APPENDIX 11-Y2

HEC-RAS RESULTS FOR COTTONWOOD PRE-MINING DRAINAGE CHANNELS (2 YR-6 HR, 10 YR-6 HR, 25 YR-6 HR, AND 100 YR-6 HR STORM EVENTS)

MAY 2001

Profile Output Table - North Fork Pre-mine 2 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
150.00	256.0	5,344.00	5,347.70	5,347.32	5,348.44	0.009143	6.91	37.02	15.66	0.79			6.91	3.7
148.91	256.0	5,342.86	5,346.77	5,346.24	5,347.48	0.008386	6.79	37.70	14.74	0.75			6.79	3.91
148.27	256.0	5,342.44	5,346.37	5,345.62	5,346.97	0.006659	6.21	41.21	15.65	0.67			6.21	3.93
147.72	256.0	5,341.90	5,345.31	5,345.31	5,346.40	0.015157	8.40	30.49	13.66	0.99			8.40	3.41
147.182*	256.0	5,341.60	5,343.97	5,344.30	5,345.32	0.023446	9.34	27.40	15.78	1.25			9.34	2.37
146.65	256.0	5,341.31	5,344.44	5,343.53	5,344.77	0.003841	4.62	55.39	23.45	0.53			4.62	3.13
146.071*	256.0	5,340.77	5,344.14	5,343.31	5,344.53	0.004358	5.04	50.79	21.24	0.57			5.04	3.37
145.50	256.0	5,340.22	5,343.96	5,342.75	5,344.29	0.003306	4.63	55.34	20.84	0.50			4.63	3.74
144.919*	256.0	5,340.09	5,343.64	5,342.64	5,344.06	0.004547	5.19	49.32	19.42	0.57			5.19	3.55
144.34	256.0	5,339.87	5,343.04	5,342.54	5,343.70	0.007889	6.55	39.07	16.65	0.75			6.55	3.17
143.770*	256.0	5,339.55	5,342.58	5,342.14	5,343.24	0.008270	6.48	39.53	17.95	0.77			6.48	3.04
143.20	256.0	5,339.13	5,341.67	5,341.67	5,342.61	0.013926	7.78	32.89	17.08	0.99			7.78	2.54
142.633*	256.0	5,338.75	5,341.09	5,340.99	5,341.80	0.011340	6.79	37.72	22.06	0.91			6.79	2.34
142.07	256.0	5,338.35	5,341.00	5,340.16	5,341.25	0.003160	4.02	63.67	31.39	0.50			4.02	2.65
141.540*	256.0	5,337.99	5,340.80	5,339.94	5,341.08	0.003381	4.22	60.69	29.00	0.51			4.22	2.81
141.01	256.0	5,337.51	5,340.59	5,339.63	5,340.89	0.003610	4.40	58.21	26.35	0.52			4.40	3.08
140.466*	256.0	5,337.35	5,340.30	5,339.64	5,340.66	0.004935	4.78	53.56	27.45	0.60			4.78	2.95
139.92	256.0	5,337.20	5,339.45	5,339.45	5,340.23	0.012373	7.08	36.17	22.70	0.99			7.08	2.25
139.384*	256.0	5,336.00	5,338.15	5,338.40	5,339.31	0.020659	8.62	29.71	18.93	1.21			8.62	2.15
138.85	256.0	5,334.80	5,337.95	5,337.22	5,338.41	0.005191	5.41	47.35	20.14	0.62			5.41	3.15
138.318*	256.0	5,334.48	5,337.77	5,336.85	5,338.14	0.003975	4.88	52.51	21.36	0.55			4.88	3.29
137.79	256.0	5,334.17	5,337.65	5,336.43	5,337.93	0.002846	4.28	59.81	22.92	0.47			4.28	3.48
137.245*	256.0	5,334.12	5,337.37	5,336.37	5,337.75	0.003878	4.91	52.11	20.46	0.54			4.91	3.25
136.70	256.0	5,333.98	5,337.02	5,336.31	5,337.49	0.005224	5.53	46.30	19.48	0.63			5.53	3.04
136.136*	256.0	5,333.76	5,336.73	5,336.06	5,337.18	0.005532	5.42	47.27	21.01	0.64			5.42	2.97
135.57	256.0	5,333.47	5,335.83	5,335.83	5,336.70	0.013022	7.51	34.10	19.28	0.99			7.51	2.36
135.060*	256.0	5,332.71	5,334.93	5,335.08	5,335.94	0.016609	8.07	31.72	19.39	1.11			8.07	2.22
134.55	256.0	5,331.95	5,334.33	5,334.33	5,335.15	0.013025	7.24	35.35	20.80	0.98			7.24	2.38
134.025*	256.0	5,331.50	5,333.85	5,333.65	5,334.50	0.009496	6.48	39.50	21.87	0.85			6.48	2.35
133.50	256.0	5,331.02	5,333.60	5,333.02	5,334.05	0.005352	5.40	47.38	22.09	0.65			5.40	2.58
132.979*	256.0	5,330.81	5,333.45	5,332.70	5,333.77	0.003882	4.55	56.28	27.28	0.56			4.55	2.64
132.46	256.0	5,330.59	5,333.33	5,332.40	5,333.58	0.002904	3.97	64.53	30.68	0.48			3.97	2.74
131.936*	256.0	5,330.34	5,333.09	5,332.32	5,333.39	0.003968	4.45	57.51	29.05	0.56			4.45	2.75
131.41	256.0	5,330.08	5,332.25	5,332.25	5,333.03	0.013177	7.08	36.15	22.48	0.98			7.08	2.17
130.863*	256.0	5,329.32	5,330.69	5,331.01	5,331.76	0.032294	8.27	30.96	33.04	1.51			8.27	1.38
130.31	256.0	5,328.49	5,331.11	5,330.18	5,331.23	0.001494	2.75	93.26	51.14	0.36			2.75	2.62
129.798*	256.0	5,328.77	5,330.96	5,330.05	5,331.13	0.002179	3.29	77.80	41.67	0.42			3.29	2.19
129.28	256.0	5,328.07	5,330.11	5,330.11	5,330.88	0.013042	7.02	36.44	23.59	1.00			7.02	2.04
128.767*	256.0	5,327.06	5,328.77	5,329.02	5,329.94	0.021007	8.67	29.53	19.61	1.24			8.67	1.71
128.25	256.0	5,325.91	5,328.11	5,327.63	5,328.53	0.005387	5.19	49.32	25.59	0.66			5.19	2.2
127.16	256.0	5,324.74	5,327.61	5,326.99	5,327.97	0.004589	4.79	53.46	27.45	0.60			4.79	2.87
126.05	256.0	5,324.24	5,327.29	5,326.17	5,327.55	0.002475	4.08	62.80	25.03	0.45			4.08	3.05
124.98	256.0	5,323.66	5,326.80	5,326.04	5,327.19	0.004695	5.01	51.08	23.25	0.60			5.01	3.14
123.90	256.0	5,322.89	5,326.24	5,325.54	5,326.65	0.005193	5.16	49.63	22.94	0.62			5.16	3.35
122.87	256.0	5,322.54	5,325.58	5,325.05	5,326.06	0.006302	5.54	46.22	23.09	0.69			5.54	3.04
121.83	256.0	5,321.96	5,324.95	5,324.42	5,325.40	0.006264	5.37	47.69	23.78	0.67			5.37	2.99
120.72	256.0	5,321.39	5,324.41	5,323.64	5,324.77	0.004576	4.81	53.20	25.55	0.59			4.81	3.02
119.57	256.0	5,320.69	5,323.55	5,323.17	5,324.09	0.007707	5.90	43.41	22.63	0.75			5.90	2.86
118.49	256.0	5,320.08	5,322.81	5,322.33	5,323.32	0.006300	5.71	44.85	21.55	0.70			5.71	2.73
117.39	256.0	5,319.57	5,322.55	5,321.52	5,322.75	0.002480	3.57	71.71	33.64	0.43			3.57	2.98
116.31	256.0	5,318.90	5,322.04	5,321.12	5,322.41	0.003798	4.86	53.16	26.69	0.54		0.41	4.82	3.14
115.746*	256.0	5,318.66	5,321.77	5,320.96	5,322.18	0.004290	5.16	52.31	42.03	0.58		0.57	4.89	3.1
115.18	256.0	5,318.42	5,321.56	5,320.76	5,321.93	0.004037	5.02	60.12	45.40	0.55		1.24	4.26	3.14
114.66	256.0	5,317.96	5,320.68	5,320.68	5,321.55	0.014358	7.52	34.06	18.90	0.99			7.52	2.72
114.09	256.0	5,317.51	5,319.95	5,319.50	5,320.30	0.004949	4.77	53.72	31.54	0.64			4.77	2.44
113.523*	256.0	5,317.25	5,319.79	5,319.11	5,320.03	0.003351	3.94	64.97	35.48	0.51			3.94	2.54
112.96	256.0	5,316.99	5,319.69	5,318.73	5,319.85	0.002073	3.21	79.64	40.71	0.41			3.21	2.7
112.448*	256.0	5,316.58	5,319.52	5,318.74	5,319.72	0.003298	3.62	70.78	39.58	0.48			3.62	2.94
111.94	256.0	5,316.11	5,319.08	5,318.74	5,319.46	0.008627	4.91	52.14	37.40	0.73			4.91	2.97
111.383*	256.0	5,315.81	5,318.81	5,318.10	5,319.06	0.004193	4.02	63.69	37.06	0.54			4.02	3
110.83	256.0	5,315.52	5,318.70	5,317.58	5,318.85	0.002340	3.16	81.08	43.98	0.41			3.16	3.18
110.190*	256.0	5,315.15	5,318.39	5,317.57	5,318.66	0.003584	4.19	61.12	28.93	0.51			4.19	3.24
109.56	256.0	5,314.79	5,317.53	5,317.53	5,318.26	0.012441	6.92	39.71	33.78	0.90		1.43	6.45	2.74
109.011*	256.0	5,314.38	5,316.09	5,316.39	5,317.23	0.023747	8.54	29.96	22.73	1.31			8.54	1.71
108.47	256.0	5,313.96	5,316.40	5,315.70	5,316.63	0.003828	3.79	67.50	39.82	0.51			3.79	2.44

