

## **APPENDIX D**

### **Hydraulic Model – Summary Output – 2 year through 100 year**

- **Lower Reach**
- **Middle Reach**

# . Lower Reach

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 7	0	100 year	205.00	80.29	0.77	330.48	128.33			60.40
Jock River	Reach 7	0	50 year	189.00	80.19	0.74	317.78	125.72			60.40
Jock River	Reach 7	0	25 year	167.00	80.04	0.68	299.18	121.81			60.40
Jock River	Reach 7	0	10 year	148.00	79.91	0.63	283.55	119.21			60.40
Jock River	Reach 7	0	5 year	129.00	79.77	0.58	267.04	116.78			60.40
Jock River	Reach 7	0	2 year	95.00	79.48	0.47	233.88	111.61			60.40
Jock River	Reach 7	158	100 year	205.00	79.97	3.54	63.60	33.71	157.90	31.11	22.56
Jock River	Reach 7	158	50 year	189.00	79.90	3.36	61.38	33.17	157.90	29.93	22.56
Jock River	Reach 7	158	25 year	167.00	79.79	3.13	57.82	32.29	157.90	28.19	22.56
Jock River	Reach 7	158	10 year	148.00	79.70	2.90	54.86	31.54	157.90	26.72	22.56
Jock River	Reach 7	158	5 year	129.00	79.60	2.66	51.58	30.69	157.90	25.16	22.56
Jock River	Reach 7	158	2 year	95.00	79.36	2.22	44.61	28.80	157.90	21.99	22.56
Jock River	Reach 7	166	100 year	205.00	80.28	4.70	48.61	25.93	165.73	31.54	17.02
Jock River	Reach 7	166	50 year	189.00	80.15	4.61	45.13	24.85	165.73	30.34	17.02
Jock River	Reach 7	166	25 year	167.00	79.97	4.44	40.83	23.53	165.73	28.56	17.02
Jock River	Reach 7	166	10 year	148.00	79.81	4.27	37.20	22.68	165.73	27.07	17.02
Jock River	Reach 7	166	5 year	129.00	79.64	4.11	33.26	21.73	165.73	25.48	17.02
Jock River	Reach 7	166	2 year	95.00	79.31	3.73	26.39	20.25	165.73	22.26	17.02
Jock River	Reach 7	177 hwy #16		Bridge							
Jock River	Reach 7	189	100 year	205.00	81.01	3.46	70.28	32.30	188.73	32.99	17.48
Jock River	Reach 7	189	50 year	189.00	80.87	3.36	65.82	30.90	188.73	31.69	17.48
Jock River	Reach 7	189	25 year	167.00	80.66	3.21	59.64	28.83	188.73	29.79	17.48
Jock River	Reach 7	189	10 year	148.00	80.48	3.07	54.46	27.06	188.73	28.18	17.48
Jock River	Reach 7	189	5 year	129.00	80.28	2.92	49.23	25.88	188.73	26.49	17.48
Jock River	Reach 7	189	2 year	95.00	79.89	2.60	39.53	23.64	188.73	23.06	17.48
Jock River	Reach 7	211	100 year	205.00	81.56	2.02	113.17	41.72	211.21	35.19	28.96
Jock River	Reach 7	211	50 year	189.00	81.39	1.96	106.36	40.70	211.21	33.75	28.96
Jock River	Reach 7	211	25 year	167.00	81.15	1.89	96.54	39.72	211.21	31.64	28.96
Jock River	Reach 7	211	10 year	148.00	80.93	1.83	87.76	38.75	211.21	29.86	28.96
Jock River	Reach 7	211	5 year	129.00	80.69	1.76	78.81	37.57	211.21	27.99	28.96
Jock River	Reach 7	211	2 year	95.00	80.23	1.61	61.93	35.30	211.21	24.24	28.96
Jock River	Reach 7	270	100 year	205.00	81.61	2.53	87.73	35.42	269.95	41.24	26.40
Jock River	Reach 7	270	50 year	189.00	81.45	2.48	82.08	34.80	269.95	39.41	26.40
Jock River	Reach 7	270	25 year	167.00	81.21	2.40	74.01	33.72	269.95	36.75	26.40
Jock River	Reach 7	270	10 year	148.00	81.00	2.33	66.88	32.74	269.95	34.48	26.40
Jock River	Reach 7	270	5 year	129.00	80.77	2.26	59.66	31.75	269.95	32.11	26.40
Jock River	Reach 7	270	2 year	95.00	80.34	2.11	46.22	29.88	269.95	27.44	26.40
Jock River	Reach 7	351	100 year	205.00	81.92	2.18	106.02	48.87	350.77	49.07	31.52
Jock River	Reach 7	351	50 year	189.00	81.76	2.15	98.29	48.14	350.77	46.70	31.52
Jock River	Reach 7	351	25 year	167.00	81.53	2.11	87.34	47.08	350.77	43.27	31.52
Jock River	Reach 7	351	10 year	148.00	81.33	2.06	77.86	44.90	350.77	40.33	31.52
Jock River	Reach 7	351	5 year	129.00	81.12	2.00	68.66	42.42	350.77	37.30	31.52
Jock River	Reach 7	351	2 year	95.00	80.72	1.85	52.81	37.72	350.77	31.44	31.52
Jock River	Reach 7	428	100 year	205.00	82.10	2.52	84.51	41.14	427.62	56.39	34.48
Jock River	Reach 7	428	50 year	189.00	81.96	2.48	78.66	40.06	427.62	53.50	34.48
Jock River	Reach 7	428	25 year	167.00	81.75	2.42	70.60	38.82	427.62	49.34	34.48
Jock River	Reach 7	428	10 year	148.00	81.57	2.37	63.69	37.72	427.62	45.77	34.48
Jock River	Reach 7	428	5 year	129.00	81.39	2.30	56.87	36.93	427.62	42.12	34.48
Jock River	Reach 7	428	2 year	95.00	81.05	2.14	44.66	35.87	427.62	35.19	34.48
Jock River	Reach 7	489	100 year	205.00	82.35	3.02	73.84	42.57	489.38	61.28	32.28
Jock River	Reach 7	489	50 year	189.00	82.22	2.98	68.57	42.01	489.38	58.05	32.28
Jock River	Reach 7	489	25 year	167.00	82.05	2.91	61.44	41.24	489.38	53.41	32.28
Jock River	Reach 7	489	10 year	148.00	81.91	2.84	55.44	40.58	489.38	49.45	32.28
Jock River	Reach 7	489	5 year	129.00	81.76	2.74	49.61	39.95	489.38	45.41	32.28
Jock River	Reach 7	489	2 year	95.00	81.50	2.49	39.48	38.82	489.38	37.79	32.28
Jock River	Reach 7	551	100 year	205.00	82.70	3.91	55.08	31.30	551.38	65.28	25.70
Jock River	Reach 7	551	50 year	189.00	82.62	3.76	52.62	30.99	551.38	61.80	25.70
Jock River	Reach 7	551	25 year	167.00	82.51	3.53	49.18	30.54	551.38	56.84	25.70
Jock River	Reach 7	551	10 year	148.00	82.41	3.32	46.10	30.09	551.38	52.60	25.70
Jock River	Reach 7	551	5 year	129.00	82.30	3.10	42.86	29.61	551.38	48.28	25.70
Jock River	Reach 7	551	2 year	95.00	82.08	2.66	36.39	28.62	551.38	40.14	25.70
Jock River	Reach 7	689	100 year	205.00	83.91	1.99	116.17	56.66	689.36	77.09	35.83
Jock River	Reach 7	689	50 year	189.00	83.78	1.94	108.88	55.20	689.36	72.95	35.83
Jock River	Reach 7	689	25 year	167.00	83.60	1.86	98.79	53.12	689.36	67.05	35.83
Jock River	Reach 7	689	10 year	148.00	83.43	1.79	90.02	51.01	689.36	61.99	35.83
Jock River	Reach 7	689	5 year	129.00	83.25	1.70	81.24	48.45	689.36	56.84	35.83

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 7	689	2 year	95.00	82.91	1.52	65.41	43.98	689.36	47.16	35.83
Jock River	Reach 7	740	100 year	205.00	84.06	1.70	131.34	60.45	740.01	83.36	41.90
Jock River	Reach 7	740	50 year	189.00	83.93	1.64	123.66	57.68	740.01	78.83	41.90
Jock River	Reach 7	740	25 year	167.00	83.74	1.57	113.07	55.20	740.01	72.42	41.90
Jock River	Reach 7	740	10 year	148.00	83.57	1.50	103.88	52.95	740.01	66.90	41.90
Jock River	Reach 7	740	5 year	129.00	83.39	1.42	94.58	50.89	740.01	61.29	41.90
Jock River	Reach 7	740	2 year	95.00	83.04	1.26	77.36	47.24	740.01	50.78	41.90
Jock River	Reach 7	815	100 year	205.00	84.16	1.87	128.50	66.39	814.60	93.02	34.72
Jock River	Reach 7	815	50 year	189.00	84.03	1.82	119.98	64.28	814.60	87.90	34.72
Jock River	Reach 7	815	25 year	167.00	83.84	1.74	108.38	59.92	814.60	80.66	34.72
Jock River	Reach 7	815	10 year	148.00	83.67	1.66	98.60	55.77	814.60	74.43	34.72
Jock River	Reach 7	815	5 year	129.00	83.49	1.57	89.05	51.42	814.60	68.13	34.72
Jock River	Reach 7	815	2 year	95.00	83.14	1.37	72.36	44.04	814.60	56.36	34.72
Jock River	Reach 7	983	100 year	205.00	84.43	1.48	146.35	52.25	982.74	116.05	42.10
Jock River	Reach 7	983	50 year	189.00	84.29	1.43	139.47	51.56	982.74	109.64	42.10
Jock River	Reach 7	983	25 year	167.00	84.10	1.35	129.66	50.56	982.74	100.61	42.10
Jock River	Reach 7	983	10 year	148.00	83.93	1.28	120.84	49.64	982.74	92.83	42.10
Jock River	Reach 7	983	5 year	129.00	83.74	1.20	111.64	48.66	982.74	84.96	42.10
Jock River	Reach 7	983	2 year	95.00	83.37	1.04	93.90	46.84	982.74	70.31	42.10
Jock River	Reach 7	1104	100 year	205.00	84.55	1.32	165.02	56.10	1104.32	134.76	44.74
Jock River	Reach 7	1104	50 year	189.00	84.41	1.27	157.47	55.13	1104.32	127.50	44.74
Jock River	Reach 7	1104	25 year	167.00	84.22	1.20	146.70	54.19	1104.32	117.25	44.74
Jock River	Reach 7	1104	10 year	148.00	84.04	1.13	136.98	53.32	1104.32	108.37	44.74
Jock River	Reach 7	1104	5 year	129.00	83.84	1.06	126.81	52.37	1104.32	99.34	44.74
Jock River	Reach 7	1104	2 year	95.00	83.46	0.91	107.14	50.48	1104.32	82.46	44.74
Jock River	Reach 7	1269	100 year	205.00	84.66	1.29	170.47	57.56	1269.08	162.48	44.20
Jock River	Reach 7	1269	50 year	189.00	84.52	1.24	162.52	56.85	1269.08	153.92	44.20
Jock River	Reach 7	1269	25 year	167.00	84.32	1.17	151.20	55.69	1269.08	141.85	44.20
Jock River	Reach 7	1269	10 year	148.00	84.14	1.10	141.01	54.60	1269.08	131.32	44.20
Jock River	Reach 7	1269	5 year	129.00	83.94	1.03	130.39	53.40	1269.08	120.57	44.20
Jock River	Reach 7	1269	2 year	95.00	83.55	0.89	109.99	50.76	1269.08	100.37	44.20
Jock River	Reach 7	1392	100 year	205.00	84.73	1.81	142.69	86.55	1392.25	181.76	33.90
Jock River	Reach 7	1392	50 year	189.00	84.59	1.78	130.61	84.54	1392.25	171.98	33.90
Jock River	Reach 7	1392	25 year	167.00	84.38	1.72	114.04	76.30	1392.25	158.18	33.90
Jock River	Reach 7	1392	10 year	148.00	84.20	1.66	100.94	65.23	1392.25	146.22	33.90
Jock River	Reach 7	1392	5 year	129.00	84.00	1.58	89.30	53.50	1392.25	134.10	33.90
Jock River	Reach 7	1392	2 year	95.00	83.61	1.41	70.34	43.61	1392.25	111.48	33.90
Jock River	Reach 7	1473	100 year	205.00	84.90	0.82	299.58	132.56	1473.07	199.63	67.26
Jock River	Reach 7	1473	50 year	189.00	84.76	0.80	280.75	131.49	1473.07	188.60	67.26
Jock River	Reach 7	1473	25 year	167.00	84.55	0.77	253.57	129.92	1473.07	173.03	67.26
Jock River	Reach 7	1473	10 year	148.00	84.36	0.74	229.06	122.75	1473.07	159.55	67.26
Jock River	Reach 7	1473	5 year	129.00	84.16	0.70	204.74	112.66	1473.07	145.98	67.26
Jock River	Reach 7	1473	2 year	95.00	83.74	0.62	162.12	95.82	1473.07	120.87	67.26
Jock River	Reach 7	1556	100 year	205.00	84.94	0.52	414.29	143.00	1555.85	229.18	114.46
Jock River	Reach 7	1556	50 year	189.00	84.80	0.51	393.89	141.73	1555.85	216.52	114.46
Jock River	Reach 7	1556	25 year	167.00	84.59	0.48	364.47	139.87	1555.85	198.62	114.46
Jock River	Reach 7	1556	10 year	148.00	84.39	0.46	337.56	137.36	1555.85	183.00	114.46
Jock River	Reach 7	1556	5 year	129.00	84.18	0.43	309.34	134.01	1555.85	167.26	114.46
Jock River	Reach 7	1556	2 year	95.00	83.77	0.38	255.18	127.43	1555.85	138.14	114.46
Jock River	Reach 7	1602	100 year	205.00	84.86	1.78	137.48	75.53	1602.28	241.99	39.91
Jock River	Reach 7	1602	50 year	189.00	84.71	1.75	126.88	73.95	1602.28	228.61	39.91
Jock River	Reach 7	1602	25 year	167.00	84.51	1.71	111.80	71.66	1602.28	209.67	39.91
Jock River	Reach 7	1602	10 year	148.00	84.32	1.68	98.61	66.03	1602.28	193.13	39.91
Jock River	Reach 7	1602	5 year	129.00	84.11	1.63	85.72	59.84	1602.28	176.43	39.91
Jock River	Reach 7	1602	2 year	95.00	83.70	1.55	63.49	49.79	1602.28	145.54	39.91
Jock River	Reach 7	1647	100 year	205.00	84.68	3.49	61.80	32.90	1647.37	246.48	25.84
Jock River	Reach 7	1647	50 year	189.00	84.56	3.41	57.90	32.15	1647.37	232.78	25.84
Jock River	Reach 7	1647	25 year	167.00	84.39	3.30	52.38	31.08	1647.37	213.37	25.84
Jock River	Reach 7	1647	10 year	148.00	84.23	3.20	47.43	30.10	1647.37	196.42	25.84
Jock River	Reach 7	1647	5 year	129.00	84.05	3.10	42.35	29.06	1647.37	179.32	25.84
Jock River	Reach 7	1647	2 year	95.00	83.73	2.88	33.12	27.14	1647.37	147.72	25.84
Jock River	Reach 7	1706	100 year	205.00	85.20	3.34	64.40	31.95	1705.64	250.16	25.22
Jock River	Reach 7	1706	50 year	189.00	85.09	3.23	61.08	31.34	1705.64	236.25	25.22
Jock River	Reach 7	1706	25 year	167.00	84.94	3.07	56.41	30.48	1705.64	216.54	25.22
Jock River	Reach 7	1706	10 year	148.00	84.80	2.91	52.28	29.69	1705.64	199.33	25.22
Jock River	Reach 7	1706	5 year	129.00	84.66	2.74	48.04	28.86	1705.64	181.95	25.22

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 7	1706	2 year	95.00	84.38	2.39	40.13	27.27	1705.64	149.85	25.22
Jock River	Reach 7	1809	100 year	205.00	85.92	3.51	64.65	31.74	1809.26	256.85	21.61
Jock River	Reach 7	1809	50 year	189.00	85.81	3.39	61.16	31.18	1809.26	242.58	21.61
Jock River	Reach 7	1809	25 year	167.00	85.65	3.22	56.24	30.38	1809.26	222.38	21.61
Jock River	Reach 7	1809	10 year	148.00	85.50	3.07	51.83	29.64	1809.26	204.72	21.61
Jock River	Reach 7	1809	5 year	129.00	85.34	2.90	47.23	28.89	1809.26	186.89	21.61
Jock River	Reach 7	1809	2 year	95.00	85.03	2.56	38.47	27.38	1809.26	153.93	21.61
Jock River	Reach 7	1944	100 year	205.00	86.66	0.93	229.24	79.31	1943.98	276.64	64.78
Jock River	Reach 7	1944	50 year	189.00	86.51	0.90	217.53	78.50	1943.98	261.35	64.78
Jock River	Reach 7	1944	25 year	167.00	86.30	0.86	200.99	76.17	1943.98	239.71	64.78
Jock River	Reach 7	1944	10 year	148.00	86.10	0.82	186.35	73.99	1943.98	220.77	64.78
Jock River	Reach 7	1944	5 year	129.00	85.89	0.77	171.26	72.16	1943.98	201.61	64.78
Jock River	Reach 7	1944	2 year	95.00	85.49	0.68	142.40	69.47	1943.98	166.11	64.78
Jock River	Reach 7	2094	100 year	205.00	86.72	1.44	218.17	163.24	2093.81	310.16	40.84
Jock River	Reach 7	2094	50 year	189.00	86.56	1.46	193.55	161.68	2093.81	292.15	40.84
Jock River	Reach 7	2094	25 year	167.00	86.35	1.44	163.57	129.34	2093.81	267.02	40.84
Jock River	Reach 7	2094	10 year	148.00	86.15	1.45	138.51	124.05	2093.81	245.10	40.84
Jock River	Reach 7	2094	5 year	129.00	85.95	1.44	114.01	105.88	2093.81	222.98	40.84
Jock River	Reach 7	2094	2 year	95.00	85.54	1.43	73.91	89.84	2093.81	182.31	40.84
Jock River	Reach 7	2213	100 year	205.00	86.84	1.76	188.22	166.34	2212.91	334.36	33.17
Jock River	Reach 7	2213	50 year	189.00	86.70	1.79	165.49	164.26	2212.91	313.53	33.17
Jock River	Reach 7	2213	25 year	167.00	86.50	1.80	132.39	129.87	2212.91	284.64	33.17
Jock River	Reach 7	2213	10 year	148.00	86.32	1.80	109.90	125.87	2212.91	259.90	33.17
Jock River	Reach 7	2213	5 year	129.00	86.14	1.78	86.94	121.66	2212.91	234.94	33.17
Jock River	Reach 7	2213	2 year	95.00	85.79	1.60	61.69	40.88	2212.91	190.39	33.17
Jock River	Reach 7	2306	100 year	205.00	87.02	1.07	255.40	183.41	2305.78	354.96	64.38
Jock River	Reach 7	2306	50 year	189.00	86.90	1.06	234.54	168.81	2305.78	332.10	64.38
Jock River	Reach 7	2306	25 year	167.00	86.71	1.04	203.89	162.52	2305.78	300.26	64.38
Jock River	Reach 7	2306	10 year	148.00	86.55	1.02	178.35	157.08	2305.78	273.28	64.38
Jock River	Reach 7	2306	5 year	129.00	86.38	0.99	152.27	146.52	2305.78	246.05	64.38
Jock River	Reach 7	2306	2 year	95.00	86.02	0.93	104.65	120.20	2305.78	198.11	64.38
Jock River	Reach 7	2386	100 year	205.00	87.00	2.36	129.93	150.47	2385.78	370.37	38.08
Jock River	Reach 7	2386	50 year	189.00	86.86	2.47	109.36	147.07	2385.78	345.86	38.08
Jock River	Reach 7	2386	25 year	167.00	86.63	2.73	76.77	141.51	2385.78	311.48	38.08
Jock River	Reach 7	2386	10 year	148.00	86.46	2.83	55.23	63.11	2385.78	282.62	38.08
Jock River	Reach 7	2386	5 year	129.00	86.30	2.81	46.50	48.24	2385.78	254.00	38.08
Jock River	Reach 7	2386	2 year	95.00	85.97	2.86	33.21	37.65	2385.78	203.63	37.65
Jock River	Reach 7	2462	100 year	205.00	87.31	3.02	69.33	39.69	2462.41	378.01	35.44
Jock River	Reach 7	2462	50 year	189.00	87.26	2.85	67.52	39.48	2462.41	352.64	35.44
Jock River	Reach 7	2462	25 year	167.00	87.21	2.59	65.59	39.25	2462.41	316.94	35.44
Jock River	Reach 7	2462	10 year	148.00	87.16	2.37	63.48	39.00	2462.41	287.17	35.44
Jock River	Reach 7	2462	5 year	129.00	87.05	2.20	59.37	38.50	2462.41	258.06	35.44
Jock River	Reach 7	2462	2 year	95.00	86.85	1.85	51.56	37.40	2462.41	206.88	35.44
Jock River	Reach 7	2560	100 year	205.00	88.07	4.01	53.43	32.53	2560.16	383.99	25.98
Jock River	Reach 7	2560	50 year	189.00	87.98	3.90	50.45	32.04	2560.16	358.39	25.98
Jock River	Reach 7	2560	25 year	167.00	87.84	3.74	46.11	31.28	2560.16	322.39	25.98
Jock River	Reach 7	2560	10 year	148.00	87.72	3.60	42.32	30.61	2560.16	292.34	25.98
Jock River	Reach 7	2560	5 year	129.00	87.60	3.41	38.65	29.95	2560.16	262.84	25.98
Jock River	Reach 7	2560	2 year	95.00	87.35	3.05	31.44	28.40	2560.16	210.93	25.98
Jock River	Reach 7	2585	100 year	205.00	88.94	2.14	96.33	40.29	2584.80	385.84	37.76
Jock River	Reach 7	2585	50 year	189.00	88.81	2.07	91.31	39.55	2584.80	360.14	37.76
Jock River	Reach 7	2585	25 year	167.00	88.63	1.98	84.23	38.51	2584.80	323.99	37.76
Jock River	Reach 7	2585	10 year	148.00	88.46	1.90	77.87	37.53	2584.80	293.82	37.53
Jock River	Reach 7	2585	5 year	129.00	88.28	1.81	71.13	36.40	2584.80	264.20	36.40
Jock River	Reach 7	2585	2 year	95.00	87.92	1.62	58.60	34.20	2584.80	212.04	34.20
Jock River	Reach 7	2590	jockvale	Bridge							
Jock River	Reach 7	2595	100 year	205.00	88.96	2.12	97.02	39.22	2595.22	386.85	36.39
Jock River	Reach 7	2595	50 year	189.00	88.84	2.06	92.17	38.45	2595.22	361.09	36.39
Jock River	Reach 7	2595	25 year	167.00	88.66	1.96	85.33	37.35	2595.22	324.88	36.39
Jock River	Reach 7	2595	10 year	148.00	88.49	1.87	79.20	36.34	2595.22	294.63	36.34
Jock River	Reach 7	2595	5 year	129.00	88.31	1.77	72.69	35.33	2595.22	264.95	35.33
Jock River	Reach 7	2595	2 year	95.00	87.95	1.57	60.48	33.31	2595.22	212.66	33.31
Jock River	Reach 7	2601	100 year	205.00	88.93	2.66	91.56	46.10	2601.48	387.44	25.74
Jock River	Reach 7	2601	50 year	189.00	88.80	2.61	85.70	45.32	2601.48	361.65	25.74
Jock River	Reach 7	2601	25 year	167.00	88.62	2.52	77.55	44.20	2601.48	325.39	25.74

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 7	2601	10 year	148.00	88.45	2.45	70.23	43.16	2601.48	295.10	25.74
Jock River	Reach 7	2601	5 year	129.00	88.27	2.38	62.40	42.02	2601.48	265.37	25.74
Jock River	Reach 7	2601	2 year	95.00	87.91	2.23	47.66	39.75	2601.48	213.00	25.74
Jock River	Reach 7	2672	100 year	205.00	89.08	2.81	90.40	70.69	2672.35	393.89	26.41
Jock River	Reach 7	2672	50 year	189.00	88.95	2.79	81.45	66.74	2672.35	367.57	26.41
Jock River	Reach 7	2672	25 year	167.00	88.78	2.70	70.82	54.88	2672.35	330.64	26.41
Jock River	Reach 7	2672	10 year	148.00	88.63	2.60	63.14	44.39	2672.35	299.83	26.41
Jock River	Reach 7	2672	5 year	129.00	88.46	2.45	56.81	35.65	2672.35	269.59	26.41
Jock River	Reach 7	2672	2 year	95.00	88.15	2.20	45.80	33.51	2672.35	216.31	26.41
Jock River	Reach 7	2776	100 year	205.00	89.31	3.88	59.96	41.81	2775.76	401.66	26.36
Jock River	Reach 7	2776	50 year	189.00	89.22	3.79	56.23	41.04	2775.76	374.69	26.36
Jock River	Reach 7	2776	25 year	167.00	89.08	3.69	50.47	39.82	2775.76	336.91	26.36
Jock River	Reach 7	2776	10 year	148.00	88.94	3.61	45.09	38.55	2775.76	305.43	26.36
Jock River	Reach 7	2776	5 year	129.00	88.82	3.46	40.59	37.34	2775.76	274.63	26.36
Jock River	Reach 7	2776	2 year	95.00	88.58	3.16	31.86	34.88	2775.76	220.33	26.36
Jock River	Reach 7	2848	100 year	205.00	90.08	2.76	88.80	73.07	2847.77	407.02	33.47
Jock River	Reach 7	2848	50 year	189.00	89.98	2.69	82.00	65.27	2847.77	379.67	33.47
Jock River	Reach 7	2848	25 year	167.00	89.84	2.60	73.38	59.84	2847.77	341.37	33.47
Jock River	Reach 7	2848	10 year	148.00	89.72	2.49	66.55	55.16	2847.77	309.44	33.47
Jock River	Reach 7	2848	5 year	129.00	89.58	2.38	59.43	49.80	2847.77	278.23	33.47
Jock River	Reach 7	2848	2 year	95.00	89.33	2.14	47.42	44.38	2847.77	223.18	33.47
Jock River	Reach 7	3027	100 year	205.00	90.61	1.47	157.64	113.81	3027.12	429.12	51.78
Jock River	Reach 7	3027	50 year	189.00	90.50	1.41	147.14	80.53	3027.12	400.22	51.78
Jock River	Reach 7	3027	25 year	167.00	90.35	1.34	135.32	76.65	3027.12	360.09	51.78
Jock River	Reach 7	3027	10 year	148.00	90.21	1.28	124.85	74.33	3027.12	326.61	51.78
Jock River	Reach 7	3027	5 year	129.00	90.06	1.21	113.66	71.76	3027.12	293.75	51.78
Jock River	Reach 7	3027	2 year	95.00	89.75	1.06	92.98	64.42	3027.12	235.77	51.78
Jock River	Reach 7	3219	100 year	205.00	90.76	1.06	261.04	169.88	3219.03	468.52	54.10
Jock River	Reach 7	3219	50 year	189.00	90.65	1.04	241.89	165.41	3219.03	436.87	54.10
Jock River	Reach 7	3219	25 year	167.00	90.49	1.00	216.03	155.82	3219.03	393.26	54.10
Jock River	Reach 7	3219	10 year	148.00	90.34	0.96	194.42	140.70	3219.03	356.80	54.10
Jock River	Reach 7	3219	5 year	129.00	90.18	0.90	173.27	124.14	3219.03	320.94	54.10
Jock River	Reach 7	3219	2 year	95.00	89.86	0.79	138.42	101.36	3219.03	257.76	54.10
Jock River	Reach 7	3389	100 year	205.00	90.82	0.52	465.30	218.90	3388.89	526.11	108.82
Jock River	Reach 7	3389	50 year	189.00	90.71	0.50	440.27	216.34	3388.89	491.23	108.82
Jock River	Reach 7	3389	25 year	167.00	90.54	0.47	405.60	212.74	3388.89	443.18	108.82
Jock River	Reach 7	3389	10 year	148.00	90.39	0.44	374.36	204.79	3388.89	402.85	108.82
Jock River	Reach 7	3389	5 year	129.00	90.23	0.41	341.72	193.95	3388.89	363.00	108.82
Jock River	Reach 7	3389	2 year	95.00	89.90	0.35	282.27	165.91	3388.89	292.71	108.82
Jock River	Reach 7	3633	100 year	205.00	90.75	1.83	115.09	54.38	3632.76	594.38	47.48
Jock River	Reach 7	3633	50 year	189.00	90.64	1.77	109.18	53.77	3632.76	556.06	47.48
Jock River	Reach 7	3633	25 year	167.00	90.49	1.69	100.98	52.93	3632.76	503.23	47.48
Jock River	Reach 7	3633	10 year	148.00	90.35	1.61	93.48	52.17	3632.76	458.56	47.48
Jock River	Reach 7	3633	5 year	129.00	90.19	1.53	85.32	51.33	3632.76	414.12	47.48
Jock River	Reach 7	3633	2 year	95.00	89.87	1.38	69.35	49.60	3632.76	335.26	47.48
Jock River	Reach 7	3672	100 year	205.00	90.71	2.90	72.78	35.87	3671.69	598.04	30.78
Jock River	Reach 7	3672	50 year	189.00	90.60	2.81	69.24	35.43	3671.69	559.53	30.78
Jock River	Reach 7	3672	25 year	167.00	90.46	2.66	64.26	34.84	3671.69	506.44	30.78
Jock River	Reach 7	3672	10 year	148.00	90.33	2.53	59.68	34.37	3671.69	461.54	30.78
Jock River	Reach 7	3672	5 year	129.00	90.18	2.40	54.67	33.84	3671.69	416.85	30.78
Jock River	Reach 7	3672	2 year	95.00	89.89	2.13	44.86	32.64	3671.69	337.48	30.78
Jock River	Reach 7	3677	greenbank								
				Bridge							
Jock River	Reach 7	3681	100 year	205.00	90.83	2.66	79.45	36.67	3681.42	598.75	31.23
Jock River	Reach 7	3681	50 year	189.00	90.72	2.57	75.63	36.28	3681.42	560.21	31.23
Jock River	Reach 7	3681	25 year	167.00	90.57	2.43	70.25	35.73	3681.42	507.08	31.23
Jock River	Reach 7	3681	10 year	148.00	90.43	2.31	65.33	35.12	3681.42	462.13	31.23
Jock River	Reach 7	3681	5 year	129.00	90.28	2.18	60.08	34.36	3681.42	417.39	31.23
Jock River	Reach 7	3681	2 year	95.00	89.98	1.91	49.88	32.84	3681.42	337.93	31.23
Jock River	Reach 7	3699	100 year	205.00	91.08	1.93	113.91	64.28	3698.82	600.44	38.24
Jock River	Reach 7	3699	50 year	189.00	90.96	1.86	107.36	49.70	3698.82	561.80	38.24
Jock River	Reach 7	3699	25 year	167.00	90.79	1.77	98.82	48.30	3698.82	508.55	38.24
Jock River	Reach 7	3699	10 year	148.00	90.63	1.69	91.23	47.01	3698.82	463.49	38.24
Jock River	Reach 7	3699	5 year	129.00	90.45	1.60	83.31	45.64	3698.82	418.64	38.24
Jock River	Reach 7	3699	2 year	95.00	90.12	1.41	68.30	42.98	3698.82	338.96	38.24
Jock River	Reach 7	3802	100 year	201.00	91.19	2.29	112.52	129.64	3801.92	612.11	33.38

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 7	3802	50 year	185.00	91.06	2.30	96.39	117.48	3801.92	572.31	33.38
Jock River	Reach 7	3802	25 year	164.00	90.89	2.20	82.97	57.69	3801.92	517.92	33.38
Jock River	Reach 7	3802	10 year	145.00	90.73	2.12	74.24	52.91	3801.92	472.02	33.38
Jock River	Reach 7	3802	5 year	126.00	90.57	2.03	65.80	47.83	3801.92	426.32	33.38
Jock River	Reach 7	3802	2 year	93.00	90.24	1.86	51.82	39.90	3801.92	345.15	33.38
Jock River	Reach 7	3888	100 year	201.00	91.45	1.42	199.38	144.35	3888.17	625.56	40.28
Jock River	Reach 7	3888	50 year	185.00	91.34	1.40	182.47	144.06	3888.17	584.33	40.28
Jock River	Reach 7	3888	25 year	164.00	91.15	1.40	154.87	143.58	3888.17	528.17	40.28
Jock River	Reach 7	3888	10 year	145.00	90.98	1.32	132.32	90.11	3888.17	480.93	40.28
Jock River	Reach 7	3888	5 year	126.00	90.80	1.27	116.73	84.80	3888.17	434.19	40.28
Jock River	Reach 7	3888	2 year	93.00	90.46	1.13	89.83	57.44	3888.17	351.26	40.28
Jock River	Reach 7	4042	100 year	201.00	91.55	0.77	303.59	212.30	4042.39	664.34	67.58
Jock River	Reach 7	4042	50 year	185.00	91.44	0.73	282.42	155.24	4042.39	620.18	67.58
Jock River	Reach 7	4042	25 year	164.00	91.25	0.69	256.08	129.70	4042.39	559.86	67.58
Jock River	Reach 7	4042	10 year	145.00	91.08	0.65	235.75	105.86	4042.39	509.31	67.58
Jock River	Reach 7	4042	5 year	126.00	90.90	0.60	218.21	91.02	4042.39	460.02	67.58
Jock River	Reach 7	4042	2 year	93.00	90.54	0.50	187.59	78.13	4042.39	372.65	67.58
Jock River	Reach 7	4241	100 year	201.00	91.58	0.72	379.79	336.90	4240.68	732.10	65.38
Jock River	Reach 7	4241	50 year	185.00	91.46	0.69	343.44	276.09	4240.68	682.23	65.38
Jock River	Reach 7	4241	25 year	164.00	91.28	0.66	297.71	213.54	4240.68	614.77	65.38
Jock River	Reach 7	4241	10 year	145.00	91.10	0.62	265.57	155.14	4240.68	559.02	65.38
Jock River	Reach 7	4241	5 year	126.00	90.92	0.57	241.73	116.32	4240.68	505.62	65.38
Jock River	Reach 7	4241	2 year	93.00	90.55	0.48	202.72	97.02	4240.68	411.35	65.38
Jock River	Reach 7	4380	100 year	201.00	91.59	0.96	285.34	293.30	4379.68	778.32	49.46
Jock River	Reach 7	4380	50 year	185.00	91.47	0.90	255.72	162.00	4379.68	723.87	49.46
Jock River	Reach 7	4380	25 year	164.00	91.28	0.86	227.89	136.62	4379.68	651.30	49.46
Jock River	Reach 7	4380	10 year	145.00	91.11	0.81	206.14	112.87	4379.68	591.80	49.46
Jock River	Reach 7	4380	5 year	126.00	90.93	0.75	187.55	92.50	4379.68	535.46	49.46
Jock River	Reach 7	4380	2 year	93.00	90.56	0.63	155.97	79.98	4379.68	436.28	49.46
Jock River	Reach 7	4534	100 year	201.00	91.61	1.00	274.05	379.13	4533.66	825.51	47.26
Jock River	Reach 7	4534	50 year	185.00	91.49	0.96	240.60	223.75	4533.66	765.48	47.26
Jock River	Reach 7	4534	25 year	164.00	91.31	0.92	208.25	193.85	4533.66	687.57	47.26
Jock River	Reach 7	4534	10 year	145.00	91.13	0.86	182.72	165.83	4533.66	623.81	47.26
Jock River	Reach 7	4534	5 year	126.00	90.95	0.80	163.24	93.94	4533.66	563.95	47.26
Jock River	Reach 7	4534	2 year	93.00	90.58	0.66	141.70	76.81	4533.66	459.80	47.26
Jock River	Reach 7	4803	100 year	201.00	91.67	0.85	347.21	489.71	4803.27	933.68	50.32
Jock River	Reach 7	4803	50 year	185.00	91.55	0.83	315.39	466.25	4803.27	860.42	50.32
Jock River	Reach 7	4803	25 year	164.00	91.36	0.80	266.91	441.18	4803.27	765.95	50.32
Jock River	Reach 7	4803	10 year	145.00	91.18	0.77	222.68	421.58	4803.27	687.78	50.32
Jock River	Reach 7	4803	5 year	126.00	90.99	0.72	179.07	103.05	4803.27	614.58	50.32
Jock River	Reach 7	4803	2 year	93.00	90.61	0.60	156.91	76.55	4803.27	501.71	50.32
Jock River	Reach 7	5002	100 year	201.00	91.71	0.60	413.94	486.84	5001.85	1039.64	75.00
Jock River	Reach 7	5002	50 year	185.00	91.59	0.57	388.96	462.66	5001.85	953.27	75.00
Jock River	Reach 7	5002	25 year	164.00	91.40	0.54	351.76	244.70	5001.85	841.67	75.00
Jock River	Reach 7	5002	10 year	145.00	91.22	0.51	318.49	221.61	5001.85	749.97	75.00
Jock River	Reach 7	5002	5 year	126.00	91.02	0.47	284.98	196.79	5001.85	663.60	75.00
Jock River	Reach 7	5002	2 year	93.00	90.64	0.40	239.30	104.44	5001.85	541.88	75.00
Jock River	Reach 7	5289	100 year	201.00	91.72	0.81	406.67	1007.78	5288.94	1186.40	51.74
Jock River	Reach 7	5289	50 year	185.00	91.60	0.80	351.10	853.36	5288.94	1077.12	51.74
Jock River	Reach 7	5289	25 year	164.00	91.41	0.78	270.71	588.05	5288.94	939.01	51.74
Jock River	Reach 7	5289	10 year	145.00	91.23	0.74	218.10	368.66	5288.94	830.47	51.74
Jock River	Reach 7	5289	5 year	126.00	91.03	0.69	188.00	133.33	5288.94	732.29	51.74
Jock River	Reach 7	5289	2 year	93.00	90.65	0.57	164.68	61.60	5288.94	599.98	51.74
Jock River	Reach 7	5538	100 year	201.00	91.75	0.83	358.89	887.34	5537.59	1327.79	47.22
Jock River	Reach 7	5538	50 year	185.00	91.63	0.81	310.24	761.98	5537.59	1191.97	47.22
Jock River	Reach 7	5538	25 year	164.00	91.44	0.76	250.79	523.02	5537.59	1021.81	47.22
Jock River	Reach 7	5538	10 year	145.00	91.26	0.71	221.62	351.61	5537.59	892.92	47.22
Jock River	Reach 7	5538	5 year	126.00	91.06	0.65	205.19	165.76	5537.59	782.49	47.22
Jock River	Reach 7	5538	2 year	93.00	90.67	0.54	178.38	67.73	5537.59	642.74	47.22
Jock River	Reach 7	5737	100 year	201.00	91.77	0.82	323.44	935.36	5736.74	1432.57	47.96
Jock River	Reach 7	5737	50 year	185.00	91.65	0.79	293.03	762.11	5736.74	1276.43	47.96
Jock River	Reach 7	5737	25 year	164.00	91.46	0.74	249.56	223.26	5736.74	1083.29	47.96
Jock River	Reach 7	5737	10 year	145.00	91.28	0.69	226.04	169.55	5736.74	942.91	47.96
Jock River	Reach 7	5737	5 year	126.00	91.08	0.63	207.05	111.24	5736.74	824.62	47.96
Jock River	Reach 7	5737	2 year	93.00	90.68	0.52	182.10	59.06	5736.74	678.70	47.96
Jock River	Reach 7	5910	100 year	201.00	91.78	0.97	254.40	1130.45	5910.01	1532.55	38.05

