.02	725.38
3709.21	721.37	3802.23	717.29	3813.77	717.08	4019.31	716.05	4202.67	712.71
4348.41	709.19	4504.88	704.58	4887.37	695.22	5353.53	689.18	5700.45	686.55
5849.74	685.06	6012.18	677.37	6082.06	669.91	6452.27	669	6808.94	673.32
6952.82	675.42	7177.59	660.84	7347.58	653.55	7420.31	646.26	7470.36	646.26
7623.97	651.35	7846.14	661.42	7910.46	662.42	8042.68	667.38	8413.83	668.15
8462.76	672.46	8620.66	684.62	8920.04	676.02	8934.43	674.51	9110.82	660.61
9252.48	660.27	9512.19	674.23	9690.69	678.8	9877.69	658	7710067.87	654.42
10215.19	645.97	10232.79	645.61	10324.4	631.0310	10496.28	609.1610	10554.83	609.16
10597.75	615.81	10727.26	64410837.22	661.0311	2233.38	654.8311	394.96	649.59	649.59
11451.99	645.98	11669.41	642.5811	1927.23	643.9612	2234.01	639.1612	2882.83	631.87
14377.07	631.87	14623	629.1615	2555.21	629.1615	2741.59	636.4515	2802.97	643.74
16103.36	638.48	16110.49	635.6516	219.46	633.5216	26892.83	603.02	17466.1	594.58
17570.92	586.82	17940.01	585.1818	035.23	577.4718	18185.09	567.4186	297.69	567.4
18844.93	571.14	18986.09	594.5819	071.06	608.7119	089.27	610.8193	17.66	623.4
19739.26	629.49	20156.28	629.59	22179.3	623.55	22289.7	623.5525	2509.58	624.62
22844.84	623.54	23789.84	628.1324	036.42	635.4225	641.79	642.7126	008.13	646.17
26413.53	650.88	27036.7	666.8227	251.28	667.2928	318.94	667.2928	297.59	664.58
29189.92	664.58	29739.83	657.2929	967.55	653.0630	131.89	650.4330	266.02	643.49
30408.4	643.87	30690.06	651.9309	998.27	654.5232	2050.24	668.8232	2686.59	672.56
33613.87	696.97	33750.56	697.7734	341.66	684.9834	374.91	685.1735	5901.59	715.81
36901.09	719.43	37090.25	724.1637	7427.36	738.8337	7467.07	739.9137	7760.78	745.26
38078.49	756.69	38229.96	760.8438	8971.77	79039	9638.43	794.8539	9974.61	800

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .15 17466.1 .1518986.09 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17466.118986.09 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

		Element	Left OB	Channel	Right OB
E.G. Elev (ft)	759.78	Element	0.150	0.150	0.150
Vel Head (ft)	0.06	Wt. n-Val.	5.00	5.00	5.00
W.S. Elev (ft)	759.72	Reach Len. (ft)	1507580.00	278481.60	1852038.00
Crit w.S. (ft)		Flow Area (sq ft)	1507580.00	278481.60	1852038.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	2649499.00	764033.10	3316468.00
Q Total (cfs)	6730000.00	Flow (cfs)	16065.51	1519.99	19203.05
Top Width (ft)	36788.55	Top Width (ft)	1.76	2.74	1.79
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	93.84	183.21	96.44
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	308200500.0	88875440.0	385785100.0
Conv. Total (cfs)	782861100.0	Conv. (cfs)	16080.76	1522.91	19207.12
Length wtd. (ft)	5.00	wetted Per. (ft)	0.43	0.84	0.44
Min Ch El (ft)	567.40	Shear (lb/sq ft)	0.76	2.31	0.80
Alpha	1.07	Stream Power (lb/ft s)	64286.66	12171.22	77331.26
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	514.70	53.71	592.00
C & E Loss (ft)	0.00	Cum SA (acres)			

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274756.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	201.21	791.23	654.62	773.33	1379.15	760.75	1561.46	752.12
1852.63	745.4	2023.39	742.7	2380.45	742.7	2721.31	740.72	3636.81	725.4
3710.02	721.39	3803.06	717.3	3814.59	717.09	4020.18	716.04	4203.58	712.7
4349.35	709.18	4505.86	704.56	4888.43	695.2	5354.69	689.16	5701.69	686.53
5851.01	685.04	6013.48	677.34	6083.38	669.87	6453.68	668.97	6810.42	673.3
6954.33	675.4	7179.15	660.8	7349.18	653.5	7421.92	646.2	7471.98	646.2
7625.62	651.3	7847.84	661.37	7912.18	662.37	8044.42	667.36	8415.66	668.16
8464.6	672.48	8622.54	684.68	8921.98	676.11	8936.37	674.6	9112.79	660.68
9254.49	660.34	9514.26	674.32	9692.79	673.9	9879.83	658.8510	10070.05	654.49
10217.41	646.06	10235.01	645.7103	26.64	631.1104	98.56	609.2105	57.13	609.2
10600.06	615.86	10729.59	644.0410	839.57	661.1112	235.82	654.8911	397.44	649.66
11454.48	646.06	11671.94	642.6511	1929.82	644.0112	236.67	639.2128	85.63	631.9
14380.19	631.91	14626.18	629.2152	258.52	629.2	15745	636.5158	06.41	643.8

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16106.86	638.5316113.99	635.7116222.99	633.58 16896.5	603.0417469.89	594.6
17574.85	586.8417944.42	585.218039.77	577.4818189.82	567.418702.67	567.4
18850.08	571.1418991.41	594.619076.37	608.7119094.37	610.819322.94	623.37
19744.49	629.4620161.46	629.5522184.26	623.522294.64	623.5 22514.5	624.37
22849.72	623.523794.61	628.124041.16	635.425646.36	642.726012.65	646.17
26418.01	650.88 27041.1	666.8327255.65	667.3 28323.2	667.328931.78	664.6
29194.08	664.629743.93	657.329971.62	653.0630135.95	650.4330270.05	643.48
30412.42	643.8530694.05	651.8931002.22	654.5132054.07	668.7932690.35	672.53
33617.53	696.88 33754.2	697.6934345.23	684.9634378.48	685.1535904.99	715.73
36904.37	719.3337093.52	724.137430.59	738.7637470.29	739.8537763.96	745.21
38081.64	756.6438233.09	760.838974.82	790 39641.4	794.8539977.55	800

Manning's n Values		num=	3
Sta n Val	Sta n Val	n Val	n Val
0	.1517469.89	.1518991.41	.15

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
17469.89	18991.41	5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507574.00	278744.20	1852371.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507574.00	278744.20	1852371.00
Q Total (cfs)	6730000.00	Flow (cfs)	2648562.00	764568.40	3316870.00
Top width (ft)	36792.94	Top width (ft)	16069.01	1521.52	19202.41
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.76	2.74	1.79
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	93.82	183.20	96.47
Conv. Total (cfs)	783018300.0	Conv. (cfs)	308153400.0	88955580.0	385909400.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	16084.28	1524.44	19206.47
Min Ch El (ft)	567.40	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.76	2.31	0.80
Frctn Loss (ft)	0.00	Cum volume (acre-ft)	64113.61	12139.24	77118.66
C & E Loss (ft)	0.00	Cum SA (acres)	512.85	53.53	589.79

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274753.*

INPUT

Description:

Station Elevation Data	num=	120							
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev									
0 800 201.25	791.23	654.77	773.32	1379.45	760.75	1561.8	752.11		
1853.04	745.39	2023.83	742.69	2380.97	742.69	2721.91	740.71	3637.59	725.42
3710.82	721.4	3803.89	717.31	3815.42	717.1	4021.05	716.04	4204.49	712.69
4350.29	709.16	4506.84	704.54	4889.49	695.19	5355.85	689.15	5702.93	686.51
5852.28	685.02	6014.79	677.31	6084.7	669.83	6455.08	668.94	6811.9	673.28
6955.84	675.38	7180.71	660.76	7350.78	653.43	7423.53	646.14	7473.6	646.14
7627.28	651.24	7849.55	661.31	7913.9	662.33	8046.17	667.33	8417.49	668.16
8466.43	672.5	8624.41	684.74	8923.92	676.2	8938.31	674.69	9114.77	660.75
9256.5	660.42	9516.33	674.42	9694.9	674	9881.98	658.93	10072.24	654.57
10219.63	646.15	10237.23	645.79	10328.88	631.17	10500.84	609.24	10559.42	609.24
10602.36	615.91	10731.92	644.09	10841.92	661.17	11238.26	654.95	11399.91	649.72
11456.96	646.14	11674.48	642.72	11932.41	644.06	12239.33	639.24	12888.42	631.93
14383.31	631.93	14629.35	629.24	15261.84	629.24	15748.42	636.55	15809.84	643.86
16110.35	638.59	16117.49	635.77	16226.51	633.64	16900.17	603.07	17473.68	594.62
17578.78	586.85	17948.84	585.22	18044.31	577.49	18194.55	567.41	18707.65	567.4
18855.23	571.14	18996.73	594.62	19081.68	608.71	19099.88	610.79	19328.22	623.33
19749.72	629.46	20166.65	629.51	2189.21	623.45	2299.58	623.45	22519.41	624.52
22854.6	623.47	23799.38	628.07	24045.91	635.38	25650.92	642.69	26017.17	646.16
26422.48	650.88	27045.5	666.85	27260.03	667.31	28327.46	667.31	28935.96	664.62
29198.24	664.62	29748.03	657.31	29975.69	653.06	30140	650.43	30274.09	643.47
30416.44	643.85	30698.04	651.89	31006.18	654.53	3057.91	668.76	32694.11	672.51
33621.18	696.88	33757.84	697.6	34348.8	684.94	34382.05	685.15	35908.39	715.64
36907.65	719.33	37096.78	724.03	37433.81	738.68	37473.52	739.85	37767.15	745.17
38084.79	756.64	38236.22	760.76	38977.87	790	39644.38	794.85	39980.48	800

Manning's n Values		num=	3
Sta n Val	Sta n Val	n Val	n Val
0	.1517473.68	.1518996.73	.15

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
17473.68	18996.73	5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507554.00	279009.40	1852707.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507554.00	279009.40	1852707.00
Q Total (cfs)	6730000.00	Flow (cfs)	2647592.00	765116.40	3317291.00
Top width (ft)	36797.32	Top width (ft)	16072.51	1523.05	19201.76
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.76	2.74	1.79
Max Chl Dpth (ft)	192.32	Hydr. Depth (ft)	93.80	183.19	96.49
Conv. Total (cfs)	783173800.0	Conv. (cfs)	308101800.0	89037020.0	386035000.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	16087.81	1525.97	19205.81
Min Ch El (ft)	567.40	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.76	2.31	0.80
Frctn Loss (ft)	0.00	Cum volume (acre-ft)	63940.57	12107.23	76906.02
C & E Loss (ft)	0.00	Cum SA (acres)	511.01	53.36	587.59