Profile Output Table - North Fork Pre-mine 2 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
107.42	256.0	5,313.26	5,315.75	5,315.42	5,316.12	0.006104	5.00	56.32	43.81	0.66	1.50		4.55	2.49
106.43	256.0	5,312.45	5,315.19	5,314.55	5,315.57	0.005094	4.97	51.47	25.50	0.62			4.97	2.74
105.33	256.0	5,311.70	5,314.64	5,314.01	5,315.00	0.005208	4.78	53.60	28.47	0.61			4.78	2.94
104.20	256.0	5,311.05	5,314.22	5,313.27	5,314.47	0.003531	4.03	63.46	32.07	0.51			4.03	3.17
103.27	256.0	5,310.39	5,313.89	5,312.84	5,314.16	0.003170	4.18	61.29	27.10	0.49			4.18	3.5
102.889*	256.0	5,310.16	5,313.63	5,312.67	5,313.96	0.003928	4.65	55.04	24.21	0.54			4.65	3.47
102.512*	256.0	5,309.92	5,313.28	5,312.54	5,313.71	0.005178	5.30	48.32	21.26	0.62			5.30	3.36
102.13	256.0	5,309.69	5,312.46	5,312.46	5,313.28	0.012161	7.28	36.25	26.92	0.93		1.00	7.06	2.77
101.65	256.0	5,309.37	5,311.91	5,311.46	5,312.20	0.006852	4.29	59.62	44.08	0.65			4.29	2.54
101.02	256.0	5,308.87	5,311.63	5,310.67	5,311.89	0.002770	4.13	61.98	27.34	0.48			4.13	2.75
100.491*	256.0	5,308.46	5,311.48	5,310.39	5,311.74	0.002889	4.07	62.84	28.19	0.48			4.07	3.02
99.96	256.0	5,308.01	5,311.32	5,310.30	5,311.58	0.003247	4.09	62.56	29.11	0.49			4.09	3.31
98.87	256.0	5,307.34	5,310.67	5,309.96	5,311.09	0.006441	5.23	48.99	25.93	0.67			5.23	3.33
97.77	256.0	5,306.68	5,310.14	5,309.25	5,310.48	0.004112	4.72	54.21	24.02	0.55			4.72	3.46
96.71	256.0	5,306.28	5,309.43	5,308.94	5,309.98	0.005222	5.91	43.33	21.21	0.73			5.91	3.15
95.63	256.0	5,305.77	5,308.97	5,308.18	5,309.40	0.004853	5.25	48.76	20.95	0.61			5.25	3.2
94.55	256.0	5,305.16	5,308.49	5,307.65	5,308.89	0.004392	5.09	50.30	21.31	0.58			5.09	3.33
93.9938*	256.0	5,304.84	5,308.26	5,307.41	5,308.63	0.004630	4.91	52.17	23.75	0.58			4.91	3.42
93.4414*	256.0	5,304.51	5,307.93	5,307.08	5,308.35	0.005693	5.17	49.50	24.10	0.64			5.17	3.42
92.89	256.0	5,304.19	5,307.55	5,306.67	5,308.03	0.005472	5.55	46.17	19.24	0.63			5.55	3.36
91.80	256.0	5,303.63	5,306.73	5,306.24	5,307.32	0.007725	6.18	41.40	19.40	0.75			6.18	3.1
90.95	256.0	5,303.15	5,306.40	5,305.52	5,306.75	0.003981	4.74	54.01	23.22	0.55			4.74	3.25
89.73	256.0	5,302.36	5,305.95	5,304.88	5,306.28	0.003673	4.60	55.63	23.46	0.53			4.60	3.59
88.67	256.0	5,301.92	5,305.21	5,304.63	5,305.74	0.007086	5.88	43.50	19.64	0.70			5.88	3.29
87.41	256.0	5,301.29	5,304.48	5,303.80	5,304.93	0.005427	5.39	47.46	21.15	0.63			5.39	3.19
86.39	256.0	5,300.66	5,303.90	5,303.28	5,304.32	0.006413	5.20	49.23	26.07	0.67			5.20	3.24
85.18	256.0	5,300.03	5,303.38	5,302.39	5,303.69	0.003469	4.46	57.36	23.76	0.51			4.46	3.35
84.14	256.0	5,299.31	5,302.94	5,301.90	5,303.29	0.004204	4.75	53.84	23.72	0.56			4.75	3.63
82.95	256.0	5,298.93	5,302.34	5,301.50	5,302.74	0.005080	5.04	50.80	23.78	0.61			5.04	3.41
81.95	256.0	5,298.48	5,301.88	5,301.00	5,302.21	0.005047	4.65	55.04	29.12	0.60			4.65	3.4
81.5578*	256.0	5,298.31	5,301.71	5,300.94	5,302.01	0.004508	4.39	58.29	30.88	0.56			4.39	3.4
81.16	256.0	5,298.14	5,301.16	5,300.81	5,301.75	0.008442	6.19	41.36	20.98	0.78			6.19	3.02
80.5313*	256.0	5,297.87	5,300.81	5,300.23	5,301.26	0.005847	5.37	47.64	23.11	0.66			5.37	2.94
79.90	256.0	5,297.51	5,300.62	5,299.68	5,300.92	0.003473	4.42	57.88	25.73	0.52			4.42	3.11
79.4147*	256.0	5,297.19	5,300.46	5,299.45	5,300.75	0.003290	4.37	58.62	25.16	0.50			4.37	3.27
78.93	256.0	5,296.80	5,300.31	5,299.21	5,300.60	0.003046	4.26	60.03	24.85	0.48			4.26	3.51
78.4489*	256.0	5,296.62	5,300.18	5,299.06	5,300.45	0.003070	4.17	61.40	26.45	0.48			4.17	3.56
77.9679*	256.0	5,296.41	5,300.07	5,298.85	5,300.30	0.002511	3.81	67.21	28.49	0.44			3.81	3.66
77.49	256.0	5,296.09	5,300.01	5,298.44	5,300.18	0.001656	3.30	77.69	30.42	0.36			3.30	3.92
76.27	256.0	5,295.25	5,299.88	5,297.48	5,300.01	0.000913	2.87	89.13	26.32	0.28			2.87	4.63
75.14	256.0	5,294.61	5,299.78	5,297.03	5,299.90	0.001081	2.80	91.43	31.00	0.29			2.80	5.17
74.50	256.0	5,293.52	5,299.79	5,295.34	5,299.83	0.000213	1.62	157.74	36.01	0.84			1.62	6.27
74.17	256.0													
73.73	256.0	5,292.89	5,294.41	5,294.27	5,294.84	0.009836	5.26	48.66	40.19	0.84			5.26	1.52
73.3981*	256.0	5,292.26	5,294.22	5,293.82	5,294.52	0.007080	4.40	58.16	46.14	0.69			4.40	1.96
72.73	256.0	5,290.92	5,294.11	5,292.88	5,294.18	0.000979	2.08	123.14	66.08	0.27			2.08	3.19
72.1792*	256.0	5,290.72	5,293.87	5,292.92	5,294.07	0.003931	3.59	71.31	45.54	0.51			3.59	3.15
71.6305*	256.0	5,290.37	5,293.60	5,292.79	5,293.85	0.003551	4.06	63.00	31.13	0.50			4.06	3.23
71.0818*	256.0	5,290.24	5,293.38	5,292.60	5,293.64	0.003705	4.12	62.09	31.22	0.52			4.12	3.14
70.53	256.0	5,290.00	5,293.18	5,292.36	5,293.43	0.003607	4.02	63.63	32.48	0.51			4.02	3.18
69.65	256.0	5,289.56	5,292.36	5,291.94	5,292.96	0.007836	6.21	41.23	19.28	0.75			6.21	2.8
68.50	256.0	5,288.87	5,291.80	5,291.20	5,292.13	0.005146	4.58	55.89	31.01	0.60			4.58	2.93
67.40	256.0	5,288.46	5,291.02	5,290.51	5,291.50	0.006084	5.54	46.19	22.79	0.69			5.54	2.56
66.34	256.0	5,287.90	5,290.68	5,289.80	5,290.94	0.003274	4.12	62.17	30.30	0.51			4.12	2.78
65.35	256.0	5,287.44	5,290.12	5,289.55	5,290.53	0.005247	5.13	49.95	24.94	0.64			5.13	2.68
64.13	256.0	5,286.68	5,289.38	5,288.85	5,289.82	0.006383	5.34	47.91	23.71	0.66			5.34	2.7
63.16	256.0	5,286.41	5,288.62	5,288.35	5,289.10	0.008768	5.52	46.38	28.57	0.76			5.52	2.21
62.6153*	256.0	5,285.55	5,288.21	5,287.90	5,288.62	0.008234	5.16	49.58	32.61	0.74			5.16	2.66
62.0746*	256.0	5,285.00	5,287.79	5,287.26	5,288.20	0.007262	5.11	50.07	30.23	0.70			5.11	2.79
61.53	256.0	5,284.29	5,287.55	5,286.68	5,287.86	0.004198	4.48	57.15	27.34	0.55			4.48	3.26
60.9467*	256.0	5,284.00	5,287.24	5,286.49	5,287.60	0.004526	4.81	53.22	24.87	0.58			4.81	3.24
60.36	256.0	5,283.71	5,286.49	5,286.32	5,287.19	0.011167	6.70	38.21	20.43	0.86			6.70	2.78
59.8334*	256.0	5,283.44	5,286.04	5,285.78	5,286.61	0.009490	6.06	42.24	24.29	0.81			6.06	2.6
59.31	256.0	5,283.16	5,285.73	5,285.16	5,286.17	0.005659	5.32	48.13	22.78	0.64			5.32	2.57
58.9687*	256.0	5,282.82	5,285.51	5,285.06	5,285.96	0.006601	5.37	47.64	25.03	0.69			5.37	2.69

Profile Output Table - North Fork Pre-mine 2 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
58.63	256.0	5,282.48	5,285.19	5,284.87	5,285.70	0.008460	5.74	44.59	25.63	0.77			5.74	2.71
57.35	256.0	5,281.14	5,284.30	5,283.68	5,284.77	0.005895	5.47	46.79	21.39	0.65			5.47	3.16
56.8865*	256.0	5,280.92	5,284.12	5,283.43	5,284.49	0.004794	4.86	52.64	25.50	0.60			4.86	3.2
56.4252*	256.0	5,280.71	5,283.92	5,283.20	5,284.26	0.004971	4.65	55.06	29.08	0.60			4.65	3.21
55.96	256.0	5,280.49	5,283.67	5,282.93	5,284.01	0.005519	4.73	54.17	29.34	0.61			4.73	3.18
54.98	256.0	5,279.91	5,283.33	5,282.29	5,283.57	0.002758	3.94	65.03	27.99	0.46			3.94	3.42
54.4423*	256.0	5,279.61	5,283.16	5,282.04	5,283.42	0.002869	4.12	62.10	24.90	0.46			4.12	3.55
53.9092*	256.0	5,279.30	5,282.92	5,281.85	5,283.25	0.003428	4.62	55.41	21.74	0.51			4.62	3.62
53.38	256.0	5,279.00	5,282.49	5,281.76	5,283.00	0.005685	5.74	44.60	17.99	0.64			5.74	3.49
52.33	256.0	5,278.63	5,282.06	5,281.12	5,282.45	0.004147	5.03	50.90	20.38	0.56			5.03	3.43
51.39	256.0	5,278.08	5,281.84	5,280.42	5,282.09	0.002655	4.00	64.01	25.04	0.44			4.00	3.76
50.8777*	256.0	5,277.91	5,281.66	5,280.50	5,281.93	0.003420	4.22	60.71	27.27	0.50			4.22	3.75
50.3694*	256.0	5,277.70	5,281.36	5,280.53	5,281.72	0.004954	4.82	53.10	25.72	0.59			4.82	3.66
49.86	256.0	5,277.48	5,280.69	5,280.39	5,281.35	0.009726	6.54	39.12	19.84	0.82			6.54	3.21
48.75	256.0	5,276.85	5,280.03	5,279.32	5,280.45	0.005247	5.21	49.12	22.42	0.62			5.21	3.18
47.86	256.0	5,276.71	5,279.64	5,278.82	5,280.01	0.004312	4.88	52.45	22.59	0.56			4.88	2.93
47.4220*	256.0	5,276.50	5,279.46	5,278.62	5,279.82	0.004212	4.80	53.34	23.61	0.56			4.80	2.96
46.9869*	256.0	5,276.28	5,279.26	5,278.47	5,279.62	0.004596	4.85	52.76	24.68	0.58			4.85	2.98
46.55	256.0	5,276.07	5,279.03	5,278.29	5,279.42	0.004902	5.00	51.16	23.84	0.60			5.00	2.96
45.61	256.0	5,275.56	5,277.89	5,277.87	5,278.70	0.013162	7.22	35.44	21.29	0.99			7.22	2.33
45.1466*	256.0	5,275.43	5,277.36	5,277.32	5,278.09	0.012111	6.87	37.29	23.46	0.96			6.87	1.93
44.6847*	256.0	5,275.08	5,276.91	5,276.80	5,277.54	0.010528	6.38	40.13	26.10	0.91			6.38	1.83
44.22	256.0	5,274.65	5,276.60	5,276.35	5,277.08	0.007687	5.55	46.09	29.13	0.78			5.55	1.95
43.00	256.0	5,273.02	5,276.19	5,275.24	5,276.36	0.002533	3.32	77.16	39.46	0.42			3.32	3.17
42.06	256.0	5,272.30	5,275.00	5,274.95	5,275.89	0.013084	7.55	33.90	17.47	0.96			7.55	2.7
41.26	256.0	5,271.44	5,274.43	5,273.97	5,274.99	0.007127	6.01	42.59	19.66	0.72			6.01	2.99
40.7621*	256.0	5,271.23	5,273.74	5,273.60	5,274.51	0.012727	7.06	36.27	20.93	0.95			7.06	2.51
40.2604*	256.0	5,270.30	5,273.27	5,273.00	5,273.92	0.009315	6.43	39.83	20.61	0.81			6.43	2.98
39.76	256.0	5,269.73	5,273.15	5,272.17	5,273.50	0.003943	4.75	53.88	22.49	0.54			4.75	3.42
38.51	256.0	5,269.19	5,272.71	5,271.54	5,273.03	0.003403	4.51	56.76	22.21	0.50			4.51	3.52
37.55	256.0	5,268.70	5,272.24	5,271.29	5,272.66	0.004197	5.15	49.75	19.28	0.56			5.15	3.54
36.59	256.0	5,268.15	5,271.59	5,271.00	5,272.15	0.006644	6.00	42.70	18.52	0.70			6.00	3.44
35.80	256.0	5,267.87	5,271.15	5,270.43	5,271.65	0.005700	5.69	45.01	18.43	0.64			5.69	3.27
34.49	256.0	5,267.18	5,270.81	5,269.33	5,271.05	0.002189	3.93	65.20	23.49	0.42			3.93	3.63
33.52	256.0	5,266.82	5,270.12	5,269.55	5,270.70	0.006575	6.11	41.88	17.78	0.70			6.11	3.3
32.58	256.0	5,266.37	5,269.69	5,268.88	5,270.12	0.004765	5.23	48.97	20.61	0.60			5.23	3.32
31.64	256.0	5,265.92	5,268.60	5,268.47	5,269.44	0.011355	7.38	34.71	16.80	0.90			7.38	2.68
30.72	256.0	5,265.19	5,268.32	5,267.35	5,268.61	0.003226	4.35	58.81	24.17	0.49			4.35	3.13
29.80	256.0	5,264.72	5,267.91	5,266.95	5,268.28	0.003767	4.91	52.11	20.40	0.54			4.91	3.19
28.82	256.0	5,264.35	5,267.38	5,266.68	5,267.85	0.005177	5.48	46.69	19.87	0.63			5.48	3.03
27.89	256.0	5,263.94	5,267.09	5,266.12	5,267.40	0.003406	4.44	57.70	24.08	0.51			4.44	3.15
26.95	256.0	5,263.45	5,266.64	5,265.87	5,267.02	0.004776	4.93	51.93	23.76	0.59			4.93	3.19
26.03	256.0	5,263.18	5,266.12	5,265.58	5,266.53	0.005852	5.15	49.76	25.11	0.64			5.15	2.94
25.12	256.0	5,262.83	5,265.68	5,265.00	5,266.03	0.004763	4.75	53.94	26.29	0.58			4.75	2.85
24.21	256.0	5,262.45	5,265.24	5,264.64	5,265.58	0.004954	4.67	54.77	28.51	0.59			4.67	2.79
23.29	256.0	5,261.83	5,264.63	5,264.09	5,265.07	0.006006	5.32	48.13	23.13	0.65			5.32	2.8
22.39	256.0	5,261.19	5,263.91	5,263.59	5,264.43	0.008439	5.79	44.23	25.19	0.77			5.79	2.72
22.17	256.0	5,261.15	5,263.91	5,263.19	5,264.24	0.004081	4.67	54.85	26.87	0.58			4.67	2.76
21.63	256.0	5,260.86	5,263.56	5,262.92	5,263.99	0.005307	5.21	49.11	23.00	0.63			5.21	2.7
						Max	**9.34**					**Avg**	**5.18**	
						Min	**1.62**							
						Avg	**5.19**							