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 7	5910	50 year	185.00	91.66	0.93	242.27	967.62	5910.01	1356.43	38.05
Jock River	Reach 7	5910	25 year	164.00	91.47	0.87	223.12	598.14	5910.01	1140.38	38.05
Jock River	Reach 7	5910	10 year	145.00	91.29	0.82	204.68	514.87	5910.01	987.98	38.05
Jock River	Reach 7	5910	5 year	126.00	91.09	0.75	186.67	263.00	5910.01	859.78	38.05
Jock River	Reach 7	5910	2 year	93.00	90.69	0.62	158.53	64.75	5910.01	708.23	38.05
Jock River	Reach 7	5950	100 year	201.00	91.78	1.14	188.91	47.28	5950.01	1549.71	35.18
Jock River	Reach 7	5950	50 year	185.00	91.66	1.07	183.25	46.82	5950.01	1370.91	35.18
Jock River	Reach 7	5950	25 year	164.00	91.47	1.00	174.42	46.09	5950.01	1151.55	35.18
Jock River	Reach 7	5950	10 year	145.00	91.29	0.92	166.03	45.40	5950.01	996.95	35.18
Jock River	Reach 7	5950	5 year	126.00	91.09	0.84	157.04	44.66	5950.01	866.87	35.18
Jock River	Reach 7	5950	2 year	93.00	90.69	0.69	139.59	43.04	5950.01	714.21	35.18
Jock River	Reach 7	5956 cedarview		Bridge							
Jock River	Reach 7	5962	100 year	201.00	91.78	1.14	186.19	46.99	5962.41	1551.99	35.18
Jock River	Reach 7	5962	50 year	185.00	91.66	1.08	180.57	46.33	5962.41	1373.12	35.18
Jock River	Reach 7	5962	25 year	164.00	91.47	1.00	171.85	45.30	5962.41	1153.65	35.18
Jock River	Reach 7	5962	10 year	145.00	91.29	0.92	163.61	44.39	5962.41	998.96	35.18
Jock River	Reach 7	5962	5 year	126.00	91.09	0.84	154.83	43.40	5962.41	868.76	35.18
Jock River	Reach 7	5962	2 year	93.00	90.69	0.69	137.92	41.48	5962.41	715.90	35.18
Jock River	Reach 7	6016	100 year	201.00	91.83	0.87	349.43	876.52	6015.56	1573.05	42.01
Jock River	Reach 7	6016	50 year	185.00	91.70	0.85	314.88	834.45	6015.56	1390.39	42.01
Jock River	Reach 7	6016	25 year	164.00	91.50	0.83	261.29	769.05	6015.56	1165.41	42.01
Jock River	Reach 7	6016	10 year	145.00	91.31	0.78	226.50	186.20	6015.56	1009.34	42.01
Jock River	Reach 7	6016	5 year	126.00	91.11	0.73	196.53	163.25	6015.56	878.07	42.01
Jock River	Reach 7	6016	2 year	93.00	90.70	0.60	161.24	63.17	6015.56	723.85	42.01
Jock River	Reach 7	6215	100 year	201.00	91.87	0.56	523.15	1623.28	6215.13	1733.90	65.48
Jock River	Reach 7	6215	50 year	185.00	91.74	0.54	484.35	1414.36	6215.13	1520.62	65.48
Jock River	Reach 7	6215	25 year	164.00	91.54	0.52	424.09	1089.86	6215.13	1254.49	65.48
Jock River	Reach 7	6215	10 year	145.00	91.35	0.50	366.18	662.96	6215.13	1078.89	65.48
Jock River	Reach 7	6215	5 year	126.00	91.14	0.47	306.50	504.06	6215.13	931.96	65.48
Jock River	Reach 7	6215	2 year	93.00	90.73	0.39	246.10	101.41	6215.13	764.89	65.48
Jock River	Reach 7	6495	100 year	201.00	91.88	0.63	528.58	1440.78	6495.36	2068.32	49.48
Jock River	Reach 7	6495	50 year	185.00	91.75	0.62	489.65	1356.90	6495.36	1802.09	49.48
Jock River	Reach 7	6495	25 year	164.00	91.55	0.61	429.28	1226.78	6495.36	1464.29	49.48
Jock River	Reach 7	6495	10 year	145.00	91.36	0.60	371.19	1082.46	6495.36	1235.91	49.48
Jock River	Reach 7	6495	5 year	126.00	91.15	0.58	308.24	918.17	6495.36	1042.51	49.48
Jock River	Reach 7	6495	2 year	93.00	90.73	0.51	210.89	261.36	6495.36	831.69	49.48
Jock River	Reach 7	6550	100 year	201.00	91.89	0.52	571.59	1235.62	6550.44	2146.85	78.97
Jock River	Reach 7	6550	50 year	185.00	91.76	0.52	530.07	1220.27	6550.44	1870.83	78.97
Jock River	Reach 7	6550	25 year	164.00	91.56	0.51	465.72	1196.47	6550.44	1518.62	78.97
Jock River	Reach 7	6550	10 year	145.00	91.37	0.51	403.77	1188.25	6550.44	1277.25	78.97
Jock River	Reach 7	6550	5 year	126.00	91.16	0.50	336.57	1186.86	6550.44	1070.78	78.97
Jock River	Reach 7	6550	2 year	93.00	90.74	0.47	217.89	319.99	6550.44	845.12	78.97
Jock River	Reach 7	6745	100 year	196.00	91.90	0.45	599.39	1387.42	6744.80	2271.81	80.88
Jock River	Reach 7	6745	50 year	181.00	91.77	0.44	560.59	1349.86	6744.80	1984.68	80.88
Jock River	Reach 7	6745	25 year	160.00	91.57	0.42	500.59	1291.79	6744.80	1615.69	80.88
Jock River	Reach 7	6745	10 year	142.00	91.38	0.40	442.83	1045.18	6744.80	1359.12	80.88
Jock River	Reach 7	6745	5 year	123.00	91.17	0.37	380.22	833.46	6744.80	1137.66	80.88
Jock River	Reach 7	6745	2 year	91.00	90.75	0.31	300.93	115.13	6744.80	894.38	80.88
Jock River	Reach 7	6946	100 year	196.00	91.90	0.79	429.34	1248.23	6946.01	2481.11	39.46
Jock River	Reach 7	6946	50 year	181.00	91.77	0.78	390.31	1215.50	6946.01	2166.04	39.46
Jock River	Reach 7	6946	25 year	160.00	91.57	0.77	329.99	1164.91	6946.01	1755.09	39.46
Jock River	Reach 7	6946	10 year	142.00	91.38	0.76	272.20	924.39	6946.01	1461.95	39.46
Jock River	Reach 7	6946	5 year	123.00	91.17	0.72	217.03	632.32	6946.01	1208.93	39.46
Jock River	Reach 7	6946	2 year	91.00	90.75	0.61	158.80	117.26	6946.01	940.32	39.46
Jock River	Reach 7	7245	100 year	196.00	91.95	0.73	451.25	1223.66	7245.05	2767.77	38.80
Jock River	Reach 7	7245	50 year	181.00	91.83	0.73	412.46	1175.07	7245.05	2411.19	38.80
Jock River	Reach 7	7245	25 year	160.00	91.63	0.73	352.54	1100.00	7245.05	1938.72	38.80
Jock River	Reach 7	7245	10 year	142.00	91.43	0.74	294.72	957.59	7245.05	1591.51	38.80
Jock River	Reach 7	7245	5 year	123.00	91.22	0.74	231.20	657.95	7245.05	1293.82	38.80
Jock River	Reach 7	7245	2 year	91.00	90.80	0.65	149.46	101.75	7245.05	989.87	38.80
Jock River	Reach 7	7441	100 year	196.00	92.02	0.55	575.87	1076.41	7441.41	3125.75	37.08
Jock River	Reach 7	7441	50 year	181.00	91.89	0.55	537.74	1004.90	7441.41	2721.46	37.08
Jock River	Reach 7	7441	25 year	160.00	91.70	0.54	479.10	938.49	7441.41	2179.35	37.08
Jock River	Reach 7	7441	10 year	142.00	91.51	0.54	422.78	874.71	7441.41	1770.06	37.08
Jock River	Reach 7	7441	5 year	123.00	91.30	0.52	367.16	674.58	7441.41	1417.85	37.08
Jock River	Reach 7	7441	2 year	91.00	90.87	0.50	268.07	371.48	7441.41	1058.23	37.08



HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 7	7657	100 year	196.00	92.06	0.78	380.24	851.71	7656.55	3384.12	36.08
Jock River	Reach 7	7657	50 year	181.00	91.94	0.76	354.98	767.01	7656.55	2950.90	36.08
Jock River	Reach 7	7657	25 year	160.00	91.74	0.74	316.50	723.56	7656.55	2366.17	36.08
Jock River	Reach 7	7657	10 year	142.00	91.56	0.73	281.95	681.94	7656.55	1917.99	36.08
Jock River	Reach 7	7657	5 year	123.00	91.35	0.70	245.29	478.83	7656.55	1527.61	36.08
Jock River	Reach 7	7657	2 year	91.00	90.92	0.64	177.12	117.67	7656.55	1122.61	36.08
Jock River	Reach 7	7751	100 year	196.00	92.13	0.97	232.82	77.42	7750.77	3595.58	40.60
Jock River	Reach 7	7751	50 year	181.00	92.00	0.93	223.06	76.82	7750.77	3133.75	40.60
Jock River	Reach 7	7751	25 year	160.00	91.80	0.87	208.15	75.92	7750.77	2506.82	40.60
Jock River	Reach 7	7751	10 year	142.00	91.61	0.82	193.94	75.06	7750.77	2019.80	40.60
Jock River	Reach 7	7751	5 year	123.00	91.40	0.77	177.93	73.18	7750.77	1591.35	40.60
Jock River	Reach 7	7751	2 year	91.00	90.96	0.65	147.40	56.79	7750.77	1151.72	40.60
Jock River	Reach 7	7760 416 NB		Bridge							
Jock River	Reach 7	7768	100 year	196.00	92.15	0.97	229.41	73.19	7768.14	3599.40	40.60
Jock River	Reach 7	7768	50 year	181.00	92.02	0.93	219.98	72.25	7768.14	3137.42	40.60
Jock River	Reach 7	7768	25 year	160.00	91.82	0.87	205.74	70.81	7768.14	2510.24	40.60
Jock River	Reach 7	7768	10 year	142.00	91.63	0.82	192.35	69.42	7768.14	2022.99	40.60
Jock River	Reach 7	7768	5 year	123.00	91.41	0.76	177.47	67.52	7768.14	1594.29	40.60
Jock River	Reach 7	7768	2 year	91.00	90.97	0.65	148.62	62.19	7768.14	1154.15	40.60
Jock River	Reach 7	7776	100 year	196.00	92.15	0.98	227.15	72.19	7776.13	3601.22	40.60
Jock River	Reach 7	7776	50 year	181.00	92.02	0.94	217.83	71.32	7776.13	3139.15	40.60
Jock River	Reach 7	7776	25 year	160.00	91.82	0.88	203.76	69.89	7776.13	2511.87	40.60
Jock River	Reach 7	7776	10 year	142.00	91.63	0.83	190.54	68.50	7776.13	2024.52	40.60
Jock River	Reach 7	7776	5 year	123.00	91.41	0.77	175.83	66.79	7776.13	1595.69	40.60
Jock River	Reach 7	7776	2 year	91.00	90.97	0.66	147.09	62.22	7776.13	1155.33	40.60
Jock River	Reach 7	7786	100 year	196.00	92.16	0.98	226.96	76.24	7786.37	3603.54	40.60
Jock River	Reach 7	7786	50 year	181.00	92.03	0.94	217.49	75.32	7786.37	3141.38	40.60
Jock River	Reach 7	7786	25 year	160.00	91.83	0.88	203.06	73.78	7786.37	2513.95	40.60
Jock River	Reach 7	7786	10 year	142.00	91.64	0.83	189.35	72.28	7786.37	2026.46	40.60
Jock River	Reach 7	7786	5 year	123.00	91.42	0.77	173.96	69.35	7786.37	1597.48	40.60
Jock River	Reach 7	7786	2 year	91.00	90.97	0.66	145.42	59.14	7786.37	1156.83	40.60
Jock River	Reach 7	7797 416 SB		Bridge							
Jock River	Reach 7	7806	100 year	196.00	92.18	0.97	228.33	76.37	7805.57	3607.71	40.60
Jock River	Reach 7	7806	50 year	181.00	92.05	0.93	218.78	75.45	7805.57	3145.37	40.60
Jock River	Reach 7	7806	25 year	160.00	91.84	0.88	204.26	73.91	7805.57	2517.67	40.60
Jock River	Reach 7	7806	10 year	142.00	91.65	0.83	190.47	72.40	7805.57	2029.93	40.60
Jock River	Reach 7	7806	5 year	123.00	91.43	0.77	174.96	69.68	7805.57	1600.66	40.60
Jock River	Reach 7	7806	2 year	91.00	90.99	0.66	146.13	59.45	7805.57	1159.48	40.60
Jock River	Reach 7	7858	100 year	196.00	92.23	1.01	227.72	492.96	7858.49	3683.82	44.60
Jock River	Reach 7	7858	50 year	181.00	92.09	0.99	214.24	469.78	7858.49	3211.42	44.60
Jock River	Reach 7	7858	25 year	160.00	91.89	0.95	193.62	380.75	7858.49	2570.31	44.60
Jock River	Reach 7	7858	10 year	142.00	91.69	0.91	175.03	362.98	7858.49	2071.26	44.60
Jock River	Reach 7	7858	5 year	123.00	91.47	0.86	157.29	316.07	7858.49	1630.01	44.60
Jock River	Reach 7	7858	2 year	91.00	91.01	0.78	124.03	240.02	7858.49	1169.85	44.60
Jock River	Reach 7	7994	100 year	196.00	92.34	0.84	282.38	384.51	7993.54	3722.51	67.04
Jock River	Reach 7	7994	50 year	181.00	92.20	0.83	262.26	353.58	7993.54	3245.65	67.04
Jock River	Reach 7	7994	25 year	160.00	92.00	0.83	231.67	299.97	7993.54	2599.51	67.04
Jock River	Reach 7	7994	10 year	142.00	91.80	0.83	203.03	295.87	7993.54	2096.91	67.04
Jock River	Reach 7	7994	5 year	123.00	91.58	0.83	170.86	291.23	7993.54	1652.00	67.04
Jock River	Reach 7	7994	2 year	91.00	91.14	0.78	125.19	129.14	7993.54	1185.81	67.04
Jock River	Reach 7	8164	100 year	196.00	92.43	0.77	317.28	240.05	8164.43	3773.19	57.32
Jock River	Reach 7	8164	50 year	181.00	92.30	0.76	297.81	237.95	8164.43	3292.56	57.32
Jock River	Reach 7	8164	25 year	160.00	92.11	0.74	268.41	234.77	8164.43	2641.29	57.32
Jock River	Reach 7	8164	10 year	142.00	91.92	0.72	240.84	231.17	8164.43	2134.28	57.32
Jock River	Reach 7	8164	5 year	123.00	91.72	0.70	209.83	226.17	8164.43	1684.44	57.32
Jock River	Reach 7	8164	2 year	91.00	91.29	0.65	154.51	148.14	8164.43	1209.38	57.32
Jock River	Reach 7	8281	100 year	196.00	92.49	0.82	312.97	242.14	8281.41	3823.82	48.12
Jock River	Reach 7	8281	50 year	181.00	92.36	0.81	293.53	236.25	8281.41	3338.81	48.12
Jock River	Reach 7	8281	25 year	160.00	92.16	0.79	264.24	227.37	8281.41	2681.11	48.12
Jock River	Reach 7	8281	10 year	142.00	91.98	0.77	236.82	218.41	8281.41	2168.26	48.12
Jock River	Reach 7	8281	5 year	123.00	91.78	0.75	205.97	201.65	8281.41	1712.17	48.12
Jock River	Reach 7	8281	2 year	91.00	91.35	0.70	147.65	126.23	8281.41	1227.47	48.12
Jock River	Reach 7	8549	100 year	196.00	92.62	0.92	305.50	203.07	8548.93	3908.64	41.92
Jock River	Reach 7	8549	50 year	181.00	92.49	0.91	279.95	197.28	8548.93	3417.13	41.92

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 7	8549	25 year	160.00	92.30	0.89	243.32	184.70	8548.93	2749.98	41.92
Jock River	Reach 7	8549	10 year	142.00	92.12	0.86	211.31	172.95	8548.93	2228.69	41.92
Jock River	Reach 7	8549	5 year	123.00	91.92	0.82	178.19	148.86	8548.93	1763.70	41.92
Jock River	Reach 7	8549	2 year	91.00	91.50	0.73	128.36	49.87	8548.93	1264.22	41.92
Jock River	Reach 7	8600	100 year	196.00	92.65	1.17	200.13	111.18	8600.04	3927.98	41.70
Jock River	Reach 7	8600	50 year	181.00	92.52	1.13	186.29	107.66	8600.04	3434.33	41.70
Jock River	Reach 7	8600	25 year	160.00	92.33	1.07	167.73	89.56	8600.04	2764.20	41.70
Jock River	Reach 7	8600	10 year	142.00	92.15	1.01	153.13	74.71	8600.04	2240.46	41.70
Jock River	Reach 7	8600	5 year	123.00	91.95	0.95	139.62	61.39	8600.04	1773.13	41.70
Jock River	Reach 7	8600	2 year	91.00	91.53	0.83	114.94	55.57	8600.04	1270.36	41.70
Jock River	Reach 7	8648	100 year	196.00	92.66	1.90	116.77	35.34	8647.93	3936.87	20.00
Jock River	Reach 7	8648	50 year	181.00	92.54	1.81	112.44	34.73	8647.93	3442.61	20.00
Jock River	Reach 7	8648	25 year	160.00	92.35	1.68	106.05	33.54	8647.93	2771.67	20.00
Jock River	Reach 7	8648	10 year	142.00	92.18	1.57	100.27	32.36	8647.93	2247.28	20.00
Jock River	Reach 7	8648	5 year	123.00	91.98	1.44	93.90	31.04	8647.93	1779.32	20.00
Jock River	Reach 7	8648	2 year	91.00	91.56	1.20	81.35	28.75	8647.93	1275.40	20.00
Jock River	Reach 7	8654 moodie		Bridge							
Jock River	Reach 7	8660	100 year	196.00	92.67	1.92	117.18	34.86	8659.76	3938.25	20.00
Jock River	Reach 7	8660	50 year	181.00	92.55	1.83	112.90	34.31	8659.76	3443.94	20.00
Jock River	Reach 7	8660	25 year	160.00	92.36	1.70	106.55	33.41	8659.76	2772.92	20.00
Jock River	Reach 7	8660	10 year	142.00	92.18	1.58	100.75	32.54	8659.76	2248.46	20.00
Jock River	Reach 7	8660	5 year	123.00	91.98	1.45	94.29	31.54	8659.76	1780.43	20.00
Jock River	Reach 7	8660	2 year	91.00	91.56	1.21	81.46	29.42	8659.76	1276.37	20.00
Jock River	Reach 7	8693	100 year	196.00	92.84	1.15	224.46	113.96	8692.91	3945.39	41.20
Jock River	Reach 7	8693	50 year	181.00	92.70	1.13	208.27	112.47	8692.91	3450.57	41.20
Jock River	Reach 7	8693	25 year	160.00	92.48	1.10	184.43	109.98	8692.91	2778.79	41.20
Jock River	Reach 7	8693	10 year	142.00	92.29	1.07	163.18	104.90	8692.91	2253.64	41.20
Jock River	Reach 7	8693	5 year	123.00	92.06	1.03	140.36	99.17	8692.91	1784.88	41.20
Jock River	Reach 7	8693	2 year	91.00	91.61	0.94	103.10	62.56	8692.91	1279.64	41.20
Jock River	Reach 7	8787	100 year	196.00	92.86	1.23	171.25	49.47	8787.48	3964.09	35.88
Jock River	Reach 7	8787	50 year	181.00	92.72	1.18	164.39	48.73	8787.48	3468.18	35.88
Jock River	Reach 7	8787	25 year	160.00	92.51	1.10	154.28	47.62	8787.48	2794.80	35.88
Jock River	Reach 7	8787	10 year	142.00	92.31	1.03	145.13	46.63	8787.48	2268.23	35.88
Jock River	Reach 7	8787	5 year	123.00	92.09	0.95	135.05	45.52	8787.48	1797.93	35.88
Jock River	Reach 7	8787	2 year	91.00	91.65	0.81	115.20	43.22	8787.48	1290.00	35.88
Jock River	Reach 7	8811	100 year	196.00	92.91	0.87	224.68	52.00	8810.51	3969.22	48.20
Jock River	Reach 7	8811	50 year	181.00	92.76	0.83	218.97	51.87	8810.51	3473.13	48.20
Jock River	Reach 7	8811	25 year	160.00	92.55	0.76	210.42	51.67	8810.51	2799.50	48.20
Jock River	Reach 7	8811	10 year	142.00	92.35	0.70	202.49	51.49	8810.51	2272.70	48.20
Jock River	Reach 7	8811	5 year	123.00	92.13	0.64	193.57	51.29	8810.51	1802.13	48.20
Jock River	Reach 7	8811	2 year	91.00	91.67	0.52	175.38	50.89	8810.51	1293.69	48.20
Jock River	Reach 7	8817 railway		Bridge							
Jock River	Reach 7	8821	100 year	196.00	92.91	0.86	228.39	51.61	8820.74	3971.69	49.46
Jock River	Reach 7	8821	50 year	181.00	92.77	0.81	222.67	51.51	8820.74	3475.54	49.46
Jock River	Reach 7	8821	25 year	160.00	92.55	0.75	214.10	51.35	8820.74	2801.81	49.46
Jock River	Reach 7	8821	10 year	142.00	92.35	0.69	206.17	51.19	8820.74	2274.92	49.46
Jock River	Reach 7	8821	5 year	123.00	92.13	0.62	197.24	51.01	8820.74	1804.26	49.46
Jock River	Reach 7	8821	2 year	91.00	91.68	0.51	179.04	50.54	8820.74	1295.61	49.46
Jock River	Reach 7	8835	100 year	196.00	92.94	0.65	471.40	240.29	8835.43	3994.46	46.54
Jock River	Reach 7	8835	50 year	181.00	92.79	0.64	436.58	230.80	8835.43	3495.98	46.54
Jock River	Reach 7	8835	25 year	160.00	92.57	0.62	387.21	216.62	8835.43	2818.97	46.54
Jock River	Reach 7	8835	10 year	142.00	92.37	0.59	344.03	209.90	8835.43	2289.24	46.54
Jock River	Reach 7	8835	5 year	123.00	92.14	0.57	296.54	206.03	8835.43	1815.47	46.54
Jock River	Reach 7	8835	2 year	91.00	91.68	0.51	204.42	190.92	8835.43	1300.85	46.54
Jock River	Reach 7	9025	100 year	196.00	92.95	0.73	483.64	417.58	9024.59	4088.66	47.92
Jock River	Reach 7	9025	50 year	181.00	92.80	0.74	423.71	389.48	9024.59	3580.65	47.92
Jock River	Reach 7	9025	25 year	160.00	92.58	0.74	342.03	347.54	9024.59	2890.39	47.92
Jock River	Reach 7	9025	10 year	142.00	92.38	0.73	275.78	297.03	9024.59	2349.54	47.92
Jock River	Reach 7	9025	5 year	123.00	92.15	0.70	215.34	232.05	9024.59	1864.82	47.92
Jock River	Reach 7	9025	2 year	91.00	91.69	0.62	159.31	75.26	9024.59	1335.39	47.92
Jock River	Reach 7	9144	100 year	196.00	92.96	0.87	399.61	388.11	9144.23	4151.32	43.08
Jock River	Reach 7	9144	50 year	181.00	92.81	0.87	346.15	334.23	9144.23	3633.72	43.08
Jock River	Reach 7	9144	25 year	160.00	92.59	0.86	281.27	253.92	9144.23	2931.25	43.08
Jock River	Reach 7	9144	10 year	142.00	92.39	0.84	236.27	196.90	9144.23	2381.35	43.08
Jock River	Reach 7	9144	5 year	123.00	92.16	0.81	196.83	149.16	9144.23	1888.84	43.08

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 7	9144	2 year	91.00	91.70	0.74	142.87	101.43	9144.23	1352.70	43.08
Jock River	Reach 7	9333	100 year	196.00	92.99	0.75	472.89	542.55	9332.91	4235.94	47.56
Jock River	Reach 7	9333	50 year	181.00	92.84	0.76	399.54	457.46	9332.91	3706.47	47.56
Jock River	Reach 7	9333	25 year	160.00	92.62	0.75	313.19	330.28	9332.91	2989.62	47.56
Jock River	Reach 7	9333	10 year	142.00	92.42	0.74	261.04	195.59	9332.91	2430.19	47.56
Jock River	Reach 7	9333	5 year	123.00	92.19	0.71	219.19	171.36	9332.91	1929.49	47.56
Jock River	Reach 7	9333	2 year	91.00	91.73	0.64	153.60	107.06	9332.91	1381.13	47.56
Jock River	Reach 7	9487	100 year	196.00	93.01	0.80	461.94	613.85	9486.93	4327.28	49.86
Jock River	Reach 7	9487	50 year	181.00	92.86	0.79	387.65	467.59	9486.93	3781.69	49.86
Jock River	Reach 7	9487	25 year	160.00	92.64	0.79	298.94	343.22	9486.93	3045.86	49.86
Jock River	Reach 7	9487	10 year	142.00	92.44	0.78	240.86	238.60	9486.93	2474.65	49.86
Jock River	Reach 7	9487	5 year	123.00	92.21	0.75	195.22	161.80	9486.93	1964.82	49.86
Jock River	Reach 7	9487	2 year	91.00	91.75	0.66	147.52	77.82	9486.93	1405.23	49.86
Jock River	Reach 7	9751	100 year	196.00	93.04	0.88	397.64	400.33	9750.83	4446.15	40.64
Jock River	Reach 7	9751	50 year	181.00	92.90	0.87	351.81	278.93	9750.83	3882.75	40.64
Jock River	Reach 7	9751	25 year	160.00	92.68	0.88	294.22	255.32	9750.83	3125.96	40.64
Jock River	Reach 7	9751	10 year	142.00	92.48	0.80	247.43	135.76	9750.83	2540.38	40.64
Jock River	Reach 7	9751	5 year	123.00	92.25	0.77	217.43	127.68	9750.83	2020.26	40.64
Jock River	Reach 7	9751	2 year	91.00	91.79	0.72	161.71	114.21	9750.83	1446.51	40.64
Jock River	Reach 7	9923	100 year	196.00	93.06	0.82	400.24	268.92	9922.85	4488.66	42.32
Jock River	Reach 7	9923	50 year	181.00	92.92	0.81	365.11	232.93	9922.85	3921.24	42.32
Jock River	Reach 7	9923	25 year	160.00	92.71	0.78	319.50	200.04	9922.85	3160.24	42.32
Jock River	Reach 7	9923	10 year	142.00	92.51	0.75	281.92	168.17	9922.85	2571.36	42.32
Jock River	Reach 7	9923	5 year	123.00	92.28	0.73	244.29	162.90	9922.85	2048.26	42.32
Jock River	Reach 7	9923	2 year	91.00	91.82	0.70	170.89	154.68	9922.85	1468.91	42.32
Jock River	Reach 7	10060	100 year	196.00	93.07	0.94	327.69	225.92	10059.91	4518.41	42.38
Jock River	Reach 7	10060	50 year	181.00	92.93	0.93	297.79	202.87	10059.91	3948.92	42.38
Jock River	Reach 7	10060	25 year	160.00	92.72	0.92	256.62	187.75	10059.91	3185.35	42.38
Jock River	Reach 7	10060	10 year	142.00	92.52	0.90	219.70	173.07	10059.91	2594.31	42.38
Jock River	Reach 7	10060	5 year	123.00	92.29	0.88	182.16	158.97	10059.91	2069.06	42.38
Jock River	Reach 7	10060	2 year	91.00	91.84	0.80	126.30	72.96	10059.91	1485.73	42.38
Jock River	Reach 7	10144	100 year	196.00	93.11	0.60	512.84	281.84	10143.78	4553.66	60.13
Jock River	Reach 7	10144	50 year	181.00	92.97	0.59	473.44	274.99	10143.78	3981.27	60.13
Jock River	Reach 7	10144	25 year	160.00	92.76	0.57	417.01	262.69	10143.78	3213.60	60.13
Jock River	Reach 7	10144	10 year	142.00	92.55	0.56	364.70	250.76	10143.78	2618.81	60.13
Jock River	Reach 7	10144	5 year	123.00	92.33	0.55	309.64	236.97	10143.78	2089.68	60.13
Jock River	Reach 7	10144	2 year	91.00	91.87	0.51	216.44	138.71	10143.78	1500.10	60.13
Jock River	Reach 6	10120	100 year	185.00	93.11	0.57	510.51	281.91			60.13
Jock River	Reach 6	10120	50 year	170.00	92.97	0.56	471.13	275.08			60.13
Jock River	Reach 6	10120	25 year	151.00	92.76	0.55	414.63	262.78			60.13
Jock River	Reach 6	10120	10 year	134.00	92.55	0.54	362.30	250.85			60.13
Jock River	Reach 6	10120	5 year	116.00	92.33	0.52	307.20	237.05			60.13
Jock River	Reach 6	10120	2 year	86.00	91.87	0.49	213.83	138.80			60.13
Jock River	Reach 6	10174	100 year	185.00	93.09	1.01	285.44	237.53	53.85	21.43	38.86
Jock River	Reach 6	10174	50 year	170.00	92.95	0.99	254.37	183.62	53.85	19.53	38.86
Jock River	Reach 6	10174	25 year	151.00	92.74	0.98	217.65	165.23	53.85	17.02	38.86
Jock River	Reach 6	10174	10 year	134.00	92.54	0.97	185.80	147.44	53.85	14.76	38.86
Jock River	Reach 6	10174	5 year	116.00	92.31	0.94	153.68	139.72	53.85	12.41	38.86
Jock River	Reach 6	10174	2 year	86.00	91.86	0.86	104.23	47.70	53.85	8.56	38.86
Jock River	Reach 6	10370	100 year	185.00	93.14	0.87	285.89	155.03	249.85	65.08	47.74
Jock River	Reach 6	10370	50 year	170.00	93.00	0.85	264.40	153.57	249.85	59.15	47.74
Jock River	Reach 6	10370	25 year	151.00	92.80	0.81	239.66	116.72	249.85	52.43	47.74
Jock River	Reach 6	10370	10 year	134.00	92.60	0.79	217.07	109.58	249.85	46.62	47.74
Jock River	Reach 6	10370	5 year	116.00	92.37	0.75	193.58	102.75	249.85	40.78	47.74
Jock River	Reach 6	10370	2 year	86.00	91.92	0.70	149.57	91.94	249.85	30.68	47.74
Jock River	Reach 6	10505	100 year	185.00	93.16	1.00	271.85	177.02	385.43	103.09	40.48
Jock River	Reach 6	10505	50 year	170.00	93.02	0.98	247.56	170.69	385.43	93.66	40.48
Jock River	Reach 6	10505	25 year	151.00	92.81	0.95	214.41	150.82	385.43	82.69	40.48
Jock River	Reach 6	10505	10 year	134.00	92.61	0.92	186.41	130.64	385.43	73.22	40.48
Jock River	Reach 6	10505	5 year	116.00	92.39	0.88	159.88	110.48	385.43	63.85	40.48
Jock River	Reach 6	10505	2 year	86.00	91.94	0.79	118.19	75.16	385.43	47.90	40.48
Jock River	Reach 6	10713	100 year	185.00	93.21	0.77	316.49	132.81	592.56	162.40	47.60
Jock River	Reach 6	10713	50 year	170.00	93.07	0.74	298.24	130.10	592.56	148.84	47.60
Jock River	Reach 6	10713	25 year	151.00	92.86	0.71	271.97	126.44	592.56	132.09	47.60
Jock River	Reach 6	10713	10 year	134.00	92.66	0.68	247.11	123.05	592.56	117.44	47.60
Jock River	Reach 6	10713	5 year	116.00	92.44	0.64	220.18	117.77	592.56	102.80	47.60

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 6	10713	2 year	86.00	91.98	0.57	170.94	98.96	592.56	77.75	47.60
Jock River	Reach 6	10802	100 year	185.00	93.22	0.65	386.73	185.77	681.79	198.58	55.72
Jock River	Reach 6	10802	50 year	170.00	93.08	0.63	361.13	180.57	681.79	182.49	55.72
Jock River	Reach 6	10802	25 year	151.00	92.88	0.60	324.90	170.73	681.79	162.15	55.72
Jock River	Reach 6	10802	10 year	134.00	92.68	0.58	291.87	159.75	681.79	144.21	55.72
Jock River	Reach 6	10802	5 year	116.00	92.45	0.54	257.54	146.92	681.79	126.10	55.72
Jock River	Reach 6	10802	2 year	86.00	92.00	0.48	197.46	116.43	681.79	95.01	55.72
Jock River	Reach 6	11008	100 year	185.00	93.24	0.61	500.84	285.07	887.52	304.80	48.44
Jock River	Reach 6	11008	50 year	170.00	93.10	0.60	461.45	273.99	887.52	280.47	48.44
Jock River	Reach 6	11008	25 year	151.00	92.89	0.57	411.20	216.85	887.52	249.10	48.44
Jock River	Reach 6	11008	10 year	134.00	92.69	0.55	368.46	208.48	887.52	221.52	48.44
Jock River	Reach 6	11008	5 year	116.00	92.47	0.53	322.59	199.16	887.52	193.22	48.44
Jock River	Reach 6	11008	2 year	86.00	92.01	0.50	235.35	180.91	887.52	143.37	48.44
Jock River	Reach 6	11199	100 year	185.00	93.26	0.61	504.90	243.45	1079.24	408.88	42.50
Jock River	Reach 6	11199	50 year	170.00	93.12	0.59	471.22	235.73	1079.24	376.84	42.50
Jock River	Reach 6	11199	25 year	151.00	92.91	0.58	423.40	225.28	1079.24	335.11	42.50
Jock River	Reach 6	11199	10 year	134.00	92.71	0.57	379.01	216.33	1079.24	298.32	42.50
Jock River	Reach 6	11199	5 year	116.00	92.48	0.55	331.41	206.74	1079.24	260.14	42.50
Jock River	Reach 6	11199	2 year	86.00	92.02	0.54	238.81	196.96	1079.24	191.27	42.50
Jock River	Reach 6	11389	100 year	185.00	93.27	0.58	511.11	254.64	1268.92	480.87	51.74
Jock River	Reach 6	11389	50 year	170.00	93.13	0.56	475.85	247.37	1268.92	444.30	51.74
Jock River	Reach 6	11389	25 year	151.00	92.92	0.55	425.66	237.37	1268.92	396.18	51.74
Jock River	Reach 6	11389	10 year	134.00	92.72	0.54	378.91	228.81	1268.92	353.51	51.74
Jock River	Reach 6	11389	5 year	116.00	92.49	0.52	328.60	219.20	1268.92	309.07	51.74
Jock River	Reach 6	11389	2 year	86.00	92.04	0.50	233.46	197.98	1268.92	228.36	51.74
Jock River	Reach 6	11438	100 year	185.00	93.26	0.99	358.13	206.93	1317.94	502.18	22.91
Jock River	Reach 6	11438	50 year	170.00	93.12	0.99	329.26	202.13	1317.94	464.03	22.91
Jock River	Reach 6	11438	25 year	151.00	92.91	0.99	287.96	193.14	1317.94	413.67	22.91
Jock River	Reach 6	11438	10 year	134.00	92.71	0.99	250.13	182.00	1317.94	368.93	22.91
Jock River	Reach 6	11438	5 year	116.00	92.48	0.99	210.39	169.84	1317.94	322.28	22.91
Jock River	Reach 6	11438	2 year	86.00	92.02	1.04	135.76	153.02	1317.94	237.40	22.91
Jock River	Reach 6	11465	100 year	185.00	93.27	0.72	389.84	196.56	1345.38	512.44	45.66
Jock River	Reach 6	11465	50 year	170.00	93.13	0.70	362.80	190.75	1345.38	473.52	45.66
Jock River	Reach 6	11465	25 year	151.00	92.93	0.68	324.41	182.65	1345.38	422.07	45.66
Jock River	Reach 6	11465	10 year	134.00	92.73	0.66	288.76	175.60	1345.38	376.32	45.66
Jock River	Reach 6	11465	5 year	116.00	92.51	0.64	250.55	167.71	1345.38	328.61	45.66
Jock River	Reach 6	11465	2 year	86.00	92.06	0.59	180.00	146.36	1345.38	241.74	45.66
Jock River	Reach 6	11595	100 year	185.00	93.29	0.58	448.32	211.49	1475.12	566.81	60.79
Jock River	Reach 6	11595	50 year	170.00	93.15	0.56	419.01	207.66	1475.12	524.24	60.79
Jock River	Reach 6	11595	25 year	151.00	92.94	0.54	376.93	200.40	1475.12	467.57	60.79
Jock River	Reach 6	11595	10 year	134.00	92.74	0.52	338.19	189.28	1475.12	416.99	60.79
Jock River	Reach 6	11595	5 year	116.00	92.52	0.49	297.46	176.84	1475.12	364.16	60.79
Jock River	Reach 6	11595	2 year	86.00	92.07	0.44	222.60	156.84	1475.12	267.85	60.79
Jock River	Reach 6	11661	100 year	185.00	93.29	0.79	471.38	264.04	1540.78	597.00	20.80
Jock River	Reach 6	11661	50 year	170.00	93.15	0.78	435.02	254.22	1540.78	552.28	20.80
Jock River	Reach 6	11661	25 year	151.00	92.95	0.78	384.05	240.04	1540.78	492.55	20.80
Jock River	Reach 6	11661	10 year	134.00	92.75	0.79	337.42	227.04	1540.78	439.17	20.80
Jock River	Reach 6	11661	5 year	116.00	92.52	0.79	288.27	212.49	1540.78	383.39	20.80
Jock River	Reach 6	11661	2 year	86.00	92.07	0.84	196.38	193.45	1540.78	281.61	20.80
Jock River	Reach 6	11684	100 year	185.00	93.30	0.58	534.08	281.91	1563.92	608.64	50.28
Jock River	Reach 6	11684	50 year	170.00	93.16	0.57	495.39	271.08	1563.92	563.04	50.28
Jock River	Reach 6	11684	25 year	151.00	92.95	0.56	441.28	255.99	1563.92	502.10	50.28
Jock River	Reach 6	11684	10 year	134.00	92.76	0.55	391.57	244.17	1563.92	447.60	50.28
Jock River	Reach 6	11684	5 year	116.00	92.53	0.54	338.72	230.94	1563.92	390.64	50.28
Jock River	Reach 6	11684	2 year	86.00	92.09	0.53	240.86	206.53	1563.92	286.67	50.28
Jock River	Reach 6	11769	100 year	185.00	93.31	0.47	631.72	302.76	1648.57	657.98	57.18
Jock River	Reach 6	11769	50 year	170.00	93.17	0.46	590.71	284.01	1648.57	609.01	57.18
Jock River	Reach 6	11769	25 year	151.00	92.96	0.44	535.22	259.97	1648.57	543.43	57.18
Jock River	Reach 6	11769	10 year	134.00	92.77	0.43	484.40	252.51	1648.57	484.68	57.18
Jock River	Reach 6	11769	5 year	116.00	92.54	0.41	429.26	244.16	1648.57	423.15	57.18
Jock River	Reach 6	11769	2 year	86.00	92.10	0.40	323.96	228.39	1648.57	310.57	57.18
Jock River	Reach 5	11784	100 year	180.00	93.31	0.50	628.96	302.69			57.18
Jock River	Reach 5	11784	50 year	166.00	93.17	0.48	587.96	283.94			57.18
Jock River	Reach 5	11784	25 year	149.00	92.96	0.47	532.47	259.95			57.18
Jock River	Reach 5	11784	10 year	130.00	92.77	0.45	481.70	252.50			57.18
Jock River	Reach 5	11784	5 year	12.00	92.55	0.05	428.25	244.41			57.18

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 5	11784	2 year	84.00	92.10	0.42	321.27	228.38			57.18
Jock River	Reach 5	11911	100 year	180.00	93.32	0.45	782.98	453.03	126.53	89.33	60.30
Jock River	Reach 5	11911	50 year	166.00	93.18	0.45	720.27	442.01	126.53	82.77	60.30
Jock River	Reach 5	11911	25 year	149.00	92.97	0.45	631.22	419.82	126.53	73.62	60.30
Jock River	Reach 5	11911	10 year	130.00	92.77	0.44	550.76	390.86	126.53	65.32	60.30
Jock River	Reach 5	11911	5 year	12.00	92.55	0.05	467.42	358.40	126.53	56.66	60.30
Jock River	Reach 5	11911	2 year	84.00	92.11	0.45	320.32	324.39	126.53	40.59	60.30
Jock River	Reach 5	11991	100 year	180.00	93.32	0.58	750.93	460.86	206.82	150.91	24.94
Jock River	Reach 5	11991	50 year	166.00	93.18	0.58	687.56	444.73	206.82	139.28	24.94
Jock River	Reach 5	11991	25 year	149.00	92.98	0.60	598.75	421.14	206.82	123.00	24.94
Jock River	Reach 5	11991	10 year	130.00	92.78	0.60	517.40	398.64	206.82	108.20	24.94
Jock River	Reach 5	11991	5 year	12.00	92.55	0.07	429.55	372.81	206.82	92.67	24.94
Jock River	Reach 5	11991	2 year	84.00	92.11	0.64	294.74	290.53	206.82	65.28	24.94
Jock River	Reach 5	12030	100 year	180.00	93.32	0.48	780.60	474.68	246.13	181.01	53.18
Jock River	Reach 5	12030	50 year	166.00	93.18	0.48	715.33	459.42	246.13	166.86	53.18
Jock River	Reach 5	12030	25 year	149.00	92.98	0.48	623.95	422.75	246.13	147.03	53.18
Jock River	Reach 5	12030	10 year	130.00	92.78	0.48	542.21	403.32	246.13	129.03	53.18
Jock River	Reach 5	12030	5 year	12.00	92.55	0.05	451.47	380.59	246.13	109.99	53.18
Jock River	Reach 5	12030	2 year	84.00	92.12	0.47	318.91	291.07	246.13	77.34	53.18
Jock River	Reach 5	12211	100 year	180.00	93.33	0.61	439.02	185.73	426.87	291.22	57.36
Jock River	Reach 5	12211	50 year	166.00	93.19	0.60	413.21	185.73	426.87	268.84	57.36
Jock River	Reach 5	12211	25 year	149.00	92.99	0.59	375.47	185.60	426.87	237.35	57.36
Jock River	Reach 5	12211	10 year	130.00	92.79	0.56	339.17	183.48	426.87	208.68	57.36
Jock River	Reach 5	12211	5 year	12.00	92.55	0.06	295.37	180.89	426.87	177.48	57.36
Jock River	Reach 5	12211	2 year	84.00	92.13	0.51	220.78	177.62	426.87	126.12	57.36
Jock River	Reach 5	12304	100 year	180.00	93.35	0.66	639.08	376.32	519.71	382.63	22.26
Jock River	Reach 5	12304	50 year	166.00	93.21	0.67	586.52	376.32	519.71	353.08	22.26
Jock River	Reach 5	12304	25 year	149.00	93.01	0.71	509.78	376.32	519.71	311.12	22.26
Jock River	Reach 5	12304	10 year	130.00	92.81	0.72	437.18	354.67	519.71	272.51	22.26
Jock River	Reach 5	12304	5 year	12.00	92.55	0.08	349.64	325.65	519.71	229.34	22.26
Jock River	Reach 5	12304	2 year	84.00	92.15	0.85	228.19	276.44	519.71	160.28	22.26
Jock River	Reach 5	12319	100 year	180.00	93.35	0.47	735.48	371.83	534.80	401.54	49.34
Jock River	Reach 5	12319	50 year	166.00	93.22	0.47	683.78	371.83	534.80	370.52	49.34
Jock River	Reach 5	12319	25 year	149.00	93.01	0.48	608.51	371.83	534.80	326.40	49.34
Jock River	Reach 5	12319	10 year	130.00	92.82	0.47	536.58	356.29	534.80	285.74	49.34
Jock River	Reach 5	12319	5 year	12.00	92.55	0.05	445.26	334.02	534.80	240.04	49.34
Jock River	Reach 5	12319	2 year	84.00	92.17	0.46	326.21	280.93	534.80	167.58	49.34
Jock River	Reach 5	12599	100 year	180.00	93.37	0.40	731.65	286.19	814.53	576.81	66.66
Jock River	Reach 5	12599	50 year	166.00	93.23	0.39	692.16	284.07	814.53	535.03	66.66
Jock River	Reach 5	12599	25 year	149.00	93.03	0.38	635.36	281.00	814.53	475.36	66.66
Jock River	Reach 5	12599	10 year	130.00	92.83	0.36	580.27	279.08	814.53	419.75	66.66
Jock River	Reach 5	12599	5 year	12.00	92.55	0.04	502.96	276.61	814.53	354.25	66.66
Jock River	Reach 5	12599	2 year	84.00	92.18	0.34	401.59	274.90	814.53	255.93	66.66
Jock River	Reach 5	12805	100 year	180.00	93.37	0.45	647.70	242.23	1021.39	756.13	58.60
Jock River	Reach 5	12805	50 year	166.00	93.23	0.44	614.15	242.23	1021.39	704.55	58.60
Jock River	Reach 5	12805	25 year	149.00	93.03	0.43	565.50	242.23	1021.39	630.70	58.60
Jock River	Reach 5	12805	10 year	130.00	92.84	0.40	517.88	241.31	1021.39	561.26	58.60
Jock River	Reach 5	12805	5 year	12.00	92.55	0.04	449.32	239.70	1021.39	476.07	58.60
Jock River	Reach 5	12805	2 year	84.00	92.19	0.36	363.22	238.54	1021.39	352.40	58.60
Jock River	Reach 5	12949	100 year	180.00	93.37	0.67	331.10	130.43	1165.17	841.75	53.14
Jock River	Reach 5	12949	50 year	166.00	93.23	0.64	313.58	123.58	1165.17	785.23	53.14
Jock River	Reach 5	12949	25 year	149.00	93.03	0.61	289.87	113.64	1165.17	704.44	53.14
Jock River	Reach 5	12949	10 year	130.00	92.84	0.56	270.03	97.30	1165.17	628.66	53.14
Jock River	Reach 5	12949	5 year	12.00	92.55	0.06	243.02	91.83	1165.17	534.57	53.14
Jock River	Reach 5	12949	2 year	84.00	92.19	0.45	211.09	88.40	1165.17	399.99	53.14
Jock River	Reach 5	13098	100 year	180.00	93.39	0.56	451.41	145.09	1314.27	900.34	53.98
Jock River	Reach 5	13098	50 year	166.00	93.25	0.54	431.24	145.09	1314.27	840.93	53.98
Jock River	Reach 5	13098	25 year	149.00	93.05	0.51	402.05	145.09	1314.27	756.09	53.98
Jock River	Reach 5	13098	10 year	130.00	92.85	0.48	373.39	144.14	1314.27	676.65	53.98
Jock River	Reach 5	13098	5 year	12.00	92.55	0.05	330.57	142.24	1314.27	577.31	53.98
Jock River	Reach 5	13098	2 year	84.00	92.20	0.39	281.38	140.54	1314.27	436.68	53.98
Jock River	Reach 5	13282	100 year	180.00	93.40	0.42	627.59	219.47	1498.14	1011.03	62.36
Jock River	Reach 5	13282	50 year	166.00	93.26	0.40	596.94	219.01	1498.14	946.22	62.36
Jock River	Reach 5	13282	25 year	149.00	93.06	0.39	552.79	218.33	1498.14	853.61	62.36
Jock River	Reach 5	13282	10 year	130.00	92.86	0.37	509.36	217.21	1498.14	766.52	62.36
Jock River	Reach 5	13282	5 year	12.00	92.55	0.04	442.29	215.15	1498.14	655.52	62.36

