

APPENDIX 2.1

**CROSS SECTION
PHOTOS**

The photo captions include the following information:

- the year, month, and day the photo was taken, in the eight-digit “yyyymmdd” format;
- the site of the photo, represented by the abbreviations used in the report, Below Jordanelle Dam Site (BJ), River Road Site (RR), Never-Channelized Site (NC), and Charleston Site (CA);
- the site cross section, represented by a one-digit number,
- the abbreviation for the point from which the photo was taken, upstream (US), downstream (DS), right bank (RB), and left bank (LB).

For example, if the caption reads “20050504NC1US,” the photo was taken in the year 2005, in May (05), on the 4th day of the month (04), at the Never-Channelized Site (NC), at cross section 1 (1), looking upstream (US).



Photo 1. 20050504BJ1US.JPG



Photo 2. 20050504BJ1RB.JPG



Photo 3. 20050504BJ1LB.JPG



Photo 4. 20050504BJ1DS.JPG



Photo 5. 20050504BJ2US.JPG



Photo 6. 20050504BJ2RB.JPG



Photo 7. 20050504BJ2LB.JPG



Photo 8. 20050504BJ2DS.JPG



Photo 9. 20050504BJ3US.JPG



Photo 10. 20050504BJ3RB.JPG



Photo 11. 20050504BJ3LB.JPG



Photo 12. 20050504BJ3DS.JPG



Photo 13. 20050504BJ3.5US.JPG



Photo 14. 20050504BJ3.5RB.JPG



Photo 15. 20050504BJ3.5LB.JPG



Photo 16. 20050504BJ3.5DS.JPG



Photo 17. 20050504BJ4US.JPG



Photo 18. 20050504BJ4RB.JPG



Photo 19. 20050504BJ4LB.JPG



Photo 20. 20050504BJ4DS.JPG



Photo 21. 20050504BJ5US.JPG



Photo 22. 20050504BJ5RB.JPG



Photo 23. 20050504BJ5LB.JPG



Photo 24. 20050504BJ5DS.JPG



Photo 25. 20050504BJ6US.JPG



Photo 26. 20050504BJ6RB.JPG



Photo 27. 20050504BJ6LB.JPG



Photo 28. 20050504BJ6DS.JPG



Photo 29. 20050503RR1US.JPG



Photo 30. 20050503RR1RB.JPG



Photo 31. 20050503RR1LB.JPG



Photo 32. 20050503RR1DS.JPG



Photo 33. 20050503RR2US.JPG



Photo 34. 20050503RR2RB.JPG



Photo 35. 20050503RR2LB.JPG



Photo 36. 20050503RR2DS.JPG



Photo 37. 20050503RR3US.JPG



Photo 38. 20050503RR3RB.JPG



Photo 39. 20050503RR3LB.JPG



Photo 40. 20050503RR3DS.JPG



Photo 41. 20050503RR4US.JPG



Photo 42. 20050503RR4RB.JPG



Photo 43. 20050503RR4LB.JPG



Photo 44. 20050503RR4DS.JPG



Photo 45. 20050503RR5US.JPG



Photo 46. 20050503RR5RB.JPG



Photo 47. 20050503RR5LB.JPG



Photo 48. 20050503RR5DS.JPG



Photo 49. 20050503RR6US.JPG



Photo 50. 20050503RR6RB.JPG



Photo 51. 20050503RR6LB.JPG



Photo 52. 20050503RR6DS.JPG



Photo 53. River road side channel



Photo 54. 20050502NC1US.JPG



Photo 55. 20050502NC1RB.JPG



Photo 56. 20050502NC1LB.JPG



Photo 57. 20050502NC1DS.JPG



Photo 58. 20050502NC2US.JPG



Photo 59. 20050502NC2RB.JPG



Photo 60. 20050502NC2LB.JPG



Photo 61. 20050502NC2DS.JPG



Photo 62. 20050502NC3US.JPG



Photo 63. 20050502NC3RB.JPG



Photo 64. 20050502NC3LB.JPG



Photo 65. 20050502NC3DS.JPG



Photo 66. 20050502NC4US.JPG



Photo 67. 20050502NC4RB.JPG



Photo 68. 20050502NC4LB.JPG



Photo 69. 20050502NC4DS.JPG



Photo 70. 20050502NC5US.JPG



Photo 71. 20050502NC5RB.JPG



Photo 72. 20050502NC5LB.JPG



Photo 73. 20050502NC5DS.JPG



Photo 74. 20050502NC6US.JPG



Photo 75. 20050502NC6RB.JPG



Photo 76. 20050502NC6LB.JPG



Photo 77. 20050502NC6DS.JPG



Photo 78. 20050502CA1US.JPG



Photo 79. 20050502CA1RB.JPG



Photo 80. 20050502CA1LB.JPG



Photo 81. 20050502CA1DS.JPG



Photo 82. 20050502CA2US.JPG



Photo 83. 20050502CA2RB.JPG



Photo 84. 20050502CA2LB.JPG



Photo 85. 20050502CA2DS.JPG



Photo 86. 20050502CA3US.JPG



Photo 87. 20050502CA3RB.JPG



Photo 88. 20050502CA3LB.JPG



Photo 89. 20050502CA3DS.JPG



Photo 90. 20050502CA4US.JPG



Photo 91. 20050502CA4RB.JPG



Photo 92. 20050502CA4LB.JPG



Photo 93. 20050502CA4DS.JPG



Photo 94. 20050502CA5US.JPG



Photo 95. 20050502CA5RB.JPG



Photo 96. 20050502CA5LB.JPG



Photo 97. 20050502CA5DS.JPG



Photo 98. 20050502CA6US.JPG



Photo 99. 20050502CA6RB.JPG



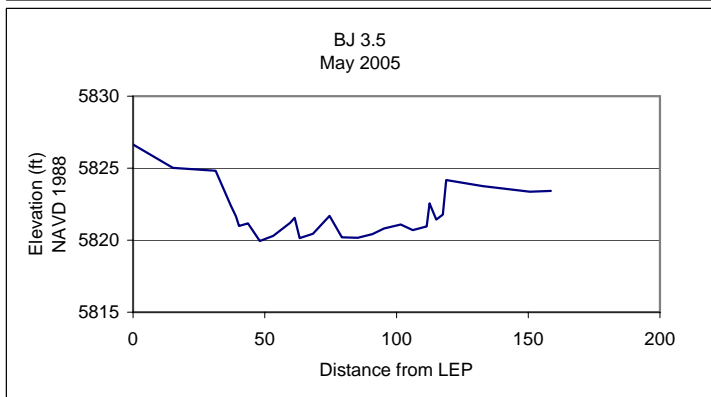
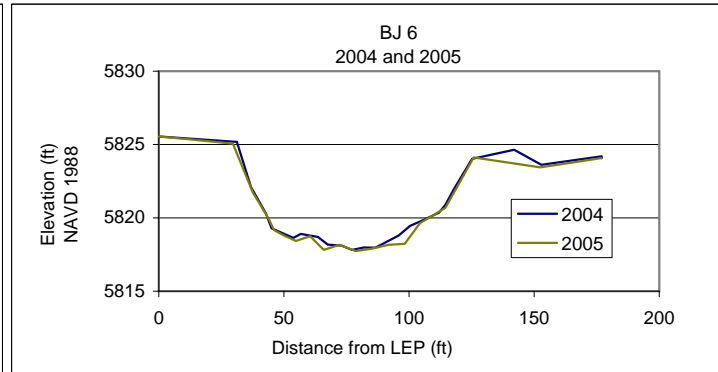
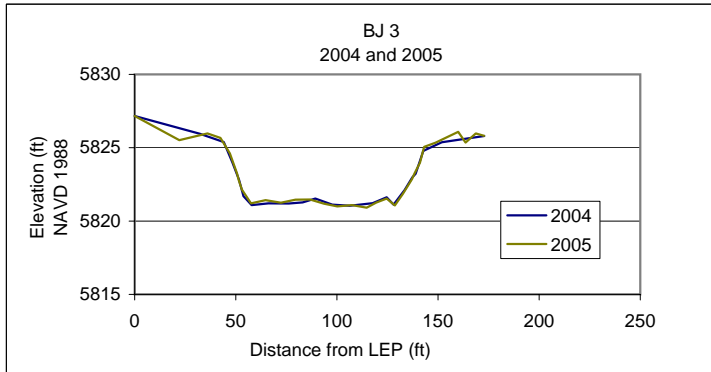
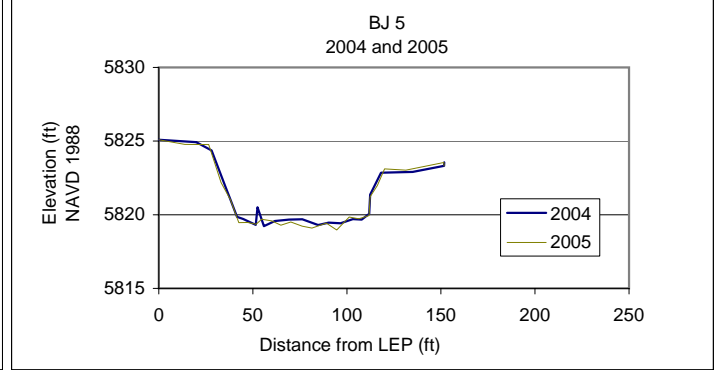
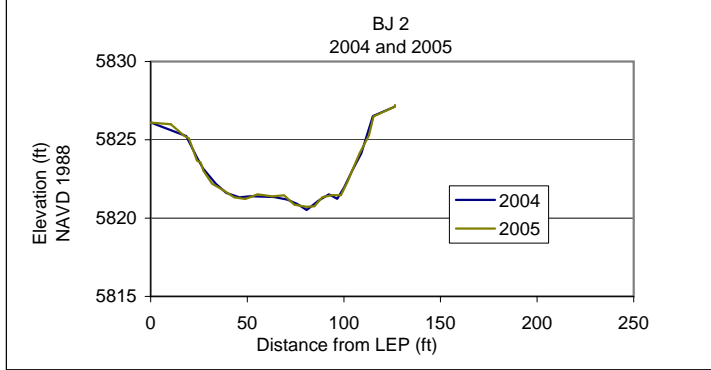
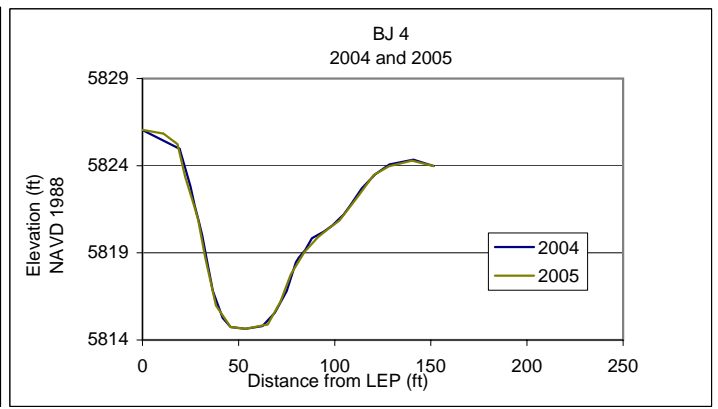
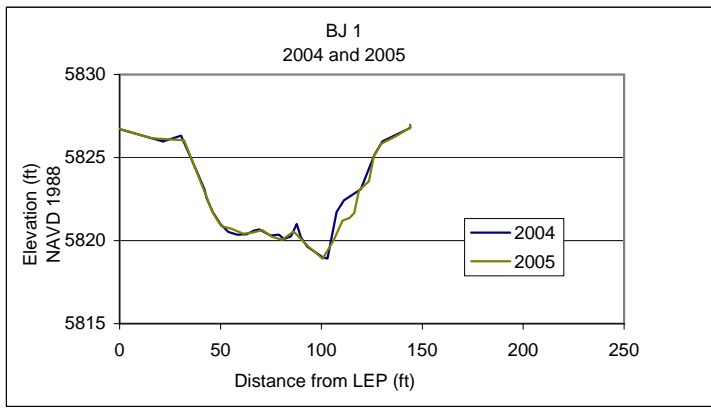
Photo 100. 20050502CA6LB.JPG

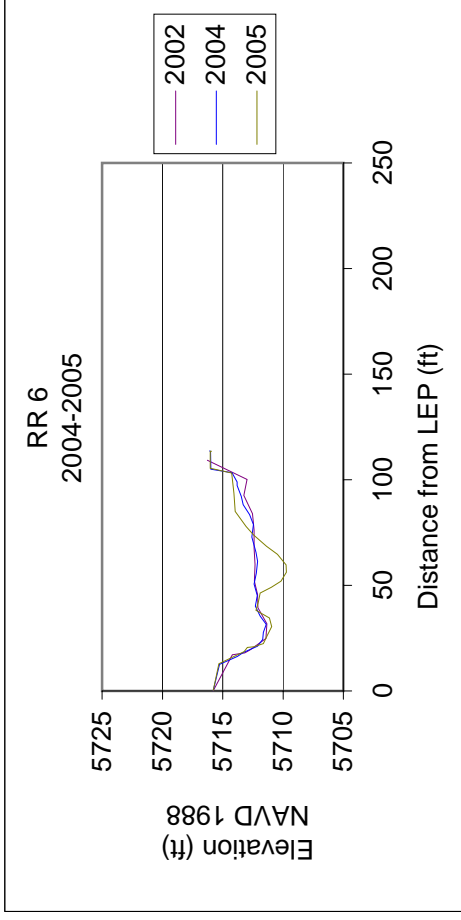
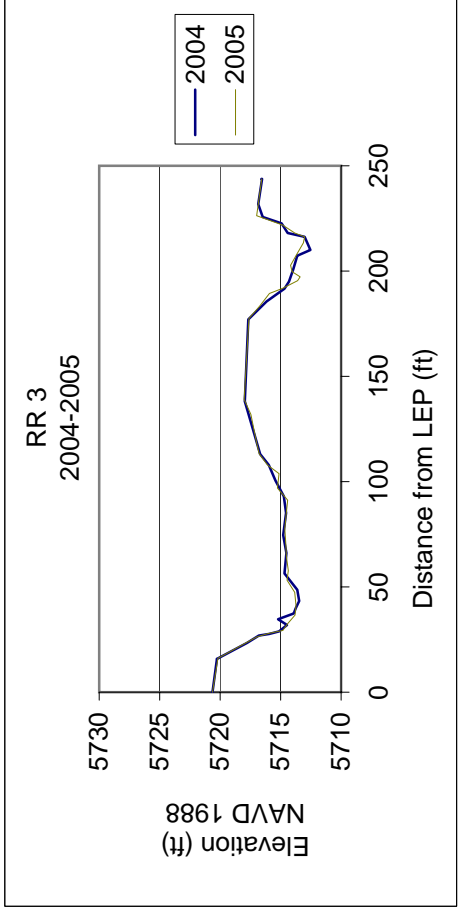
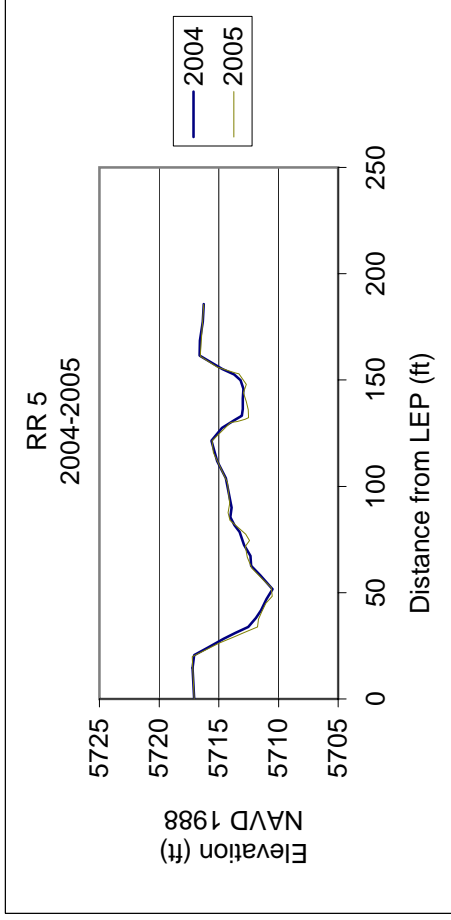
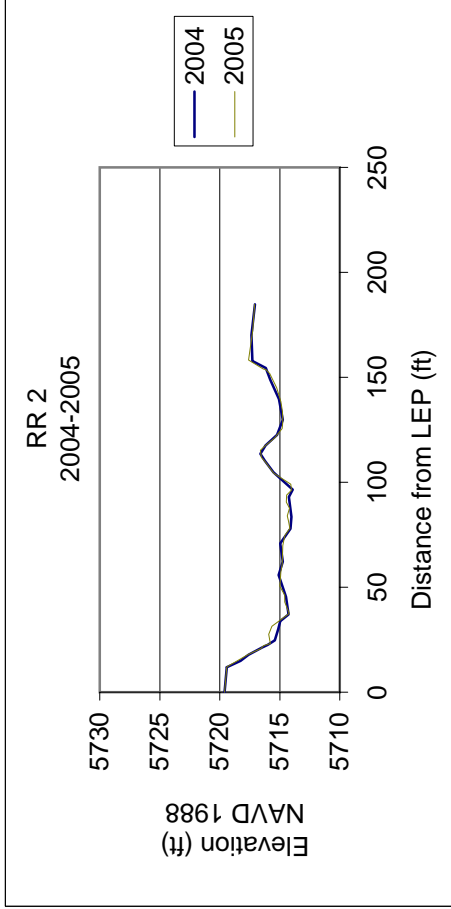
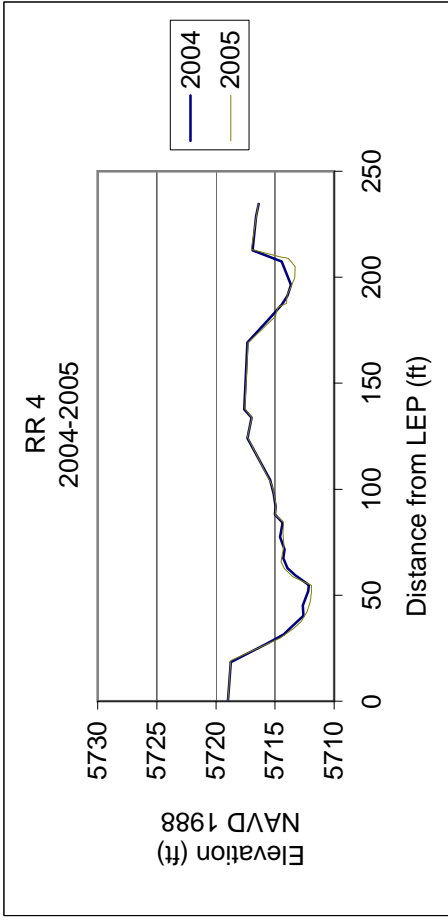
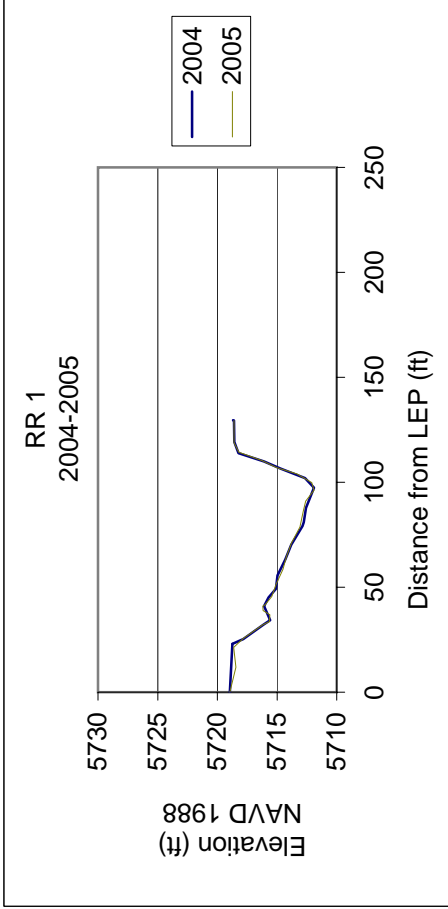


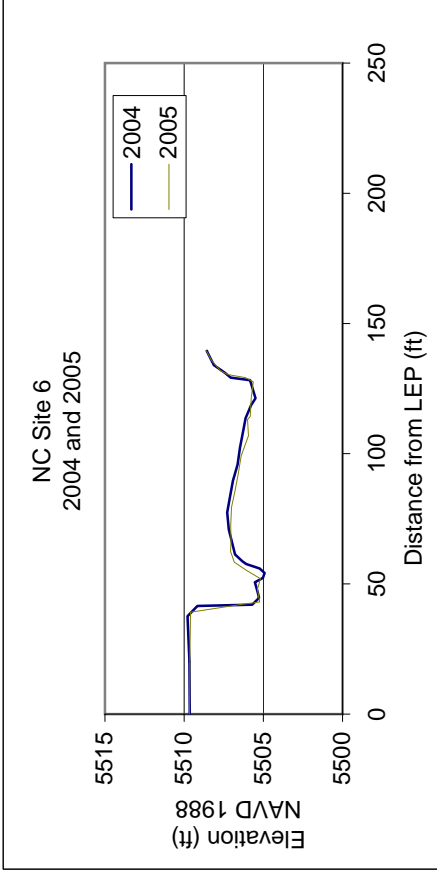
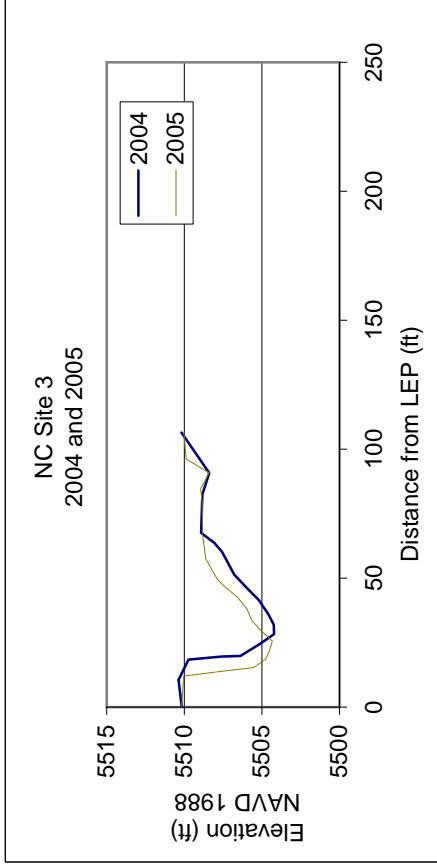
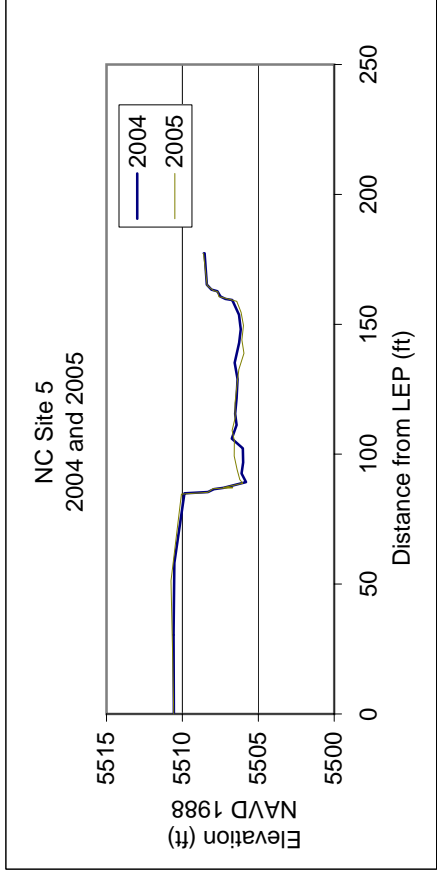
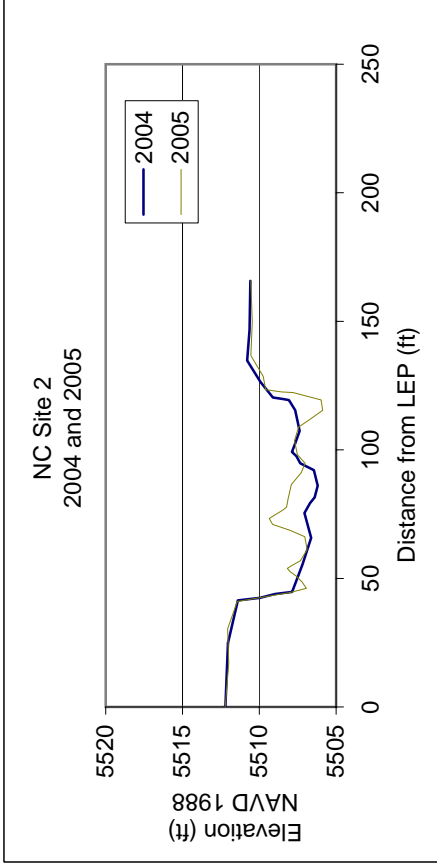
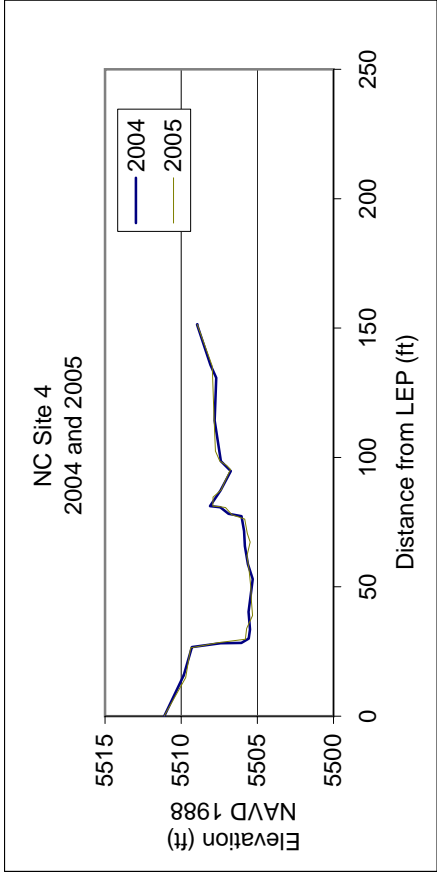
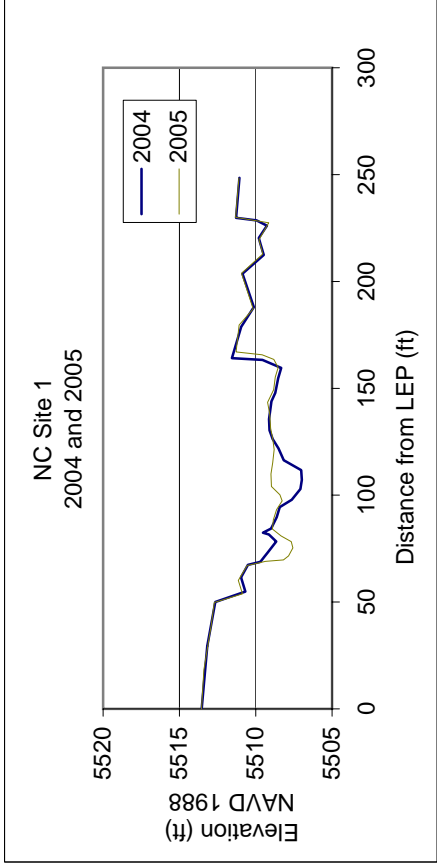
Photo 101. 20050502CA6DS.JPG