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274751.*

INPUT

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Sta n Val Sta n Val Sta n Val
 0 .1517488.86 .1519017.99 .15
 Bank Sta: Left Right Lengths: Left Channel Right
 17488.8619017.99 5 5 5
 Coeff Contr. Expan.
 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507534.00	280075.60	1854095.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507534.00	280075.60	1854095.00
Q Total (cfs)	6730000.00	Flow (cfs)	2643738.00	767305.30	3318957.00
Top Width (ft)	36814.79	Top Width (ft)	16086.70	1529.13	19198.96
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.75	2.74	1.79
Max Chl Dpth (ft)	192.33	Hydr. Depth (ft)	93.71	183.16	96.57
Conv. Total (cfs)	783835100.0	Conv. (cfs)	307913000.0	89367140.0	386555000.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16102.07	1532.07	19202.98
Min Ch El (ft)	567.39	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.76	2.30	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	63248.39	11978.88	76055.06
C & E Loss (ft)	0.00	Cum SA (acres)	503.63	52.66	578.78

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274739.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	201.47	791.21	655.48	773.26	1380.95	760.73	1563.5	752.07
1855.05	745.36	2026.02	742.64	2383.56	742.64	2724.86	740.64	3641.54	725.5
3714.85	721.48	3808.01	717.36	3819.56	717.15	4025.42	716.01	4209.06	712.64
4355.02	709.09	4511.73	704.46	4894.8	695.09	5361.67	689.07	5709.12	686.42
5858.63	684.92	6021.31	677.18	6091.31	669.65	6462.08	668.77	6819.29	673.16
6963.39	675.28	7188.5	660.56	7358.75	653.2	7431.58	645.84	7481.72	645.84
7635.56	650.98	7858.07	661.05	7922.48	662.1	8054.9	667.19	8426.62	668.2
8475.62	672.58	8633.77	685.02	8933.6	676.64	8948.01	675.13	9124.67	661.11
9266.54	660.78	9526.65	674.89	9705.42	674.48	9892.7	659.3210083.17	654.94	
10230.72	646.610248.34	646.2410340.09	631.5210512.24	609.4410570.88	609.44				
10613.86	616.1510743.56	644.3210853.69	661.5211250.46	655.2611412.28	650.06				
11469.4	646.5211687.15	643.0811945.36	644.2912252.61	639.4412902.41	632.08				
14398.92	632.0814645.23	629.44 15278.4	629.4415765.52	636.8	15827	644.16			
16127.84	638.8516134.98	636.0916244.12	633.9516918.51	603.217492.65	594.72				
17598.43	586.91 17970.9	585.31 18067	577.5318218.22	567.3918732.54	567.39				
18880.99	571.1219023.31	594.7219108.21	608.7 19126.4	610.7819354.62	623.15				
19775.88	629.2520192.57	629.322213.98	623.222324.29	623.2 22544	624.28				
22878.99	623.2823823.24	627.9224069.63	635.2825673.73	642.6426039.77	646.13				
26444.85	650.8627067.52	666.927281.93	667.3628348.75	667.3628956.91	664.72				
29219.04	664.7229768.51	657.3629996.04	653.0930160.26	650.4230294.28	643.4				
30436.54	643.7730717.98	651.8531025.95	654.4732077.08	668.6232712.92	672.39				
33639.47	696.3633776.05	697.1734366.68	684.84 34399.9	685.0335925.38	715.2				
36924.07	718.937113.09	723.7237449.93	738.3337489.61	739.4337783.08	744.93				
38100.54	756.3738251.89	760.5638993.11	79039659.24	794.8939995.16	800				

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .1517492.65 .1519023.31 .15

Bank Sta: Left Right Lengths: Left Channel Right
 17492.6519023.31 5 5 5
 Coeff Contr. Expan.
 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507533.00	280338.00	1854426.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507533.00	280338.00	1854426.00
Q Total (cfs)	6730000.00	Flow (cfs)	2642797.00	767838.10	3319365.00
Top Width (ft)	36819.26	Top Width (ft)	16090.39	1530.66	19198.21
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.75	2.74	1.79
Max Chl Dpth (ft)	192.33	Hydr. Depth (ft)	93.69	183.15	96.59
Conv. Total (cfs)	783992700.0	Conv. (cfs)	307865300.0	89447170.0	386680200.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16105.78	1533.60	19202.23
Min Ch El (ft)	567.39	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.75	2.30	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	63075.35	11946.72	75842.23
C & E Loss (ft)	0.00	Cum SA (acres)	501.78	52.48	576.57

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274736.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	201.51	791.2	655.62	773.24	1381.25	760.73	1563.84	752.07
1855.45	745.35	2026.46	742.63	2384.07	742.63	2725.45	740.63	3642.33	725.52
3715.66	721.49	3808.84	717.37	3820.39	717.16	4026.29	716	4209.97	712.63
4355.96	709.08	4512.71	704.44	4895.86	695.07	5362.83	689.06	5710.35	686.4
5859.9	684.91	6022.62	677.15	6092.63	669.61	6463.48	668.74	6820.77	673.14
6964.9	675.26	7190.06	660.52	7360.35	653.15	7433.2	645.78	7483.34	645.78
7637.21	650.92	7859.77	661	7924.2	662.05	8056.65	667.17	8428.45	668.2
8477.46	672.6	8635.64	685.08	8935.54	676.73	8949.95	675.22	9126.64	661.18
9268.55	660.85	9528.72	674.99	9707.53	674.58	9894.85	659.410085.36	655.01	
10232.94	646.710250.56	646.3310342.33	631.5910514.52	609.4810573.17	609.48				

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10616.17	616.210745.89	644.3710856.04	661.59 11252.9	655.3211414.76	650.13
11471.89	646.611689.68	643.1611947.95	644.3412255.27	639.4812905.21	632.11
14402.04	632.11 14648.4	629.4815281.71	629.4815768.93	636.8515830.43	644.22
16131.33	638.916138.48	636.1516247.64	634.0116922.18	603.2217496.44	594.74
17602.36	586.9217975.32	585.3218071.54	577.5418222.96	567.3918737.52	567.39
18886.14	571.1119028.63	594.7419113.52	608.719131.71	610.78 19359.9	623.11
19781.11	629.2120197.75	629.2622218.94	623.1522329.23	623.1522548.92	624.23
22883.87	623.2523828.01	627.8924074.37	635.2625678.29	642.6326044.29	646.13
26449.32	650.8627071.92	666.9227286.31	667.3728353.01	667.37 28961.1	664.74
29223.19	664.7429772.61	657.3730000.11	653.0930164.31	650.4230298.31	643.39
30440.56	643.7530721.97	651.84 31029.9	654.4632080.91	668.5932716.68	672.37
33643.12	696.2833779.69	697.0934370.25	684.8134403.47	685.0135928.77	715.11
36927.36	718.8337116.35	723.6637453.15	738.2637492.83	739.3737786.27	744.88
38103.69	756.3238255.02	760.5238996.16	79039662.21	794.939998.09	800

Manning's n Values	num=	3
Sta n Val Sta n Val	n Val	Sta n Val
0 .1517496.44	.1519028.63	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17496.4419028.63	5 5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507518.00	280606.80	1854758.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507518.00	280606.80	1854758.00
Q Total (cfs)	6730000.00	Flow (cfs)	2641838.00	768398.30	3319764.00
Top width (ft)	36823.58	Top width (ft)	16093.87	1532.19	19197.52
Vel Total (ft/s)	1.85	Avg. vel. (ft/s)	1.75	2.74	1.79
Max Chl Dpth (ft)	192.33	Hydr. Depth (ft)	93.67	183.14	96.61
Conv. Total (cfs)	784150900.0	Conv. (cfs)	307815700.0	89530500.0	386804700.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	16109.28	1535.13	19201.54
Min Ch El (ft)	567.39	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.75	2.30	0.80
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	62902.31	11914.52	75629.35
C & E Loss (ft)	0.00	Cum SA (acres)	499.93	52.30	574.37

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274733.*

INPUT

Description:	Station Elevation Data	num=	120	
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev	Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev	Elev Sta Elev	Elev Sta Elev	
0 800 201.55	791.2 655.76	773.23 1381.55	760.73 1564.18	752.06
1855.85 745.35 2026.9	742.62 2384.59	742.62 2726.04	740.62 3643.12	725.54
3716.46 721.51 3809.66	717.38 3821.22	717.17 4027.16	716 4210.88	712.62
4356.9 709.06 4513.69	704.42 4896.92	695.05 5363.99	689.05 5711.59	686.38
5861.17 684.89 6023.93	677.12 6093.95	669.58 6464.89	668.7 6822.25	673.12
6966.41 675.24 7191.62	660.48 7361.95	653.1 7434.81	645.72 7484.96	645.72
7638.87 650.87 7861.48	660.94 7925.92	662.01 8058.4	667.14 8430.28	668.21
8479.3 672.62 8637.51	685.13 8937.48	676.82 8951.89	675.31 9128.62	661.25
9270.56 660.92 9530.79	675.08 9709.63	674.67 9896.99	659.4810087.54	655.09
10235.16 646.7910252.79	646.4210344.57	631.6610516.79	609.5210575.46	609.52
10618.47 616.2510748.22	644.42 10858.4	661.6611255.34	655.3811417.23	650.2
11474.37 646.6811692.22	643.2311950.54	644.3812257.92	639.5212908.01	632.14
14405.17 632.1414651.58	629.5215285.03	629.5215772.35	636.915833.86	644.28
16134.83 638.9616141.98	636.2116251.16	634.0716925.85	603.2517500.23	594.76
17606.29 586.9317979.73	585.3418076.08	577.5518227.69	567.39 18742.5	567.39
18891.29 571.1119033.95	594.7619118.83	608.719137.01	610.7719365.18	623.07
19786.34 629.1820202.94	629.222223.89	623.122334.18	623.122553.83	624.18
22888.75 623.2123832.78	627.8624079.12	635.2425682.85	642.6226048.81	646.12
26453.8 650.8527076.33	666.9327290.69	667.3828357.26	667.3828965.29	664.76
29227.35 664.76 29776.7	657.3830004.18	653.0930168.36	650.4230302.35	643.38
30444.58 643.7430725.96	651.8431033.85	654.4532084.75	668.5632720.45	672.34
33646.78 696.1933783.33	69734373.82	684.7934407.04	684.9935932.17	715.02
36930.64 718.7637119.61	723.5937456.38	738.1937496.05	739.337789.45	744.83
38106.84 756.2738258.15	760.4838999.21	79039665.19	794.9140001.03	800