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 5	13282	2 year	84.00	92.21	0.32	369.82	211.49	1498.14	501.96	62.36
Jock River	Reach 5	13498	100 year	180.00	93.41	0.52	452.43	155.63	1714.11	1132.65	64.00
Jock River	Reach 5	13498	50 year	166.00	93.27	0.50	430.77	154.43	1714.11	1061.89	64.00
Jock River	Reach 5	13498	25 year	149.00	93.07	0.48	399.79	152.68	1714.11	960.73	64.00
Jock River	Reach 5	13498	10 year	130.00	92.87	0.45	369.48	151.40	1714.11	865.24	64.00
Jock River	Reach 5	13498	5 year	12.00	92.55	0.05	321.98	149.71	1714.11	741.20	64.00
Jock River	Reach 5	13498	2 year	84.00	92.22	0.39	272.53	146.09	1714.11	573.75	64.00
Jock River	Reach 5	13518	100 year	180.00	93.40	0.78	234.70	47.05	1733.69	1143.88	44.00
Jock River	Reach 5	13518	50 year	166.00	93.26	0.74	228.19	46.89	1733.69	1072.56	44.00
Jock River	Reach 5	13518	25 year	149.00	93.06	0.69	218.82	46.67	1733.69	970.61	44.00
Jock River	Reach 5	13518	10 year	130.00	92.86	0.63	209.60	46.45	1733.69	874.35	44.00
Jock River	Reach 5	13518	5 year	12.00	92.55	0.06	195.20	46.12	1733.69	749.11	44.00
Jock River	Reach 5	13518	2 year	84.00	92.22	0.47	179.79	45.84	1733.69	580.40	44.00
Jock River	Reach 5	13524	twin elm	Bridge							
Jock River	Reach 5	13529	100 year	180.00	93.42	0.77	237.41	55.35	1745.13	1145.84	44.58
Jock River	Reach 5	13529	50 year	166.00	93.28	0.73	230.57	54.49	1745.13	1074.52	44.58
Jock River	Reach 5	13529	25 year	149.00	93.07	0.69	220.74	53.25	1745.13	972.55	44.58
Jock River	Reach 5	13529	10 year	130.00	92.87	0.63	211.04	52.42	1745.13	876.27	44.58
Jock River	Reach 5	13529	5 year	12.00	92.55	0.06	195.64	51.48	1745.13	751.00	44.58
Jock River	Reach 5	13529	2 year	84.00	92.22	0.47	179.76	49.66	1745.13	582.26	44.58
Jock River	Reach 5	13548	100 year	180.00	93.42	0.90	241.17	84.66	1764.21	1150.83	41.04
Jock River	Reach 5	13548	50 year	166.00	93.28	0.87	229.33	81.22	1764.21	1079.29	41.04
Jock River	Reach 5	13548	25 year	149.00	93.07	0.82	213.20	76.28	1764.21	977.01	41.04
Jock River	Reach 5	13548	10 year	130.00	92.87	0.76	198.24	72.14	1764.21	880.45	41.04
Jock River	Reach 5	13548	5 year	12.00	92.55	0.08	176.16	66.26	1764.21	754.75	41.04
Jock River	Reach 5	13548	2 year	84.00	92.22	0.61	154.57	63.37	1764.21	585.60	41.04
Jock River	Reach 5	13572	100 year	180.00	93.42	0.93	211.28	66.47	1788.36	1156.35	36.54
Jock River	Reach 5	13572	50 year	166.00	93.28	0.89	202.29	60.05	1788.36	1084.55	36.54
Jock River	Reach 5	13572	25 year	149.00	93.07	0.83	190.98	50.84	1788.36	981.93	36.54
Jock River	Reach 5	13572	10 year	130.00	92.87	0.76	181.32	47.04	1788.36	885.07	36.54
Jock River	Reach 5	13572	5 year	12.00	92.55	0.08	166.44	45.82	1788.36	758.92	36.54
Jock River	Reach 5	13572	2 year	84.00	92.22	0.58	151.48	44.51	1788.36	589.32	36.54
Jock River	Reach 5	13593	100 year	180.00	93.46	0.41	708.31	264.62	1809.21	1196.01	49.76
Jock River	Reach 5	13593	50 year	166.00	93.32	0.40	669.83	261.24	1809.21	1121.74	49.76
Jock River	Reach 5	13593	25 year	149.00	93.11	0.39	615.72	256.40	1809.21	1015.66	49.76
Jock River	Reach 5	13593	10 year	130.00	92.90	0.37	563.08	250.28	1809.21	915.44	49.76
Jock River	Reach 5	13593	5 year	12.00	92.55	0.04	478.05	237.58	1809.21	783.89	49.76
Jock River	Reach 5	13593	2 year	84.00	92.24	0.32	404.41	228.88	1809.21	609.61	49.76
Jock River	Reach 5	13855	100 year	180.00	93.47	0.30	727.57	249.70	2070.77	1395.21	112.20
Jock River	Reach 5	13855	50 year	166.00	93.32	0.29	691.79	239.14	2070.77	1310.38	112.20
Jock River	Reach 5	13855	25 year	149.00	93.11	0.28	643.40	224.06	2070.77	1189.72	112.20
Jock River	Reach 5	13855	10 year	130.00	92.91	0.26	598.20	213.49	2070.77	1075.60	112.20
Jock River	Reach 5	13855	5 year	12.00	92.55	0.03	524.02	204.66	2070.77	921.47	112.20
Jock River	Reach 5	13855	2 year	84.00	92.24	0.20	461.56	198.28	2070.77	727.90	112.20
Jock River	Reach 5	14023	100 year	180.00	93.47	0.45	596.46	256.83	2238.71	1504.33	58.62
Jock River	Reach 5	14023	50 year	166.00	93.32	0.44	559.86	242.81	2238.71	1413.55	58.62
Jock River	Reach 5	14023	25 year	149.00	93.12	0.42	511.18	222.81	2238.71	1284.94	58.62
Jock River	Reach 5	14023	10 year	130.00	92.91	0.40	466.67	208.57	2238.71	1163.48	58.62
Jock River	Reach 5	14023	5 year	12.00	92.55	0.04	394.69	196.25	2238.71	997.39	58.62
Jock River	Reach 5	14023	2 year	84.00	92.24	0.34	337.01	181.49	2238.71	794.00	58.62
Jock River	Reach 5	14247	100 year	180.00	93.48	0.45	577.53	217.73	2463.34	1631.56	62.24
Jock River	Reach 5	14247	50 year	166.00	93.33	0.44	545.74	216.09	2463.34	1533.38	62.24
Jock River	Reach 5	14247	25 year	149.00	93.12	0.43	500.82	213.76	2463.34	1394.66	62.24
Jock River	Reach 5	14247	10 year	130.00	92.91	0.41	456.69	208.22	2463.34	1263.65	62.24
Jock River	Reach 5	14247	5 year	12.00	92.55	0.04	384.38	190.51	2463.34	1082.05	62.24
Jock River	Reach 5	14247	2 year	84.00	92.25	0.35	327.93	183.65	2463.34	866.39	62.24
Jock River	Reach 5	14469	100 year	180.00	93.48	0.53	508.18	182.60	2685.48	1745.64	53.68
Jock River	Reach 5	14469	50 year	166.00	93.34	0.52	481.46	182.20	2685.48	1641.38	53.68
Jock River	Reach 5	14469	25 year	149.00	93.13	0.50	443.48	181.63	2685.48	1494.06	53.68
Jock River	Reach 5	14469	10 year	130.00	92.92	0.47	405.72	180.85	2685.48	1354.54	53.68
Jock River	Reach 5	14469	5 year	12.00	92.55	0.05	339.45	178.89	2685.48	1158.53	53.68
Jock River	Reach 5	14469	2 year	84.00	92.25	0.41	290.00	160.51	2685.48	931.88	53.68
Jock River	Reach 5	14685	100 year	180.00	93.49	0.60	478.83	166.72	2900.58	1855.60	41.84
Jock River	Reach 5	14685	50 year	166.00	93.35	0.58	454.43	166.28	2900.58	1745.62	41.84
Jock River	Reach 5	14685	25 year	149.00	93.14	0.56	419.79	165.66	2900.58	1590.17	41.84

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 5	14685	10 year	130.00	92.93	0.54	385.32	164.71	2900.58	1442.57	41.84
Jock River	Reach 5	14685	5 year	12.00	92.55	0.06	323.91	161.80	2900.58	1232.26	41.84
Jock River	Reach 5	14685	2 year	84.00	92.26	0.47	278.17	156.16	2900.58	994.92	41.84
Jock River	Reach 5	14795	100 year	180.00	93.50	0.57	460.98	157.90	3011.12	1902.47	52.62
Jock River	Reach 5	14795	50 year	166.00	93.35	0.55	437.96	156.31	3011.12	1790.18	52.62
Jock River	Reach 5	14795	25 year	149.00	93.14	0.53	405.60	154.05	3011.12	1631.47	52.62
Jock River	Reach 5	14795	10 year	130.00	92.93	0.49	374.06	147.29	3011.12	1480.65	52.62
Jock River	Reach 5	14795	5 year	12.00	92.55	0.05	318.28	145.45	3011.12	1264.63	52.62
Jock River	Reach 5	14795	2 year	84.00	92.27	0.42	277.16	143.73	3011.12	1023.06	52.62
Jock River	Reach 5	14966	100 year	180.00	93.50	0.60	429.06	136.67	3181.65	1978.36	48.86
Jock River	Reach 5	14966	50 year	166.00	93.36	0.58	409.08	135.91	3181.65	1862.40	48.86
Jock River	Reach 5	14966	25 year	149.00	93.15	0.55	380.87	134.81	3181.65	1698.52	48.86
Jock River	Reach 5	14966	10 year	130.00	92.94	0.52	352.84	133.75	3181.65	1542.63	48.86
Jock River	Reach 5	14966	5 year	12.00	92.55	0.06	301.37	131.99	3181.65	1317.47	48.86
Jock River	Reach 5	14966	2 year	84.00	92.27	0.44	264.83	130.76	3181.65	1069.27	48.86
Jock River	Reach 5	15103	100 year	180.00	93.51	0.54	461.07	166.95	3318.54	2039.29	62.98
Jock River	Reach 5	15103	50 year	166.00	93.36	0.52	436.56	166.65	3318.54	1920.28	62.98
Jock River	Reach 5	15103	25 year	149.00	93.15	0.50	401.82	166.18	3318.54	1752.10	62.98
Jock River	Reach 5	15103	10 year	130.00	92.95	0.48	367.09	165.65	3318.54	1591.91	62.98
Jock River	Reach 5	15103	5 year	12.00	92.55	0.05	302.21	164.27	3318.54	1358.78	62.98
Jock River	Reach 5	15103	2 year	84.00	92.28	0.40	261.65	139.75	3318.54	1105.30	62.98
Jock River	Reach 5	15299	100 year	180.00	93.52	0.56	519.41	276.85	3514.87	2136.16	59.00
Jock River	Reach 5	15299	50 year	166.00	93.37	0.56	478.96	271.54	3514.87	2010.72	59.00
Jock River	Reach 5	15299	25 year	149.00	93.16	0.55	423.07	263.13	3514.87	1833.55	59.00
Jock River	Reach 5	15299	10 year	130.00	92.95	0.50	372.49	177.58	3514.87	1664.91	59.00
Jock River	Reach 5	15299	5 year	12.00	92.55	0.05	305.92	154.38	3514.87	1418.77	59.00
Jock River	Reach 5	15299	2 year	84.00	92.29	0.43	265.86	149.54	3514.87	1157.32	59.00
Jock River	Reach 5	15496	100 year	180.00	93.53	0.56	568.48	505.06	3712.30	2245.42	64.76
Jock River	Reach 5	15496	50 year	166.00	93.38	0.56	497.64	443.29	3712.30	2108.03	64.76
Jock River	Reach 5	15496	25 year	149.00	93.17	0.54	417.09	330.01	3712.30	1916.48	64.76
Jock River	Reach 5	15496	10 year	130.00	92.96	0.51	359.90	217.40	3712.30	1736.83	64.76
Jock River	Reach 5	15496	5 year	12.00	92.55	0.05	285.54	145.99	3712.30	1476.78	64.76
Jock River	Reach 5	15496	2 year	84.00	92.30	0.42	250.66	132.25	3712.30	1207.97	64.76
Jock River	Reach 5	15715	100 year	180.00	93.54	0.49	639.59	342.63	3931.21	2388.67	63.74
Jock River	Reach 5	15715	50 year	166.00	93.39	0.48	590.03	333.24	3931.21	2236.36	63.74
Jock River	Reach 5	15715	25 year	149.00	93.19	0.48	521.69	322.85	3931.21	2026.47	63.74
Jock River	Reach 5	15715	10 year	130.00	92.97	0.47	454.43	309.94	3931.21	1831.66	63.74
Jock River	Reach 5	15715	5 year	12.00	92.55	0.05	336.32	250.22	3931.21	1548.46	63.74
Jock River	Reach 5	15715	2 year	84.00	92.31	0.43	276.93	233.25	3931.21	1268.40	63.74
Jock River	Reach 5	15865	100 year	180.00	93.55	0.49	708.26	477.61	4081.07	2502.49	62.42
Jock River	Reach 5	15865	50 year	166.00	93.40	0.49	638.42	473.07	4081.07	2339.67	62.42
Jock River	Reach 5	15865	25 year	149.00	93.19	0.50	540.52	466.63	4081.07	2115.16	62.42
Jock River	Reach 5	15865	10 year	130.00	92.98	0.48	445.13	339.13	4081.07	1906.08	62.42
Jock River	Reach 5	15865	5 year	12.00	92.55	0.05	323.29	278.58	4081.07	1602.26	62.42
Jock River	Reach 5	15865	2 year	84.00	92.31	0.41	271.94	180.62	4081.07	1312.80	62.42
Jock River	Reach 5	16112	100 year	180.00	93.55	0.46	597.25	329.54	4328.45	2618.84	76.44
Jock River	Reach 5	16112	50 year	166.00	93.41	0.45	549.28	325.63	4328.45	2447.78	76.44
Jock River	Reach 5	16112	25 year	149.00	93.20	0.44	482.91	316.98	4328.45	2211.70	76.44
Jock River	Reach 5	16112	10 year	130.00	92.99	0.42	416.76	305.21	4328.45	1991.08	76.44
Jock River	Reach 5	16112	5 year	12.00	92.55	0.05	312.02	175.62	4328.45	1668.62	76.44
Jock River	Reach 5	16112	2 year	84.00	92.32	0.35	275.86	144.61	4328.45	1371.19	76.44
Jock River	Reach 4	16165	100 year	181.76	93.55	0.46	582.39	329.54			76.44
Jock River	Reach 4	16165	50 year	167.04	93.41	0.45	534.37	325.64			76.44
Jock River	Reach 4	16165	25 year	148.48	93.20	0.45	467.95	316.99			76.44
Jock River	Reach 4	16165	10 year	130.90	92.99	0.44	401.68	305.13			76.44
Jock River	Reach 4	16165	5 year	113.33	92.55	0.45	295.84	173.60			76.44
Jock River	Reach 4	16165	2 year	85.12	92.32	0.37	260.79	144.56			76.44
Jock River	Reach 4	16465	100 year	181.76	93.57	0.48	659.19	316.96	299.96	143.47	30.00
Jock River	Reach 4	16465	50 year	167.04	93.42	0.48	612.92	316.96	299.96	131.94	30.00
Jock River	Reach 4	16465	25 year	148.48	93.21	0.49	547.56	316.96	299.96	115.97	30.00
Jock River	Reach 4	16465	10 year	130.90	93.00	0.50	480.48	316.96	299.96	100.00	30.00
Jock River	Reach 4	16465	5 year	113.33	92.56	0.61	346.49	291.87	299.96	73.01	30.00
Jock River	Reach 4	16465	2 year	85.12	92.33	0.57	280.43	284.01	299.96	62.78	30.00
Jock River	Reach 4	16480	100 year	181.76	93.53	1.39	142.41	41.76	315.38	211.64	30.00
Jock River	Reach 4	16480	50 year	167.04	93.39	1.33	136.54	41.17	315.38	195.02	30.00
Jock River	Reach 4	16480	25 year	148.48	93.19	1.25	128.35	40.38	315.38	171.87	30.00

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 4	16480	10 year	130.90	92.98	1.17	120.09	39.57	315.38	148.54	30.00
Jock River	Reach 4	16480	5 year	113.33	92.54	1.16	103.25	37.97	315.38	106.96	30.00
Jock River	Reach 4	16480	2 year	85.12	92.32	0.94	94.95	37.13	315.38	89.61	30.00
Jock River	Reach 4	16486 eagleson		Bridge							
Jock River	Reach 4	16493	100 year	181.76	93.53	1.41	139.89	41.81	327.99	213.37	30.00
Jock River	Reach 4	16493	50 year	167.04	93.39	1.34	134.00	41.16	327.99	196.68	30.00
Jock River	Reach 4	16493	25 year	148.48	93.19	1.26	125.81	40.23	327.99	173.43	30.00
Jock River	Reach 4	16493	10 year	130.90	92.98	1.18	117.60	39.27	327.99	150.00	30.00
Jock River	Reach 4	16493	5 year	113.33	92.55	1.17	101.00	37.31	327.99	108.20	30.00
Jock River	Reach 4	16493	2 year	85.12	92.33	0.95	92.81	36.28	327.99	90.76	30.00
Jock River	Reach 4	16505	100 year	181.76	93.65	0.77	440.38	279.65	340.06	251.79	30.00
Jock River	Reach 4	16505	50 year	167.04	93.49	0.77	397.73	254.81	340.06	230.71	30.00
Jock River	Reach 4	16505	25 year	148.48	93.28	0.80	342.49	253.30	340.06	201.83	30.00
Jock River	Reach 4	16505	10 year	130.90	93.05	0.84	285.78	251.74	340.06	172.62	30.00
Jock River	Reach 4	16505	5 year	113.33	92.58	1.11	172.43	230.34	340.06	119.32	30.00
Jock River	Reach 4	16505	2 year	85.12	92.33	1.03	119.50	173.87	340.06	96.62	30.00
Jock River	Reach 4	16627	100 year	181.76	93.67	0.38	610.49	246.46	461.64	329.65	101.36
Jock River	Reach 4	16627	50 year	167.04	93.51	0.37	572.85	245.99	461.64	302.01	101.36
Jock River	Reach 4	16627	25 year	148.48	93.30	0.36	520.30	244.75	461.64	264.40	101.36
Jock River	Reach 4	16627	10 year	130.90	93.08	0.35	466.70	243.46	461.64	226.25	101.36
Jock River	Reach 4	16627	5 year	113.33	92.64	0.37	365.30	215.71	461.64	155.63	101.36
Jock River	Reach 4	16627	2 year	85.12	92.39	0.32	312.81	196.78	461.64	124.69	101.36
Jock River	Reach 4	16725	100 year	181.76	93.67	0.46	626.70	263.30	559.84	369.98	38.08
Jock River	Reach 4	16725	50 year	167.04	93.51	0.45	586.48	262.77	559.84	340.00	38.08
Jock River	Reach 4	16725	25 year	148.48	93.30	0.45	530.43	260.45	559.84	299.10	38.08
Jock River	Reach 4	16725	10 year	130.90	93.08	0.44	473.51	257.95	559.84	257.60	38.08
Jock River	Reach 4	16725	5 year	113.33	92.64	0.48	365.96	230.36	559.84	180.49	38.08
Jock River	Reach 4	16725	2 year	85.12	92.39	0.42	310.39	204.01	559.84	146.10	38.08
Jock River	Reach 4	16872	100 year	181.76	93.67	0.52	565.35	263.81	706.55	457.42	32.73
Jock River	Reach 4	16872	50 year	167.04	93.52	0.52	525.08	263.29	706.55	421.53	32.73
Jock River	Reach 4	16872	25 year	148.48	93.31	0.52	469.15	259.28	706.55	372.43	32.73
Jock River	Reach 4	16872	10 year	130.90	93.09	0.53	412.79	254.84	706.55	322.61	32.73
Jock River	Reach 4	16872	5 year	113.33	92.65	0.59	309.06	217.31	706.55	230.01	32.73
Jock River	Reach 4	16872	2 year	85.12	92.40	0.52	256.31	199.63	706.55	187.67	32.73
Jock River	Reach 3	16845	100 year	166.76	93.67	0.48	580.91	263.82			32.73
Jock River	Reach 3	16845	50 year	153.04	93.52	0.48	540.65	263.29			32.73
Jock River	Reach 3	16845	25 year	135.48	93.31	0.48	484.73	259.30			32.73
Jock River	Reach 3	16845	10 year	119.90	93.09	0.48	428.36	254.86			32.73
Jock River	Reach 3	16845	5 year	104.33	92.65	0.53	324.68	217.45			32.73
Jock River	Reach 3	16845	2 year	78.12	92.40	0.47	271.88	199.66			32.73
Jock River	Reach 3	16924	100 year	166.76	93.67	0.55	464.87	196.99	79.23	41.43	37.61
Jock River	Reach 3	16924	50 year	153.04	93.52	0.55	434.82	196.99	79.23	38.64	37.61
Jock River	Reach 3	16924	25 year	135.48	93.31	0.53	393.40	190.46	79.23	34.79	37.61
Jock River	Reach 3	16924	10 year	119.90	93.09	0.52	352.56	183.05	79.23	30.94	37.61
Jock River	Reach 3	16924	5 year	104.33	92.66	0.57	276.57	168.66	79.23	23.82	37.61
Jock River	Reach 3	16924	2 year	78.12	92.40	0.50	234.29	161.93	79.23	20.05	37.61
Jock River	Reach 3	17132	100 year	166.76	93.67	0.89	289.55	156.41	286.71	113.50	31.48
Jock River	Reach 3	17132	50 year	153.04	93.52	0.88	266.61	145.22	286.71	105.76	31.48
Jock River	Reach 3	17132	25 year	135.48	93.31	0.86	236.41	139.07	286.71	95.20	31.48
Jock River	Reach 3	17132	10 year	119.90	93.09	0.85	206.61	133.85	286.71	84.74	31.48
Jock River	Reach 3	17132	5 year	104.33	92.66	0.87	161.69	93.83	286.71	66.26	31.48
Jock River	Reach 3	17132	2 year	78.12	92.41	0.74	138.45	88.71	286.71	56.32	31.48
Jock River	Reach 3	17209	100 year	166.76	93.69	0.63	393.96	190.87	363.54	132.18	46.42
Jock River	Reach 3	17209	50 year	153.04	93.54	0.62	365.02	189.75	363.54	123.31	46.42
Jock River	Reach 3	17209	25 year	135.48	93.33	0.60	325.05	185.34	363.54	111.26	46.42
Jock River	Reach 3	17209	10 year	119.90	93.11	0.59	285.34	180.12	363.54	99.29	46.42
Jock River	Reach 3	17209	5 year	104.33	92.69	0.63	214.65	144.97	363.54	78.06	46.42
Jock River	Reach 3	17209	2 year	78.12	92.43	0.54	180.22	122.74	363.54	66.58	46.42
Jock River	Reach 3	17280	100 year	166.76	93.71	0.35	660.31	260.02	435.05	173.45	79.58
Jock River	Reach 3	17280	50 year	153.04	93.56	0.34	620.95	257.78	435.05	162.07	79.58
Jock River	Reach 3	17280	25 year	135.48	93.34	0.33	566.50	254.18	435.05	146.55	79.58
Jock River	Reach 3	17280	10 year	119.90	93.13	0.32	511.77	250.34	435.05	131.08	79.58
Jock River	Reach 3	17280	5 year	104.33	92.70	0.34	408.83	233.89	435.05	103.20	79.58
Jock River	Reach 3	17280	2 year	78.12	92.44	0.28	348.78	216.68	435.05	87.78	79.58
Jock River	Reach 3	17503	100 year	166.76	93.71	0.41	789.80	483.79	658.19	317.77	36.10



HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 3	17503	50 year	153.04	93.56	0.42	716.19	482.40	658.19	294.71	36.10
Jock River	Reach 3	17503	25 year	135.48	93.35	0.44	614.04	474.79	658.19	263.01	36.10
Jock River	Reach 3	17503	10 year	119.90	93.13	0.48	511.94	464.76	658.19	231.41	36.10
Jock River	Reach 3	17503	5 year	104.33	92.71	0.64	324.02	411.26	658.19	173.89	36.10
Jock River	Reach 3	17503	2 year	78.12	92.44	0.59	227.61	246.24	658.19	143.15	36.10
Jock River	Reach 3	17590	100 year	166.76	93.70	0.92	356.17	310.37	744.50	399.09	29.52
Jock River	Reach 3	17590	50 year	153.04	93.55	0.95	309.72	292.71	744.50	366.59	29.52
Jock River	Reach 3	17590	25 year	135.48	93.33	0.99	250.33	256.67	744.50	322.31	29.52
Jock River	Reach 3	17590	10 year	119.90	93.11	1.03	198.54	216.65	744.50	278.94	29.52
Jock River	Reach 3	17590	5 year	104.33	92.69	1.12	133.91	123.67	744.50	202.03	29.52
Jock River	Reach 3	17590	2 year	78.12	92.43	1.00	103.86	104.27	744.50	161.81	29.52
Jock River	Reach 3	17630	100 year	166.76	93.70	1.00	302.77	243.02	784.69	412.33	30.24
Jock River	Reach 3	17630	50 year	153.04	93.55	1.02	266.33	232.78	784.69	378.16	30.24
Jock River	Reach 3	17630	25 year	135.48	93.34	1.03	221.20	199.86	784.69	331.78	30.24
Jock River	Reach 3	17630	10 year	119.90	93.12	1.06	179.66	182.09	784.69	286.54	30.24
Jock River	Reach 3	17630	5 year	104.33	92.71	1.10	128.50	95.73	784.69	207.30	30.24
Jock River	Reach 3	17630	2 year	78.12	92.45	0.96	105.08	84.60	784.69	166.01	30.24
Jock River	Reach 3	17632		Inl Struct							
Jock River	Reach 3	17635	100 year	166.76	93.72	0.93	317.71	232.01	790.25	414.05	31.06
Jock River	Reach 3	17635	50 year	153.04	93.57	0.95	282.62	226.15	790.25	379.69	31.06
Jock River	Reach 3	17635	25 year	135.48	93.35	0.99	234.32	215.24	790.25	333.05	31.06
Jock River	Reach 3	17635	10 year	119.90	93.14	1.03	190.01	203.62	790.25	287.57	31.06
Jock River	Reach 3	17635	5 year	104.33	92.72	1.06	133.60	99.48	790.25	208.03	31.06
Jock River	Reach 3	17635	2 year	78.12	92.46	0.93	109.33	87.54	790.25	166.60	31.06
Jock River	Reach 3	17656	100 year	166.76	93.73	0.83	334.22	211.99	811.18	420.87	35.10
Jock River	Reach 3	17656	50 year	153.04	93.58	0.84	302.46	207.60	811.18	385.81	35.10
Jock River	Reach 3	17656	25 year	135.48	93.36	0.86	258.42	201.89	811.18	338.20	35.10
Jock River	Reach 3	17656	10 year	119.90	93.15	0.88	216.94	196.64	811.18	291.82	35.10
Jock River	Reach 3	17656	5 year	104.33	92.73	1.08	136.17	180.05	811.18	210.85	35.10
Jock River	Reach 3	17656	2 year	78.12	92.46	0.96	93.77	77.04	811.18	168.73	35.10
Jock River	Reach 3	17766	100 year	166.76	93.75	0.64	418.68	241.95	920.60	463.09	40.58
Jock River	Reach 3	17766	50 year	153.04	93.60	0.64	383.37	230.73	920.60	424.29	40.58
Jock River	Reach 3	17766	25 year	135.48	93.39	0.63	336.15	217.18	920.60	371.59	40.58
Jock River	Reach 3	17766	10 year	119.90	93.19	0.63	293.15	206.16	920.60	320.48	40.58
Jock River	Reach 3	17766	5 year	104.33	92.79	0.72	218.02	175.89	920.60	230.71	40.58
Jock River	Reach 3	17766	2 year	78.12	92.52	0.68	171.16	170.54	920.60	183.51	40.58
Jock River	Reach 3	17856	100 year	166.76	93.72	1.54	186.72	143.18	1011.04	496.24	19.70
Jock River	Reach 3	17856	50 year	153.04	93.56	1.58	164.76	141.29	1011.04	454.33	19.70
Jock River	Reach 3	17856	25 year	135.48	93.34	1.65	133.96	137.70	1011.04	397.40	19.70
Jock River	Reach 3	17856	10 year	119.90	93.13	1.72	104.98	133.87	1011.04	342.40	19.70
Jock River	Reach 3	17856	5 year	104.33	92.71	1.92	69.27	58.54	1011.04	246.37	19.70
Jock River	Reach 3	17856	2 year	78.12	92.47	1.66	56.34	46.99	1011.04	195.66	19.70
Jock River	Reach 3	17994	100 year	166.76	93.82	0.34	636.03	611.76	1149.05	534.21	230.02
Jock River	Reach 3	17994	50 year	153.04	93.67	0.36	551.72	567.06	1149.05	487.85	215.08
Jock River	Reach 3	17994	25 year	135.48	93.48	0.40	444.99	507.49	1149.05	425.09	192.62
Jock River	Reach 3	17994	10 year	119.90	93.29	0.46	352.72	468.70	1149.05	365.00	160.09
Jock River	Reach 3	17994	5 year	104.33	92.93	0.60	209.47	242.59	1149.05	262.12	109.78
Jock River	Reach 3	17994	2 year	78.12	92.65	0.58	150.37	175.97	1149.05	208.22	105.69
Jock River	Reach 3	18033	100 year	166.76	93.82	0.40	626.67	329.54	1188.08	573.73	76.44
Jock River	Reach 3	18033	50 year	153.04	93.68	0.40	579.71	329.54	1188.08	522.73	76.44
Jock River	Reach 3	18033	25 year	135.48	93.48	0.39	514.47	328.62	1188.08	453.93	76.44
Jock River	Reach 3	18033	10 year	119.90	93.29	0.39	453.96	320.82	1188.08	388.43	76.44
Jock River	Reach 3	18033	5 year	104.33	92.94	0.41	345.30	291.94	1188.08	276.53	76.44
Jock River	Reach 3	18033	2 year	78.12	92.66	0.35	274.95	208.30	1188.08	218.45	76.44
Jock River	Reach 3	18071	100 year	166.76	93.81	0.77	302.37	163.61	1225.75	595.99	46.42
Jock River	Reach 3	18071	50 year	153.04	93.67	0.74	280.33	148.00	1225.75	543.12	46.42
Jock River	Reach 3	18071	25 year	135.48	93.47	0.70	253.37	127.98	1225.75	471.91	46.42
Jock River	Reach 3	18071	10 year	119.90	93.28	0.66	230.66	117.53	1225.75	404.29	46.42
Jock River	Reach 3	18071	5 year	104.33	92.94	0.66	193.26	99.86	1225.75	288.74	46.42
Jock River	Reach 3	18071	2 year	78.12	92.66	0.56	166.37	92.72	1225.75	228.25	46.42
Jock River	Reach 3	18224	100 year	166.76	93.77	1.53	117.85	37.07	1379.29	625.52	27.98
Jock River	Reach 3	18224	50 year	153.04	93.63	1.46	112.83	36.62	1379.29	570.92	27.98
Jock River	Reach 3	18224	25 year	135.48	93.44	1.37	105.92	35.99	1379.29	497.51	27.98
Jock River	Reach 3	18224	10 year	119.90	93.26	1.28	99.51	35.41	1379.29	427.96	27.98
Jock River	Reach 3	18224	5 year	104.33	92.92	1.25	87.61	34.33	1379.29	309.08	27.98
Jock River	Reach 3	18224	2 year	78.12	92.65	1.04	78.42	33.58	1379.29	246.11	27.98

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 3	18384	100 year	166.76	93.83	1.46	122.22	37.66	1539.18	644.67	28.26
Jock River	Reach 3	18384	50 year	153.04	93.69	1.39	117.03	37.00	1539.18	589.26	28.26
Jock River	Reach 3	18384	25 year	135.48	93.50	1.30	109.94	36.08	1539.18	514.74	28.26
Jock River	Reach 3	18384	10 year	119.90	93.32	1.22	103.40	35.35	1539.18	444.16	28.26
Jock River	Reach 3	18384	5 year	104.33	92.98	1.18	91.76	34.01	1539.18	323.41	28.26
Jock River	Reach 3	18384	2 year	78.12	92.70	0.98	82.26	32.88	1539.18	258.95	28.26
Jock River	Reach 3	18544	100 year	166.76	93.95	0.37	681.65	329.54	1699.18	708.98	76.44
Jock River	Reach 3	18544	50 year	153.04	93.80	0.36	632.45	329.54	1699.18	649.22	76.44
Jock River	Reach 3	18544	25 year	135.48	93.59	0.36	564.37	329.54	1699.18	568.68	76.44
Jock River	Reach 3	18544	10 year	119.90	93.40	0.35	500.57	325.37	1699.18	492.48	76.44
Jock River	Reach 3	18544	5 year	104.33	93.06	0.37	392.55	311.16	1699.18	362.15	76.44
Jock River	Reach 3	18544	2 year	78.12	92.75	0.32	306.46	235.11	1699.18	290.05	76.44
Jock River	Reach 3	18551	100 year	166.76	93.87	1.86	93.32	37.83	1706.22	719.14	28.26
Jock River	Reach 3	18551	50 year	153.04	93.73	1.77	89.64	37.16	1706.22	658.43	28.26
Jock River	Reach 3	18551	25 year	135.48	93.53	1.66	84.50	36.22	1706.22	576.57	28.26
Jock River	Reach 3	18551	10 year	119.90	93.34	1.56	79.67	35.45	1706.22	499.13	28.26
Jock River	Reach 3	18551	5 year	104.33	93.01	1.52	70.93	34.12	1706.22	366.76	28.26
Jock River	Reach 3	18551	2 year	78.12	92.72	1.27	63.35	32.96	1706.22	293.10	28.26
Jock River	Reach 3	18558 mcbean		Bridge							
Jock River	Reach 3	18564	100 year	166.76	93.91	1.66	102.94	37.55	1719.37	720.44	24.00
Jock River	Reach 3	18564	50 year	153.04	93.77	1.58	99.18	37.07	1719.37	659.68	24.00
Jock River	Reach 3	18564	25 year	135.48	93.57	1.48	93.96	36.40	1719.37	577.76	24.00
Jock River	Reach 3	18564	10 year	119.90	93.38	1.38	89.04	35.78	1719.37	500.25	24.00
Jock River	Reach 3	18564	5 year	104.33	93.04	1.33	80.34	34.69	1719.37	367.76	24.00
Jock River	Reach 3	18564	2 year	78.12	92.74	1.10	72.52	33.83	1719.37	294.00	24.00
Jock River	Reach 3	18571	100 year	166.76	94.07	0.68	354.15	185.03	1725.63	732.24	46.42
Jock River	Reach 3	18571	50 year	153.04	93.91	0.66	324.93	174.59	1725.63	670.00	46.42
Jock River	Reach 3	18571	25 year	135.48	93.69	0.63	289.24	150.34	1725.63	586.33	46.42
Jock River	Reach 3	18571	10 year	119.90	93.48	0.60	260.70	128.68	1725.63	507.53	46.42
Jock River	Reach 3	18571	5 year	104.33	93.14	0.59	219.87	109.30	1725.63	373.31	46.42
Jock River	Reach 3	18571	2 year	78.12	92.81	0.51	186.17	96.52	1725.63	298.27	46.42
Jock River	Reach 3	18677	100 year	166.76	94.09	0.39	674.82	265.63	1831.94	786.94	32.73
Jock River	Reach 3	18677	50 year	153.04	93.93	0.39	632.17	264.69	1831.94	720.87	32.73
Jock River	Reach 3	18677	25 year	135.48	93.71	0.38	573.78	263.93	1831.94	632.21	32.73
Jock River	Reach 3	18677	10 year	119.90	93.50	0.38	519.25	263.20	1831.94	548.98	32.73
Jock River	Reach 3	18677	5 year	104.33	93.16	0.40	430.22	256.27	1831.94	407.87	32.73
Jock River	Reach 3	18677	2 year	78.12	92.82	0.37	346.63	234.66	1831.94	326.59	32.73
Jock River	Reach 2	18671	100 year	161.76	94.09	0.41	675.68	265.63			32.73
Jock River	Reach 2	18671	50 year	149.04	93.93	0.41	633.01	264.69			32.73
Jock River	Reach 2	18671	25 year	131.48	93.71	0.40	574.63	263.93			32.73
Jock River	Reach 2	18671	10 year	116.90	93.50	0.40	520.10	263.20			32.73
Jock River	Reach 2	18671	5 year	101.33	93.16	0.42	431.06	256.26			32.73
Jock River	Reach 2	18671	2 year	75.12	92.82	0.38	347.50	234.65			32.73
Jock River	Reach 2	18718	100 year	161.76	94.08	0.72	370.40	173.93	46.91	24.54	35.04
Jock River	Reach 2	18718	50 year	149.04	93.92	0.71	342.56	170.08	46.91	22.88	35.04
Jock River	Reach 2	18718	25 year	131.48	93.70	0.69	306.25	159.51	46.91	20.66	35.04
Jock River	Reach 2	18718	10 year	116.90	93.49	0.67	274.35	149.76	46.91	18.63	35.04
Jock River	Reach 2	18718	5 year	101.33	93.15	0.69	224.56	140.54	46.91	15.38	35.04
Jock River	Reach 2	18718	2 year	75.12	92.82	0.61	179.48	127.13	46.91	12.36	35.04
Jock River	Reach 2	18871	100 year	161.76	94.09	0.77	352.21	219.73	199.94	75.69	37.62
Jock River	Reach 2	18871	50 year	149.04	93.93	0.76	320.45	186.00	199.94	69.86	37.62
Jock River	Reach 2	18871	25 year	131.48	93.71	0.75	280.20	178.88	199.94	62.28	37.62
Jock River	Reach 2	18871	10 year	116.90	93.50	0.75	243.92	172.21	199.94	55.48	37.62
Jock River	Reach 2	18871	5 year	101.33	93.16	0.82	186.43	164.40	199.94	44.70	37.62
Jock River	Reach 2	18871	2 year	75.12	92.83	0.77	133.49	145.57	199.94	34.81	37.62
Jock River	Reach 2	18972	100 year	161.76	94.10	0.80	325.90	202.57	300.75	114.33	39.00
Jock River	Reach 2	18972	50 year	149.04	93.94	0.79	295.34	181.84	300.75	104.96	39.00
Jock River	Reach 2	18972	25 year	131.48	93.72	0.78	257.45	163.39	300.75	92.87	39.00
Jock River	Reach 2	18972	10 year	116.90	93.52	0.78	225.71	146.15	300.75	82.12	39.00
Jock River	Reach 2	18972	5 year	101.33	93.18	0.82	178.61	135.32	300.75	65.22	39.00
Jock River	Reach 2	18972	2 year	75.12	92.85	0.77	135.11	125.47	300.75	49.67	39.00
Jock River	Reach 2	19091	100 year	161.76	94.11	1.06	264.46	179.30	419.60	155.43	30.28
Jock River	Reach 2	19091	50 year	149.04	93.95	1.07	236.38	169.79	419.60	141.73	30.28
Jock River	Reach 2	19091	25 year	131.48	93.73	1.06	201.36	150.24	419.60	124.33	30.28
Jock River	Reach 2	19091	10 year	116.90	93.53	1.05	172.58	132.02	419.60	109.19	30.28