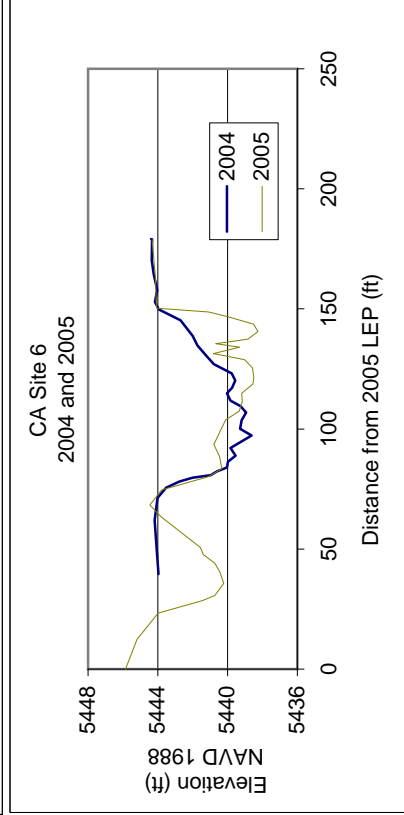
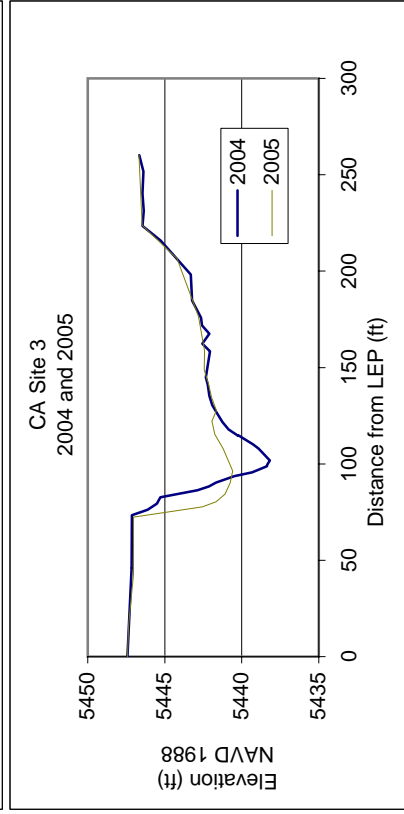
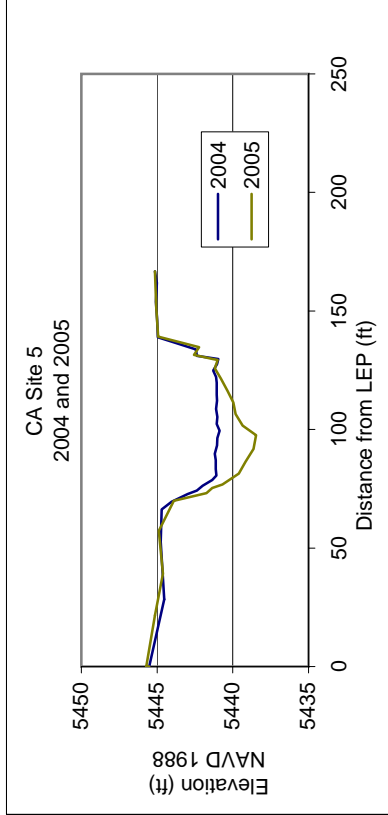
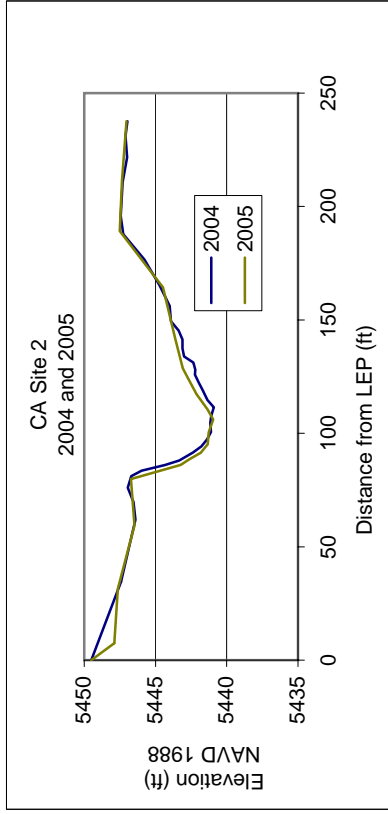
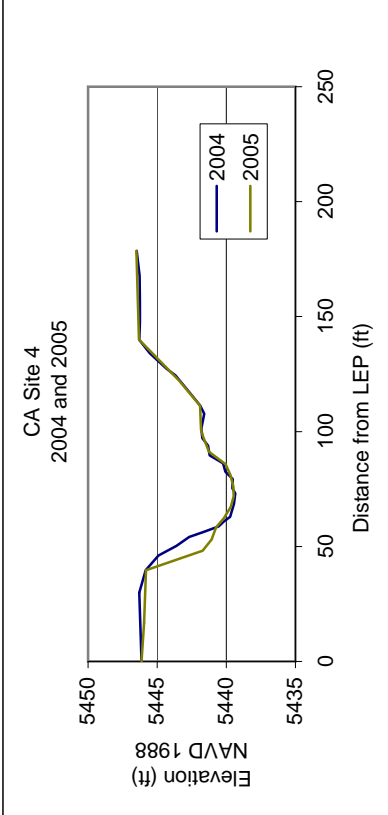
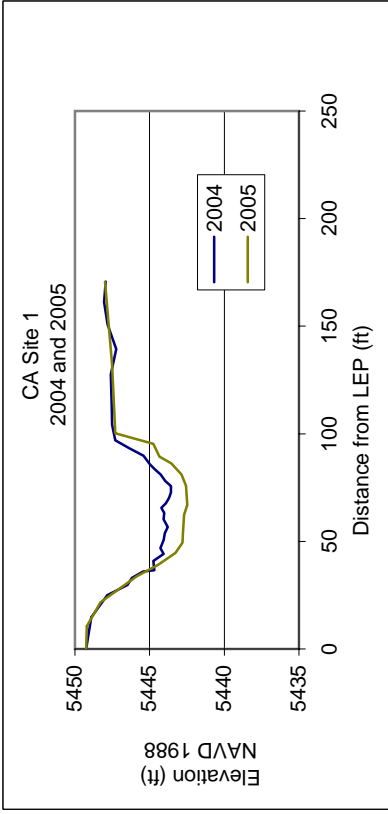
APPENDIX 2.2A

**CROSS SECTION
PLOTS**









APPENDIX 2.2B

CROSS SECTION DATA

Below Jordanelle Site cross section 1 data

BJ1 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7381916.43	1658896.14	0.00	5826.72	lep1
27	7381900.77	1658893.95	15.81	5826.17	veg
26	7381884.80	1658891.72	31.94	5826.04	tbank
25	7381874.93	1658890.34	41.90	5823.01	lew
24	7381870.57	1658889.80	46.30	5821.65	ic
23	7381866.55	1658889.24	50.35	5820.88	ic
22	7381861.66	1658888.57	55.29	5820.72	ic
21	7381855.73	1658887.75	61.28	5820.41	ic
20	7381850.90	1658887.08	66.15	5820.49	ic
19	7381846.40	1658886.46	70.70	5820.64	ic
18	7381841.77	1658885.82	75.37	5820.24	ic
17	7381836.69	1658885.05	80.51	5820.05	ic
16	7381831.02	1658884.33	86.22	5820.55	ic
15	7381823.65	1658883.31	93.66	5819.63	ic
14	7381816.78	1658882.48	100.58	5818.91	ic debris
13	7381811.36	1658881.74	106.05	5820.03	ic debris
12	7381806.96	1658881.17	110.49	5821.20	ic debris
11	7381803.56	1658880.80	113.91	5821.37	ic debris
10	7381801.28	1658880.13	116.26	5821.66	ic debris
9	7381798.94	1658879.80	118.62	5823.03	rew
8	7381794.05	1658879.43	123.52	5823.57	botbank
7	7381791.62	1658878.93	125.99	5825.08	tbank
6	7381788.11	1658878.44	129.53	5825.83	veg
5	7381780.80	1658877.44	136.91	5826.29	veg
29	7381773.88	1658876.52	143.89	5826.80	rep1cl
3	7381773.84	1658876.47	143.94	5826.78	rep1
4	7381773.82	1658876.47	143.96	5826.78	rep1
2	7381773.81	1658876.47	143.97	5826.95	rep1

Below Jordanelle Site cross section 2 data

BJ2 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7381902.34	1658922.77	0.00	5826.10	lep2
27	7381891.90	1658922.76	10.44	5825.99	veg
26	7381885.01	1658922.75	17.33	5825.26	veg
25	7381882.53	1658922.75	19.81	5825.10	top lft bnk
24	7381878.37	1658922.74	23.97	5823.67	lft bnk
23	7381876.46	1658922.74	25.88	5823.54	lft bnk
22	7381875.08	1658922.73	27.26	5823.03	lew
21	7381870.55	1658922.73	31.79	5822.19	ic
20	7381864.87	1658922.72	37.47	5821.80	ic
19	7381859.12	1658922.71	43.22	5821.33	ic
18	7381853.34	1658922.70	49.00	5821.22	ic
17	7381847.06	1658922.69	55.28	5821.52	ic
16	7381839.42	1658922.68	62.92	5821.39	ic
15	7381833.29	1658922.67	69.05	5821.46	ic
14	7381828.00	1658922.67	74.34	5820.85	ic
13	7381821.66	1658922.66	80.68	5820.72	ic
12	7381817.61	1658922.65	84.73	5820.75	ic
11	7381813.51	1658922.65	88.83	5821.34	ic
10	7381808.23	1658922.64	94.11	5821.47	ic
9	7381803.87	1658922.63	98.47	5821.46	ic
8	7381800.43	1658922.63	101.91	5822.34	ic
7	7381798.35	1658922.62	103.99	5822.96	rew
6	7381794.19	1658922.62	108.15	5824.14	rt bnk
5	7381789.43	1658922.61	112.91	5825.28	rt bnk
4	7381787.02	1658922.61	115.32	5826.50	top bnk
2	7381775.95	1658922.59	126.39	5827.12	rep2
3	7381775.88	1658922.59	126.46	5827.22	rep2
28	7381775.86	1658922.59	126.48	5827.21	rep2

Below Jordanelle Site cross section 3 data

BJ3 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7381919.15	1658985.32	0	5827.16	lep3
32	7381897.16	1658983.40	22.07366	5825.52	veg
31	7381883.27	1658982.18	36.01713	5825.98	veg
30	7381876.91	1658981.63	42.40087	5825.67	top bnk
29	7381872.24	1658981.22	47.08883	5824.61	bnk
28	7381868.70	1658980.91	50.64238	5823.24	bnk
27	7381867.83	1658980.83	51.51604	5822.77	lew
26	7381866.35	1658980.70	53.00174	5822.15	ic
25	7381861.84	1658980.31	57.52857	5821.21	ic
24	7381854.67	1658979.68	64.72619	5821.43	ic
23	7381847.10	1658979.02	72.32491	5821.25	ic
22	7381839.91	1658978.39	79.54246	5821.46	ic
21	7381832.74	1658977.77	86.73921	5821.47	ic
20	7381825.89	1658977.17	93.61544	5821.18	ic
19	7381819.36	1658976.60	100.1703	5821	ic
18	7381812.07	1658975.96	107.4883	5821.09	ic
17	7381804.84	1658975.33	114.7457	5820.91	ic
16	7381800.15	1658974.92	119.4536	5821.26	ic
15	7381795.03	1658974.47	124.5933	5821.54	ic
14	7381791.02	1658974.12	128.6186	5821.06	ic
13	7381787.03	1658973.77	132.6239	5821.85	ic
12	7381783.81	1658973.49	135.856	5822.57	ic
11	7381782.55	1658973.38	137.1208	5822.86	rew
10	7381781.39	1658973.28	138.2851	5823.23	bnk
9	7381778.63	1658973.04	141.0556	5823.98	bnk
8	7381776.55	1658972.85	143.1442	5825.06	top bnk
7	7381770.97	1658972.37	148.7448	5825.34	veg
6	7381759.79	1658971.39	159.9677	5826.08	veg
5	7381756.15	1658971.07	163.6217	5825.35	veg
4	7381751.12	1658970.63	168.6709	5825.98	veg
41	7381747.05	1658970.28	172.7559	5825.81	rep3
43	7381746.98	1658970.29	172.8248	5825.8	rep3
3	7381746.98	1658970.27	172.8265	5825.81	rep3
2	7381746.96	1658970.27	172.8465	5825.81	rep3

Below Jordanelle Site cross section 3.5 data

BJ3.5 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7381895.23	1659057.03	0	5826.65	lep3.5 bj
31	7381880.28	1659054.92	15.10	5825.02	veg
30	7381864.2	1659052.65	31.34	5824.82	top l bnk
29	7381858.46	1659051.84	37.13	5822.4	bnk
28	7381856.57	1659051.58	39.04	5821.66	lew
27	7381855.44	1659051.42	40.18	5820.99	ic
26	7381852.07	1659050.94	43.59	5821.17	ic
25	7381847.61	1659050.31	48.09	5819.94	ic
24	7381842.52	1659049.59	53.23	5820.3	ic
23	7381836.23	1659048.71	59.58	5821.2	ic
22	7381834.46	1659048.46	61.37	5821.55	ic
21	7381832.6	1659048.2	63.25	5820.15	ic
20	7381827.65	1659047.5	68.25	5820.45	ic
19	7381821.37	1659046.62	74.59	5821.69	ic
18	7381816.77	1659045.97	79.24	5820.2	ic
17	7381810.79	1659045.13	85.27	5820.17	ic
16	7381805.26	1659044.34	90.86	5820.42	ic
15	7381800.94	1659043.74	95.22	5820.81	ic
14	7381794.6	1659042.85	101.62	5821.09	ic
13	7381790.14	1659041.93	106.17	5820.7	ic
12	7381784.88	1659041.47	111.44	5820.96	ic
11	7381783.8	1659041.32	112.53	5822.56	ic
10	7381781.26	1659040.96	115.10	5821.43	ic
9	7381778.8	1659040.62	117.58	5821.78	rew
8	7381777.51	1659040.43	118.88	5824.18	top r bnk
7	7381763.85	1659038.51	132.68	5823.76	veg
6	7381746.1	1659036.01	150.60	5823.37	veg
4	7381738.18	1659034.89	158.60	5823.42	rep3.5 bj
5	7381738.18	1659034.89	158.60	5823.42	rep3.5 bj
32	7381738.13	1659034.88	158.65	5823.42	rep3.5 bj

NOT USED FOR XS

3	7381747.01	1658970.3	7565869	5825.79	rep3
2	7381746.96	1658970.27	7565869	5825.81	rep3 bj

Below Jordanelle Site cross section 4 data

BJ4 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7381845.69	1659164.06	0.00	5826.05	lep4
22	7381836.95	1659157.50	10.93	5825.84	veg
21	7381831.14	1659153.12	18.20	5825.24	tlb
20	7381827.83	1659150.82	22.23	5823.35	lb
19	7381824.24	1659147.92	26.84	5821.69	lew
18	7381822.60	1659146.62	28.94	5820.89	ic
17	7381819.64	1659144.39	32.64	5818.74	ic
16	7381815.40	1659140.81	38.18	5815.98	ic
21a	7381809.10	1659136.38	45.88	5814.75	ic
20a	7381803.12	1659131.60	53.53	5814.64	ic
15	7381794.32	1659124.03	65.13	5814.89	ic
14	7381788.36	1659120.89	71.77	5816.19	ic
13	7381784.22	1659117.42	77.16	5817.76	ic
12	7381778.51	1659113.18	84.27	5819.06	ic
11	7381772.78	1659109.09	91.31	5819.9	ic
10	7381768.79	1659106.06	96.32	5820.34	ic
9	7381763.89	1659102.37	102.45	5820.86	ic
8	7381759.81	1659099.35	107.53	5821.58	rew
7	7381756.31	1659096.71	111.91	5822.22	cob
6	7381749.65	1659091.62	120.30	5823.46	cob
5	7381743.30	1659086.90	128.21	5823.97	e grass wil
4	7381733.79	1659079.75	140.11	5824.29	grass wil
23	7381724.93	1659072.80	151.37	5823.98	rep4 close
NOT USED FOR XS					
24	7381724.92	1659072.83		5823.98	rep4 close2
3	7381724.90	1659072.85		5823.94	rep4
2	7381724.88	1659072.83		5823.94	rep4

points 20a and 21a from last years survey to fill in areas missed in deep pool.

Below Jordanelle Site cross section 5 data

BJ5 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7381705.53	1659257.40	0.00	5825.09	lep5
26	7381695.59	1659247.76	13.85	5824.78	veg
25	7381686.47	1659238.92	26.55	5824.77	tlb
24	7381681.80	1659234.32	33.10	5822.19	lb
23	7381678.20	1659230.82	38.12	5821.02	lew
22	7381675.04	1659227.79	42.50	5819.46	ic
21	7381671.65	1659224.50	47.23	5819.47	ic
20	7381668.36	1659221.50	51.68	5819.36	ic
19	7381666.14	1659219.40	54.73	5819.69	ic
18	7381662.42	1659215.60	60.05	5819.58	ic
17	7381658.94	1659212.23	64.89	5819.29	ic
16	7381655.17	1659208.58	70.14	5819.51	ic
15	7381650.72	1659204.41	76.24	5819.22	ic
14	7381647.14	1659200.73	81.37	5819.10	ic
13	7381641.59	1659195.44	89.04	5819.43	ic
12	7381637.57	1659191.55	94.63	5818.96	ic
11	7381632.81	1659186.93	101.26	5819.84	ic
10	7381629.15	1659183.38	106.36	5819.73	ic
9	7381625.25	1659179.60	111.79	5819.94	ic
8	7381624.84	1659179.21	112.36	5821.22	rew
7	7381622.10	1659176.55	116.18	5821.98	rb
6	7381619.31	1659173.85	120.06	5823.11	trb
5	7381611.20	1659165.99	131.35	5823.03	veg
2	7381596.66	1659151.89	151.61	5823.55	rep5
27	7381596.61	1659151.84	151.68	5823.31	rep5 close

NOT USED FOR XS

28	7381596.62	1659151.86	151.66	5823.32	rep5 re0
49	7381596.60	1659151.87	151.67	5823.31	rep5 close2
4	7381596.60	1659151.84	151.69	5823.32	rep5 bj open2
3	7381596.59	1659151.83	151.70	5823.32	rep5 bj open
39	7381818.11	1659087.81	203.56	5817.58	tw
38	7381819.10	1659072.94	216.62	5818.61	tw
37	7381819.68	1659052.02	234.97	5819.36	tw
36	7381820.25	1659030.41	254.33	5820.49	tw
35	7381823.33	1659008.54	275.33	5820.89	tw
34	7381825.90	1658986.16	296.75	5820.80	tw
33	7381828.72	1658964.11	318.11	5820.99	tw
32	7381832.04	1658941.39	340.39	5820.94	tw
31	7381836.80	1658924.01	358.30	5820.95	tw
30	7381838.72	1658910.78	371.33	5820.69	tw
29	7381840.91	1658895.19	386.68	5820.44	tw
43	7381669.19	1659200.18	67.78	5819.67	tw
44	7381650.61	1659215.91	68.83	5819.33	tw
42	7381691.39	1659188.07	70.76	5818.87	tw
45	7381633.45	1659229.88	77.15	5819.16	tw
41	7381716.96	1659174.44	83.74	5816.30	tw
46	7381616.80	1659245.82	89.48	5818.09	tw
47	7381605.71	1659260.59	99.87	5817.97	tw
48	7381589.96	1659271.47	116.42	5817.15	tw
40	7381761.95	1659142.37	128.12	5816.10	tw

Below Jordanelle Site cross section 6 data

BJ6 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7381637.75	1659331.36	0.00	5825.55	lep6
23	7381629.12	1659318.18	15.75	5825.30	veg
22	7381621.57	1659306.58	29.59	5825.06	tlb
21	7381617.17	1659299.92	37.58	5821.73	lb
20	7381613.69	1659294.59	43.94	5819.93	lew
19	7381612.50	1659292.94	45.97	5819.18	ic
18	7381610.42	1659289.61	49.90	5818.81	ic
17	7381607.72	1659285.49	54.83	5818.43	ic
16	7381604.50	1659280.80	60.51	5818.75	ic
15	7381601.57	1659276.26	65.92	5817.81	ic
14	7381598.30	1659270.95	72.15	5818.16	ic
13	7381594.66	1659265.54	78.67	5817.74	ic
12	7381591.41	1659260.30	84.83	5817.89	ic
11	7381587.50	1659254.49	91.84	5818.16	ic
10	7381583.86	1659249.17	98.28	5818.23	ic
9	7381580.55	1659244.11	104.33	5819.64	ic
8	7381578.02	1659240.24	108.95	5820.10	rew
7	7381574.94	1659235.62	114.50	5820.68	rightbank
6	7381568.73	1659226.15	125.83	5824.12	trb cobgrass
4	7381554.15	1659203.93	152.41	5823.44	veg
3	7381540.85	1659183.35	176.91	5824.08	rep6 open
24	7381540.87	1659183.32	176.92	5824.06	rep6 close
2	7381540.83	1659183.31	176.95	5824.20	rep6

River Road cross section 1 data

RR1 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7372987.21	1658569.52	0.00	5718.97	lep1-RR
27	7372980.61	1658559.63	11.89	5718.46	veg
26	7372975.39	1658551.82	21.29	5718.64	tbank
25	7372973.00	1658548.25	25.58	5717.84	bank
24	7372969.45	1658542.84	32.05	5716.23	lewgrass
23	7372968.52	1658541.43	33.74	5715.62	ic
22	7372966.76	1658538.80	36.90	5715.61	ic
21	7372965.68	1658537.18	38.85	5716.16	icgrass
20	7372964.46	1658535.34	41.06	5716.19	ic
19	7372964.11	1658534.87	41.64	5716.00	ic
18	7372961.91	1658531.58	45.60	5715.44	ic
17	7372958.73	1658526.61	51.50	5715.07	ic
16	7372954.70	1658520.77	58.60	5714.51	ic
15	7372951.34	1658515.81	64.59	5714.20	ic
14	7372947.65	1658510.30	71.22	5713.78	ic
13	7372943.53	1658504.12	78.65	5713.09	ic
12	7372939.08	1658497.52	86.60	5712.79	ic
11	7372936.66	1658493.89	90.96	5712.60	ic
10	7372933.73	1658489.51	96.24	5711.90	tw
9	7372931.72	1658486.51	99.85	5712.08	ic
8	7372929.53	1658483.07	103.92	5713.32	ic
7	7372927.82	1658480.42	107.07	5715.03	ic
6	7372926.01	1658477.70	110.35	5716.27	rewbotbank
5	7372923.70	1658474.41	114.37	5718.19	tbank
4	7372921.13	1658470.68	118.89	5718.59	grasscobble
3	7372915.38	1658461.79	129.48	5718.60	rep1-RR

River Road cross section 2 data

RR2 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7372899.93	1658694.98	0.00	5719.60	lep2-RR
47	7372889.60	1658688.90	11.99	5719.41	top bnk
46	7372884.39	1658685.84	18.03	5717.62	bnk
45	7372882.13	1658684.51	20.66	5716.60	bnk
44	7372880.80	1658683.73	22.20	5716.31	bot bnk
43	7372880.48	1658683.54	22.57	5716.10	lew
42	7372879.92	1658683.21	23.22	5715.77	ic
41	7372876.15	1658680.99	27.60	5715.93	ic
40	7372872.81	1658679.02	31.47	5715.65	ic
39	7372867.65	1658675.99	37.45	5714.22	ic
38	7372865.86	1658674.94	39.53	5714.36	ic
37	7372862.84	1658673.16	43.04	5714.59	ic
36	7372860.09	1658671.54	46.22	5714.58	ic
35	7372856.38	1658669.36	50.53	5715.00	ic
34	7372850.36	1658665.81	57.52	5714.91	ic
33	7372847.58	1658664.18	60.75	5714.79	ic
32	7372843.95	1658662.04	64.96	5714.76	ic
31	7372839.74	1658659.57	69.84	5714.73	ic
30	7372835.69	1658657.19	74.54	5714.58	ic
29	7372832.71	1658655.43	78.00	5714.15	ic
28	7372829.79	1658653.71	81.38	5714.25	ic
27	7372827.53	1658652.38	84.01	5714.36	ic
26	7372824.40	1658650.54	87.64	5714.19	ic
25	7372821.83	1658649.03	90.62	5714.46	ic
24	7372819.02	1658647.38	93.88	5714.44	ic
23	7372816.99	1658646.18	96.24	5714.02	ic
22	7372814.57	1658644.76	99.04	5714.08	ic
21	7372810.07	1658642.11	104.27	5715.49	ic
20	7372807.45	1658640.56	107.31	5715.90	ic
19	7372805.45	1658639.39	109.62	5716.18	rew
18	7372803.45	1658638.22	111.94	5716.54	bar gr
17	7372800.62	1658636.55	115.23	5716.62	bar
16	7372798.62	1658635.37	117.56	5716.18	ws sc
15	7372795.58	1658633.59	121.07	5715.43	sc
14	7372791.65	1658631.27	125.64	5714.80	sc
13	7372788.97	1658629.69	128.75	5714.74	sc
12	7372784.80	1658627.24	133.59	5714.77	sc
11	7372780.61	1658624.78	138.45	5714.92	sc
10	7372774.94	1658621.44	145.03	5715.24	sc
9	7372769.07	1658617.99	151.84	5715.85	sc
8	7372767.55	1658617.09	153.60	5716.16	ws sc
7	7372767.20	1658616.88	154.01	5716.38	bot bnk sc
6	7372763.55	1658614.74	158.24	5717.59	top bnk sc
5	7372751.44	1658607.61	172.29	5717.24	veg
61	7372740.69	1658601.28	184.77	5717.09	rep2-RR

River Road cross section 3 data

RR3 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7372882.87	1658810.17	0.00	5720.63	lep3-RR
67	7372869.64	1658801.02	16.08	5720.19	tbank
66	7372861.23	1658795.18	26.32	5716.97	bank
65	7372860.04	1658794.36	27.76	5716.06	lew botbank
64	7372858.76	1658793.47	29.32	5714.81	ic
63	7372856.26	1658791.74	32.37	5714.45	ic
62	7372852.76	1658789.39	36.58	5713.81	ic
61	7372849.02	1658786.75	41.16	5713.73	ic
60	7372843.88	1658783.16	47.42	5713.84	ic
59	7372839.14	1658779.92	53.17	5714.46	ic
58	7372835.36	1658777.32	57.76	5714.36	ic
57	7372829.94	1658773.68	64.29	5714.52	ic
56	7372824.63	1658769.88	70.81	5714.57	ic
55	7372818.96	1658765.96	77.70	5714.65	ic
54	7372813.76	1658762.36	84.03	5714.55	ic
53	7372807.93	1658758.31	91.13	5714.42	ic
52	7372803.14	1658755.00	96.95	5715.27	ic
51	7372797.49	1658751.09	103.82	5715.14	ic
50	7372794.10	1658748.79	107.92	5716.10	rew
49	7372789.77	1658745.80	113.18	5716.78	is willgrass
48	7372784.86	1658742.40	119.15	5717.00	is grass
47	7372774.47	1658735.07	131.87	5717.45	is grass
46	7372768.55	1658731.12	138.98	5718.02	is grass
45	7372736.88	1658709.22	177.49	5717.61	is grass
44	7372732.18	1658705.93	183.23	5716.73	is willgrass
43	7372727.12	1658702.44	189.37	5715.91	is willgrass
42	7372725.15	1658700.98	191.82	5714.84	sc ws
41	7372722.16	1658698.91	195.46	5713.60	sc
40	7372720.68	1658697.88	197.26	5713.38	sc
39	7372718.66	1658696.49	199.72	5714.06	sc
38	7372716.15	1658694.75	202.77	5714.18	sc
37	7372711.23	1658691.41	208.72	5713.59	sc
36	7372707.39	1658688.75	213.39	5713.13	sc
35	7372705.04	1658687.13	216.24	5713.02	sc
34	7372703.44	1658686.17	218.11	5713.84	sc
33	7372700.30	1658684.07	221.88	5714.84	sc ws botbank
32	7372696.72	1658681.43	226.33	5716.98	vegtbanksc
4	7372682.41	1658671.51	243.74	5716.56	rep3

River Road cross section 4 data

RR 4 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7372779.83	1658925.04	0.00	5719.00	lep4-RR
41	7372770.04	1658908.53	19.19	5718.74	tbank
40	7372764.67	1658899.41	29.77	5714.57	lew
39	7372762.28	1658895.40	34.44	5713.42	ic
38	7372760.64	1658892.64	37.65	5712.79	ic
37	7372758.34	1658888.76	42.17	5712.29	ic
36	7372756.00	1658884.80	46.77	5712.02	ic
35	7372753.66	1658880.86	51.35	5711.91	ic
34	7372751.96	1658878.01	54.66	5711.93	ic
33	7372749.89	1658874.51	58.73	5713.48	ic
32	7372747.87	1658871.23	62.58	5714.23	ictopshelf
31	7372746.29	1658868.46	65.76	5714.50	ic
30	7372742.31	1658861.74	73.58	5714.25	ic
29	7372739.27	1658856.61	79.54	5714.32	ic
28	7372736.76	1658852.52	84.35	5714.28	ic
27	7372734.97	1658849.52	87.84	5714.97	ic
26	7372732.48	1658845.31	92.73	5714.93	ic
25	7372729.52	1658840.34	98.51	5715.12	rew cob
24	7372727.46	1658836.87	102.55	5715.32	is grass will
23	7372724.09	1658831.22	109.12	5715.92	is grass will
22	7372721.82	1658827.41	113.56	5716.29	is grass cob
21	7372716.10	1658817.77	124.77	5717.33	is grass cob
20	7372711.56	1658810.00	133.77	5716.97	is grass cob
19	7372709.45	1658806.29	138.03	5717.56	is grass
18	7372693.71	1658779.60	169.02	5717.28	is grass
17	7372687.34	1658768.85	181.51	5714.98	is grass will
16	7372685.20	1658765.24	185.72	5714.77	is grass will
15	7372684.66	1658764.33	186.77	5714.40	ws sc is
14	7372684.23	1658763.61	187.61	5714.03	sc
13	7372682.12	1658760.04	191.76	5713.98	sc
12	7372679.94	1658756.36	196.03	5713.60	sc
11	7372678.00	1658753.07	199.85	5713.34	sc
10	7372675.37	1658748.63	205.01	5713.30	sc
9	7372673.39	1658745.29	208.89	5713.88	sc
8	7372673.07	1658744.80	209.48	5714.52	botbank sc ws
7	7372671.19	1658741.62	213.17	5717.02	tbankgrass
42	7372660.17	1658723.30	234.56	5716.41	rep4