Profile Output Table - North Fork Pre-mine 10 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
150.00	674.0	5,344.00	5,350.22	5,349.40	5,351.07	0.007048	7.42	90.83	28.17	0.73			7.42	6.22
148.91	674.0	5,342.86	5,348.99	5,348.44	5,350.14	0.010145	8.60	78.35	24.62	0.85			8.60	6.13
148.27	674.0	5,342.44	5,348.44	5,347.79	5,349.51	0.008738	8.31	81.10	24.18	0.80			8.31	6.00
147.72	674.0	5,341.90	5,347.38	5,347.38	5,348.87	0.014266	9.79	68.87	23.38	1.00			9.79	5.48
147.182*	674.0	5,341.60	5,345.55	5,346.07	5,347.81	0.021966	12.08	55.80	19.64	1.26			12.08	3.95
146.65	674.0	5,341.31	5,346.61	5,345.10	5,347.17	0.003570	5.98	112.71	29.28	0.54			5.98	5.30
146.071*	674.0	5,340.77	5,346.36	5,345.02	5,346.95	0.004066	6.15	109.65	30.99	0.58			6.15	5.59
145.50	674.0	5,340.22	5,346.14	5,344.57	5,346.70	0.004124	6.02	111.90	32.49	0.57			6.02	5.92
144.919*	674.0	5,340.09	5,345.75	5,344.63	5,346.42	0.005298	6.60	102.08	30.96	0.64			6.60	5.66
144.34	674.0	5,339.87	5,345.11	5,344.52	5,346.04	0.007847	7.73	87.15	28.18	0.77			7.73	5.24
143.770*	674.0	5,339.55	5,344.71	5,344.08	5,345.58	0.007338	7.48	90.08	29.43	0.75			7.48	5.16
143.20	674.0	5,339.13	5,343.57	5,343.57	5,344.99	0.012999	9.55	70.56	24.30	0.99			9.55	4.44
142.633*	674.0	5,338.75	5,341.99	5,342.49	5,343.90	0.023496	11.09	60.78	28.56	1.34			11.09	3.24
142.07	674.0	5,338.35	5,342.86	5,341.44	5,343.30	0.002860	5.32	126.74	36.34	0.50			5.32	4.51
141.540*	674.0	5,337.99	5,342.66	5,341.34	5,343.14	0.003361	5.56	121.30	36.53	0.54			5.56	4.67
141.01	674.0	5,337.51	5,342.39	5,341.20	5,342.93	0.004217	5.93	113.71	35.52	0.58			5.93	4.88
140.466*	674.0	5,337.35	5,342.09	5,341.08	5,342.69	0.004588	6.19	108.83	34.44	0.61			6.19	4.74
139.92	674.0	5,337.20	5,340.94	5,340.94	5,342.26	0.011296	9.22	73.10	27.07	0.99			9.22	3.74
139.384*	674.0	5,336.00	5,339.74	5,340.03	5,341.45	0.016742	10.49	64.26	24.50	1.14			10.49	3.74
138.85	674.0	5,334.80	5,340.09	5,338.95	5,340.85	0.005100	7.01	96.19	25.54	0.64			7.01	5.29
138.318*	674.0	5,334.48	5,339.94	5,338.54	5,340.57	0.004154	6.38	105.71	27.92	0.58			6.38	5.46
137.79	674.0	5,334.17	5,339.83	5,338.10	5,340.33	0.003286	5.68	118.64	31.42	0.52			5.68	5.66
137.245*	674.0	5,334.12	5,339.39	5,338.13	5,340.10	0.004781	6.75	99.87	26.97	0.62			6.75	5.27
136.70	674.0	5,333.98	5,338.93	5,338.04	5,339.80	0.005682	7.55	92.42	30.32	0.69	1.87		7.29	4.95
136.136*	674.0	5,333.76	5,338.67	5,337.74	5,339.45	0.005873	7.10	94.95	28.38	0.68			7.10	4.91
135.57	674.0	5,333.47	5,337.51	5,337.51	5,338.93	0.012208	9.59	70.30	24.36	0.99			9.59	4.04
135.060*	674.0	5,332.71	5,336.35	5,336.72	5,338.14	0.017461	10.76	62.62	24.43	1.18			10.76	3.64
134.55	674.0	5,331.95	5,335.65	5,335.90	5,337.24	0.016034	10.11	66.69	26.73	1.13			10.11	3.70
134.025*	674.0	5,331.50	5,335.61	5,335.26	5,336.59	0.008998	7.91	85.23	31.81	0.85			7.91	4.11
133.50	674.0	5,331.02	5,335.21	5,334.60	5,336.17	0.006768	7.83	86.09	26.63	0.76	0.35		7.83	4.19
132.979*	674.0	5,330.81	5,335.18	5,334.13	5,335.77	0.004336	6.14	109.82	35.30	0.61			6.14	4.37
132.46	674.0	5,330.59	5,335.09	5,333.74	5,335.53	0.003209	5.31	126.87	40.32	0.53			5.31	4.50
131.936*	674.0	5,330.34	5,334.81	5,333.75	5,335.33	0.004112	5.77	116.88	39.58	0.59			5.77	4.48
131.41	674.0	5,330.08	5,333.78	5,333.78	5,334.94	0.012321	8.67	77.71	32.49	0.99			8.67	3.70
130.863*	674.0	5,329.32	5,332.92	5,332.13	5,333.42	0.004360	5.69	118.50	45.79	0.62			5.69	3.60
130.31	674.0	5,328.49	5,332.98	5,331.02	5,333.18	0.001078	3.52	191.53	53.88	0.33			3.52	4.49
129.798*	674.0	5,328.77	5,332.83	5,331.14	5,333.10	0.001677	4.15	162.54	47.99	0.40			4.15	4.06
129.28	674.0	5,328.07	5,331.62	5,331.62	5,332.85	0.012279	8.90	75.72	30.62	1.00			8.90	3.55
128.767*	674.0	5,327.06	5,330.32	5,330.68	5,332.04	0.017312	10.53	64.02	25.78	1.18			10.53	3.26
128.25	674.0	5,325.91	5,329.88	5,329.03	5,330.61	0.004990	6.88	97.99	29.50	0.66			6.88	3.97
127.16	674.0	5,324.74	5,329.51	5,328.38	5,330.08	0.003855	6.07	111.06	33.22	0.58			6.07	4.77
126.05	674.0	5,324.24	5,329.11	5,327.64	5,329.67	0.003533	6.00	112.39	30.80	0.55			6.00	4.87
124.98	674.0	5,323.66	5,328.65	5,327.69	5,329.24	0.004658	6.16	109.47	34.76	0.61			6.16	4.99
123.90	674.0	5,322.89	5,328.11	5,327.31	5,328.70	0.005393	6.17	109.23	38.65	0.65			6.17	5.22
122.87	674.0	5,322.54	5,327.50	5,326.78	5,328.13	0.005671	6.33	106.46	38.56	0.67			6.33	4.96
121.83	674.0	5,321.96	5,326.80	5,325.99	5,327.48	0.006564	6.62	101.88	37.68	0.71			6.62	4.84
120.72	674.0	5,321.39	5,326.36	5,325.25	5,326.84	0.003992	5.57	121.00	40.67	0.57			5.57	4.97
119.57	674.0	5,320.69	5,325.48	5,324.72	5,326.26	0.006046	7.08	95.68	32.86	0.70	0.87		7.04	4.79
118.49	674.0	5,320.08	5,324.68	5,323.93	5,325.43	0.009922	6.96	96.83	45.62	0.84			6.96	4.60
117.39	674.0	5,319.57	5,324.24	5,322.78	5,324.63	0.002819	5.01	134.58	40.83	0.49			5.01	4.67
116.31	674.0	5,318.90	5,323.41	5,322.97	5,324.19	0.005365	7.40	107.78	45.39	0.67		2.55	6.25	4.51
115.746*	674.0	5,318.66	5,323.16	5,322.70	5,323.88	0.005175	7.28	114.91	48.15	0.66		2.89	5.87	4.50
115.18	674.0	5,318.42	5,322.98	5,322.38	5,323.57	0.004544	6.83	128.09	52.22	0.61		3.04	5.26	4.56
114.66	674.0	5,317.96	5,322.37	5,322.37	5,323.27	0.008640	8.12	104.14	57.85	0.81		2.96	6.47	4.41
114.09	674.0	5,317.51	5,320.09	5,320.71	5,322.17	0.026875	11.59	58.16	31.84	1.51			11.59	2.58
113.523*	674.0	5,317.25	5,321.18	5,320.21	5,321.69	0.003954	5.76	116.97	39.50	0.59			5.76	3.93
112.96	674.0	5,316.99	5,321.10	5,319.77	5,321.46	0.002628	4.75	142.36	54.02	0.48		0.33	4.73	4.11
112.448*	674.0	5,316.58	5,320.87	5,319.84	5,321.29	0.003955	5.18	130.21	47.99	0.55			5.18	4.29
111.94	674.0	5,316.11	5,320.59	5,319.93	5,321.05	0.005316	5.47	123.23	51.33	0.62			5.47	4.48
111.383*	674.0	5,315.81	5,320.37	5,319.33	5,320.79	0.003769	5.18	130.23	46.97	0.55			5.18	4.56
110.83	674.0	5,315.52	5,320.28	5,318.80	5,320.58	0.002226	4.38	153.76	47.68	0.43			4.38	4.76
110.190*	674.0	5,315.15	5,319.58	5,318.88	5,320.33	0.006165	6.94	97.10	31.40	0.70			6.94	4.43
109.56	674.0	5,314.79	5,318.83	5,318.83	5,319.83	0.010664	8.76	94.94	46.31	0.88		3.97	7.10	4.04
109.011*	674.0	5,314.38	5,317.54	5,317.83	5,319.10	0.016254	10.02	67.33	30.14	1.15		0.49	10.01	3.16
108.47	674.0	5,313.96	5,317.85	5,316.82	5,318.27	0.003628	5.20	129.50	44.37	0.54			5.20	3.89

Profile Output Table - North Fork Pre-mine 10 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
107.42	674.0	5,313.26	5,317.49	5,316.56	5,317.91	0.003377	5.60	147.33	60.48	0.53	2.56		4.57	4.23
106.43	674.0	5,312.45	5,316.87	5,316.11	5,317.52	0.004676	6.61	111.22	44.45	0.63	1.99		6.06	4.42
105.33	674.0	5,311.70	5,316.48	5,315.45	5,316.99	0.004152	5.76	118.78	44.69	0.58		1.07	5.67	4.78
104.20	674.0	5,311.05	5,316.23	5,314.76	5,316.55	0.002632	4.54	148.42	49.47	0.46			4.54	5.18
103.27	674.0	5,310.39	5,315.79	5,314.36	5,316.26	0.003258	5.52	125.21	51.67	0.52	0.68		5.38	5.40
102.889*	674.0	5,310.16	5,315.43	5,314.34	5,316.04	0.004799	6.27	107.46	33.89	0.62			6.27	5.27
102.512*	674.0	5,309.92	5,314.55	5,314.30	5,315.65	0.010007	8.41	81.61	36.33	0.88		1.14	8.26	4.63
102.13	674.0	5,309.69	5,314.04	5,314.04	5,315.10	0.010302	8.74	90.48	42.66	0.90		3.78	7.45	4.35
101.65	674.0	5,309.37	5,313.81	5,312.52	5,314.13	0.002734	4.53	148.73	49.46	0.46			4.53	4.44
101.02	674.0	5,308.87	5,313.36	5,312.08	5,313.91	0.003376	5.94	113.47	31.87	0.55			5.94	4.49
100.491*	674.0	5,308.46	5,313.21	5,311.93	5,313.72	0.003517	5.71	118.06	35.57	0.55			5.71	4.75
99.96	674.0	5,308.01	5,313.03	5,311.78	5,313.52	0.003778	5.59	120.52	38.34	0.56			5.59	5.02
98.87	674.0	5,307.34	5,312.67	5,311.67	5,313.07	0.004068	5.08	132.68	50.76	0.55			5.08	5.33
97.77	674.0	5,306.68	5,311.97	5,310.86	5,312.59	0.004106	6.41	111.42	41.20	0.59		1.55	6.05	5.29
96.71	674.0	5,306.28	5,311.56	5,310.71	5,312.16	0.003920	6.23	108.20	39.94	0.67			6.23	5.28
95.63	674.0	5,305.77	5,311.00	5,309.96	5,311.68	0.005121	6.60	103.91	43.17	0.65	0.73		6.49	5.23
94.55	674.0	5,305.16	5,310.35	5,309.38	5,311.11	0.005246	6.98	97.18	34.91	0.66		0.50	6.94	5.19
93.9938*	674.0	5,304.84	5,310.18	5,309.09	5,310.79	0.004681	6.28	107.63	37.77	0.62		0.32	6.26	5.34
93.4414*	674.0	5,304.51	5,309.96	5,308.87	5,310.51	0.004729	5.97	112.89	37.96	0.61			5.97	5.45
92.89	674.0	5,304.19	5,309.66	5,308.76	5,310.23	0.005432	6.05	111.45	40.51	0.64			6.05	5.47
91.80	674.0	5,303.63	5,308.71	5,308.08	5,309.52	0.007379	7.24	93.15	32.61	0.75			7.24	5.08
90.95	674.0	5,303.15	5,308.38	5,307.19	5,308.96	0.004230	6.07	111.05	34.61	0.59	0.17		6.07	5.23
89.73	674.0	5,302.36	5,308.01	5,306.73	5,308.43	0.003586	5.22	133.41	64.23	0.53	0.78		5.05	5.65
88.67	674.0	5,301.92	5,307.06	5,306.57	5,307.89	0.006945	7.44	100.26	53.01	0.73		1.69	6.72	5.14
87.41	674.0	5,301.29	5,306.37	5,305.64	5,307.01	0.006141	6.43	104.75	38.54	0.69			6.43	5.08
86.39	674.0	5,300.66	5,305.86	5,304.88	5,306.39	0.005220	5.85	115.12	43.16	0.63			5.85	5.20
85.18	674.0	5,300.03	5,305.22	5,303.98	5,305.81	0.004448	6.15	109.82	35.44	0.60		0.47	6.14	5.19
84.14	674.0	5,299.31	5,304.76	5,303.74	5,305.31	0.004906	6.06	119.95	59.15	0.62	1.48		5.62	5.45
82.95	674.0	5,298.93	5,304.12	5,303.28	5,304.71	0.005252	6.15	110.41	45.26	0.64	0.60		6.10	5.19
81.95	674.0	5,298.48	5,303.81	5,302.70	5,304.21	0.003681	5.03	134.21	52.53	0.54	0.33		5.02	5.33
81.5578*	674.0	5,298.31	5,303.65	5,302.36	5,304.06	0.003438	5.18	130.16	43.19	0.53			5.18	5.34
81.16	674.0	5,298.14	5,303.01	5,302.56	5,303.84	0.006777	7.48	99.04	43.28	0.74		2.38	6.81	4.87
80.5313*	674.0	5,297.87	5,302.74	5,301.80	5,303.42	0.005155	6.66	105.77	45.71	0.65		1.24	6.37	4.87
79.90	674.0	5,297.51	5,302.57	5,301.18	5,303.09	0.003704	5.78	116.70	35.96	0.56		0.07	5.78	5.06
79.4147*	674.0	5,297.19	5,302.40	5,301.03	5,302.91	0.003629	5.78	119.27	50.35	0.55		0.64	5.65	5.21
78.93	674.0	5,296.80	5,302.25	5,300.80	5,302.74	0.003371	5.68	127.89	66.53	0.53		0.92	5.27	5.45
78.4489*	674.0	5,296.62	5,302.11	5,300.65	5,302.57	0.003252	5.47	128.07	64.13	0.52		0.64	5.26	5.49
77.9679*	674.0	5,296.41	5,302.00	5,300.33	5,302.41	0.002815	5.11	132.89	63.57	0.49		0.22	5.07	5.59
77.49	674.0	5,296.09	5,301.94	5,299.94	5,302.27	0.002096	4.63	146.81	55.50	0.43	0.36	0.10	4.59	5.85
76.27	674.0	5,295.25	5,301.67	5,299.14	5,302.01	0.002162	4.65	145.15	44.21	0.43	0.21		4.64	6.42
75.14	674.0	5,294.61	5,301.54	5,298.89	5,301.75	0.001721	3.83	214.09	151.48	0.37	0.25	1.10	3.15	6.93
74.50	674.0	5,293.52	5,301.53	5,296.82	5,301.65	0.000476	2.85	268.50	87.08	0.61	0.70	0.32	2.51	8.01
74.17	674.0													
73.73	674.0	5,292.89	5,296.02	5,295.34	5,296.44	0.004466	5.20	129.73	57.15	0.61			5.20	3.13
73.3981*	674.0	5,292.26	5,295.98	5,294.88	5,296.27	0.002905	4.31	156.31	63.55	0.48			4.31	3.72
72.73	674.0	5,290.92	5,295.99	5,293.69	5,296.10	0.000688	2.63	259.11	81.86	0.25	0.46		2.60	5.07
72.1792*	674.0	5,290.72	5,295.83	5,294.34	5,296.03	0.001831	3.57	189.04	67.94	0.38			3.57	5.11
71.6305*	674.0	5,290.37	5,295.47	5,294.06	5,295.87	0.004016	5.08	132.62	50.49	0.55			5.08	5.10
71.0818*	674.0	5,290.24	5,295.19	5,293.87	5,295.65	0.003476	5.41	124.69	38.63	0.53			5.41	4.95
70.53	674.0	5,290.00	5,295.05	5,293.65	5,295.45	0.002886	5.08	135.84	54.48	0.49		0.82	4.96	5.05
69.65	674.0	5,289.56	5,294.08	5,293.87	5,295.00	0.010351	7.69	88.53	46.13	0.87		0.70	7.61	4.52
68.50	674.0	5,288.87	5,293.54	5,292.53	5,294.03	0.004203	5.59	123.51	60.03	0.58		0.70	5.46	4.67
67.40	674.0	5,288.46	5,292.80	5,292.21	5,293.51	0.004990	6.98	113.38	56.11	0.67	1.99		5.94	4.34
66.34	674.0	5,287.90	5,292.57	5,291.16	5,292.99	0.003211	5.19	131.67	54.61	0.52	0.54		5.12	4.67
65.35	674.0	5,287.44	5,291.87	5,291.03	5,292.57	0.005197	6.71	101.72	36.85	0.67	1.08		6.63	4.43
64.13	674.0	5,286.68	5,290.86	5,290.38	5,291.78	0.008006	7.70	92.27	57.97	0.77		0.95	7.30	4.18
63.16	674.0	5,286.41	5,290.08	5,289.69	5,290.91	0.009463	7.32	92.55	60.45	0.83		0.23	7.28	3.67
62.6153*	674.0	5,285.55	5,289.80	5,289.10	5,290.41	0.006378	6.28	107.37	41.95	0.69			6.28	4.25
62.0746*	674.0	5,285.00	5,289.61	5,288.67	5,290.07	0.004621	5.44	123.87	47.35	0.59			5.44	4.61
61.53	674.0	5,284.29	5,289.42	5,288.42	5,289.80	0.004602	4.95	136.11	53.07	0.54			4.95	5.13
60.9467*	674.0	5,284.00	5,289.05	5,288.16	5,289.52	0.004533	5.49	122.81	46.04	0.59			5.49	5.05
60.36	674.0	5,283.71	5,288.26	5,287.99	5,289.11	0.010131	7.41	90.92	37.90	0.84			7.41	4.55
59.8334*	674.0	5,283.44	5,287.85	5,287.26	5,288.65	0.006966	7.15	94.29	32.00	0.73			7.15	4.41
59.31	674.0	5,283.16	5,287.37	5,286.70	5,288.27	0.006776	7.64	88.27	26.19	0.73			7.64	4.21
58.9687*	674.0	5,282.82	5,287.26	5,286.52	5,288.00	0.006440	6.90	97.62	33.32	0.71			6.90	4.44