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 2	19091	5 year	101.33	93.19	1.13	131.09	118.93	419.60	85.95	30.28
Jock River	Reach 2	19091	2 year	75.12	92.86	1.06	94.25	97.76	419.60	64.69	30.28
Jock River	Reach 2	19245	100 year	161.76	94.14	1.30	207.22	142.01	573.70	192.10	27.00
Jock River	Reach 2	19245	50 year	149.04	93.98	1.29	186.44	125.91	573.70	174.56	27.00
Jock River	Reach 2	19245	25 year	131.48	93.77	1.30	160.07	118.47	573.70	152.28	27.00
Jock River	Reach 2	19245	10 year	116.90	93.56	1.32	136.94	111.54	573.70	133.04	27.00
Jock River	Reach 2	19245	5 year	101.33	93.25	1.45	103.48	99.78	573.70	103.83	27.00
Jock River	Reach 2	19245	2 year	75.12	92.92	1.42	72.94	85.78	573.70	77.20	27.00
Jock River	Reach 2	19353	100 year	161.76	94.18	1.04	194.63	121.75	682.13	213.88	51.64
Jock River	Reach 2	19353	50 year	149.04	94.03	1.03	176.75	110.55	682.13	194.25	51.64
Jock River	Reach 2	19353	25 year	131.48	93.82	1.01	154.65	103.29	682.13	169.34	51.64
Jock River	Reach 2	19353	10 year	116.90	93.63	0.99	135.47	97.64	682.13	147.80	51.64
Jock River	Reach 2	19353	5 year	101.33	93.34	1.02	109.33	84.05	682.13	115.37	51.64
Jock River	Reach 2	19353	2 year	75.12	93.04	0.91	86.46	64.81	682.13	85.84	51.64
Jock River	Reach 2	19457	100 year	161.76	94.21	1.22	198.43	149.77	785.82	234.26	41.03
Jock River	Reach 2	19457	50 year	149.04	94.06	1.26	175.50	147.41	785.82	212.51	41.03
Jock River	Reach 2	19457	25 year	131.48	93.85	1.31	145.05	143.75	785.82	184.88	41.03
Jock River	Reach 2	19457	10 year	116.90	93.65	1.39	117.62	140.22	785.82	160.93	41.03
Jock River	Reach 2	19457	5 year	101.33	93.37	1.60	79.37	115.73	785.82	125.15	41.03
Jock River	Reach 2	19457	2 year	75.12	93.06	1.59	51.40	66.19	785.82	92.99	41.03
Jock River	Reach 2	19579	100 year	161.76	94.28	1.45	187.54	205.15	908.47	257.93	37.40
Jock River	Reach 2	19579	50 year	149.04	94.14	1.58	158.38	202.15	908.47	232.99	37.40
Jock River	Reach 2	19579	25 year	131.48	93.95	1.79	120.63	187.22	908.47	201.18	37.40
Jock River	Reach 2	19579	10 year	116.90	93.79	1.91	94.05	150.62	908.47	173.91	37.40
Jock River	Reach 2	19579	5 year	101.33	93.61	1.99	71.06	109.51	908.47	134.37	37.40
Jock River	Reach 2	19579	2 year	75.12	93.40	1.82	52.08	81.16	908.47	99.33	37.40
Jock River	Reach 2	19791	100 year	161.76	94.46	3.64	47.08	42.75	1120.44	282.80	34.04
Jock River	Reach 2	19791	50 year	149.04	94.44	3.40	46.29	42.56	1120.44	254.68	34.04
Jock River	Reach 2	19791	25 year	131.48	94.42	3.05	45.57	42.38	1120.44	218.79	34.04
Jock River	Reach 2	19791	10 year	116.90	94.42	2.72	45.37	42.33	1120.44	188.68	34.04
Jock River	Reach 2	19791	5 year	101.33	94.37	2.44	43.64	41.91	1120.44	146.53	34.04
Jock River	Reach 2	19791	2 year	75.12	94.22	2.10	37.20	40.30	1120.44	108.80	34.04
Jock River	Reach 2	19861	100 year	161.76	95.24	2.66	75.24	97.45	1189.97	287.05	35.00
Jock River	Reach 2	19861	50 year	149.04	95.12	2.69	65.04	79.70	1189.97	258.55	35.00
Jock River	Reach 2	19861	25 year	131.48	94.97	2.65	54.91	55.47	1189.97	222.28	35.00
Jock River	Reach 2	19861	10 year	116.90	94.84	2.64	47.97	51.46	1189.97	191.93	35.00
Jock River	Reach 2	19861	5 year	101.33	94.73	2.54	42.46	48.04	1189.97	149.52	35.00
Jock River	Reach 2	19861	2 year	75.12	94.54	2.29	34.02	42.26	1189.97	111.27	35.00
Jock River	Reach 2	19930	100 year	161.76	95.63	2.12	103.87	136.59	1258.61	293.20	40.14
Jock River	Reach 2	19930	50 year	149.04	95.55	2.10	93.41	125.98	1258.61	263.99	40.14
Jock River	Reach 2	19930	25 year	131.48	95.42	2.09	77.85	108.35	1258.61	226.84	40.14
Jock River	Reach 2	19930	10 year	116.90	95.32	2.04	67.89	95.38	1258.61	195.90	40.14
Jock River	Reach 2	19930	5 year	101.33	95.21	1.97	58.21	80.82	1258.61	152.98	40.14
Jock River	Reach 2	19930	2 year	75.12	95.01	1.78	44.58	54.00	1258.61	113.97	40.14
Jock River	Reach 2	20275	100 year	161.76	96.09	1.01	183.67	145.01	1603.58	337.37	68.74
Jock River	Reach 2	20275	50 year	149.04	96.02	0.98	172.81	142.07	1603.58	305.53	68.74
Jock River	Reach 2	20275	25 year	131.48	95.90	0.92	156.72	128.98	1603.58	264.41	68.74
Jock River	Reach 2	20275	10 year	116.90	95.79	0.87	143.96	116.29	1603.58	230.50	68.74
Jock River	Reach 2	20275	5 year	101.33	95.67	0.81	130.53	101.24	1603.58	184.40	68.74
Jock River	Reach 2	20275	2 year	75.12	95.43	0.70	109.16	78.75	1603.58	140.12	68.74
Jock River	Reach 2	20408	100 year	161.76	96.16	0.84	281.18	324.83	1737.09	368.40	69.96
Jock River	Reach 2	20408	50 year	149.04	96.08	0.83	256.26	305.10	1737.09	334.18	69.96
Jock River	Reach 2	20408	25 year	131.48	95.96	0.81	220.95	267.09	1737.09	289.63	69.96
Jock River	Reach 2	20408	10 year	116.90	95.85	0.79	192.99	247.79	1737.09	252.99	69.96
Jock River	Reach 2	20408	5 year	101.33	95.72	0.77	162.66	224.99	1737.09	203.97	69.96
Jock River	Reach 2	20408	2 year	75.12	95.47	0.69	114.15	98.54	1737.09	155.03	69.96
Jock River	Reach 2	20686	100 year	161.76	96.25	0.68	431.02	841.25	2014.99	467.36	93.76
Jock River	Reach 2	20686	50 year	149.04	96.17	0.70	367.83	801.72	2014.99	420.89	93.76
Jock River	Reach 2	20686	25 year	131.48	96.05	0.73	276.05	740.55	2014.99	358.68	93.76
Jock River	Reach 2	20686	10 year	116.90	95.94	0.66	224.56	241.24	2014.99	311.01	93.76
Jock River	Reach 2	20686	5 year	101.33	95.82	0.64	195.74	217.70	2014.99	253.77	93.76
Jock River	Reach 2	20686	2 year	75.12	95.57	0.59	147.16	170.84	2014.99	191.34	93.76
Jock River	Reach 2	21097	100 year	161.76	96.36	0.63	321.44	607.32	2426.40	587.93	191.22
Jock River	Reach 2	21097	50 year	149.04	96.29	0.62	285.08	537.77	2426.40	529.27	191.22
Jock River	Reach 2	21097	25 year	131.48	96.20	0.61	238.83	433.44	2426.40	449.87	191.22
Jock River	Reach 2	21097	10 year	116.90	96.08	0.61	197.23	311.00	2426.40	389.56	191.22

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Jock River	Reach 2	21097	5 year	101.33	95.97	0.60	168.98	189.72	2426.40	323.23	189.72
Jock River	Reach 2	21097	2 year	75.12	95.75	0.59	127.73	178.78	2426.40	245.03	178.78
Jock River	Reach 2	21178	100 year	161.76	96.38	2.23	99.41	97.05	2506.81	650.49	33.78
Jock River	Reach 2	21178	50 year	149.04	96.32	2.16	93.57	94.62	2506.81	578.29	33.78
Jock River	Reach 2	21178	25 year	131.48	96.23	2.07	85.21	91.03	2506.81	482.97	33.78
Jock River	Reach 2	21178	10 year	116.90	96.13	2.03	76.38	87.08	2506.81	410.77	33.78
Jock River	Reach 2	21178	5 year	101.33	96.03	1.95	67.93	83.12	2506.81	339.63	33.78
Jock River	Reach 2	21178	2 year	75.12	95.84	1.82	52.92	77.24	2506.81	257.05	33.78
Jock River	Reach 2	21359	100 year	161.76	96.72	0.84	209.56	156.05	2687.51	678.40	107.76
Jock River	Reach 2	21359	50 year	149.04	96.65	0.82	198.71	152.75	2687.51	604.69	107.76
Jock River	Reach 2	21359	25 year	131.48	96.55	0.77	183.21	147.89	2687.51	507.22	107.76
Jock River	Reach 2	21359	10 year	116.90	96.45	0.74	168.79	143.39	2687.51	432.92	107.76
Jock River	Reach 2	21359	5 year	101.33	96.34	0.70	153.62	138.68	2687.51	359.64	107.76
Jock River	Reach 2	21359	2 year	75.12	96.14	0.61	126.90	129.97	2687.51	273.29	107.76
Jock River	Reach 1	21537	100 year	156.00	96.49	2.95	71.87	91.20			29.58
Jock River	Reach 1	21537	50 year	144.00	96.42	2.92	65.47	86.02			29.58
Jock River	Reach 1	21537	25 year	127.00	96.32	2.86	57.23	78.85			29.58
Jock River	Reach 1	21537	10 year	113.00	96.21	2.86	49.02	71.00			29.58
Jock River	Reach 1	21537	5 year	98.00	96.11	2.76	42.59	64.17			29.58
Jock River	Reach 1	21537	2 year	72.00	95.96	2.44	33.50	53.89			29.58
Jock River	Reach 1	21728	100 year	156.00	97.24	1.66	155.04	166.08	190.91	20.44	30.08
Jock River	Reach 1	21728	50 year	144.00	97.17	1.62	144.90	161.54	190.91	18.99	30.08
Jock River	Reach 1	21728	25 year	127.00	97.08	1.57	129.77	154.53	190.91	16.95	30.08
Jock River	Reach 1	21728	10 year	113.00	97.00	1.52	117.41	148.46	190.91	15.13	30.08
Jock River	Reach 1	21728	5 year	98.00	96.89	1.46	102.42	136.96	190.91	13.24	30.08
Jock River	Reach 1	21728	2 year	72.00	96.67	1.34	74.73	112.65	190.91	9.99	30.08
Jock River	Reach 1	22026	100 year	156.00	97.51	0.97	278.73	254.00	488.97	85.08	38.44
Jock River	Reach 1	22026	50 year	144.00	97.45	0.96	262.62	253.85	488.97	79.72	38.44
Jock River	Reach 1	22026	25 year	127.00	97.35	0.93	238.08	253.66	488.97	71.77	38.44
Jock River	Reach 1	22026	10 year	113.00	97.27	0.91	216.63	253.50	488.97	64.92	38.44
Jock River	Reach 1	22026	5 year	98.00	97.16	0.90	190.08	253.29	488.97	56.84	38.44
Jock River	Reach 1	22026	2 year	72.00	96.95	0.88	135.91	242.74	488.97	41.38	38.44
Flowing Creek	Reach 1	0	100 year	15.50	93.68	0.05	591.83	263.84			32.73
Flowing Creek	Reach 1	0	50 year	15.00	93.53	0.05	551.55	263.31			32.73
Flowing Creek	Reach 1	0	25 year	14.00	93.31	0.05	495.62	259.44			32.73
Flowing Creek	Reach 1	0	10 year	12.00	93.09	0.05	439.30	255.00			32.73
Flowing Creek	Reach 1	0	5 year	10.00	92.66	0.05	335.84	218.39			32.73
Flowing Creek	Reach 1	0	2 year	15.00	92.40	0.10	282.47	199.80			32.73
Flowing Creek	Reach 1	90	100 year	15.50	93.68	0.15	209.54	98.00	90.00	42.74	8.00
Flowing Creek	Reach 1	90	50 year	15.00	93.53	0.15	194.57	98.00	90.00	39.74	8.00
Flowing Creek	Reach 1	90	25 year	14.00	93.31	0.16	173.61	98.00	90.00	35.56	8.00
Flowing Creek	Reach 1	90	10 year	12.00	93.09	0.16	152.15	98.00	90.00	31.34	8.00
Flowing Creek	Reach 1	90	5 year	10.00	92.66	0.20	109.84	98.00	90.00	23.43	8.00
Flowing Creek	Reach 1	90	2 year	15.00	92.40	0.39	84.35	97.68	90.00	19.17	8.00
Flowing Creek	Reach 1	96	100 year	15.50	93.67	0.47	41.32	24.23	96.00	50.58	10.60
Flowing Creek	Reach 1	96	50 year	15.00	93.52	0.49	37.61	24.23	96.00	46.94	10.60
Flowing Creek	Reach 1	96	25 year	14.00	93.31	0.51	32.58	22.54	96.00	41.88	10.60
Flowing Creek	Reach 1	96	10 year	12.00	93.09	0.49	27.86	20.63	96.00	36.78	10.60
Flowing Creek	Reach 1	96	5 year	10.00	92.66	0.53	19.65	17.45	96.00	27.17	10.60
Flowing Creek	Reach 1	96	2 year	15.00	92.38	0.92	16.32	15.69	96.00	21.90	10.60
Flowing Creek	Reach 1	112		Culvert							
Flowing Creek	Reach 1	116	100 year	15.50	93.73	0.59	29.64	20.61	116.00	51.44	8.88
Flowing Creek	Reach 1	116	50 year	15.00	93.57	0.61	26.35	20.61	116.00	47.75	8.88
Flowing Creek	Reach 1	116	25 year	14.00	93.35	0.62	23.00	18.65	116.00	42.62	8.88
Flowing Creek	Reach 1	116	10 year	12.00	93.12	0.58	20.81	15.64	116.00	37.45	8.88
Flowing Creek	Reach 1	116	5 year	10.00	92.67	0.55	18.14	12.00	116.00	27.72	8.88
Flowing Creek	Reach 1	116	2 year	15.00	92.41	0.90	16.59	10.67	116.00	22.39	8.88
Flowing Creek	Reach 1	120	100 year	15.50	93.76	0.08	340.12	179.54	120.00	66.59	11.12
Flowing Creek	Reach 1	120	50 year	15.00	93.60	0.09	311.82	179.54	120.00	61.47	11.12
Flowing Creek	Reach 1	120	25 year	14.00	93.37	0.10	271.76	179.54	120.00	54.33	11.12
Flowing Creek	Reach 1	120	10 year	12.00	93.14	0.10	229.44	179.54	120.00	47.05	11.12
Flowing Creek	Reach 1	120	5 year	10.00	92.69	0.13	153.80	149.90	120.00	33.70	11.12
Flowing Creek	Reach 1	120	2 year	15.00	92.47	0.24	122.48	129.49	120.00	26.96	11.12
Flowing Creek	Reach 1	246	100 year	15.50	93.76	0.05	379.72	566.39	246.00	150.04	222.28
Flowing Creek	Reach 1	246	50 year	15.00	93.60	0.06	293.89	524.81	246.00	132.16	197.39

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Flowing Creek	Reach 1	246	25 year	14.00	93.38	0.09	219.69	183.80	246.00	111.77	51.88
Flowing Creek	Reach 1	246	10 year	12.00	93.14	0.09	179.64	156.21	246.00	94.54	42.91
Flowing Creek	Reach 1	246	5 year	10.00	92.69	0.12	119.73	116.31	246.00	64.73	32.15
Flowing Creek	Reach 1	246	2 year	15.00	92.47	0.22	95.97	100.87	246.00	51.38	28.57
Flowing Creek	Reach 1	493	100 year	15.50	93.76	0.15	313.16	422.40	493.00	253.05	10.38
Flowing Creek	Reach 1	493	50 year	15.00	93.60	0.17	252.10	358.12	493.00	213.31	10.38
Flowing Creek	Reach 1	493	25 year	14.00	93.38	0.20	182.09	268.55	493.00	171.58	10.38
Flowing Creek	Reach 1	493	10 year	12.00	93.14	0.21	129.73	176.35	493.00	140.69	10.38
Flowing Creek	Reach 1	493	5 year	10.00	92.70	0.23	76.53	91.17	493.00	93.91	10.38
Flowing Creek	Reach 1	493	2 year	15.00	92.48	0.41	59.37	70.83	493.00	74.33	10.38
Flowing Creek	Reach 1	766	100 year	15.50	93.76	0.08	261.12	341.09	766.00	336.40	149.63
Flowing Creek	Reach 1	766	50 year	15.00	93.60	0.09	214.97	251.53	766.00	280.93	126.22
Flowing Creek	Reach 1	766	25 year	14.00	93.38	0.10	170.13	175.25	766.00	222.67	100.48
Flowing Creek	Reach 1	766	10 year	12.00	93.15	0.11	132.93	141.83	766.00	178.89	80.37
Flowing Creek	Reach 1	766	5 year	10.00	92.70	0.15	79.38	111.43	766.00	116.58	60.63
Flowing Creek	Reach 1	766	2 year	15.00	92.51	0.30	58.69	105.22	766.00	91.40	55.97
Flowing Creek	Reach 1	1088	100 year	15.50	93.76	0.23	187.40	269.87	1088.00	392.02	5.90
Flowing Creek	Reach 1	1088	50 year	15.00	93.61	0.26	151.22	196.42	1088.00	327.77	5.90
Flowing Creek	Reach 1	1088	25 year	14.00	93.38	0.29	117.11	134.76	1088.00	260.08	5.90
Flowing Creek	Reach 1	1088	10 year	12.00	93.15	0.33	86.86	123.94	1088.00	207.99	5.90
Flowing Creek	Reach 1	1088	5 year	10.00	92.71	0.48	39.00	90.93	1088.00	132.89	5.90
Flowing Creek	Reach 1	1088	2 year	15.00	92.56	0.85	25.99	76.80	1088.00	103.33	5.90
Flowing Creek	Reach 1	1310	100 year	15.50	93.76	0.20	180.91	172.92	1310.00	434.09	8.45
Flowing Creek	Reach 1	1310	50 year	15.00	93.61	0.22	155.23	160.37	1310.00	362.50	8.45
Flowing Creek	Reach 1	1310	25 year	14.00	93.39	0.25	122.89	136.36	1310.00	287.13	8.45
Flowing Creek	Reach 1	1310	10 year	12.00	93.16	0.29	91.90	131.60	1310.00	228.00	8.45
Flowing Creek	Reach 1	1310	5 year	10.00	92.74	0.43	41.05	101.25	1310.00	141.72	8.45
Flowing Creek	Reach 1	1310	2 year	15.00	92.63	0.74	31.27	90.77	1310.00	109.68	8.45
Flowing Creek	Reach 1	1485	100 year	15.50	93.77	0.29	81.60	61.88	1485.00	457.06	13.35
Flowing Creek	Reach 1	1485	50 year	15.00	93.61	0.31	72.11	61.88	1485.00	382.39	13.35
Flowing Creek	Reach 1	1485	25 year	14.00	93.39	0.34	58.52	61.88	1485.00	303.01	13.35
Flowing Creek	Reach 1	1485	10 year	12.00	93.16	0.35	44.33	61.88	1485.00	239.92	13.35
Flowing Creek	Reach 1	1485	5 year	10.00	92.75	0.37	28.56	20.62	1485.00	147.81	13.35
Flowing Creek	Reach 1	1485	2 year	15.00	92.69	0.57	27.24	19.38	1485.00	114.80	13.35
Flowing Creek	Reach 1	1527	100 year	15.50	93.76	0.63	29.13	14.00	1527.00	459.62	6.72
Flowing Creek	Reach 1	1527	50 year	15.00	93.60	0.65	26.98	14.00	1527.00	384.67	6.72
Flowing Creek	Reach 1	1527	25 year	14.00	93.38	0.67	23.96	13.35	1527.00	304.88	6.72
Flowing Creek	Reach 1	1527	10 year	12.00	93.16	0.64	21.07	12.06	1527.00	241.37	6.72
Flowing Creek	Reach 1	1527	5 year	10.00	92.75	0.65	16.55	10.26	1527.00	148.77	6.72
Flowing Creek	Reach 1	1527	2 year	15.00	92.68	1.00	15.83	10.00	1527.00	115.72	6.72
Flowing Creek	Reach 1	1535	100 year	15.50	93.75	0.70	23.48	8.10	1535.00	459.82	6.04
Flowing Creek	Reach 1	1535	50 year	15.00	93.60	0.71	22.24	8.10	1535.00	384.86	6.04
Flowing Creek	Reach 1	1535	25 year	14.00	93.38	0.71	20.49	7.88	1535.00	305.05	6.04
Flowing Creek	Reach 1	1535	10 year	12.00	93.16	0.66	18.75	7.46	1535.00	241.52	6.04
Flowing Creek	Reach 1	1535	5 year	10.00	92.75	0.64	15.85	6.85	1535.00	148.90	6.04
Flowing Creek	Reach 1	1535	2 year	15.00	92.68	0.99	15.39	6.76	1535.00	115.84	6.04
Flowing Creek	Reach 1	1545	100 year	15.50	93.78	0.30	133.27	276.95	1545.00	469.70	10.06
Flowing Creek	Reach 1	1545	50 year	15.00	93.63	0.35	93.65	237.47	1545.00	390.56	10.06
Flowing Creek	Reach 1	1545	25 year	14.00	93.41	0.39	58.11	77.18	1545.00	307.22	10.06
Flowing Creek	Reach 1	1545	10 year	12.00	93.18	0.41	42.41	58.38	1545.00	242.66	10.06
Flowing Creek	Reach 1	1545	5 year	10.00	92.76	0.45	24.81	28.86	1545.00	149.27	10.06
Flowing Creek	Reach 1	1545	2 year	15.00	92.71	0.70	23.47	25.68	1545.00	116.17	10.06
Leamy Creek	Reach 1	0	100 year	10.20	93.32	0.03	591.57	303.83			57.18
Leamy Creek	Reach 1	0	50 year	9.40	93.18	0.03	550.31	285.02			57.18
Leamy Creek	Reach 1	0	25 year	8.30	92.97	0.03	494.50	260.23			57.18
Leamy Creek	Reach 1	0	10 year	7.40	92.77	0.03	443.58	252.77			57.18
Leamy Creek	Reach 1	0	5 year	6.40	92.55	0.02	388.32	244.41			57.18
Leamy Creek	Reach 1	0	2 year	4.70	92.10	0.02	282.90	228.62			57.18
Leamy Creek	Reach 1	187	100 year	10.20	93.32	0.03	627.00	347.51	187.00	114.15	7.29
Leamy Creek	Reach 1	187	50 year	9.40	93.18	0.03	578.95	338.24	187.00	105.78	7.29
Leamy Creek	Reach 1	187	25 year	8.30	92.97	0.03	510.82	323.71	187.00	94.17	7.29
Leamy Creek	Reach 1	187	10 year	7.40	92.77	0.03	448.48	304.23	187.00	83.56	7.29
Leamy Creek	Reach 1	187	5 year	6.40	92.55	0.03	383.28	282.41	187.00	72.27	7.29
Leamy Creek	Reach 1	187	2 year	4.70	92.10	0.03	265.16	248.63	187.00	51.33	7.29
Leamy Creek	Reach 1	403	100 year	10.20	93.32	0.03	748.67	474.80	403.00	262.67	8.32
Leamy Creek	Reach 1	403	50 year	9.40	93.18	0.03	683.12	460.60	403.00	242.04	8.32

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Leamy Creek	Reach 1	403	25 year	8.30	92.97	0.03	591.00	424.74	403.00	213.13	8.32
Leamy Creek	Reach 1	403	10 year	7.40	92.77	0.03	508.93	402.05	403.00	186.92	8.32
Leamy Creek	Reach 1	403	5 year	6.40	92.55	0.03	422.39	376.63	403.00	159.26	8.32
Leamy Creek	Reach 1	403	2 year	4.70	92.10	0.03	282.86	295.76	403.00	110.50	8.32
Leamy Creek	Reach 1	640	100 year	10.20	93.32	0.05	441.64	294.01	640.00	372.70	8.54
Leamy Creek	Reach 1	640	50 year	9.40	93.18	0.05	400.81	287.40	640.00	341.54	8.54
Leamy Creek	Reach 1	640	25 year	8.30	92.97	0.05	342.96	275.43	640.00	297.84	8.54
Leamy Creek	Reach 1	640	10 year	7.40	92.77	0.05	289.43	263.86	640.00	258.28	8.54
Leamy Creek	Reach 1	640	5 year	6.40	92.55	0.06	232.22	250.91	640.00	216.55	8.54
Leamy Creek	Reach 1	640	2 year	4.70	92.10	0.06	151.08	165.33	640.00	147.48	8.54
Leamy Creek	Reach 1	656	100 year	10.20	93.32	0.05	423.58	302.72	656.00	377.72	9.46
Leamy Creek	Reach 1	656	50 year	9.40	93.18	0.05	381.87	292.53	656.00	346.02	9.46
Leamy Creek	Reach 1	656	25 year	8.30	92.97	0.05	323.32	273.68	656.00	301.57	9.46
Leamy Creek	Reach 1	656	10 year	7.40	92.77	0.06	273.09	232.36	656.00	261.36	9.46
Leamy Creek	Reach 1	656	5 year	6.40	92.55	0.06	226.59	186.11	656.00	219.00	9.46
Leamy Creek	Reach 1	656	2 year	4.70	92.10	0.06	150.59	162.80	656.00	149.05	9.46
Leamy Creek	Reach 1	669	100 year	10.20	93.32	0.12	204.40	209.22	669.00	390.59	7.04
Leamy Creek	Reach 1	669	50 year	9.40	93.18	0.13	175.76	199.28	669.00	357.86	7.04
Leamy Creek	Reach 1	669	25 year	8.30	92.97	0.12	138.62	105.13	669.00	311.95	7.04
Leamy Creek	Reach 1	669	10 year	7.40	92.77	0.13	118.41	98.41	669.00	270.46	7.04
Leamy Creek	Reach 1	669	5 year	6.40	92.55	0.13	97.37	90.88	669.00	226.76	7.04
Leamy Creek	Reach 1	669	2 year	4.70	92.10	0.16	59.53	79.32	669.00	154.25	7.04
Leamy Creek	Reach 1	705	100 year	10.20	93.32	0.10	229.29	213.98	705.00	397.16	10.82
Leamy Creek	Reach 1	705	50 year	9.40	93.18	0.11	200.00	204.02	705.00	363.48	10.82
Leamy Creek	Reach 1	705	25 year	8.30	92.97	0.12	159.60	185.72	705.00	316.32	10.82
Leamy Creek	Reach 1	705	10 year	7.40	92.77	0.13	126.66	146.17	705.00	274.01	10.82
Leamy Creek	Reach 1	705	5 year	6.40	92.55	0.13	99.09	101.90	705.00	229.58	10.82
Leamy Creek	Reach 1	705	2 year	4.70	92.10	0.14	60.03	81.12	705.00	155.98	10.82
Leamy Creek	Reach 1	955	100 year	10.20	93.32	0.09	293.15	259.82	955.00	448.69	6.84
Leamy Creek	Reach 1	955	50 year	9.40	93.18	0.09	257.34	251.73	955.00	408.59	6.84
Leamy Creek	Reach 1	955	25 year	8.30	92.97	0.11	206.85	240.07	955.00	352.56	6.84
Leamy Creek	Reach 1	955	10 year	7.40	92.77	0.12	160.26	230.09	955.00	302.73	6.84
Leamy Creek	Reach 1	955	5 year	6.40	92.55	0.15	110.44	218.91	955.00	251.33	6.84
Leamy Creek	Reach 1	955	2 year	4.70	92.11	0.19	49.29	82.87	955.00	168.28	6.84
Leamy Creek	Reach 1	1080	100 year	10.20	93.32	0.19	118.68	107.50	1080.00	479.30	7.58
Leamy Creek	Reach 1	1080	50 year	9.40	93.18	0.20	104.04	101.66	1080.00	435.40	7.58
Leamy Creek	Reach 1	1080	25 year	8.30	92.97	0.21	84.06	92.40	1080.00	374.04	7.58
Leamy Creek	Reach 1	1080	10 year	7.40	92.77	0.22	67.07	79.23	1080.00	319.33	7.58
Leamy Creek	Reach 1	1080	5 year	6.40	92.55	0.24	51.16	64.51	1080.00	262.85	7.58
Leamy Creek	Reach 1	1080	2 year	4.70	92.11	0.26	28.68	37.27	1080.00	173.51	7.58
Leamy Creek	Reach 1	1174	100 year	10.20	93.32	0.19	127.41	122.85	1174.00	489.53	7.22
Leamy Creek	Reach 1	1174	50 year	9.40	93.18	0.19	111.22	108.71	1174.00	444.36	7.22
Leamy Creek	Reach 1	1174	25 year	8.30	92.97	0.19	91.05	89.33	1174.00	381.33	7.22
Leamy Creek	Reach 1	1174	10 year	7.40	92.78	0.20	74.37	79.55	1174.00	325.24	7.22
Leamy Creek	Reach 1	1174	5 year	6.40	92.56	0.22	58.00	68.61	1174.00	267.42	7.22
Leamy Creek	Reach 1	1174	2 year	4.70	92.11	0.25	32.56	46.55	1174.00	176.12	7.22
Leamy Creek	Reach 1	1213	100 year	10.20	93.32	0.19	122.27	113.66	1213.00	494.16	7.74
Leamy Creek	Reach 1	1213	50 year	9.40	93.18	0.19	107.13	102.94	1213.00	448.42	7.74
Leamy Creek	Reach 1	1213	25 year	8.30	92.97	0.20	87.64	87.82	1213.00	384.66	7.74
Leamy Creek	Reach 1	1213	10 year	7.40	92.78	0.21	71.35	77.18	1213.00	327.95	7.74
Leamy Creek	Reach 1	1213	5 year	6.40	92.56	0.22	55.62	65.30	1213.00	269.54	7.74
Leamy Creek	Reach 1	1213	2 year	4.70	92.11	0.23	32.25	40.59	1213.00	177.34	7.74
Leamy Creek	Reach 1	1351	100 year	10.20	93.32	0.18	99.58	81.20	1351.00	509.26	9.76
Leamy Creek	Reach 1	1351	50 year	9.40	93.18	0.18	89.06	69.39	1351.00	461.78	9.76
Leamy Creek	Reach 1	1351	25 year	8.30	92.98	0.18	76.62	53.93	1351.00	395.86	9.76
Leamy Creek	Reach 1	1351	10 year	7.40	92.78	0.18	66.15	52.29	1351.00	337.34	9.76
Leamy Creek	Reach 1	1351	5 year	6.40	92.56	0.18	54.84	50.46	1351.00	277.09	9.76
Leamy Creek	Reach 1	1351	2 year	4.70	92.12	0.19	35.46	36.27	1351.00	181.98	9.76
Leamy Creek	Reach 1	1418	100 year	10.20	93.32	0.36	43.47	48.11	1418.00	513.27	8.24
Leamy Creek	Reach 1	1418	50 year	9.40	93.18	0.36	37.55	36.70	1418.00	465.41	8.24
Leamy Creek	Reach 1	1418	25 year	8.30	92.97	0.34	31.73	21.89	1418.00	399.03	8.24
Leamy Creek	Reach 1	1418	10 year	7.40	92.78	0.34	27.61	19.96	1418.00	340.13	8.24
Leamy Creek	Reach 1	1418	5 year	6.40	92.56	0.33	23.46	17.82	1418.00	279.47	8.24
Leamy Creek	Reach 1	1418	2 year	4.70	92.12	0.32	16.59	13.48	1418.00	183.64	8.24
Leamy Creek	Reach 1	1425	100 year	10.20	93.31	0.53	20.17	7.42	1425.00	513.93	6.26
Leamy Creek	Reach 1	1425	50 year	9.40	93.17	0.52	19.15	7.36	1425.00	465.92	6.26

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Leamy Creek	Reach 1	1425	25 year	8.30	92.97	0.49	17.65	7.26	1425.00	399.42	6.26
Leamy Creek	Reach 1	1425	10 year	7.40	92.77	0.47	16.24	7.13	1425.00	340.44	6.26
Leamy Creek	Reach 1	1425	5 year	6.40	92.56	0.45	14.69	6.99	1425.00	279.72	6.26
Leamy Creek	Reach 1	1425	2 year	4.70	92.12	0.41	11.69	6.73	1425.00	183.78	6.26
Leamy Creek	Reach 1	1428		Bridge							
Leamy Creek	Reach 1	1431	100 year	10.20	93.31	0.56	19.28	7.20	1431.00	514.05	5.97
Leamy Creek	Reach 1	1431	50 year	9.40	93.17	0.54	18.31	7.12	1431.00	466.03	5.97
Leamy Creek	Reach 1	1431	25 year	8.30	92.97	0.52	16.89	7.02	1431.00	399.52	5.97
Leamy Creek	Reach 1	1431	10 year	7.40	92.77	0.50	15.54	6.94	1431.00	340.54	5.97
Leamy Creek	Reach 1	1431	5 year	6.40	92.56	0.48	14.04	6.85	1431.00	279.80	5.97
Leamy Creek	Reach 1	1431	2 year	4.70	92.12	0.44	11.09	6.62	1431.00	183.85	5.97
Leamy Creek	Reach 1	1608	100 year	10.20	93.34	0.24	77.50	69.84	1608.00	521.84	9.00
Leamy Creek	Reach 1	1608	50 year	9.40	93.20	0.24	68.10	64.26	1608.00	472.97	9.00
Leamy Creek	Reach 1	1608	25 year	8.30	92.99	0.25	55.75	56.02	1608.00	405.33	9.00
Leamy Creek	Reach 1	1608	10 year	7.40	92.79	0.25	45.64	46.67	1608.00	345.41	9.00
Leamy Creek	Reach 1	1608	5 year	6.40	92.57	0.25	36.51	36.22	1608.00	283.82	9.00
Leamy Creek	Reach 1	1608	2 year	4.70	92.14	0.25	23.89	22.56	1608.00	186.64	9.00
Leamy Creek	Reach 1	1698	100 year	10.20	93.34	0.17	123.43	110.77	1698.00	530.62	9.90
Leamy Creek	Reach 1	1698	50 year	9.40	93.20	0.17	108.63	100.76	1698.00	480.69	9.90
Leamy Creek	Reach 1	1698	25 year	8.30	92.99	0.18	89.48	86.18	1698.00	411.67	9.90
Leamy Creek	Reach 1	1698	10 year	7.40	92.80	0.18	73.66	74.64	1698.00	350.61	9.90
Leamy Creek	Reach 1	1698	5 year	6.40	92.58	0.19	58.66	61.74	1698.00	287.97	9.90
Leamy Creek	Reach 1	1698	2 year	4.70	92.14	0.20	35.78	44.22	1698.00	189.25	9.90
Leamy Creek	Reach 1	1833	100 year	10.20	93.34	0.22	113.62	126.77	1833.00	548.01	6.62
Leamy Creek	Reach 1	1833	50 year	9.40	93.20	0.22	97.66	101.48	1833.00	495.86	6.62
Leamy Creek	Reach 1	1833	25 year	8.30	93.00	0.20	80.68	65.06	1833.00	424.20	6.62
Leamy Creek	Reach 1	1833	10 year	7.40	92.80	0.21	68.38	60.14	1833.00	361.07	6.62
Leamy Creek	Reach 1	1833	5 year	6.40	92.58	0.21	55.77	54.65	1833.00	296.39	6.62
Leamy Creek	Reach 1	1833	2 year	4.70	92.14	0.23	34.59	41.99	1833.00	194.40	6.62
Leamy Creek	Reach 1	1888	100 year	10.20	93.34	0.28	98.47	127.80	1888.00	553.73	4.34
Leamy Creek	Reach 1	1888	50 year	9.40	93.20	0.30	82.19	104.81	1888.00	500.71	4.34
Leamy Creek	Reach 1	1888	25 year	8.30	93.00	0.30	64.17	71.57	1888.00	428.10	4.34
Leamy Creek	Reach 1	1888	10 year	7.40	92.80	0.32	50.93	63.02	1888.00	364.29	4.34
Leamy Creek	Reach 1	1888	5 year	6.40	92.58	0.36	38.12	53.46	1888.00	298.92	4.34
Leamy Creek	Reach 1	1888	2 year	4.70	92.14	0.42	19.40	31.56	1888.00	195.86	4.34
Leamy Creek	Reach 1	1905	100 year	10.20	93.34	0.25	102.39	119.45	1905.00	555.19	5.80
Leamy Creek	Reach 1	1905	50 year	9.40	93.20	0.25	87.09	99.51	1905.00	501.93	5.80
Leamy Creek	Reach 1	1905	25 year	8.30	93.00	0.25	69.71	70.56	1905.00	429.08	5.80
Leamy Creek	Reach 1	1905	10 year	7.40	92.80	0.27	56.66	62.41	1905.00	365.08	5.80
Leamy Creek	Reach 1	1905	5 year	6.40	92.58	0.28	43.98	53.31	1905.00	299.53	5.80
Leamy Creek	Reach 1	1905	2 year	4.70	92.15	0.31	24.98	33.72	1905.00	196.20	5.80
Leamy Creek	Reach 1	2035	100 year	10.20	93.34	0.23	128.39	170.74	2035.00	571.89	4.77
Leamy Creek	Reach 1	2035	50 year	9.40	93.21	0.24	106.46	143.79	2035.00	515.92	4.77
Leamy Creek	Reach 1	2035	25 year	8.30	93.00	0.25	81.08	104.25	2035.00	439.90	4.77
Leamy Creek	Reach 1	2035	10 year	7.40	92.80	0.25	64.45	76.79	2035.00	373.72	4.77
Leamy Creek	Reach 1	2035	5 year	6.40	92.59	0.26	49.71	58.31	2035.00	306.17	4.77
Leamy Creek	Reach 1	2035	2 year	4.70	92.15	0.28	30.52	38.00	2035.00	200.10	4.77
Leamy Creek	Reach 1	2270	100 year	10.20	93.35	0.22	83.32	58.65	2270.00	593.14	8.02
Leamy Creek	Reach 1	2270	50 year	9.40	93.21	0.22	75.34	56.25	2270.00	534.33	8.02
Leamy Creek	Reach 1	2270	25 year	8.30	93.00	0.22	64.23	52.72	2270.00	454.90	8.02
Leamy Creek	Reach 1	2270	10 year	7.40	92.81	0.23	54.28	49.31	2270.00	386.17	8.02
Leamy Creek	Reach 1	2270	5 year	6.40	92.59	0.24	43.97	45.52	2270.00	316.15	8.02
Leamy Creek	Reach 1	2270	2 year	4.70	92.16	0.25	26.52	35.08	2270.00	206.25	8.02
Leamy Creek	Reach 1	2317	100 year	10.20	93.33	0.98	10.46	35.94	2317.00	596.17	6.92
Leamy Creek	Reach 1	2317	50 year	9.40	93.19	0.94	10.04	34.38	2317.00	537.09	6.92
Leamy Creek	Reach 1	2317	25 year	8.30	92.99	0.88	9.44	32.08	2317.00	457.30	6.92
Leamy Creek	Reach 1	2317	10 year	7.40	92.79	0.83	8.86	29.88	2317.00	388.24	6.92
Leamy Creek	Reach 1	2317	5 year	6.40	92.58	0.78	8.22	27.42	2317.00	317.87	6.92
Leamy Creek	Reach 1	2317	2 year	4.70	92.16	0.68	6.95	22.57	2317.00	207.36	6.92
Leamy Creek	Reach 1	2350		Culvert							
Leamy Creek	Reach 1	2363	100 year	10.20	93.40	1.08	9.40	12.51	2363.00	597.71	3.70
Leamy Creek	Reach 1	2363	50 year	9.40	93.25	1.05	8.94	11.30	2363.00	538.51	3.70
Leamy Creek	Reach 1	2363	25 year	8.30	93.03	1.00	8.27	9.56	2363.00	458.54	3.70
Leamy Creek	Reach 1	2363	10 year	7.40	92.82	0.97	7.66	8.42	2363.00	389.33	3.70
Leamy Creek	Reach 1	2363	5 year	6.40	92.60	0.92	6.98	7.25	2363.00	318.81	3.70

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Leamy Creek	Reach 1	2363	2 year	4.70	92.17	0.83	5.69	5.98	2363.00	208.02	3.70
Leamy Creek	Reach 1	2409	100 year	10.20	93.46	0.70	20.00	12.98	2409.00	598.52	3.70
Leamy Creek	Reach 1	2409	50 year	9.40	93.31	0.70	18.04	11.74	2409.00	539.25	3.70
Leamy Creek	Reach 1	2409	25 year	8.30	93.08	0.68	15.57	9.95	2409.00	459.19	3.70
Leamy Creek	Reach 1	2409	10 year	7.40	92.87	0.67	13.64	8.66	2409.00	389.90	3.70
Leamy Creek	Reach 1	2409	5 year	6.40	92.64	0.65	11.79	7.47	2409.00	319.30	3.70
Leamy Creek	Reach 1	2409	2 year	4.70	92.20	0.60	8.88	6.06	2409.00	208.40	3.70
Leamy Creek	Reach 1	2500	100 year	10.20	93.49	0.18	117.57	109.14	2500.00	604.78	8.59
Leamy Creek	Reach 1	2500	50 year	9.40	93.33	0.18	101.17	97.81	2500.00	544.67	8.59
Leamy Creek	Reach 1	2500	25 year	8.30	93.10	0.19	80.73	81.52	2500.00	463.57	8.59
Leamy Creek	Reach 1	2500	10 year	7.40	92.89	0.20	65.21	67.28	2500.00	393.49	8.59
Leamy Creek	Reach 1	2500	5 year	6.40	92.66	0.20	51.42	52.34	2500.00	322.18	8.59
Leamy Creek	Reach 1	2500	2 year	4.70	92.22	0.20	33.13	34.73	2500.00	210.31	8.59
Leamy Creek	Reach 1	2520	100 year	10.20	93.49	0.15	135.03	114.54	2520.00	607.83	8.84
Leamy Creek	Reach 1	2520	50 year	9.40	93.33	0.16	117.96	101.00	2520.00	547.28	8.84
Leamy Creek	Reach 1	2520	25 year	8.30	93.10	0.16	97.17	81.53	2520.00	465.64	8.84
Leamy Creek	Reach 1	2520	10 year	7.40	92.89	0.17	81.67	70.14	2520.00	395.18	8.84
Leamy Creek	Reach 1	2520	5 year	6.40	92.66	0.17	66.15	64.56	2520.00	323.51	8.84
Leamy Creek	Reach 1	2520	2 year	4.70	92.22	0.18	40.86	47.93	2520.00	211.12	8.84
Leamy Creek	Reach 1	2534	100 year	10.20	93.49	0.15	143.88	122.33	2534.00	610.35	9.02
Leamy Creek	Reach 1	2534	50 year	9.40	93.33	0.16	125.50	109.72	2534.00	549.49	9.02
Leamy Creek	Reach 1	2534	25 year	8.30	93.10	0.16	102.57	91.59	2534.00	467.47	9.02
Leamy Creek	Reach 1	2534	10 year	7.40	92.89	0.16	84.97	78.74	2534.00	396.68	9.02
Leamy Creek	Reach 1	2534	5 year	6.40	92.66	0.17	67.99	68.66	2534.00	324.70	9.02
Leamy Creek	Reach 1	2534	2 year	4.70	92.22	0.18	41.77	50.88	2534.00	211.83	9.02
Leamy Creek	Reach 1	2546	100 year	10.20	93.49	0.17	131.43	123.28	2546.00	612.01	8.59
Leamy Creek	Reach 1	2546	50 year	9.40	93.33	0.18	112.91	110.53	2546.00	550.92	8.59
Leamy Creek	Reach 1	2546	25 year	8.30	93.10	0.19	89.82	92.19	2546.00	468.62	8.59
Leamy Creek	Reach 1	2546	10 year	7.40	92.89	0.19	72.20	77.45	2546.00	397.63	8.59
Leamy Creek	Reach 1	2546	5 year	6.40	92.66	0.20	55.97	63.42	2546.00	325.46	8.59
Leamy Creek	Reach 1	2546	2 year	4.70	92.22	0.21	33.44	40.16	2546.00	212.30	8.59
Leamy Creek	Reach 1	2615	100 year	10.20	93.49	0.14	161.76	152.85	2615.00	623.26	8.67
Leamy Creek	Reach 1	2615	50 year	9.40	93.33	0.15	138.71	138.34	2615.00	560.59	8.67
Leamy Creek	Reach 1	2615	25 year	8.30	93.10	0.16	109.58	117.47	2615.00	476.27	8.67
Leamy Creek	Reach 1	2615	10 year	7.40	92.90	0.17	87.02	98.82	2615.00	403.70	8.67
Leamy Creek	Reach 1	2615	5 year	6.40	92.67	0.18	66.57	78.79	2615.00	330.09	8.67
Leamy Creek	Reach 1	2615	2 year	4.70	92.22	0.19	38.71	52.06	2615.00	214.95	8.67
Leamy Creek	Reach 1	2702	100 year	10.20	93.49	0.14	191.02	221.57	2702.00	636.98	7.39
Leamy Creek	Reach 1	2702	50 year	9.40	93.33	0.16	157.62	200.47	2702.00	572.10	7.39
Leamy Creek	Reach 1	2702	25 year	8.30	93.11	0.18	115.44	170.11	2702.00	485.02	7.39
Leamy Creek	Reach 1	2702	10 year	7.40	92.90	0.21	83.13	136.53	2702.00	410.36	7.39
Leamy Creek	Reach 1	2702	5 year	6.40	92.67	0.23	56.70	93.10	2702.00	334.97	7.39
Leamy Creek	Reach 1	2702	2 year	4.70	92.23	0.24	29.42	43.52	2702.00	217.72	7.39
Leamy Creek	Reach 1	2725	100 year	10.20	93.49	0.15	150.46	129.20	2725.00	643.16	6.31
Leamy Creek	Reach 1	2725	50 year	9.40	93.33	0.17	130.16	127.48	2725.00	577.28	6.31
Leamy Creek	Reach 1	2725	25 year	8.30	93.11	0.19	101.43	125.01	2725.00	488.84	6.31
Leamy Creek	Reach 1	2725	10 year	7.40	92.90	0.22	76.21	110.78	2725.00	413.04	6.31
Leamy Creek	Reach 1	2725	5 year	6.40	92.67	0.24	54.07	81.61	2725.00	336.70	6.31
Leamy Creek	Reach 1	2725	2 year	4.70	92.23	0.27	27.75	45.38	2725.00	218.51	6.31
Leamy Creek	Reach 1	2769	100 year	10.20	93.49	0.15	161.69	139.81	2769.00	650.36	6.30
Leamy Creek	Reach 1	2769	50 year	9.40	93.33	0.16	140.18	132.24	2769.00	583.54	6.30
Leamy Creek	Reach 1	2769	25 year	8.30	93.11	0.17	111.40	120.90	2769.00	493.84	6.30
Leamy Creek	Reach 1	2769	10 year	7.40	92.90	0.19	87.47	107.70	2769.00	416.99	6.30
Leamy Creek	Reach 1	2769	5 year	6.40	92.67	0.21	64.74	90.25	2769.00	339.65	6.30
Leamy Creek	Reach 1	2769	2 year	4.70	92.23	0.26	32.51	56.05	2769.00	220.03	6.30
Leamy Creek	Reach 1	2809	100 year	10.20	93.49	0.13	207.62	294.78	2809.00	665.20	10.63
Leamy Creek	Reach 1	2809	50 year	9.40	93.33	0.14	164.95	245.07	2809.00	595.21	10.63
Leamy Creek	Reach 1	2809	25 year	8.30	93.11	0.16	117.39	173.66	2809.00	502.15	10.63
Leamy Creek	Reach 1	2809	10 year	7.40	92.90	0.17	87.42	121.78	2809.00	423.35	10.63
Leamy Creek	Reach 1	2809	5 year	6.40	92.67	0.18	63.20	89.93	2809.00	344.34	10.63
Leamy Creek	Reach 1	2809	2 year	4.70	92.23	0.18	34.97	44.12	2809.00	222.31	10.63
Leamy Creek	Reach 1	2822	100 year	10.20	93.49	0.15	204.11	365.57	2822.00	676.89	10.26
Leamy Creek	Reach 1	2822	50 year	9.40	93.33	0.17	152.84	282.95	2822.00	604.13	10.26
Leamy Creek	Reach 1	2822	25 year	8.30	93.11	0.18	102.05	164.26	2822.00	508.00	10.26
Leamy Creek	Reach 1	2822	10 year	7.40	92.90	0.18	77.06	97.82	2822.00	427.30	10.26
Leamy Creek	Reach 1	2822	5 year	6.40	92.67	0.18	57.40	73.53	2822.00	346.80	10.26



HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Leamy Creek	Reach 1	2822	2 year	4.70	92.23	0.18	33.83	38.41	2822.00	223.27	10.26
Leamy Creek	Reach 1	2843	100 year	10.20	93.49	0.16	167.76	248.97	2843.00	691.13	9.22
Leamy Creek	Reach 1	2843	50 year	9.40	93.33	0.18	131.90	204.76	2843.00	614.61	9.22
Leamy Creek	Reach 1	2843	25 year	8.30	93.11	0.20	92.60	141.22	2843.00	514.64	9.22
Leamy Creek	Reach 1	2843	10 year	7.40	92.90	0.21	68.50	98.39	2843.00	431.91	9.22
Leamy Creek	Reach 1	2843	5 year	6.40	92.67	0.21	49.29	69.07	2843.00	349.84	9.22
Leamy Creek	Reach 1	2843	2 year	4.70	92.23	0.21	28.78	31.77	2843.00	224.61	9.22
Leamy Creek	Reach 1	2922	100 year	10.20	93.49	0.10	280.38	352.83	2922.00	709.99	8.79
Leamy Creek	Reach 1	2922	50 year	9.40	93.34	0.11	228.88	300.10	2922.00	629.62	8.79
Leamy Creek	Reach 1	2922	25 year	8.30	93.11	0.13	169.43	224.33	2922.00	525.34	8.79
Leamy Creek	Reach 1	2922	10 year	7.40	92.90	0.14	129.00	175.70	2922.00	439.84	8.79
Leamy Creek	Reach 1	2922	5 year	6.40	92.67	0.16	92.01	147.19	2922.00	355.43	8.79
Leamy Creek	Reach 1	2922	2 year	4.70	92.23	0.20	41.12	80.01	2922.00	227.40	8.79
Leamy Creek	Reach 1	2984	100 year	10.20	93.49	0.12	229.88	340.29	2984.00	722.55	10.19
Leamy Creek	Reach 1	2984	50 year	9.40	93.34	0.14	180.23	289.05	2984.00	639.43	10.19
Leamy Creek	Reach 1	2984	25 year	8.30	93.11	0.16	123.03	215.40	2984.00	532.17	10.19
Leamy Creek	Reach 1	2984	10 year	7.40	92.90	0.18	84.92	155.29	2984.00	444.90	10.19
Leamy Creek	Reach 1	2984	5 year	6.40	92.67	0.19	55.93	97.89	2984.00	359.04	10.19
Leamy Creek	Reach 1	2984	2 year	4.70	92.23	0.19	30.67	36.52	2984.00	229.33	10.19
Leamy Creek	Reach 1	3026	100 year	10.20	93.49	0.14	192.82	320.86	3026.00	731.59	13.31
Leamy Creek	Reach 1	3026	50 year	9.40	93.34	0.15	147.72	251.02	3026.00	646.54	13.31
Leamy Creek	Reach 1	3026	25 year	8.30	93.11	0.16	102.21	150.67	3026.00	537.13	13.31
Leamy Creek	Reach 1	3026	10 year	7.40	92.90	0.16	78.81	92.65	3026.00	448.47	13.31
Leamy Creek	Reach 1	3026	5 year	6.40	92.67	0.16	60.23	69.85	3026.00	361.54	13.31
Leamy Creek	Reach 1	3026	2 year	4.70	92.24	0.16	37.35	40.39	3026.00	230.78	13.31
Leamy Creek	Reach 1	3041	100 year	10.20	93.49	0.06	188.81	265.14	3041.00	736.24	171.68
Leamy Creek	Reach 1	3041	50 year	9.40	93.34	0.07	150.69	218.69	3041.00	650.02	142.31
Leamy Creek	Reach 1	3041	25 year	8.30	93.11	0.09	108.72	151.92	3041.00	539.42	100.08
Leamy Creek	Reach 1	3041	10 year	7.40	92.90	0.10	82.68	108.51	3041.00	450.14	72.30
Leamy Creek	Reach 1	3041	5 year	6.40	92.67	0.12	60.83	82.60	3041.00	362.72	55.15
Leamy Creek	Reach 1	3041	2 year	4.70	92.24	0.15	34.13	43.53	3041.00	231.40	29.86
Leamy Creek	Reach 1	3063	100 year	10.20	93.49	0.13	170.61	196.54	3063.00	740.74	14.70
Leamy Creek	Reach 1	3063	50 year	9.40	93.34	0.13	141.74	169.86	3063.00	653.65	14.70
Leamy Creek	Reach 1	3063	25 year	8.30	93.11	0.14	107.62	131.51	3063.00	542.06	14.70
Leamy Creek	Reach 1	3063	10 year	7.40	92.90	0.15	83.67	102.72	3063.00	452.15	14.70
Leamy Creek	Reach 1	3063	5 year	6.40	92.67	0.15	62.92	78.82	3063.00	364.19	14.70
Leamy Creek	Reach 1	3063	2 year	4.70	92.24	0.15	37.19	42.63	3063.00	232.23	14.70
Leamy Creek	Reach 1	3162	100 year	10.20	93.49	0.10	234.38	294.04	3162.00	759.41	16.94
Leamy Creek	Reach 1	3162	50 year	9.40	93.34	0.11	191.75	247.55	3162.00	669.01	16.94
Leamy Creek	Reach 1	3162	25 year	8.30	93.11	0.11	143.29	180.74	3162.00	553.62	16.94
Leamy Creek	Reach 1	3162	10 year	7.40	92.90	0.12	111.49	133.52	3162.00	461.17	16.94
Leamy Creek	Reach 1	3162	5 year	6.40	92.67	0.12	84.93	99.04	3162.00	371.07	16.94
Leamy Creek	Reach 1	3162	2 year	4.70	92.24	0.12	52.49	60.22	3162.00	236.49	16.94
Leamy Creek	Reach 1	3221	100 year	10.20	93.49	0.12	259.90	435.84	3221.00	770.83	11.47
Leamy Creek	Reach 1	3221	50 year	9.40	93.34	0.13	197.98	350.59	3221.00	678.10	11.47
Leamy Creek	Reach 1	3221	25 year	8.30	93.11	0.15	132.50	228.05	3221.00	560.18	11.47
Leamy Creek	Reach 1	3221	10 year	7.40	92.90	0.16	94.88	156.42	3221.00	466.18	11.47
Leamy Creek	Reach 1	3221	5 year	6.40	92.67	0.18	62.32	128.52	3221.00	374.77	11.47
Leamy Creek	Reach 1	3221	2 year	4.70	92.24	0.18	31.01	33.65	3221.00	238.75	11.47
Leamy Creek	Reach 1	3233	100 year	10.20	93.49	0.11	260.09	406.88	3233.00	782.04	9.83
Leamy Creek	Reach 1	3233	50 year	9.40	93.34	0.13	201.93	332.06	3233.00	686.62	9.83
Leamy Creek	Reach 1	3233	25 year	8.30	93.11	0.15	138.96	224.50	3233.00	565.76	9.83
Leamy Creek	Reach 1	3233	10 year	7.40	92.90	0.16	100.90	161.92	3233.00	469.95	9.83
Leamy Creek	Reach 1	3233	5 year	6.40	92.67	0.19	66.57	138.42	3233.00	376.92	9.83
Leamy Creek	Reach 1	3233	2 year	4.70	92.24	0.20	31.38	40.26	3233.00	239.40	9.83
Leamy Creek	Reach 1	3247	100 year	10.20	93.49	0.10	303.35	460.77	3247.00	791.88	11.00
Leamy Creek	Reach 1	3247	50 year	9.40	93.34	0.11	236.89	384.04	3247.00	694.27	11.00
Leamy Creek	Reach 1	3247	25 year	8.30	93.11	0.13	162.50	273.74	3247.00	570.92	11.00
Leamy Creek	Reach 1	3247	10 year	7.40	92.90	0.15	114.75	203.53	3247.00	473.48	11.00
Leamy Creek	Reach 1	3247	5 year	6.40	92.68	0.18	72.59	165.42	3247.00	378.96	11.00
Leamy Creek	Reach 1	3247	2 year	4.70	92.24	0.19	32.93	42.98	3247.00	240.07	11.00
Leamy Creek	Reach 1	3272	100 year	10.20	93.49	0.10	288.06	458.59	3272.00	803.04	12.86
Leamy Creek	Reach 1	3272	50 year	9.40	93.34	0.12	222.18	378.85	3272.00	703.09	12.86
Leamy Creek	Reach 1	3272	25 year	8.30	93.11	0.13	149.47	264.20	3272.00	576.97	12.86
Leamy Creek	Reach 1	3272	10 year	7.40	92.90	0.15	104.48	182.64	3272.00	477.58	12.86
Leamy Creek	Reach 1	3272	5 year	6.40	92.68	0.16	69.63	122.73	3272.00	381.40	12.86

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Leamy Creek	Reach 1	3272	2 year	4.70	92.24	0.16	35.71	49.07	3272.00	241.02	12.86
Leamy Creek	Reach 1	3476	100 year	10.20	93.50	0.08	369.47	534.54	3476.00	848.69	11.36
Leamy Creek	Reach 1	3476	50 year	9.40	93.34	0.09	292.74	442.19	3476.00	739.19	11.36
Leamy Creek	Reach 1	3476	25 year	8.30	93.11	0.10	207.90	309.48	3476.00	602.44	11.36
Leamy Creek	Reach 1	3476	10 year	7.40	92.91	0.11	154.84	222.54	3476.00	496.36	11.36
Leamy Creek	Reach 1	3476	5 year	6.40	92.68	0.13	109.90	172.17	3476.00	394.74	11.36
Leamy Creek	Reach 1	3476	2 year	4.70	92.24	0.18	34.10	46.36	3476.00	247.39	11.36
Leamy Creek	Reach 1	3576	100 year	10.20	93.50	0.07	398.40	470.26	3576.00	892.64	18.08
Leamy Creek	Reach 1	3576	50 year	9.40	93.34	0.07	327.98	426.57	3576.00	774.25	18.08
Leamy Creek	Reach 1	3576	25 year	8.30	93.11	0.09	238.81	363.80	3576.00	627.21	18.08
Leamy Creek	Reach 1	3576	10 year	7.40	92.91	0.10	169.42	309.36	3576.00	514.12	18.08
Leamy Creek	Reach 1	3576	5 year	6.40	92.68	0.12	105.39	253.48	3576.00	406.38	18.08
Leamy Creek	Reach 1	3576	2 year	4.70	92.24	0.12	48.30	52.34	3576.00	251.69	18.08
Leamy Creek	Reach 1	3644	100 year	10.20	93.50	0.07	406.59	522.80	3644.00	916.94	11.22
Leamy Creek	Reach 1	3644	50 year	9.40	93.34	0.08	328.73	469.00	3644.00	794.21	11.22
Leamy Creek	Reach 1	3644	25 year	8.30	93.11	0.10	231.65	391.69	3644.00	641.65	11.22
Leamy Creek	Reach 1	3644	10 year	7.40	92.91	0.17	90.54	132.53	3644.00	522.10	11.22
Leamy Creek	Reach 1	3644	5 year	6.40	92.68	0.18	64.35	97.83	3644.00	411.68	11.22
Leamy Creek	Reach 1	3644	2 year	4.70	92.24	0.19	33.87	50.08	3644.00	254.37	11.22
Leamy Creek	Reach 1	3660	100 year	10.20	93.50	0.08	399.00	543.41	3660.00	920.58	13.85
Leamy Creek	Reach 1	3660	50 year	9.40	93.34	0.09	318.40	483.24	3660.00	797.17	13.85
Leamy Creek	Reach 1	3660	25 year	8.30	93.11	0.11	219.14	396.78	3660.00	643.77	13.85
Leamy Creek	Reach 1	3660	10 year	7.40	92.91	0.14	99.39	140.82	3660.00	523.24	13.85
Leamy Creek	Reach 1	3660	5 year	6.40	92.68	0.15	71.71	102.93	3660.00	412.53	13.85
Leamy Creek	Reach 1	3660	2 year	4.70	92.24	0.16	39.77	53.73	3660.00	254.88	13.85
Leamy Creek	Reach 1	3691	100 year	10.20	93.50	0.07	424.24	646.25	3691.00	938.63	18.23
Leamy Creek	Reach 1	3691	50 year	9.40	93.34	0.08	329.84	556.37	3691.00	811.24	18.23
Leamy Creek	Reach 1	3691	25 year	8.30	93.11	0.10	218.92	427.25	3691.00	653.25	18.23
Leamy Creek	Reach 1	3691	10 year	7.40	92.91	0.11	117.07	139.28	3691.00	528.63	18.23
Leamy Creek	Reach 1	3691	5 year	6.40	92.68	0.12	88.25	114.63	3691.00	416.30	18.23
Leamy Creek	Reach 1	3691	2 year	4.70	92.25	0.12	48.94	65.77	3691.00	256.60	18.23
Leamy Creek	Reach 1	3812	100 year	10.20	93.50	0.09	319.33	456.73	3812.00	1019.24	14.19
Leamy Creek	Reach 1	3812	50 year	9.40	93.34	0.11	249.80	429.38	3812.00	872.99	14.19
Leamy Creek	Reach 1	3812	25 year	8.30	93.11	0.14	157.42	390.08	3812.00	691.18	14.19
Leamy Creek	Reach 1	3812	10 year	7.40	92.91	0.14	100.30	143.72	3812.00	547.36	14.19
Leamy Creek	Reach 1	3812	5 year	6.40	92.68	0.15	71.88	106.64	3812.00	429.50	14.19
Leamy Creek	Reach 1	3812	2 year	4.70	92.25	0.16	38.77	53.37	3812.00	263.12	14.19
Leamy Creek	Reach 1	3907	100 year	10.20	93.50	0.13	241.56	435.94	3907.00	1048.27	7.63
Leamy Creek	Reach 1	3907	50 year	9.40	93.34	0.15	180.48	342.88	3907.00	894.95	7.63
Leamy Creek	Reach 1	3907	25 year	8.30	93.11	0.18	118.31	209.28	3907.00	704.66	7.63
Leamy Creek	Reach 1	3907	10 year	7.40	92.91	0.19	85.85	129.74	3907.00	556.12	7.63
Leamy Creek	Reach 1	3907	5 year	6.40	92.68	0.22	59.74	100.41	3907.00	435.81	7.63
Leamy Creek	Reach 1	3907	2 year	4.70	92.25	0.25	27.61	50.19	3907.00	266.49	7.63
Leamy Creek	Reach 1	3978	100 year	10.20	93.50	0.13	232.54	416.85	3978.00	1069.99	10.71
Leamy Creek	Reach 1	3978	50 year	9.40	93.34	0.15	173.90	331.94	3978.00	910.88	10.71
Leamy Creek	Reach 1	3978	25 year	8.30	93.12	0.18	112.96	210.05	3978.00	714.78	10.71
Leamy Creek	Reach 1	3978	10 year	7.40	92.91	0.19	79.70	132.64	3978.00	563.32	10.71
Leamy Creek	Reach 1	3978	5 year	6.40	92.68	0.22	53.94	95.04	3978.00	440.76	10.71
Leamy Creek	Reach 1	3978	2 year	4.70	92.25	0.25	25.67	44.98	3978.00	268.81	10.71
Leamy Creek	Reach 1	4029	100 year	10.20	93.50	0.09	367.24	577.27	4029.00	1093.71	8.27
Leamy Creek	Reach 1	4029	50 year	9.40	93.34	0.11	279.34	546.77	4029.00	928.59	8.27
Leamy Creek	Reach 1	4029	25 year	8.30	93.12	0.17	161.40	502.94	4029.00	724.95	8.27
Leamy Creek	Reach 1	4029	10 year	7.40	92.91	0.18	91.13	140.63	4029.00	569.19	8.27
Leamy Creek	Reach 1	4029	5 year	6.40	92.68	0.20	63.81	101.31	4029.00	444.73	8.27
Leamy Creek	Reach 1	4029	2 year	4.70	92.25	0.22	33.08	52.65	4029.00	270.68	8.27
Leamy Creek	Reach 1	4067	100 year	10.20	93.50	0.05	273.60	537.15	4067.00	1116.08	220.96
Leamy Creek	Reach 1	4067	50 year	9.40	93.34	0.06	198.50	424.50	4067.00	945.08	178.52
Leamy Creek	Reach 1	4067	25 year	8.30	93.12	0.08	121.53	262.99	4067.00	734.33	117.67
Leamy Creek	Reach 1	4067	10 year	7.40	92.91	0.11	80.83	159.20	4067.00	574.53	78.36
Leamy Creek	Reach 1	4067	5 year	6.40	92.69	0.15	50.51	109.88	4067.00	448.13	59.24
Leamy Creek	Reach 1	4067	2 year	4.70	92.26	0.25	20.41	40.59	4067.00	272.08	26.78
Leamy Creek	Reach 1	4197	100 year	10.20	93.50	0.13	282.63	587.29	4197.00	1140.30	6.56
Leamy Creek	Reach 1	4197	50 year	9.40	93.34	0.16	201.20	457.18	4197.00	962.68	6.56
Leamy Creek	Reach 1	4197	25 year	8.30	93.12	0.20	119.90	270.80	4197.00	745.13	6.56
Leamy Creek	Reach 1	4197	10 year	7.40	92.91	0.22	79.81	151.06	4197.00	581.74	6.56
Leamy Creek	Reach 1	4197	5 year	6.40	92.69	0.25	52.11	96.63	4197.00	452.76	6.56

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Leamy Creek	Reach 1	4197	2 year	4.70	92.26	0.27	27.35	41.34	4197.00	274.48	6.56
Leamy Creek	Reach 1	4338	100 year	10.20	93.50	0.10	344.40	596.66	4338.00	1192.31	6.47
Leamy Creek	Reach 1	4338	50 year	9.40	93.34	0.13	255.01	554.23	4338.00	1000.44	6.47
Leamy Creek	Reach 1	4338	25 year	8.30	93.12	0.21	138.56	493.53	4338.00	766.12	6.47
Leamy Creek	Reach 1	4338	10 year	7.40	92.92	0.26	68.68	139.55	4338.00	593.41	6.47
Leamy Creek	Reach 1	4338	5 year	6.40	92.70	0.31	42.52	95.82	4338.00	460.22	6.47
Leamy Creek	Reach 1	4338	2 year	4.70	92.27	0.36	17.00	35.24	4338.00	277.97	6.47
Leamy Creek	Reach 1	4490	100 year	10.20	93.50	0.04	307.84	573.74	4490.00	1240.13	222.85
Leamy Creek	Reach 1	4490	50 year	9.40	93.34	0.06	222.93	524.27	4490.00	1035.49	173.38
Leamy Creek	Reach 1	4490	25 year	8.30	93.13	0.11	115.69	454.15	4490.00	784.80	103.26
Leamy Creek	Reach 1	4490	10 year	7.40	92.92	0.17	51.77	118.42	4490.00	602.31	58.19
Leamy Creek	Reach 1	4490	5 year	6.40	92.71	0.23	30.85	74.30	4490.00	465.68	43.86
Leamy Creek	Reach 1	4490	2 year	4.70	92.29	0.34	14.22	22.15	4490.00	280.32	20.79
Leamy Creek	Reach 1	4506	100 year	10.20	93.50	0.10	314.15	500.22	4506.00	1254.10	6.92
Leamy Creek	Reach 1	4506	50 year	9.40	93.34	0.13	238.51	478.42	4506.00	1045.86	6.92
Leamy Creek	Reach 1	4506	25 year	8.30	93.13	0.21	137.13	447.54	4506.00	790.40	6.92
Leamy Creek	Reach 1	4506	10 year	7.40	92.93	0.27	68.30	171.00	4506.00	604.79	6.92
Leamy Creek	Reach 1	4506	5 year	6.40	92.71	0.32	38.53	103.37	4506.00	466.92	6.92
Leamy Creek	Reach 1	4506	2 year	4.70	92.30	0.35	17.11	27.01	4506.00	280.70	6.92
Leamy Creek	Reach 1	4515	100 year	10.20	93.50	0.11	299.53	487.50	4515.00	1259.18	4.43
Leamy Creek	Reach 1	4515	50 year	9.40	93.34	0.14	225.75	467.34	4515.00	1049.65	4.43
Leamy Creek	Reach 1	4515	25 year	8.30	93.13	0.24	126.57	438.77	4515.00	792.43	4.43
Leamy Creek	Reach 1	4515	10 year	7.40	92.93	0.34	60.01	155.16	4515.00	605.63	4.43
Leamy Creek	Reach 1	4515	5 year	6.40	92.71	0.44	32.24	99.15	4515.00	467.34	4.43
Leamy Creek	Reach 1	4515	2 year	4.70	92.29	0.49	12.73	18.60	4515.00	280.85	4.43
Tributary D	Reach 1	0	100 year	4.24	93.56	0.01	533.34	329.54			76.44
Tributary D	Reach 1	0	50 year	3.96	93.42	0.01	485.29	326.05			76.44
Tributary D	Reach 1	0	25 year	3.52	93.21	0.01	418.81	317.39			76.44
Tributary D	Reach 1	0	10 year	3.10	93.00	0.01	352.41	307.97			76.44
Tributary D	Reach 1	0	5 year	2.67	92.55	0.01	244.83	175.65			76.44
Tributary D	Reach 1	0	2 year	1.88	92.33	0.01	209.60	145.16			76.44
Tributary D	Reach 1	232	100 year	4.24	93.56	0.01	822.20	486.46	231.50	163.98	114.30
Tributary D	Reach 1	232	50 year	3.96	93.42	0.01	751.06	486.15	231.50	150.19	114.30
Tributary D	Reach 1	232	25 year	3.52	93.21	0.01	650.66	485.71	231.50	130.87	114.30
Tributary D	Reach 1	232	10 year	3.10	93.00	0.01	547.65	484.73	231.50	111.26	114.30
Tributary D	Reach 1	232	5 year	2.67	92.55	0.01	356.73	373.52	231.50	76.71	114.30
Tributary D	Reach 1	232	2 year	1.88	92.33	0.01	277.05	337.38	231.50	63.41	114.30
Tributary D	Reach 1	255		Culvert							
Tributary D	Reach 1	261	100 year	4.24	93.56	0.01	815.44	486.62	260.66	178.26	108.28
Tributary D	Reach 1	261	50 year	3.96	93.42	0.01	744.36	485.21	260.66	163.55	108.28
Tributary D	Reach 1	261	25 year	3.52	93.21	0.01	644.31	483.11	260.66	142.94	108.28
Tributary D	Reach 1	261	10 year	3.10	93.00	0.01	542.02	480.47	260.66	122.01	108.28
Tributary D	Reach 1	261	5 year	2.67	92.55	0.01	353.99	364.84	260.66	84.86	108.28
Tributary D	Reach 1	261	2 year	1.88	92.33	0.01	276.11	330.98	260.66	70.36	108.28
Tributary D	Reach 1	277	100 year	4.24	93.56	0.01	677.79	379.65	277.06	213.43	118.24
Tributary D	Reach 1	277	50 year	3.96	93.42	0.01	622.42	375.83	277.06	195.83	118.24
Tributary D	Reach 1	277	25 year	3.52	93.21	0.01	545.73	366.36	277.06	171.17	118.24
Tributary D	Reach 1	277	10 year	3.10	93.00	0.01	469.02	356.25	277.06	146.14	118.24
Tributary D	Reach 1	277	5 year	2.67	92.55	0.01	334.40	248.91	277.06	101.01	118.24
Tributary D	Reach 1	277	2 year	1.88	92.33	0.01	282.25	218.93	277.06	82.84	118.24
Tributary D	Reach 1	524	100 year	4.24	93.56	0.01	915.14	508.56	523.80	379.13	42.40
Tributary D	Reach 1	524	50 year	3.96	93.42	0.01	840.96	503.58	523.80	347.73	42.40
Tributary D	Reach 1	524	25 year	3.52	93.21	0.01	738.17	491.21	523.80	304.06	42.40
Tributary D	Reach 1	524	10 year	3.10	93.00	0.01	635.28	478.45	523.80	260.13	42.40
Tributary D	Reach 1	524	5 year	2.67	92.55	0.01	431.26	438.74	523.80	180.38	42.40
Tributary D	Reach 1	524	2 year	1.88	92.33	0.01	333.65	428.41	523.80	147.56	42.40
Tributary D	Reach 1	684	100 year	4.24	93.56	0.01	534.68	236.83	684.32	503.98	40.58
Tributary D	Reach 1	684	50 year	3.96	93.42	0.01	500.05	236.43	684.32	463.02	40.58
Tributary D	Reach 1	684	25 year	3.52	93.21	0.01	451.30	235.42	684.32	406.07	40.58
Tributary D	Reach 1	684	10 year	3.10	93.00	0.01	401.45	234.40	684.32	348.78	40.58
Tributary D	Reach 1	684	5 year	2.67	92.55	0.01	297.43	233.25	684.32	242.26	40.58
Tributary D	Reach 1	684	2 year	1.88	92.33	0.01	245.89	220.52	684.32	196.58	40.58
Tributary D	Reach 1	930	100 year	4.24	93.56	0.01	641.06	287.20	930.11	589.36	48.70
Tributary D	Reach 1	930	50 year	3.96	93.42	0.01	599.05	287.20	930.11	542.89	48.70
Tributary D	Reach 1	930	25 year	3.52	93.21	0.01	539.70	287.20	930.11	478.17	48.70

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Tributary D	Reach 1	930	10 year	3.10	93.00	0.01	478.76	287.20	930.11	412.94	48.70
Tributary D	Reach 1	930	5 year	2.67	92.55	0.01	351.23	286.13	930.11	289.86	48.70
Tributary D	Reach 1	930	2 year	1.88	92.33	0.01	286.70	285.58	930.11	235.98	48.70
Tributary D	Reach 1	981	100 year	4.24	93.56	0.01	510.39	255.16	980.65	636.91	34.94
Tributary D	Reach 1	981	50 year	3.96	93.42	0.01	473.06	255.16	980.65	587.11	34.94
Tributary D	Reach 1	981	25 year	3.52	93.21	0.01	420.33	255.16	980.65	517.70	34.94
Tributary D	Reach 1	981	10 year	3.10	93.00	0.01	366.19	255.16	980.65	447.65	34.94
Tributary D	Reach 1	981	5 year	2.67	92.55	0.02	252.68	255.16	980.65	314.47	34.94
Tributary D	Reach 1	981	2 year	1.88	92.33	0.02	196.51	238.53	980.65	255.51	34.94
Tributary D	Reach 1	1096	100 year	4.24	93.56	0.17	25.64	63.82	1095.96	682.94	32.00
Tributary D	Reach 1	1096	50 year	3.96	93.42	0.16	24.64	63.82	1095.96	629.99	32.00
Tributary D	Reach 1	1096	25 year	3.52	93.21	0.15	23.24	63.82	1095.96	556.12	32.00
Tributary D	Reach 1	1096	10 year	3.10	93.00	0.14	21.80	63.82	1095.96	481.50	32.00
Tributary D	Reach 1	1096	5 year	2.67	92.55	0.14	18.77	63.82	1095.96	338.74	32.00
Tributary D	Reach 1	1096	2 year	1.88	92.33	0.11	17.24	62.42	1095.96	275.01	32.00
Tributary D	Reach 1	1112		Culvert							
Tributary D	Reach 1	1128	100 year	4.24	93.56	0.16	26.28	94.19	1127.90	688.90	32.00
Tributary D	Reach 1	1128	50 year	3.96	93.42	0.16	25.29	93.40	1127.90	635.61	32.00
Tributary D	Reach 1	1128	25 year	3.52	93.21	0.15	23.88	91.40	1127.90	561.27	32.00
Tributary D	Reach 1	1128	10 year	3.10	93.00	0.14	22.46	89.40	1127.90	486.16	32.00
Tributary D	Reach 1	1128	5 year	2.67	92.55	0.14	19.41	82.85	1127.90	342.42	32.00
Tributary D	Reach 1	1128	2 year	1.88	92.33	0.11	17.87	80.07	1127.90	278.20	32.00
Tributary D	Reach 1	1132	100 year	4.24	93.57	0.04	163.92	80.45	1132.39	692.31	14.00
Tributary D	Reach 1	1132	50 year	3.96	93.42	0.04	152.14	79.95	1132.39	638.77	14.00
Tributary D	Reach 1	1132	25 year	3.52	93.21	0.04	135.70	78.67	1132.39	564.08	14.00
Tributary D	Reach 1	1132	10 year	3.10	93.00	0.04	119.44	77.37	1132.39	488.63	14.00
Tributary D	Reach 1	1132	5 year	2.67	92.55	0.05	88.26	61.36	1132.39	344.19	14.00
Tributary D	Reach 1	1132	2 year	1.88	92.33	0.04	74.95	57.11	1132.39	279.67	14.00
Tributary D	Reach 1	1305	100 year	4.24	93.57	0.04	182.72	155.02	1305.16	720.29	22.90
Tributary D	Reach 1	1305	50 year	3.96	93.42	0.04	160.10	153.39	1305.16	664.10	22.90
Tributary D	Reach 1	1305	25 year	3.52	93.21	0.05	128.52	151.31	1305.16	585.71	22.90
Tributary D	Reach 1	1305	10 year	3.10	93.00	0.05	97.21	149.22	1305.16	506.59	22.90
Tributary D	Reach 1	1305	5 year	2.67	92.56	0.06	58.49	57.50	1305.16	356.53	22.90
Tributary D	Reach 1	1305	2 year	1.88	92.33	0.05	47.07	47.96	1305.16	289.95	22.90
Tributary D	Reach 1	1453	100 year	4.24	93.57	0.04	195.63	231.55	1452.64	751.13	18.82
Tributary D	Reach 1	1453	50 year	3.96	93.42	0.05	162.38	214.09	1452.64	690.30	18.82
Tributary D	Reach 1	1453	25 year	3.52	93.21	0.05	122.61	169.72	1452.64	605.97	18.82
Tributary D	Reach 1	1453	10 year	3.10	93.00	0.06	91.90	125.11	1452.64	521.69	18.82
Tributary D	Reach 1	1453	5 year	2.67	92.56	0.06	59.96	59.78	1452.64	365.85	18.82
Tributary D	Reach 1	1453	2 year	1.88	92.33	0.05	47.84	50.89	1452.64	297.38	18.82
Tributary D	Reach 1	1644	100 year	4.24	93.57	0.03	235.17	281.23	1644.20	787.22	32.86
Tributary D	Reach 1	1644	50 year	3.96	93.42	0.04	195.16	255.70	1644.20	720.57	32.86
Tributary D	Reach 1	1644	25 year	3.52	93.21	0.04	148.24	197.18	1644.20	629.29	32.86
Tributary D	Reach 1	1644	10 year	3.10	93.00	0.04	113.30	138.36	1644.20	539.65	32.86
Tributary D	Reach 1	1644	5 year	2.67	92.56	0.05	65.31	76.24	1644.20	377.13	32.86
Tributary D	Reach 1	1644	2 year	1.88	92.33	0.04	53.04	47.40	1644.20	306.52	32.86
Tributary D	Reach 1	1862	100 year	4.24	93.57	0.11	76.94	78.96	1862.10	822.54	8.06
Tributary D	Reach 1	1862	50 year	3.96	93.42	0.11	66.77	65.30	1862.10	750.13	8.06
Tributary D	Reach 1	1862	25 year	3.52	93.21	0.12	53.76	60.29	1862.10	651.99	8.06
Tributary D	Reach 1	1862	10 year	3.10	93.00	0.13	41.73	55.24	1862.10	556.99	8.06
Tributary D	Reach 1	1862	5 year	2.67	92.56	0.24	18.47	48.35	1862.10	386.38	8.06
Tributary D	Reach 1	1862	2 year	1.88	92.33	0.24	10.80	25.62	1862.10	313.54	8.06
Tributary D	Reach 1	1943	100 year	4.24	93.57	0.19	42.95	48.32	1942.67	832.22	4.82
Tributary D	Reach 1	1943	50 year	3.96	93.42	0.20	36.62	40.73	1942.67	758.36	4.82
Tributary D	Reach 1	1943	25 year	3.52	93.21	0.22	28.56	37.22	1942.67	658.38	4.82
Tributary D	Reach 1	1943	10 year	3.10	93.01	0.25	21.19	33.68	1942.67	561.70	4.82
Tributary D	Reach 1	1943	5 year	2.67	92.56	0.37	10.19	15.80	1942.67	388.20	4.82
Tributary D	Reach 1	1943	2 year	1.88	92.34	0.34	7.25	11.84	1942.67	314.56	4.82
Tributary D	Reach 1	1957	100 year	4.24	93.57	0.24	20.63	11.10	1956.68	835.55	7.00
Tributary D	Reach 1	1957	50 year	3.96	93.42	0.24	19.10	11.01	1956.68	761.07	7.00
Tributary D	Reach 1	1957	25 year	3.52	93.21	0.24	16.93	10.84	1956.68	660.33	7.00
Tributary D	Reach 1	1957	10 year	3.10	93.01	0.24	14.75	10.67	1956.68	562.96	7.00
Tributary D	Reach 1	1957	5 year	2.67	92.57	0.29	10.22	9.78	1956.68	388.57	7.00
Tributary D	Reach 1	1957	2 year	1.88	92.34	0.25	8.10	9.15	1956.68	314.80	7.00
Tributary D	Reach 1	1959		Bridge							

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Tributary D	Reach 1	1964	100 year	4.24	93.57	0.25	19.81	12.06	1964.38	835.69	7.00
Tributary D	Reach 1	1964	50 year	3.96	93.42	0.25	18.20	11.35	1964.38	761.21	7.00
Tributary D	Reach 1	1964	25 year	3.52	93.21	0.25	15.96	10.56	1964.38	660.46	7.00
Tributary D	Reach 1	1964	10 year	3.10	93.01	0.25	13.85	9.77	1964.38	563.07	7.00
Tributary D	Reach 1	1964	5 year	2.67	92.57	0.29	9.75	8.90	1964.38	388.65	7.00
Tributary D	Reach 1	1964	2 year	1.88	92.34	0.25	7.81	8.44	1964.38	314.86	7.00
Tributary D	Reach 1	1971	100 year	4.24	93.57	0.13	51.93	54.80	1971.10	836.64	10.00
Tributary D	Reach 1	1971	50 year	3.96	93.42	0.14	44.25	49.36	1971.10	761.96	10.00
Tributary D	Reach 1	1971	25 year	3.52	93.22	0.14	34.97	40.29	1971.10	660.98	10.00
Tributary D	Reach 1	1971	10 year	3.10	93.01	0.15	27.55	31.20	1971.10	563.42	10.00
Tributary D	Reach 1	1971	5 year	2.67	92.57	0.17	17.03	16.86	1971.10	388.79	10.00
Tributary D	Reach 1	1971	2 year	1.88	92.35	0.15	13.75	13.68	1971.10	314.96	10.00
Tributary D	Reach 1	1985	100 year	4.24	93.57	0.01	868.82	486.33	1985.11	843.00	114.30
Tributary D	Reach 1	1985	50 year	3.96	93.43	0.01	797.55	486.17	1985.11	767.78	114.30
Tributary D	Reach 1	1985	25 year	3.52	93.22	0.01	697.00	485.73	1985.11	666.04	114.30
Tributary D	Reach 1	1985	10 year	3.10	93.01	0.01	596.26	485.28	1985.11	567.74	114.30
Tributary D	Reach 1	1985	5 year	2.67	92.57	0.01	406.42	378.49	1985.11	391.73	114.30
Tributary D	Reach 1	1985	2 year	1.88	92.35	0.01	326.23	340.11	1985.11	317.33	114.30
Tributary D	Reach 1	2087	100 year	4.24	93.57	0.06	102.74	122.14	2086.59	891.00	26.92
Tributary D	Reach 1	2087	50 year	3.96	93.43	0.06	87.73	83.61	2086.59	811.60	26.92
Tributary D	Reach 1	2087	25 year	3.52	93.22	0.06	71.38	74.42	2086.59	704.24	26.92
Tributary D	Reach 1	2087	10 year	3.10	93.01	0.06	56.90	65.20	2086.59	600.40	26.92
Tributary D	Reach 1	2087	5 year	2.67	92.57	0.08	36.62	39.20	2086.59	414.19	26.92
Tributary D	Reach 1	2087	2 year	1.88	92.35	0.07	28.46	33.90	2086.59	335.35	26.92
Tributary D	Reach 1	2128	100 year	4.24	93.57	0.17	33.72	25.03	2127.88	895.27	9.00
Tributary D	Reach 1	2128	50 year	3.96	93.42	0.17	30.08	24.14	2127.88	815.13	9.00
Tributary D	Reach 1	2128	25 year	3.52	93.22	0.17	25.34	21.69	2127.88	706.96	9.00
Tributary D	Reach 1	2128	10 year	3.10	93.01	0.18	21.09	19.23	2127.88	602.44	9.00
Tributary D	Reach 1	2128	5 year	2.67	92.57	0.21	13.90	13.58	2127.88	415.36	9.00
Tributary D	Reach 1	2128	2 year	1.88	92.35	0.18	11.08	11.91	2127.88	336.23	9.00
Tributary D	Reach 1	2150	100 year	4.24	93.57	0.28	15.01	48.92	2149.82	896.50	9.00
Tributary D	Reach 1	2150	50 year	3.96	93.42	0.28	14.18	47.81	2149.82	816.23	9.00
Tributary D	Reach 1	2150	25 year	3.52	93.22	0.27	13.00	44.81	2149.82	707.89	9.00
Tributary D	Reach 1	2150	10 year	3.10	93.01	0.26	11.82	41.80	2149.82	603.21	9.00
Tributary D	Reach 1	2150	5 year	2.67	92.57	0.29	9.32	39.28	2149.82	415.83	9.00
Tributary D	Reach 1	2150	2 year	1.88	92.35	0.23	8.04	32.03	2149.82	336.56	9.00
Tributary D	Reach 1	2159		Culvert							
Tributary D	Reach 1	2170	100 year	4.24	93.57	0.26	16.05	75.43	2170.82	901.00	22.86
Tributary D	Reach 1	2170	50 year	3.96	93.43	0.26	15.20	52.79	2170.82	820.12	22.86
Tributary D	Reach 1	2170	25 year	3.52	93.22	0.25	14.02	46.62	2170.82	711.05	22.86
Tributary D	Reach 1	2170	10 year	3.10	93.01	0.24	12.79	40.20	2170.82	605.73	22.86
Tributary D	Reach 1	2170	5 year	2.67	92.57	0.26	10.25	36.26	2170.82	417.18	22.86
Tributary D	Reach 1	2170	2 year	1.88	92.35	0.21	8.95	31.78	2170.82	337.40	22.86
Tributary D	Reach 1	2353	100 year	4.24	93.58	0.05	115.96	103.05	2354.43	920.16	35.68
Tributary D	Reach 1	2353	50 year	3.96	93.43	0.05	102.95	81.18	2354.43	836.59	35.68
Tributary D	Reach 1	2353	25 year	3.52	93.23	0.05	86.97	75.59	2354.43	724.67	35.68
Tributary D	Reach 1	2353	10 year	3.10	93.02	0.05	71.57	69.78	2354.43	616.86	35.68
Tributary D	Reach 1	2353	5 year	2.67	92.58	0.07	43.49	59.27	2354.43	424.21	35.68
Tributary D	Reach 1	2353	2 year	1.88	92.35	0.07	30.60	55.08	2354.43	342.66	35.68
Tributary D	Reach 1	2622	100 year	4.24	93.58	0.14	31.34	53.44	2623.48	940.13	48.88
Tributary D	Reach 1	2622	50 year	3.96	93.43	0.16	24.03	46.60	2623.48	853.73	46.60
Tributary D	Reach 1	2622	25 year	3.52	93.23	0.23	15.21	39.69	2623.48	738.40	39.69
Tributary D	Reach 1	2622	10 year	3.10	93.01	0.42	7.44	32.41	2623.48	627.44	32.41
Tributary D	Reach 1	2622	5 year	2.67	92.85	1.00	2.67	26.99	2623.48	430.37	26.99
Tributary D	Reach 1	2622	2 year	1.88	92.83	0.89	2.12	26.29	2623.48	347.02	26.29
Tributary D	Reach 1	2821	100 year	4.24	93.59	0.10	44.56	83.26	2822.19	947.66	69.88
Tributary D	Reach 1	2821	50 year	3.96	93.44	0.12	33.60	67.32	2822.19	859.45	67.32
Tributary D	Reach 1	2821	25 year	3.52	93.26	0.16	22.03	58.82	2822.19	742.10	58.82
Tributary D	Reach 1	2821	10 year	3.10	93.13	0.21	14.84	52.85	2822.19	629.66	52.85
Tributary D	Reach 1	2821	5 year	2.67	93.10	0.20	13.26	51.45	2822.19	431.95	51.45
Tributary D	Reach 1	2821	2 year	1.88	93.06	0.17	10.88	49.26	2822.19	348.31	49.26
Tributary D	Reach 1	3008	100 year	4.24	93.59	0.15	27.96	65.33	3008.66	954.33	56.32
Tributary D	Reach 1	3008	50 year	3.96	93.46	0.20	20.00	53.56	3008.66	864.45	53.56
Tributary D	Reach 1	3008	25 year	3.52	93.30	0.29	12.32	43.06	3008.66	745.30	43.06
Tributary D	Reach 1	3008	10 year	3.10	93.22	0.34	9.11	37.80	3008.66	631.89	37.80