River Road cross section 5 data

RR 5 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7372657.18	1658939.83	0.00	5717.07	lep5-RR
39	7372653.95	1658920.24	19.86	5717.23	tbank
38	7372652.89	1658913.83	26.36	5714.95	bank
37	7372652.44	1658911.10	29.13	5713.73	lew
36	7372652.09	1658909.03	31.22	5712.90	ic
35	7372651.66	1658906.41	33.88	5711.75	ic
34	7372651.08	1658902.86	37.47	5711.69	ic
33	7372650.50	1658899.51	40.87	5711.41	ic
32	7372649.83	1658895.51	44.93	5711.05	ic
31	7372649.31	1658892.10	48.38	5710.52	ic
30	7372648.66	1658888.20	52.34	5710.61	ic
29	7372648.02	1658884.30	56.29	5711.32	ic
28	7372647.20	1658879.04	61.60	5712.23	ic
27	7372646.37	1658874.06	66.65	5712.63	ic
26	7372645.47	1658868.98	71.82	5712.77	ic
25	7372645.04	1658866.39	74.44	5712.43	ic
24	7372644.53	1658863.32	77.55	5712.74	ic
23	7372643.81	1658858.95	81.98	5713.67	rew
22	7372643.49	1658857.03	83.93	5714.07	is grasswill
21	7372642.90	1658853.43	87.57	5714.23	is grasswill
20	7372642.18	1658849.10	91.97	5714.08	is grasswill
19	7372640.59	1658839.51	101.69	5714.26	is grasswill
18	7372639.52	1658833.04	108.24	5714.82	is grass
17	7372638.23	1658825.50	115.89	5715.46	is grass
16	7372637.38	1658820.06	121.40	5715.56	is grass
15	7372635.98	1658811.57	130.00	5714.00	is grasswill
14	7372635.95	1658811.02	130.56	5713.45	ws
13	7372635.80	1658810.09	131.49	5712.81	sc
12	7372635.67	1658809.26	132.34	5712.51	sc
11	7372635.05	1658805.52	136.12	5712.54	sc
10	7372634.46	1658801.93	139.76	5712.70	sc
9	7372633.76	1658797.66	144.09	5712.94	sc
8	7372632.93	1658793.82	148.02	5712.70	sc
7	7372632.12	1658788.92	152.98	5713.30	sc
6	7372632.06	1658788.57	153.34	5713.63	ws sc
5	7372631.61	1658785.88	156.06	5715.14	bank
4	7372630.78	1658780.84	161.17	5716.57	tbankgrass
3	7372626.89	1658756.74	185.58	5716.27	rep5

River Road cross section 6 data

RR 6 dist from LEP	2005 data elevation	Description
0.00	5715.78	lep6-RR
12.93	5715.31	tbank
18.61	5713.23	bank
20.64	5712.96	lew
20.96	5712.44	ic
22.48	5711.62	ic
26.79	5711.25	ic
30.50	5710.94	ic
34.55	5711.14	ic
38.18	5712.24	ic
42.51	5712.02	ic
46.32	5711.89	ic
49.08	5710.96	ic
52.01	5710.16	ic
56.26	5709.73	ic
59.67	5709.74	ic
64.71	5710.47	ic
68.49	5711.36	ic
73.73	5712.44	ic
77.85	5713.07	rew
84.96	5713.96	bar cob
93.61	5714.08	bar ewill grv
103.13	5714.26	botbank will grv
105.38	5716.03	tbank
113.46	5716.03	rep6
113.47	5716.03	rep6
113.48	5716.03	rep6
113.48	5715.94	rep6-RR

Never Channelized Site cross section 1 data

NC1 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7355452.12	1654251.22	0.00	5513.56	lep1-nc
41	7355436.06	1654242.20	18.42	5513.39	veg
40	7355418.23	1654232.17	38.88	5512.92	tbankgrass
39	7355408.71	1654226.82	49.80	5512.72	tbankgrass
38	7355405.23	1654224.83	53.81	5510.88	grasswillbotbank
37	7355399.79	1654221.69	60.09	5511.14	grasswill
36	7355393.73	1654218.26	67.05	5510.56	tbank
35	7355391.96	1654217.35	69.04	5509.36	lew
34	7355391.36	1654217.01	69.73	5508.19	ic
33	7355389.72	1654216.11	71.60	5507.86	ic
32	7355386.46	1654214.28	75.33	5507.57	ic
31	7355383.91	1654212.85	78.26	5507.68	ic
30	7355381.57	1654211.53	80.95	5508.35	ic
29	7355378.75	1654209.94	84.19	5508.91	ic
28	7355375.02	1654207.84	88.47	5508.85	ic
27	7355370.92	1654205.51	93.18	5508.64	ic
26	7355367.29	1654203.47	97.35	5508.27	ic
25	7355364.78	1654202.10	100.21	5508.42	ic
24	7355361.42	1654200.20	104.06	5508.97	ic
23	7355356.40	1654197.28	109.88	5509.00	ic
22	7355351.65	1654194.75	115.26	5508.89	ic
21	7355346.34	1654191.77	121.34	5508.79	ic
20	7355341.91	1654189.19	126.47	5508.89	ic
19	7355337.80	1654186.76	131.24	5509.02	ic
18	7355331.85	1654183.41	138.07	5509.09	ic
17	7355327.17	1654180.77	143.44	5509.22	ic
16	7355322.02	1654177.82	149.38	5508.82	ic
15	7355316.79	1654175.10	155.26	5508.72	ic
14	7355312.92	1654172.92	159.71	5508.53	ic
13	7355309.53	1654171.22	163.50	5508.81	ic
12	7355307.63	1654170.15	165.68	5509.58	rew
11	7355306.45	1654169.49	167.03	5511.29	tbank
10	7355295.48	1654163.34	179.61	5511.09	willgrass
9	7355288.86	1654159.62	187.20	5510.17	willgrass
8	7355274.40	1654151.51	203.78	5510.93	willgrass
7	7355266.54	1654146.98	212.85	5509.54	willgrass
6	7355260.75	1654143.73	219.49	5509.79	willgrass
5	7355253.75	1654139.89	227.47	5509.15	willgrassbotbank
4	7355251.65	1654138.46	230.01	5511.32	veg
3	7355235.6	1654129.4	248.42	5511.10	rep1

Never Channelized Site cross section 2 data

NC2 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7355385.86	1654309.63	0.00	5512.22	lep2-nc
37	7355372.39	1654299.31	16.97	5511.99	veg
36	7355361.74	1654291.15	30.39	5512.06	veg
35	7355353.30	1654284.69	41.02	5511.44	tbank
34	7355350.54	1654282.53	44.52	5508.02	ws backwater
33	7355349.21	1654281.66	46.11	5506.94	backwater
32	7355347.25	1654280.17	48.57	5507.21	backwater
31	7355345.44	1654278.68	50.91	5507.60	backwater
30	7355344.00	1654277.57	52.72	5508.01	ws small is
29	7355343.09	1654276.87	53.88	5508.18	small is
28	7355342.31	1654276.28	54.85	5507.94	ws small is
27	7355340.67	1654275.05	56.90	5507.33	backwater
26	7355337.25	1654272.42	61.22	5506.89	backwater
25	7355333.23	1654269.42	66.24	5507.04	backwater
24	7355331.24	1654267.90	68.74	5508.00	ws backwater
23	7355329.42	1654266.54	71.01	5509.14	cobblebar
22	7355327.57	1654265.13	73.34	5509.35	cobblebar
21	7355325.10	1654263.26	76.44	5508.51	lew
20	7355324.14	1654262.47	77.68	5508.23	ic
19	7355321.33	1654260.24	81.27	5508.11	ic
18	7355317.19	1654257.01	86.51	5507.92	ic
17	7355313.51	1654254.24	91.12	5507.27	ic
16	7355310.57	1654252.00	94.82	5507.02	ic
15	7355307.93	1654249.97	98.14	5507.52	ic
14	7355303.59	1654246.65	103.61	5507.71	ic
13	7355299.39	1654243.43	108.90	5507.44	ic
12	7355297.32	1654241.75	111.57	5506.77	ic
11	7355294.28	1654239.42	115.40	5505.88	ic
10	7355291.05	1654236.98	119.44	5505.98	ic
9	7355288.82	1654235.27	122.26	5507.80	ic
8	7355288.59	1654235.09	122.55	5508.55	rew
7	7355287.92	1654234.58	123.39	5509.58	tbank
6	7355283.76	1654231.33	128.67	5509.75	bank
					treegrass
5	7355277.43	1654226.45	136.67	5510.56	veg
4	7355266.99	1654218.68	149.67	5510.45	veg
38	7355254.26	1654208.91	165.72	5510.55	rep2cl

Never Channelized Site cross section 3 data

NC3 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7355224.06	1654362.42	0.00	5510.17	lep3-nc
22	7355220.81	1654350.83	12.03	5510.04	tbank
21	7355220.30	1654348.95	13.98	5507.50	lew
20	7355219.90	1654347.65	15.34	5505.53	ic
19	7355219.01	1654344.45	18.66	5504.74	ic
18	7355218.13	1654341.33	21.90	5504.52	tw
17	7355217.16	1654337.75	25.61	5504.33	ic
16	7355216.16	1654334.17	29.34	5505.00	ic
15	7355215.07	1654330.29	33.36	5505.63	ic
14	7355213.83	1654325.80	38.02	5505.95	ic
13	7355212.58	1654321.34	42.65	5506.58	ic
12	7355211.47	1654317.20	46.94	5507.44	rew
11	7355210.71	1654314.69	49.56	5507.88	cobble bar
10	7355208.57	1654307.03	57.51	5508.62	cobble bar
9	7355206.13	1654298.34	66.54	5508.81	grasswilledge
8	7355202.70	1654286.19	79.17	5508.85	grasswill
7	7355201.20	1654280.86	84.70	5508.94	grasswill
6	7355199.60	1654274.92	90.85	5508.40	grasswill
5	7355197.98	1654269.88	96.14	5509.88	veg
4	7355195.34	1654259.99	106.38	5510.03	rep3

Never Channelized Site cross section 4 data

NC4 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7355097.82	1654381.85	0.00	5511.13	lep4-nc
31	7355096.03	1654367.07	14.88	5509.71	veg
30	7355094.64	1654355.66	26.38	5509.38	top bnk
29	7355094.39	1654353.59	28.47	5507.53	lew
27	7355094.24	1654352.30	29.76	5505.79	ic
26	7355093.74	1654348.23	33.86	5505.70	ic
25	7355093.13	1654343.21	38.92	5505.32	ic
24	7355092.48	1654337.79	44.38	5505.39	ic
23	7355091.81	1654332.34	49.87	5505.43	ic
22	7355091.00	1654325.63	56.63	5505.54	ic
21	7355090.36	1654320.33	61.97	5505.68	ic
20	7355089.72	1654315.08	67.26	5505.47	ic
19	7355089.31	1654311.71	70.65	5505.66	ic
18	7355088.64	1654306.19	76.21	5505.83	ic
17	7355088.44	1654304.58	77.83	5506.67	ic gr
16	7355088.10	1654301.78	80.65	5507.09	ic
15	7355088.06	1654301.44	81.00	5507.50	rew
14	7355088.04	1654301.26	81.18	5507.92	bnk
13	7355087.62	1654297.83	84.64	5507.91	bnk
12	7355087.29	1654295.07	87.41	5507.37	ws bkwatr
11	7355086.96	1654292.31	90.19	5507.18	bkwatr
10	7355086.34	1654287.21	95.33	5506.76	bkwatr
9	7355086.15	1654285.65	96.90	5507.02	bkwatr
8	7355085.94	1654283.94	98.62	5507.47	ws bkwatr
7	7355085.48	1654280.15	102.45	5507.75	gr willow
6	7355083.87	1654266.87	115.82	5507.85	veg cob
5	7355081.52	1654247.55	135.29	5507.97	veg cob
32	7355079.57	1654231.49	151.47	5508.95	rep4-nc

Never Channelized Site cross section 5 data

NC5 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7355007.48	1654441.82	0.00	5510.57	lep5-nc
30	7355009.84	1654421.35	20.60	5510.64	veg
29	7355013.34	1654390.93	51.22	5510.75	veg
28	7355017.15	1654357.77	84.60	5510.06	top bnk
27	7355017.23	1654357.10	85.28	5508.32	bnk
26	7355017.40	1654355.65	86.74	5507.98	bnk
24	7355017.44	1654355.30	87.09	5506.68	ic
25	7355017.45	1654355.23	87.16	5507.28	lew
23	7355017.63	1654353.61	88.79	5506.03	ic
22	7355017.80	1654352.17	90.24	5506.22	ic
21	7355018.24	1654348.33	94.10	5506.40	ic
20	7355018.83	1654343.20	99.27	5506.59	ic
19	7355019.51	1654337.30	105.20	5506.58	ic
18	7355019.96	1654333.38	109.15	5506.72	ic
17	7355020.51	1654328.56	114.01	5506.53	ic
16	7355021.16	1654322.95	119.65	5506.53	ic
15	7355021.87	1654316.77	125.87	5506.42	ic
14	7355022.64	1654310.06	132.63	5506.28	ic
13	7355023.35	1654303.92	138.81	5505.94	ic
12	7355023.94	1654298.76	144.00	5506.08	ic
11	7355024.58	1654293.26	149.53	5505.97	ic
10	7355025.16	1654288.21	154.62	5506.14	ic
9	7355025.64	1654284.01	158.85	5506.42	ic
8	7355025.81	1654282.54	160.32	5507.36	rew gr
7	7355025.84	1654282.25	160.62	5507.60	bnk
6	7355026.07	1654280.33	162.56	5507.67	bnk
5	7355026.12	1654279.89	163.00	5507.96	bnk
4	7355026.34	1654277.93	164.97	5508.37	bnk
31	7355027.79	1654265.65	177.33	5508.61	rep5-nc

Never Channelized Site cross section 6 data

NC6 Name	2005 data Northing	Easting	Distance	Elevation	Description
1	7354957.72	1654396.24	0.00	5509.66	lep6-nc
26	7354964.93	1654373.91	23.47	5509.64	veg
25	7354969.75	1654358.98	39.16	5509.59	tbank
24	7354970.62	1654356.15	42.12	5506.37	lew undercut
23	7354970.92	1654355.22	43.09	5505.23	ic
22	7354972.47	1654350.55	48.01	5505.37	ic
21	7354973.79	1654346.81	51.98	5505.18	ic
20	7354974.70	1654343.62	55.29	5506.09	ws bar
19	7354975.65	1654340.67	58.39	5506.84	cob bar
18	7354976.84	1654336.77	62.47	5507.07	ws bar
17	7354978.06	1654332.98	66.45	5507.04	ic-bar
16	7354979.97	1654327.46	72.30	5507.06	ic-bar
15	7354982.17	1654320.67	79.43	5507.01	ic-bar
14	7354984.12	1654314.65	85.76	5506.79	ic
13	7354986.19	1654308.17	92.56	5506.58	ic
12	7354988.20	1654301.94	99.10	5506.40	ic
11	7354990.72	1654294.59	106.88	5505.94	ic
32	7355007.22	1654294.52	113.12	5506.00	tw
10	7354992.88	1654287.53	114.26	5505.83	ic
9	7354994.95	1654280.90	121.20	5505.77	ic
8	7354996.98	1654274.80	127.63	5505.63	ic
7	7354997.58	1654273.34	129.21	5506.13	ic
6	7354997.94	1654272.22	130.38	5507.23	rewgrass
5	7354998.39	1654270.84	131.83	5507.71	bank
4	7354999.53	1654266.84	136.00	5508.28	bank
34	7355000.58	1654263.55	139.44	5508.60	rep6-cl

Charleston Site cross section 1 data

CA1 Name	2005 data Northing	Easting	Distance (ft)	Elevation	Description
1	7347294.53	1652090.69	0.00	5449.24	lep1-ca
20	7347287.18	1652083.05	10.60	5449.20	veg
19	7347279.47	1652075.03	21.72	5448.29	tbank
18	7347271.08	1652066.39	33.77	5445.87	cobbgrassbank
17	7347267.34	1652062.49	39.17	5444.43	lew
16	7347263.66	1652058.56	44.56	5443.26	ic
15	7347260.30	1652055.15	49.34	5442.81	ic
14	7347256.19	1652050.95	55.21	5442.76	ic
13	7347251.41	1652045.75	62.27	5442.69	ic
12	7347248.09	1652042.46	66.95	5442.48	ic
11	7347245.02	1652039.27	71.38	5442.52	tw
10	7347241.92	1652036.07	75.83	5442.57	ic
9	7347238.35	1652032.36	80.98	5442.86	ic
8	7347234.72	1652028.44	86.32	5443.55	ic
7	7347232.47	1652026.36	89.38	5444.34	rew
6	7347228.37	1652021.99	95.38	5444.74	botbankcobgrass
5	7347225.01	1652018.50	100.21	5447.30	tbank
4	7347202.86	1651995.39	132.23	5447.51	veg
21	7347176.17	1651967.75	170.65	5447.98	repcl

Charleston Site cross section 2 data

CA2 Name	2005 data Northing	Easting	Distance (ft)	Elevation	Description
1	7347149.96	1652238.21	0.00	5449.50	lep2-ca
21	7347147.06	1652231.35	7.45	5447.90	veg
20	7347137.74	1652209.29	31.40	5447.64	veg
19	7347126.84	1652183.50	59.40	5446.48	veg
18	7347118.87	1652164.64	79.87	5446.73	tbank
17	7347116.36	1652158.99	86.05	5443.24	lewbotbank
16	7347115.36	1652156.60	88.65	5442.61	ic
15	7347114.35	1652154.01	91.42	5441.83	ic
14	7347112.84	1652150.44	95.30	5441.33	ic
13	7347110.90	1652145.59	100.52	5441.26	ic
12	7347108.70	1652140.51	106.06	5440.95	ic
11	7347106.97	1652136.28	110.63	5441.36	ic
10	7347104.42	1652130.23	117.20	5442.12	ic
9	7347102.07	1652124.51	123.37	5442.63	ic
8	7347099.99	1652119.58	128.73	5443.08	rew
7	7347094.92	1652107.98	141.39	5443.61	cobbar
6	7347086.00	1652086.88	164.30	5444.47	cobbank
5	7347076.20	1652064.02	189.17	5447.52	veg
4	7347067.53	1652043.53	211.42	5447.36	veg
22	7347057.41	1652019.37	237.61	5447.03	repcl

Charleston Site cross section 3 data

CA3 Name	2005 data Northing	Easting	Distance (ft)	Elevation	Description
1	7346931.72	1652242.21	0.00	5447.42	lep3-ca
23	7346935.31	1652225.68	16.91	5447.34	veg
22	7346940.82	1652200.29	42.90	5447.04	veg
21	7346947.13	1652171.45	72.42	5447.04	tbank
20	7346948.32	1652166.31	77.70	5442.56	lewbotbank
19	7346948.88	1652163.76	80.31	5441.66	ic
18	7346949.74	1652159.83	84.33	5441.09	ic
17	7346950.97	1652154.22	90.07	5440.75	ic
16	7346952.24	1652148.21	96.22	5440.59	ic
15	7346953.56	1652142.77	101.81	5440.88	ic
14	7346954.73	1652136.73	107.96	5441.21	ic
13	7346956.20	1652129.53	115.31	5441.76	ic
12	7346957.78	1652122.88	122.14	5441.94	ic
11	7346958.96	1652117.48	127.67	5441.64	ic
10	7346960.42	1652110.78	134.53	5441.95	ic
9	7346961.91	1652103.93	141.54	5442.17	ic
8	7346963.31	1652096.87	148.73	5442.44	rew
7	7346965.30	1652087.10	158.71	5442.43	wetcobgrassbar
6	7346969.05	1652069.79	176.42	5442.81	grassbarcob
5	7346975.43	1652040.32	206.57	5444.21	bankcob
4	7346979.34	1652023.53	223.81	5446.48	veg
3	7346987.18	1651987.96	260.24	5446.68	rep3

Charleston Site cross section 4 data

CA4 Name	2005 data Northing	Easting	Distance (ft)	Elevation	Description
1	7346795.35	1652049.10	0.00	5446.13	lep4-ca
20	7346807.61	1652037.83	16.65	5445.96	tbankgrass
19	7346824.55	1652022.22	39.69	5445.82	tbankgrass
18	7346830.78	1652016.49	48.15	5441.72	lewbotbank
17	7346834.37	1652013.26	52.97	5441.07	ic
16	7346838.26	1652009.69	58.26	5440.75	ic
15	7346841.15	1652007.03	62.19	5440.19	ic
14	7346844.91	1652003.58	67.29	5439.67	ic
13	7346848.31	1652000.54	71.85	5439.46	ic
12	7346851.44	1651997.58	76.16	5439.50	ic
11	7346855.02	1651994.36	80.97	5439.69	ic
10	7346858.48	1651991.12	85.71	5440.05	ic
9	7346862.44	1651987.39	91.15	5441.24	ic
8	7346867.23	1651983.08	97.59	5441.67	rew
7	7346869.53	1651980.96	100.72	5441.84	bar
6	7346877.26	1651973.78	111.27	5441.89	botbank
5	7346885.19	1651966.49	122.04	5443.40	bank
4	7346898.46	1651954.29	140.06	5446.32	tbankgrass
3	7346926.86	1651928.26	178.59	5446.50	rep4

Charleston Site cross section 5 data

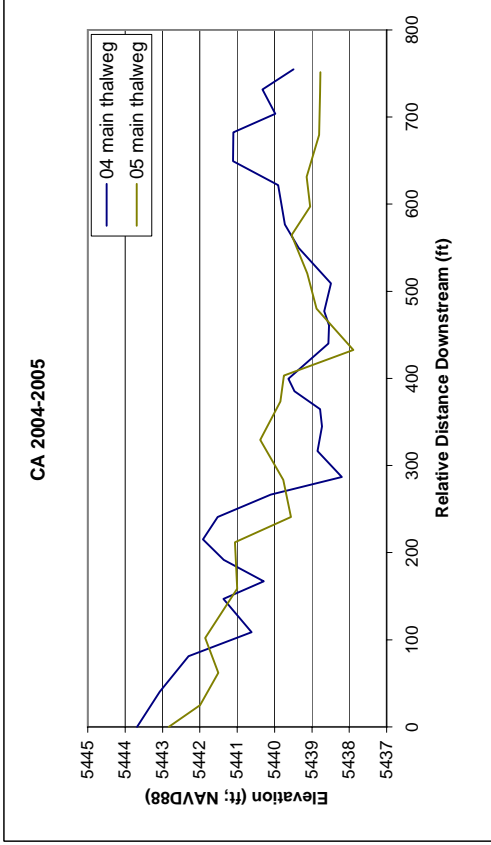
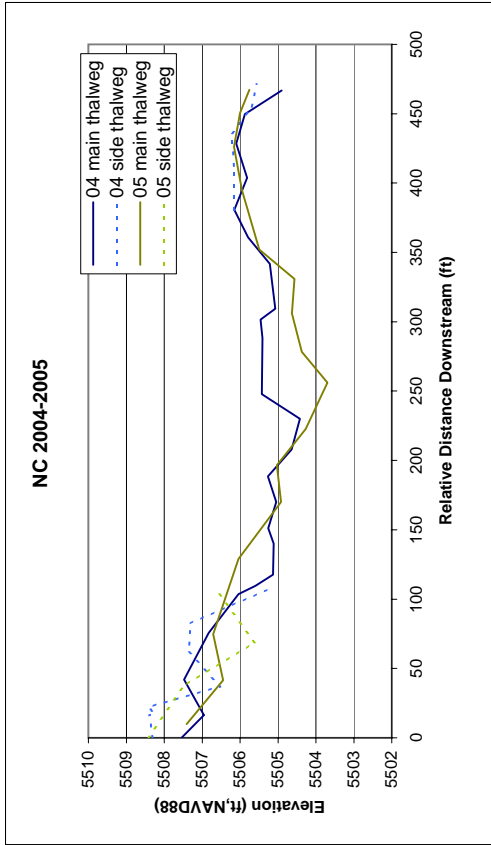
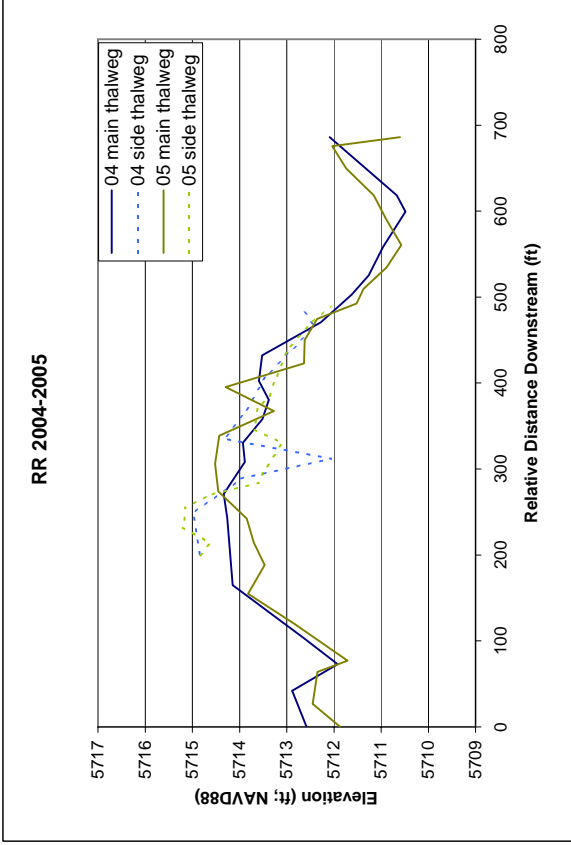
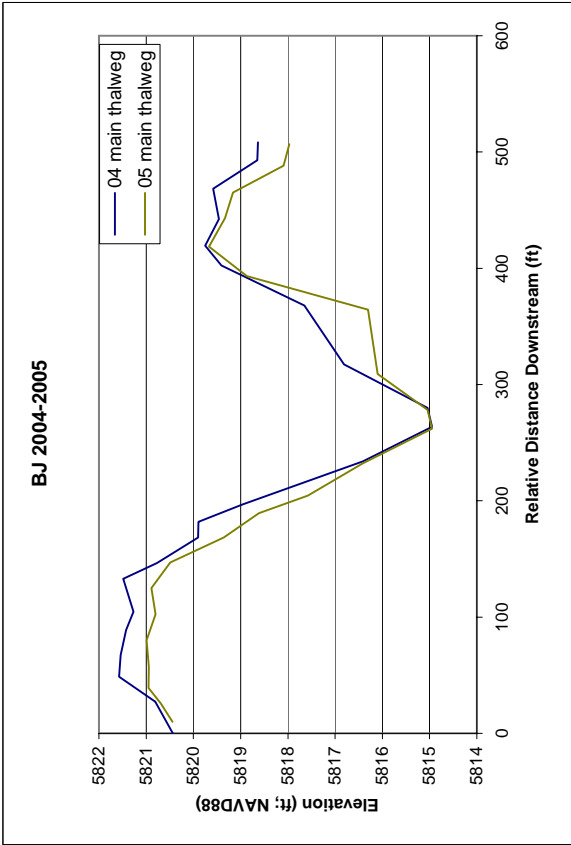
CA5 Name	2005 data (LEP replaced)		Distance (ft)	Elevation	Description
	Northing	Easting			
1	7346732.81	1651974.42	0.00	5445.51	lep5-ca
18	7346732.73	1651974.52	0.13	5445.72	lep5new
42	7346732.74	1651974.56	0.16	5445.71	lep5new
19	7346744.22	1651956.06	21.61	5445.14	dirt
20	7346753.53	1651941.17	39.17	5444.61	grass
21	7346763.12	1651925.86	57.24	5444.89	grass
22	7346769.84	1651915.12	69.91	5443.90	tbank
23	7346771.54	1651912.40	73.11	5441.75	botbank
24	7346772.70	1651910.46	75.38	5441.36	lew
25	7346773.47	1651909.33	76.75	5440.68	ic
26	7346775.93	1651905.35	81.42	5439.60	ic
27	7346778.54	1651901.18	86.34	5439.16	ic
28	7346781.55	1651896.62	91.80	5438.63	ic
29	7346784.58	1651891.73	97.55	5438.47	ic
30	7346786.77	1651888.23	101.68	5439.35	ic
31	7346789.28	1651884.10	106.52	5439.81	ic
32	7346791.88	1651879.95	111.41	5439.95	ic
33	7346794.43	1651875.87	116.22	5440.35	ic
34	7346797.24	1651871.37	121.53	5440.78	ic
35	7346799.52	1651867.71	125.84	5441.19	ic
36	7346801.34	1651864.79	129.28	5441.00	ic
37	7346801.54	1651864.47	129.66	5441.32	rew
38	7346802.53	1651862.89	131.52	5442.55	boulder
39	7346804.21	1651860.21	134.69	5442.22	botbank
40	7346806.58	1651856.41	139.17	5444.92	tbank
41	7346813.12	1651845.98	151.47	5445.05	grass
2	7346821.18	1651833.11	166.67	5445.13	rep5-ca

Charleston Site cross section 6 data

CA6 Name	2005 data (LEP replaced and line extended)				Description
	Northing	Easting	dist.	Elevation	
5	7346638.87	1651918.18	0.00	5445.85	lep6new
6	7346646.76	1651908.65	12.37	5445.20	dirt
7	7346653.70	1651900.23	23.28	5443.97	tbank
8	7346657.02	1651896.22	28.48	5441.44	botbank sc ws
9	7346658.37	1651894.59	30.60	5440.74	sc
10	7346661.59	1651890.70	35.65	5440.21	sc
11	7346664.60	1651887.06	40.38	5440.45	sc
12	7346667.01	1651884.16	44.15	5440.73	sc
13	7346669.23	1651881.43	47.67	5441.39	ws sc
14	7346671.15	1651879.19	50.61	5441.57	veg
15	7346679.42	1651869.21	63.58	5443.84	veg is
16	7346682.46	1651865.53	68.36	5444.46	veg is
17	7346686.49	1651860.67	74.67	5443.78	veg is tbank
18	7346689.94	1651856.49	80.08	5441.12	lew botbank is
19	7346692.08	1651853.97	83.40	5440.34	ic
20	7346695.30	1651850.07	88.45	5440.46	ic
21	7346698.55	1651846.14	93.55	5440.78	ic
22	7346702.11	1651841.80	99.16	5440.43	ic
23	7346705.09	1651838.20	103.84	5440.11	ic
24	7346707.45	1651835.43	107.47	5439.35	ic
25	7346709.80	1651832.51	111.22	5439.15	ic
26	7346712.13	1651829.69	114.88	5439.20	ic
27	7346714.61	1651826.76	118.72	5438.55	ic
28	7346716.24	1651824.73	121.32	5438.50	ic
29	7346718.81	1651821.62	125.35	5438.57	ic
30	7346721.06	1651818.90	128.89	5439.03	ic rockpile
31	7346722.70	1651816.91	131.46	5440.81	ic rockpile
32	7346724.40	1651814.87	134.12	5439.32	ic rockpile
33	7346725.30	1651813.85	135.48	5440.68	ic rockpile
34	7346726.55	1651812.34	137.44	5438.85	ic
35	7346728.48	1651809.91	140.54	5438.26	ic
36	7346730.47	1651807.54	143.64	5438.52	ic
37	7346732.40	1651805.21	146.67	5439.97	ic
38	7346733.71	1651803.64	148.71	5441.09	rew botbank
39	7346734.70	1651802.40	150.29	5444.07	tbank
40	7346743.32	1651792.00	163.80	5444.15	veg
2	7346753.01	1651780.30	178.99	5444.32	rep6-ca