Manning's n Values	num=	3
Sta n Val Sta n Val	n Val	Sta n Val
0 .1517500.23	.1519033.95	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17500.2319033.95	5 5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507507.00	280871.20	1855120.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507507.00	280871.20	1855120.00
Q Total (cfs)	6730000.00	Flow (cfs)	2640855.00	768930.10	3320216.00
Top width (ft)	36827.92	Top width (ft)	16097.37	1533.72	19196.83
Vel Total (ft/s)	1.85	Avg. vel. (ft/s)	1.75	2.74	1.79
Max Chl Dpth (ft)	192.33	Hydr. Depth (ft)	93.65	183.13	96.64
Conv. Total (cfs)	784318700.0	Conv. (cfs)	307766900.0	89611620.0	386940200.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	16112.80	1536.66	19200.84
Min Ch El (ft)	567.39	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.75	2.30	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	62729.27	11882.30	75416.44
C & E Loss (ft)	0.00	Cum SA (acres)	498.09	52.13	572.16

CROSS SECTION

RIVER: BRAZOS

Q Total (cfs)	6730000.00	Flow (cfs)	2638944.00	770011.60	3321045.00
Top width (ft)	36836.71	Top width (ft)	16104.57	1536.76	19195.38
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.75	2.74	1.79
Max Chl Dpth (ft)	192.33	Hydr. Depth (ft)	93.61	183.11	96.68
Conv. Total (cfs)	784635600.0	Conv. (cfs)	307668600.0	89773940.0	387193200.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16120.04	1539.71	19199.38
Min Ch El (ft)	567.39	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.75	2.30	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	62383.20	11817.76	74990.48
C & E Loss (ft)	0.00	Cum SA (acres)	494.39	51.78	567.76

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274724.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	201.69	791.18	656.19
1857.06	745.33	2028.22	742.59	2386.14
3718.88	721.56	3812.14	717.41	3823.7
4359.74	709.02	4516.62	704.37	4900.11
5864.98	684.83	6027.84	677.04	6097.91
6970.94	675.18	7196.29	660.36	7366.73
7643.83	650.71	7866.59	660.78	7931.07
8484.81	672.67	8643.13	685.3	8943.29
9276.59	661.14	9536.98	675.37	9715.94
10241.81	647.06	10259.45	646.69	10351.3
10625.37	616.41	10755.21	644.56	10865.46
11481.83	646.91	11699.82	643.45	11958.31
14414.53	632.23	14661.41	629.64	15294.96
16145.32	639.12	16152.47	636.41	16261.73
17618.08	586.96	17992.97	585.41	18089.69
18906.75	571.09	19049.9	594.82	19134.75
19802.04	629.07	20218.49	629.09	22238.76
22903.39	623.1	23847.1	627.77	24093.35
26467.22	650.84	27089.54	666.96	27303.82
29239.83	664.82	29788.99	657.41	30016.39
30456.64	643.73	30737.92	651.82	31045.71
33657.75	695.93	33794.26	696.75	34384.55
36940.49	718.54	37129.4	723.43	4766.05
38116.29	756.14	38267.55	760.36	39008.36
				79039674.11
				794.9340009.84

Manning's n	Values	num=	3
Sta	n Val	Sta	n Val
0	.1517511.61	.15	19049.9

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
17511.61	19049.9	5	5	5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	w. n-val.	0.150	0.150	0.150
w.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit w.S. (ft)		Flow Area (sq ft)	1507485.00	281672.30	1856146.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507485.00	281672.30	1856146.00
Q Total (cfs)	6730000.00	Flow (cfs)	2637968.00	770574.60	3321457.00
Top width (ft)	36840.96	Top width (ft)	16108.05	1538.29	19194.62
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.75	2.74	1.79
Max Chl Dpth (ft)	192.34	Hydr. Depth (ft)	93.59	183.11	96.70
Conv. Total (cfs)	784809200.0	Conv. (cfs)	307622800.0	89859440.0	387326900.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16123.54	1541.24	19198.61
Min Ch El (ft)	567.38	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.75	2.30	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	62210.16	11785.44	74777.44
C & E Loss (ft)	0.00	Cum SA (acres)	492.54	51.60	565.55

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274721.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	201.73	791.18	656.33
1857.46	745.32	2028.66	742.58	2386.66
3719.69	721.57	3812.97	717.42	3824.53
4360.68	709.09	4517.6	704.36	4901.17
5866.25	684.81	6029.15	677.01	6099.23
6972.45	675.16	7197.85	660.32	7368.33
7645.49	650.66	7868.29	660.73	7932.79
8486.65	672.69	8645	685.36	8945.23
9278.6	661.22	9539.05	675.46	9718.05
10244.03	647.15	10261.68	646.78	10353.54
10627.67	616.45	10757.54	644.61	10867.81
11484.32	646.98	11702.35	643.52	11960.9
14417.65	632.26	14664.28	629.68	15298.28
16148.82	639.17	16155.97	636.46	16265.25
17622.01	586.98	17997.38	585.41	18094.23
18911.9	571.09	19055.21	594.84	19140.06
19807.27	629.07	20223.67	629.05	22243.71
22908.27	623.07	23851.87	627.74	24098.09
26471.69	650.84	27093.94	666.97	27308.2
29243.89	664.82	29793.09	657.42	30020.47
30460.67	643.68	30741.91	651.81	31049.67
33661.41	695.84	33797.9	696.66	34388.12
36943.77	718.47	37132.66	723.34	37469.27
				737.9137508.93
				739.0237802.2

38119.44 756.0938270.68 760.3239011.41 79039677.08 794.9340012.77 800

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .1517515.41 .1519055.21 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17515.4119055.21 5 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507479.00	281933.40	1856488.00
E.G. Slope (ft/ft)	0.000074	Area (sq ft)	1507479.00	281933.40	1856488.00
Q Total (cfs)	6730000.00	Flow (cfs)	2637024.00	771103.00	3321874.00
Top Width (ft)	36845.27	Top Width (ft)	16111.56	1539.80	19193.91
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.75	2.74	1.79
Max Chl Dpth (ft)	192.34	Hydr. Depth (ft)	93.57	183.10	96.72
Conv. Total (cfs)	784971000.0	Conv. (cfs)	307576100.0	89939600.0	387455400.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	16127.07	1542.75	19197.89
Min Ch El (ft)	567.38	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.75	2.29	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	62037.13	11753.10	74564.36
C & E Loss (ft)	0.00	Cum SA (acres)	490.69	51.42	563.35

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274718.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	201.77	791.17	656.47	773.17	1383.04	760.71	1565.87	752.02
1857.86	745.32	2029.1	742.57	2387.17	742.57	2729	740.55	3647.07	725.62
3720.49	721.59	3813.79	717.43	3825.36	717.22	4031.53	715.97	4215.44	712.57
4361.63	708.99	4518.58	704.34	4902.23	694.95	5369.81	688.97	5717.78	686.29
5867.52	684.79	6030.45	676.99	6100.55	669.4	6471.89	668.54	6829.64	673
6973.96	675.14	7199.41	660.28	7369.92	652.85	7442.87	645.42	7493.07	645.42
7647.15	650.61	7869.99	660.68	7934.51	661.78	8067.13	667	8439.42	668.25
8488.49	672.7	8646.87	685.42	8947.16	677.26	8961.59	675.75	9138.52	661.61
9280.61	661.29	9541.11	675.56	9720.15	675.16	9907.72	659.87	10098.48	655.46
10246.25	647.24	10263.9	646.87	10355.78	632.01	10528.19	609.72	10586.92	609.72
10629.97	616.51	10759.87	644.65	10870.16	662.01	11267.54	655.69	11429.61	650.54
11486.81	647.06	11704.89	643.59	11963.49	644.62	12271.21	639.72	12922	632.29
14420.78	632.29	14667.46	629.72	15301.59	629.72	15789.45	637.15	15851.02	644.58
16152.32	639.22	16159.47	636.52	16268.78	634.37	16944.19	603.38	17519.2	594.86
17625.94	586.99	18001.79	585.43	18098.77	577.61	18251.36	567.38	18767.4	567.38
18917.05	571.09	19060.53	594.86	19145.37	608.69	19163.54	610.76	19391.57	622.89
19812.5	629.02	20228.86	629.01	22248.67	622.85	22358.89	622.85	22578.42	623.94
22913.15	623.03	23856.64	627.71	24102.83	635.14	25705.66	642.57	26071.41	646.1
26476.17	650.84	27098.34	666.99	27312.58	667.43	28378.55	667.43	28986.23	664.86
29248.15	664.86	29797.19	657.43	30024.54	653.11	30188.62	650.41	30322.53	643.31
30464.69	643.67	30745.9	651.83	31053.62	654.41	32103.92	668.42	32739.26	672.22
33665.07	695.76	33801.54	696.58	34391.7	684.69	34424.89	684.89	35949.16	714.58
36947.06	718.43	37135.93	723.28	37472.5	737.84	37512.15	738.95	37805.38	744.59
38122.59	756.05	38273.82	760.28	39014.46	79039680.05		794.94	40015.7	800

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .1517519.2 .1519060.53 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17519.219060.53 5 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507470.00	282198.10	1856821.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507470.00	282198.10	1856821.00
Q Total (cfs)	6730000.00	Flow (cfs)	2636063.00	771644.80	3322292.00
Top Width (ft)	36849.73	Top Width (ft)	16115.26	1541.33	19193.15
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.75	2.73	1.79
Max Chl Dpth (ft)	192.34	Hydr. Depth (ft)	93.54	183.09	96.74
Conv. Total (cfs)	785128100.0	Conv. (cfs)	307525600.0	90020790.0	387581700.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	16130.78	1544.28	19197.13
Min Ch El (ft)	567.38	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.75	2.29	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	61864.09	11720.72	74351.24
C & E Loss (ft)	0.00	Cum SA (acres)	488.84	51.25	561.15