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Tributary D	Reach 1	3008	5 year	2.67	93.19	0.33	8.12	36.03	3008.66	433.94	36.03
Tributary D	Reach 1	3008	2 year	1.88	93.14	0.30	6.30	32.52	3008.66	349.91	32.52
Tributary D	Reach 1	3075	100 year	4.24	93.59	0.38	11.03	35.51	3075.97	957.20	10.00
Tributary D	Reach 1	3075	50 year	3.96	93.46	0.38	10.37	31.99	3075.97	866.53	10.00
Tributary D	Reach 1	3075	25 year	3.52	93.31	0.37	9.60	26.05	3075.97	746.67	10.00
Tributary D	Reach 1	3075	10 year	3.10	93.23	0.34	9.21	23.08	3075.97	632.97	10.00
Tributary D	Reach 1	3075	5 year	2.67	93.20	0.29	9.07	22.02	3075.97	434.94	10.00
Tributary D	Reach 1	3075	2 year	1.88	93.15	0.21	8.80	19.90	3075.97	350.74	10.00
Tributary D	Reach 1	3090		Culvert							
Tributary D	Reach 1	3105	100 year	4.24	93.60	0.36	11.81	24.84	3105.68	959.12	10.00
Tributary D	Reach 1	3105	50 year	3.96	93.47	0.36	11.16	23.30	3105.68	867.96	10.00
Tributary D	Reach 1	3105	25 year	3.52	93.32	0.34	10.38	19.77	3105.68	747.63	10.00
Tributary D	Reach 1	3105	10 year	3.10	93.24	0.31	9.99	17.97	3105.68	633.74	10.00
Tributary D	Reach 1	3105	5 year	2.67	93.21	0.27	9.84	17.30	3105.68	435.65	10.00
Tributary D	Reach 1	3105	2 year	1.88	93.15	0.20	9.55	15.97	3105.68	351.35	10.00
Tributary D	Reach 1	3137	100 year	4.24	93.61	0.15	28.36	54.31	3137.79	960.21	48.92
Tributary D	Reach 1	3137	50 year	3.96	93.48	0.18	21.63	47.75	3137.79	868.81	47.75
Tributary D	Reach 1	3137	25 year	3.52	93.33	0.24	14.94	38.00	3137.79	748.25	38.00
Tributary D	Reach 1	3137	10 year	3.10	93.24	0.26	12.08	32.96	3137.79	634.27	32.96
Tributary D	Reach 1	3137	5 year	2.67	93.21	0.24	11.09	31.03	3137.79	436.14	31.03
Tributary D	Reach 1	3137	2 year	1.88	93.15	0.20	9.30	28.44	3137.79	351.78	28.44
Tributary D	Reach 1	3307	100 year	4.24	93.63	0.22	19.29	50.91	3308.14	964.24	43.98
Tributary D	Reach 1	3307	50 year	3.96	93.52	0.29	13.87	44.80	3308.14	871.83	43.98
Tributary D	Reach 1	3307	25 year	3.52	93.40	0.39	9.09	37.86	3308.14	750.29	37.86
Tributary D	Reach 1	3307	10 year	3.10	93.35	0.43	7.17	34.63	3308.14	635.91	34.63
Tributary D	Reach 1	3307	5 year	2.67	93.31	0.44	6.06	32.61	3308.14	437.60	32.61
Tributary D	Reach 1	3307	2 year	1.88	93.25	0.47	3.96	28.44	3308.14	352.91	28.44
Tributary D	Reach 1	3383	100 year	4.24	93.65	0.40	10.76	27.35	3384.08	965.40	25.68
Tributary D	Reach 1	3383	50 year	3.96	93.56	0.47	8.49	26.40	3384.08	872.68	25.68
Tributary D	Reach 1	3383	25 year	3.52	93.51	0.50	6.99	25.75	3384.08	750.90	25.68
Tributary D	Reach 1	3383	10 year	3.10	93.48	0.48	6.40	25.24	3384.08	636.42	25.24
Tributary D	Reach 1	3383	5 year	2.67	93.46	0.46	5.88	24.68	3384.08	438.05	24.68
Tributary D	Reach 1	3383	2 year	1.88	93.42	0.39	4.87	23.57	3384.08	353.25	23.57
Tributary D	Reach 1	3406	100 year	4.24	93.66	0.68	6.38	17.07	3407.43	965.60	14.38
Tributary D	Reach 1	3406	50 year	3.96	93.59	0.76	5.24	15.91	3407.43	872.84	14.38
Tributary D	Reach 1	3406	25 year	3.52	93.55	0.77	4.59	15.21	3407.43	751.04	14.38
Tributary D	Reach 1	3406	10 year	3.10	93.53	0.73	4.27	14.86	3407.43	636.55	14.38
Tributary D	Reach 1	3406	5 year	2.67	93.51	0.68	3.95	14.48	3407.43	438.17	14.38
Tributary D	Reach 1	3406	2 year	1.88	93.46	0.57	3.29	13.66	3407.43	353.34	13.66
Tributary D	Reach 1	3450	100 year	4.24	93.70	0.27	16.44	40.78	3450.95	966.10	31.90
Tributary D	Reach 1	3450	50 year	3.96	93.65	0.29	14.27	38.40	3450.95	873.27	31.90
Tributary D	Reach 1	3450	25 year	3.52	93.61	0.28	12.85	36.76	3450.95	751.42	31.90
Tributary D	Reach 1	3450	10 year	3.10	93.59	0.26	11.94	35.67	3450.95	636.90	31.90
Tributary D	Reach 1	3450	5 year	2.67	93.56	0.24	10.99	34.50	3450.95	438.49	31.90
Tributary D	Reach 1	3450	2 year	1.88	93.50	0.21	9.11	32.04	3450.95	353.61	31.90
Tributary D	Reach 1	3575	100 year	4.24	93.74	0.36	12.78	35.72	3576.39	967.96	25.24
Tributary D	Reach 1	3575	50 year	3.96	93.70	0.37	11.26	33.83	3576.39	874.89	25.24
Tributary D	Reach 1	3575	25 year	3.52	93.66	0.36	10.13	32.35	3576.39	752.87	25.24
Tributary D	Reach 1	3575	10 year	3.10	93.64	0.34	9.31	31.22	3576.39	638.24	25.24
Tributary D	Reach 1	3575	5 year	2.67	93.61	0.32	8.44	30.00	3576.39	439.72	25.24
Tributary D	Reach 1	3575	2 year	1.88	93.55	0.28	6.73	27.42	3576.39	354.61	25.24
Tributary D	Reach 1	3682	100 year	4.24	93.80	0.37	12.42	38.98	3683.48	969.31	27.32
Tributary D	Reach 1	3682	50 year	3.96	93.76	0.38	11.20	37.74	3683.48	876.08	27.32
Tributary D	Reach 1	3682	25 year	3.52	93.74	0.37	10.10	36.57	3683.48	753.95	27.32
Tributary D	Reach 1	3682	10 year	3.10	93.71	0.36	9.19	35.57	3683.48	639.23	27.32
Tributary D	Reach 1	3682	5 year	2.67	93.68	0.34	8.22	34.49	3683.48	440.61	27.32
Tributary D	Reach 1	3682	2 year	1.88	93.63	0.31	6.31	32.23	3683.48	355.30	27.32
Tributary D	Reach 1	3797	100 year	4.24	93.86	0.38	16.02	54.83	3798.19	970.81	15.68
Tributary D	Reach 1	3797	50 year	3.96	93.84	0.39	14.74	52.94	3798.19	877.46	15.68
Tributary D	Reach 1	3797	25 year	3.52	93.81	0.37	13.37	50.82	3798.19	755.20	15.68
Tributary D	Reach 1	3797	10 year	3.10	93.78	0.36	12.11	48.81	3798.19	640.36	15.68
Tributary D	Reach 1	3797	5 year	2.67	93.76	0.34	10.84	46.69	3798.19	441.63	15.68
Tributary D	Reach 1	3797	2 year	1.88	93.70	0.30	8.43	42.36	3798.19	356.10	15.68
Tributary D	Reach 1	3986	100 year	4.24	93.99	0.64	8.10	20.14	3987.45	973.06	10.26
Tributary D	Reach 1	3986	50 year	3.96	93.97	0.62	7.75	19.78	3987.45	879.56	10.26

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Tributary D	Reach 1	3986	25 year	3.52	93.94	0.58	7.22	19.23	3987.45	757.12	10.26
Tributary D	Reach 1	3986	10 year	3.10	93.92	0.55	6.71	18.68	3987.45	642.11	10.26
Tributary D	Reach 1	3986	5 year	2.67	93.89	0.51	6.17	18.09	3987.45	443.20	10.26
Tributary D	Reach 1	3986	2 year	1.88	93.82	0.43	5.05	16.78	3987.45	357.34	10.26
Tributary D	Reach 1	4177	100 year	4.24	94.30	0.84	6.59	27.74	4178.49	974.37	11.20
Tributary D	Reach 1	4177	50 year	3.96	94.28	0.83	6.15	26.87	4178.49	880.80	11.20
Tributary D	Reach 1	4177	25 year	3.52	94.26	0.82	5.44	25.35	4178.49	758.25	11.20
Tributary D	Reach 1	4177	10 year	3.10	94.23	0.81	4.76	23.83	4178.49	643.14	11.20
Tributary D	Reach 1	4177	5 year	2.67	94.20	0.80	4.05	22.14	4178.49	444.13	11.20
Tributary D	Reach 1	4177	2 year	1.88	94.13	0.79	2.70	18.49	4178.49	358.05	11.20
Tributary D	Reach 1	4348	100 year	4.24	94.95	1.10	4.78	14.00	4349.06	975.47	6.70
Tributary D	Reach 1	4348	50 year	3.96	94.93	1.07	4.61	13.79	4349.06	881.83	6.70
Tributary D	Reach 1	4348	25 year	3.52	94.91	1.00	4.32	13.45	4349.06	759.18	6.70
Tributary D	Reach 1	4348	10 year	3.10	94.89	0.93	4.06	13.12	4349.06	643.98	6.70
Tributary D	Reach 1	4348	5 year	2.67	94.87	0.86	3.74	12.73	4349.06	444.86	6.70
Tributary D	Reach 1	4348	2 year	1.88	94.82	0.71	3.15	11.94	4349.06	358.59	6.70
Tributary D	Reach 1	4563	100 year	4.24	95.17	0.24	18.35	66.22	4564.27	977.97	51.78
Tributary D	Reach 1	4563	50 year	3.96	95.15	0.24	17.39	64.96	4564.27	884.22	51.78
Tributary D	Reach 1	4563	25 year	3.52	95.13	0.23	15.82	62.85	4564.27	761.37	51.78
Tributary D	Reach 1	4563	10 year	3.10	95.10	0.22	14.32	60.75	4564.27	645.97	51.78
Tributary D	Reach 1	4563	5 year	2.67	95.08	0.21	12.81	58.58	4564.27	446.66	51.78
Tributary D	Reach 1	4563	2 year	1.88	95.03	0.19	9.83	54.01	4564.27	360.00	51.78
Tributary D	Reach 1	4926	100 year	4.24	95.49	1.11	5.08	49.09	4926.65	982.12	17.10
Tributary D	Reach 1	4926	50 year	3.96	95.49	1.08	4.84	48.71	4926.65	888.16	17.10
Tributary D	Reach 1	4926	25 year	3.52	95.48	1.04	4.40	48.01	4926.65	764.97	17.10
Tributary D	Reach 1	4926	10 year	3.10	95.47	1.00	3.90	47.19	4926.65	649.23	17.10
Tributary D	Reach 1	4926	5 year	2.67	95.45	1.02	2.95	33.37	4926.65	449.49	17.10
Tributary D	Reach 1	4926	2 year	1.88	95.43	0.80	2.56	23.66	4926.65	362.23	17.10
Tributary D	Reach 1	4973	100 year	4.24	95.94	2.17	1.96	23.60	4973.59	982.56	23.60
Tributary D	Reach 1	4973	50 year	3.96	95.92	2.08	1.91	23.14	4973.59	888.58	23.14
Tributary D	Reach 1	4973	25 year	3.52	95.88	1.93	1.83	22.39	4973.59	765.35	22.39
Tributary D	Reach 1	4973	10 year	3.10	95.85	1.77	1.75	21.68	4973.59	649.57	21.68
Tributary D	Reach 1	4973	5 year	2.67	95.83	1.58	1.69	21.14	4973.59	449.78	21.14
Tributary D	Reach 1	4973	2 year	1.88	95.73	1.29	1.45	18.89	4973.59	362.47	18.89
Tributary D	Reach 1	4983		Culvert							
Tributary D	Reach 1	4992	100 year	4.24	96.67	1.16	3.66	142.55	4993.19	986.18	24.21
Tributary D	Reach 1	4992	50 year	3.96	96.60	1.13	3.49	141.92	4993.19	891.93	24.21
Tributary D	Reach 1	4992	25 year	3.52	96.49	1.09	3.23	140.76	4993.19	768.27	24.21
Tributary D	Reach 1	4992	10 year	3.10	96.40	1.04	2.99	137.65	4993.19	652.11	24.21
Tributary D	Reach 1	4992	5 year	2.67	96.30	0.97	2.74	134.42	4993.19	451.92	24.21
Tributary D	Reach 1	4992	2 year	1.88	96.11	0.83	2.27	128.24	4993.19	363.89	24.21
Tributary D	Reach 1	5175	100 year	4.24	96.76	0.07	83.53	102.64	5176.36	1005.78	29.58
Tributary D	Reach 1	5175	50 year	3.96	96.69	0.07	76.38	99.74	5176.36	909.99	29.58
Tributary D	Reach 1	5175	25 year	3.52	96.57	0.08	65.54	95.17	5176.36	783.98	29.58
Tributary D	Reach 1	5175	10 year	3.10	96.47	0.08	56.02	90.11	5176.36	665.73	29.58
Tributary D	Reach 1	5175	5 year	2.67	96.37	0.08	46.82	82.47	5176.36	463.47	29.58
Tributary D	Reach 1	5175	2 year	1.88	96.16	0.08	31.40	67.75	5176.36	371.74	29.58
Van Gaal Drain	Reach 1	0	100 year	12.00	94.09	0.03	654.06	265.66			32.73
Van Gaal Drain	Reach 1	0	50 year	12.00	93.93	0.03	611.37	264.70			32.73
Van Gaal Drain	Reach 1	0	25 year	10.00	93.71	0.03	552.95	263.94			32.73
Van Gaal Drain	Reach 1	0	10 year	9.00	93.50	0.03	498.41	263.23			32.73
Van Gaal Drain	Reach 1	0	5 year	8.00	93.16	0.03	409.50	256.36			32.73
Van Gaal Drain	Reach 1	0	2 year	6.00	92.82	0.03	325.69	235.08			32.73
Van Gaal Drain	Reach 1	226	100 year	12.00	94.09	0.29	80.39	57.60	225.61	82.85	4.00
Van Gaal Drain	Reach 1	226	50 year	12.00	93.93	0.33	71.11	57.11	225.61	76.99	4.00
Van Gaal Drain	Reach 1	226	25 year	10.00	93.71	0.34	58.64	55.58	225.61	68.99	4.00
Van Gaal Drain	Reach 1	226	10 year	9.00	93.50	0.38	47.25	54.14	225.61	61.55	4.00
Van Gaal Drain	Reach 1	226	5 year	8.00	93.16	0.48	31.30	38.56	225.61	49.73	4.00
Van Gaal Drain	Reach 1	226	2 year	6.00	92.82	0.51	20.36	28.84	225.61	39.04	4.00
Van Gaal Drain	Reach 1	263	100 year	12.00	94.08	0.87	15.92	13.10	262.84	85.09	6.34
Van Gaal Drain	Reach 1	263	50 year	12.00	93.91	0.97	13.76	13.10	262.84	78.98	6.34
Van Gaal Drain	Reach 1	263	25 year	10.00	93.69	0.94	10.88	13.10	262.84	70.65	6.34
Van Gaal Drain	Reach 1	263	10 year	9.00	93.48	0.93	9.68	12.97	262.84	62.91	6.34
Van Gaal Drain	Reach 1	263	5 year	8.00	93.14	0.96	8.31	9.97	262.84	50.65	6.34
Van Gaal Drain	Reach 1	263	2 year	6.00	92.81	0.86	6.99	7.09	262.84	39.66	6.34

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Van Gaal Drain	Reach 1	269	fowler	Culvert							
Van Gaal Drain	Reach 1	275	100 year	12.00	94.12	0.94	13.35	6.43	274.83	85.32	4.82
Van Gaal Drain	Reach 1	275	50 year	12.00	93.97	1.00	12.40	6.43	274.83	79.19	4.82
Van Gaal Drain	Reach 1	275	25 year	10.00	93.75	0.92	10.96	6.43	274.83	70.84	4.82
Van Gaal Drain	Reach 1	275	10 year	9.00	93.53	0.91	9.85	6.43	274.83	63.07	4.82
Van Gaal Drain	Reach 1	275	5 year	8.00	93.17	0.95	8.41	5.37	274.83	50.78	4.82
Van Gaal Drain	Reach 1	275	2 year	6.00	92.83	0.85	7.07	4.74	274.83	39.77	4.74
Van Gaal Drain	Reach 1	277	100 year	12.00	94.17	0.43	68.88	76.16	277.37	86.42	4.50
Van Gaal Drain	Reach 1	277	50 year	12.00	94.03	0.51	58.07	76.16	277.37	80.08	4.50
Van Gaal Drain	Reach 1	277	25 year	10.00	93.79	0.57	41.15	64.89	277.37	71.42	4.50
Van Gaal Drain	Reach 1	277	10 year	9.00	93.56	0.70	27.56	52.36	277.37	63.41	4.50
Van Gaal Drain	Reach 1	277	5 year	8.00	93.18	0.95	12.76	23.60	277.37	50.88	4.50
Van Gaal Drain	Reach 1	277	2 year	6.00	92.83	0.91	8.27	9.02	277.37	39.82	4.50
Van Gaal Drain	Reach 1	521	100 year	12.00	94.18	0.27	107.55	170.95	520.74	108.57	8.98
Van Gaal Drain	Reach 1	521	50 year	12.00	94.05	0.32	86.67	137.66	520.74	98.25	8.98
Van Gaal Drain	Reach 1	521	25 year	10.00	93.82	0.33	60.10	96.81	520.74	84.09	8.98
Van Gaal Drain	Reach 1	521	10 year	9.00	93.60	0.37	43.07	62.74	520.74	72.23	8.98
Van Gaal Drain	Reach 1	521	5 year	8.00	93.28	0.44	27.98	38.68	520.74	55.94	8.98
Van Gaal Drain	Reach 1	521	2 year	6.00	92.96	0.49	17.46	28.63	520.74	43.00	8.98
Van Gaal Drain	Reach 1	592	100 year	12.00	94.19	0.22	95.87	57.25	591.70	117.40	3.00
Van Gaal Drain	Reach 1	592	50 year	12.00	94.05	0.24	88.33	55.47	591.70	105.75	3.00
Van Gaal Drain	Reach 1	592	25 year	10.00	93.82	0.24	75.88	53.67	591.70	89.97	3.00
Van Gaal Drain	Reach 1	592	10 year	9.00	93.61	0.26	64.67	52.35	591.70	76.90	3.00
Van Gaal Drain	Reach 1	592	5 year	8.00	93.29	0.32	48.20	50.37	591.70	59.22	3.00
Van Gaal Drain	Reach 1	592	2 year	6.00	92.99	0.37	33.04	48.10	591.70	45.13	3.00
Van Gaal Drain	Reach 1	645	100 year	12.00	94.18	0.62	26.94	17.45	645.47	119.63	6.00
Van Gaal Drain	Reach 1	645	50 year	12.00	94.04	0.67	24.60	17.05	645.47	107.80	6.00
Van Gaal Drain	Reach 1	645	25 year	10.00	93.82	0.65	20.83	15.98	645.47	91.73	6.00
Van Gaal Drain	Reach 1	645	10 year	9.00	93.60	0.68	17.56	14.90	645.47	78.40	6.00
Van Gaal Drain	Reach 1	645	5 year	8.00	93.28	0.78	13.01	13.28	645.47	60.34	6.00
Van Gaal Drain	Reach 1	645	2 year	6.00	92.98	0.80	9.20	11.85	645.47	45.91	6.00
Van Gaal Drain	Reach 1	647	100 year	12.00	94.15	1.25	9.61	15.17	647.34	119.73	6.00
Van Gaal Drain	Reach 1	647	50 year	12.00	94.01	1.33	9.05	14.76	647.34	107.89	6.00
Van Gaal Drain	Reach 1	647	25 year	10.00	93.79	1.22	8.17	13.80	647.34	91.80	6.00
Van Gaal Drain	Reach 1	647	10 year	9.00	93.58	1.23	7.32	12.88	647.34	78.46	6.00
Van Gaal Drain	Reach 1	647	5 year	8.00	93.25	1.33	6.02	11.40	647.34	60.38	6.00
Van Gaal Drain	Reach 1	647	2 year	6.00	92.95	1.24	4.84	10.11	647.34	45.94	6.00
Van Gaal Drain	Reach 1	656	fortune	Culvert							
Van Gaal Drain	Reach 1	666	100 year	12.00	94.19	1.32	9.10	39.52	665.86	120.43	5.65
Van Gaal Drain	Reach 1	666	50 year	12.00	94.04	1.41	8.52	39.08	665.86	108.49	5.65
Van Gaal Drain	Reach 1	666	25 year	10.00	93.82	1.31	7.62	32.08	665.86	92.25	5.65
Van Gaal Drain	Reach 1	666	10 year	9.00	93.60	1.33	6.77	24.16	665.86	78.79	5.65
Van Gaal Drain	Reach 1	666	5 year	8.00	93.29	1.45	5.51	15.13	665.86	60.59	5.65
Van Gaal Drain	Reach 1	666	2 year	6.00	92.98	1.40	4.29	7.95	665.86	46.07	5.65
Van Gaal Drain	Reach 1	668	100 year	12.00	94.30	0.49	56.73	84.40	667.54	121.85	4.66
Van Gaal Drain	Reach 1	668	50 year	12.00	94.17	0.63	45.58	84.40	667.54	109.61	4.66
Van Gaal Drain	Reach 1	668	25 year	10.00	93.92	0.66	28.25	40.44	667.54	92.90	4.66
Van Gaal Drain	Reach 1	668	10 year	9.00	93.70	0.83	19.93	35.92	667.54	79.21	4.66
Van Gaal Drain	Reach 1	668	5 year	8.00	93.32	1.56	8.14	23.03	667.54	60.72	4.66
Van Gaal Drain	Reach 1	668	2 year	6.00	92.99	2.31	3.06	7.94	667.54	46.10	4.66
Smith Drain	Reach 1	0	100 year	11.00	93.15	0.18	122.89	104.35			8.89
Smith Drain	Reach 1	0	50 year	10.00	93.01	0.19	107.99	104.35			8.89
Smith Drain	Reach 1	0	25 year	9.00	92.79	0.18	90.95	74.40			8.89
Smith Drain	Reach 1	0	10 year	8.00	92.58	0.19	76.16	68.47			8.89
Smith Drain	Reach 1	0	5 year	7.00	92.36	0.20	61.24	61.79			8.89
Smith Drain	Reach 1	0	2 year	5.00	91.89	0.23	35.81	48.98			8.89
Smith Drain	Reach 1	110	100 year	11.00	93.15	0.30	111.14	230.59	109.56	12.82	4.68
Smith Drain	Reach 1	110	50 year	10.00	93.01	0.37	78.79	221.20	109.56	10.23	4.68
Smith Drain	Reach 1	110	25 year	9.00	92.79	0.24	66.46	46.98	109.56	8.62	4.68
Smith Drain	Reach 1	110	10 year	8.00	92.59	0.24	57.20	42.59	109.56	7.31	4.68
Smith Drain	Reach 1	110	5 year	7.00	92.36	0.25	47.92	39.45	109.56	5.98	4.68
Smith Drain	Reach 1	110	2 year	5.00	91.90	0.28	30.76	35.52	109.56	3.65	4.68
Smith Drain	Reach 1	424	100 year	11.00	93.16	0.19	120.52	149.11	424.06	46.53	5.70
Smith Drain	Reach 1	424	50 year	10.00	93.02	0.19	102.37	111.06	424.06	36.86	5.70
Smith Drain	Reach 1	424	25 year	9.00	92.80	0.21	80.58	90.61	424.06	30.32	5.70



HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Smith Drain	Reach 1	424	10 year	8.00	92.60	0.23	63.55	75.50	424.06	25.17	5.70
Smith Drain	Reach 1	424	5 year	7.00	92.37	0.26	48.02	65.21	424.06	20.22	5.70
Smith Drain	Reach 1	424	2 year	5.00	91.93	0.35	22.85	36.26	424.06	11.67	5.70
Smith Drain	Reach 1	610	100 year	11.00	93.16	0.30	87.39	107.34	610.05	64.92	4.52
Smith Drain	Reach 1	610	50 year	10.00	93.03	0.27	74.27	80.86	610.05	52.52	4.52
Smith Drain	Reach 1	610	25 year	9.00	92.81	0.28	58.62	65.10	610.05	42.68	4.52
Smith Drain	Reach 1	610	10 year	8.00	92.60	0.31	46.58	53.58	610.05	34.97	4.52
Smith Drain	Reach 1	610	5 year	7.00	92.38	0.35	35.89	45.12	610.05	27.71	4.52
Smith Drain	Reach 1	610	2 year	5.00	91.96	0.48	18.93	36.38	610.05	15.44	4.52
Smith Drain	Reach 1	824	100 year	11.00	93.17	0.51	61.45	125.51	824.19	80.81	4.24
Smith Drain	Reach 1	824	50 year	10.00	93.03	0.52	47.02	79.57	824.19	65.26	4.24
Smith Drain	Reach 1	824	25 year	9.00	92.82	0.60	32.98	57.56	824.19	52.01	4.24
Smith Drain	Reach 1	824	10 year	8.00	92.62	0.72	22.68	45.54	824.19	41.79	4.24
Smith Drain	Reach 1	824	5 year	7.00	92.40	0.88	14.28	32.52	824.19	32.45	4.24
Smith Drain	Reach 1	824	2 year	5.00	92.04	0.99	6.49	10.36	824.19	17.75	4.24
Smith Drain	Reach 1	1148	100 year	11.00	93.21	0.43	48.65	49.41	1147.57	99.15	5.50
Smith Drain	Reach 1	1148	50 year	10.00	93.07	0.45	42.01	47.44	1147.57	80.12	5.50
Smith Drain	Reach 1	1148	25 year	9.00	92.87	0.50	33.04	43.08	1147.57	62.98	5.50
Smith Drain	Reach 1	1148	10 year	8.00	92.70	0.55	26.04	39.34	1147.57	49.89	5.50
Smith Drain	Reach 1	1148	5 year	7.00	92.54	0.59	19.84	35.70	1147.57	38.17	5.50
Smith Drain	Reach 1	1148	2 year	5.00	92.25	0.61	10.91	22.77	1147.57	20.67	5.50
Smith Drain	Reach 1	1153	100 year	11.00	93.12	1.87	5.88	32.89	1152.77	100.66	9.70
Smith Drain	Reach 1	1153	50 year	10.00	93.00	1.79	5.57	31.48	1152.77	81.38	9.70
Smith Drain	Reach 1	1153	25 year	9.00	92.80	1.76	5.11	29.34	1152.77	63.89	9.70
Smith Drain	Reach 1	1153	10 year	8.00	92.64	1.69	4.72	25.74	1152.77	50.53	9.70
Smith Drain	Reach 1	1153	5 year	7.00	92.48	1.61	4.35	20.46	1152.77	38.60	9.70
Smith Drain	Reach 1	1153	2 year	5.00	92.22	1.35	3.70	12.63	1152.77	20.83	9.48
Smith Drain	Reach 1	1162									
				Culvert							
Smith Drain	Reach 1	1171	100 year	11.00	93.23	1.79	6.14	34.04	1171.26	101.30	6.70
Smith Drain	Reach 1	1171	50 year	10.00	93.09	1.72	5.81	32.52	1171.26	81.94	6.70
Smith Drain	Reach 1	1171	25 year	9.00	92.89	1.69	5.34	30.35	1171.26	64.35	6.70
Smith Drain	Reach 1	1171	10 year	8.00	92.72	1.62	4.93	28.48	1171.26	50.89	6.70
Smith Drain	Reach 1	1171	5 year	7.00	92.56	1.54	4.54	23.03	1171.26	38.89	6.70
Smith Drain	Reach 1	1171	2 year	5.00	92.26	1.31	3.83	13.34	1171.26	21.03	6.70
Smith Drain	Reach 1	1179	100 year	11.00	93.43	0.43	41.34	31.72	1178.83	101.93	6.40
Smith Drain	Reach 1	1179	50 year	10.00	93.28	0.43	36.57	30.34	1178.83	82.49	6.40
Smith Drain	Reach 1	1179	25 year	9.00	93.07	0.46	30.53	28.50	1178.83	64.77	6.40
Smith Drain	Reach 1	1179	10 year	8.00	92.89	0.47	25.49	25.99	1178.83	51.23	6.40
Smith Drain	Reach 1	1179	5 year	7.00	92.71	0.48	21.02	23.10	1178.83	39.14	6.40
Smith Drain	Reach 1	1179	2 year	5.00	92.37	0.47	14.06	17.90	1178.83	21.18	6.40
Monaghan Drain	Reach 2	0	100 year	21.00	93.12	0.07	500.38	282.51			60.13
Monaghan Drain	Reach 2	0	50 year	20.00	92.98	0.07	460.87	275.85			60.13
Monaghan Drain	Reach 2	0	25 year	17.00	92.77	0.06	404.21	263.55			60.13
Monaghan Drain	Reach 2	0	10 year	15.00	92.57	0.06	351.74	251.62			60.13
Monaghan Drain	Reach 2	0	5 year	13.00	92.34	0.06	296.41	237.86			60.13
Monaghan Drain	Reach 2	0	2 year	10.00	91.88	0.06	201.62	139.79			60.13
Monaghan Drain	Reach 2	47	100 year	21.00	93.12	0.08	282.11	120.38	46.91	18.35	71.78
Monaghan Drain	Reach 2	47	50 year	20.00	92.98	0.08	265.22	118.18	46.91	17.03	71.78
Monaghan Drain	Reach 2	47	25 year	17.00	92.77	0.08	240.99	112.55	46.91	15.13	71.78
Monaghan Drain	Reach 2	47	10 year	15.00	92.57	0.07	218.62	107.10	46.91	13.38	71.78
Monaghan Drain	Reach 2	47	5 year	13.00	92.34	0.07	195.13	100.74	46.91	11.53	71.78
Monaghan Drain	Reach 2	47	2 year	10.00	91.88	0.07	151.72	88.79	46.91	8.29	71.78
Monaghan Drain	Reach 2	214	100 year	21.00	93.12	0.12	232.08	107.95	214.46	57.40	42.63
Monaghan Drain	Reach 2	214	50 year	20.00	92.98	0.12	216.81	107.05	214.46	53.77	42.63
Monaghan Drain	Reach 2	214	25 year	17.00	92.77	0.11	195.36	97.18	214.46	48.60	42.63
Monaghan Drain	Reach 2	214	10 year	15.00	92.57	0.10	176.55	87.60	214.46	43.85	42.63
Monaghan Drain	Reach 2	214	5 year	13.00	92.34	0.10	157.45	83.29	214.46	38.88	42.63
Monaghan Drain	Reach 2	214	2 year	10.00	91.88	0.10	119.89	79.95	214.46	29.70	42.63
Monaghan Drain	Reach 2	252	100 year	21.00	93.11	0.52	46.99	16.53	252.08	63.54	9.84
Monaghan Drain	Reach 2	252	50 year	20.00	92.97	0.52	44.65	16.53	252.08	59.51	9.84
Monaghan Drain	Reach 2	252	25 year	17.00	92.76	0.48	41.20	16.53	252.08	53.75	9.84
Monaghan Drain	Reach 2	252	10 year	15.00	92.56	0.45	37.85	16.53	252.08	48.49	9.84
Monaghan Drain	Reach 2	252	5 year	13.00	92.34	0.43	34.17	15.97	252.08	43.00	9.84
Monaghan Drain	Reach 2	252	2 year	10.00	91.88	0.40	27.18	14.54	252.08	32.78	9.84
Monaghan Drain	Reach 2	257									
				Bridge							

HEC-RAS Plan: Plan 01 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Monaghan Drain	Reach 2	261	100 year	21.00	93.12	0.69	36.12	12.31	260.76	63.80	7.44
Monaghan Drain	Reach 2	261	50 year	20.00	92.98	0.68	34.35	12.31	260.76	59.76	7.44
Monaghan Drain	Reach 2	261	25 year	17.00	92.77	0.62	31.74	12.31	260.76	54.00	7.44
Monaghan Drain	Reach 2	261	10 year	15.00	92.56	0.59	29.21	12.31	260.76	48.74	7.44
Monaghan Drain	Reach 2	261	5 year	13.00	92.33	0.56	26.44	12.03	260.76	43.24	7.44
Monaghan Drain	Reach 2	261	2 year	10.00	91.87	0.52	21.07	11.24	260.76	33.00	7.44
Monaghan Drain	Reach 2	277	100 year	21.00	93.15	0.14	271.62	258.39	276.92	87.34	30.04
Monaghan Drain	Reach 2	277	50 year	20.00	93.00	0.15	237.24	220.16	276.92	79.27	30.04
Monaghan Drain	Reach 2	277	25 year	17.00	92.79	0.12	209.89	119.44	276.92	70.46	30.04
Monaghan Drain	Reach 2	277	10 year	15.00	92.58	0.11	186.26	108.63	276.92	62.67	30.04
Monaghan Drain	Reach 2	277	5 year	13.00	92.35	0.11	162.65	98.06	276.92	54.77	30.04
Monaghan Drain	Reach 2	277	2 year	10.00	91.89	0.11	121.58	82.25	276.92	40.75	30.04
Monaghan Drain	Reach 2	411	100 year	21.00	93.15	0.29	139.81	110.90	411.29	124.55	10.69
Monaghan Drain	Reach 2	411	50 year	20.00	93.00	0.31	123.87	110.90	411.29	111.99	10.69
Monaghan Drain	Reach 2	411	25 year	17.00	92.79	0.29	102.55	85.50	411.29	99.17	10.69
Monaghan Drain	Reach 2	411	10 year	15.00	92.58	0.27	87.42	60.74	411.29	88.08	10.69
Monaghan Drain	Reach 2	411	5 year	13.00	92.35	0.26	75.42	49.91	411.29	77.00	10.69
Monaghan Drain	Reach 2	411	2 year	10.00	91.89	0.28	53.17	46.24	411.29	56.93	10.69
Monaghan Drain	Reach 2	508	100 year	21.00	93.15	0.30	132.96	104.35	507.54	137.68	11.69
Monaghan Drain	Reach 2	508	50 year	20.00	93.01	0.32	118.00	104.35	507.54	123.63	11.69
Monaghan Drain	Reach 2	508	25 year	17.00	92.79	0.28	101.09	74.34	507.54	108.97	11.69
Monaghan Drain	Reach 2	508	10 year	15.00	92.58	0.29	86.30	68.41	507.54	96.44	11.69
Monaghan Drain	Reach 2	508	5 year	13.00	92.35	0.29	71.40	61.72	507.54	84.07	11.69
Monaghan Drain	Reach 2	508	2 year	10.00	91.89	0.31	45.97	48.92	507.54	61.70	11.69
Monaghan Drain	Reach 1	0	100 year	10.00	93.15	0.16	129.26	104.35			8.89
Monaghan Drain	Reach 1	0	50 year	10.00	93.01	0.18	114.35	104.35			8.89
Monaghan Drain	Reach 1	0	25 year	8.00	92.79	0.15	97.32	74.41			8.89
Monaghan Drain	Reach 1	0	10 year	7.00	92.59	0.15	82.53	68.48			8.89
Monaghan Drain	Reach 1	0	5 year	6.00	92.36	0.16	67.62	61.80			8.89
Monaghan Drain	Reach 1	0	2 year	5.00	91.89	0.19	42.19	48.99			8.89
Monaghan Drain	Reach 1	197	100 year	10.00	93.15	0.11	207.40	378.97	197.33	33.22	19.06
Monaghan Drain	Reach 1	197	50 year	10.00	93.01	0.12	166.73	191.90	197.33	27.73	19.06
Monaghan Drain	Reach 1	197	25 year	8.00	92.79	0.11	132.58	133.79	197.33	22.68	19.06
Monaghan Drain	Reach 1	197	10 year	7.00	92.59	0.10	109.46	89.71	197.33	18.94	19.06
Monaghan Drain	Reach 1	197	5 year	6.00	92.36	0.09	92.54	68.78	197.33	15.80	19.06
Monaghan Drain	Reach 1	197	2 year	5.00	91.90	0.11	62.71	61.34	197.33	10.35	19.06
Monaghan Drain	Reach 1	420	100 year	10.00	93.15	0.20	184.37	483.89	420.28	54.18	6.68
Monaghan Drain	Reach 1	420	50 year	10.00	93.01	0.29	120.45	409.36	420.28	44.45	6.68
Monaghan Drain	Reach 1	420	25 year	8.00	92.79	0.20	89.27	114.80	420.28	36.32	6.68
Monaghan Drain	Reach 1	420	10 year	7.00	92.59	0.21	68.70	83.90	420.28	30.46	6.68
Monaghan Drain	Reach 1	420	5 year	6.00	92.36	0.23	52.11	68.19	420.28	25.67	6.68
Monaghan Drain	Reach 1	420	2 year	5.00	91.90	0.35	23.14	51.07	420.28	17.23	6.68
Monaghan Drain	Reach 1	652	100 year	10.00	93.16	0.16	192.02	304.16	652.11	83.26	5.82
Monaghan Drain	Reach 1	652	50 year	10.00	93.02	0.20	151.79	270.76	652.11	65.75	5.82
Monaghan Drain	Reach 1	652	25 year	8.00	92.80	0.14	119.62	129.41	652.11	53.00	5.82
Monaghan Drain	Reach 1	652	10 year	7.00	92.59	0.16	94.46	114.49	652.11	43.78	5.82
Monaghan Drain	Reach 1	652	5 year	6.00	92.36	0.18	70.28	98.15	652.11	35.93	5.82
Monaghan Drain	Reach 1	652	2 year	5.00	91.91	0.30	33.35	68.68	652.11	22.38	5.82
Monaghan Drain	Reach 1	894	100 year	10.00	93.16	0.19	151.59	284.80	893.67	110.62	9.32
Monaghan Drain	Reach 1	894	50 year	10.00	93.02	0.20	119.20	181.60	893.67	87.73	9.32
Monaghan Drain	Reach 1	894	25 year	8.00	92.80	0.20	85.78	131.52	893.67	70.41	9.32
Monaghan Drain	Reach 1	894	10 year	7.00	92.59	0.22	62.52	94.82	893.67	57.68	9.32
Monaghan Drain	Reach 1	894	5 year	6.00	92.37	0.24	44.32	74.56	893.67	46.54	9.32
Monaghan Drain	Reach 1	894	2 year	5.00	91.93	0.36	16.86	26.76	893.67	27.55	9.32
Monaghan Drain	Reach 1	1213	100 year	10.00	93.16	0.21	111.20	167.64	1213.14	143.79	9.90
Monaghan Drain	Reach 1	1213	50 year	10.00	93.02	0.24	90.02	139.93	1213.14	114.45	9.90
Monaghan Drain	Reach 1	1213	25 year	8.00	92.80	0.24	63.47	102.70	1213.14	89.85	9.90
Monaghan Drain	Reach 1	1213	10 year	7.00	92.60	0.26	46.01	68.98	1213.14	72.13	9.90
Monaghan Drain	Reach 1	1213	5 year	6.00	92.38	0.27	33.85	47.11	1213.14	57.23	9.90
Monaghan Drain	Reach 1	1213	2 year	5.00	91.97	0.35	18.02	29.67	1213.14	32.80	9.90
Monaghan Drain	Reach 1	1398	100 year	10.00	93.16	0.34	70.07	135.71	1397.81	156.96	7.10
Monaghan Drain	Reach 1	1398	50 year	10.00	93.03	0.38	53.44	108.09	1397.81	125.06	7.10
Monaghan Drain	Reach 1	1398	25 year	8.00	92.81	0.38	38.58	58.22	1397.81	97.61	7.10
Monaghan Drain	Reach 1	1398	10 year	7.00	92.61	0.43	27.76	49.01	1397.81	77.92	7.10
Monaghan Drain	Reach 1	1398	5 year	6.00	92.39	0.48	18.20	36.46	1397.81	61.46	7.10
Monaghan Drain	Reach 1	1398	2 year	5.00	91.99	0.59	9.06	10.19	1397.81	35.17	7.10