APPENDIX 2.3A

**LONGITUDINAL
PROFILES**



APPENDIX 2.3B

LONGITUDINAL DATA

BJ 05 2005 thalweg

Name	Northing	Easting	Distance	Elevation	
29	7381840.91	1658895.19	5.00	5820.44	05 main thalweg
30	7381838.72	1658910.78	20.74	5820.69	
31	7381836.80	1658924.01	34.11	5820.95	04 main thalweg
32	7381832.04	1658941.39	52.13	5820.94	
33	7381828.72	1658964.11	75.09	5820.99	
34	7381825.90	1658986.16	97.32	5820.80	
35	7381823.33	1659008.54	119.85	5820.89	
36	7381820.25	1659030.41	141.94	5820.49	
37	7381819.68	1659052.02	163.55	5819.36	
38	7381819.10	1659072.94	184.48	5818.61	
39	7381818.11	1659087.81	199.38	5817.58	
40	7381761.95	1659142.37	277.68	5816.10	
41	7381716.96	1659174.44	332.93	5816.30	
42	7381691.39	1659188.07	391.91	5818.87	
43	7381669.19	1659200.18	417.20	5819.67	
44	7381650.61	1659215.91	441.54	5819.33	
45	7381633.45	1659229.88	463.67	5819.16	
46	7381616.80	1659245.82	486.72	5818.09	
47	7381605.71	1659260.59	505.19	5817.97	
48	7381589.96	1659271.47	524.33	5817.15	

RR 05 2005 thalweg

Name	Northing	Easting	Distance	Elevation	
28	7372931.75	1658488.14	0.00	5711.86	05 main thalweg
27	7372911.19	1658505.59	26.96	5712.45	
26	7372880.88	1658526.90	64.02	5712.35	
25	7372872.59	1658536.86	76.98	5711.71	
24	7372846.52	1658570.76	119.74	5712.84	
23	7372834.91	1658604.06	155.00	5713.82	
22	7372822.75	1658631.99	185.47	5713.68	
21	7372821.59	1658634.47	188.21	5713.46	
20	7372817.66	1658660.39	214.43	5713.70	
19	7372818.91	1658688.20	242.26	5713.85	
18	7372821.19	1658719.88	274.02	5714.45	
17	7372819.72	1658751.78	305.96	5714.52	
16	7372824.00	1658784.13	338.59	5714.43	
15	7372826.07	1658813.04	367.58	5713.27	
14	7372817.01	1658839.11	395.17	5714.29	
13	7372802.60	1658862.83	422.93	5712.63	
12	7372779.05	1658876.47	450.14	5712.62	
11	7372756.53	1658885.70	474.49	5712.36	
10	7372739.09	1658889.79	492.40	5711.52	
9	7372722.23	1658892.98	509.55	5711.38	
8	7372697.33	1658891.14	534.52	5710.88	
7	7372671.29	1658894.03	560.73	5710.57	
6	7372641.78	1658889.65	590.55	5710.89	
5	7372616.54	1658877.79	618.45	5711.16	
4	7372595.34	1658855.03	649.55	5711.74	
3	7372585.59	1658830.90	675.57	5712.04	
2	7372574.48	1658816.91	693.44	5709.61	
1	7372512.98	1658799.54	757.34	5710.65	
44	7372818.23	1658616.89	185.47	5714.39	05 side thalweg
43	7372792.51	1658627.77	213.39	5714.63	
42	7372775.18	1658634.34	231.93	5715.19	
41	7372753.89	1658642.22	254.62	5715.15	
40	7372743.78	1658653.22	269.57	5714.65	
39	7372731.63	1658661.34	284.17	5713.59	
38	7372720.49	1658669.07	297.74	5713.49	
37	7372702.18	1658695.88	330.20	5713.10	
36	7372696.65	1658710.58	345.91	5713.68	
35	7372687.08	1658733.91	371.13	5713.62	
34	7372677.29	1658744.19	385.32	5713.37	
33	7372671.62	1658758.98	401.17	5713.26	
32	7372647.86	1658791.14	441.15	5712.97	
31	7372627.38	1658808.29	467.86	5712.51	
30	7372608.38	1658817.62	489.03	5712.08	
29	7372596.33	1658824.69	503.00	5709.69	

NC 05 2005 thalweg

Name	Northing	Easting	Distance	Elevation	
10	7355380.44	1654217.33	0.00	5507.41	
9	7355348.99	1654218.03	31.45	5506.44	
8	7355322.60	1654238.21	64.67	5506.71	
7	7355290.84	1654278.63	116.07	5506.04	
6	7355269.12	1654313.29	156.98	5504.92	
5	7355247.67	1654328.88	183.50	5505.03	main thalweg
4	7355223.43	1654338.56	209.60	5504.27	
3	7355190.58	1654345.49	243.18	5503.69	
2	7355168.52	1654346.45	265.26	5504.37	
1	7355137.88	1654348.19	295.95	5504.63	
28	7355113.31	1654343.76	320.91	5504.57	
29	7355092.12	1654343.94	342.10	5505.49	
30	7355054.36	1654323.95	384.82	5505.95	side thalweg
31	7355029.26	1654305.01	416.27	5506.16	
32	7355007.22	1654294.52	440.68	5506.00	
33	7354985.25	1654283.31	465.34	5505.76	
10b	7355321.10	1654164.90	0.00	5508.44	
9b	7355305.10	1654203.32	41.62	5507.50	
8b	7355293.34	1654238.73	78.93	5505.61	
7b	7355282.28	1654275.51	117.34	5506.65	

CA 05 2005 thalweg

Name	Northing	Easting	Distance	Elevation	
22	7347260.54	1652022.25	0.00	5442.83	05 main thalweg
23	7347229.95	1652055.47	45.16	5441.99	
24	7347198.86	1652075.56	82.17	5441.50	
25	7347171.53	1652098.63	117.94	5441.86	
26	7347132.83	1652131.44	168.68	5441.00	
27	7347085.29	1652155.45	221.94	5441.06	
28	7347056.21	1652154.86	251.02	5439.56	
29	7347013.81	1652159.91	293.72	5439.77	
30	7346968.35	1652154.45	339.50	5440.39	
31	7346926.20	1652141.07	383.73	5439.84	
32	7346900.36	1652126.39	413.45	5439.75	
33	7346880.86	1652104.73	442.59	5437.89	
34	7346859.95	1652061.95	490.21	5438.87	
23	7346852.73	1652022.52	530.30	5439.12	
24	7346841.05	1651979.70	574.67	5439.54	
25	7346826.92	1651950.26	607.33	5439.05	
26	7346810.41	1651920.44	641.42	5439.14	
27	7346777.98	1651885.04	689.42	5438.81	
28	7346744.37	1651849.49	738.35	5438.78	
29	7346708.45	1651820.17	784.72	5438.76	
30	7346690.39	1651790.64	819.33	5438.64	

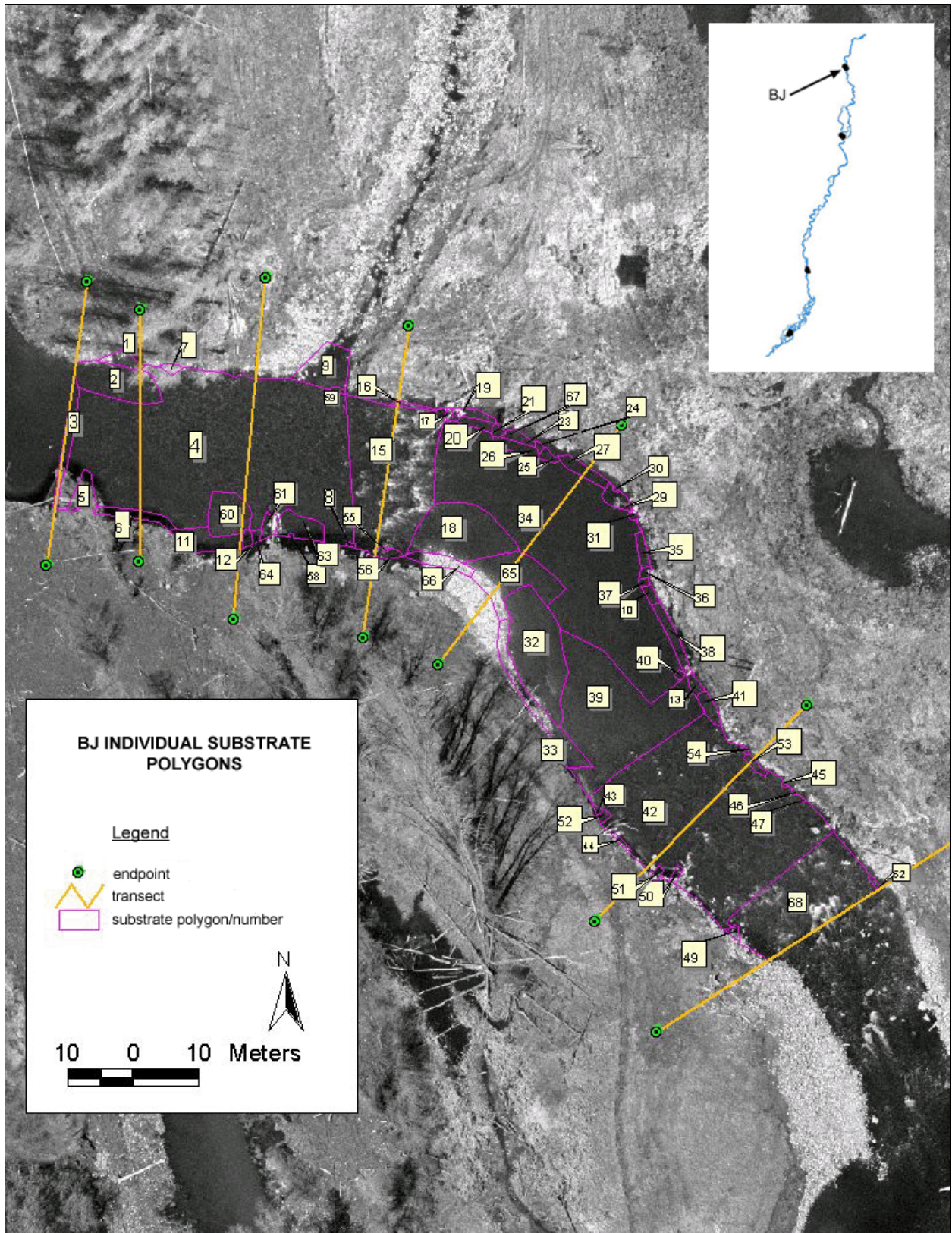
APPENDIX 2.4

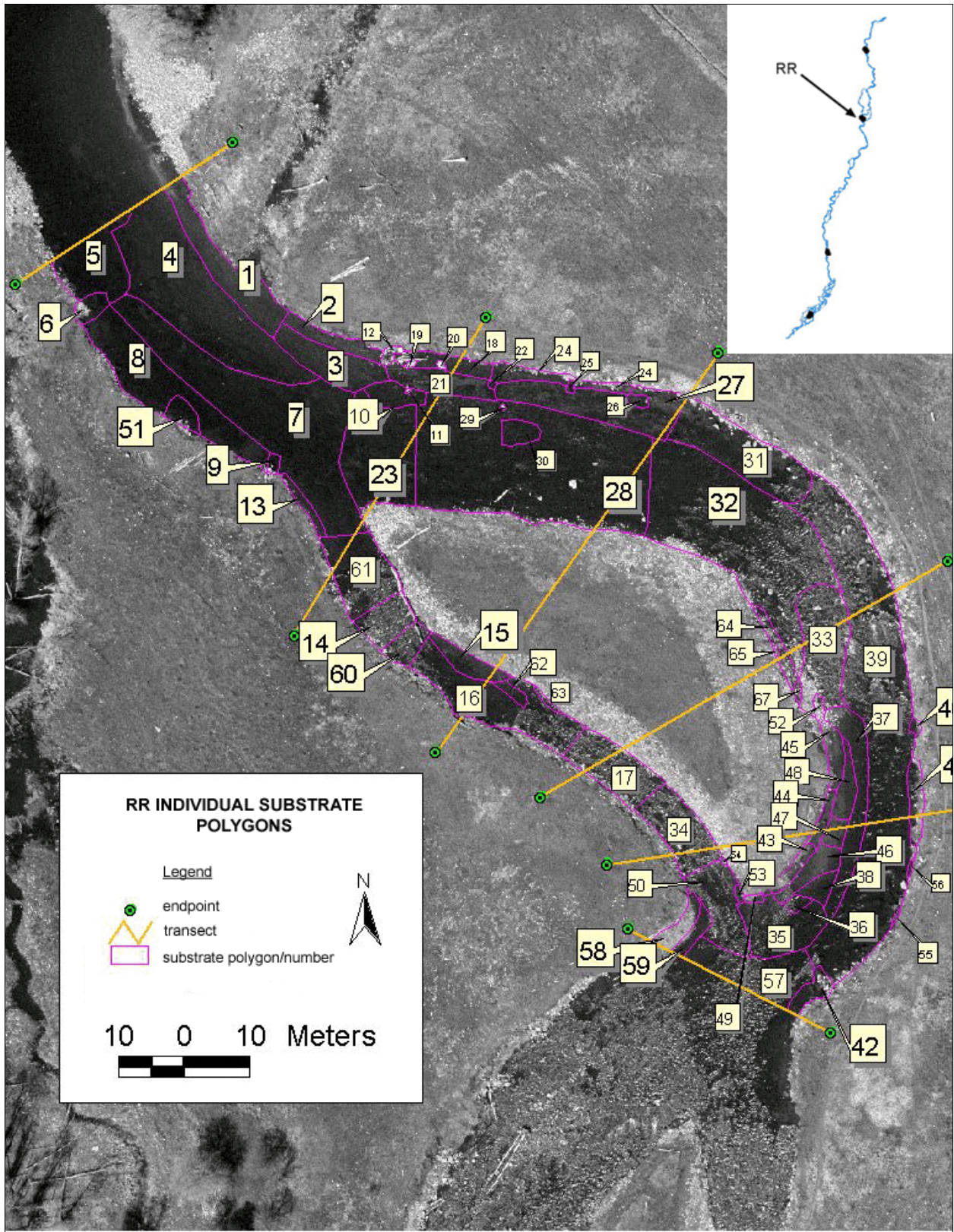
**PROFILE
COMPARISONS
(PENDING)**

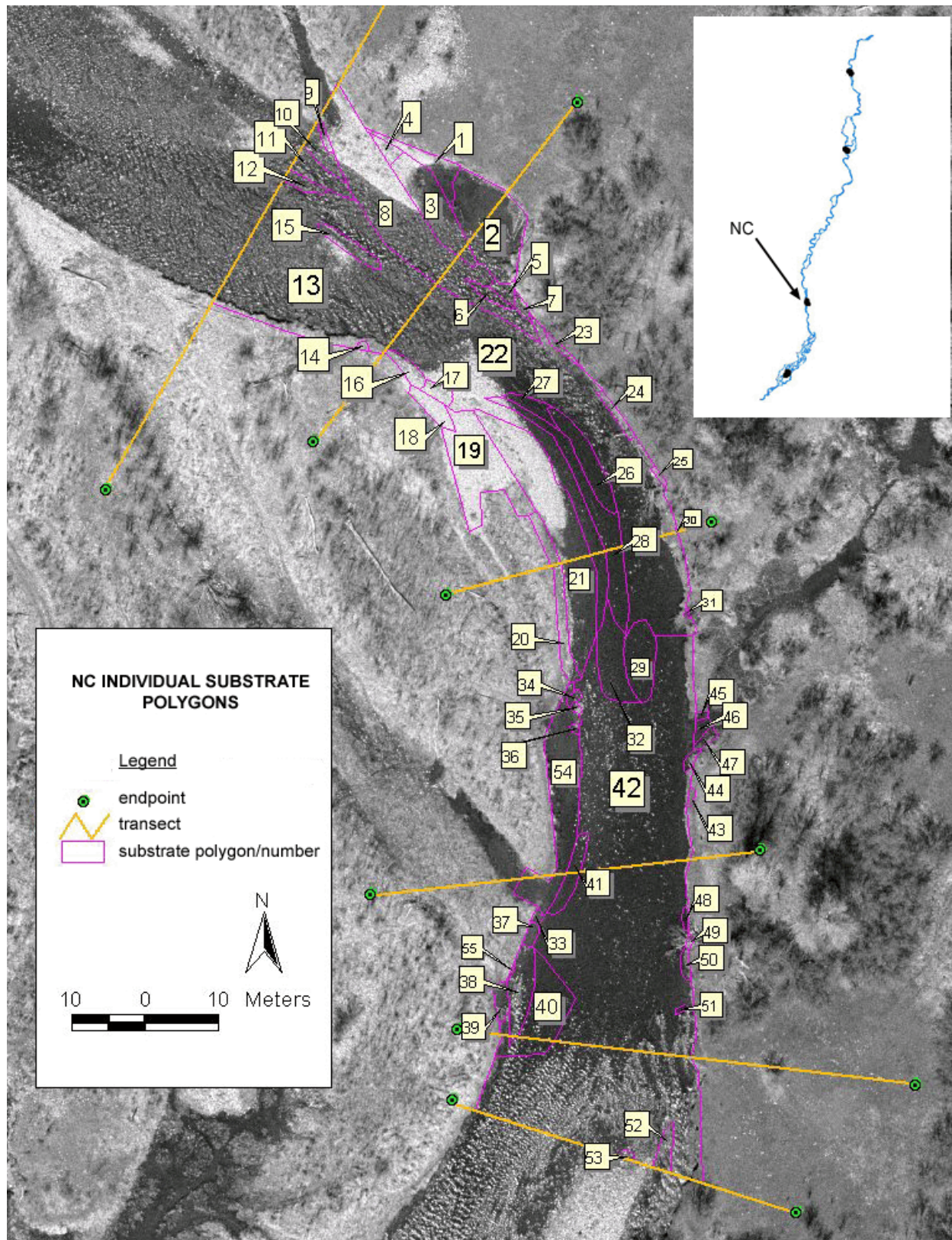
APPENDIX 2.5

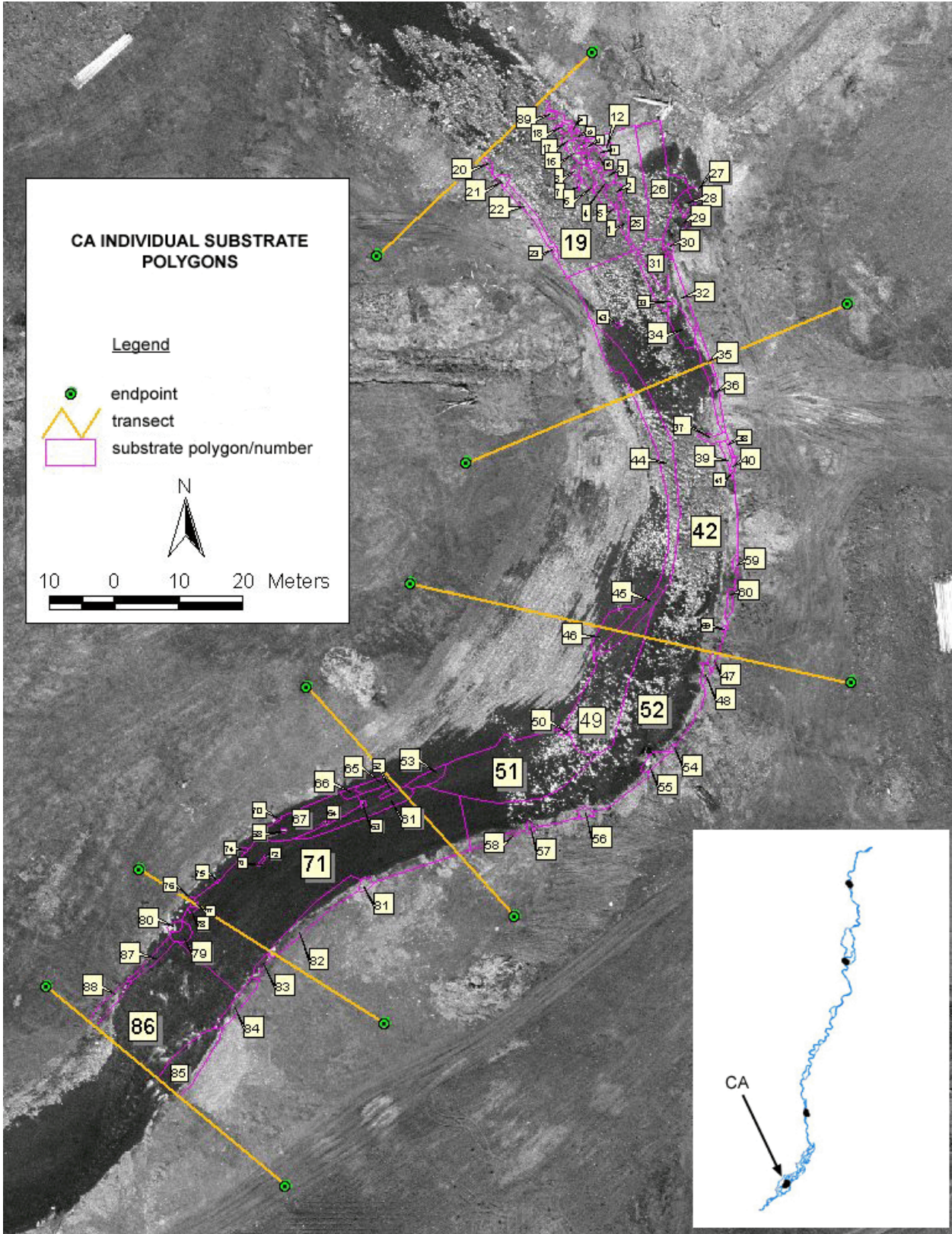
HEC-RAS OUTPUT PLOTS (PENDING)