Profile Output Table - North Fork Pre-mine 10 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
58.63	674.0	5,282.48	5,287.12	5,286.31	5,287.76	0.005895	6.40	105.30	37.19	0.67			6.40	4.64
57.35	674.0	5,281.14	5,286.08	5,285.36	5,286.94	0.006616	7.45	90.59	28.99	0.72		0.57	7.44	4.94
56.8865*	674.0	5,280.92	5,285.98	5,284.93	5,286.60	0.004754	6.31	106.87	33.70	0.62			6.31	5.06
56.4252*	674.0	5,280.71	5,285.88	5,284.63	5,286.37	0.003744	5.64	119.60	36.86	0.55			5.64	5.17
55.96	674.0	5,280.49	5,285.78	5,284.46	5,286.18	0.003167	5.12	131.67	40.15	0.50			5.12	5.29
54.98	674.0	5,279.91	5,285.51	5,283.68	5,285.91	0.002362	5.03	135.03	38.62	0.45	0.68		4.99	5.60
54.4423*	674.0	5,279.61	5,285.30	5,283.55	5,285.76	0.003096	5.42	124.43	34.28	0.50			5.42	5.69
53.9092*	674.0	5,279.30	5,284.98	5,283.55	5,285.56	0.003769	6.15	112.70	39.43	0.56		1.03	5.98	5.68
53.38	674.0	5,279.00	5,284.40	5,283.78	5,285.29	0.006161	7.73	97.15	40.73	0.71		2.14	6.94	5.40
52.33	674.0	5,278.63	5,283.90	5,282.98	5,284.64	0.005403	6.90	98.75	33.06	0.66		1.16	6.83	5.27
51.39	674.0	5,278.08	5,283.59	5,282.15	5,284.13	0.003960	5.92	115.12	46.46	0.56	0.45		5.85	5.51
50.8777*	674.0	5,277.91	5,283.40	5,282.17	5,283.92	0.004143	5.79	116.36	39.63	0.57	0.13		5.79	5.49
50.3694*	674.0	5,277.70	5,283.16	5,282.17	5,283.69	0.004859	5.86	115.04	40.58	0.61			5.86	5.46
49.86	674.0	5,277.48	5,282.72	5,282.21	5,283.38	0.007414	6.54	103.14	42.45	0.74			6.54	5.24
48.75	674.0	5,276.85	5,282.03	5,280.99	5,282.68	0.005073	6.49	103.79	32.33	0.64			6.49	5.18
47.86	674.0	5,276.71	5,281.57	5,280.46	5,282.21	0.005407	6.41	105.20	34.16	0.64			6.41	4.86
47.4220*	674.0	5,276.50	5,281.38	5,280.25	5,281.98	0.004783	6.18	109.13	35.09	0.62			6.18	4.88
46.9869*	674.0	5,276.28	5,281.18	5,280.08	5,281.77	0.004561	6.14	109.83	34.82	0.61			6.14	4.90
46.55	674.0	5,276.07	5,280.92	5,279.91	5,281.55	0.005015	6.41	105.16	33.49	0.64			6.41	4.85
45.61	674.0	5,275.56	5,279.37	5,279.37	5,280.79	0.013062	9.56	70.49	26.27	1.03			9.56	3.81
45.1466*	674.0	5,275.43	5,278.50	5,278.79	5,280.12	0.016046	10.19	66.13	27.24	1.15			10.19	3.07
44.6847*	674.0	5,275.08	5,278.46	5,278.15	5,279.44	0.008556	7.92	85.09	32.35	0.86			7.92	3.38
44.22	674.0	5,274.65	5,278.49	5,277.70	5,279.00	0.004402	5.73	117.54	43.18	0.61			5.73	3.84
43.00	674.0	5,273.02	5,278.30	5,276.33	5,278.54	0.001721	3.97	169.95	48.45	0.37			3.97	5.28
42.06	674.0	5,272.30	5,276.91	5,276.91	5,278.16	0.010035	9.09	79.95	40.16	0.89		1.82	8.43	4.61
41.26	674.0	5,271.44	5,276.10	5,275.69	5,277.17	0.008309	8.30	82.26	29.12	0.81		1.35	8.19	4.66
40.7621*	674.0	5,271.23	5,275.67	5,275.26	5,276.73	0.008814	8.27	81.49	26.45	0.83			8.27	4.44
40.2604*	674.0	5,270.30	5,275.51	5,274.66	5,276.28	0.005763	7.05	95.57	28.54	0.68			7.05	5.21
39.76	674.0	5,269.73	5,275.45	5,273.85	5,275.97	0.003695	5.77	116.71	33.69	0.55			5.77	5.72
38.51	674.0	5,269.19	5,275.04	5,273.34	5,275.52	0.003299	5.53	121.89	33.83	0.51			5.53	5.85
37.55	674.0	5,268.70	5,274.48	5,273.14	5,275.12	0.004840	6.43	104.74	31.37	0.62			6.43	5.78
36.59	674.0	5,268.15	5,273.80	5,272.91	5,274.59	0.006232	7.12	94.65	29.45	0.70			7.12	5.65
35.80	674.0	5,267.87	5,273.35	5,272.41	5,274.10	0.005883	6.91	97.54	28.99	0.66			6.91	5.48
34.49	674.0	5,267.18	5,273.07	5,271.03	5,273.43	0.002460	4.81	140.19	39.44	0.45			4.81	5.89
33.52	674.0	5,266.82	5,272.18	5,271.82	5,273.01	0.009174	7.29	92.46	37.58	0.82			7.29	5.36
32.58	674.0	5,266.37	5,271.46	5,270.64	5,272.31	0.005773	7.40	93.87	32.84	0.69		1.51	7.18	5.09
31.64	674.0	5,265.92	5,270.71	5,270.27	5,271.65	0.008604	7.78	86.61	29.86	0.81			7.78	4.79
30.72	674.0	5,265.19	5,270.43	5,268.81	5,270.97	0.003545	5.90	114.24	30.21	0.53			5.90	5.24
29.80	674.0	5,264.72	5,269.93	5,268.75	5,270.59	0.004462	6.55	102.88	27.97	0.60			6.55	5.21
28.82	674.0	5,264.35	5,269.27	5,268.42	5,270.09	0.005652	7.37	99.33	41.40	0.68	1.80		6.79	4.92
27.89	674.0	5,263.94	5,268.98	5,267.65	5,269.57	0.004082	6.17	110.08	35.83	0.58	0.74		6.12	5.04
26.95	674.0	5,263.45	5,268.40	5,267.47	5,269.11	0.005461	6.77	99.59	30.47	0.66			6.77	4.95
26.03	674.0	5,263.18	5,267.89	5,267.02	5,268.60	0.005746	6.76	99.73	32.90	0.67	0.23		6.76	4.71
25.12	674.0	5,262.83	5,267.46	5,266.43	5,268.08	0.004914	6.34	106.35	33.41	0.63			6.34	4.63
24.21	674.0	5,262.45	5,267.11	5,265.96	5,267.66	0.004009	5.97	113.49	36.52	0.57	0.72		5.94	4.66
23.29	674.0	5,261.83	5,266.23	5,265.61	5,267.14	0.007776	7.63	88.39	29.03	0.77			7.63	4.40
22.39	674.0	5,261.19	5,265.65	5,265.05	5,266.44	0.006872	7.15	94.25	32.39	0.74			7.15	4.46
22.17	674.0	5,261.15	5,265.63	5,264.59	5,266.28	0.004420	6.47	104.14	30.99	0.62			6.47	4.48
21.63	674.0	5,260.86	5,265.19	5,264.52	5,266.00	0.005304	7.34	104.42	57.36	0.68	1.40	1.69	6.46	4.33
						Max	**12.08**					**Avg**	**6.46**	
						Min	**2.63**							
						Avg	**6.58**							