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274716.*

INPUT

Description:
 Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	201.82	791.17	656.61	773.16	1383.34	760.71	1566.21	752.01
1858.26	745.31	2029.54	742.56	2387.69	742.56	2729.59	740.54	3647.86	725.64
3721.3	721.6	3814.62	717.44	3826.19	717.23	4032.4	715.97	4216.36	712.56
4362.57	708.97	4519.56	704.32	4903.29	694.93	5370.97	688.96	5719.02	686.27
5868.79	684.78	6031.76	676.96	6101.87	669.36	6473.29	668.5	6831.12	672.98
6975.47	675.12	7200.97	660.24	7371.52	652.8	7444.48	645.36	7494.69	645.36
7648.8	650.55	7871.7	660.63	7936.23	661.73	8068.88	666.98	8441.24	668.25

ss_Rev3.rep											
8490.33	672.72	8648.74	685.47	8949.1	677.35	8963.53	675.84	9140.49	661.68		
9282.62	661.36	9543.18	675.66	9722.26	675.25	9909.86	659.95	10100.66	655.54		
10248.46	647.33	10266.12	646.96	10352.03	632.08	10530.47	609.76	10589.22	609.76		
10632.28	616.54	10762.2	644.71	10872.52	662.08	11269.97	655.75	11432.08	650.61		
11489.29	647.14	11707.42	643.66	11966.08	644.66	12273.86	639.76	12924.79	632.32		
14423.9	632.32	14670.63	629.76	15304.9	629.76	15792.86	637.21	15854.45	644.64		
16155.81	639.27	16162.97	636.59	16272.3	634.43	16947.86	603.41	17522.99	594.88		
17629.87	58718006.21		585.45	18103.3	577.61	18256.1	567.38	18772.38	567.38		
18922.2	571.08	19065.85	594.88	19150.67	608.69	19168.85	610.76	19396.85	622.85		
19817.73	628.97	20234.04	628.97	22253.62	622.82	2363.83	622.82	2583.34	623.89		
22918.03	622.99	23861.41	627.68	24107.58	635.12	25710.22	642.56	26075.93	646.09		
26480.64	650.83	27102.75	66727316.96		667.44	28382.81	667.44	28990.42	664.88		
29252.31	664.88	29801.28	657.44	30028.61	653.12	30192.67	650.41	30326.57	643.3		
30468.71	643.65	30749.89	651.79	31057.58	654.41	32107.75	668.39	32743.02	672.2		
33668.72	695.67	33805.18	696.49	34395.27	684.67	34428.46	684.87	35952.55	714.49		
36950.34	718.33	37139.19	723.22	37475.72	737.77	37515.37	738.88	37808.57	744.55		
38125.74	75638276.95		760.24	39017.5	79039683.02		794.95	40018.64	800		

Manning's n Values	num=	3
Sta n Val Sta n Val	.1517522.99	.1519065.85

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
17522.99	19065.85	5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit w.S. (ft)		Flow Area (sq ft)	1507469.00	282725.60	1857489.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507469.00	282725.60	1857489.00
Q Total (cfs)	6730000.00	Flow (cfs)	2634173.00	772721.30	3323106.00
Top width (ft)	36858.35	Top width (ft)	16122.27	1544.37	19191.71
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.75	2.73	1.79
Max Chl Dpth (ft)	192.34	Hydr. Depth (ft)	93.50	183.07	96.79
Conv. Total (cfs)	785445800.0	Conv. (cfs)	307429400.0	90182860.0	387833600.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	16137.84	1547.33	19195.67
Min Ch El (ft)	567.38	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.75	2.29	0.79
Frcn Loss (ft)	0.00	Cum Volume (acre-ft)	61518.03	11655.88	73924.89
C & E Loss (ft)	0.00	Cum SA (acres)	485.14	50.89	556.74

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274713.*

INPUT

Description:	Station	Elevation	Data	num=	120
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev	0 800 201.86	791.17 656.76	773.14 1383.64	760.71 1566.55	752
1858.67	745.3 2029.98	742.55 2388.21	742.55 2730.18	740.53 3648.65	725.66
3722.1	721.62 3815.44	717.45 3827.02	717.24 4033.27	715.96 4217.27	712.55
4363.52	708.96 4520.53	704.31 4904.35	694.92 5372.13	688.94 5720.26	686.26
5870.06	684.76 6033.07	676.93 6103.2	669.32 6474.69	668.47 6832.6	672.96
6976.98	675.1 7202.53	660.2 7373.11	652.75 7446.09	645.3 7496.32	645.3
7650.46	650.5 7873.4	660.57 7937.94	661.69 8070.62	666.95 8443.07	668.26
8492.16	672.74 8650.62	685.53 8951.04	677.44 8965.47	675.93 9142.47	661.75
9284.63	661.43 9545.25	675.75 9724.36	675.35 9912.01	660.03	10102.85
10250.68	647.42	10268.34	647.05	10360.27	632.15
10634.58	616.59	10764.53	644.74	10874.87	662.15
11491.78	647.21	11709.96	643.73	11968.67	644.71
14427.02	632.35	14673.81	629.81	15308.22	629.81
16159.31	639.33	16166.47	636.65	16275.82	634.49
17633.8	587.01	18010.62	585.47	18107.84	577.62
18927.35	571.08	19071.16	594.91	19155.98	608.69
19822.96	628.93	20239.22	628.93	22258.58	622.75
22922.91	622.96	23866.19	627.65	24112.32	635.12
26485.12	650.83	27107.15	667.01	27321.34	667.45
29256.46	664.92	29805.38	657.45	30032.68	653.12
30472.73	643.64	30753.88	651.79	31061.53	654.43
33672.38	695.59	33808.82	696.41	34398.84	684.65
36953.62	718.26	37142.45	723.15	37478.95	737.73
38128.89	755.95	38280.09	760.23	39020.55	790 39686

Manning's n Values	num=	3
Sta n Val Sta n Val	.1517526.79	.1519071.16

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
17526.79	19071.16	5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	Wt. n-val.	0.150	0.150	0.150
W.S. Elev (ft)	759.72	Reach Len. (ft)	5.00	5.00	5.00
Crit w.S. (ft)		Flow Area (sq ft)	1507451.00	282725.60	1857489.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507451.00	282725.60	1857489.00
Q Total (cfs)	6730000.00	Flow (cfs)	2634173.00	772721.30	3323106.00
Top width (ft)	36858.35	Top width (ft)	16122.27	1544.37	19191.71
Vel Total (ft/s)	1.85	Avg. Vel. (ft/s)	1.75	2.73	1.79
Max Chl Dpth (ft)	192.34	Hydr. Depth (ft)	93.50	183.07	96.79
Conv. Total (cfs)	785445800.0	Conv. (cfs)	307429400.0	90182860.0	387833600.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	16137.84	1547.33	19195.67
Min Ch El (ft)	567.38	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.75	2.29	0.79
Frcn Loss (ft)	0.00	Cum Volume (acre-ft)	61518.03	11655.88	73924.89
C & E Loss (ft)	0.00	Cum SA (acres)	485.14	50.89	556.74

CROSS SECTION

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RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274710.*

INPUT

Description:

Table with columns: Station, Elevation, Data, num=, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains stationing data from Sta 0 to Sta 38132.04.

Manning's n Values table with columns: Sta, n Val, Sta, n Val. Values include .1517530.58 and .1519076.48.

Bank Sta: Left, Right, Lengths: Left Channel, Right, Coeff Contr., Expan. Values include 17530.5819076.48, 5, 5, .1, .3.

CROSS SECTION OUTPUT Profile #PF 1

Table with columns: E.G. Elev (ft), Vel Head (ft), w.s. Elev (ft), Crit w.s. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft/s), vel total (ft/s), Max chl Dpth (ft), Conv. Total (cfs), Length Wtd. (ft), Min Ch El (ft), Alpha, Frctn Loss (ft), C & E Loss (ft). Includes Element, Left OB, Channel, Right OB, wt. n-val., Reach Len. (ft), Flow Area (sq ft), Area (sq ft), Flow (cfs), Top width (ft/s), Avg. Vel. (ft/s), Hydr. Depth (ft), Conv. (cfs), Wetted Per. (ft), Shear (lb/sq ft), Stream Power (lb/ft s), Cum Volume (acre-ft), Cum SA (acres).

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274707.*

INPUT

Description:

Table with columns: Station, Elevation, Data, num=, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains stationing data from Sta 0 to Sta 38135.19.

Manning's n Values table with columns: Sta, n Val, Sta, n Val. Values include .1517534.37 and .1519081.8.

Bank Sta: Left, Right, Lengths: Left Channel, Right, Coeff Contr., Expan. Values include 17534.37 19081.8, 5, 5, .1, .3.

CROSS SECTION OUTPUT Profile #PF 1

Table with columns: E.G. Elev (ft), Vel Head (ft), Element, Left OB, Channel, Right OB, wt. n-val., Page 433.

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30488.81	643.5830769.83	651.7631077.34	654.3732126.92	668.2432761.83	672.08
33687.01	695.2433823.39	696.0634413.14	684.5734446.32	684.7735969.54	714.05
36966.76	717.9737155.5	722.937491.84	737.4237531.47	738.5437824.5	744.31
38141.49	755.7738292.62	760.0439032.75	79039697.89	794.9840033.32	800

Manning's n Values	num=	3
Sta n Val Sta n Val	n Val	Sta n Val
0 .1517541.96	.1519092.43	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17541.9619092.43	5 5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
w.s. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit w.s. (ft)		Flow Area (sq ft)	1507412.00	283783.10	1858875.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507412.00	283783.10	1858875.00
Q Total (cfs)	6730000.00	Flow (cfs)	2630318.00	774859.40	3324823.00
Top width (ft)	36875.59	Top width (ft)	16136.45	1550.47	19188.67
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.73	1.79
Max Chl Dpth (ft)	192.33	Hydr. Depth (ft)	93.42	183.03	96.87
Conv. Total (cfs)	786100500.0	Conv. (cfs)	307235400.0	90507780.0	388357400.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16152.10	1553.44	19192.61
Min Ch El (ft)	567.38	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.75	2.28	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	60825.91	11525.82	73071.72
C & E Loss (ft)	0.00	Cum SA (acres)	477.74	50.18	547.93

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274698.*

INPUT

Description:

Station Elevation Data	num=	120
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
0 800 202.08 791.14 657.47 773.08 1385.14 760.69 1568.25 751.96		
1860.68 745.27 2032.17 742.5 2390.79 742.5 2733.13 740.47 3652.6 725.74		
3726.13 721.7 3819.57 717.5 3831.16 717.28 4037.64 715.93 4221.83 712.5		
4368.24 708.88 4525.43 704.22 4909.66 694.82 5377.94 688.87 5726.45 686.16		
5876.41 684.66 6039.59 676.8 6109.8 669.14 6481.7 668.3 6839.99 672.84		
6984.53 675 7210.32 660 7381.09 652.5 7454.15 645 7504.43 645		
7658.74 650.24 7881.92 660.31 7946.53 661.46 8079.36 666.81 8452.21 668.29		
8501.35 672.82 8659.98 685.82 8960.72 677.88 8975.17 676.37 9152.37 662.11		
9294.67 661.8 9555.57 676.23 9734.88 675.83 9922.73 660.4210113.78 655.98		
10261.78 647.8710279.45 647.510371.48 632.510544.15 61010602.97 610		
10646.08 616.8410776.18 644.9810886.64 662.511284.61 656.1211446.93 651.02		
11504.22 647.611722.63 644.0911981.62 644.94 12289.8 64012941.58 632.5		
14442.63 632.514689.69 63015324.78 63015813.38 637.515875.04 645		
16176.8 639.5916183.96 636.9616293.43 634.816969.87 603.5617545.75 595		
17653.45 587.0718032.69 585.5618130.53 577.66 18284.5 567.3818802.25 567.38		
18953.11 571.0619097.75 59519182.52 608.6819200.68 610.7419428.53 622.64		
19849.12 628.7620265.15 628.7222283.35 622.522393.48 622.522612.84 623.6		
22947.3 622.7823890.04 627.524136.04 63525737.59 642.526103.05 646.06		
26507.49 650.8227129.17 667.0727343.23 667.528408.36 667.529015.55 665		
29277.26 66529825.86 657.530053.03 653.1430216.99 650.430350.79 643.22		
30492.83 643.5730773.82 651.75 31081.3 654.3632130.76 668.2132765.59 672.05		
33690.66 695.1533827.03 695.9834416.72 684.5534449.89 684.7535972.94 713.97		
36970.05 717.937158.76 722.8437495.07 737.3537534.69 738.4737827.69 744.26		
38144.64 755.7338295.75 760 39035.8 79039700.86 794.9940036.25 800		

Manning's n Values	num=	3
Sta n Val Sta n Val	n Val	Sta n Val
0 .1517545.75	.1519097.75	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17545.7519097.75	5 5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
w.s. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit w.s. (ft)		Flow Area (sq ft)	1507409.00	284049.00	1859204.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507409.00	284049.00	1859204.00
Q Total (cfs)	6730000.00	Flow (cfs)	2629374.00	775403.30	3325223.00
Top width (ft)	36880.02	Top width (ft)	16140.14	1552.00	19187.88
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.73	1.79
Max Chl Dpth (ft)	192.33	Hydr. Depth (ft)	93.40	183.02	96.89
Conv. Total (cfs)	786259300.0	Conv. (cfs)	307187100.0	90589600.0	388482500.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16155.81	1554.97	19191.81
Min Ch El (ft)	567.38	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.74	2.28	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	60652.88	11493.23	72858.33
C & E Loss (ft)	0.00	Cum SA (acres)	475.88	50.00	545.73

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274695.*

INPUT

Description:

Station Elevation Data	num=	120
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
0 800 202.12 791.14 657.61 773.07 1385.44 760.69 1568.58 751.96		
1861.08 745.27 2032.61 742.49 2391.31 742.49 2733.72 740.45 3653.39 725.76		
3726.94 721.71 3820.4 717.51 3831.99 717.29 4038.51 715.93 4222.75 712.49		
4369.18 708.87 4526.4 704.2 4910.72 694.8 5379.11 688.85 5727.69 686.14		

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5877.68	684.64	6040.9	676.77	6111.12	669.1	6483.1	668.27	6841.47	672.82
6986.04	674.98	7211.88	659.96	7382.69	652.45	7455.76	644.94	7506.05	644.94
7660.39	650.18	7883.63	660.25	7948.25	661.41	8081.1	666.79	8454.03	668.3
8503.19	672.84	8661.85	685.87	8962.66	677.97	8977.11	676.46	9154.34	662.18
9296.68	661.87	9557.64	676.32	9736.99	675.93	9924.88	660.510115.97		656.06
10263.99	647.9610281.67		647.5910373.72		632.5710546.43		610.0410605.26		610.04
10648.39	616.8910778.51		645.0210888.99		662.5711287.05		656.1811449.4		651.08
11506.7	647.6711725.16		644.1711984.21		644.9912292.46		640.0412944.38		632.53
14445.75	632.5314692.86		630.0415328.09		630.0415816.79		637.5515878.47		645.06
16180.29	639.6416187.46		637.0316296.95		634.8616973.54		603.5817549.54		595.02
17657.38	587.0818037.1		585.5718135.07		577.6718289.23		567.3718807.23		567.37
18958.26	571.0519103.07		595.0219187.83		608.6719205.98		610.7419433.81		622.6
19834.35	628.7220270.33		628.6822288.3		622.4522398.42		622.4522617.76		623.55
22952.18	622.7423894.82		627.4724140.79		634.9825742.15		642.4926107.57		646.05
26511.96	650.8127133.57		667.0827347.61		667.5128412.61		667.5129019.74		665.02
29281.42	665.0229829.96		657.5130057.1		653.1530221.04		650.430354.83		643.21
30496.85	643.5530777.81		651.7531085.25		654.3532134.59		668.1832769.35		672.03
33694.32	695.0733830.67		695.8934420.29		684.5334453.46		684.7335976.34		713.88
36973.33	717.8337162.02		722.7837498.29		737.2837537.91		738.437830.88		744.21
38147.79	755.6838298.88		759.9639038.84		79039703.84		794.9940039.18		800

Manning's n Values	num=	3
Sta n Val Sta n Val	n Val Sta n Val	n Val
0 .1517549.54	.1519103.07	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr. Expan.
17549.5419103.07	5 5 5	.1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507405.00	284324.30	1859552.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507405.00	284324.30	1859552.00
Q Total (cfs)	6730000.00	Flow (cfs)	2628406.00	775975.00	3325619.00
Top width (ft)	36884.26	Top width (ft)	16143.62	1553.53	19187.11
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.73	1.79
Max Chl Dpth (ft)	192.34	Hydr. Depth (ft)	93.37	183.02	96.92
Conv. Total (cfs)	786432000.0	Conv. (cfs)	307141600.0	90676310.0	388614100.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	16159.30	1556.50	19191.04
Min Ch El (ft)	567.37	Shear (lb/sq ft)	0.43	0.84	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.74	2.28	0.79
Frctn Loss (ft)	0.00	Cum volume (acre-ft)	60479.86	11460.61	72644.90
C & E Loss (ft)	0.00	Cum SA (acres)	474.03	49.82	543.53

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274692.*

INPUT

Description:	num=	120			
Station Elevation Data	Elev Sta Elev Sta Elev Sta Elev Sta Elev				
0 800 202.17	791.13 657.75	773.06 1385.74	760.69 1568.92	751.95	
1861.48	745.26 2033.05	742.48 2391.82	742.48 2734.31	740.44 3654.18	725.77
3727.74	721.73 3821.22	717.52 3832.81	717.3 4039.38	715.92 4223.66	712.48
4370.12	708.85 4527.38	704.19 4911.78	694.78 5380.27	688.84 5728.92	686.13
5878.95	684.63 6042.21	676.74 6112.44	669.07 6484.5	668.24 6842.95	672.8
6987.55	674.96 7213.44	659.92 7384.28	652.4 7457.37	644.88 7507.67	644.88
7662.05	650.13 7885.33	660.2 7949.97	661.37 8082.85	666.76 8455.86	668.31
8505.03	672.86 8663.72	685.93 8964.6	678.06 8979.05	676.55 9156.32	662.25
9298.69	661.94 9559.71	676.42 9739.09	676.03 9927.02	660.5810118.15	656.13
10266.21	648.05 10283.9	647.6810375.96	632.6410548.71	610.0810607.55	610.08
10650.69	616.9410780.84	645.0710891.34	662.6411289.49	656.2411451.88	651.15
11509.19	647.75 11727.7	644.24 11986.8	645.0312295.12	640.0812947.17	632.56
14448.88	632.5614696.04	630.0815331.41	630.0815820.21	637.615881.91	645.12
16183.79	639.716190.96	637.0916300.48	634.9216977.21	603.6117553.34	595.04
17661.31	587.0918041.51	585.5918139.61	577.6818293.97	567.3718812.21	567.37
18963.41	571.0519108.38	595.0419193.13	608.6719211.29	610.7319439.09	622.56
19859.58	628.6920275.52	628.6322293.26	622.422403.37	622.422622.67	623.5
22957.06	622.723899.59	627.4424145.53	634.9625746.71	642.4826112.09	646.05
26516.43	650.8127137.97	667.0927351.99	667.5228416.87	667.5229023.93	665.04
29285.58	665.0429834.05	657.5230061.17	653.1530225.09	650.430358.87	643.2
30500.87	643.54 30781.8	651.7431089.21	654.3532138.43	668.1832773.11	672.01
33697.98	694.9833834.31	695.8134423.87	684.5134457.03	684.7135979.73	713.79
36976.61	717.7537165.29	722.7137501.52	737.2137541.12	738.4337834.06	744.16
38150.95	755.6338302.02	759.9239041.89	79039706.81	79540042.12	800

Manning's n Values	num=	3
Sta n Val Sta n Val	n Val Sta n Val	n Val
0 .1517553.34	.1519108.38	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr. Expan.
17553.3419108.38	5 5 5	.1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507386.00	284385.30	1859908.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507386.00	284385.30	1859908.00
Q Total (cfs)	6730000.00	Flow (cfs)	2627423.00	776498.60	3326078.00
Top width (ft)	36888.53	Top width (ft)	16147.13	1555.04	19186.36
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.73	1.79
Max Chl Dpth (ft)	192.34	Hydr. Depth (ft)	93.35	183.01	96.94
Conv. Total (cfs)	786595000.0	Conv. (cfs)	307090300.0	90756300.0	388748400.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	16162.84	1558.02	19190.28
Min Ch El (ft)	567.37	Shear (lb/sq ft)	0.43	0.83	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.74	2.28	0.79
Frctn Loss (ft)	0.00	Cum volume (acre-ft)	60306.83	11427.96	72431.43
C & E Loss (ft)	0.00	Cum SA (acres)	472.18	49.65	541.32

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CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274689.*

INPUT

Description:

Table with columns: Station Elevation Data, num= 120, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. It lists station elevations and corresponding values for 120 data points.

Table with columns: Manning's n Values, num= 3, Sta, n Val, Sta, n Val, Sta, n Val. It lists Manning's n values for three stations.

Table with columns: Bank Sta: Left Right, Lengths: Left Channel Right, Coeff Contr., Expan. It lists bank station data, channel lengths, coefficients, and expansion values.

CROSS SECTION OUTPUT Profile #PF 1

Table with columns: E.G. Elev (ft), Vel Head (ft), w.s. Elev (ft), Crit w.s. (ft), E.G. Slope (ft/ft), Q Total (cfs), Top width (ft), Vel Total (ft/s), Max Chl Dpth (ft), Conv. Total (cfs), Length wtd. (ft), Min Ch El (ft), Alpha, Frctn Loss (ft), C & E Loss (ft), Element, wt. n-Val., Reach Len. (ft), Area (sq ft), Flow (cfs), Top width (ft), Avg. Vel. (ft/s), Hydr. Depth (ft), Conv. (cfs), wetted Per. (ft), Shear (lb/sq ft), Stream Power (lb/ft s), Cum volume (acre-ft), Cum SA (acres), Left OB, Channel, Right OB. It provides detailed hydraulic output data for profile #PF 1.