APPENDIX 3.1 A SUBSTRATE MAPS









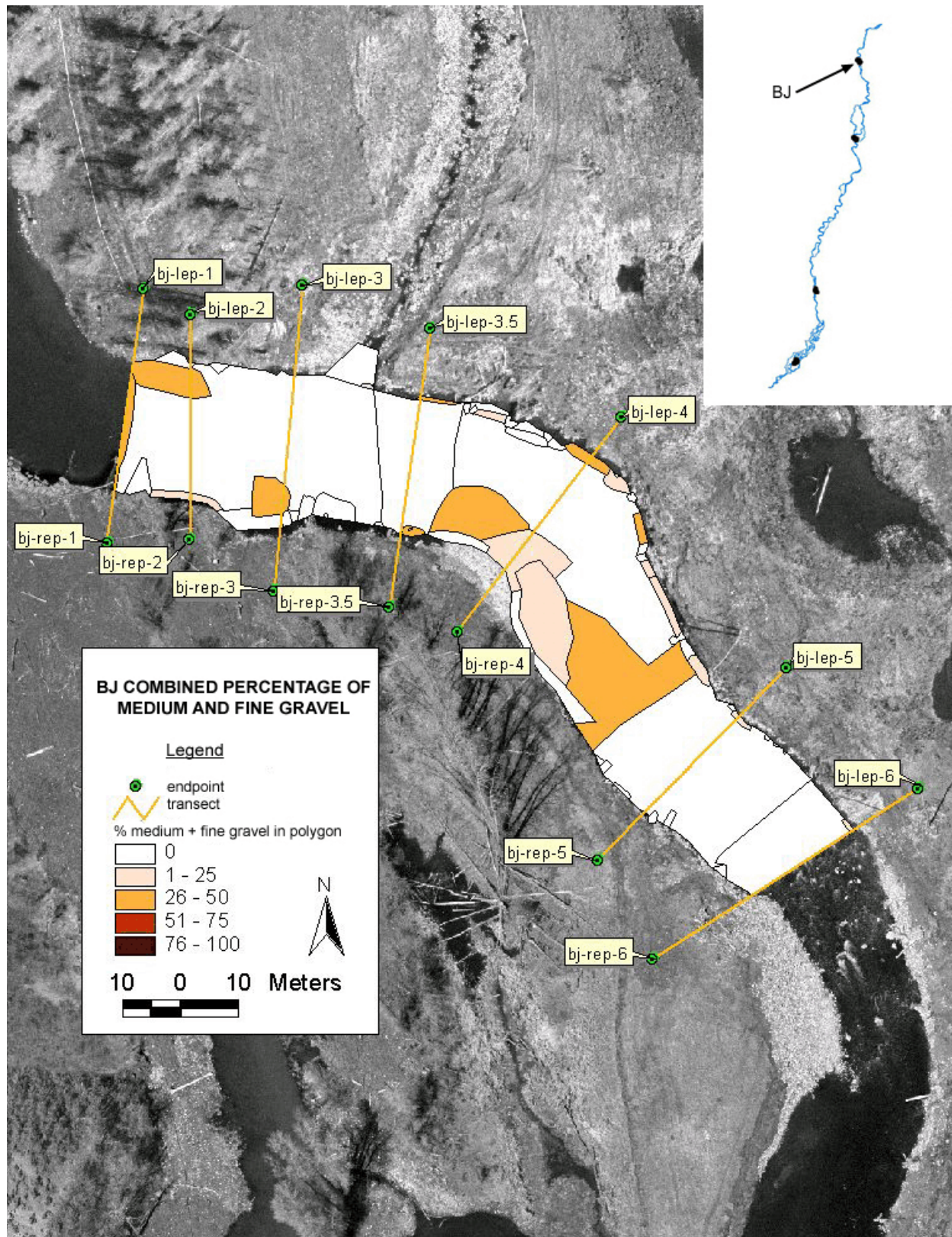
APPENDIX 3.1 B

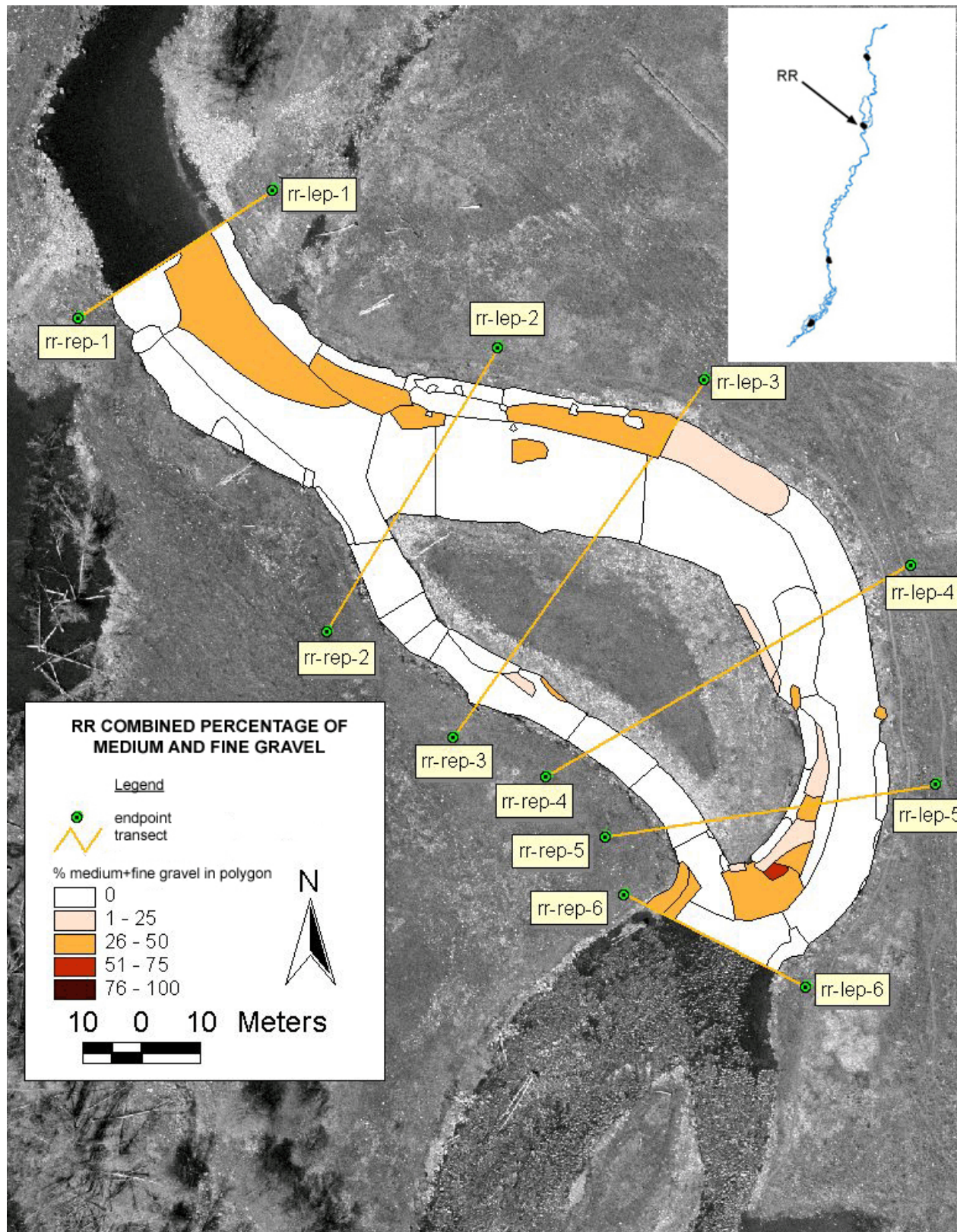
**SUBSTRATE POLYGON
ATTRIBUTE TABLES**

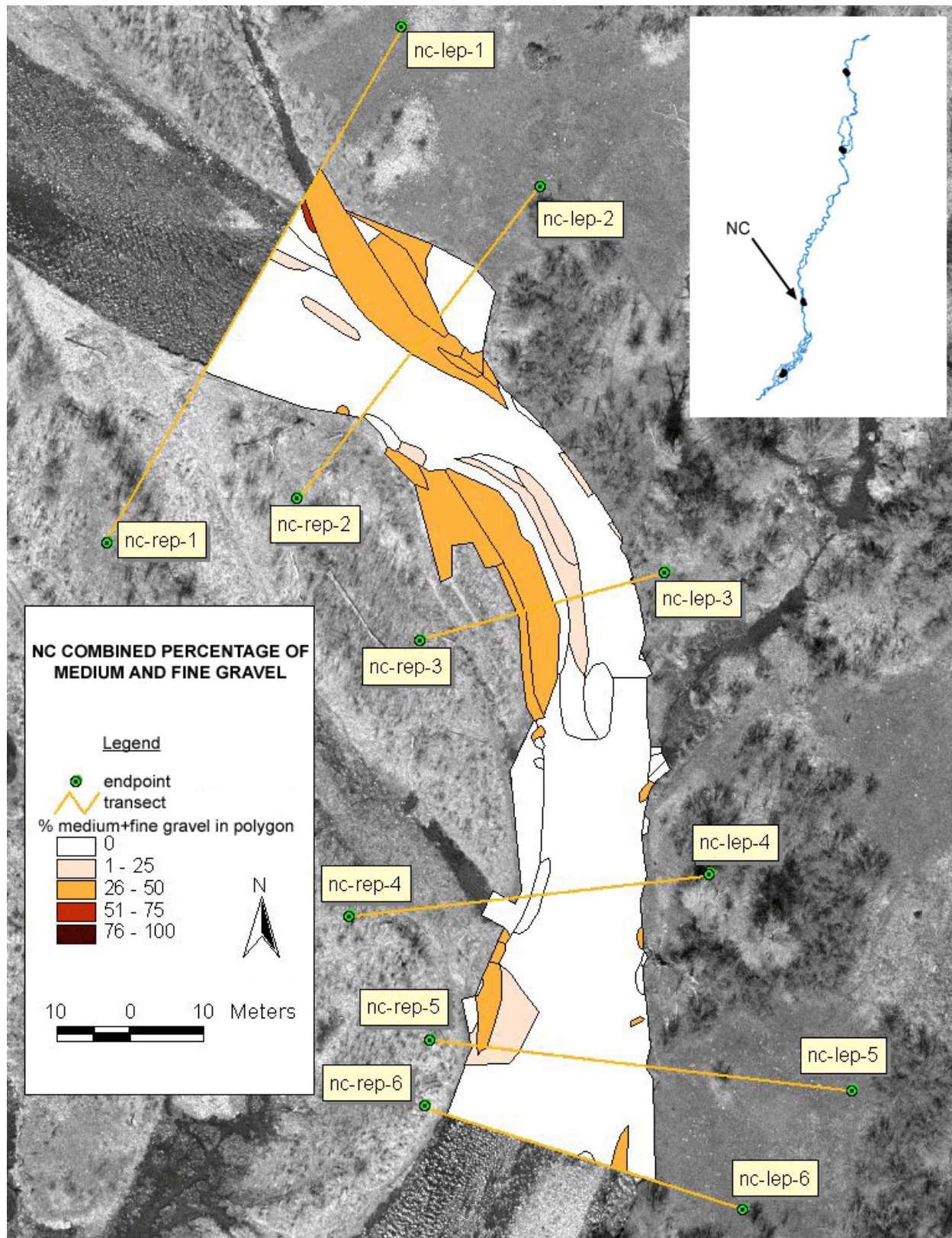
NC	POLYGON	Area m2	substype	notes	majoritytype	PERCENTAGES										
						%B	%C	%LG	%MG	%FG	%SA	%SI	%GRASS	%UNKNOWN		
1	18.851	1C 3LG 3MG 2FG 1SA	photo 14	gravel	0	10	30	30	20	10	0	0	0			
2	74.685	10SI	photo 12 & 13	sand/silt	0	0	0	0	0	0	100	0	0			
3	44.758	3C 3LG 3MG 1FG	grass w/ S.C.G	grass	0	30	30	30	10	0	0	0	0			
4	5.321	grass		grass	0	0	0	0	0	0	0	100	0			
5	5.368	2.5C 2.5LG 2.5MG 2.5FG		grass	0	25	25	25	25	0	0	0	0			
6	5.32	3.3C 3.3LG 3.3MG	thin S over rocks	gravel	0	33.3	33.3	33.3	0	0	0	0	0			
7	3.316	3.3C 3.3LG 3.3MG	thin S over rocks	gravel	0	33.3	33.3	33.3	0	0	0	0	0			
8	149.708	3.3C 3.3LG 3.3MG	lots of 30-40mm ? LG v MG	gravel	0	33.3	33.3	33.3	0	0	0	0	0			
9	3.169	2C 2LG 3MG 3FG		gravel	0	20	20	30	30	0	0	0	0			
10	11.688	5SA 5SI		sand/silt	0	0	0	0	0	50	50	0	0			
11	16.243	4C 4LG 2S		cobble-gravel	0	40	40	0	0	20	0	0	0			
12	6.55	4C 4LG 2MG		gravel	0	40	40	20	0	0	0	0	0			
13	299.485	5C 5LG	lots of 30-40mm ? LG v MG	cobble-gravel	0	50	50	0	0	0	0	0	0			
14	1.319	3.3C 3.3LG 3.3MG		gravel	0	33.3	33.3	33.3	0	0	0	0	0			
15	11.912	4C 4LG 2MG	algae over rocks	gravel	0	40	40	20	0	0	0	0	0			
16	7.995	3.3C 3.3LG 3.3S		cobble-gravel-sand/silt	0	33.3	33.3	0	0	0	33.3	0	0			
17	6.09	2C 6LG 2MG	coated w. algae & thin SI	gravel	0	20	60	20	0	0	0	0	0			
18	10.636	1C 2LG 2MG 2.5FG 2.5SA		gravel	0	10	20	20	25	25	0	0	0			
19	70.427	2C 4LG 4MG		gravel	0	20	40	40	0	0	0	0	0			
20	24.906	1.5C 3.5LG 3.5MG 1.5FG		gravel	0	15	35	35	15	0	0	0	0			
21	119.787	3.3C 3.3LG 3.3MG		gravel	0	33.3	33.3	33.3	0	0	0	0	0			
22	417.866	5C 5LG		cobble-gravel	0	50	50	0	0	0	0	0	0			
23	3.169	4C 4LG 2SI		cobble-gravel	0	40	40	0	0	0	20	0	0			
24	5.451	4C 4LG 2MG		gravel	0	40	40	20	0	0	0	0	0			
25	1.357	4C 4LG 2MG		gravel	0	40	40	20	0	0	0	0	0			
26	25.532	2C 6LG 2MG		gravel	0	20	60	20	0	0	0	0	0			
27	8.814	10SI		sand/silt	0	0	0	0	0	0	100	0	0			
28	53.014	2C 3LG 2MG 3SI		gravel	0	20	30	20	0	0	30	0	0			
29	28.035	2C 8SI	sticks on bed	sand/silt	0	20	0	0	0	0	80	0	0			
30	0.19	5LG 5MG	small patch above debris	gravel	0	0	50	50	0	0	0	0	0			
31	0.468	10SI		sand/silt	0	0	0	0	0	0	100	0	0			
32	31.62	3.3C 3.3LG 3.3SI		cobble-gravel-sand/silt	0	33.3	33.3	0	0	0	33.3	0	0			
33	1.784	5MG 5SI		gravel-sand/silt	0	0	0	50	0	0	50	0	0			
34	1.957	7LG 3MG		gravel	0	0	70	30	0	0	0	0	0			
35	1.288	grass	grass clumps/"islands"	grass	0	0	0	0	0	0	0	100	0			
36	1.264	grass	grass clumps/"islands"	grass	0	0	0	0	0	0	0	100	0			
37	3.332	5MG 5SI		gravel-sand/silt	0	0	0	50	0	0	50	0	0			
38	24.837	3.3C 3.3LG 3.3MG	algae, some SI coating	gravel	0	33.3	33.3	33.3	0	0	0	0	0			
39	6.794	10SI		sand/silt	0	0	0	0	0	0	100	0	0			
40	52.04	2C 7LG 1MG		gravel	0	20	70	10	0	0	0	0	0			
41	14.319	3.3C 3.3LG 3.3SI		cobble-gravel-sand/silt	0	33.3	33.3	0	0	0	33.3	0	0			
42	900.371	5C 5LG	algae+ thin SI coat in many parts	cobble-gravel	0	50	50	0	0	0	0	0	0			
43	1.483	5SI 5grass	bk slump	grass-sand/silt	0	0	0	0	0	0	50	50	0			
44	2.622	2C 4LG 4MG		gravel	0	20	40	40	0	0	0	0	0			
45	1.346	10SI		sand/silt	0	0	0	0	0	0	100	0	0			
46	3.605	3.3C 3.3LG 3.3SI		cobble-gravel-sand/silt	0	33.3	33.3	0	0	0	33.3	0	0			
47	3.494	5SI 5grass	grass slump	grass-sand/silt	0	0	0	0	0	0	50	50	0			
48	1.808	3.3LG 3.3MG 3.3SI		gravel	0	0	33.3	33.3	0	0	33.3	0	0			
49	0.978	10SI		sand/silt	0	0	0	0	0	0	100	0	0			
50	3.357	2.5C 2.5LG 5SI		sand/silt	0	25	25	0	0	0	50	0	0			
51	1.072	5LG 5MG	gr dep ab log	gravel	0	0	50	50	0	0	0	0	0			
52	8.022	5LG 5MG		gravel	0	0	50	50	0	0	0	0	0			
53	1.458	2C 2LG 6SI		sand/silt	0	20	20	0	0	0	60	0	0			
54	81.279	10SI		sand/silt	0	0	0	0	0	0	100	0	0			
55	0.684	5SI 5C		cobble-sand/silt	0	50	0	0	0	0	50	0	0			

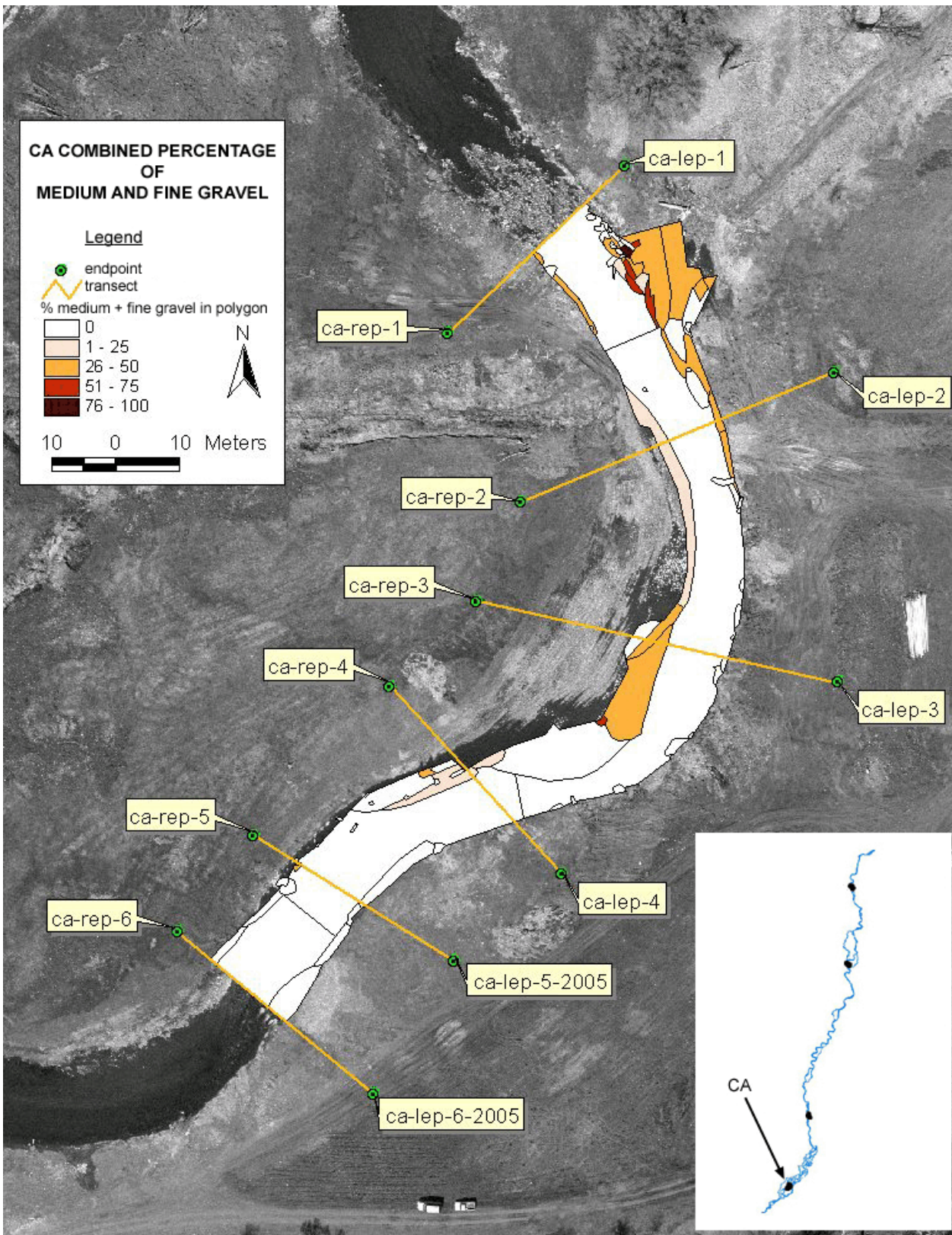
APPENDIX 3.2

**SUBSTRATE TYPE
(PERCENT GRAVEL
IN EACH POLYGON)**



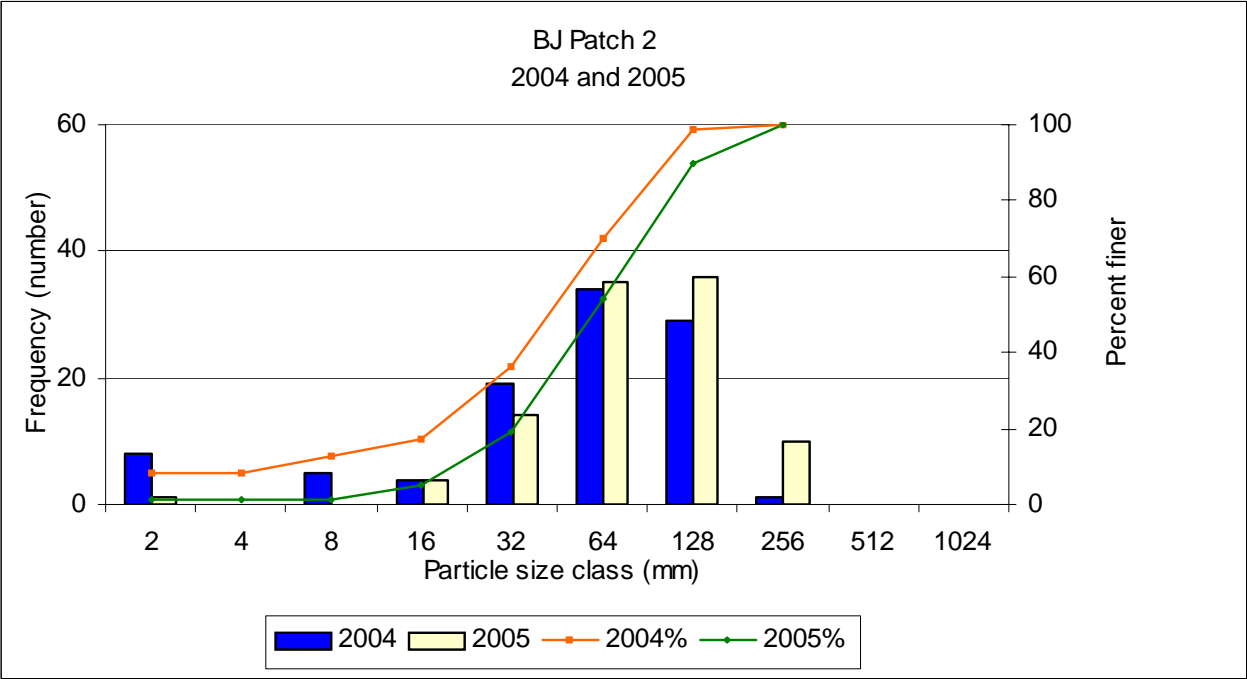
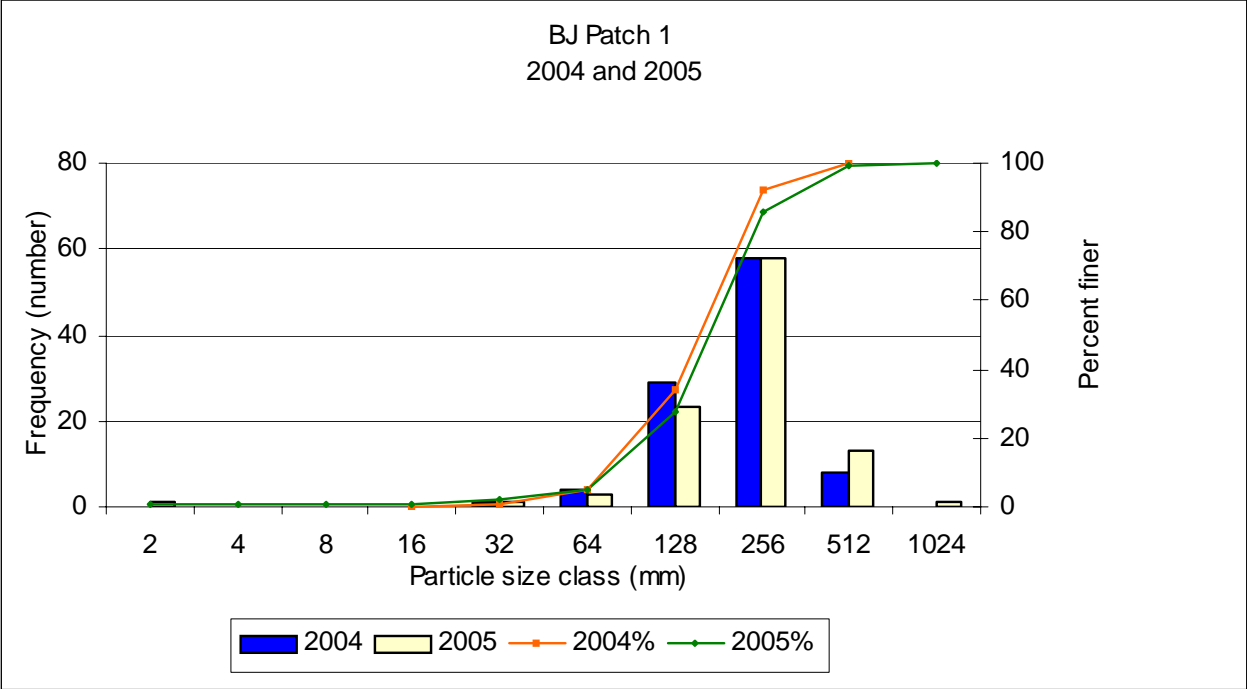


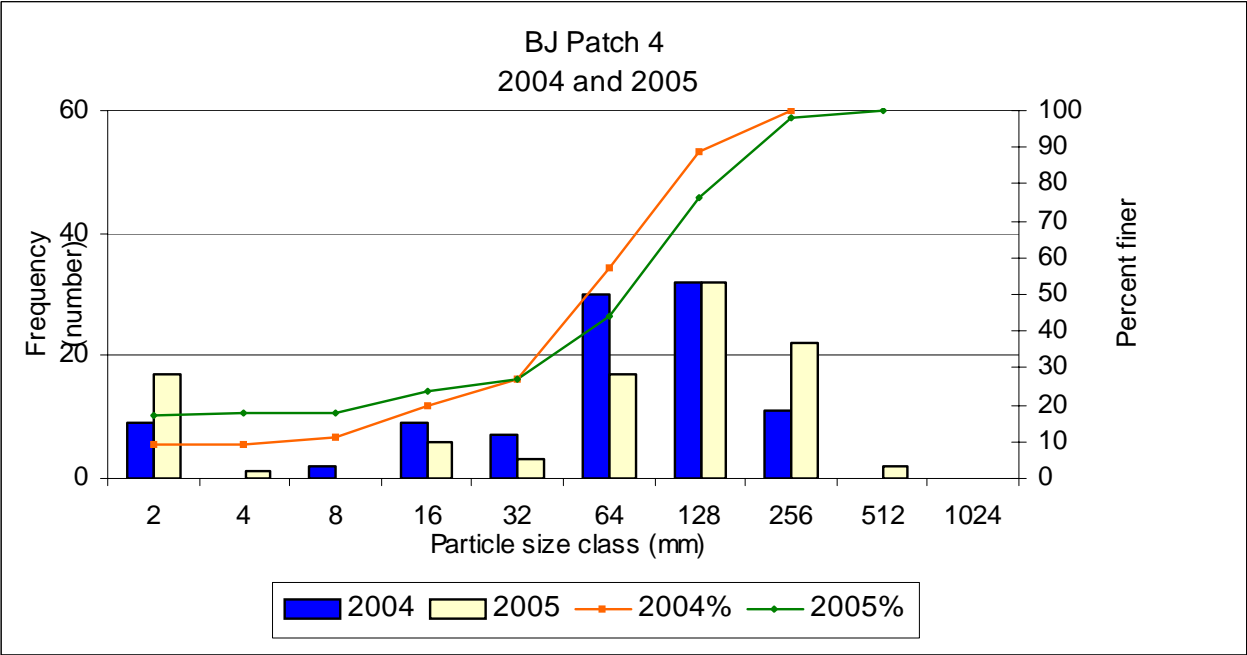
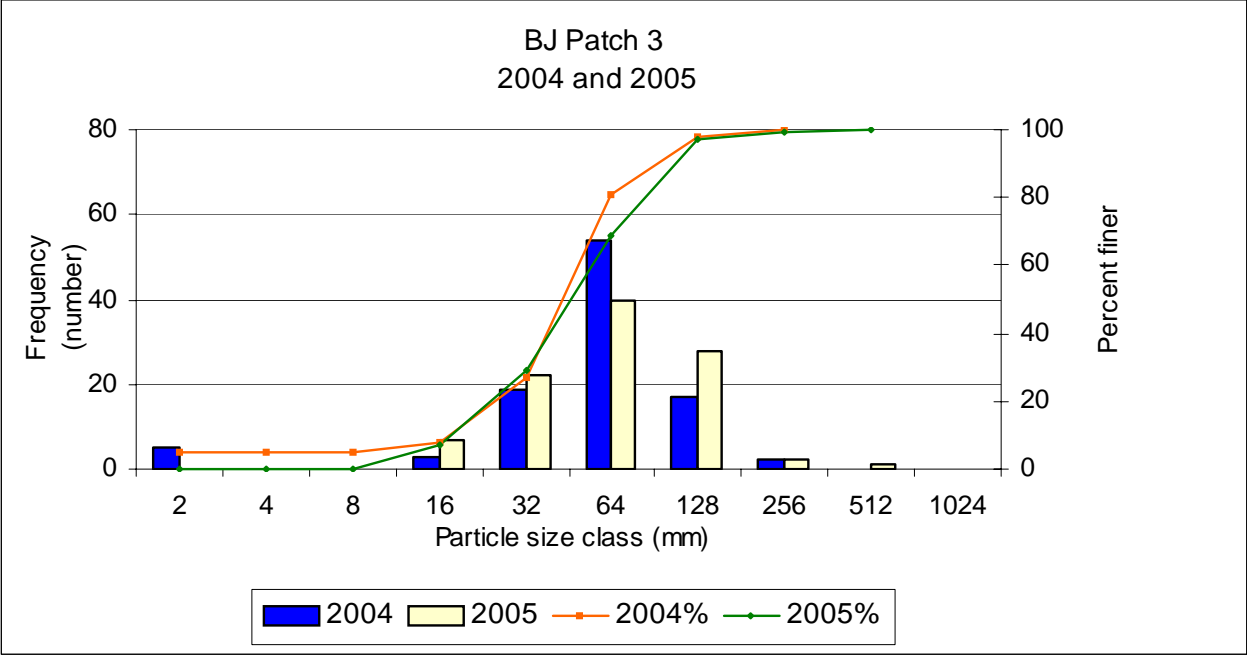


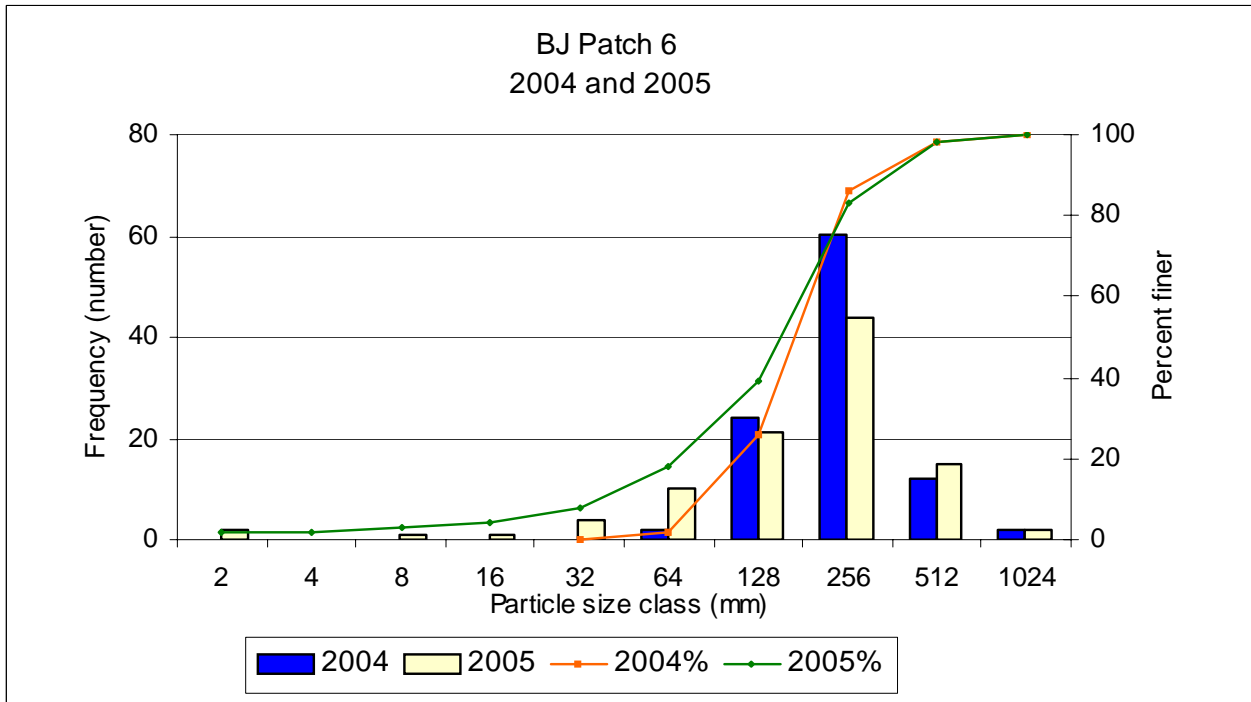
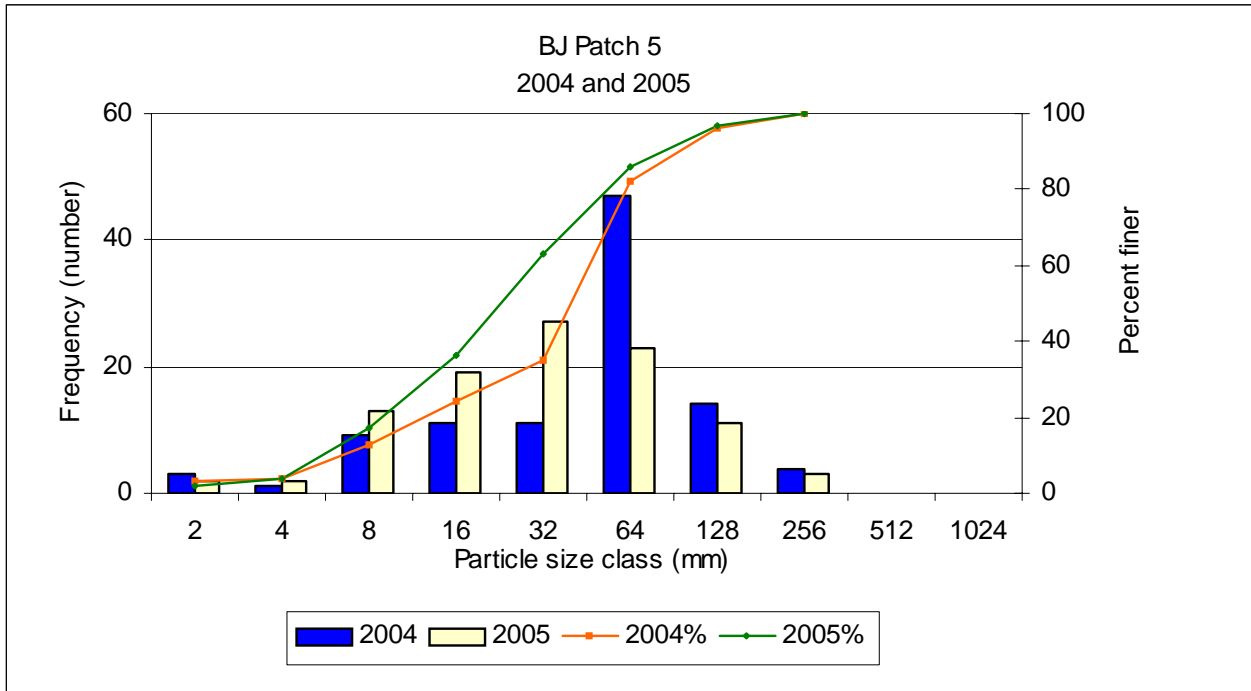