Profile Output Table - North Fork Pre-mine 25 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
150.00	971.0	5,344.00	5,351.19	5,350.37	5,352.19	0.006943	8.04	121.06	34.83	0.74	0.72		8.02	7.19
148.91	971.0	5,342.86	5,350.14	5,349.64	5,351.30	0.009710	8.64	112.33	34.73	0.85			8.64	7.28
148.27	971.0	5,342.44	5,349.25	5,348.87	5,350.65	0.009868	9.49	102.81	30.29	0.87	1.09		9.44	6.81
147.72	971.0	5,341.90	5,348.41	5,348.41	5,349.99	0.013272	10.09	96.25	29.85	0.99			10.09	6.51
147.182*	971.0	5,341.60	5,346.57	5,347.16	5,349.03	0.019635	12.58	77.20	23.04	1.21			12.58	4.97
146.65	971.0	5,341.31	5,347.59	5,345.92	5,348.31	0.003864	6.81	142.66	31.90	0.57			6.81	6.28
146.071*	971.0	5,340.77	5,347.36	5,345.88	5,348.08	0.004184	6.81	142.65	34.94	0.59			6.81	6.59
145.50	971.0	5,340.22	5,347.15	5,345.59	5,347.82	0.004319	6.56	147.96	38.90	0.59			6.56	6.93
144.919*	971.0	5,340.09	5,346.72	5,345.55	5,347.53	0.005398	7.20	134.88	36.26	0.66			7.20	6.63
144.34	971.0	5,339.87	5,346.01	5,345.39	5,347.13	0.007946	8.48	114.46	32.28	0.79			8.48	6.14
143.770*	971.0	5,339.55	5,345.64	5,344.94	5,346.67	0.007226	8.14	119.22	33.68	0.76			8.14	6.09
143.20	971.0	5,339.13	5,344.55	5,344.55	5,346.09	0.012699	9.95	97.56	31.01	0.99			9.95	5.42
142.633*	971.0	5,338.75	5,342.58	5,343.25	5,344.98	0.023571	12.42	78.16	30.63	1.37			12.42	3.83
142.07	971.0	5,338.35	5,343.83	5,342.14	5,344.38	0.002938	5.95	163.06	39.53	0.52			5.95	5.48
141.540*	971.0	5,337.99	5,343.64	5,342.06	5,344.21	0.003391	6.08	159.67	41.80	0.55			6.08	5.65
141.01	971.0	5,337.51	5,343.36	5,341.98	5,344.01	0.004151	6.43	150.96	40.67	0.59			6.43	5.85
140.466*	971.0	5,337.35	5,343.06	5,341.83	5,343.77	0.004374	6.74	144.16	38.23	0.61			6.74	5.71
139.92	971.0	5,337.20	5,341.74	5,341.74	5,343.33	0.011035	10.15	95.71	29.42	0.99			10.15	4.54
139.384*	971.0	5,336.00	5,341.23	5,340.87	5,342.59	0.009319	9.37	103.66	29.08	0.87			9.37	5.23
138.85	971.0	5,334.80	5,341.12	5,339.87	5,342.08	0.005359	7.85	123.75	28.13	0.66			7.85	6.32
138.318*	971.0	5,334.48	5,340.98	5,339.45	5,341.77	0.004379	7.11	136.55	31.26	0.60			7.11	6.50
137.79	971.0	5,334.17	5,340.89	5,339.01	5,341.50	0.003552	6.28	154.61	36.89	0.54			6.28	6.72
137.245*	971.0	5,334.12	5,340.33	5,339.09	5,341.24	0.005362	7.67	126.60	30.26	0.66			7.67	6.21
136.70	971.0	5,333.98	5,339.85	5,339.07	5,340.92	0.005794	8.43	123.43	36.60	0.72	2.68		7.87	5.87
136.136*	971.0	5,333.76	5,339.60	5,338.64	5,340.57	0.005712	7.89	124.54	35.11	0.69	1.32		7.80	5.84
135.57	971.0	5,333.47	5,338.43	5,338.43	5,340.07	0.011865	10.26	94.66	28.32	0.99			10.26	4.96
135.060*	971.0	5,332.71	5,337.10	5,337.63	5,339.26	0.017733	11.82	82.16	27.65	1.21			11.82	4.39
134.55	971.0	5,331.95	5,336.28	5,336.73	5,338.33	0.017636	11.50	84.45	29.57	1.20			11.50	4.33
134.025*	971.0	5,331.50	5,336.68	5,336.08	5,337.67	0.007079	7.98	121.61	36.69	0.77			7.98	5.18
133.50	971.0	5,331.02	5,335.97	5,335.43	5,337.26	0.007301	9.13	109.26	34.36	0.80	1.59		8.89	4.95
132.979*	971.0	5,330.81	5,336.06	5,334.90	5,336.78	0.004510	6.78	143.19	40.21	0.63			6.78	5.25
132.46	971.0	5,330.59	5,335.99	5,334.49	5,336.50	0.003773	5.75	168.81	52.91	0.57			5.75	5.40
131.936*	971.0	5,330.34	5,335.65	5,334.48	5,336.28	0.004297	6.39	151.95	45.05	0.61			6.39	5.31
131.41	971.0	5,330.08	5,334.52	5,334.52	5,335.88	0.012045	9.35	103.88	37.72	0.99			9.35	4.44
130.863*	971.0	5,329.32	5,333.80	5,332.70	5,334.36	0.003958	5.99	162.08	52.76	0.60			5.99	4.48
130.31	971.0	5,328.49	5,333.88	5,331.55	5,334.13	0.001118	4.04	240.18	55.19	0.34			4.04	5.38
129.798*	971.0	5,328.77	5,333.70	5,331.71	5,334.05	0.001743	4.73	205.18	50.20	0.41			4.73	4.93
129.28	971.0	5,328.07	5,332.47	5,332.47	5,333.79	0.012062	9.23	105.20	38.73	0.99			9.23	4.40
128.767*	971.0	5,327.06	5,331.25	5,331.54	5,333.04	0.015244	10.73	90.51	31.49	1.12			10.73	4.19
128.25	971.0	5,325.91	5,330.80	5,329.80	5,331.72	0.005151	7.69	126.30	32.17	0.68			7.69	4.89
127.16	971.0	5,324.74	5,330.46	5,329.13	5,331.17	0.003871	6.75	143.89	36.10	0.60			6.75	5.72
126.05	971.0	5,324.24	5,329.97	5,328.41	5,330.70	0.004400	6.86	141.57	36.79	0.62			6.86	5.73
124.98	971.0	5,323.66	5,329.41	5,328.39	5,330.20	0.005015	7.10	136.74	36.52	0.65			7.10	5.75
123.90	971.0	5,322.89	5,328.88	5,327.97	5,329.63	0.005397	6.93	140.11	41.29	0.66			6.93	5.99
122.87	971.0	5,322.54	5,328.29	5,327.43	5,329.06	0.005643	7.02	138.41	42.43	0.68			7.02	5.75
121.83	971.0	5,321.96	5,327.64	5,326.85	5,328.44	0.006124	7.18	135.19	41.63	0.70			7.18	5.68
120.72	971.0	5,321.39	5,327.24	5,325.96	5,327.82	0.003810	6.13	158.38	44.05	0.57			6.13	5.85
119.57	971.0	5,320.69	5,326.05	5,325.55	5,327.19	0.007361	8.60	115.81	37.66	0.78	1.74		8.38	5.36
118.49	971.0	5,320.08	5,325.41	5,325.02	5,326.26	0.008265	7.42	130.94	48.41	0.79			7.42	5.33
117.39	971.0	5,319.57	5,325.03	5,323.46	5,325.54	0.002997	5.76	172.54	58.64	0.51	0.81		5.63	5.46
116.31	971.0	5,318.90	5,324.11	5,323.69	5,325.07	0.005801	8.43	140.70	49.22	0.71		3.43	6.90	5.21
115.746*	971.0	5,318.66	5,323.84	5,323.32	5,324.73	0.005680	8.32	149.44	54.21	0.70		3.58	6.50	5.18
115.18	971.0	5,318.42	5,323.54	5,322.82	5,324.40	0.005967	8.39	160.45	68.81	0.71		3.35	6.05	5.12
114.66	971.0	5,317.96	5,322.74	5,322.74	5,324.01	0.011280	9.88	125.66	60.31	0.94		4.06	7.73	4.78
114.09	971.0	5,317.51	5,320.76	5,321.38	5,323.04	0.021165	12.13	80.02	33.29	1.38			12.13	3.25
113.523*	971.0	5,317.25	5,321.95	5,320.84	5,322.59	0.003853	6.49	158.36	68.56	0.60		1.06	6.13	4.70
112.96	971.0	5,316.99	5,321.93	5,320.39	5,322.35	0.002464	5.23	201.59	85.44	0.48		1.11	4.82	4.94
112.448*	971.0	5,316.58	5,321.69	5,320.44	5,322.19	0.003750	5.67	171.35	52.58	0.55			5.67	5.11
111.94	971.0	5,316.11	5,321.48	5,320.43	5,321.99	0.004041	5.72	169.65	53.04	0.56			5.72	5.37
111.383*	971.0	5,315.81	5,321.30	5,319.94	5,321.77	0.003254	5.53	175.74	50.92	0.52			5.53	5.49
110.83	971.0	5,315.52	5,321.24	5,319.36	5,321.59	0.001966	4.82	209.34	65.92	0.42	1.00		4.64	5.72
110.190*	971.0	5,315.15	5,320.35	5,319.61	5,321.34	0.006553	7.97	121.87	32.99	0.73			7.97	5.20
109.56	971.0	5,314.79	5,319.40	5,319.40	5,320.78	0.012470	10.41	122.58	61.11	0.97		4.17	7.92	4.61
109.011*	971.0	5,314.38	5,318.26	5,318.65	5,320.06	0.014054	10.84	94.39	44.69	1.11		2.13	10.29	3.88
108.47	971.0	5,313.96	5,318.66	5,317.40	5,319.19	0.003388	5.84	169.14	53.61	0.54		1.03	5.74	4.70

Profile Output Table - North Fork Pre-mine 25 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
107.42	971.0	5,313.26	5,318.39	5,317.17	5,318.84	0.002929	5.95	205.56	68.93	0.51	2.88		4.72	5.13
106.43	971.0	5,312.45	5,317.73	5,316.84	5,318.49	0.004369	7.26	152.90	51.78	0.62	2.62		6.35	5.28
105.33	971.0	5,311.70	5,317.40	5,316.16	5,317.92	0.004704	5.86	174.04	73.93	0.61		1.81	5.58	5.70
104.20	971.0	5,311.05	5,317.09	5,315.42	5,317.48	0.002402	5.00	202.44	73.49	0.46		0.98	4.80	6.04
103.27	971.0	5,310.39	5,316.67	5,315.15	5,317.21	0.003042	6.08	180.88	70.15	0.52	1.60		5.37	6.28
102.889*	971.0	5,310.16	5,316.25	5,315.13	5,317.00	0.004705	7.01	148.91	62.69	0.63	1.38		6.52	6.09
102.512*	971.0	5,309.92	5,315.24	5,315.24	5,316.59	0.010711	9.42	109.59	45.07	0.93		2.60	8.86	5.32
102.13	971.0	5,309.69	5,314.49	5,314.75	5,315.95	0.013479	10.39	110.81	47.91	1.04		4.90	8.76	4.80
101.65	971.0	5,309.37	5,314.90	5,313.06	5,315.25	0.002220	4.74	204.64	53.69	0.43			4.74	5.53
101.02	971.0	5,308.87	5,314.38	5,312.82	5,315.03	0.004738	6.48	149.92	47.55	0.64	0.26		6.48	5.51
100.491*	971.0	5,308.46	5,314.19	5,312.68	5,314.76	0.004529	6.05	160.61	52.86	0.61			6.05	5.73
99.96	971.0	5,308.01	5,313.99	5,312.53	5,314.50	0.004493	5.74	169.03	58.59	0.60			5.74	5.98
98.87	971.0	5,307.34	5,313.62	5,312.26	5,314.05	0.003393	5.26	184.50	57.98	0.52			5.26	6.28
97.77	971.0	5,306.68	5,312.87	5,311.73	5,313.61	0.004012	7.12	156.15	59.28	0.60		1.95	6.22	6.19
96.71	971.0	5,306.28	5,312.51	5,311.49	5,313.15	0.004147	6.37	152.31	59.90	0.70			6.37	6.23
95.63	971.0	5,305.77	5,311.94	5,310.88	5,312.67	0.004577	6.96	155.50	61.61	0.63	1.96		6.24	6.17
94.55	971.0	5,305.16	5,311.08	5,310.26	5,312.08	0.005749	8.13	128.23	45.62	0.70		1.89	7.57	5.92
93.9938*	971.0	5,304.84	5,310.95	5,309.91	5,311.72	0.004800	7.12	145.21	53.65	0.64		1.65	6.69	6.11
93.4414*	971.0	5,304.51	5,310.76	5,309.68	5,311.43	0.004606	6.61	156.02	67.63	0.62		1.27	6.22	6.25
92.89	971.0	5,304.19	5,310.55	5,309.50	5,311.16	0.004740	6.32	168.65	95.18	0.62		1.19	5.76	6.36
91.80	971.0	5,303.63	5,309.40	5,308.93	5,310.46	0.007941	8.30	119.39	47.20	0.80	1.08		8.13	5.77
90.95	971.0	5,303.15	5,309.06	5,307.99	5,309.83	0.004966	7.11	149.03	77.53	0.64	1.16		6.52	5.91
89.73	971.0	5,302.36	5,308.74	5,307.49	5,309.24	0.003330	5.76	191.00	91.90	0.53	1.62	0.91	5.08	6.38
88.67	971.0	5,301.92	5,307.82	5,307.53	5,308.73	0.006371	8.05	145.14	63.06	0.71		2.68	6.69	5.90
87.41	971.0	5,301.29	5,307.12	5,306.35	5,307.91	0.006043	7.17	138.41	57.96	0.70		0.90	7.02	5.83
86.39	971.0	5,300.66	5,306.72	5,305.67	5,307.31	0.004482	6.24	163.70	73.84	0.61	1.13		5.93	6.06
85.18	971.0	5,300.03	5,305.93	5,304.86	5,306.73	0.004876	7.20	140.35	58.03	0.64	0.63	1.36	6.92	5.90
84.14	971.0	5,299.31	5,305.63	5,304.73	5,306.17	0.004501	6.15	179.69	76.73	0.61	2.38		5.40	6.32
82.95	971.0	5,298.93	5,304.89	5,303.98	5,305.59	0.005130	6.78	154.28	69.64	0.65	1.50		6.29	5.96
81.95	971.0	5,298.48	5,304.64	5,303.34	5,305.09	0.003291	5.44	188.29	78.37	0.52	1.16		5.16	6.16
81.5578*	971.0	5,298.31	5,304.42	5,303.06	5,304.95	0.003467	5.87	169.99	67.88	0.54	0.79	0.44	5.71	6.11
81.16	971.0	5,298.14	5,303.76	5,303.41	5,304.73	0.006955	8.20	135.06	51.97	0.77		3.21	7.19	5.62
80.5313*	971.0	5,297.87	5,303.46	5,302.79	5,304.30	0.005511	7.52	143.47	58.38	0.69		2.12	6.77	5.59
79.90	971.0	5,297.51	5,303.25	5,302.02	5,303.95	0.004319	6.78	152.99	66.88	0.62		1.18	6.35	5.74
79.4147*	971.0	5,297.19	5,303.06	5,301.84	5,303.74	0.004114	6.70	161.95	71.29	0.60		1.56	6.00	5.87
78.93	971.0	5,296.80	5,302.92	5,301.70	5,303.53	0.003715	6.45	176.41	84.24	0.57	0.24	1.88	5.50	6.12
78.4489*	971.0	5,296.62	5,302.76	5,301.46	5,303.35	0.003643	6.30	178.26	98.09	0.56	0.50	1.60	5.45	6.14
77.9679*	971.0	5,296.41	5,302.63	5,301.14	5,303.17	0.003157	5.98	187.45	104.25	0.53	0.86	1.26	5.18	6.22
77.49	971.0	5,296.09	5,302.56	5,300.70	5,303.01	0.002432	5.49	204.77	109.89	0.47	1.09	0.97	4.74	6.47
76.27	971.0	5,295.25	5,302.21	5,300.03	5,302.69	0.002780	5.65	204.07	152.52	0.49	0.88	0.82	4.76	6.96
75.14	971.0	5,294.61	5,302.11	5,300.05	5,302.35	0.001722	4.26	309.23	176.57	0.38	0.93	1.49	3.14	7.50
74.50	971.0	5,293.52	5,302.07	5,297.63	5,302.26	0.000685	3.63	320.31	106.34	0.57	1.00	0.49	3.03	8.55
74.17	971.0													
73.73	971.0	5,292.89	5,296.79	5,295.81	5,297.27	0.003729	5.53	175.55	60.76	0.57			5.53	3.90
73.3981*	971.0	5,292.26	5,296.79	5,295.39	5,297.12	0.002530	4.64	209.33	68.20	0.47			4.64	4.53
72.73	971.0	5,290.92	5,296.81	5,294.16	5,296.96	0.000710	3.04	329.34	90.27	0.26	0.77		2.95	5.89
72.1792*	971.0	5,290.72	5,296.65	5,294.81	5,296.89	0.001696	3.95	247.87	79.68	0.38	0.59		3.92	5.93
71.6305*	971.0	5,290.37	5,296.29	5,294.81	5,296.73	0.004022	5.33	182.54	68.54	0.56		0.43	5.32	5.92
71.0818*	971.0	5,290.24	5,295.82	5,294.53	5,296.47	0.004263	6.48	153.08	68.39	0.60		0.56	6.34	5.58
70.53	971.0	5,290.00	5,295.73	5,294.30	5,296.21	0.002954	5.74	204.41	111.49	0.50		1.32	4.75	5.73
69.65	971.0	5,289.56	5,294.79	5,294.79	5,295.78	0.008592	8.15	137.22	84.15	0.82		1.93	7.08	5.23
68.50	971.0	5,288.87	5,294.28	5,293.22	5,294.84	0.003751	6.14	182.62	98.99	0.57	0.94	1.50	5.32	5.41
67.40	971.0	5,288.46	5,293.59	5,293.06	5,294.36	0.004747	7.52	164.16	72.47	0.66	2.54		5.91	5.13
66.34	971.0	5,287.90	5,293.37	5,291.91	5,293.87	0.002997	5.77	183.76	74.79	0.52	1.32		5.28	5.47
65.35	971.0	5,287.44	5,292.54	5,291.80	5,293.44	0.005872	7.73	142.82	95.33	0.72	1.22		6.80	5.10
64.13	971.0	5,286.68	5,291.47	5,291.47	5,292.59	0.008392	8.76	129.95	67.42	0.81		2.31	7.47	4.79
63.16	971.0	5,286.41	5,290.88	5,290.73	5,291.60	0.006470	7.13	171.58	119.08	0.71		1.89	5.66	4.47
62.6153*	971.0	5,285.55	5,290.56	5,289.82	5,291.27	0.005873	6.81	150.58	81.29	0.68		1.03	6.45	5.01
62.0746*	971.0	5,285.00	5,290.41	5,289.32	5,290.95	0.004327	5.92	164.87	60.83	0.59		0.49	5.89	5.41
61.53	971.0	5,284.29	5,290.25	5,288.99	5,290.69	0.004107	5.30	183.38	60.87	0.53	0.14	0.21	5.29	5.96
60.9467*	971.0	5,284.00	5,289.89	5,288.77	5,290.44	0.004061	5.95	164.50	58.26	0.58	0.65		5.90	5.89
60.36	971.0	5,283.71	5,289.23	5,288.65	5,290.10	0.007231	7.49	131.02	49.49	0.74	0.88		7.41	5.52
59.8334*	971.0	5,283.44	5,288.88	5,288.01	5,289.75	0.005942	7.51	129.97	43.48	0.70	0.53		7.47	5.44
59.31	971.0	5,283.16	5,288.12	5,287.54	5,289.36	0.007867	8.95	108.46	27.75	0.80			8.95	4.96
58.9687*	971.0	5,282.82	5,288.12	5,287.33	5,289.02	0.006267	7.62	127.53	38.95	0.72	0.24		7.61	5.30