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274686.*

INPUT

Description:

Table with columns: Station Elevation Data, num= 120, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. It lists station elevations and corresponding values for 120 data points.

Table with columns: Manning's n Values, num= 3, Sta, n Val, Sta, n Val, Sta, n Val. It lists Manning's n values for three stations.

Table with columns: Bank Sta: Left Right, Lengths: Left Channel Right, Coeff Contr., Expan. It lists bank station data, channel lengths, coefficients, and expansion values.

CROSS SECTION OUTPUT Profile #PF 1

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E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507380.00	285113.10	1860580.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507380.00	285113.10	1860580.00
Q Total (cfs)	6730000.00	Flow (cfs)	2625542.00	777561.20	3326897.00
Top width (ft)	36897.20	Top width (ft)	16154.32	1558.10	19184.79
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.73	1.79
Max chl Dpth (ft)	192.34	Hydr. Depth (ft)	93.31	182.99	96.98
Conv. Total (cfs)	786918700.0	Conv. (cfs)	306996700.0	90917890.0	389004100.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	16170.07	1561.08	19188.70
Min Ch El (ft)	567.37	Shear (lb/sq ft)	0.43	0.83	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.74	2.27	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	59960.79	11362.57	72004.38
C & E Loss (ft)	0.00	Cum SA (acres)	468.47	49.29	536.92

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274683.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	202.3	791.12	658.18
1862.69	745.24	2034.37	742.45	2393.38
3730.16	721.78	3823.7	717.55	3835.3
4372.96	708.81	4530.32	704.14	4914.97
5882.76	684.57	6046.12	676.66	6116.4
6992.07	674.9	7218.12	659.8	7389.07
7667.01	649.97	7890.44	660.04	7955.12
8510.54	672.91	8669.34	686.1	8970.41
9304.72	662.16	9565.9	676.7	9745.41
10272.87	648.32	10290.56	647.95	10382.69
10657.59	617.09	10787.83	645.21	10898.41
11516.65	647.98	11735.3	644.46	11994.57
14458.24	632.65	14705.57	630.21	15341.35
16194.28	639.85	16201.45	637.28	16311.04
17673.1	587.13	18054.75	585.64	18153.22
18978.87	571.03	19124.34	595.11	19209.05
19875.28	628.58	20291.07	628.51	212308.12
22971.7	622.59	23913.9	627.35	24159.76
26529.86	650.82	27151.18	667.13	27365.13
29298.05	665.12	29846.35	657.55	30073.38
30512.93	643.53	30793.77	651.72	31101.07
33708.95	694.72	33845.23	695.53	34434.59
36986.46	717.54	37175.07	722.52	37511.19
38160.39	755.53	38111.41	759.83	39051.04

Manning's n Values	num=	3
Sta	n Val	Sta
0	.1517564.71	.1519124.34

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	17564.71	19124.34		5	5	5	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507353.00	285111.20	1860924.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507353.00	285381.20	1860924.00
Q Total (cfs)	6730000.00	Flow (cfs)	2624550.00	778112.40	3327338.00
Top width (ft)	36901.41	Top width (ft)	16157.80	1559.63	19183.99
Vel total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.73	1.79
Max chl Dpth (ft)	192.34	Hydr. Depth (ft)	93.29	182.98	97.00
Conv. Total (cfs)	787079200.0	Conv. (cfs)	306943300.0	91000910.0	389135000.0
Length Wtd. (ft)	5.00	Wetted Per. (ft)	16173.57	1562.61	19187.89
Min Ch El (ft)	567.37	Shear (lb/sq ft)	0.43	0.83	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.74	2.27	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	59787.76	11329.83	71790.79
C & E Loss (ft)	0.00	Cum SA (acres)	466.62	49.11	534.72

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274681.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	202.34	791.12	658.32
1863.09	745.23	2034.81	742.44	2393.89
3730.96	721.79	3824.53	717.56	3836.13
4373.9	708.79	4531.3	704.12	4916.03
5884.03	684.55	6047.43	676.63	6117.72
6993.58	674.88	7219.67	659.76	7390.67
7668.67	649.92	7892.15	659.99	7956.84
8512.38	672.92	8671.21	686.16	8972.35
9306.73	662.24	9567.97	676.8	9747.51
10275.09	648.41	10292.79	648.04	10384.93
10659.89	617.13	10790.15	645.26	10900.76
11519.14	648.06	11737.83	644.53	11997.16
14461.36	632.68	14708.74	630.24	15344.66
16197.78	639.91	16204.95	637.34	16314.56
17677.03	587.14	18059.17	585.66	18157.76
18984.02	571.03	19129.65	595.12	19214.36
19880.51	628.55	20296.25	628.47	22313.08

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22976.58	622.5623918.68	627.32 24164.5	634.8825764.96	642.4426130.17	646.03
26534.33	650.827155.59	667.1427369.51	667.56 28433.9	667.5629040.68	665.12
29302.21	665.1229850.44	657.5630077.46	653.17 30241.3	650.3930375.01	643.15
30516.96	643.4830797.76	651.7131105.02	654.3232153.76	668.0432788.16	671.91
33712.61	694.633848.88	695.4734438.16	684.4234471.31	684.6335993.32	713.44
36989.75	717.4737178.34	722.4637514.41	736.93 37554	738.06 37846.8	743.97
38163.54	755.4538314.55	759.7639054.09	790 39718.7	795.0340053.86	800

Manning's n Values	num=	3
Sta n Val Sta n Val		
0 .1517568.51	.1519129.65	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17568.5119129.65	5 5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507352.00	285642.40	1861249.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507352.00	285642.40	1861249.00
Q Total (cfs)	6730000.00	Flow (cfs)	2623636.00	778639.90	3327724.00
Top Width (ft)	36905.66	Top width (ft)	16161.31	1561.14	19183.21
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.73	1.79
Max Chl Dpth (ft)	192.34	Hydr. Depth (ft)	93.27	182.97	97.02
Conv. Total (cfs)	787237900.0	Conv. (cfs)	306898300.0	91080950.0	389258600.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16177.10	1564.12	19187.11
Min Ch El (ft)	567.37	Shear (lb/sq ft)	0.43	0.83	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.74	2.27	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	59614.74	11297.06	71577.16
C & E Loss (ft)	0.00	Cum SA (acres)	464.76	48.93	532.52

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274678.*

INPUT

Description:

Station Elevation Data	num=	120		
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev				
0 800 202.38	791.11 658.46	773 1387.24	760.68 1570.62	751.91
1863.49	745.23 2035.25	742.43 2394.41	742.43 2737.27	740.38 3658.12
3731.77	721.81 3825.35	717.57 3836.96	717.35 4043.74	715.9 4228.22
4374.85	708.78 4532.27	704.1 4917.09	694.68 5386.08	688.76 5735.11
5885.31	684.53 6048.73	676.61 6119.04	668.88 6491.51	668.07 6850.34
6995.09	674.86 7221.23	659.72 7392.26	652.15 7465.42	644.58 7515.78
7670.33	649.86 7893.85	659.94 7958.56	661.14 8091.58	666.62 8465
8514.22	672.94 8673.08	686.21 8974.28	678.5 8988.76	676.99 9166.22
9308.74	662.31 9570.03	676.89 9749.62	676.51 9937.75	660.9710129.08
10277.3	648.5110295.01	648.1310387.17	632.99 10560.1	610.2810619.01
10662.2	617.1810792.48	645.310903.11	662.9911301.69	656.5511464.25
11521.62	648.1311740.37	644.611999.75	645.27 12308.4	640.2812961.16
14464.49	632.71114711.92	630.2815347.97	630.28 15837.3	637.8515899.07
16201.28	639.9616208.45	637.416318.09	635.2216995.55	603.74 17372.3
17680.96	587.1518063.58	585.6818162.29	577.7318317.64	567.37 18837.1
19899.17	571.0319134.97	595.1419219.67	608.6619237.81	610.7219465.48
19885.74	628.5120301.44	628.4322318.03	622.1522428.08	622.1522647.26
22981.46	622.5223923.45	627.2924169.25	634.8625769.52	642.4326134.69
26538.8	650.7927159.99	667.1527373.89	667.5728438.16	667.5729044.87
29306.37	665.1429854.54	657.5730081.53	653.1730245.35	650.3930379.05
30520.98	643.4730801.74	651.731108.97	654.31 32157.6	668.0132791.93
33716.26	694.5533852.52	695.3834441.74	684.434474.88	684.6135996.72
36993.03	717.4 37181.6	722.437517.64	736.8637557.22	737.9937849.99
38166.7	755.4138317.68	759.7239057.14	79039721.68	795.03 40056.8

Manning's n Values	num=	3
Sta n Val Sta n Val		
0 .15 17572.3	.1519134.97	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17572.319134.97	5 5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507343.00	285906.60	1861595.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507343.00	285906.60	1861595.00
Q Total (cfs)	6730000.00	Flow (cfs)	2622679.00	779168.80	3328152.00
Top Width (ft)	36909.89	Top width (ft)	16164.81	1562.67	19182.41
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.73	1.79
Max Chl Dpth (ft)	192.34	Hydr. Depth (ft)	93.25	182.96	97.05
Conv. Total (cfs)	787403000.0	Conv. (cfs)	306850800.0	91161940.0	389390300.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16180.63	1565.66	19186.30
Min Ch El (ft)	567.37	Shear (lb/sq ft)	0.42	0.83	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.74	2.27	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	59441.72	11264.25	71363.50
C & E Loss (ft)	0.00	Cum SA (acres)	462.91	48.75	530.31

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274675.*

INPUT

Description:

Station Elevation Data	num=	120		
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev				
0 800 202.43	791.11 658.6	772.98 1387.54	760.67 1570.96	751.9

Alpha	1.07	Stream Power (lb/ft s)	0.74	2.27	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	59095.69	11198.56	70936.05
C & E Loss (ft)	0.00	Cum SA (acres)	459.19	48.39	525.91