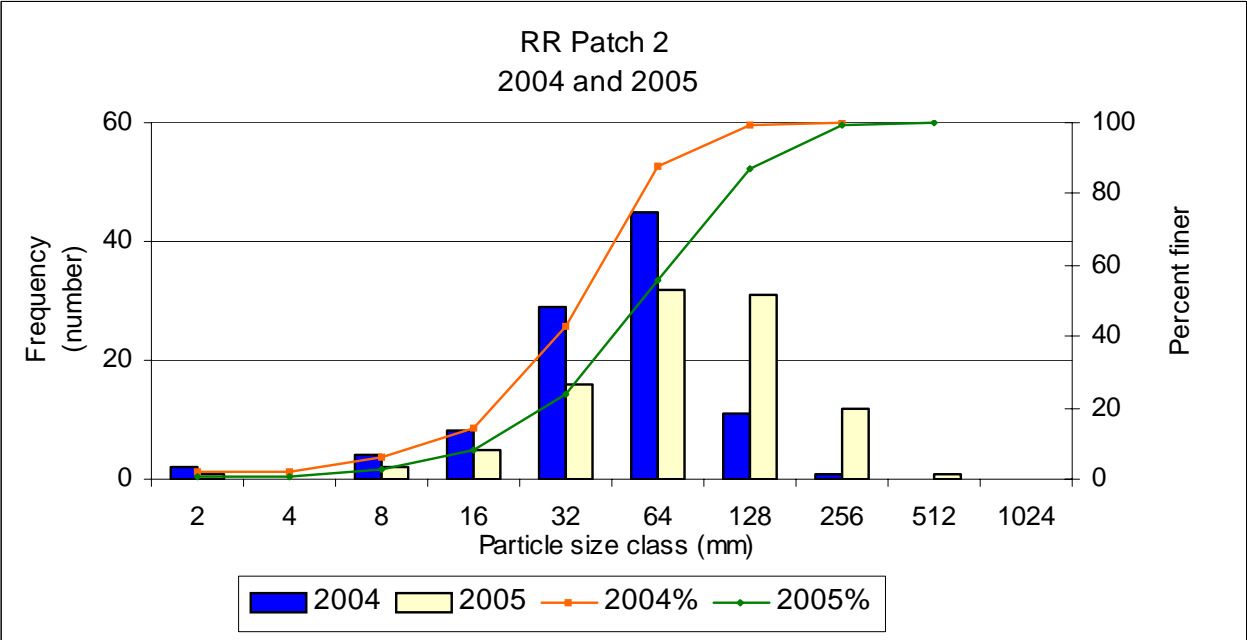
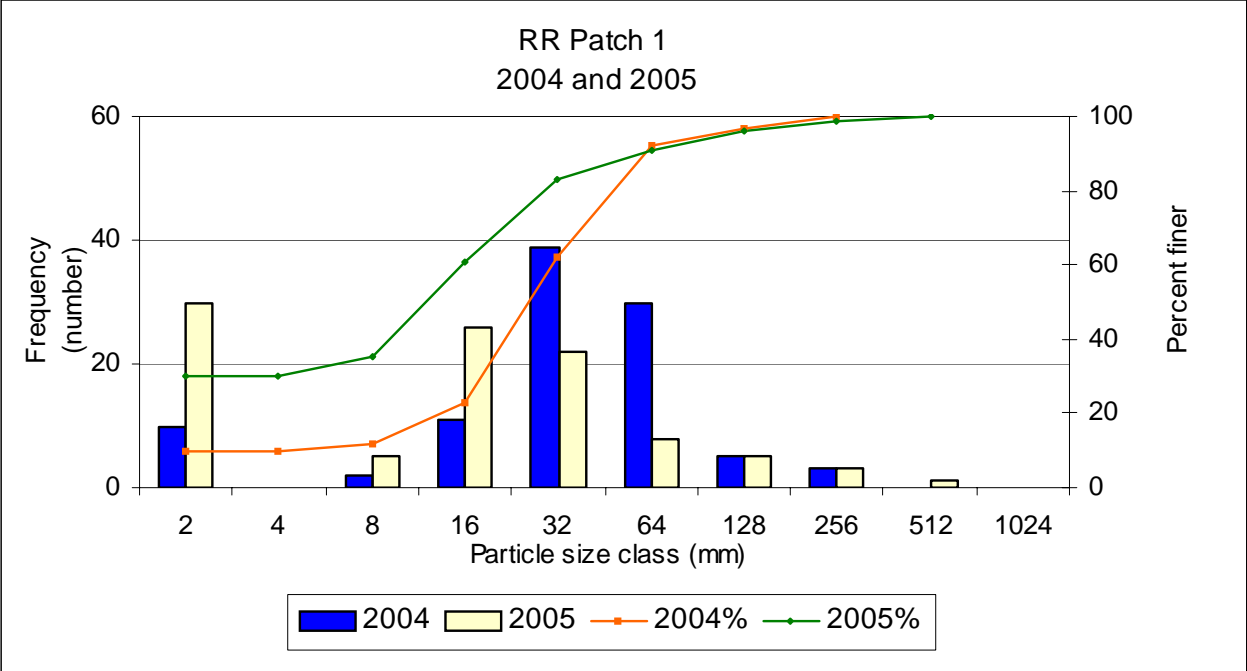
APPENDIX 3.3

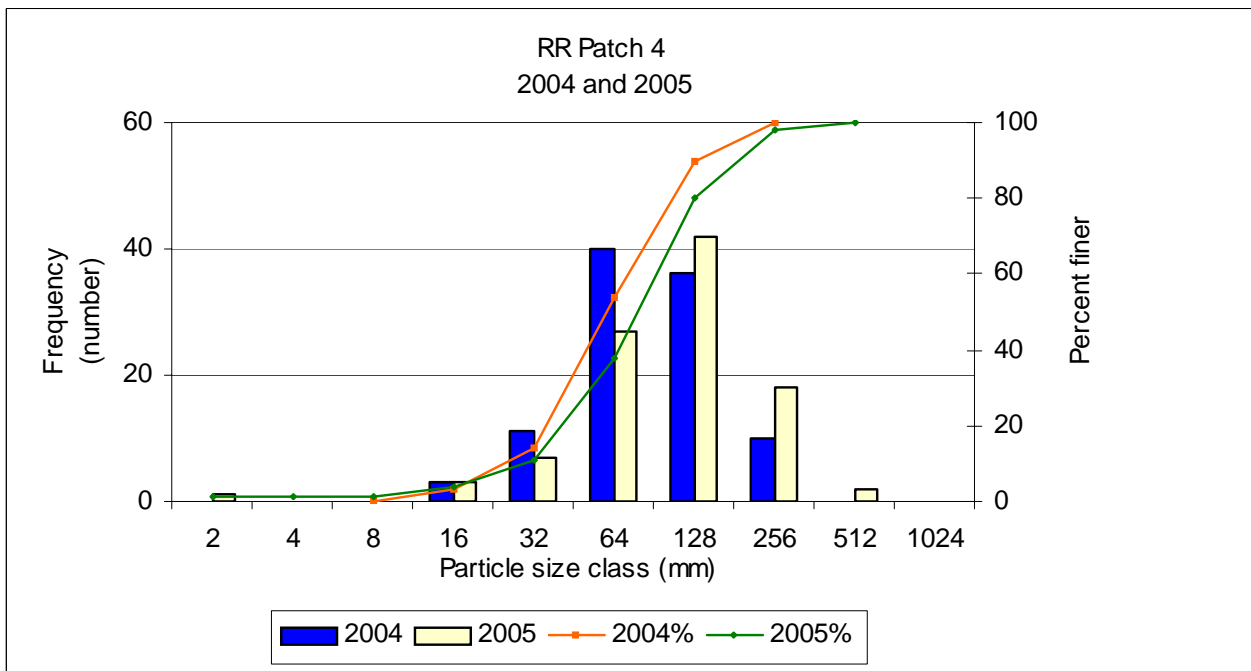
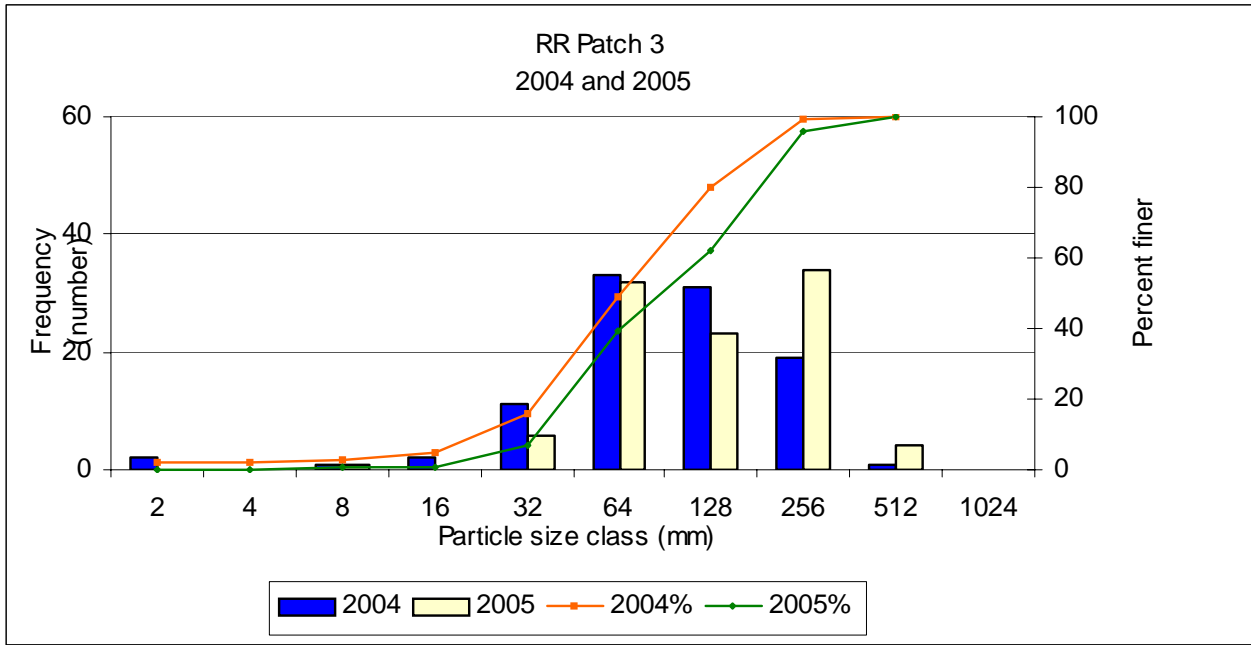
PEBBLE COUNT RESULTS

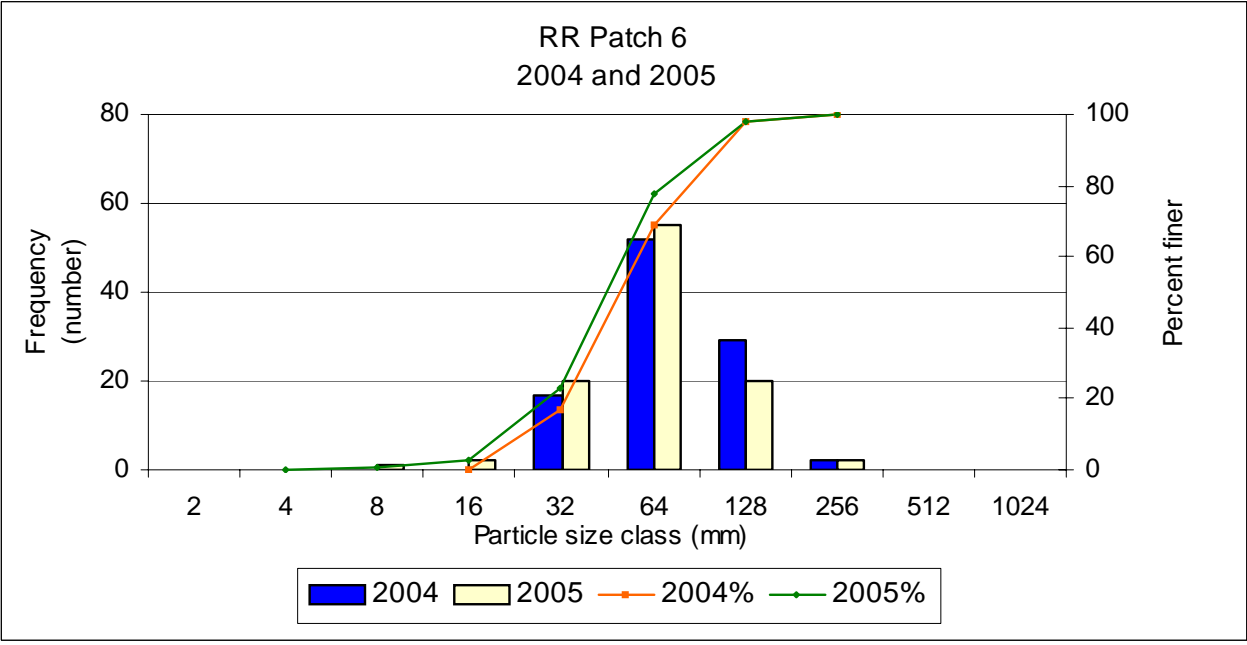
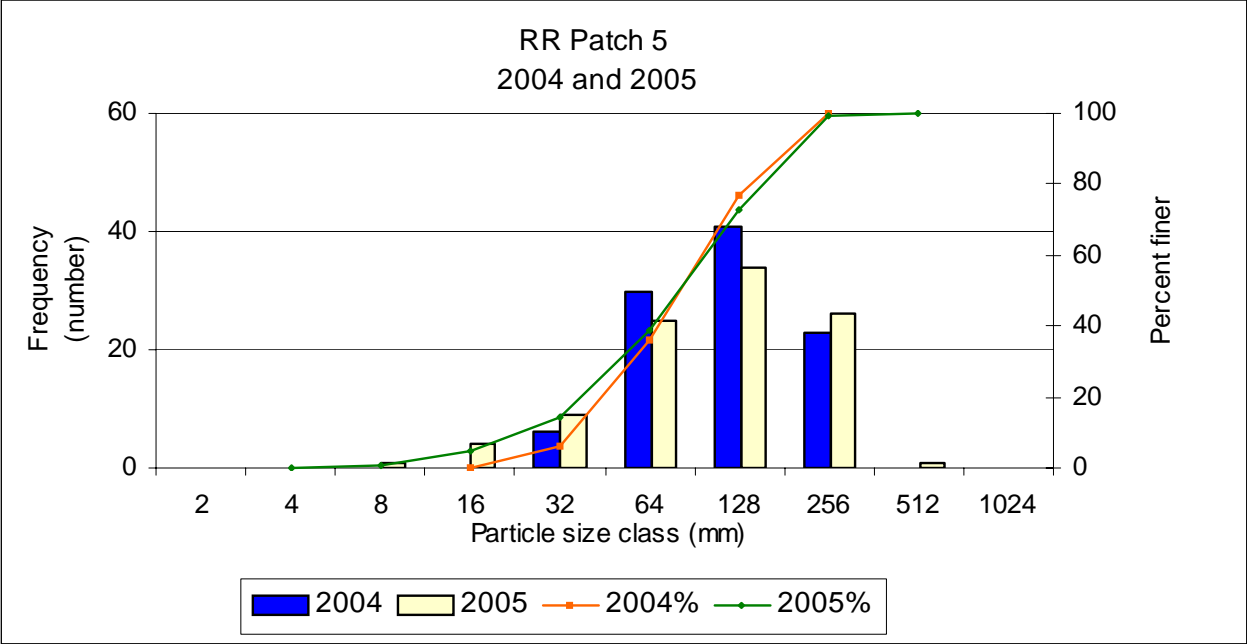


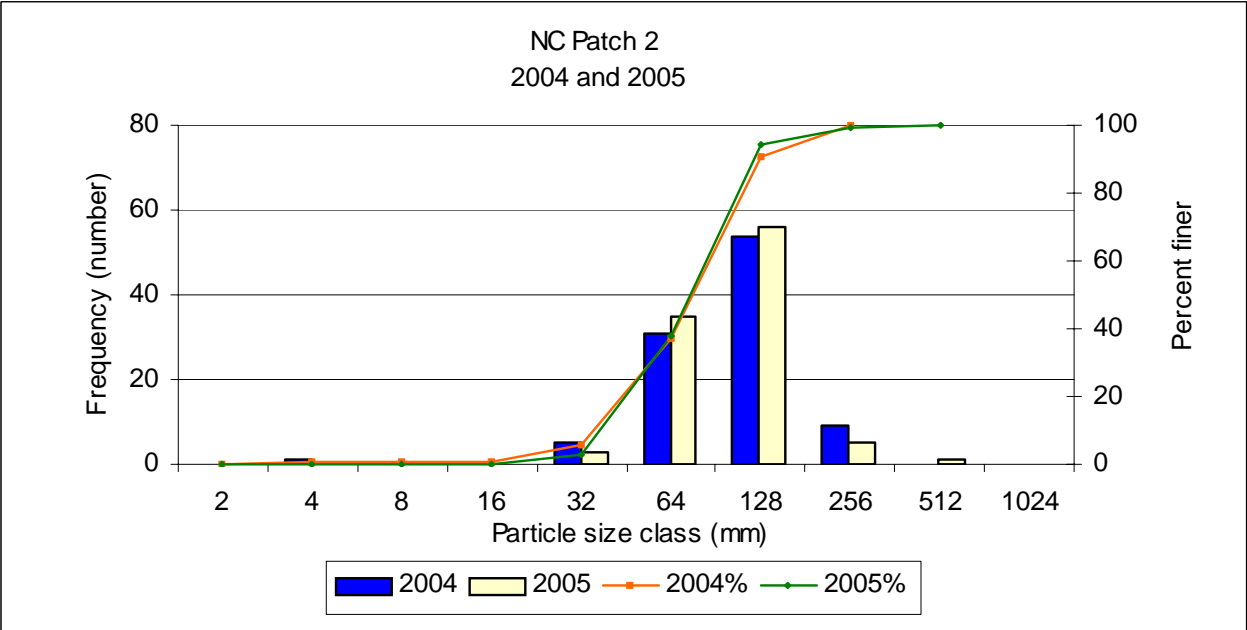
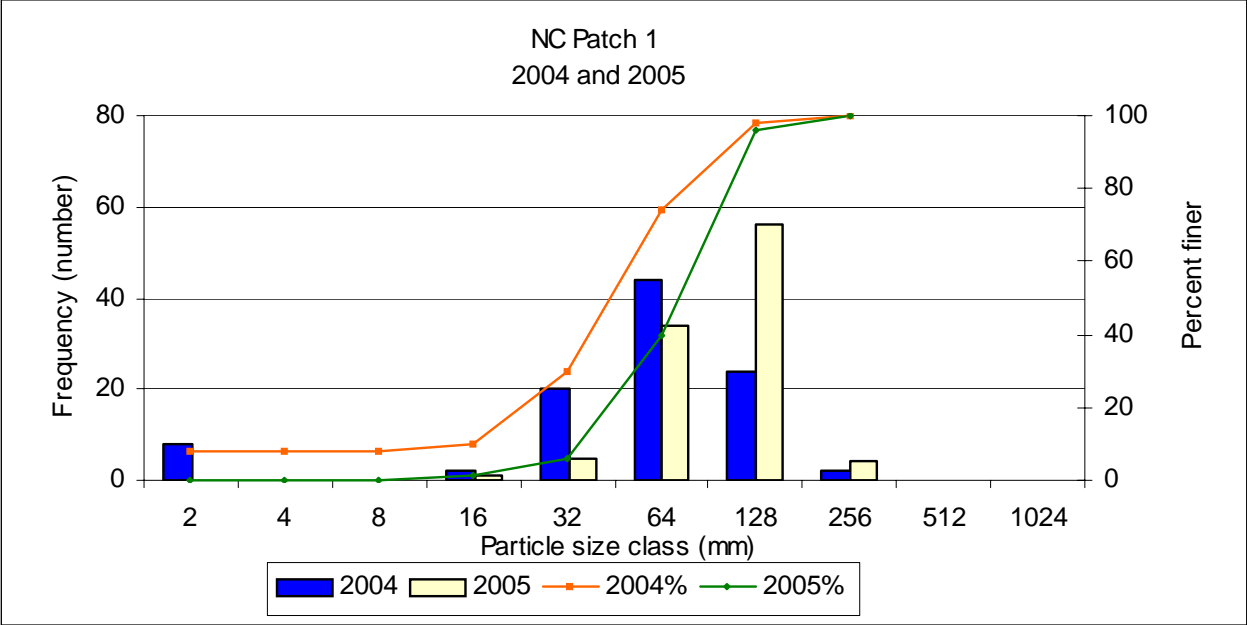


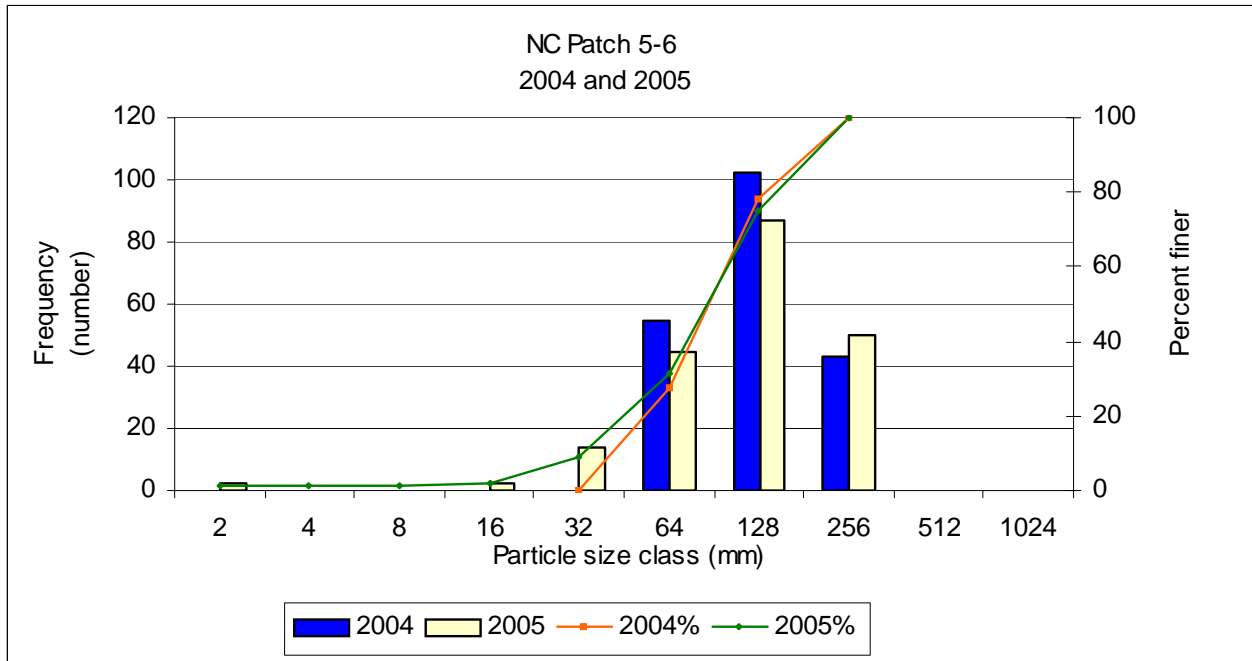
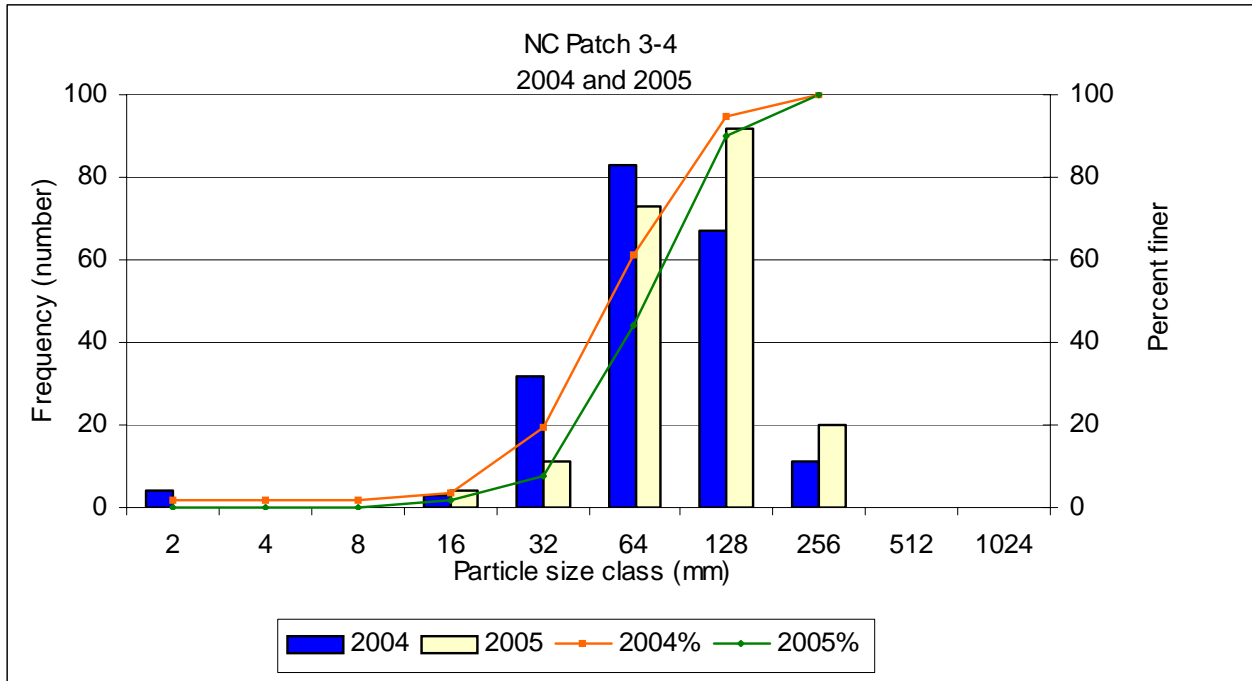