Profile Output Table - North Fork Pre-mine 25 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
58.63	971.0	5,282.48	5,288.05	5,287.07	5,288.77	0.005152	6.84	144.38	53.16	0.64	0.85		6.73	5.57
57.35	971.0	5,281.14	5,286.90	5,286.20	5,288.00	0.006377	8.46	121.23	46.45	0.74	1.31	1.68	8.01	5.76
56.8865*	971.0	5,280.92	5,286.90	5,285.75	5,287.65	0.004620	6.96	141.72	44.12	0.63		1.14	6.85	5.98
56.4252*	971.0	5,280.71	5,286.81	5,285.36	5,287.41	0.003718	6.20	157.38	46.54	0.56		0.63	6.17	6.10
55.96	971.0	5,280.49	5,286.72	5,285.08	5,287.22	0.003184	5.64	172.21	45.49	0.51			5.64	6.23
54.98	971.0	5,279.91	5,286.42	5,284.45	5,286.93	0.002644	5.77	174.55	49.03	0.48	1.37		5.56	6.51
54.4423*	971.0	5,279.61	5,286.16	5,284.41	5,286.76	0.003286	6.25	158.72	50.16	0.53	0.79	0.78	6.12	6.55
53.9092*	971.0	5,279.30	5,285.81	5,284.48	5,286.55	0.004079	7.04	150.85	54.04	0.60		1.72	6.44	6.51
53.38	971.0	5,279.00	5,285.22	5,284.80	5,286.26	0.006387	8.57	135.98	55.46	0.73		2.75	7.14	6.22
52.33	971.0	5,278.63	5,284.61	5,283.84	5,285.61	0.005793	8.11	127.96	52.35	0.71	1.20	1.54	7.59	5.98
51.39	971.0	5,278.08	5,284.36	5,283.02	5,285.04	0.004194	6.71	160.40	67.62	0.59	1.56		6.05	6.28
50.8777*	971.0	5,277.91	5,284.17	5,282.98	5,284.82	0.004216	6.52	160.68	67.72	0.59	1.39		6.04	6.26
50.3694*	971.0	5,277.70	5,283.96	5,282.86	5,284.60	0.004614	6.44	158.59	67.06	0.62	1.25		6.12	6.26
49.86	971.0	5,277.48	5,283.65	5,282.86	5,284.33	0.005732	6.63	149.77	64.35	0.67	0.97		6.48	6.17
48.75	971.0	5,276.85	5,282.89	5,281.83	5,283.68	0.005744	7.16	141.02	58.71	0.69	1.24		6.89	6.04
47.86	971.0	5,276.71	5,282.39	5,281.35	5,283.17	0.005653	7.12	140.99	58.79	0.67		1.02	6.89	5.68
47.4220*	971.0	5,276.50	5,282.19	5,281.10	5,282.93	0.004850	6.93	146.72	63.18	0.64		1.04	6.62	5.69
46.9869*	971.0	5,276.28	5,281.99	5,280.88	5,282.72	0.004569	6.89	150.60	70.45	0.63		1.10	6.45	5.71
46.55	971.0	5,276.07	5,281.73	5,280.74	5,282.51	0.005012	7.13	147.81	71.54	0.65		1.26	6.57	5.66
45.61	971.0	5,275.56	5,280.43	5,280.43	5,281.82	0.010006	9.49	106.88	45.64	0.92		1.70	9.09	4.87
45.1466*	971.0	5,275.43	5,279.21	5,279.58	5,281.17	0.016007	11.22	86.51	30.19	1.17			11.22	3.78
44.6847*	971.0	5,275.08	5,279.21	5,278.96	5,280.39	0.009043	8.72	111.35	37.46	0.89			8.72	4.13
44.22	971.0	5,274.65	5,279.30	5,278.27	5,279.92	0.004160	6.31	153.83	46.17	0.61			6.31	4.65
43.00	971.0	5,273.02	5,279.14	5,276.93	5,279.46	0.001922	4.58	212.12	52.60	0.40			4.58	6.12
42.06	971.0	5,272.30	5,277.82	5,277.82	5,279.07	0.008320	9.38	123.27	52.04	0.83		3.09	7.88	5.52
41.26	971.0	5,271.44	5,277.35	5,276.84	5,278.23	0.005171	7.87	147.60	59.02	0.66		2.44	6.58	5.91
40.7621*	971.0	5,271.23	5,276.65	5,276.11	5,277.88	0.008195	8.91	109.04	30.26	0.81		0.41	8.91	5.42
40.2604*	971.0	5,270.30	5,276.52	5,275.47	5,277.44	0.005747	7.69	126.24	32.63	0.69			7.69	6.22
39.76	971.0	5,269.73	5,276.50	5,274.74	5,277.10	0.003780	6.22	156.19	40.95	0.56			6.22	6.77
38.51	971.0	5,269.19	5,276.08	5,274.18	5,276.65	0.003319	6.08	160.18	41.84	0.53	0.52	0.05	6.06	6.89
37.55	971.0	5,268.70	5,275.53	5,274.18	5,276.25	0.005265	6.80	142.82	42.12	0.65			6.80	6.83
36.59	971.0	5,268.15	5,274.72	5,273.85	5,275.67	0.006419	7.83	124.47	39.02	0.72	0.56		7.80	6.57
35.80	971.0	5,267.87	5,274.20	5,273.26	5,275.16	0.006468	7.88	123.25	31.94	0.71			7.88	6.33
34.49	971.0	5,267.18	5,273.94	5,272.06	5,274.41	0.002652	5.53	175.99	46.68	0.48	0.33		5.52	6.76
33.52	971.0	5,266.82	5,273.23	5,272.56	5,274.01	0.007024	7.09	137.11	51.02	0.74	0.30		7.08	6.41
32.58	971.0	5,266.37	5,272.37	5,271.57	5,273.37	0.006122	8.16	127.99	42.63	0.72		2.51	7.59	6.00
31.64	971.0	5,265.92	5,271.64	5,271.06	5,272.72	0.007751	8.35	118.51	42.08	0.79		1.26	8.19	5.72
30.72	971.0	5,265.19	5,271.36	5,269.65	5,272.06	0.004183	6.69	145.50	42.05	0.59		0.31	6.67	6.17
29.80	971.0	5,264.72	5,270.65	5,269.58	5,271.60	0.005356	7.85	127.08	48.90	0.67		0.80	7.64	5.93
28.82	971.0	5,264.35	5,270.14	5,269.56	5,271.07	0.005342	8.03	139.98	63.33	0.68	2.96	0.68	6.94	5.79
27.89	971.0	5,263.94	5,269.79	5,268.52	5,270.56	0.004629	7.09	144.28	54.80	0.63	1.29		6.73	5.85
26.95	971.0	5,263.45	5,269.34	5,268.29	5,270.08	0.005360	7.02	153.25	69.08	0.66	1.81		6.34	5.89
26.03	971.0	5,263.18	5,268.79	5,267.85	5,269.59	0.005229	7.29	149.57	85.19	0.66	1.28		6.49	5.61
25.12	971.0	5,262.83	5,268.37	5,267.19	5,269.11	0.004917	6.95	145.92	66.49	0.64	0.93		6.65	5.54
24.21	971.0	5,262.45	5,268.09	5,266.69	5,268.69	0.003563	6.35	174.74	88.23	0.56	1.29		5.56	5.64
23.29	971.0	5,261.83	5,267.06	5,266.51	5,268.17	0.009136	8.44	115.09	36.75	0.84			8.44	5.23
22.39	971.0	5,261.19	5,266.24	5,265.80	5,267.36	0.008822	8.46	114.71	36.74	0.84			8.46	5.05
22.17	971.0	5,261.15	5,266.16	5,265.37	5,267.16	0.006030	8.01	121.25	32.60	0.73			8.01	5.01
21.63	971.0	5,260.86	5,265.88	5,265.61	5,266.84	0.005302	8.25	150.03	73.66	0.70	2.16	2.52	6.47	5.02
						Max	**12.58**					**Avg**	**6.88**	
						Min	**3.04**							
						Avg	**7.24**							