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CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274669.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	202.52	791.1	658.89
1864.7	745.21	2036.57	742.4	2395.96
3734.18	721.85	3827.83	717.6	3839.44
4377.68	708.74	4535.21	704.05	4920.27
5889.12	684.48	6052.65	676.53	6123.01
6999.62	674.8	7225.91	659.6	7397.05
7675.29	649.71	7898.96	659.78	7963.71
8519.73	672.99	8678.7	686.38	8980.09
9314.77	662.53	9576.23	677.18	9755.93
10283.96	648.78	10301.67	648.4	10393.9
10669.1	617.33	10799.47	645.44	10910.17
11529.09	648.36	11747.97	644.82	12007.52
14473.85	632.81	14721.44	630.41	15357.91
16211.77	640.12	16218.94	637.59	16328.65
17692.75	587.19	18076.82	585.73	18175.91
19004.63	571.01	19150.92	595.21	19235.59
19901.44	628.41	20316.99	628.3	22332.9
22996.09	622.41	23937.76	627.22	24183.48
26552.23	650.78	27173.2	667.19	27387.02
29318.85	665.22	29866.83	657.63	30093.74
30533.04	643.43	30813.71	651.68	31120.84
33727.23	694.29	33863.44	695.12	34452.46
37002.88	717.18	37191.38	722.21	37527.31
38176.14	755.27	38327.08	759.63	39066.29

Manning's n Values	num=	3
Sta	n Val	Sta
0	.1517583.68	.1519150.92
		.15

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
17583.68	19150.92	5	5	5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-val.	0.150	0.150	0.150
w.s. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507302.00	286705.80	1862641.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507302.00	286705.80	1862641.00
Q Total (cfs)	6730000.00	Flow (cfs)	2619701.00	780773.40	3329526.00
Top width (ft)	36921.57	Top width (ft)	16175.48	1567.24	19178.84
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.7	1.79
Max Ch Dpt (ft)	192.55	Hydr. Depth (ft)	93.18	182.94	97.12
Conv. Total (cfs)	787913500.0	Conv. (cfs)	306701000.0	91408900.0	389803600.0
Length wtd. (ft)	5.00	Wetted Per. (ft)	16191.37	1570.23	19182.72
Min Ch El (ft)	567.36	Shear (lb/sq ft)	0.42	0.83	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.74	2.26	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	58922.67	11165.66	70722.27
C & E Loss (ft)	0.00	Cum SA (acres)	457.34	48.21	523.71

CROSS SECTION

RIVER: BRAZOS
REACH: UPPER BRAZOS RS: 274666.*

INPUT

Description:

Station	Elevation	Data	num=	120
Sta	Elev	Sta	Elev	Sta
0	800	202.56	791.09	659.03
1865.1	745.2	2037	742.39	2396.48
3734.99	721.87	3828.66	717.61	3840.27
4378.62	708.72	4536.19	704.04	4921.34
5890.39	684.46	6053.96	676.5	6124.33
7001.13	674.78	7227.47	659.56	7398.65
7676.95	649.65	7900.66	659.73	7965.43
8521.57	673.01	8680.57	686.44	8982.03
9316.78	662.6	9578.3	677.27	9758.03
10286.18	648.87	10303.9	648.49	10396.14
10671.4	617.38	10801.8	645.49	10912.53
11531.57	648.44	11750.5	644.89	12010.11
14476.97	632.83	14724.62	630.44	15361.22
16215.26	640.17	16222.44	637.65	16332.18
17695.69	587.21	18081.23	585.73	18180.45
19009.78	571.01	19156.24	595.22	19240.9
19906.67	628.37	20322.17	628.26	22337.85
23000.97	622.38	23942.54	627.17	24188.22
26556.7	650.78	27177.6	667.2	27391.4
29323.01	665.22	29870.92	657.61	30097.81
30537.06	643.41	30817.7	651.68	31124.79
33730.89	694.23	33867.08	695.04	34456.04
37006.17	717.13	37194.65	722.15	37530.53
38179.3	755.22	38330.21	759.56	39069.33

Manning's n Values	num=	3
Sta	n Val	Sta
0	.1517587.47	.1519156.24
		.15

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

17587.4719156.24 5 5 5 SS_Rev3.rep .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507295.00	286969.80	1862969.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507295.00	286969.80	1862969.00
Q Total (cfs)	6730000.00	Flow (cfs)	2618741.00	781303.10	3329956.00
Top Width (ft)	36925.57	Top Width (ft)	16179.18	1568.77	19177.62
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.72	1.79
Max Chl Dpth (ft)	192.35	Hydr. Depth (ft)	93.16	182.93	97.14
Conv. Total (cfs)	788076300.0	Conv. (cfs)	306652000.0	91489810.0	389934500.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16195.08	1571.76	19181.49
Min Ch El (ft)	567.36	Shear (lb/sq ft)	0.42	0.83	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.74	2.26	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	58749.66	11132.74	70508.45
C & E Loss (ft)	0.00	Cum SA (acres)	455.48	48.03	521.51

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274663.*

INPUT

Description: Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	202.6	791.09	659.17	772.94	1388.73	760.66	1572.31	751.87
1865.5	745.2	2037.44	742.38	2396.99	742.38	2740.22	740.31	3662.07	725.94
3735.8	721.88	3829.48	717.62	3841.1	717.4	4048.11	715.87	4232.79	712.38
4379.57	708.71	4537.17	704.02	4922.4	694.59	5391.89	688.69	5741.3	685.94
5891.66	684.44	6055.26	676.47	6125.65	668.7	6498.51	667.91	6857.73	672.57
7002.64	674.76	7229.03	659.52	7400.24	651.9	7473.48	644.28	7523.9	644.28
7678.6	649.6	7902.37	659.67	7967.15	660.91	8100.31	666.49	8474.13	668.38
8523.41	673.03	8682.44	686.5	8983.97	678.94	8998.46	677.43	9176.11	662.97
9318.79	662.67	9580.36	677.37	9760.14	675.99	9948.47	661.36	10140.02	656.88
10288.4	648.96	10306.12	648.58	10398.38	633.34	10571.5	610.48	10630.47	610.48
10673.7	617.43	10804.13	645.54	10914.88	663.34	11313.88	656.86	11476.62	651.83
11534.06	648.52	11753.04	644.96	12012.7	645.51	12321.69	640.48	12975.15	632.86
14480.1	632.86	14727.79	630.48	15364.54	630.48	15854.4	638.11	15916.22	645.72
16218.76	640.22	16225.94	637.71	16335.7	635.53	17013.89	603.87	17591.27	595.24
17700.62	587.21	18085.65	585.77	18184.98	577.78	18341.31	567.36	18862	567.36
19014.93	571.01	19161.55	595.24	19246.21	608.66	19264.34	610.71	19491.88	622.2
19911.9	628.34	20327.36	628.22	22342.8	621.92	2452.79	621.92	2671.84	623.02
23005.85	622.34	23947.31	627.14	24219.97	634.76	25792.33	642.38	26157.29	646
26561.18	650.78	27182.01	667.21	27395.78	667.62	28459.45	667.62	29065.82	665.24
29327.17	665.24	29875.02	657.62	30101.88	653.19	30265.61	650.38	30399.23	643.07
30541.08	643.43	30821.69	651.67	31128.74	654.27	32176.77	667.86	32810.73	671.77
33734.55	694.12	33870.73	694.95	34459.61	684.33	34492.73	684.5	36013.7	712.91
37009.45	717.04	37197.91	722.08	37533.76	736.51	37573.32	737.65	37865.92	743.69
38182.45	755.18	38333.34	759.52	39072.38	79039	736.54	795.07	40071.47	800

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1517591.27	.1519161.55	.15		

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17591.27 19161.55 5 5 5 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507280.00	287230.90	1863305.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507280.00	287230.90	1863305.00
Q Total (cfs)	6730000.00	Flow (cfs)	2617770.00	781822.90	3330408.00
Top Width (ft)	36929.36	Top Width (ft)	16182.69	1570.28	19176.39
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.72	1.79
Max Chl Dpth (ft)	192.35	Hydr. Depth (ft)	93.14	182.92	97.17
Conv. Total (cfs)	788240500.0	Conv. (cfs)	306602100.0	91569760.0	390068700.0
Length wtd. (ft)	5.00	wetted Per. (ft)	16198.61	1573.28	19180.25
Min Ch El (ft)	567.36	Shear (lb/sq ft)	0.42	0.83	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.74	2.26	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	58576.64	11099.79	70294.59
C & E Loss (ft)	0.00	Cum SA (acres)	453.62	47.85	519.31

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274660.*

INPUT

Description: Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	800	202.65	791.08	659.32	772.92	1389.03	760.66	1572.65	751.86
1865.91	745.19	2037.88	742.37	2397.51	742.37	2740.81	740.3	3662.86	725.96
3736.6	721.9	3830.31	717.63	3841.93	717.41	4048.98	715.86	4233.7	712.37
4380.51	708.69	4538.14	704	4923.46	694.57	5393.06	688.67	5742.54	685.92
5892.93	684.42	6056.57	676.44	6126.97	668.66	6499.92	667.87	6859.21	672.55
7004.15	674.74	7230.59	659.48	7401.84	651.85	7475.09	644.22	7525.52	644.22
7680.26	649.55	7904.07	659.62	7968.87	660.86	8102.06	666.46	8475.96	668.38
8525.24	673.04	8684.31	686.55	8985.91	679.03	9000.4	677.52	9178.09	663.04
9320.8	662.74	9582.43	677.46	9762.24	677.09	9950.62	661.44	10142.2	656.95
10290.61	649.05	10308.34	648.67	10400.63	633.41	110573.78	610.52	10632.77	610.52
10676	617.48	10806.46	645.58	10917.23	663.41	11316.32	656.92	11479.1	651.9
11536.55	648.61	11755.57	645.03	12015.29	645.55	12324.34	640.52	12977.95	632.89
14483.22	632.89	14730.97	630.52	15367.85	630.52	15857.82	638.15	15919.66	645.78
16222.26	640.28	16229.44	637.78	16339.22	635.59	17017.56	603.89	17595.06	595.26

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17704.54	587.2218090.06	585.7918189.52	577.7918346.04	567.3618866.98	567.36
19020.08	57119166.87	595.2619251.51	608.6519269.65	610.719497.16	622.16
19917.13	628.320332.54	628.1822347.76	621.8522457.73	621.8522676.76	622.97
23010.73	622.323952.08	627.1124197.71	634.7425796.89	642.3726161.81	645.99
26565.65	650.7727186.41	667.2227400.16	667.6328463.71	667.63 29070	665.26
29331.33	665.2629879.12	657.6330105.95	653.230269.66	650.3830403.27	643.06
30545.1	643.3830825.68	651.66 31132.7	654.26 32180.6	667.83 32814.5	671.74
33738.2	694.0333874.37	694.8734463.18	684.28 34496.3	684.48 36017.1	712.82
37012.73	716.9373201.17	722.0237536.98	736.4437576.54	737.5837869.11	743.64
38185.6	755.1338336.48	759.4839075.43	79039739.52	795.0740074.41	800