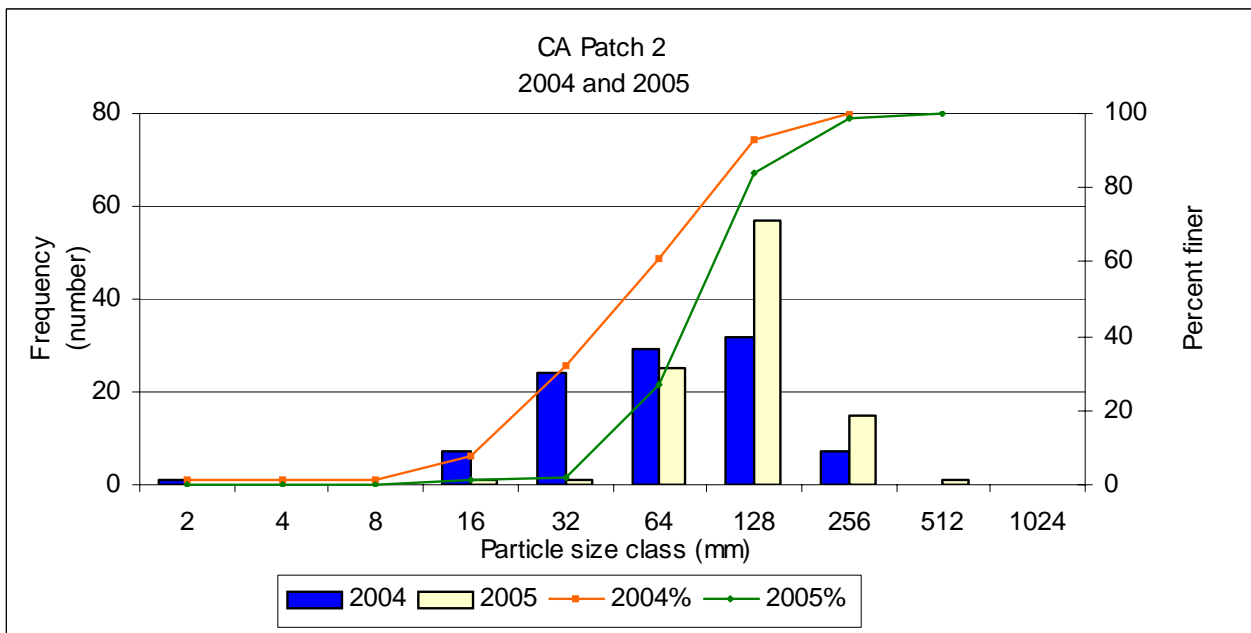
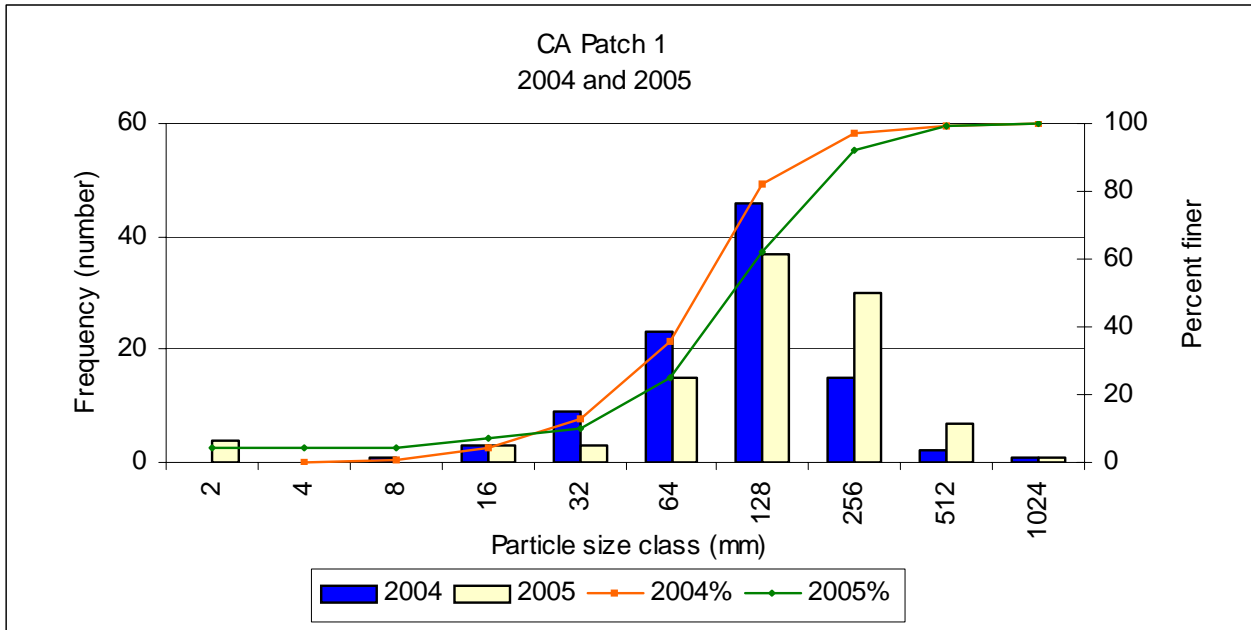


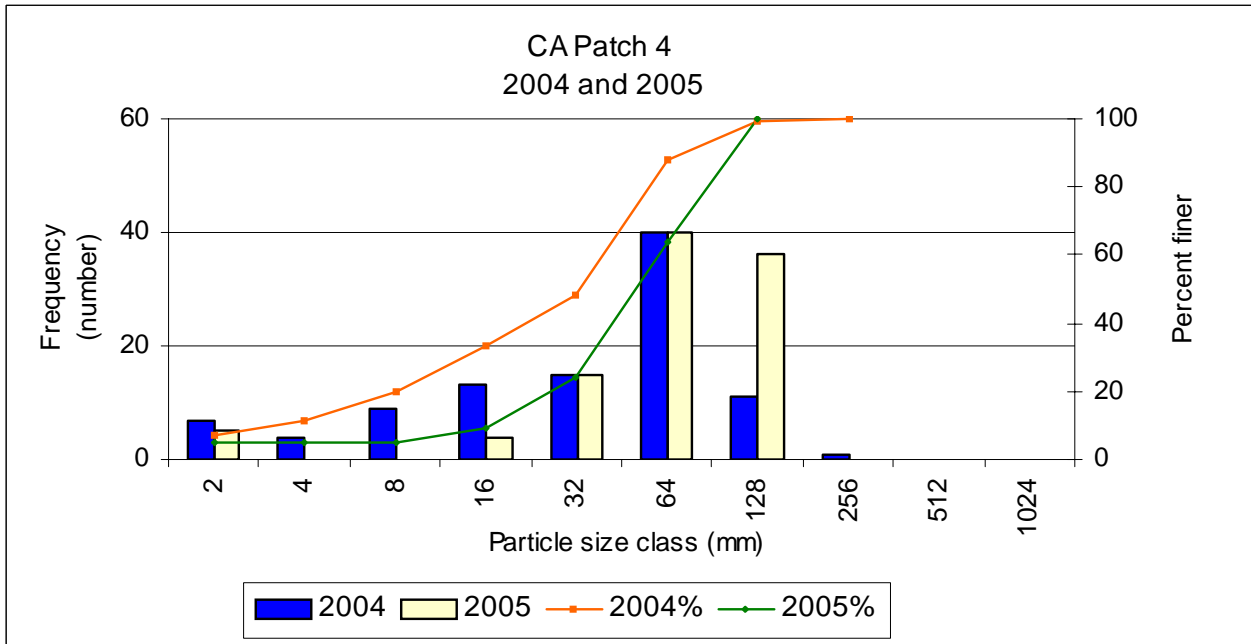
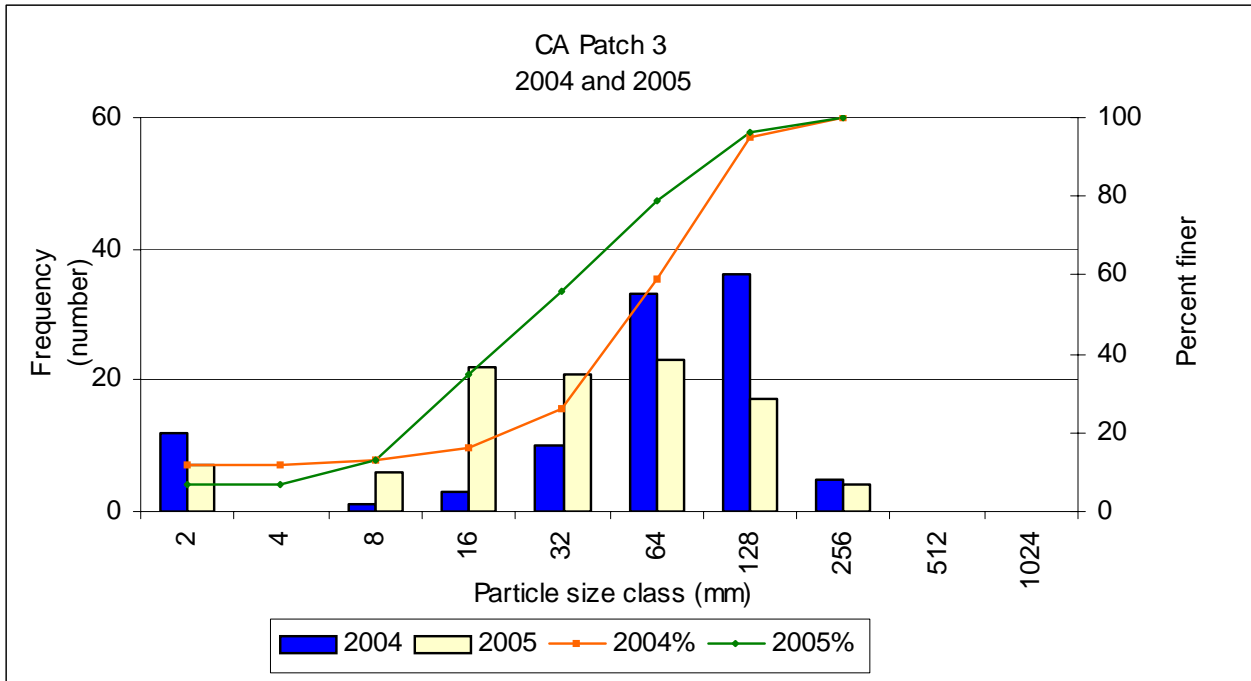


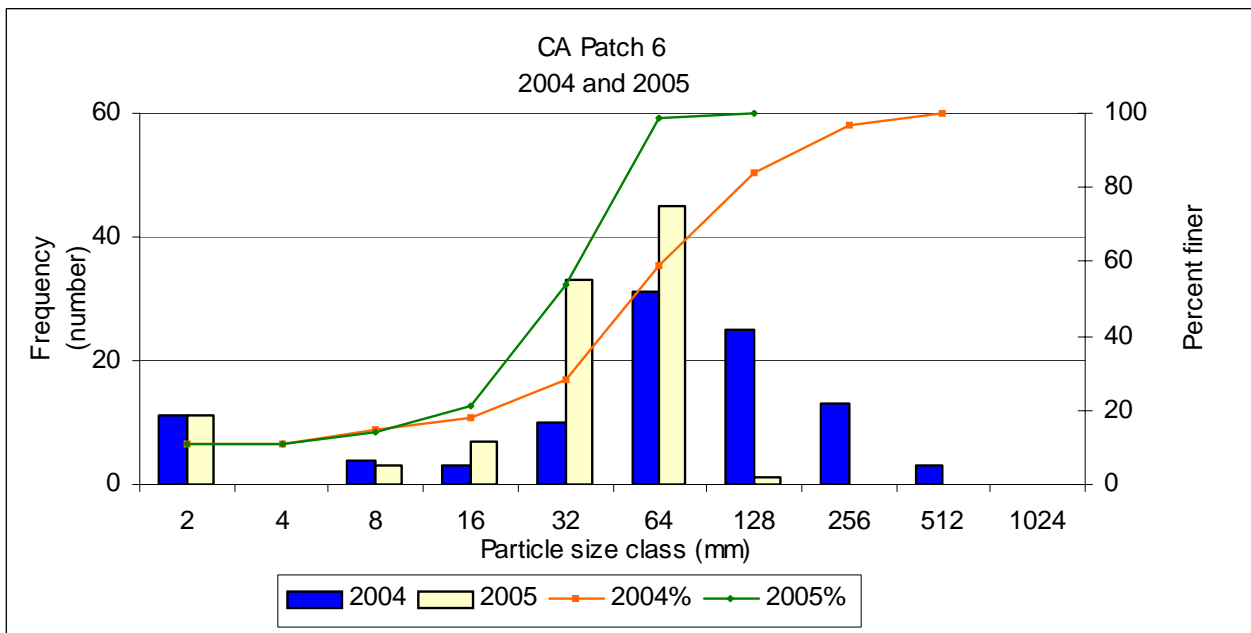
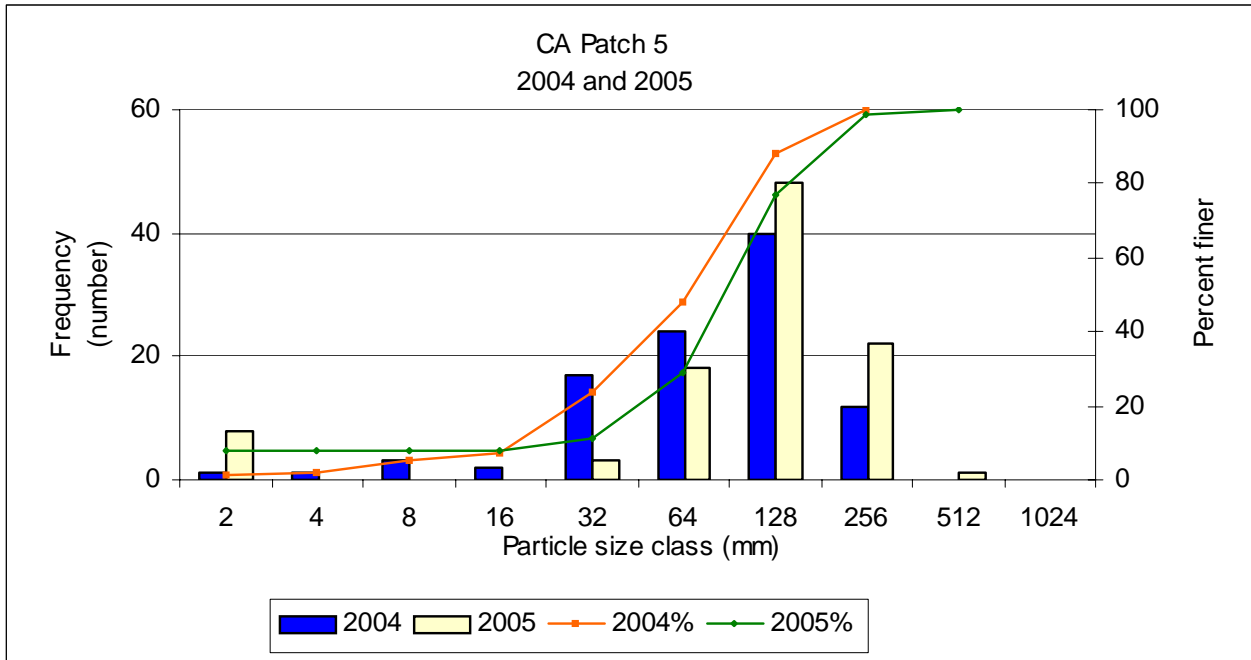












APPENDIX 4.1

**SUSPENDED
SEDIMENTS AND
BEDLOAD RESULTS**

MID	6/7/2005	1360	33.01	MID	5/25/2005	727	0.98	0.45	0.54
MID	6/15/2005	694	7.49	MID	5/27/2005	995	9.89	9.17	0.73
MID	6/21/2005	898	9.69	MID	5/29/2005	1240	8.06	6.14	1.93
MID	5/17/2004	127	0.86	MID	5/31/2005	1420	33.48	23.87	9.61
MID	5/19/2004	395	94.81	MID	6/1/2005	1660	239.76	229.33	10.43
MID	5/20/2004	724	74.20	MID	6/2/2005	1760	433.09	413.37	19.71
MID	5/21/2004	977	167.32	MID	6/3/2005	1780	376.67	364.11	12.56
MID	5/22/2004	1290	186.13	MID	6/4/2005	1720	276.60	261.75	14.85
MID	5/23/2004	1580	394.17	MID	6/5/2005	1660	473.80	466.97	6.83
MID	5/24/2004	1600	155.35	MID	6/6/2005	1440	406.07	379.62	26.45
MID	5/24/2004	1340	83.12	MID	6/7/2005	1390	390.54	382.46	8.08
MID	5/25/2004	1050	25.49	MID	5/20/2004	724	0.30		0.30
MID	5/27/2004	947	20.43	MID	5/21/2004	977	0.37		0.37
MID	5/29/2004	833	16.85	MID	5/22/2004	1300	56.21	54.84	1.37
MID	5/31/2004	724	15.62	MID	5/23/2004	1500	**		
MID	6/2/2004	621	17.59	MID	5/24/2004	1600	148.23	137.49	10.74
MID	6/4/2004	515	2.78	MID	5/24/2004	1340	181.02	174.39	6.64
MID	6/7/2004	416	3.93	MID	5/25/2004	1050	19.32	18.05	1.27
MID	6/9/2004	326	1.76	MID	5/27/2004	947	9.93	9.26	0.67
CA	4/21/2005	194	3.14	MID	5/29/2004	833	6.62	6.25	0.37
CA	5/22/2005	442	104.90	MID	5/31/2004	724	0.24		0.24
CA	5/23/2005	564	50.20	MID	6/2/2004	616	0.14		0.14
CA	5/25/2005	835	159.89	MID	6/17/2003	1388	4.97	3.42	1.55
CA	5/27/2005	1030	119.45	MID	6/17/2003	1388	5.75	0.35	5.40
CA	5/29/2005	1330	161.42	MID	6/17/2003	1395	6.85	0.20	6.65
CA	5/31/2005	1580	264.20	MID	6/17/2003	1395	4.53	0.02	4.52
CA	5/31/2005	1580	140.62	MID	6/18/2003	1409	10.82	2.53	8.28
CA	6/1/2005	1790	265.52	MID	6/18/2003	1409	24.15	14.23	9.92
CA	6/2/2005	1870	358.08	CA	5/25/2005	831	0.95	0.05	0.90
CA	6/3/2005	1830	276.39	CA	5/27/2005	1030	1.19	0.07	1.12
CA	6/4/2005	2080	173.90	CA	5/29/2005	1330	2.85	0.34	2.52
CA	6/5/2005	2010	200.58	CA	5/31/2005	1590	63.38	57.34	6.04
CA	6/6/2005	1750	103.83	CA	6/1/2005	1790	4.19	0.79	3.40
CA	6/7/2005	1580	68.18	CA	6/2/2005	1870	23.56	18.20	5.36
CA	6/15/2005	741	51.96	CA	6/3/2005	1830	128.45	117.73	10.72
CA	6/21/2005	886	11.95	CA	6/4/2005	2090	213.24	203.11	10.14
CA	6/27/2005	712	7.68	CA	6/5/2005	2010	37.11	26.80	10.31
CA	5/17/2004	174	11.73	CA	6/6/2005	1750	44.02	27.13	15.71
CA	5/20/2004	784	1135.46	CA	6/7/2005	1580	14.99	10.80	4.18
CA	5/20/2004	790	605.10	CA	5/20/2004	790	1.12		1.12
CA	5/21/2004	1060	806.19	CA	5/21/2004	1070	1.38		1.38
CA	5/22/2004	1450	613.97	CA	5/22/2004	1450	2.33		2.33
CA	5/23/2004	1730	1017.15	CA	5/23/2004	1740	2.44		2.44
CA	5/24/2004	1650	233.63	CA	5/24/2004	1610	18.79	1.50	17.29
CA	5/25/2004	1420	166.59	CA	5/25/2004	1410	14.99	6.74	8.26
CA	5/25/2004	1120	86.09	CA	5/25/2004	1120	5.90	0.48	5.42
CA	5/27/2004	978	18.46	CA	5/27/2004	978	7.54		7.54
CA	5/29/2004	866	35.03	CA	5/29/2004	866	3.88		3.88
CA	5/31/2004	738	21.89	CA	5/31/2004	738	2.16		2.16
CA	6/2/2004	632	17.90	CA	6/2/2004	632	1.70		1.70
CA	6/4/2004	531	15.04	CA	6/17/2003	1405	10.24		10.24
CA	6/7/2004	461	7.46	CA	6/17/2003	1396	9.25		9.25
CA	6/9/2004	347	2.34	CA	6/17/2003	1372	9.81	0.10	9.71
				CA	6/17/2003	1372	7.57	0.01	7.56
				CA	6/18/2003	1346	23.64	11.22	12.42
				CA	6/18/2003	1404	40.06	26.47	13.58
				CA	5/20/2002	357	0.06		0.06
				CA	5/21/2002	854	0.25		0.25
				CA	5/22/2002	1342	1.35	0.43	0.91

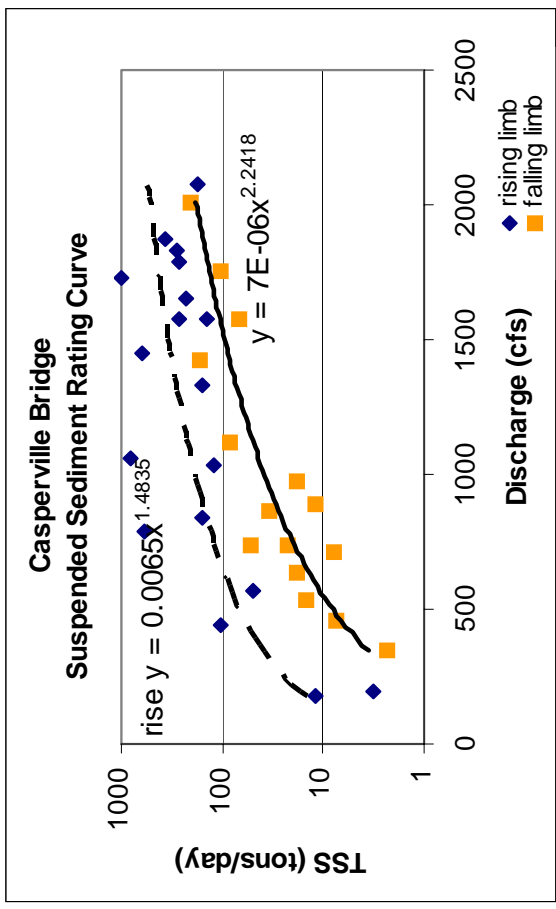
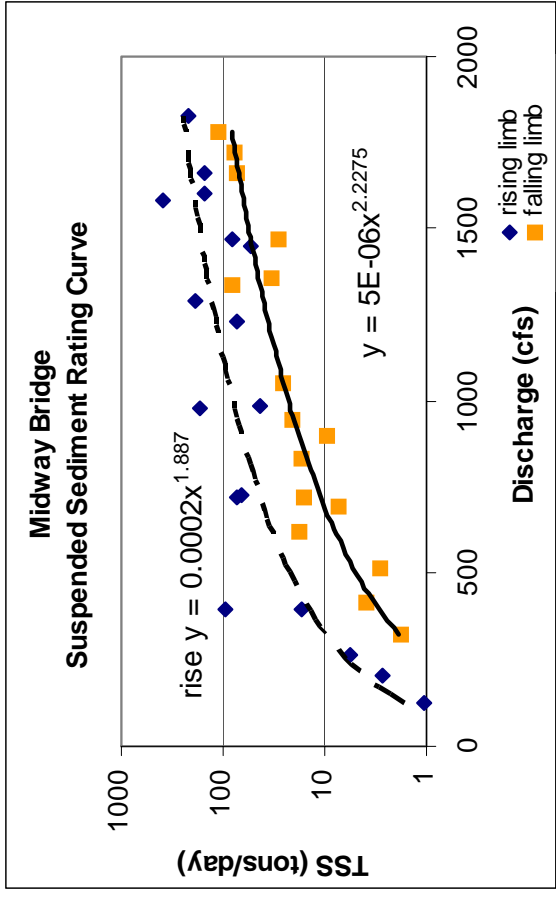
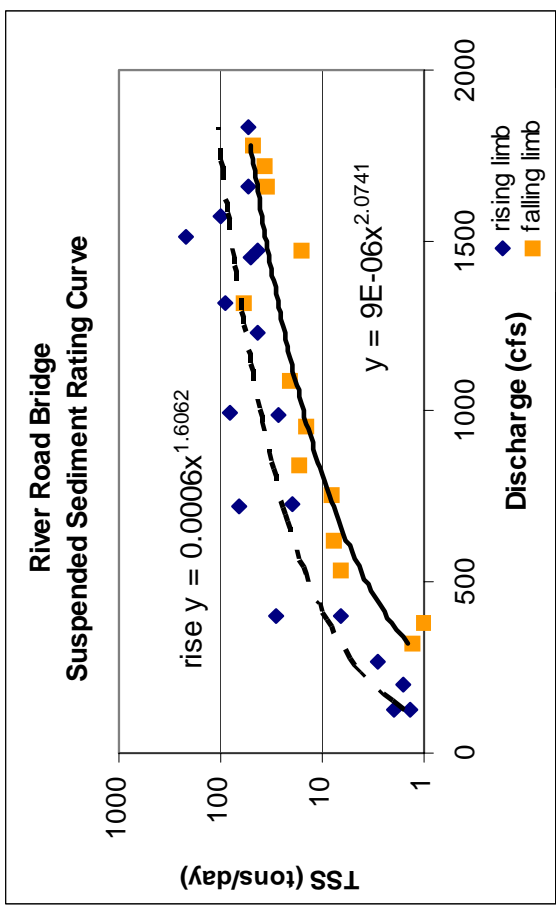
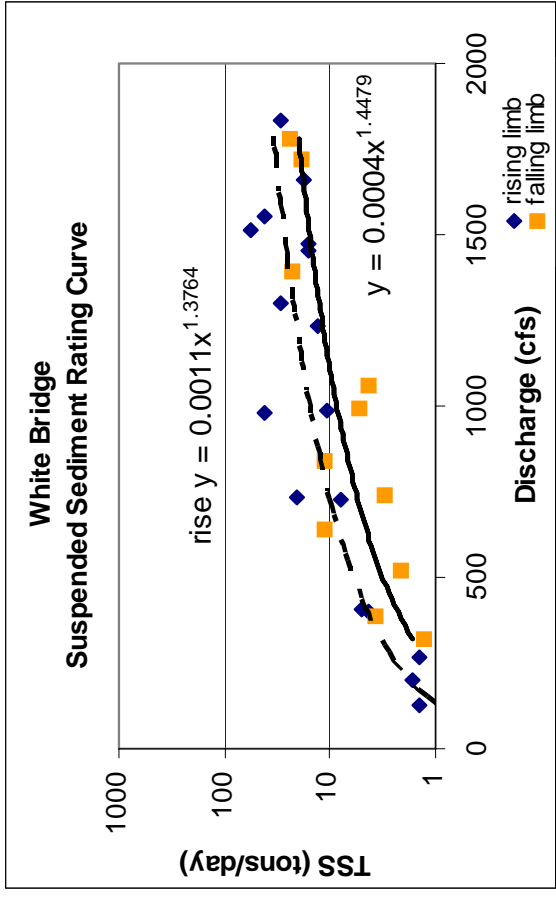


Figure 1. Suspended sediment rating curves for the four middle Provo River monitoring sites.

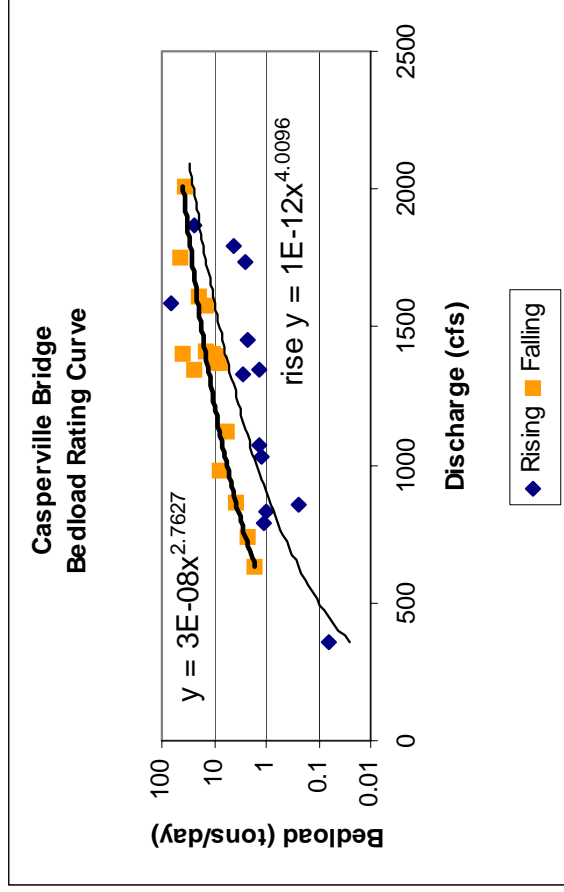
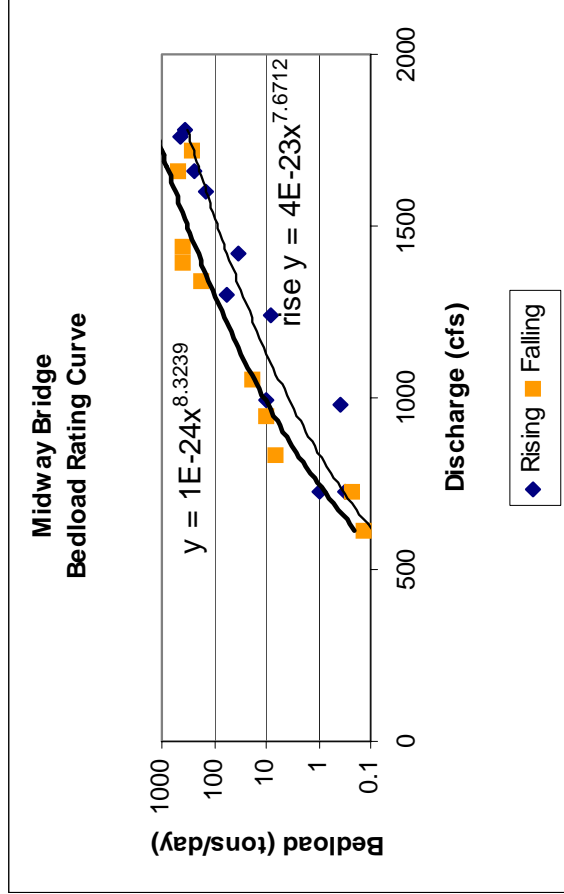
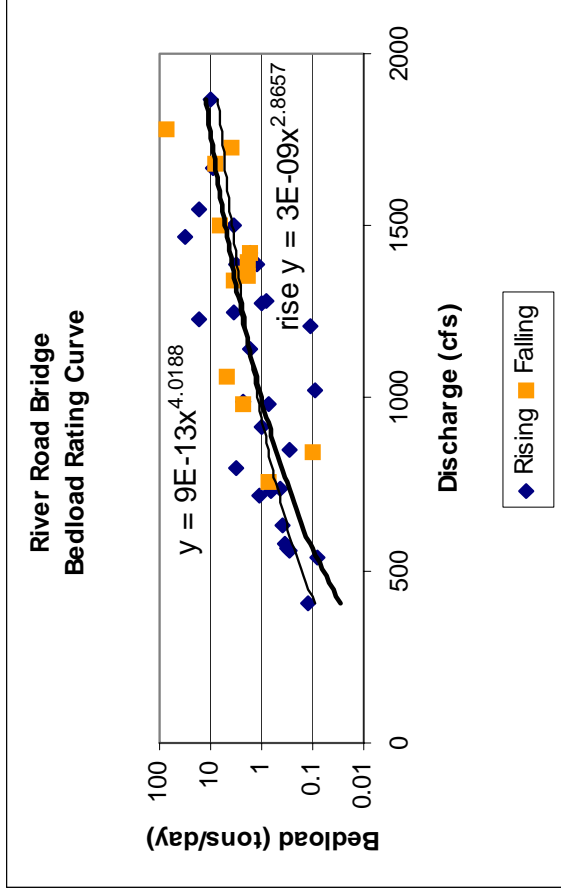
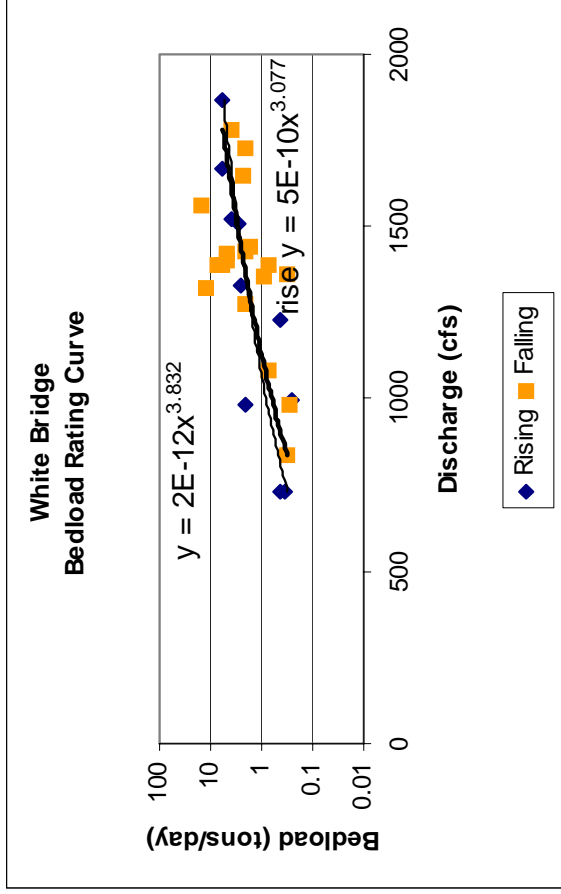


Figure 2. Bedload rating curves for the four middle Provo River monitoring sites.