Profile Output Table - North Fork Pre-mine 100 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
150.00	1,401.0	5,344.00	5,352.14	5,351.42	5,353.41	0.007092	9.07	158.50	43.93	0.77	1.99		8.84	8.14
148.91	1,401.0	5,342.86	5,351.48	5,350.70	5,352.59	0.007090	8.47	168.17	48.93	0.75		1.73	8.33	8.62
148.27	1,401.0	5,342.44	5,350.02	5,349.98	5,351.95	0.011452	11.18	129.13	37.60	0.96	2.45		10.85	7.58
147.72	1,401.0	5,341.90	5,349.42	5,349.42	5,351.23	0.013209	10.81	129.62	36.38	1.01			10.81	7.52
147.182*	1,401.0	5,341.60	5,347.80	5,348.35	5,350.34	0.017790	12.78	109.66	29.63	1.17			12.78	6.2
146.65	1,401.0	5,341.31	5,348.73	5,346.97	5,349.66	0.004562	7.72	181.45	37.89	0.62			7.72	7.42
146.071*	1,401.0	5,340.77	5,348.49	5,346.89	5,349.38	0.004774	7.57	185.07	42.51	0.64			7.57	7.72
145.50	1,401.0	5,340.22	5,348.31	5,346.68	5,349.09	0.004305	7.08	203.14	71.88	0.60		0.80	6.90	8.09
144.919*	1,401.0	5,340.09	5,347.84	5,346.56	5,348.79	0.005337	7.83	180.37	53.90	0.67		0.61	7.77	7.75
144.34	1,401.0	5,339.87	5,346.98	5,346.44	5,348.37	0.008402	9.47	147.99	36.70	0.83			9.47	7.11
143.770*	1,401.0	5,339.55	5,346.59	5,345.93	5,347.88	0.007711	9.14	153.28	38.06	0.80			9.14	7.04
143.20	1,401.0	5,339.13	5,345.56	5,345.56	5,347.30	0.012489	10.57	132.52	37.97	1.00			10.57	6.43
142.633*	1,401.0	5,338.75	5,343.39	5,344.15	5,346.21	0.021788	13.48	103.97	33.47	1.35			13.48	4.64
142.07	1,401.0	5,338.35	5,345.00	5,342.98	5,345.66	0.003274	6.53	214.44	48.55	0.55			6.53	6.65
141.540*	1,401.0	5,337.99	5,344.81	5,342.98	5,345.48	0.003280	6.60	212.61	50.44	0.55	0.47		6.59	6.82
141.01	1,401.0	5,337.51	5,344.55	5,342.90	5,345.29	0.003889	6.90	204.18	51.12	0.58	0.93		6.86	7.04
140.466*	1,401.0	5,337.35	5,344.23	5,342.63	5,345.06	0.003989	7.33	192.61	46.48	0.60		0.95	7.27	6.88
139.92	1,401.0	5,337.20	5,342.72	5,342.72	5,344.64	0.010629	11.10	126.21	32.82	0.99		0.44	11.10	5.52
139.384*	1,401.0	5,336.00	5,342.48	5,341.94	5,343.97	0.008328	9.78	143.28	33.98	0.84			9.78	6.48
138.85	1,401.0	5,334.80	5,342.29	5,340.98	5,343.51	0.005897	8.83	158.60	31.86	0.70			8.83	7.49
138.318*	1,401.0	5,334.48	5,342.18	5,340.50	5,343.14	0.004944	7.89	177.67	37.84	0.64			7.89	7.7
137.79	1,401.0	5,334.17	5,342.11	5,340.07	5,342.84	0.003756	6.87	203.83	43.92	0.56			6.87	7.94
137.245*	1,401.0	5,334.12	5,341.35	5,340.16	5,342.54	0.006286	8.77	159.71	34.81	0.72			8.77	7.23
136.70	1,401.0	5,333.98	5,340.95	5,340.20	5,342.21	0.005840	9.25	167.96	44.47	0.73	3.51		8.34	6.97
136.136*	1,401.0	5,333.76	5,340.69	5,339.70	5,341.87	0.005581	8.78	167.36	44.18	0.70	2.26		8.37	6.93
135.57	1,401.0	5,333.47	5,339.49	5,339.49	5,341.37	0.011724	11.01	127.22	33.43	0.99			11.01	6.02
135.060*	1,401.0	5,332.71	5,337.98	5,338.54	5,340.50	0.019976	12.76	109.81	35.50	1.28			12.76	5.27
134.55	1,401.0	5,331.95	5,337.30	5,337.76	5,339.42	0.018509	11.67	120.03	41.92	1.22			11.67	5.35
134.025*	1,401.0	5,331.50	5,337.88	5,336.97	5,338.95	0.005491	8.32	173.23	50.31	0.71	1.59		8.09	6.38
133.50	1,401.0	5,331.02	5,336.75	5,336.60	5,338.53	0.008499	10.83	138.88	42.22	0.88	2.64		10.09	5.73
132.979*	1,401.0	5,330.81	5,337.00	5,335.82	5,337.92	0.004725	7.68	182.41	43.38	0.66			7.68	6.19
132.46	1,401.0	5,330.59	5,337.01	5,335.38	5,337.61	0.003369	6.23	224.83	56.77	0.55			6.23	6.42
131.936*	1,401.0	5,330.34	5,336.65	5,335.32	5,337.40	0.004692	6.92	202.55	56.32	0.64			6.92	6.31
131.41	1,401.0	5,330.08	5,335.39	5,335.39	5,336.96	0.011583	10.06	139.29	43.54	0.99			10.06	5.31
130.863*	1,401.0	5,329.32	5,334.83	5,333.50	5,335.46	0.003544	6.39	219.26	58.63	0.58			6.39	5.51
130.31	1,401.0	5,328.49	5,334.90	5,332.17	5,335.25	0.001218	4.71	297.57	56.69	0.36			4.71	6.41
129.798*	1,401.0	5,328.77	5,334.69	5,332.42	5,335.16	0.001898	5.47	256.13	52.71	0.44			5.47	5.92
129.28	1,401.0	5,328.07	5,333.27	5,333.27	5,334.87	0.011740	10.15	137.99	42.44	0.99			10.15	5.2
128.767*	1,401.0	5,327.06	5,332.31	5,332.46	5,334.21	0.012918	11.07	126.58	36.46	1.05			11.07	5.25
128.25	1,401.0	5,325.91	5,331.87	5,330.70	5,333.02	0.005527	8.61	162.65	36.16	0.72			8.61	5.96
127.16	1,401.0	5,324.74	5,331.51	5,330.05	5,332.41	0.004223	7.60	184.31	40.66	0.63			7.60	6.77
126.05	1,401.0	5,324.24	5,330.97	5,329.59	5,331.91	0.004696	7.78	180.08	39.94	0.65			7.78	6.73
124.98	1,401.0	5,323.66	5,330.31	5,329.25	5,331.36	0.005490	8.21	170.56	38.59	0.69			8.21	6.65
123.90	1,401.0	5,322.89	5,329.78	5,328.78	5,330.74	0.005601	7.83	178.82	44.69	0.69			7.83	6.89
122.87	1,401.0	5,322.54	5,329.20	5,328.26	5,330.15	0.005774	7.83	178.85	46.87	0.71			7.83	6.66
121.83	1,401.0	5,321.96	5,328.69	5,327.68	5,329.56	0.005043	7.55	199.95	71.33	0.66		1.86	7.01	6.73
120.72	1,401.0	5,321.39	5,328.32	5,326.77	5,329.02	0.003743	6.73	208.29	49.31	0.58			6.73	6.93
119.57	1,401.0	5,320.69	5,326.72	5,326.69	5,328.33	0.008744	10.31	147.21	51.16	0.87	2.45		9.52	6.03
118.49	1,401.0	5,320.08	5,326.30	5,325.71	5,327.28	0.007137	7.98	176.63	61.54	0.76	0.64		7.93	6.22
117.39	1,401.0	5,319.57	5,326.02	5,324.29	5,326.62	0.002903	6.37	242.53	76.67	0.52	1.77		5.78	6.45
116.31	1,401.0	5,318.90	5,325.06	5,324.51	5,326.16	0.005672	9.23	190.03	54.45	0.71		4.24	7.37	6.16
115.746*	1,401.0	5,318.66	5,324.87	5,324.16	5,325.81	0.005262	8.79	211.29	65.98	0.69		4.07	6.63	6.21
115.18	1,401.0	5,318.42	5,323.64	5,323.36	5,325.33	0.011570	11.82	167.39	74.09	0.99		4.55	8.37	5.22
114.66	1,401.0	5,317.96	5,323.74	5,323.74	5,324.71	0.007401	9.22	221.72	100.07	0.78		3.81	6.32	5.78
114.09	1,401.0	5,317.51	5,322.94	5,322.41	5,324.01	0.005035	8.49	199.76	107.74	0.72		1.67	7.01	5.43
113.523*	1,401.0	5,317.25	5,323.00	5,321.75	5,323.65	0.003200	6.71	250.94	100.59	0.56		1.90	5.58	5.75
112.96	1,401.0	5,316.99	5,323.01	5,321.17	5,323.43	0.002036	5.41	301.48	99.12	0.45		1.85	4.65	6.02
112.448*	1,401.0	5,316.58	5,322.68	5,321.20	5,323.28	0.003414	6.23	224.92	55.18	0.54			6.23	6.1
111.94	1,401.0	5,316.11	5,322.51	5,321.07	5,323.11	0.003500	6.22	225.23	55.02	0.54			6.22	6.4
111.383*	1,401.0	5,315.81	5,322.35	5,320.64	5,322.92	0.002965	6.08	230.58	56.95	0.51	0.27		6.08	6.54
110.83	1,401.0	5,315.52	5,322.32	5,320.05	5,322.74	0.001828	5.34	282.70	69.88	0.42	1.82		4.96	6.8
110.190*	1,401.0	5,315.15	5,320.52	5,320.52	5,322.40	0.011925	10.98	127.62	33.35	0.99			10.98	5.38
109.56	1,401.0	5,314.79	5,320.48	5,320.37	5,321.54	0.008008	9.63	201.94	77.48	0.80		4.48	6.94	5.69
109.011*	1,401.0	5,314.38	5,319.39	5,319.39	5,321.05	0.009586	10.66	150.23	56.79	0.95		3.39	9.33	5.01
108.47	1,401.0	5,313.96	5,319.54	5,318.11	5,320.22	0.003448	6.69	220.69	63.81	0.56		1.71	6.35	5.58