## **. Middle Reach**

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	0	100 year	141.00	97.51	0.50	443.66	491.79			18.72
Reach 1	0	50 year	125.00	97.45	0.48	414.15	491.20			18.72
Reach 1	0	25 year	107.00	97.35	0.47	365.17	488.35			18.72
Reach 1	0	10 year	86.00	97.27	0.43	326.13	485.66			18.72
Reach 1	0	5 year	70.00	97.16	0.43	272.89	481.97			18.72
Reach 1	0	2 year	46.00	96.95	0.47	173.22	451.04			18.72
Reach 1	339	100 year	141.00	97.54	0.31	692.85	880.32	338.76	126.39	192.41
Reach 1	339	50 year	125.00	97.48	0.30	639.46	880.32	338.76	117.18	192.41
Reach 1	339	25 year	107.00	97.38	0.29	553.28	880.32	338.76	102.22	192.41
Reach 1	339	10 year	86.00	97.30	0.27	481.52	838.68	338.76	89.92	192.41
Reach 1	339	5 year	70.00	97.19	0.26	395.70	751.08	338.76	74.67	192.41
Reach 1	339	2 year	46.00	96.99	0.23	260.79	587.52	338.76	49.21	192.41
Reach 1	546	100 year	141.00	97.55	0.16	978.56	886.89	545.75	329.51	557.80
Reach 1	546	50 year	125.00	97.49	0.15	924.49	873.46	545.75	306.24	557.80
Reach 1	546	25 year	107.00	97.39	0.14	839.46	867.83	545.75	268.90	557.80
Reach 1	546	10 year	86.00	97.31	0.12	766.52	862.97	545.75	237.73	557.80
Reach 1	546	5 year	70.00	97.20	0.11	673.55	856.74	545.75	199.34	557.80
Reach 1	546	2 year	46.00	97.00	0.10	502.65	671.42	545.75	134.93	557.20
Reach 1	946	100 year	141.00	97.56	0.22	757.94	785.76	946.41	648.55	375.32
Reach 1	946	50 year	125.00	97.50	0.21	709.66	723.77	946.41	605.32	375.32
Reach 1	946	25 year	107.00	97.40	0.20	639.11	719.15	946.41	538.15	375.32
Reach 1	946	10 year	86.00	97.31	0.17	577.71	715.11	946.41	481.29	375.32
Reach 1	946	5 year	70.00	97.20	0.16	500.53	710.00	946.41	410.43	375.32
Reach 1	946	2 year	46.00	97.00	0.14	358.26	700.48	946.41	286.57	375.32
Reach 1	1124	100 year	141.00	97.57	0.30	686.50	870.30	1124.00	793.13	171.88
Reach 1	1124	50 year	125.00	97.50	0.29	632.27	866.17	1124.00	737.11	171.88
Reach 1	1124	25 year	107.00	97.41	0.28	550.92	810.80	1124.00	651.62	171.88
Reach 1	1124	10 year	86.00	97.32	0.25	482.03	776.37	1124.00	579.30	171.88
Reach 1	1124	5 year	70.00	97.21	0.24	400.16	733.34	1124.00	489.93	171.88
Reach 1	1124	2 year	46.00	97.01	0.23	260.42	653.40	1124.00	334.28	171.88
Reach 1	2710	100 year	141.00	98.31	2.30	120.04	316.93	2709.78	1419.61	29.64
Reach 1	2710	50 year	125.00	98.28	2.20	110.41	312.33	2709.78	1315.47	29.64
Reach 1	2710	25 year	107.00	98.24	2.08	98.46	306.53	2709.78	1159.61	29.64
Reach 1	2710	10 year	86.00	98.19	1.94	82.00	298.36	2709.78	1022.32	29.64
Reach 1	2710	5 year	70.00	97.92	2.81	25.35	32.64	2709.78	825.30	29.64
Reach 1	2710	2 year	46.00	97.71	2.47	18.71	31.14	2709.78	558.38	29.64
Reach 1	2960	100 year	141.00	98.86	1.34	220.13	352.84	2960.49	1453.42	23.80
Reach 1	2960	50 year	125.00	98.81	1.29	203.15	344.54	2960.49	1346.94	23.80
Reach 1	2960	25 year	107.00	98.75	1.23	182.95	334.42	2960.49	1188.26	23.80
Reach 1	2960	10 year	86.00	98.68	1.14	157.60	321.27	2960.49	1047.37	23.80
Reach 1	2960	5 year	70.00	98.69	0.90	163.35	324.30	2960.49	848.31	23.80
Reach 1	2960	2 year	46.00	98.46	0.88	95.26	218.49	2960.49	572.88	23.80
Reach 1	3170	100 year	141.00	98.99	1.14	226.75	300.16	3169.62	1481.98	33.82
Reach 1	3170	50 year	125.00	98.94	1.08	211.17	295.60	3169.62	1373.69	33.82
Reach 1	3170	25 year	107.00	98.88	1.02	192.38	290.02	3169.62	1212.86	33.82
Reach 1	3170	10 year	86.00	98.79	0.93	168.33	282.72	3169.62	1069.24	33.82
Reach 1	3170	5 year	70.00	98.77	0.78	161.40	280.58	3169.62	870.22	33.82
Reach 1	3170	2 year	46.00	98.56	0.73	104.23	262.26	3169.62	587.78	33.82
Reach 1	3412	100 year	141.00	99.13	1.34	225.87	396.91	3412.26	1521.37	27.70
Reach 1	3412	50 year	125.00	99.08	1.31	203.00	390.26	3412.26	1409.90	27.70
Reach 1	3412	25 year	107.00	99.01	1.28	175.34	382.06	3412.26	1245.20	27.70
Reach 1	3412	10 year	86.00	98.91	1.16	143.63	312.59	3412.26	1097.02	27.70
Reach 1	3412	5 year	70.00	98.86	1.03	127.46	295.56	3412.26	895.94	27.70
Reach 1	3412	2 year	46.00	98.66	0.95	74.59	231.31	3412.26	604.83	27.70
Reach 1	3678	100 year	141.00	99.34	1.37	168.74	221.62	3678.44	1573.89	33.02
Reach 1	3678	50 year	125.00	99.28	1.29	155.49	207.04	3678.44	1457.61	33.02
Reach 1	3678	25 year	107.00	99.20	1.19	140.29	188.94	3678.44	1287.21	33.02
Reach 1	3678	10 year	86.00	99.08	1.07	119.22	160.50	3678.44	1132.00	33.02
Reach 1	3678	5 year	70.00	99.00	0.94	106.77	141.02	3678.44	927.11	33.02
Reach 1	3678	2 year	46.00	98.79	0.74	80.87	108.84	3678.44	625.52	33.02
Reach 1	3820	100 year	141.00	99.43	1.94	91.44	64.50	3820.39	1592.36	26.52
Reach 1	3820	50 year	125.00	99.36	1.79	87.32	63.11	3820.39	1474.85	26.52
Reach 1	3820	25 year	107.00	99.28	1.61	82.23	61.35	3820.39	1303.00	26.52
Reach 1	3820	10 year	86.00	99.16	1.40	74.69	58.64	3820.39	1145.77	26.52
Reach 1	3820	5 year	70.00	99.06	1.22	69.24	56.60	3820.39	939.60	26.52

HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	3820	2 year	46.00	98.84	0.94	57.08	53.87	3820.39	635.31	26.52
Reach 1	4091	100 year	141.00	99.81	1.78	123.50	90.65	4091.20	1619.23	17.88
Reach 1	4091	50 year	125.00	99.71	1.70	114.03	88.69	4091.20	1500.09	17.88
Reach 1	4091	25 year	107.00	99.58	1.60	102.80	86.30	4091.20	1326.28	17.88
Reach 1	4091	10 year	86.00	99.40	1.48	88.08	81.58	4091.20	1166.37	17.88
Reach 1	4091	5 year	70.00	99.26	1.34	77.03	76.85	4091.20	958.21	17.88
Reach 1	4091	2 year	46.00	98.99	1.11	57.19	67.16	4091.20	650.03	17.88
Reach 1	4356	100 year	141.00	100.02	1.06	151.86	73.46	4355.90	1652.68	43.94
Reach 1	4356	50 year	125.00	99.91	0.99	143.48	72.34	4355.90	1531.47	43.94
Reach 1	4356	25 year	107.00	99.77	0.91	133.39	71.24	4355.90	1355.19	43.94
Reach 1	4356	10 year	86.00	99.58	0.81	119.99	69.76	4355.90	1192.01	43.94
Reach 1	4356	5 year	70.00	99.42	0.72	109.03	68.51	4355.90	981.28	43.94
Reach 1	4356	2 year	46.00	99.11	0.57	88.48	66.10	4355.90	668.35	43.94
Reach 1	4587	100 year	141.00	100.10	1.55	168.06	163.81	4587.10	1675.16	17.52
Reach 1	4587	50 year	125.00	99.98	1.57	148.16	161.98	4587.10	1552.74	17.52
Reach 1	4587	25 year	107.00	99.83	1.58	124.41	156.10	4587.10	1375.00	17.52
Reach 1	4587	10 year	86.00	99.63	1.62	93.46	148.08	4587.10	1209.85	17.52
Reach 1	4587	5 year	70.00	99.46	1.64	68.63	133.70	4587.10	997.50	17.52
Reach 1	4587	2 year	46.00	99.14	1.47	37.08	66.62	4587.10	681.66	17.52
Reach 1	4828	100 year	141.00	100.23	2.00	93.50	84.99	4827.79	1694.09	24.02
Reach 1	4828	50 year	125.00	100.13	1.88	85.43	78.55	4827.79	1570.13	24.02
Reach 1	4828	25 year	107.00	100.01	1.74	76.41	70.66	4827.79	1390.63	24.02
Reach 1	4828	10 year	86.00	99.85	1.54	66.03	61.02	4827.79	1223.36	24.02
Reach 1	4828	5 year	70.00	99.72	1.35	58.57	53.08	4827.79	1009.41	24.02
Reach 1	4828	2 year	46.00	99.42	1.07	45.04	36.93	4827.79	690.87	24.02
Reach 1	5014	100 year	141.00	100.49	1.27	125.80	65.58	5014.32	1714.76	36.68
Reach 1	5014	50 year	125.00	100.37	1.19	118.19	63.42	5014.32	1589.35	36.68
Reach 1	5014	25 year	107.00	100.23	1.09	109.11	60.74	5014.32	1408.15	36.68
Reach 1	5014	10 year	86.00	100.04	0.96	97.78	57.21	5014.32	1238.84	36.68
Reach 1	5014	5 year	70.00	99.87	0.84	88.64	55.62	5014.32	1023.30	36.68
Reach 1	5014	2 year	46.00	99.53	0.67	69.74	53.06	5014.32	701.55	36.68
Reach 1	5252	100 year	141.00	100.60	1.78	119.43	135.96	5251.56	1738.14	23.60
Reach 1	5252	50 year	125.00	100.47	1.73	102.76	124.60	5251.56	1611.19	23.60
Reach 1	5252	25 year	107.00	100.32	1.65	84.67	106.79	5251.56	1428.20	23.60
Reach 1	5252	10 year	86.00	100.11	1.51	65.34	83.67	5251.56	1256.72	23.60
Reach 1	5252	5 year	70.00	99.95	1.34	54.81	30.82	5251.56	1039.59	23.60
Reach 1	5252	2 year	46.00	99.59	1.06	44.36	28.01	5251.56	714.92	23.60
Reach 1	5464	100 year	141.00	100.79	1.37	112.62	48.17	5463.66	1758.92	31.54
Reach 1	5464	50 year	125.00	100.67	1.27	106.90	46.50	5463.66	1630.62	31.54
Reach 1	5464	25 year	107.00	100.51	1.15	99.79	44.33	5463.66	1446.04	31.54
Reach 1	5464	10 year	86.00	100.30	1.01	90.40	42.65	5463.66	1272.59	31.54
Reach 1	5464	5 year	70.00	100.10	0.90	82.07	41.18	5463.66	1053.94	31.54
Reach 1	5464	2 year	46.00	99.70	0.71	66.37	38.42	5463.66	726.61	31.54
Reach 1	5671	100 year	141.00	100.88	1.99	82.84	46.55	5671.30	1778.60	22.72
Reach 1	5671	50 year	125.00	100.75	1.86	77.08	43.68	5671.30	1649.20	22.72
Reach 1	5671	25 year	107.00	100.59	1.71	70.24	40.01	5671.30	1463.27	22.72
Reach 1	5671	10 year	86.00	100.36	1.53	61.71	37.07	5671.30	1288.08	22.72
Reach 1	5671	5 year	70.00	100.16	1.38	54.28	35.62	5671.30	1067.88	22.72
Reach 1	5671	2 year	46.00	99.76	1.14	41.05	28.84	5671.30	737.69	22.72
Reach 1	5704	100 year	141.00	100.82	2.90	49.02	16.87	5704.36	1780.74	16.08
Reach 1	5704	50 year	125.00	100.71	2.67	47.18	16.80	5704.36	1651.22	16.08
Reach 1	5704	25 year	107.00	100.56	2.41	44.72	16.70	5704.36	1465.14	16.08
Reach 1	5704	10 year	86.00	100.35	2.09	41.27	16.57	5704.36	1289.76	16.08
Reach 1	5704	5 year	70.00	100.16	1.84	38.09	16.45	5704.36	1069.40	16.08
Reach 1	5704	2 year	46.00	99.77	1.45	31.75	16.23	5704.36	738.89	16.08
Reach 1	5707	Munster	Bridge							
Reach 1	5711	100 year	141.00	100.83	2.96	47.71	17.59	5710.86	1781.05	17.18
Reach 1	5711	50 year	125.00	100.71	2.73	45.76	17.56	5710.86	1651.52	17.18
Reach 1	5711	25 year	107.00	100.56	2.48	43.23	17.53	5710.86	1465.43	17.18
Reach 1	5711	10 year	86.00	100.35	2.17	39.68	17.47	5710.86	1290.03	17.18
Reach 1	5711	5 year	70.00	100.16	1.92	36.37	17.42	5710.86	1069.64	17.18
Reach 1	5711	2 year	46.00	99.77	1.55	29.74	17.29	5710.86	739.09	17.18
Reach 1	5716	100 year	141.00	101.19	1.84	78.15	25.06	5716.45	1781.40	22.70

HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	5716	50 year	125.00	101.02	1.72	73.88	24.76	5716.45	1651.85	22.70
Reach 1	5716	25 year	107.00	100.81	1.58	68.77	24.54	5716.45	1465.74	22.70
Reach 1	5716	10 year	86.00	100.54	1.40	62.20	24.27	5716.45	1290.31	22.70
Reach 1	5716	5 year	70.00	100.31	1.25	56.54	23.96	5716.45	1069.90	22.70
Reach 1	5716	2 year	46.00	99.87	1.00	46.11	23.31	5716.45	739.31	22.70
Reach 1	5819	100 year	141.00	101.33	1.60	107.28	57.63	5818.72	1791.30	24.34
Reach 1	5819	50 year	125.00	101.14	1.52	97.21	50.23	5818.72	1660.93	24.34
Reach 1	5819	25 year	107.00	100.92	1.42	86.85	44.33	5818.72	1473.96	24.34
Reach 1	5819	10 year	86.00	100.63	1.30	74.16	43.14	5818.72	1297.46	24.34
Reach 1	5819	5 year	70.00	100.38	1.21	63.50	42.12	5818.72	1076.15	24.34
Reach 1	5819	2 year	46.00	99.92	1.02	45.69	27.54	5818.72	744.01	24.34
Reach 1	5950	100 year	141.00	101.45	1.48	139.00	82.49	5950.40	1809.94	19.82
Reach 1	5950	50 year	125.00	101.25	1.47	122.88	79.81	5950.40	1677.42	19.82
Reach 1	5950	25 year	107.00	101.01	1.45	104.16	76.58	5950.40	1488.07	19.82
Reach 1	5950	10 year	86.00	100.71	1.42	81.66	72.51	5950.40	1308.72	19.82
Reach 1	5950	5 year	70.00	100.46	1.35	64.25	55.01	5950.40	1085.15	19.82
Reach 1	5950	2 year	46.00	99.99	1.19	40.85	31.56	5950.40	749.79	19.82
Reach 1	6083	100 year	141.00	101.53	1.09	147.59	68.94	6083.09	1826.95	36.60
Reach 1	6083	50 year	125.00	101.34	1.04	134.86	65.12	6083.09	1692.84	36.60
Reach 1	6083	25 year	107.00	101.11	0.98	120.34	61.53	6083.09	1501.68	36.60
Reach 1	6083	10 year	86.00	100.82	0.89	103.38	55.03	6083.09	1320.20	36.60
Reach 1	6083	5 year	70.00	100.57	0.81	90.31	48.27	6083.09	1094.96	36.60
Reach 1	6083	2 year	46.00	100.10	0.67	69.43	42.00	6083.09	757.04	36.60
Reach 1	6210	100 year	141.00	101.60	1.02	259.52	208.79	6209.76	1845.68	17.20
Reach 1	6210	50 year	125.00	101.40	1.09	218.42	207.12	6209.76	1709.62	17.20
Reach 1	6210	25 year	107.00	101.16	1.22	168.62	205.12	6209.76	1516.13	17.20
Reach 1	6210	10 year	86.00	100.86	1.40	109.55	170.40	6209.76	1331.84	17.20
Reach 1	6210	5 year	70.00	100.59	1.56	70.18	120.90	6209.76	1104.42	17.20
Reach 1	6210	2 year	46.00	100.08	1.77	29.14	63.19	6209.76	763.22	17.20
Reach 1	6353	100 year	83.00	101.64	0.67	233.12	184.04	6352.88	1866.48	15.74
Reach 1	6353	50 year	74.00	101.45	0.71	198.97	181.81	6352.88	1727.86	15.74
Reach 1	6353	25 year	64.00	101.23	0.79	159.49	179.67	6352.88	1531.33	15.74
Reach 1	6353	10 year	51.00	100.98	0.88	113.71	177.15	6352.88	1343.41	15.74
Reach 1	6353	5 year	42.00	100.76	1.00	76.14	175.01	6352.88	1113.07	15.74
Reach 1	6353	2 year	27.00	100.38	0.98	28.11	18.65	6352.88	767.42	15.74
Reach 1	6524	100 year	83.00	101.66	0.66	229.65	175.17	6523.97	1906.07	17.77
Reach 1	6524	50 year	74.00	101.48	0.69	198.13	172.40	6523.97	1761.83	17.77
Reach 1	6524	25 year	64.00	101.27	0.73	162.59	168.56	6523.97	1558.89	17.77
Reach 1	6524	10 year	51.00	101.03	0.77	122.72	164.15	6523.97	1363.63	17.77
Reach 1	6524	5 year	42.00	100.85	0.81	92.62	158.32	6523.97	1127.50	17.77
Reach 1	6524	2 year	27.00	100.48	0.82	39.05	47.31	6523.97	773.17	17.77
Reach 1	6588	100 year	83.00	101.66	1.07	159.90	190.34	6587.50	1918.44	14.48
Reach 1	6588	50 year	74.00	101.47	1.19	124.95	180.94	6587.50	1772.09	14.48
Reach 1	6588	25 year	64.00	101.26	1.30	89.99	146.09	6587.50	1566.91	14.48
Reach 1	6588	10 year	51.00	101.02	1.32	59.53	106.83	6587.50	1369.42	14.48
Reach 1	6588	5 year	42.00	100.84	1.28	43.06	76.45	6587.50	1131.81	14.48
Reach 1	6588	2 year	27.00	100.50	1.04	26.88	19.18	6587.50	775.26	14.48
Reach 1	6626	100 year	83.00	101.63	1.90	46.27	19.20	6625.87	1929.27	13.55
Reach 1	6626	50 year	74.00	101.46	1.80	43.42	18.62	6625.87	1780.31	13.55
Reach 1	6626	25 year	64.00	101.26	1.68	40.12	18.14	6625.87	1572.53	13.55
Reach 1	6626	10 year	51.00	101.04	1.47	36.33	17.58	6625.87	1372.82	13.55
Reach 1	6626	5 year	42.00	100.87	1.31	33.39	17.23	6625.87	1134.04	13.55
Reach 1	6626	2 year	27.00	100.53	1.00	27.69	16.60	6625.87	776.40	13.55
Reach 1	6633 Jock		Bridge							
Reach 1	6637	100 year	83.00	101.68	1.63	51.77	18.73	6636.75	1929.80	15.95
Reach 1	6637	50 year	74.00	101.51	1.54	48.87	18.34	6636.75	1780.81	15.95
Reach 1	6637	25 year	64.00	101.31	1.43	45.51	18.06	6636.75	1572.99	15.95
Reach 1	6637	10 year	51.00	101.08	1.24	41.56	17.75	6636.75	1373.24	15.95
Reach 1	6637	5 year	42.00	100.90	1.10	38.52	17.54	6636.75	1134.43	15.95
Reach 1	6637	2 year	27.00	100.55	0.84	32.56	17.19	6636.75	776.72	15.95
Reach 1	6652	100 year	83.00	101.84	0.98	185.44	200.46	6652.05	1931.62	10.04
Reach 1	6652	50 year	74.00	101.64	1.14	145.84	193.04	6652.05	1782.30	10.04
Reach 1	6652	25 year	64.00	101.37	1.49	96.46	184.52	6652.05	1574.08	10.04
Reach 1	6652	10 year	51.00	101.03	2.17	34.93	175.02	6652.05	1373.83	10.04

HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	6652	5 year	42.00	100.85	2.06	25.07	26.67	6652.05	1134.92	10.04
Reach 1	6652	2 year	27.00	100.50	1.76	16.81	20.75	6652.05	777.10	10.04
Reach 1	6899	100 year	83.00	101.83	2.46	33.67	19.06	6899.23	1958.70	19.06
Reach 1	6899	50 year	74.00	101.72	2.34	31.61	18.66	6899.23	1804.23	18.66
Reach 1	6899	25 year	64.00	101.65	2.11	30.33	18.41	6899.23	1589.75	18.41
Reach 1	6899	10 year	51.00	101.64	1.69	30.25	18.39	6899.23	1381.88	18.39
Reach 1	6899	5 year	42.00	101.46	1.56	26.92	17.71	6899.23	1141.34	17.71
Reach 1	6899	2 year	27.00	101.07	1.33	20.36	16.29	6899.23	781.70	16.29
Reach 1	7091	100 year	83.00	102.61	2.78	29.81	17.89	7090.53	1964.77	17.89
Reach 1	7091	50 year	74.00	102.47	2.69	27.46	17.43	7090.53	1809.88	17.43
Reach 1	7091	25 year	64.00	102.32	2.58	24.76	16.87	7090.53	1595.02	16.87
Reach 1	7091	10 year	51.00	102.11	2.39	21.34	16.14	7090.53	1386.82	16.14
Reach 1	7091	5 year	42.00	101.92	2.29	18.34	15.47	7090.53	1145.67	15.47
Reach 1	7091	2 year	27.00	101.55	2.11	12.82	14.16	7090.53	784.87	14.16
Reach 1	7361	100 year	83.00	104.13	3.51	24.67	29.47	7360.87	1972.10	12.52
Reach 1	7361	50 year	74.00	104.01	3.34	22.14	14.47	7360.87	1816.59	12.52
Reach 1	7361	25 year	64.00	103.86	3.17	20.21	12.17	7360.87	1601.10	12.17
Reach 1	7361	10 year	51.00	103.63	2.93	17.42	11.59	7360.87	1392.06	11.59
Reach 1	7361	5 year	42.00	103.46	2.70	15.56	11.19	7360.87	1150.25	11.19
Reach 1	7361	2 year	27.00	103.15	2.22	12.17	10.41	7360.87	788.25	10.41
Reach 1	7542	100 year	83.00	105.11	1.50	60.26	57.49	7542.41	1979.44	26.88
Reach 1	7542	50 year	74.00	104.96	1.46	53.05	40.10	7542.41	1823.26	26.88
Reach 1	7542	25 year	64.00	104.77	1.42	45.95	34.64	7542.41	1607.05	26.88
Reach 1	7542	10 year	51.00	104.50	1.35	37.74	26.97	7542.41	1397.07	26.88
Reach 1	7542	5 year	42.00	104.29	1.31	32.09	25.31	7542.41	1154.58	25.31
Reach 1	7542	2 year	27.00	103.88	1.21	22.31	22.29	7542.41	791.38	22.29
Reach 1	7753	100 year	83.00	105.62	3.37	27.74	29.00	7753.21	1989.29	15.58
Reach 1	7753	50 year	74.00	105.51	3.30	24.68	27.38	7753.21	1831.78	15.58
Reach 1	7753	25 year	64.00	105.37	3.24	20.95	24.10	7753.21	1614.25	15.58
Reach 1	7753	10 year	51.00	105.17	3.11	16.68	19.55	7753.21	1402.82	15.58
Reach 1	7753	5 year	42.00	105.03	2.98	14.11	16.21	7753.21	1159.45	15.58
Reach 1	7753	2 year	27.00	104.75	2.69	10.04	13.82	7753.21	794.79	13.82
Reach 1	7823	100 year	83.00	106.56	1.75	82.29	139.19	7823.21	1993.75	15.58
Reach 1	7823	50 year	74.00	106.46	1.76	69.50	119.02	7823.21	1835.69	15.58
Reach 1	7823	25 year	64.00	106.35	1.81	57.23	106.10	7823.21	1617.60	15.58
Reach 1	7823	10 year	51.00	106.20	1.85	42.57	88.21	7823.21	1405.51	15.58
Reach 1	7823	5 year	42.00	106.08	1.87	33.41	75.18	7823.21	1161.72	15.58
Reach 1	7823	2 year	27.00	105.88	1.88	20.35	59.95	7823.21	796.46	15.58
Reach 1	7825	Garland								
Reach 1	7828	100 year	83.00	106.56	1.81	80.67	140.21	7828.21	1994.25	15.58
Reach 1	7828	50 year	74.00	106.46	1.82	68.40	120.42	7828.21	1836.12	15.58
Reach 1	7828	25 year	64.00	106.34	1.94	54.27	106.91	7828.21	1617.96	15.58
Reach 1	7828	10 year	51.00	106.19	2.06	39.10	90.20	7828.21	1405.80	15.58
Reach 1	7828	5 year	42.00	106.01	2.42	25.24	67.50	7828.21	1161.96	15.58
Reach 1	7828	2 year	27.00	105.90	2.01	18.36	52.08	7828.21	796.65	15.58
Reach 1	8029	100 year	83.00	106.73	0.78	173.51	177.71	8028.21	2011.23	29.52
Reach 1	8029	50 year	74.00	106.65	0.74	158.72	168.86	8028.21	1851.94	29.52
Reach 1	8029	25 year	64.00	106.55	0.70	143.29	159.11	8028.21	1632.48	29.52
Reach 1	8029	10 year	51.00	106.44	0.62	125.17	146.51	8028.21	1418.78	29.52
Reach 1	8029	5 year	42.00	106.36	0.55	114.60	138.46	8028.21	1173.80	29.52
Reach 1	8029	2 year	27.00	106.16	0.44	87.63	125.91	8028.21	806.49	29.52
Reach 1	8110	100 year	78.00	106.75	1.00	143.58	187.68	8109.20	2024.07	21.05
Reach 1	8110	50 year	69.00	106.66	0.98	127.64	179.84	8109.20	1863.53	21.05
Reach 1	8110	25 year	60.00	106.57	0.96	110.71	171.12	8109.20	1642.77	21.05
Reach 1	8110	10 year	48.00	106.45	0.88	90.73	153.84	8109.20	1427.53	21.05
Reach 1	8110	5 year	39.00	106.37	0.78	79.64	138.20	8109.20	1181.67	21.05
Reach 1	8110	2 year	25.00	106.16	0.62	55.36	95.34	8109.20	812.28	21.05
Reach 1	8231	100 year	78.00	106.80	0.84	153.13	192.03	8229.51	2041.92	29.24
Reach 1	8231	50 year	69.00	106.71	0.81	137.18	180.18	8229.51	1879.46	29.24
Reach 1	8231	25 year	60.00	106.62	0.78	120.70	167.06	8229.51	1656.69	29.24
Reach 1	8231	10 year	48.00	106.49	0.70	100.93	149.73	8229.51	1439.06	29.24
Reach 1	8231	5 year	39.00	106.41	0.62	88.83	137.11	8229.51	1191.80	29.24
Reach 1	8231	2 year	25.00	106.19	0.49	62.44	104.45	8229.51	819.37	29.24

HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	8387	100 year	78.00	106.86	0.96	131.33	192.24	8386.36	2064.23	33.09
Reach 1	8387	50 year	69.00	106.77	0.94	115.28	178.72	8386.36	1899.26	33.09
Reach 1	8387	25 year	60.00	106.68	0.93	98.85	163.72	8386.36	1673.91	33.09
Reach 1	8387	10 year	48.00	106.55	0.88	78.90	143.41	8386.36	1453.16	33.09
Reach 1	8387	5 year	39.00	106.45	0.82	66.26	128.66	8386.36	1203.96	33.09
Reach 1	8387	2 year	25.00	106.23	0.73	41.07	91.76	8386.36	827.48	33.09
Reach 1	8578	100 year	78.00	106.96	1.09	139.27	221.27	8577.04	2090.02	20.44
Reach 1	8578	50 year	69.00	106.88	1.08	121.22	212.10	8577.04	1921.81	20.44
Reach 1	8578	25 year	60.00	106.79	1.08	102.23	202.00	8577.04	1693.08	20.44
Reach 1	8578	10 year	48.00	106.66	1.05	77.14	187.83	8577.04	1468.03	20.44
Reach 1	8578	5 year	39.00	106.56	0.99	58.84	176.79	8577.04	1215.89	20.44
Reach 1	8578	2 year	25.00	106.32	0.77	37.05	56.34	8577.04	834.93	20.44
Reach 1	8834	100 year	78.00	107.10	1.15	127.00	169.63	8833.28	2124.14	17.47
Reach 1	8834	50 year	69.00	107.02	1.12	113.92	161.88	8833.28	1951.94	17.47
Reach 1	8834	25 year	60.00	106.94	1.09	100.29	157.49	8833.28	1719.03	17.47
Reach 1	8834	10 year	48.00	106.81	1.04	80.93	153.07	8833.28	1488.29	17.47
Reach 1	8834	5 year	39.00	106.70	0.99	64.83	149.29	8833.28	1231.73	17.47
Reach 1	8834	2 year	25.00	106.44	0.87	31.99	43.75	8833.28	843.78	17.47
Reach 1	8995	100 year	78.00	107.19	1.42	86.34	97.09	8993.66	2141.50	17.58
Reach 1	8995	50 year	69.00	107.11	1.35	78.97	93.03	8993.66	1967.46	17.58
Reach 1	8995	25 year	60.00	107.02	1.27	71.28	88.60	8993.66	1732.75	17.58
Reach 1	8995	10 year	48.00	106.90	1.14	60.80	79.41	8993.66	1499.53	17.58
Reach 1	8995	5 year	39.00	106.79	1.02	52.69	70.92	8993.66	1241.02	17.58
Reach 1	8995	2 year	25.00	106.52	0.83	36.38	49.61	8993.66	849.28	17.58
Reach 1	9049	100 year	78.00	107.20	2.00	38.93	16.12	9047.72	2147.89	14.96
Reach 1	9049	50 year	69.00	107.12	1.82	37.93	16.00	9047.72	1973.25	14.96
Reach 1	9049	25 year	60.00	107.04	1.63	36.81	15.86	9047.72	1737.92	14.96
Reach 1	9049	10 year	48.00	106.92	1.37	35.10	15.66	9047.72	1503.86	14.96
Reach 1	9049	5 year	39.00	106.81	1.16	33.58	15.48	9047.72	1244.71	14.96
Reach 1	9049	2 year	25.00	106.54	0.84	29.76	15.03	9047.72	851.66	14.96
Reach 1	9058	Franktown	Bridge							
Reach 1	9066	100 year	78.00	107.28	1.95	40.06	20.38	9065.01	2148.56	18.18
Reach 1	9066	50 year	69.00	107.18	1.78	38.70	20.10	9065.01	1973.92	18.18
Reach 1	9066	25 year	60.00	107.08	1.61	37.31	19.82	9065.01	1738.59	18.18
Reach 1	9066	10 year	48.00	106.94	1.36	35.36	19.42	9065.01	1504.50	18.18
Reach 1	9066	5 year	39.00	106.82	1.16	33.72	19.09	9065.01	1245.33	18.18
Reach 1	9066	2 year	25.00	106.55	0.84	29.84	18.31	9065.01	852.21	18.18
Reach 1	9101	100 year	78.00	107.52	0.73	155.18	244.99	9100.12	2165.40	39.86
Reach 1	9101	50 year	69.00	107.38	0.71	130.26	154.80	9100.12	1986.10	39.86
Reach 1	9101	25 year	60.00	107.24	0.69	110.02	131.19	9100.12	1747.31	39.86
Reach 1	9101	10 year	48.00	107.05	0.63	88.08	99.44	9100.12	1509.85	39.86
Reach 1	9101	5 year	39.00	106.90	0.57	74.79	80.85	9100.12	1248.96	39.86
Reach 1	9101	2 year	25.00	106.59	0.46	54.29	48.70	9100.12	853.84	39.86
Reach 1	9349	100 year	78.00	107.59	1.54	109.16	211.49	9347.91	2198.15	14.05
Reach 1	9349	50 year	69.00	107.45	1.69	81.02	171.43	9347.91	2012.28	14.05
Reach 1	9349	25 year	60.00	107.29	1.85	57.34	132.88	9347.91	1768.05	14.05
Reach 1	9349	10 year	48.00	107.08	1.96	34.52	79.71	9347.91	1525.04	14.05
Reach 1	9349	5 year	39.00	106.93	1.83	25.96	41.98	9347.91	1261.44	14.05
Reach 1	9349	2 year	25.00	106.62	1.60	16.07	21.68	9347.91	862.55	14.05
Reach 1	9448	100 year	78.00	107.76	1.04	177.73	321.97	9446.69	2232.98	13.50
Reach 1	9448	50 year	69.00	107.64	1.10	141.92	303.37	9446.69	2037.07	13.50
Reach 1	9448	25 year	60.00	107.52	1.16	106.89	284.00	9446.69	1783.73	13.50
Reach 1	9448	10 year	48.00	107.35	1.16	76.69	150.22	9446.69	1533.84	13.50
Reach 1	9448	5 year	39.00	107.17	1.21	51.11	140.06	9446.69	1266.83	13.50
Reach 1	9448	2 year	25.00	106.82	1.03	24.71	17.51	9446.69	864.71	13.50
Reach 1	9599	100 year	78.00	107.81	1.61	136.76	246.23	9597.91	2256.76	13.08
Reach 1	9599	50 year	69.00	107.71	1.59	113.19	222.01	9597.91	2056.36	13.08
Reach 1	9599	25 year	60.00	107.60	1.55	91.53	197.16	9597.91	1798.73	13.08
Reach 1	9599	10 year	48.00	107.44	1.39	66.96	95.62	9597.91	1544.70	13.08
Reach 1	9599	5 year	39.00	107.29	1.30	53.33	83.98	9597.91	1274.72	13.08
Reach 1	9599	2 year	25.00	106.93	1.16	28.38	54.46	9597.91	868.72	13.08
Reach 1	9777	100 year	78.00	107.95	0.99	158.00	219.57	9775.99	2273.77	26.28
Reach 1	9777	50 year	69.00	107.85	0.95	137.89	210.08	9775.99	2070.91	26.28
Reach 1	9777	25 year	60.00	107.75	0.90	117.13	199.80	9775.99	1810.94	26.28



HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	9777	10 year	48.00	107.58	0.84	83.25	181.79	9775.99	1554.04	26.28
Reach 1	9777	5 year	39.00	107.42	0.75	62.70	83.28	9775.99	1282.59	26.28
Reach 1	9777	2 year	25.00	107.06	0.60	41.69	34.91	9775.99	874.40	26.28
Reach 1	9848	100 year	78.00	107.99	0.83	208.23	320.29	9846.49	2286.68	32.09
Reach 1	9848	50 year	69.00	107.89	0.81	178.73	296.86	9846.49	2082.07	32.09
Reach 1	9848	25 year	60.00	107.79	0.78	149.23	271.42	9846.49	1820.33	32.09
Reach 1	9848	10 year	48.00	107.61	0.74	104.30	227.26	9846.49	1560.65	32.09
Reach 1	9848	5 year	39.00	107.45	0.68	74.56	120.81	9846.49	1287.43	32.09
Reach 1	9848	2 year	25.00	107.08	0.58	43.94	48.79	9846.49	877.42	32.09
Reach 1	10084	100 year	67.00	108.06	1.18	123.71	399.62	10082.51	2323.57	18.42
Reach 1	10084	50 year	60.00	107.96	1.14	97.03	116.19	10082.51	2113.59	18.42
Reach 1	10084	25 year	52.00	107.86	1.08	85.21	111.64	10082.51	1847.49	18.42
Reach 1	10084	10 year	42.00	107.68	1.01	66.11	103.87	10082.51	1580.96	18.42
Reach 1	10084	5 year	34.00	107.52	0.94	49.71	96.70	10082.51	1302.54	18.42
Reach 1	10084	2 year	22.00	107.16	0.78	29.41	35.63	10082.51	886.10	18.42
Reach 1	10277	100 year	67.00	108.19	1.19	122.98	220.83	10275.83	2356.49	22.20
Reach 1	10277	50 year	60.00	108.10	1.20	102.30	201.10	10275.83	2136.80	22.20
Reach 1	10277	25 year	52.00	107.99	1.19	81.22	177.74	10275.83	1866.59	22.16
Reach 1	10277	10 year	42.00	107.80	1.17	53.49	128.29	10275.83	1594.31	21.65
Reach 1	10277	5 year	34.00	107.64	1.12	35.78	82.44	10275.83	1311.49	21.18
Reach 1	10277	2 year	22.00	107.26	0.98	22.54	17.56	10275.83	891.21	17.56
Reach 1	10459	100 year	67.00	108.31	1.49	55.63	75.47	10457.98	2369.53	19.82
Reach 1	10459	50 year	60.00	108.22	1.40	49.91	62.54	10457.98	2147.88	19.82
Reach 1	10459	25 year	52.00	108.12	1.28	44.45	47.00	10457.98	1876.00	19.82
Reach 1	10459	10 year	42.00	107.96	1.13	38.63	26.93	10457.98	1601.80	19.82
Reach 1	10459	5 year	34.00	107.79	1.00	34.47	24.41	10457.98	1317.64	19.82
Reach 1	10459	2 year	22.00	107.41	0.84	26.21	19.32	10457.98	895.65	19.32
Reach 1	10648	100 year	67.00	108.50	1.51	47.31	58.78	10646.78	2378.92	21.94
Reach 1	10648	50 year	60.00	108.41	1.42	44.11	31.89	10646.78	2156.57	21.94
Reach 1	10648	25 year	52.00	108.29	1.31	40.56	29.04	10646.78	1883.96	21.94
Reach 1	10648	10 year	42.00	108.11	1.18	35.61	24.53	10646.78	1608.80	21.94
Reach 1	10648	5 year	34.00	107.93	1.08	31.62	21.48	10646.78	1323.88	21.48
Reach 1	10648	2 year	22.00	107.54	0.93	23.68	18.91	10646.78	900.35	18.91
Reach 1	10750	100 year	67.00	108.57	2.21	33.09	24.46	10749.21	2382.98	13.46
Reach 1	10750	50 year	60.00	108.48	2.08	30.85	22.87	10749.21	2160.37	13.46
Reach 1	10750	25 year	52.00	108.36	1.91	28.34	20.60	10749.21	1887.47	13.46
Reach 1	10750	10 year	42.00	108.18	1.70	24.94	17.05	10749.21	1611.89	13.46
Reach 1	10750	5 year	34.00	108.01	1.53	22.27	13.63	10749.21	1326.64	13.46
Reach 1	10750	2 year	22.00	107.62	1.28	17.24	12.21	10749.21	902.45	12.21
Reach 1	10768	100 year	67.00	108.72	1.77	37.91	20.14	10766.58	2383.84	14.58
Reach 1	10768	50 year	60.00	108.61	1.65	36.32	19.32	10766.58	2161.12	14.58
Reach 1	10768	25 year	52.00	108.48	1.51	34.49	18.33	10766.58	1888.12	14.58
Reach 1	10768	10 year	42.00	108.28	1.32	31.71	16.77	10766.58	1612.42	14.58
Reach 1	10768	5 year	34.00	108.09	1.17	29.06	15.29	10766.58	1327.09	14.58
Reach 1	10768	2 year	22.00	107.68	0.94	23.34	13.94	10766.58	902.80	13.94
Reach 1	10773 Copeland		Bridge							
Reach 1	10779	100 year	67.00	108.81	1.60	43.26	37.25	10777.95	2384.26	19.78
Reach 1	10779	50 year	60.00	108.67	1.53	39.32	33.66	10777.95	2161.54	19.78
Reach 1	10779	25 year	52.00	108.52	1.40	37.23	29.66	10777.95	1888.52	19.78
Reach 1	10779	10 year	42.00	108.30	1.23	34.12	25.36	10777.95	1612.79	19.78
Reach 1	10779	5 year	34.00	108.11	1.08	31.42	21.80	10777.95	1327.43	19.78
Reach 1	10779	2 year	22.00	107.70	0.86	25.64	18.47	10777.95	903.08	18.47
Reach 1	10790	100 year	67.00	108.92	0.94	74.17	41.88	10788.71	2385.00	27.50
Reach 1	10790	50 year	60.00	108.78	0.89	68.46	36.98	10788.71	2162.20	27.50
Reach 1	10790	25 year	52.00	108.61	0.83	62.73	31.29	10788.71	1889.12	27.50
Reach 1	10790	10 year	42.00	108.37	0.75	55.88	26.90	10788.71	1613.31	26.90
Reach 1	10790	5 year	34.00	108.16	0.68	50.36	25.94	10788.71	1327.90	25.94
Reach 1	10790	2 year	22.00	107.73	0.56	39.58	23.95	10788.71	903.45	23.95
Reach 1	10925	100 year	67.00	108.91	2.04	42.44	49.91	10924.13	2394.06	12.26
Reach 1	10925	50 year	60.00	108.76	2.01	35.70	39.74	10924.13	2169.91	12.26
Reach 1	10925	25 year	52.00	108.59	1.92	30.02	28.45	10924.13	1895.69	12.26
Reach 1	10925	10 year	42.00	108.36	1.78	24.70	19.35	10924.13	1618.87	12.26
Reach 1	10925	5 year	34.00	108.15	1.62	21.19	15.32	10924.13	1332.76	12.26
Reach 1	10925	2 year	22.00	107.73	1.39	15.86	11.64	10924.13	907.20	11.64

HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	11015	100 year	67.00	109.13	1.18	63.94	38.33	11014.00	2398.84	21.25
Reach 1	11015	50 year	60.00	108.99	1.13	58.59	36.65	11014.00	2174.15	21.25
Reach 1	11015	25 year	52.00	108.81	1.07	52.43	34.17	11014.00	1899.40	21.25
Reach 1	11015	10 year	42.00	108.56	1.00	44.19	30.55	11014.00	1621.96	21.25
Reach 1	11015	5 year	34.00	108.33	0.92	37.75	26.90	11014.00	1335.41	21.25
Reach 1	11015	2 year	22.00	107.89	0.80	27.36	20.62	11014.00	909.14	20.62
Reach 1	11234	100 year	67.00	109.25	1.65	70.64	92.57	11233.14	2410.25	11.52
Reach 1	11234	50 year	60.00	109.10	1.69	58.27	79.40	11233.14	2184.45	11.52
Reach 1	11234	25 year	52.00	108.93	1.71	45.70	64.52	11233.14	1908.44	11.52
Reach 1	11234	10 year	42.00	108.68	1.74	31.85	45.74	11233.14	1629.44	11.52
Reach 1	11234	5 year	34.00	108.46	1.68	23.66	30.78	11233.14	1341.76	11.52
Reach 1	11234	2 year	22.00	108.05	1.52	14.52	13.55	11233.14	913.73	11.52
Reach 1	11462	100 year	67.00	109.54	1.49	61.11	153.57	11460.76	2433.78	20.04
Reach 1	11462	50 year	60.00	109.43	1.43	50.18	54.88	11460.76	2202.49	20.04
Reach 1	11462	25 year	52.00	109.28	1.37	42.66	44.88	11460.76	1922.07	20.04
Reach 1	11462	10 year	42.00	109.07	1.27	34.74	31.05	11460.76	1638.53	20.04
Reach 1	11462	5 year	34.00	108.87	1.18	29.47	24.92	11460.76	1348.43	20.04
Reach 1	11462	2 year	22.00	108.50	1.04	21.14	20.04	11460.76	917.79	20.04
Reach 1	11661	100 year	67.00	109.79	1.69	56.76	55.28	11659.66	2447.58	13.46
Reach 1	11661	50 year	60.00	109.67	1.67	50.41	51.59	11659.66	2214.03	13.46
Reach 1	11661	25 year	52.00	109.52	1.65	43.17	47.05	11659.66	1931.82	13.46
Reach 1	11661	10 year	42.00	109.32	1.60	34.08	40.54	11659.66	1646.15	13.46
Reach 1	11661	5 year	34.00	109.12	1.54	26.87	34.49	11659.66	1354.49	13.46
Reach 1	11661	2 year	22.00	108.79	1.38	17.08	23.28	11659.66	921.68	13.46
Reach 1	11884	100 year	67.00	110.11	1.82	64.93	70.64	11883.45	2459.19	8.54
Reach 1	11884	50 year	60.00	110.01	1.83	57.98	68.63	11883.45	2224.46	8.54
Reach 1	11884	25 year	52.00	109.89	1.83	49.89	65.85	11883.45	1940.90	8.54
Reach 1	11884	10 year	42.00	109.72	1.86	39.10	61.90	11883.45	1653.47	8.54
Reach 1	11884	5 year	34.00	109.57	1.89	30.23	58.46	11883.45	1360.34	8.54
Reach 1	11884	2 year	22.00	109.30	1.84	16.61	38.99	11883.45	925.30	8.54
Reach 1	12089	100 year	67.00	110.34	1.20	87.32	90.42	12088.26	2471.70	17.62
Reach 1	12089	50 year	60.00	110.25	1.18	79.67	89.54	12088.26	2235.87	17.62
Reach 1	12089	25 year	52.00	110.15	1.14	70.70	88.51	12088.26	1951.03	17.62
Reach 1	12089	10 year	42.00	110.02	1.08	59.04	87.14	12088.26	1661.92	17.62
Reach 1	12089	5 year	34.00	109.90	1.00	49.50	78.04	12088.26	1367.41	17.62
Reach 1	12089	2 year	22.00	109.67	0.84	33.89	56.43	12088.26	930.12	17.62
Reach 1	12291	100 year	67.00	110.51	1.38	76.76	82.56	12289.81	2489.75	14.46
Reach 1	12291	50 year	60.00	110.42	1.33	70.10	76.82	12289.81	2252.25	14.46
Reach 1	12291	25 year	52.00	110.32	1.26	62.66	71.26	12289.81	1965.49	14.46
Reach 1	12291	10 year	42.00	110.19	1.16	53.50	63.76	12289.81	1673.96	14.46
Reach 1	12291	5 year	34.00	110.06	1.07	45.98	56.86	12289.81	1377.49	14.46
Reach 1	12291	2 year	22.00	109.81	0.92	33.13	48.44	12289.81	937.01	14.46
Reach 1	12386	100 year	67.00	110.59	1.51	55.75	69.05	12384.85	2494.87	27.70
Reach 1	12386	50 year	60.00	110.51	1.47	50.08	66.15	12384.85	2256.92	27.70
Reach 1	12386	25 year	52.00	110.41	1.42	43.81	60.46	12384.85	1969.66	27.70
Reach 1	12386	10 year	42.00	110.27	1.33	36.19	52.48	12384.85	1677.51	27.70
Reach 1	12386	5 year	34.00	110.15	1.25	30.11	45.12	12384.85	1380.53	27.70
Reach 1	12386	2 year	22.00	109.91	1.10	20.88	34.81	12384.85	939.22	27.70
Reach 1	12467	100 year	67.00	110.72	0.58	126.28	94.88	12465.86	2503.01	57.94
Reach 1	12467	50 year	60.00	110.63	0.55	118.18	94.13	12465.86	2264.38	57.94
Reach 1	12467	25 year	52.00	110.53	0.52	108.41	93.22	12465.86	1976.31	57.94
Reach 1	12467	10 year	42.00	110.38	0.46	95.44	84.79	12465.86	1683.10	57.94
Reach 1	12467	5 year	34.00	110.25	0.41	84.69	75.38	12465.86	1385.29	57.94
Reach 1	12467	2 year	22.00	109.99	0.32	67.79	57.88	12465.86	942.81	57.88
Reach 1	12494	100 year	67.00	110.52	2.98	22.98	16.73	12492.70	2505.65	13.90
Reach 1	12494	50 year	60.00	110.46	2.77	22.05	16.42	12492.70	2266.77	13.90
Reach 1	12494	25 year	52.00	110.39	2.53	20.88	16.01	12492.70	1978.41	13.90
Reach 1	12494	10 year	42.00	110.28	2.21	19.16	15.41	12492.70	1684.83	13.90
Reach 1	12494	5 year	34.00	110.17	1.95	17.51	14.81	12492.70	1386.74	13.90
Reach 1	12494	2 year	22.00	109.95	1.53	14.37	13.86	12492.70	943.91	13.86
Reach 1	12500	Bleeks	Bridge							
Reach 1	12506	100 year	67.00	110.80	2.18	30.68	20.40	12505.01	2505.98	16.16
Reach 1	12506	50 year	60.00	110.70	2.06	29.12	19.94	12505.01	2267.09	16.16

HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	12506	25 year	52.00	110.58	1.91	27.28	19.41	12505.01	1978.71	16.16
Reach 1	12506	10 year	42.00	110.43	1.70	24.78	18.60	12505.01	1685.10	16.16
Reach 1	12506	5 year	34.00	110.29	1.51	22.51	17.79	12505.01	1386.99	16.16
Reach 1	12506	2 year	22.00	110.02	1.20	18.32	16.30	12505.01	944.11	16.16
Reach 1	12523	100 year	67.00	111.04	1.23	61.52	48.43	12521.91	2507.22	26.32
Reach 1	12523	50 year	60.00	110.92	1.18	56.23	40.99	12521.91	2268.18	26.32
Reach 1	12523	25 year	52.00	110.77	1.13	50.14	39.95	12521.91	1979.64	26.32
Reach 1	12523	10 year	42.00	110.57	1.06	42.31	38.57	12521.91	1685.83	26.32
Reach 1	12523	5 year	34.00	110.39	0.99	35.82	35.61	12521.91	1387.56	26.32
Reach 1	12523	2 year	22.00	110.09	0.84	26.13	28.49	12521.91	944.49	26.32
Reach 1	12619	100 year	67.00	111.15	1.04	103.44	112.60	12618.37	2516.39	18.76
Reach 1	12619	50 year	60.00	111.02	1.07	88.81	111.12	12618.37	2276.19	18.76
Reach 1	12619	25 year	52.00	110.86	1.10	72.40	100.52	12618.37	1986.35	18.76
Reach 1	12619	10 year	42.00	110.66	1.13	53.26	85.00	12618.37	1690.96	18.76
Reach 1	12619	5 year	34.00	110.48	1.14	39.46	71.02	12618.37	1391.48	18.76
Reach 1	12619	2 year	22.00	110.18	1.02	23.00	38.10	12618.37	946.90	18.76
Reach 1	12773	100 year	67.00	111.21	2.76	42.24	67.40	12771.65	2530.37	7.94
Reach 1	12773	50 year	60.00	111.14	2.79	37.58	66.24	12771.65	2288.37	7.94
Reach 1	12773	25 year	52.00	111.09	2.68	34.05	65.34	12771.65	1996.51	7.94
Reach 1	12773	10 year	42.00	111.02	2.49	29.48	64.15	12771.65	1698.53	7.94
Reach 1	12773	5 year	34.00	110.91	2.45	23.31	55.61	12771.65	1396.86	7.83
Reach 1	12773	2 year	22.00	110.76	2.17	15.42	44.58	12771.65	949.66	7.63
Reach 1	12949	100 year	67.00	111.86	1.98	38.60	30.09	12947.52	2537.48	16.80
Reach 1	12949	50 year	60.00	111.81	1.84	37.04	29.87	12947.52	2294.94	16.80
Reach 1	12949	25 year	52.00	111.73	1.70	34.53	29.53	12947.52	2002.54	16.80
Reach 1	12949	10 year	42.00	111.61	1.50	30.98	29.04	12947.52	1703.85	16.80
Reach 1	12949	5 year	34.00	111.50	1.33	27.85	28.55	12947.52	1401.36	16.80
Reach 1	12949	2 year	22.00	111.27	1.04	21.95	23.16	12947.52	952.94	16.80
Reach 1	13113	100 year	67.00	112.25	3.22	24.46	28.86	13112.14	2543.31	11.04
Reach 1	13113	50 year	60.00	112.14	3.13	21.59	27.90	13112.14	2300.24	11.04
Reach 1	13113	25 year	52.00	112.03	2.98	18.38	26.79	13112.14	2007.17	11.04
Reach 1	13113	10 year	42.00	111.89	2.65	16.13	12.93	13112.14	1707.90	11.04
Reach 1	13113	5 year	34.00	111.75	2.38	14.44	12.28	13112.14	1404.95	11.04
Reach 1	13113	2 year	22.00	111.49	1.93	11.38	11.00	13112.14	955.72	11.00
Reach 1	13356	100 year	67.00	113.07	1.12	65.07	54.06	13354.59	2553.19	28.56
Reach 1	13356	50 year	60.00	112.95	1.07	59.44	47.68	13354.59	2309.45	28.56
Reach 1	13356	25 year	52.00	112.81	1.02	52.80	41.42	13354.59	2015.57	28.56
Reach 1	13356	10 year	42.00	112.57	0.95	44.35	31.71	13354.59	1715.19	28.56
Reach 1	13356	5 year	34.00	112.37	0.89	38.37	27.86	13354.59	1411.35	27.86
Reach 1	13356	2 year	22.00	112.00	0.77	28.55	25.94	13354.59	960.56	25.94
Reach 1	13544	100 year	67.00	113.19	1.63	44.57	36.12	13543.19	2562.96	21.26
Reach 1	13544	50 year	60.00	113.08	1.56	40.82	32.50	13543.19	2318.53	21.26
Reach 1	13544	25 year	52.00	112.93	1.48	36.46	28.80	13543.19	2023.80	21.26
Reach 1	13544	10 year	42.00	112.72	1.39	30.62	25.02	13543.19	1722.24	21.26
Reach 1	13544	5 year	34.00	112.52	1.31	26.05	21.61	13543.19	1417.42	21.26
Reach 1	13544	2 year	22.00	112.17	1.17	18.84	19.80	13543.19	965.02	19.80
Reach 1	13702	100 year	67.00	113.42	2.57	42.13	101.49	13700.88	2569.80	11.30
Reach 1	13702	50 year	60.00	113.28	2.68	30.67	73.91	13700.88	2324.16	11.30
Reach 1	13702	25 year	52.00	113.14	2.67	22.12	43.07	13700.88	2028.42	11.30
Reach 1	13702	10 year	42.00	112.96	2.44	17.64	13.68	13700.88	1726.04	11.30
Reach 1	13702	5 year	34.00	112.81	2.21	15.57	12.88	13700.88	1420.70	11.30
Reach 1	13702	2 year	22.00	112.51	1.83	12.04	11.37	13700.88	967.46	11.30
Reach 1	13809	100 year	52.00	113.79	0.73	107.02	103.09	13808.40	2577.82	22.13
Reach 1	13809	50 year	46.00	113.71	0.69	99.52	101.43	13808.40	2331.16	22.13
Reach 1	13809	25 year	40.00	113.59	0.67	86.81	98.54	13808.40	2034.27	22.13
Reach 1	13809	10 year	32.00	113.36	0.67	65.46	86.70	13808.40	1730.51	22.13
Reach 1	13809	5 year	27.00	113.15	0.70	49.22	72.42	13808.40	1424.19	22.13
Reach 1	13809	2 year	18.00	112.79	0.66	29.27	40.20	13808.40	969.68	22.13
Reach 1	14015	100 year	52.00	113.84	0.86	84.06	94.15	14014.22	2597.48	23.46
Reach 1	14015	50 year	46.00	113.76	0.81	77.26	84.16	14014.22	2349.35	23.46
Reach 1	14015	25 year	40.00	113.63	0.76	67.76	67.82	14014.22	2050.18	23.46
Reach 1	14015	10 year	32.00	113.41	0.70	55.57	49.54	14014.22	1742.96	23.46
Reach 1	14015	5 year	27.00	113.22	0.69	46.31	47.87	14014.22	1434.02	23.46
Reach 1	14015	2 year	18.00	112.88	0.64	30.71	40.62	14014.22	975.85	23.46

HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	14190	100 year	52.00	113.90	1.01	88.59	116.34	14188.74	2612.55	16.17
Reach 1	14190	50 year	46.00	113.82	0.96	79.60	103.57	14188.74	2363.04	16.17
Reach 1	14190	25 year	40.00	113.69	0.92	67.72	83.78	14188.74	2062.00	16.17
Reach 1	14190	10 year	32.00	113.47	0.83	52.97	53.59	14188.74	1752.44	16.17
Reach 1	14190	5 year	27.00	113.29	0.84	43.41	51.76	14188.74	1441.85	16.17
Reach 1	14190	2 year	18.00	112.96	0.82	27.07	46.37	14188.74	980.89	16.17
Reach 1	14344	100 year	52.00	113.97	0.87	109.17	149.64	14343.25	2627.82	17.00
Reach 1	14344	50 year	46.00	113.89	0.85	96.82	137.95	14343.25	2376.67	17.00
Reach 1	14344	25 year	40.00	113.76	0.84	80.31	120.58	14343.25	2073.44	17.00
Reach 1	14344	10 year	32.00	113.53	0.86	56.70	90.10	14343.25	1760.91	17.00
Reach 1	14344	5 year	27.00	113.36	0.86	43.05	70.43	14343.25	1448.53	17.00
Reach 1	14344	2 year	18.00	113.05	0.78	26.59	36.54	14343.25	985.04	17.00
Reach 1	14414	100 year	52.00	113.98	1.17	62.46	60.63	14412.76	2633.79	16.00
Reach 1	14414	50 year	46.00	113.90	1.10	57.54	57.52	14412.76	2382.04	16.00
Reach 1	14414	25 year	40.00	113.77	1.05	50.73	52.90	14412.76	2077.99	16.00
Reach 1	14414	10 year	32.00	113.56	0.99	40.19	44.83	14412.76	1764.28	16.00
Reach 1	14414	5 year	27.00	113.39	0.95	33.38	38.13	14412.76	1451.18	16.00
Reach 1	14414	2 year	18.00	113.09	0.81	23.80	25.19	14412.76	986.79	16.00
Reach 1	14613	100 year	52.00	114.07	0.43	156.23	158.67	14612.14	2663.99	50.62
Reach 1	14613	50 year	46.00	113.98	0.41	142.05	150.54	14612.14	2408.81	50.62
Reach 1	14613	25 year	40.00	113.85	0.39	123.98	132.57	14612.14	2100.39	50.62
Reach 1	14613	10 year	32.00	113.64	0.36	98.42	101.88	14612.14	1780.67	50.62
Reach 1	14613	5 year	27.00	113.47	0.35	83.51	80.91	14612.14	1464.27	50.62
Reach 1	14613	2 year	18.00	113.16	0.30	61.26	60.69	14612.14	995.55	50.62
Reach 1	14822	100 year	52.00	114.09	0.90	115.92	226.20	14821.16	2689.94	18.50
Reach 1	14822	50 year	46.00	114.00	0.81	95.65	122.71	14821.16	2431.77	18.50
Reach 1	14822	25 year	40.00	113.87	0.82	80.15	118.69	14821.16	2120.25	18.50
Reach 1	14822	10 year	32.00	113.65	0.88	54.78	111.80	14821.16	1795.89	18.50
Reach 1	14822	5 year	27.00	113.49	0.90	37.46	58.38	14821.16	1476.61	18.50
Reach 1	14822	2 year	18.00	113.18	0.81	23.31	32.89	14821.16	1004.35	18.50
Reach 1	14945	100 year	52.00	114.14	0.65	149.78	204.42	14943.73	2706.22	16.29
Reach 1	14945	50 year	46.00	114.04	0.64	129.92	199.19	14943.73	2445.59	16.29
Reach 1	14945	25 year	40.00	113.92	0.63	108.60	153.71	14943.73	2131.82	16.29
Reach 1	14945	10 year	32.00	113.71	0.65	80.64	120.58	14943.73	1804.19	16.29
Reach 1	14945	5 year	27.00	113.56	0.66	63.96	95.49	14943.73	1482.82	16.29
Reach 1	14945	2 year	18.00	113.25	0.69	38.01	81.71	14943.73	1008.10	16.29
Reach 1	15128	100 year	52.00	114.17	0.59	159.39	179.59	15127.36	2725.67	20.24
Reach 1	15128	50 year	46.00	114.07	0.59	142.14	176.78	15127.36	2463.14	20.24
Reach 1	15128	25 year	40.00	113.95	0.60	120.91	173.42	15127.36	2147.11	20.24
Reach 1	15128	10 year	32.00	113.75	0.64	87.42	168.31	15127.36	1816.02	20.24
Reach 1	15128	5 year	27.00	113.61	0.69	63.21	164.51	15127.36	1492.21	20.24
Reach 1	15128	2 year	18.00	113.32	0.63	33.47	58.15	15127.36	1013.93	20.24
Reach 1	15193	100 year	52.00	114.16	1.35	40.34	18.98	15191.79	2747.60	14.62
Reach 1	15193	50 year	46.00	114.07	1.25	38.62	18.67	15191.79	2482.39	14.62
Reach 1	15193	25 year	40.00	113.96	1.14	36.49	18.30	15191.79	2163.09	14.62
Reach 1	15193	10 year	32.00	113.77	1.00	33.10	17.76	15191.79	1826.87	14.62
Reach 1	15193	5 year	27.00	113.63	0.90	30.62	17.35	15191.79	1499.37	14.62
Reach 1	15193	2 year	18.00	113.34	0.70	25.77	16.23	15191.79	1016.70	14.62
Reach 1	15201	Dwyer Hill	Bridge							
Reach 1	15209	100 year	52.00	114.16	1.52	36.83	19.32	15207.83	2748.22	12.92
Reach 1	15209	50 year	46.00	114.07	1.40	35.09	18.96	15207.83	2482.99	12.92
Reach 1	15209	25 year	40.00	113.96	1.29	32.94	18.44	15207.83	2163.65	12.92
Reach 1	15209	10 year	32.00	113.77	1.13	29.58	17.43	15207.83	1827.37	12.92
Reach 1	15209	5 year	27.00	113.63	1.03	27.18	16.67	15207.83	1499.83	12.92
Reach 1	15209	2 year	18.00	113.34	0.81	22.63	15.00	15207.83	1017.09	12.92
Reach 1	15219	100 year	52.00	114.32	0.42	241.05	241.11	15218.11	2764.95	14.66
Reach 1	15219	50 year	46.00	114.20	0.42	214.03	236.46	15218.11	2497.29	14.66
Reach 1	15219	25 year	40.00	114.07	0.43	182.46	230.91	15218.11	2175.14	14.66
Reach 1	15219	10 year	32.00	113.85	0.47	134.35	217.69	15218.11	1834.65	14.66
Reach 1	15219	5 year	27.00	113.69	0.52	100.68	206.35	15218.11	1504.27	14.66
Reach 1	15219	2 year	18.00	113.37	0.60	49.09	96.76	15218.11	1017.97	14.66
Reach 1	15439	100 year	52.00	114.33	0.72	149.45	191.23	15437.53	2807.79	10.85
Reach 1	15439	50 year	46.00	114.22	0.75	128.26	188.58	15437.53	2534.84	10.85
Reach 1	15439	25 year	40.00	114.09	0.80	103.55	185.43	15437.53	2206.52	10.85

## HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	15439	10 year	32.00	113.89	0.91	70.82	137.88	15437.53	1857.16	10.85
Reach 1	15439	5 year	27.00	113.74	1.03	50.38	135.74	15437.53	1520.84	10.85
Reach 1	15439	2 year	18.00	113.44	1.07	17.81	16.46	15437.53	1025.31	10.85
Reach 1	15574	100 year	52.00	114.43	0.61	152.42	188.18	15572.67	2867.89	9.30
Reach 1	15574	50 year	46.00	114.33	0.60	133.97	176.00	15572.67	2586.65	9.30
Reach 1	15574	25 year	40.00	114.21	0.60	114.60	162.22	15572.67	2249.09	9.30
Reach 1	15574	10 year	32.00	114.04	0.60	88.70	141.73	15572.67	1887.23	9.30
Reach 1	15574	5 year	27.00	113.93	0.61	73.41	133.79	15572.67	1543.15	9.30
Reach 1	15574	2 year	18.00	113.70	0.71	43.97	124.29	15572.67	1034.40	9.30
Reach 1	15868	100 year	52.00	114.46	0.49	164.86	211.53	15867.01	2885.15	34.37
Reach 1	15868	50 year	46.00	114.36	0.49	144.74	201.59	15867.01	2602.11	34.37
Reach 1	15868	25 year	40.00	114.25	0.49	123.51	190.54	15867.01	2262.62	34.37
Reach 1	15868	10 year	32.00	114.10	0.51	94.91	174.54	15867.01	1898.12	34.37
Reach 1	15868	5 year	27.00	114.00	0.52	78.36	164.58	15867.01	1552.45	34.37
Reach 1	15868	2 year	18.00	113.83	0.51	51.83	143.43	15867.01	1040.88	34.37
Reach 1	16147	100 year	36.00	114.50	0.24	222.44	292.19	16146.06	2938.85	20.36
Reach 1	16147	50 year	32.00	114.41	0.24	195.72	286.68	16146.06	2649.42	20.36
Reach 1	16147	25 year	28.00	114.31	0.25	167.33	280.71	16146.06	2303.17	20.36
Reach 1	16147	10 year	23.00	114.17	0.27	129.47	272.55	16146.06	1929.65	20.36
Reach 1	16147	5 year	19.00	114.09	0.27	107.23	267.63	16146.06	1578.72	20.36
Reach 1	16147	2 year	13.00	113.95	0.28	71.60	243.56	16146.06	1058.68	20.36
Reach 1	16426	100 year	36.00	114.53	0.42	118.63	196.94	16425.33	2986.53	48.17
Reach 1	16426	50 year	32.00	114.44	0.42	102.66	179.15	16425.33	2691.29	48.17
Reach 1	16426	25 year	28.00	114.35	0.44	86.69	174.58	16425.33	2338.95	48.17
Reach 1	16426	10 year	23.00	114.24	0.46	67.35	168.86	16425.33	1957.47	48.17
Reach 1	16426	5 year	19.00	114.17	0.46	56.13	165.46	16425.33	1601.87	48.17
Reach 1	16426	2 year	13.00	114.07	0.45	40.08	160.46	16425.33	1074.51	48.17
Reach 1	16718	100 year	36.00	114.60	0.50	94.45	181.28	16716.67	3005.53	30.04
Reach 1	16718	50 year	32.00	114.53	0.51	81.63	178.94	16716.67	2707.94	30.04
Reach 1	16718	25 year	28.00	114.47	0.52	70.20	174.56	16716.67	2353.37	30.04
Reach 1	16718	10 year	23.00	114.40	0.50	58.48	167.30	16716.67	1969.36	30.04
Reach 1	16718	5 year	19.00	114.36	0.47	51.26	162.67	16716.67	1612.23	30.04
Reach 1	16718	2 year	13.00	114.29	0.41	40.41	155.45	16716.67	1082.60	30.04
Reach 1	16909	100 year	36.00	114.79	1.20	49.76	105.40	16908.15	3019.34	9.10
Reach 1	16909	50 year	32.00	114.75	1.16	45.90	102.34	16908.15	2720.15	9.10
Reach 1	16909	25 year	28.00	114.72	1.10	42.26	99.38	16908.15	2364.14	9.10
Reach 1	16909	10 year	23.00	114.67	1.02	37.61	95.46	16908.15	1978.56	9.10
Reach 1	16909	5 year	19.00	114.62	0.95	33.40	91.77	16908.15	1620.34	9.10
Reach 1	16909	2 year	13.00	114.54	0.83	26.36	85.24	16908.15	1088.99	9.10
Reach 1	17029	100 year	36.00	115.14	1.36	37.39	96.04	17028.24	3024.57	26.35
Reach 1	17029	50 year	32.00	115.10	1.31	34.03	90.73	17028.24	2724.95	26.35
Reach 1	17029	25 year	28.00	115.06	1.26	30.44	84.69	17028.24	2368.50	26.35
Reach 1	17029	10 year	23.00	115.00	1.19	25.82	76.22	17028.24	1982.37	26.35
Reach 1	17029	5 year	19.00	114.95	1.12	22.15	71.10	17028.24	1623.68	26.35
Reach 1	17029	2 year	13.00	114.87	1.01	16.32	62.51	17028.24	1091.56	26.35
Reach 1	17222	100 year	36.00	115.74	0.75	53.62	123.38	17220.66	3036.90	73.02
Reach 1	17222	50 year	32.00	115.70	0.73	48.85	119.53	17220.66	2736.03	73.02
Reach 1	17222	25 year	28.00	115.66	0.70	43.88	115.39	17220.66	2378.28	73.02
Reach 1	17222	10 year	23.00	115.60	0.65	37.67	109.99	17220.66	1990.55	73.02
Reach 1	17222	5 year	19.00	115.55	0.61	32.32	105.12	17220.66	1630.58	73.02
Reach 1	17222	2 year	13.00	115.46	0.54	24.16	70.17	17220.66	1096.55	70.17
Reach 1	17326	100 year	36.00	115.90	1.17	36.88	82.70	17325.42	3041.64	38.02
Reach 1	17326	50 year	32.00	115.87	1.11	33.86	78.57	17325.42	2740.36	38.02
Reach 1	17326	25 year	28.00	115.83	1.05	30.79	74.12	17325.42	2382.19	38.02
Reach 1	17326	10 year	23.00	115.77	0.96	26.88	68.04	17325.42	1993.93	38.02
Reach 1	17326	5 year	19.00	115.72	0.88	23.59	62.48	17325.42	1633.51	38.02
Reach 1	17326	2 year	13.00	115.63	0.74	18.28	52.27	17325.42	1098.78	38.02
Reach 1	17531	100 year	36.00	116.27	0.96	63.38	123.92	17529.94	3055.24	18.55
Reach 1	17531	50 year	32.00	116.22	0.94	57.27	121.35	17529.94	2752.56	18.55
Reach 1	17531	25 year	28.00	116.17	0.92	50.85	118.60	17529.94	2392.96	18.55
Reach 1	17531	10 year	23.00	116.09	0.89	42.15	114.77	17529.94	2002.79	18.55
Reach 1	17531	5 year	19.00	116.03	0.86	34.45	111.26	17529.94	1640.73	18.55
Reach 1	17531	2 year	13.00	115.89	0.72	24.02	62.23	17529.94	1103.74	18.55
Reach 1	17688	100 year	36.00	116.51	1.98	18.20	47.45	17686.80	3061.64	43.81

HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	17688	50 year	32.00	116.48	1.93	16.59	43.03	17686.80	2758.36	43.03
Reach 1	17688	25 year	28.00	116.44	1.88	14.92	41.65	17686.80	2398.12	41.65
Reach 1	17688	10 year	23.00	116.39	1.78	12.89	39.93	17686.80	2007.11	39.93
Reach 1	17688	5 year	19.00	116.34	1.70	11.17	38.41	17686.80	1644.31	38.41
Reach 1	17688	2 year	13.00	116.27	1.53	8.49	35.90	17686.80	1106.29	35.90
Reach 1	17929	100 year	36.00	117.14	0.53	76.24	140.95	17928.07	3073.01	91.60
Reach 1	17929	50 year	32.00	117.10	0.51	70.46	139.65	17928.07	2768.84	91.60
Reach 1	17929	25 year	28.00	117.05	0.49	64.41	138.27	17928.07	2407.67	91.60
Reach 1	17929	10 year	23.00	116.99	0.45	56.33	136.12	17928.07	2015.45	91.60
Reach 1	17929	5 year	19.00	116.94	0.42	49.27	131.37	17928.07	1651.59	91.60
Reach 1	17929	2 year	13.00	116.85	0.37	38.12	123.49	17928.07	1111.90	91.60
Reach 1	18021	100 year	36.00	117.22	0.55	88.47	145.41	18020.08	3084.57	22.48
Reach 1	18021	50 year	32.00	117.18	0.52	82.36	142.21	18020.08	2779.53	22.48
Reach 1	18021	25 year	28.00	117.13	0.49	76.05	138.83	18020.08	2417.46	22.48
Reach 1	18021	10 year	23.00	117.07	0.45	67.74	134.25	18020.08	2024.06	22.48
Reach 1	18021	5 year	19.00	117.02	0.41	60.53	130.15	18020.08	1659.18	22.48
Reach 1	18021	2 year	13.00	116.93	0.34	48.85	125.11	18020.08	1117.87	22.48
Reach 1	18156	100 year	36.00	117.32	0.96	53.65	103.10	18154.96	3092.53	23.06
Reach 1	18156	50 year	32.00	117.28	0.92	49.21	99.47	18154.96	2786.90	23.06
Reach 1	18156	25 year	28.00	117.23	0.89	44.65	95.59	18154.96	2424.21	23.06
Reach 1	18156	10 year	23.00	117.17	0.84	38.69	90.27	18154.96	2029.97	23.06
Reach 1	18156	5 year	19.00	117.11	0.79	33.65	85.52	18154.96	1664.36	23.06
Reach 1	18156	2 year	13.00	117.01	0.70	25.55	77.28	18154.96	1121.84	23.06
Reach 1	18271	100 year	36.00	117.52	0.98	65.35	149.26	18269.86	3101.71	16.87
Reach 1	18271	50 year	32.00	117.48	0.96	58.87	143.96	18269.86	2795.18	16.87
Reach 1	18271	25 year	28.00	117.43	0.94	52.20	136.93	18269.86	2431.57	16.87
Reach 1	18271	10 year	23.00	117.36	0.91	43.68	127.38	18269.86	2036.15	16.87
Reach 1	18271	5 year	19.00	117.31	0.89	36.65	118.93	18269.86	1669.57	16.87
Reach 1	18271	2 year	13.00	117.21	0.84	25.50	104.13	18269.86	1125.51	16.87
Reach 1	18446	100 year	36.00	117.67	1.05	56.78	128.86	18444.75	3107.69	20.95
Reach 1	18446	50 year	32.00	117.63	1.01	51.93	127.77	18444.75	2800.72	20.95
Reach 1	18446	25 year	28.00	117.59	0.98	46.67	126.58	18444.75	2436.65	20.95
Reach 1	18446	10 year	23.00	117.53	0.92	39.78	124.99	18444.75	2040.64	20.95
Reach 1	18446	5 year	19.00	117.48	0.82	33.39	84.78	18444.75	1673.54	20.95
Reach 1	18446	2 year	13.00	117.38	0.68	25.85	71.88	18444.75	1128.66	20.95
Reach 1	18698	100 year	36.00	118.39	1.42	32.03	99.07	18696.68	3120.54	29.28
Reach 1	18698	50 year	32.00	118.35	1.40	28.76	96.30	18696.68	2812.36	29.28
Reach 1	18698	25 year	28.00	118.32	1.37	25.44	93.41	18696.68	2447.02	29.28
Reach 1	18698	10 year	23.00	118.27	1.36	20.82	89.22	18696.68	2049.29	29.28
Reach 1	18698	5 year	19.00	118.20	1.54	14.91	83.55	18696.68	1680.36	29.28
Reach 1	18698	2 year	13.00	118.15	1.36	11.40	80.01	18696.68	1133.86	29.28
Reach 1	18871	100 year	36.00	119.66	2.36	19.03	28.78	18869.84	3125.48	12.12
Reach 1	18871	50 year	32.00	119.62	2.19	18.07	28.37	18869.84	2816.89	12.12
Reach 1	18871	25 year	28.00	119.58	2.03	16.93	27.88	18869.84	2451.10	12.12
Reach 1	18871	10 year	23.00	119.53	1.80	15.49	27.24	18869.84	2052.78	12.12
Reach 1	18871	5 year	19.00	119.51	1.53	14.94	26.99	18869.84	1683.20	12.12
Reach 1	18871	2 year	13.00	119.37	1.29	11.51	23.13	18869.84	1136.03	12.12
Reach 1	18888	100 year	36.00	119.78	2.09	17.99	16.83	18886.70	3125.82	13.28
Reach 1	18888	50 year	32.00	119.74	1.92	17.36	16.70	18886.70	2817.20	13.28
Reach 1	18888	25 year	28.00	119.70	1.75	16.62	16.54	18886.70	2451.40	13.28
Reach 1	18888	10 year	23.00	119.63	1.53	15.56	16.31	18886.70	2053.05	13.28
Reach 1	18888	5 year	19.00	119.58	1.33	14.82	16.14	18886.70	1683.46	13.28
Reach 1	18888	2 year	13.00	119.44	1.06	12.63	15.56	18886.70	1136.24	13.28
Reach 1	18892 McCaffrey		Bridge							
Reach 1	18897	100 year	36.00	119.84	2.04	19.05	21.39	18892.70	3125.92	13.16
Reach 1	18897	50 year	32.00	119.79	1.89	18.24	21.00	18892.70	2817.31	13.16
Reach 1	18897	25 year	28.00	119.73	1.74	17.36	20.57	18892.70	2451.50	13.16
Reach 1	18897	10 year	23.00	119.66	1.53	16.14	19.97	18892.70	2053.14	13.16
Reach 1	18897	5 year	19.00	119.60	1.33	15.26	19.54	18892.70	1683.55	13.16
Reach 1	18897	2 year	13.00	119.46	1.07	12.91	18.24	18892.70	1136.31	13.16
Reach 1	18905	100 year	36.00	119.87	2.27	25.76	58.36	18900.56	3126.34	11.94
Reach 1	18905	50 year	32.00	119.81	2.19	22.25	51.66	18900.56	2817.66	11.94
Reach 1	18905	25 year	28.00	119.74	2.08	19.10	44.77	18900.56	2451.79	11.94
Reach 1	18905	10 year	23.00	119.66	1.90	15.76	36.10	18900.56	2053.37	11.94

## HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	18905	5 year	19.00	119.60	1.69	13.85	30.04	18900.56	1683.74	11.94
Reach 1	18905	2 year	13.00	119.46	1.40	10.49	18.65	18900.56	1136.44	11.94
Reach 1	19140	100 year	36.00	121.31	2.01	31.72	95.29	19136.14	3131.26	20.31
Reach 1	19140	50 year	32.00	121.27	1.95	28.16	90.79	19136.14	2822.09	20.31
Reach 1	19140	25 year	28.00	121.23	1.90	24.21	85.51	19136.14	2455.73	20.31
Reach 1	19140	10 year	23.00	121.16	1.87	18.59	77.39	19136.14	2056.67	20.31
Reach 1	19140	5 year	19.00	121.11	1.79	14.75	71.31	19136.14	1686.61	20.31
Reach 1	19140	2 year	13.00	120.96	1.87	6.97	19.60	19136.14	1138.40	19.60
Reach 1	19305	100 year	36.00	121.77	0.67	96.43	242.23	19300.87	3152.53	47.18
Reach 1	19305	50 year	32.00	121.72	0.65	85.01	227.56	19300.87	2840.03	47.18
Reach 1	19305	25 year	28.00	121.67	0.63	73.65	211.97	19300.87	2470.39	47.18
Reach 1	19305	10 year	23.00	121.60	0.59	59.73	191.14	19300.87	2067.37	47.18
Reach 1	19305	5 year	19.00	121.53	0.55	47.96	171.56	19300.87	1694.10	47.18
Reach 1	19305	2 year	13.00	121.42	0.45	35.38	88.70	19300.87	1143.10	47.18
Reach 1	19506	100 year	36.00	121.92	1.05	56.96	118.29	19501.96	3162.59	31.80
Reach 1	19506	50 year	32.00	121.87	1.01	51.80	115.24	19501.96	2849.24	31.80
Reach 1	19506	25 year	28.00	121.83	0.96	46.40	111.97	19501.96	2478.73	31.80
Reach 1	19506	10 year	23.00	121.76	0.90	39.26	107.48	19501.96	2074.59	31.80
Reach 1	19506	5 year	19.00	121.70	0.85	32.98	103.37	19501.96	1700.34	31.80
Reach 1	19506	2 year	13.00	121.59	0.77	21.41	95.34	19501.96	1147.89	31.80
Reach 1	19757	100 year	36.00	122.08	0.43	87.41	90.66	19753.20	3180.72	81.42
Reach 1	19757	50 year	32.00	122.03	0.40	82.76	90.18	19753.20	2866.14	81.42
Reach 1	19757	25 year	28.00	121.97	0.37	77.80	89.68	19753.20	2494.33	81.42
Reach 1	19757	10 year	23.00	121.89	0.33	71.03	89.02	19753.20	2088.44	81.42
Reach 1	19757	5 year	19.00	121.83	0.30	64.95	88.42	19753.20	1712.64	81.42
Reach 1	19757	2 year	13.00	121.70	0.25	53.79	87.30	19753.20	1157.33	81.42
Reach 1	19915	100 year	36.00	122.12	0.99	61.68	111.37	19911.31	3193.51	27.09
Reach 1	19915	50 year	32.00	122.07	0.95	55.85	105.52	19911.31	2877.97	27.09
Reach 1	19915	25 year	28.00	122.01	0.90	49.95	99.24	19911.31	2505.16	27.09
Reach 1	19915	10 year	23.00	121.93	0.83	42.42	91.23	19911.31	2097.98	27.09
Reach 1	19915	5 year	19.00	121.86	0.76	36.17	84.12	19911.31	1721.07	27.09
Reach 1	19915	2 year	13.00	121.73	0.66	26.05	71.09	19911.31	1163.88	27.09
Reach 1	20033	100 year	36.00	122.27	0.89	84.58	127.56	20029.04	3206.64	20.05
Reach 1	20033	50 year	32.00	122.21	0.86	77.03	125.75	20029.04	2889.69	20.05
Reach 1	20033	25 year	28.00	122.14	0.83	69.02	123.80	20029.04	2515.43	20.05
Reach 1	20033	10 year	23.00	122.06	0.79	58.20	121.12	20029.04	2106.35	20.05
Reach 1	20033	5 year	19.00	121.98	0.75	48.68	116.10	20029.04	1727.84	20.05
Reach 1	20033	2 year	13.00	121.83	0.67	33.47	96.06	20029.04	1168.17	20.05
Reach 1	20216	100 year	36.00	122.44	0.59	92.07	164.94	20212.36	3238.01	52.42
Reach 1	20216	50 year	32.00	122.38	0.57	82.44	154.62	20212.36	2917.60	52.42
Reach 1	20216	25 year	28.00	122.32	0.55	72.83	143.57	20212.36	2539.87	52.42
Reach 1	20216	10 year	23.00	122.23	0.52	60.86	128.51	20212.36	2126.43	52.42
Reach 1	20216	5 year	19.00	122.15	0.49	51.28	115.03	20212.36	1744.38	52.42
Reach 1	20216	2 year	13.00	122.01	0.45	36.77	90.90	20212.36	1179.38	52.42
Reach 1	20361	100 year	36.00	122.51	1.53	30.03	89.16	20357.28	3245.43	24.02
Reach 1	20361	50 year	32.00	122.46	1.45	26.97	49.80	20357.28	2924.32	24.02
Reach 1	20361	25 year	28.00	122.40	1.37	24.26	46.63	20357.28	2545.89	24.02
Reach 1	20361	10 year	23.00	122.33	1.25	20.85	42.32	20357.28	2131.56	24.02
Reach 1	20361	5 year	19.00	122.26	1.15	18.09	38.49	20357.28	1748.79	24.02
Reach 1	20361	2 year	13.00	122.14	0.97	13.96	31.88	20357.28	1182.68	24.02
Reach 1	20509	100 year	36.00	123.04	1.12	61.25	69.98	20505.29	3258.25	14.02
Reach 1	20509	50 year	32.00	122.97	1.06	56.73	67.92	20505.29	2935.98	14.02
Reach 1	20509	25 year	28.00	122.90	1.00	52.07	66.56	20505.29	2556.51	14.02
Reach 1	20509	10 year	23.00	122.80	0.93	45.77	64.66	20505.29	2140.82	14.02
Reach 1	20509	5 year	19.00	122.72	0.86	40.38	63.00	20505.29	1756.92	14.02
Reach 1	20509	2 year	13.00	122.58	0.74	31.54	60.17	20505.29	1189.02	14.02
Reach 1	20678	100 year	36.00	123.57	2.15	16.80	38.01	20674.25	3261.10	35.65
Reach 1	20678	50 year	32.00	123.53	2.08	15.44	36.80	20674.25	2938.62	35.65
Reach 1	20678	25 year	28.00	123.50	1.98	14.11	35.60	20674.25	2558.94	35.60
Reach 1	20678	10 year	23.00	123.44	1.88	12.21	34.00	20674.25	2142.96	34.00
Reach 1	20678	5 year	19.00	123.39	1.79	10.59	32.58	20674.25	1758.80	32.58
Reach 1	20678	2 year	13.00	123.31	1.62	8.02	30.19	20674.25	1190.48	30.19
Reach 1	20699	100 year	36.00	124.08	1.87	33.28	43.77	20694.94	3264.37	11.32
Reach 1	20699	50 year	32.00	124.02	1.78	30.65	41.67	20694.94	2941.47	11.32

HEC-RAS Plan: JRMIDFINAL River: Jock River Reach: Reach 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Cum Ch Len (m)	Volume (1000 m3)	Top W Chnl (m)
Reach 1	20699	25 year	28.00	123.95	1.68	27.94	39.75	20694.94	2561.39	11.32
Reach 1	20699	10 year	23.00	123.86	1.54	24.46	37.36	20694.94	2144.92	11.32
Reach 1	20699	5 year	19.00	123.79	1.41	21.64	35.31	20694.94	1760.39	11.32
Reach 1	20699	2 year	13.00	123.65	1.18	17.14	31.76	20694.94	1191.55	11.32
Reach 1	20705	100 year	36.00	124.28	2.70	24.48	46.82	20700.59	3267.75	8.33
Reach 1	20705	50 year	32.00	124.20	2.69	20.61	44.47	20700.59	2944.43	8.33
Reach 1	20705	25 year	28.00	124.11	2.67	16.75	42.00	20700.59	2563.93	8.33
Reach 1	20705	10 year	23.00	124.00	2.41	12.33	14.65	20700.59	2146.97	8.33
Reach 1	20705	5 year	19.00	123.97	2.05	11.92	14.52	20700.59	1762.24	8.33
Reach 1	20705	2 year	13.00	123.83	1.66	9.90	13.84	20700.59	1193.02	8.33
Reach 1	20722	100 year	36.00	124.70	0.95	75.57	196.79	20717.98	3284.89	17.68
Reach 1	20722	50 year	32.00	124.60	0.94	58.24	151.38	20717.98	2954.95	17.68
Reach 1	20722	25 year	28.00	124.50	0.91	45.17	51.74	20717.98	2569.59	17.68
Reach 1	20722	10 year	23.00	124.31	0.89	35.83	45.54	20717.98	2150.20	17.68
Reach 1	20722	5 year	19.00	124.19	0.82	30.90	41.89	20717.98	1764.72	17.68
Reach 1	20722	2 year	13.00	123.98	0.70	22.69	31.68	20717.98	1194.35	17.68
Reach 1	20902	100 year	36.00	124.81	0.46	102.84	159.59	20898.17	3301.71	82.36
Reach 1	20902	50 year	32.00	124.72	0.47	88.98	153.49	20898.17	2968.84	82.36
Reach 1	20902	25 year	28.00	124.63	0.48	75.00	147.09	20898.17	2580.93	82.36
Reach 1	20902	10 year	23.00	124.48	0.53	53.23	135.74	20898.17	2158.56	82.36
Reach 1	20902	5 year	19.00	124.38	0.56	40.49	126.01	20898.17	1771.39	82.36
Reach 1	20902	2 year	13.00	124.22	0.68	21.47	109.89	20898.17	1198.44	82.36
Reach 1	21143	100 year	20.00	124.87	0.29	135.13	204.81	21138.48	3330.29	37.00
Reach 1	21143	50 year	18.00	124.79	0.29	119.32	191.73	21138.48	2993.85	37.00
Reach 1	21143	25 year	16.00	124.71	0.29	104.34	178.46	21138.48	2602.47	37.00
Reach 1	21143	10 year	13.00	124.60	0.28	84.51	159.20	21138.48	2175.10	37.00
Reach 1	21143	5 year	11.00	124.52	0.26	73.40	147.32	21138.48	1785.06	37.00
Reach 1	21143	2 year	8.00	124.43	0.23	59.44	142.61	21138.48	1208.16	37.00
Reach 1	21407	100 year	20.00	124.91	0.37	65.72	108.53	21403.14	3356.86	65.02
Reach 1	21407	50 year	18.00	124.84	0.37	57.81	105.77	21403.14	3017.29	65.02
Reach 1	21407	25 year	16.00	124.77	0.37	50.11	103.02	21403.14	2622.90	65.02
Reach 1	21407	10 year	13.00	124.66	0.37	39.42	99.06	21403.14	2191.50	65.02
Reach 1	21407	5 year	11.00	124.60	0.36	32.94	96.59	21403.14	1799.13	65.02
Reach 1	21407	2 year	8.00	124.50	0.33	24.27	93.17	21403.14	1219.24	65.02