Manning's n Values	num=	3
Sta n Val Sta	n Val Sta n Val	
0 .1517595.06	.1519166.87	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17595.0619166.87	5 5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507282.00	287496.20	1863666.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507282.00	287496.20	1863666.00
Q Total (cfs)	6730000.00	Flow (cfs)	2616798.00	782340.60	3330862.00
Top Width (ft)	36933.16	Top width (ft)	16186.19	1571.81	19175.16
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.72	1.79
Max Chl Dpth (ft)	192.35	Hydr. Depth (ft)	93.12	182.91	97.19
Conv. Total (cfs)	788420700.0	Conv. (cfs)	306558300.0	91651340.0	390211100.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16202.14	1574.81	19179.02
Min Ch El (ft)	567.36	Shear (lb/sq ft)	0.42	0.83	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.73	2.26	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	58403.63	11066.80	70080.70
C & E Loss (ft)	0.00	Cum SA (acres)	451.77	47.67	517.10

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274657.*

INPUT

Description:

Station Elevation Data	num=	120
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
0 800 202.69 791.08 659.46 772.91 1389.33 760.66 1572.99 751.85		
1866.31 745.18 2038.32 742.36 2398.03 742.36 2741.4 740.29 3663.65 725.98		
3737.41 721.92 3831.13 717.64 3842.75 717.42 4049.85 715.86 4234.61 712.36		
4381.46 708.68 4539.12 703.99 4924.52 694.55 5394.22 688.66 5743.78 685.91		
5894.2 684.4 6057.87 676.42 6128.29 668.63 6501.32 667.84 6860.69 672.52		
7005.66 674.72 7232.14 659.44 7403.43 651.8 7476.71 644.16 7527.14 644.16		
7681.92 649.49 7905.78 659.57 7970.58 660.82 8103.81 666.43 8477.79 668.39		
8527.08 673.06 8686.19 686.61 8987.84 679.12 9002.34 677.61 9180.07 663.11		
9322.8 662.82 9584.49 677.56 9764.35 677.19 9952.76 661.5210144.39 657.03		
10292.83 649.1410310.56 648.7610402.87 633.4810576.06 610.5610635.06 610.56		
10678.3 617.5310808.79 645.6310919.59 663.4811318.76 656.9811481.57 651.97		
11539.03 648.6711758.11 645.112017.88 645.59 12327 640.5612980.75 632.92		
14486.34 632.9214734.15 630.5615371.16 630.5615861.23 638.215923.09 645.84		
16225.76 640.3316232.94 637.8416342.74 635.6517021.23 603.9217598.85 595.28		
17708.47 587.2318094.47 585.818194.06 577.818350.78 567.3618871.96 567.36		
19025.23 57119172.19 595.2819256.82 608.6519274.95 610.719502.44 622.12		
19922.36 628.2720337.72 628.1322352.71 621.822462.67 621.822681.68 622.92		
23015.61 622.2723956.85 627.0824202.46 634.7225801.45 642.3626166.33 645.99		
26570.12 650.7727190.81 667.2327404.54 667.6428467.96 667.6429074.19 665.28		
29335.48 665.2829883.21 657.6430110.02 653.230273.71 650.3830407.31 643.04		
30549.12 643.3730829.66 651.6531136.65 654.2632184.44 667.8132818.26 671.72		
33741.86 693.9433878.01 694.7834466.76 684.2834499.88 684.48 36020.5 712.73		
37016.02 716.9373204.43 721.96 37540.2 736.3737579.76 737.51 37872.3 743.59		
38188.75 755.0938339.61 759.4439078.48 79039742.49 795.0840077.34 800		

Manning's n Values	num=	3
Sta n Val Sta	n Val Sta n Val	
0 .1517598.85	.1519172.19	.15

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
17598.8519172.19	5 5 5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	759.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.06	wt. n-Val.	0.150	0.150	0.150
W.S. Elev (ft)	759.71	Reach Len. (ft)	5.00	5.00	5.00
Crit W.S. (ft)		Flow Area (sq ft)	1507255.00	287762.90	1863997.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	1507255.00	287762.90	1863997.00
Q Total (cfs)	6730000.00	Flow (cfs)	2615806.00	782882.50	3331312.00
Top Width (ft)	36936.95	Top width (ft)	16189.69	1573.34	19173.92
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	1.74	2.72	1.79
Max Chl Dpth (ft)	192.35	Hydr. Depth (ft)	93.10	182.90	97.22
Conv. Total (cfs)	788582000.0	Conv. (cfs)	306504800.0	91733590.0	390343700.0
Length Wtd. (ft)	5.00	wetted Per. (ft)	16205.66	1576.34	19177.77
Min Ch El (ft)	567.36	Shear (lb/sq ft)	0.42	0.83	0.44
Alpha	1.07	Stream Power (lb/ft s)	0.73	2.26	0.79
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	58230.62	11033.79	69866.76
C & E Loss (ft)	0.00	Cum SA (acres)	449.91	47.49	514.90

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274654.*

INPUT

Description:

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Station Elevation Data				num=	120
Sta	Elev	Sta	Elev	Sta	Elev
0	800	202.73	791.07	659.6	772.9
1866.71	745.18	2038.76	742.35	2398.54	742.35
3738.21	721.93	3831.96	717.65	3843.58	717.43
4382.4	708.66	4540.1	703.97	4925.58	694.53
5895.47	684.38	6059.18	676.39	6129.61	668.59
7007.17	674.7	7233.7	659.4	7405.03	651.75
7683.57	649.44	7907.48	659.51	7972.3	660.77
8528.92	673.08	8688.06	686.67	8989.78	679.21
9324.81	662.89	9586.56	677.65	9766.45	677.28
10295.05	649.23	10312.79	648.85	10405.11	633.55
10680.61	617.58	10811.12	645.68	10921.94	663.55
11541.52	648.75	11760.64	645.18	12020.47	645.64
14489.46	632.95	14737.32	630.61	15374.47	630.61
16229.25	640.38	16236.44	637.91	16346.26	635.71
17712.41	587.25	18098.89	585.82	18198.6	577.81
19030.38	570.99	19177.51	595.31	19262.13	608.65
19927.59	628.23	20342.91	628.09	22357.67	621.75
23020.49	622.23	23961.62	627.05	24207.2	634.72
26574.6	650.77	27195.22	667.24	27408.92	667.65
29339.64	665.32	29887.31	657.65	30114.09	653.21
30553.14	643.36	30833.65	651.65	31140.6	654.25
33745.52	693.86	33881.65	694.73	34470.33	684.24
37019.3	716.82	37207.7	721.89	37543.43	736.33
38191.89	755.04	38342.74	759.43	39081.53	79039745.46

Manning's n Values				num=	3
Sta	n Val	Sta	n Val	Sta	n Val
0	.1517602.64		.1519177.51		.15

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
17602.64	19177.51		5	5	5		.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

		Element	Left OB	Channel	Right OB
E.G. Elev (ft)	759.76		0.150	0.150	0.150
Vel Head (ft)	0.06	wt. n-val.	5.00	5.00	5.00
W.S. Elev (ft)	759.71	Reach Len. (ft)	1507255.00	288027.10	1864338.00
Crit W.S. (ft)		Flow Area (sq ft)	1507255.00	288027.10	1864338.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	2613873.00	783920.00	3332207.00
Q Total (cfs)	6730000.00	Flow (cfs)	16196.87	1576.38	19171.45
Top width (ft)	36944.70	Top width (ft)	1.73	2.72	1.79
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	93.06	182.88	97.26
Max chl Dpth (ft)	192.35	Hydr. Depth (ft)	306458300.0	91814540.0	390479600.0
Conv. Total (cfs)	788752400.0	Conv. (cfs)	16209.34	1577.87	19176.52
Length wtd. (ft)	5.00	wetted Per. (ft)	0.42	0.83	0.44
Min Ch El (ft)	567.36	Shear (lb/sq ft)	0.73	2.26	0.79
Alpha	1.07	Stream Power (lb/ft s)	58057.61	11000.74	69552.78
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	448.05	47.31	512.70
C & E Loss (ft)	0.00	Cum SA (acres)			

CROSS SECTION

RIVER: BRAZOS
 REACH: UPPER BRAZOS RS: 274651.*

INPUT

Description:				num=	120
Sta	Elev	Sta	Elev	Sta	Elev
0	800	202.78	791.07	659.74	772.89
1867.11	745.17	2039.2	742.34	2399.06	742.34
3739.02	721.95	3832.78	717.66	3844.41	717.44
4383.35	708.65	4541.08	703.95	4926.64	694.51
5896.74	684.36	6060.48	676.36	6130.93	668.55
7008.68	674.68	7235.26	659.36	7406.62	651.7
7685.23	649.39	7909.18	659.46	7974.02	660.72
8530.76	673.1	8689.93	686.72	8991.72	679.3
9326.82	662.96	9588.63	677.75	9768.56	677.38
10297.27	649.32	10315.01	648.94	10407.35	633.62
10682.91	617.63	10813.45	645.72	10924.29	663.62
11544.01	648.83	11763.17	645.25	12023.06	645.69
14492.59	632.98	14740.5	630.64	15377.79	630.64
16232.75	640.44	16239.94	637.96	16349.79	635.71
17716.34	587.26	18103.3	585.84	18203.14	577.81
19035.54	570.99	19182.82	595.32	19267.44	608.65
19932.82	628.23	20348.09	628.05	22362.62	621.72
23025.37	622.23	23966.39	627.02	24211.94	634.68
26579.07	650.76	27199.62	667.26	27413.3	667.66
29343.8	665.32	29891.41	657.66	30118.16	653.21
30557.16	643.34	30837.64	651.64	31144.56	654.24
33749.18	693.73	33885.29	694.61	34473.91	684.22
37022.59	716.75	37210.96	721.83	37546.65	736.23
38195.05	754.99	38345.88	759.36	39084.58	79039748.43

Manning's n Values				num=	3
Sta	n Val	Sta	n Val	Sta	n Val
0	.1517606.44		.1519182.82		.15

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
17606.44	19182.82		5	5	5		.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

		Element	Left OB	Channel	Right OB
E.G. Elev (ft)	759.76		0.150	0.150	0.150
Vel Head (ft)	0.06	wt. n-val.	5.00	5.00	5.00
W.S. Elev (ft)	759.71	Reach Len. (ft)	1507242.00	288288.10	1864680.00
Crit W.S. (ft)		Flow Area (sq ft)	1507242.00	288288.10	1864680.00
E.G. Slope (ft/ft)	0.000073	Area (sq ft)	2613873.00	783920.00	3332207.00
Q Total (cfs)	6730000.00	Flow (cfs)	16196.87	1576.38	19171.45
Top width (ft)	36944.70	Top width (ft)	1.73	2.72	1.79
Vel Total (ft/s)	1.84	Avg. Vel. (ft/s)	93.06	182.88	97.26
Max chl Dpth (ft)	192.35	Hydr. Depth (ft)			