Profile Output Table - North Fork Pre-mine 100 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
107.42	1,401.0	5,313.26	5,319.32	5,317.88	5,319.85	0.002895	6.59	273.54	77.46	0.51	3.32		5.12	6.06
106.43	1,401.0	5,312.45	5,318.50	5,317.74	5,319.48	0.005196	8.40	194.59	57.40	0.69	3.60		7.20	6.05
105.33	1,401.0	5,311.70	5,318.24	5,317.27	5,318.85	0.004106	6.38	247.60	121.82	0.59		1.47	5.66	6.54
104.20	1,401.0	5,311.05	5,317.96	5,316.15	5,318.44	0.002431	5.66	270.46	83.03	0.47		1.74	5.18	6.91
103.27	1,401.0	5,310.39	5,317.49	5,316.29	5,318.17	0.003237	6.92	242.63	79.60	0.54	2.35		5.77	7.1
102.889*	1,401.0	5,310.16	5,316.98	5,316.31	5,317.93	0.004927	8.06	204.02	82.36	0.66	2.37	1.38	6.87	6.82
102.512*	1,401.0	5,309.92	5,316.25	5,316.25	5,317.57	0.008426	9.58	172.82	80.32	0.85	1.86	3.48	8.11	6.33
102.13	1,401.0	5,309.69	5,315.11	5,315.54	5,316.92	0.015511	11.76	142.58	55.14	1.13		6.04	9.83	5.42
101.65	1,401.0	5,309.37	5,315.84	5,313.74	5,316.30	0.002453	5.44	257.35	58.86	0.46			5.44	6.47
101.02	1,401.0	5,308.87	5,315.24	5,313.77	5,316.06	0.004768	7.27	198.08	64.04	0.65	1.38		7.07	6.37
100.491*	1,401.0	5,308.46	5,315.09	5,313.91	5,315.78	0.004388	6.66	210.28	57.99	0.62			6.66	6.63
99.96	1,401.0	5,308.01	5,314.93	5,313.70	5,315.53	0.003987	6.18	226.76	64.12	0.58			6.18	6.92
98.87	1,401.0	5,307.34	5,314.60	5,312.97	5,315.11	0.003256	5.72	244.80	65.39	0.52			5.72	7.26
97.77	1,401.0	5,306.68	5,313.80	5,312.84	5,314.67	0.004057	7.91	220.97	79.08	0.61		2.52	6.34	7.12
96.71	1,401.0	5,306.28	5,313.65	5,312.60	5,314.18	0.003328	5.79	241.78	89.03	0.62			5.79	7.37
95.63	1,401.0	5,305.77	5,313.04	5,312.03	5,313.77	0.003775	7.20	229.61	72.22	0.59	2.77		6.10	7.27
94.55	1,401.0	5,305.16	5,311.80	5,311.46	5,313.17	0.006964	9.62	163.46	53.31	0.79		2.90	8.57	6.64
93.9938*	1,401.0	5,304.84	5,311.71	5,311.02	5,312.72	0.005569	8.25	192.66	73.38	0.70		2.26	7.27	6.87
93.4414*	1,401.0	5,304.51	5,311.62	5,310.66	5,312.37	0.004557	7.17	228.70	96.05	0.63		2.12	6.13	7.11
92.89	1,401.0	5,304.19	5,311.55	5,310.70	5,312.08	0.003674	6.18	271.87	109.85	0.56		2.34	5.15	7.36
91.80	1,401.0	5,303.63	5,310.16	5,310.16	5,311.45	0.007996	9.30	172.63	82.10	0.82	2.16		8.12	6.53
90.95	1,401.0	5,303.15	5,309.83	5,309.32	5,310.73	0.004940	7.90	212.24	86.94	0.66	2.40	0.75	6.60	6.68
89.73	1,401.0	5,302.36	5,309.60	5,308.48	5,310.14	0.002931	6.22	275.56	104.67	0.52	2.36	1.69	5.08	7.24
88.67	1,401.0	5,301.92	5,308.63	5,308.29	5,309.67	0.006253	8.85	199.25	70.77	0.72		3.56	7.03	6.71
87.41	1,401.0	5,301.29	5,307.94	5,307.38	5,308.88	0.005706	7.94	193.82	75.29	0.70	0.79	2.28	7.23	6.65
86.39	1,401.0	5,300.66	5,307.66	5,306.56	5,308.29	0.003950	6.56	241.47	90.15	0.58	2.17		5.80	7
85.18	1,401.0	5,300.03	5,306.62	5,305.87	5,307.70	0.005463	8.50	194.00	96.04	0.70	1.68	1.77	7.22	6.59
84.14	1,401.0	5,299.31	5,306.46	5,305.59	5,307.05	0.004277	6.57	248.39	89.00	0.60	3.02		5.64	7.15
82.95	1,401.0	5,298.93	5,305.76	5,305.01	5,306.51	0.004599	7.25	225.72	93.03	0.64	2.40	0.68	6.21	6.83
81.95	1,401.0	5,298.48	5,305.56	5,304.09	5,306.06	0.002943	5.84	273.89	105.92	0.51	1.74		5.12	7.08
81.5578*	1,401.0	5,298.31	5,305.27	5,303.87	5,305.92	0.003309	6.60	240.74	95.38	0.55	1.62	1.35	5.82	6.96
81.16	1,401.0	5,298.14	5,304.49	5,304.27	5,305.69	0.007335	9.29	181.64	77.94	0.81	1.29	3.99	7.71	6.35
80.5313*	1,401.0	5,297.87	5,304.16	5,303.80	5,305.23	0.006269	8.65	187.26	65.86	0.75		3.13	7.48	6.29
79.90	1,401.0	5,297.51	5,303.89	5,303.22	5,304.83	0.005143	7.98	199.00	73.58	0.68		2.30	7.04	6.38
79.4147*	1,401.0	5,297.19	5,303.68	5,303.13	5,304.58	0.004998	7.90	207.52	76.57	0.67		2.57	6.75	6.49
78.93	1,401.0	5,296.80	5,303.57	5,302.94	5,304.31	0.004177	7.39	243.61	116.64	0.62	1.31	2.72	5.75	6.77
78.4489*	1,401.0	5,296.62	5,303.38	5,302.76	5,304.12	0.003997	7.27	247.01	121.28	0.60	1.38	2.42	5.67	6.76
77.9679*	1,401.0	5,296.41	5,303.24	5,302.41	5,303.92	0.003553	6.97	256.90	124.16	0.57	1.49	2.10	5.45	6.83
77.49	1,401.0	5,296.09	5,303.15	5,301.62	5,303.75	0.002864	6.50	275.24	126.54	0.52	1.55	1.80	5.09	7.06
76.27	1,401.0	5,295.25	5,302.82	5,301.25	5,303.37	0.002970	6.36	309.38	185.80	0.52	1.57	1.57	4.53	7.57
75.14	1,401.0	5,294.61	5,302.73	5,301.37	5,303.00	0.001773	4.76	425.14	201.13	0.39	1.38	1.87	3.30	8.12
74.50	1,401.0	5,293.52	5,302.61	5,298.70	5,302.91	0.000999	4.63	383.50	127.89	0.60	1.38	0.78	3.65	9.09
74.17	1,401.0													
73.73	1,401.0	5,292.89	5,297.58	5,296.43	5,298.18	0.003873	6.21	225.62	66.83	0.60			6.21	4.69
73.3981*	1,401.0	5,292.26	5,297.58	5,296.02	5,298.02	0.002613	5.28	265.39	72.42	0.49			5.28	5.33
72.73	1,401.0	5,290.92	5,297.63	5,294.70	5,297.83	0.000844	3.63	410.37	109.06	0.29	0.98		3.41	6.71
72.1792*	1,401.0	5,290.72	5,297.43	5,295.38	5,297.75	0.001782	4.59	319.38	117.20	0.40	0.98	0.45	4.39	6.71
71.6305*	1,401.0	5,290.37	5,297.07	5,295.86	5,297.60	0.003723	5.85	256.92	115.97	0.56	0.26	1.26	5.45	6.7
71.0818*	1,401.0	5,290.24	5,296.47	5,295.46	5,297.31	0.005536	7.54	213.88	107.01	0.69		1.77	6.55	6.23
70.53	1,401.0	5,290.00	5,296.42	5,295.59	5,296.98	0.003105	6.45	285.52	125.28	0.53		2.04	4.91	6.42
69.65	1,401.0	5,289.56	5,295.48	5,295.48	5,296.54	0.007951	8.79	199.71	98.81	0.81		2.93	7.02	5.92
68.50	1,401.0	5,288.87	5,295.15	5,294.26	5,295.70	0.003034	6.38	296.50	151.89	0.53	1.45	2.13	4.73	6.28
67.40	1,401.0	5,288.46	5,294.25	5,293.93	5,295.23	0.005523	8.70	223.22	102.10	0.72	2.88		6.28	5.79
66.34	1,401.0	5,287.90	5,293.96	5,292.87	5,294.68	0.003690	6.97	231.50	86.83	0.58	1.96		6.05	6.06
65.35	1,401.0	5,287.44	5,293.36	5,293.14	5,294.24	0.004996	8.01	229.14	113.25	0.69	2.42	0.90	6.11	5.92
64.13	1,401.0	5,286.68	5,292.20	5,292.20	5,293.46	0.008130	9.60	181.89	72.64	0.81		3.53	7.70	5.52
63.16	1,401.0	5,286.41	5,291.94	5,291.39	5,292.41	0.003521	6.26	318.42	152.30	0.54		2.40	4.40	5.53
62.6153*	1,401.0	5,285.55	5,291.51	5,290.79	5,292.20	0.004388	6.93	247.87	122.68	0.61		1.92	5.65	5.96
62.0746*	1,401.0	5,285.00	5,291.35	5,290.08	5,291.97	0.003647	6.41	238.07	102.04	0.56	0.59	1.37	5.88	6.35
61.53	1,401.0	5,284.29	5,291.25	5,289.69	5,291.75	0.003249	5.68	262.31	95.87	0.49	1.26	1.23	5.34	6.96
60.9467*	1,401.0	5,284.00	5,290.95	5,289.46	5,291.55	0.003169	6.29	248.17	108.27	0.53	1.34	1.06	5.65	6.95
60.36	1,401.0	5,283.71	5,290.44	5,289.50	5,291.30	0.004901	7.56	211.10	107.40	0.64	1.59	0.88	6.64	6.73
59.8334*	1,401.0	5,283.44	5,290.29	5,288.96	5,291.05	0.003785	7.22	233.02	107.54	0.58	1.82	0.45	6.01	6.85
59.31	1,401.0	5,283.16	5,288.73	5,288.59	5,290.65	0.010587	11.12	128.25	49.12	0.94	0.83		10.92	5.57
58.9687*	1,401.0	5,282.82	5,289.03	5,288.26	5,290.12	0.005937	8.50	182.35	78.95	0.72	1.63		7.68	6.21

Profile Output Table - North Fork Pre-mine 100 yr-6 hr
HEC-RAS Plan: nfpremine Reach: NFpremine 4/30/2001

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chnl	Vel Lt (ft/s)	Vel Rt (ft/s)	Vel Total (ft/s)	Max Chnl Depth (ft)
58.63	1,401.0	5,282.48	5,289.04	5,287.94	5,289.86	0.004494	7.42	209.88	77.18	0.62	1.86		6.68	6.56
57.35	1,401.0	5,281.14	5,287.80	5,287.44	5,289.15	0.006275	9.57	169.84	61.60	0.76	2.58	2.40	8.25	6.66
56.8865*	1,401.0	5,280.92	5,287.83	5,286.70	5,288.77	0.004864	7.85	189.39	58.92	0.66		1.93	7.40	6.91
56.4252*	1,401.0	5,280.71	5,287.76	5,286.25	5,288.51	0.003833	7.02	209.83	65.02	0.59		1.48	6.68	7.05
55.96	1,401.0	5,280.49	5,287.69	5,285.87	5,288.31	0.003238	6.36	236.20	101.15	0.53		0.94	5.93	7.2
54.98	1,401.0	5,279.91	5,287.31	5,285.37	5,287.99	0.003016	6.73	224.69	71.17	0.53	2.05	0.52	6.24	7.4
54.4423*	1,401.0	5,279.61	5,286.98	5,285.43	5,287.80	0.003642	7.39	209.78	74.46	0.58	1.54	1.49	6.68	7.37
53.9092*	1,401.0	5,279.30	5,286.61	5,285.67	5,287.57	0.004560	8.17	202.05	73.37	0.64	0.69	2.36	6.93	7.31
53.38	1,401.0	5,279.00	5,286.36	5,285.91	5,287.33	0.005285	8.61	214.05	81.30	0.68		3.25	6.55	7.36
52.33	1,401.0	5,278.63	5,285.28	5,285.03	5,286.66	0.006708	9.66	166.39	61.73	0.78	2.27	2.62	8.42	6.65
51.39	1,401.0	5,278.08	5,285.17	5,284.33	5,285.96	0.004290	7.46	229.97	94.19	0.61	2.32		6.09	7.09
50.8777*	1,401.0	5,277.91	5,284.97	5,284.01	5,285.74	0.004350	7.31	226.61	92.65	0.62	2.10		6.18	7.06
50.3694*	1,401.0	5,277.70	5,284.76	5,283.86	5,285.52	0.004585	7.15	222.80	88.87	0.63	2.06		6.29	7.06
49.86	1,401.0	5,277.48	5,284.52	5,283.71	5,285.28	0.004954	7.12	216.54	87.42	0.65	2.00	0.63	6.47	7.04
48.75	1,401.0	5,276.85	5,283.83	5,283.11	5,284.67	0.005922	7.54	203.14	81.66	0.70	2.70	0.11	6.90	6.98
47.86	1,401.0	5,276.71	5,283.12	5,282.51	5,284.13	0.005977	8.20	192.19	79.11	0.70		2.02	7.29	6.41
47.4220*	1,401.0	5,276.50	5,282.92	5,282.20	5,283.87	0.005227	7.99	199.92	78.97	0.67		2.09	7.01	6.42
46.9869*	1,401.0	5,276.28	5,282.73	5,282.10	5,283.64	0.004920	7.88	206.03	79.48	0.66		2.24	6.80	6.45
46.55	1,401.0	5,276.07	5,282.52	5,282.01	5,283.43	0.005091	7.93	207.52	81.56	0.67	0.45	2.44	6.75	6.45
45.61	1,401.0	5,275.56	5,281.65	5,281.65	5,282.85	0.006733	9.18	188.95	90.85	0.78		2.42	7.41	6.09
45.1466*	1,401.0	5,275.43	5,280.30	5,280.68	5,282.33	0.012868	11.44	125.43	46.02	1.07		1.67	11.17	4.87
44.6847*	1,401.0	5,275.08	5,279.31	5,279.88	5,281.62	0.017368	12.19	114.97	38.12	1.24			12.19	4.23
44.22	1,401.0	5,274.65	5,280.21	5,279.00	5,280.99	0.004156	7.09	199.55	55.92	0.62		1.04	7.02	5.56
43.00	1,401.0	5,273.02	5,280.06	5,277.64	5,280.50	0.002246	5.33	263.08	58.12	0.44			5.33	7.04
42.06	1,401.0	5,272.30	5,278.71	5,278.63	5,280.07	0.007928	10.10	173.03	60.08	0.83		4.08	8.10	6.41
41.26	1,401.0	5,271.44	5,278.69	5,277.71	5,279.45	0.003663	7.66	234.01	69.23	0.57		3.17	5.99	7.25
40.7621*	1,401.0	5,271.23	5,277.55	5,277.40	5,279.13	0.008360	10.15	148.45	56.91	0.84		1.84	9.44	6.32
40.2604*	1,401.0	5,270.30	5,277.42	5,276.54	5,278.64	0.007057	8.86	158.05	38.49	0.77			8.86	7.12
39.76	1,401.0	5,269.73	5,277.45	5,275.87	5,278.23	0.003951	7.11	203.37	69.62	0.59	0.87		6.89	7.72
38.51	1,401.0	5,269.19	5,276.98	5,275.22	5,277.76	0.003509	7.13	205.33	57.83	0.56	1.41	1.15	6.82	7.79
37.55	1,401.0	5,268.70	5,276.47	5,275.36	5,277.34	0.005601	7.50	189.01	66.54	0.68		0.68	7.41	7.77
36.59	1,401.0	5,268.15	5,275.87	5,274.92	5,276.81	0.005445	7.99	203.49	89.65	0.68	2.00		6.88	7.72
35.80	1,401.0	5,267.87	5,275.01	5,274.30	5,276.29	0.007064	9.20	165.53	64.53	0.75	1.76		8.46	7.14
34.49	1,401.0	5,267.18	5,274.81	5,272.93	5,275.44	0.002955	6.45	235.53	84.26	0.52	1.22		5.95	7.63
33.52	1,401.0	5,266.82	5,274.29	5,273.42	5,275.06	0.005160	7.18	213.89	90.27	0.66	1.75		6.55	7.47
32.58	1,401.0	5,266.37	5,273.21	5,272.76	5,274.47	0.006701	9.29	175.40	78.77	0.77	1.19	3.15	7.99	6.84
31.64	1,401.0	5,265.92	5,272.61	5,272.45	5,273.79	0.007148	8.94	180.85	90.72	0.78	0.69	2.04	7.75	6.69
30.72	1,401.0	5,265.19	5,272.42	5,270.78	5,273.18	0.003806	7.15	230.69	98.94	0.57		1.68	6.07	7.23
29.80	1,401.0	5,264.72	5,271.35	5,270.72	5,272.69	0.006503	9.42	166.92	64.30	0.75		2.01	8.39	6.63
28.82	1,401.0	5,264.35	5,270.86	5,270.58	5,272.04	0.005764	9.26	192.43	83.16	0.73	3.95	1.77	7.28	6.51
27.89	1,401.0	5,263.94	5,270.56	5,269.70	5,271.45	0.005079	7.85	227.02	134.39	0.67	2.08	1.41	6.17	6.63
26.95	1,401.0	5,263.45	5,270.07	5,269.53	5,270.96	0.005481	7.92	214.95	113.42	0.69	2.54	0.97	6.52	6.62
26.03	1,401.0	5,263.18	5,269.67	5,269.21	5,270.48	0.004628	7.66	233.27	104.43	0.64	2.33		6.01	6.49
25.12	1,401.0	5,262.83	5,269.22	5,268.38	5,270.05	0.004965	7.59	218.61	98.73	0.65	2.01		6.41	6.39
24.21	1,401.0	5,262.45	5,268.99	5,267.99	5,269.62	0.003377	6.74	264.23	109.31	0.55	2.14		5.30	6.54
23.29	1,401.0	5,261.83	5,268.30	5,267.98	5,269.19	0.006208	7.80	210.50	111.09	0.72	2.11	1.62	6.66	6.47
22.39	1,401.0	5,261.19	5,267.18	5,266.79	5,268.49	0.008925	9.18	153.17	49.82	0.86		0.64	9.15	5.99
22.17	1,401.0	5,261.15	5,266.67	5,266.33	5,268.27	0.008417	10.17	138.56	36.45	0.88		1.16	10.11	5.52
21.63	1,401.0	5,260.86	5,266.64	5,266.44	5,267.74	0.005303	9.20	212.41	90.13	0.72	2.81	3.35	6.60	5.78
						Max	**13.48**					**Avg**	**7.20**	
						Min	**3.63**							
						Avg	**7.95**							