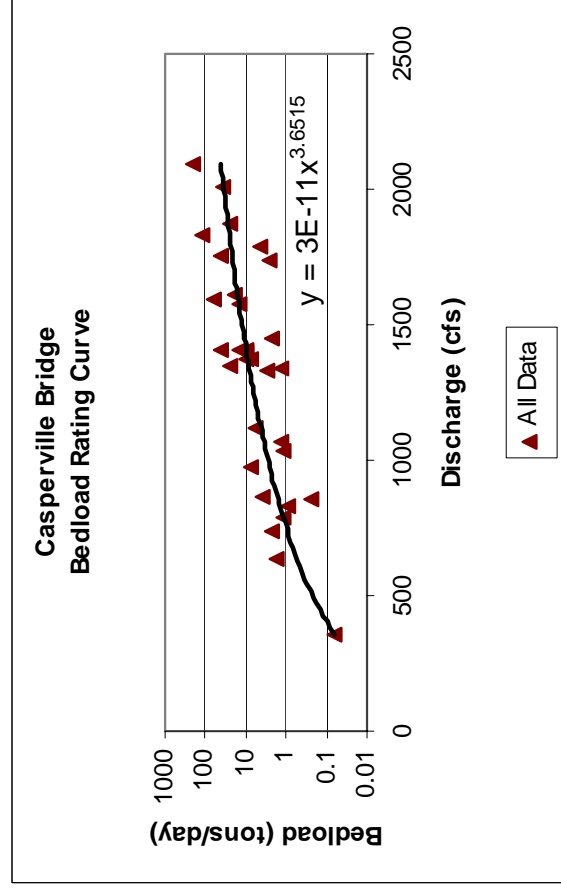
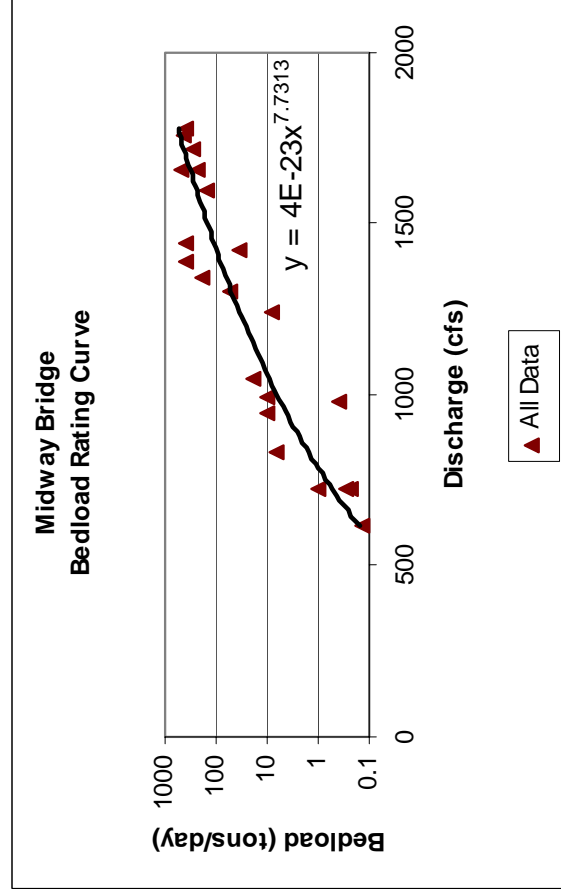
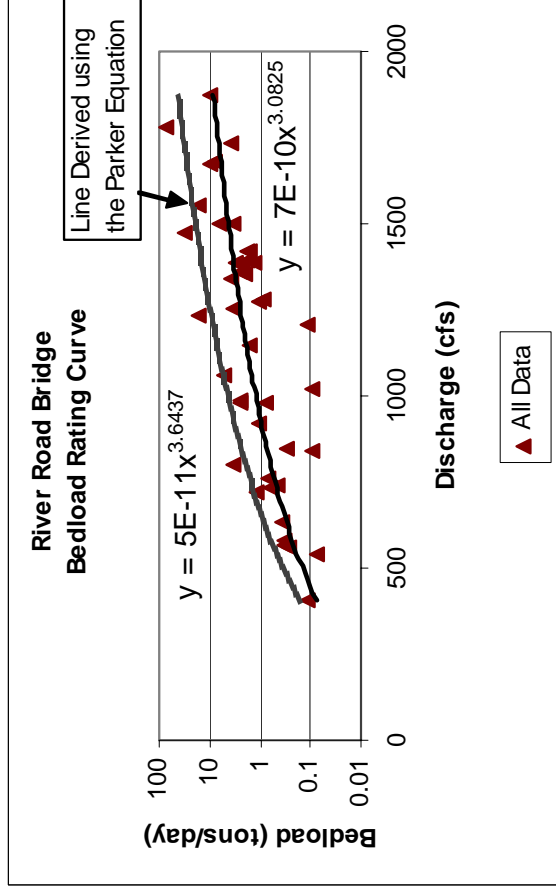
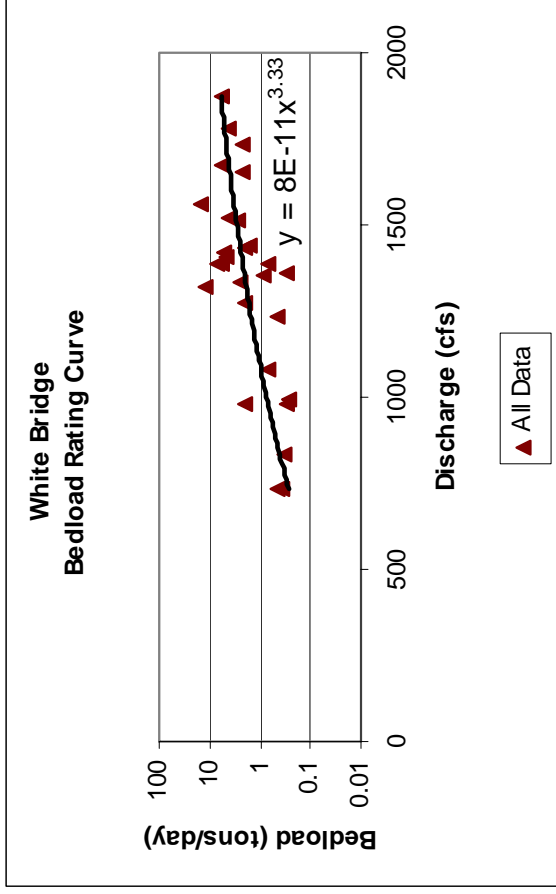


Figure 3. Bedload rating curves for the four middle Provo River monitoring sites.

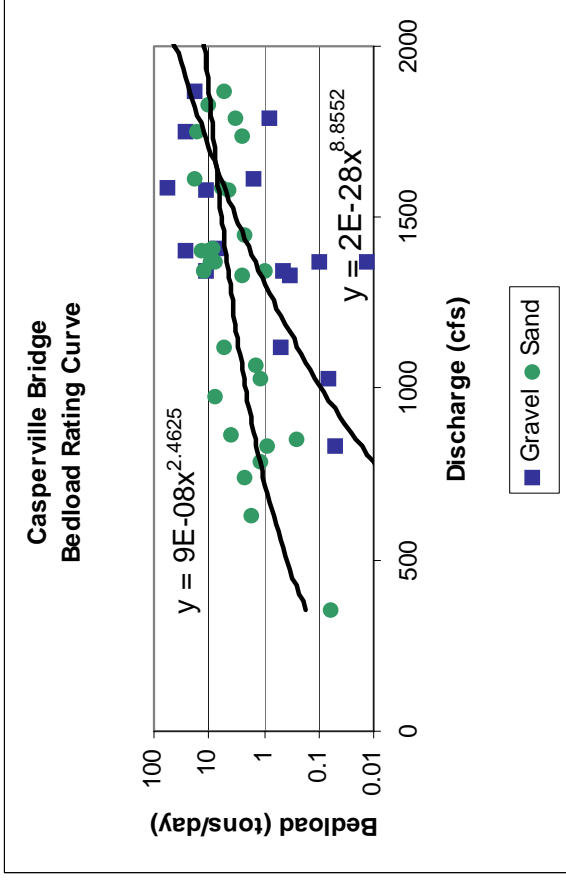
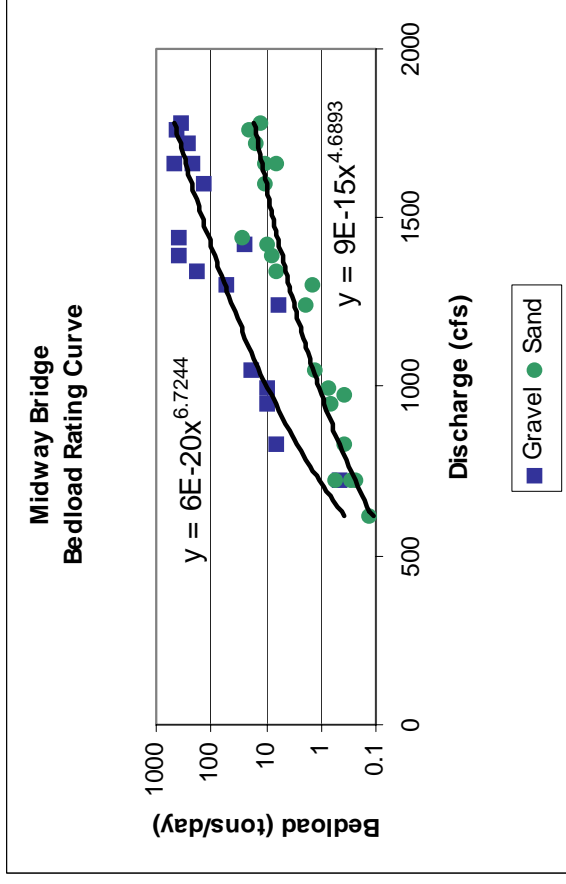
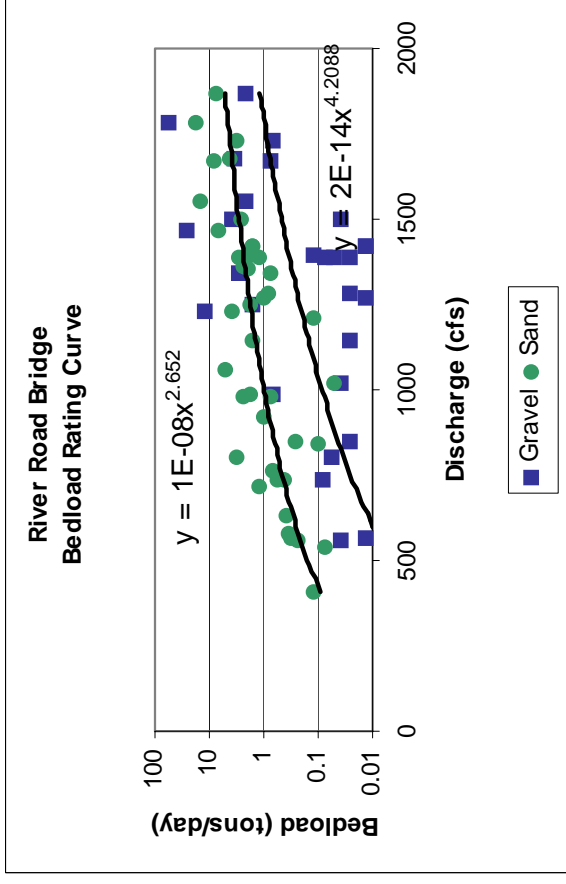
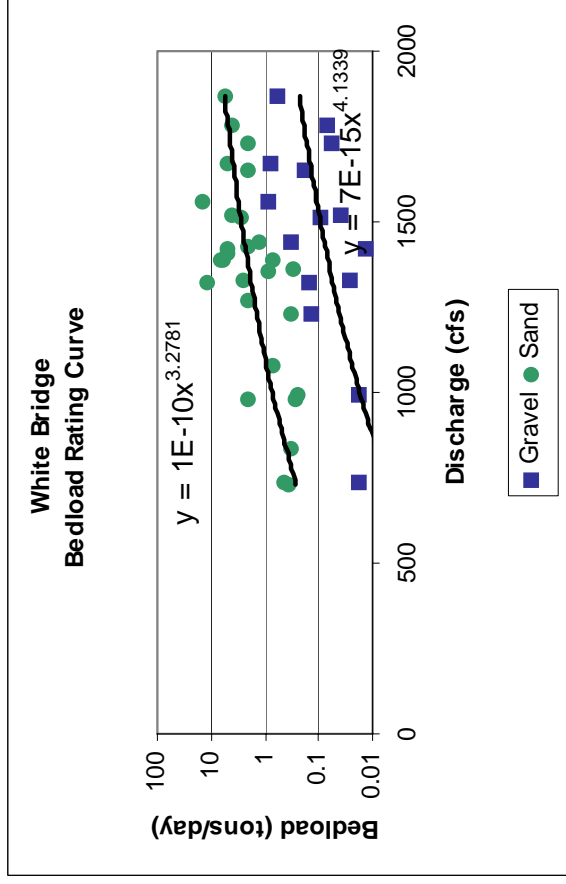


Figure 4. Sand (green circles) and gravel (blue squares) rating curves for the four middle Provo River monitoring sites.



727 cubic feet per second



995 cubic feet per second



1240 cubic feet per second



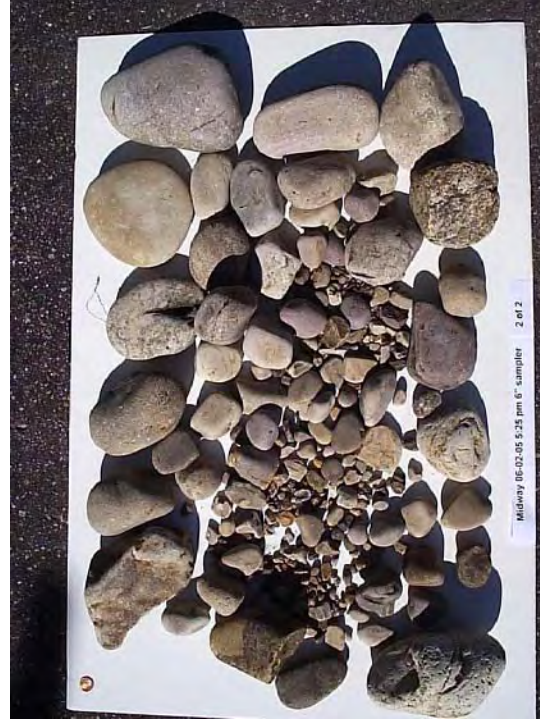
1420 cubic feet per second



1660 cubic feet per second



1760 cubic feet per second



1760 cubic feet per second



1780 cubic feet per second



1780 cubic feet per second



1720 cubic feet per second



1660 cubic feet per second



1660 cubic feet per second



1440 cubic feet per second



1440 cubic feet per second



1390 cubic feet per second



White Bridge 05-25-05 3:251 pm 6" sampler

734 cubic feet per second



White Bridge 05-27-05 11:53 am 6" sampler

995 cubic feet per second



White Bridge 05-29-05 9:36 am 6" sampler

1230 cubic feet per second



White Bridge 05-31-05 12:48 pm 6" sampler

1510 cubic feet per second



White Bridge 06-01-05 11:43 am 6" sampler

1670 cubic feet per second



White Bridge 06-02-05 6:25 pm 6" sampler

1870 cubic feet per second



White Bridge 06-03-05 11:38 am 6" sampler

1780 cubic feet per second



White Bridge 06-04-05 4:10 pm 6" sampler

1730 cubic feet per second



1650 cubic feet per second



1440 cubic feet per second



1360 cubic feet per second



734 cubic feet per second



988 cubic feet per second



1230 cubic feet per second



1470 cubic feet per second



River Road 06-01-05 12:40 pm 6" sampler

1670 cubic feet per second



River Road 06-02-05 7:29 pm 6" sampler

1870 cubic feet per second



River Road 06-03-05 12:23 pm 6" sampler

1780 cubic feet per second



River Road 06-04-05 5:25 pm 6" sampler

1730 cubic feet per second



1680 cubic feet per second



1500 cubic feet per second



1340 cubic feet per second



835 cubic feet per second



1030 cubic feet per second



1330 cubic feet per second



1580 cubic feet per second



1790 cubic feet per second



1870 cubic feet per second



1830 cubic feet per second



2090 cubic feet per second



2010 cubic feet per second



1750 cubic feet per second



1580 cubic feet per second

APPENDIX 5.1

MACROINVERTEBRATE TAXA RESULTS

Provo Benthos 05 Batch 1 (ID)
 EcoAnalysts, Inc.
 Data are NOT adjusted for subsampling

Stream Site	Provo River, Wasatch Co., UT Below Jordanelle (BJ)	Provo River, Wasatch Co., UT Below Jordanelle (BJ)	Provo River, Wasatch Co., UT Below Jordanelle (BJ)	Provo River, Wasatch Co., UT Below Jordanelle (BJ)	Provo River, Wasatch Co., UT River Road (RR)	Provo River, Wasatch Co., UT River Road (RR)	Provo River, Wasatch Co., UT River Road (RR)	Provo River, Wasatch Co., UT River Road (RR)	Provo River, Wasatch Co., UT Never Channelized (NC)	Provo River, Wasatch Co., UT Never Channelized (NC)	Provo River, Wasatch Co., UT Never Channelized (NC)	Provo River, Wasatch Co., UT Never Channelized (NC)	Provo River, Wasatch Co., UT Casperville Road (CA)	Provo River, Wasatch Co., UT Casperville Road (CA)	Provo River, Wasatch Co., UT Casperville Road (CA)	Provo River, Wasatch Co., UT Casperville Road (CA)
Rep	BJ01	BJ02	BJ03	BJ04	RR01	RR02	RR03	RR04	NC01	NC02	NC03	NC04	CA01	CA02	CA03	CA04
Date	04-21-2005	04-21-2005	04-21-2005	04-21-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005
Percent Subsampled	7.29	4.17	12.50	2.53	16.67	11.45	1.79	9.89	20.83	7.29	1.79	33.33	25.00	20.83	2.68	
Device	Hess	Hess	Hess	D-frame	Hess	Hess	Hess	D-frame	Hess	Hess	Hess	D-frame	Hess	Hess	Hess	D-frame
Habitat	12T.4492587N,463394E	12T.4492587N,463394E	12T.4492587N,463394E	12T.4492587N,463394E	12T.4489835N,463351E	12T.4489835N,463351E	12T.4489835N,463351E	12T.4489835N,463351E	12T.4434404N,461939E	12T.4434404N,461939E	12T.4434404N,461939E	12T.4434404N,461939E	12T.4482017N,461246E	12T.4482017N,461246E	12T.4482017N,461246E	12T.4482017N,461246E
EcoAnalysts Sample ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ephemeroptera																
Baetis tricaudatus	80	64	159	39	88	63	59	124	49	32	23	27	53	70	121	0
Diphetero hageni	2	1	3	0	22	12	11	12	4	6	1	3	11	3	5	0
Drunella grandis	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Epeorus sp.	0	2	2	0	8	3	2	4	1	0	0	0	1	2	2	0
Ephemerella inermis/intrequens	43	44	54	34	7	12	7	28	4	4	4	6	12	0	5	22
Leptophlebia	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraleptophlebia sp.	0	3	12	2	6	6	9	9	7	2	5	7	15	13	16	7
Rhithrogena sp.	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
Plecoptera																
Claassenia sabulosa	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Hesperoperla pacifica	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0
Isoperla sp.	0	0	0	0	1	0	1	0	18	13	11	14	26	28	34	37
Nemouridae	0	0	6	0	2	0	0	0	0	0	0	0	0	0	0	0
Perlidae	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Pteronarcella sp.	0	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0
Stenonema sp.	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Hemiptera																
Corixidae	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1
Coleoptera																
Opiuservus sp.	0	0	0	0	3	2	15	2	17	24	18	31	54	86	21	36
Diptera-Chironomidae																
Chironomidae	396	384	244	323	367	417	401	292	289	325	293	292	275	263	293	302
Diptera																
Antocha sp.	0	1	0	1	1	3	2	1	3	0	1	1	2	2	3	1
Atherix sp.	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2	0
Bezzia/Palomyia sp.	0	0	0	11	0	1	0	0	0	0	0	2	0	0	0	0
Ceratopogoninae	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Chelifera/Metachela sp.	0	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0
Dicranota sp.	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
Hemerodromia sp.	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0
Neoptilastis sp.	0	1	0	1	0	1	0	0	0	1	0	1	1	1	1	1
Simulium sp.	1	0	14	0	0	5	1	0	1	0	2	4	3	4	35	5
Trichoptera																
Brachycentrus americanus	24	11	22	4	0	0	2	3	2	2	1	0	0	2	5	2
Brachycentrus echo	2	3	0	0	7	7	6	4	0	0	2	5	14	5	48	5
Cheumatopsyche sp.	0	0	0	0	0	0	0	0	0	2	0	0	3	2	0	1
Culoptila sp.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Helicopsyche sp.	0	0	0	0	0	0	0	0	1	0	1	5	0	0	0	37
Hydropsyche sp.	2	0	5	2	1	1	5	4	18	4	11	14	59	81	103	3
Lepidostoma sp.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	2
Oecetis disjuncta	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	2
Protoptila sp.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Rhyacophila brunnea gr.	2	0	4	3	0	0	0	0	0	0	1	0	0	0	0	0
Rhyacophila coloradensis gr.	2	1	3	1	0	0	2	0	0	0	0	0	0	0	0	0
Gastropoda																
Gyraulus sp.	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Hydrobiidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Lymnaeidae	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Physa (Physella) sp.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Bivalvia																
Pisidium sp.	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	2
Sphaeriidae	0	0	0	0	0	0	4	0	2	0	0	0	0	0	0	0
Annelida																
Erpobdellidae	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Oligochaeta	16	14	9	29	27	37	31	31	95	150	131	83	52	37	8	44
Acarina																
Acari	0	0	0	1	0	2	1	0	0	1	1	1	0	0	0	2
Lebertia sp.	0	1	0	6	0	0	1	0	1	1	0	2	1	0	0	0
Oribatei	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sperchon sp.	0	1	1	1	1	1	0	2	0	0	0	2	1	0	0	3
Testudacarus sp.	1	0	2	4	1	0	0	1	0	0	0	0	0	0	0	0
Crustacea																
Caecidotea sp.	1	0	2	4	0	0	1	0	1	0	1	3	1	1	4	15
Ostracoda	10	45	75	14	15	7	3	3	3	3	3	13	0	0	0	5
Other Organisms																
Nematoda	5	6	2	5	2	4	16	0	8	11	0	17	8	8	4	10
Turbellaria	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0
Total	587	588	575	545	565	586	575	559	529	587	512	541	588	632	712	554

Stream Site	Provo River, Wasatch Co., UT Below Jordanelle (BJ)	Provo River, Wasatch Co., UT Below Jordanelle (BJ)	Provo River, Wasatch Co., UT Below Jordanelle (BJ)	Provo River, Wasatch Co., UT Below Jordanelle (BJ)	Provo River, Wasatch Co., UT River Road (RR)	Provo River, Wasatch Co., UT River Road (RR)	Provo River, Wasatch Co., UT River Road (RR)	Provo River, Wasatch Co., UT River Road (RR)	Provo River, Wasatch Co., UT Never Channelized (NC)	Provo River, Wasatch Co., UT Never Channelized (NC)	Provo River, Wasatch Co., UT Never Channelized (NC)	Provo River, Wasatch Co., UT Never Channelized (NC)	Provo River, Wasatch Co., UT Casperville Road (CA)	Provo River, Wasatch Co., UT Casperville Road (CA)	Provo River, Wasatch Co., UT Casperville Road (CA)	Provo River, Wasatch Co., UT Casperville Road (CA)
Rep	BJ01	BJ02	BJ03	BJ04	RR01	RR02	RR03	RR04	NC01	NC02	NC03	NC04	CA01	CA02	CA03	CA04
Date	04-21-2005	04-21-2005	04-21-2005	04-21-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005	04-20-2005
Percent Subsampled	7.29	4.17	12.50	2.53	16.67	12.50	11.45	1.79	9.89	20.83	7.29	1.79	33.33	25.00	20.83	2.68
Device	Hess	Hess	Hess	D-frame	Hess	Hess	Hess	D-frame	Hess	Hess	Hess	D-frame	Hess	Hess	Hess	D-frame
Habitat	12T.4492587N,463394E	12T.4492587N,463394E	12T.4492587N,463394E	12T.4492587N,463394E	12T.4489835N,463351E	12T.4489835N,463351E	12T.4489835N,463351E	12T.4489835N,463351E	12T.4434404N,461939E	12T.4434404N,461939E	12T.4434404N,461939E	12T.4434404N,461939E	12T.4482017N,461246E	12T.4482017N,461246E	12T.4482017N,461246E	12T.4482017N,461246E
EcoAnalysts Sample ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Abundance Measures																
Corrected Abundance	8047.77	14112.00	4600.00	21543.85	3390.00	4688.00	5019.75	31304.00	5348.19	2817.60	7019.52	30296.00	1764.00	2528.00	3417.60	20680.82
EPT Abundance	2166.18	3144.00	2168.00	3439.11	882.00	824.00	881.73	12376.00	1112.10	316.80	808.89	4480.00	534.00	892.00	1636.80	4404.94
Dominance Measures																
1st Dominant Taxon	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae	Chironomidae
1st Dominant Abundance	5429.16	9216.00	1952.00	12766.19	2202.00	3336.00	3500.73	16352.00	2921.79	1560.00	4017.03	16352.00	1406.40	1052.00	1406.40	11273.66
2nd Dominant Taxon	Baetis tricaudatus	Baetis tricaudatus	Baetis tricaudatus	Ostracoda	Baetis tricaudatus	Baetis tricaudatus	Baetis tricaudatus	Baetis tricaudatus	Oligochaeta	Oligochaeta	Oligochaeta	Oligochaeta	Hydropsyche sp.	Opiotervus sp.	Baetis tricaudatus	Oligochaeta
2nd Dominant Abundance	1096.80	1536.00	1272.00	2964.75	528.00	504.00	515.07	6944.00	960.45	720.00	1796.01	4648.00	177.00	344.00	580.80	1642.52
3rd Dominant Taxon	Ephemerella inermis/infrequens	Ostracoda	Ephemerella inermis/infrequens	Baetis tricaudatus	Oligochaeta	Oligochaeta	Baetis tricaudatus	Brachycentrus echo	Baetis tricaudatus	Baetis tricaudatus	Baetis tricaudatus	Opiotervus sp.	Opiotervus sp.	Hydropsyche sp.	Hydropsyche sp.	Hydropsyche sp.
3rd Dominant Abundance	569.53	1080.00	432.00	1541.67	162.00	296.00	270.63	1904.00	495.39	153.60	315.33	1736.00	162.00	324.00	494.40	1381.21
% 1 Dominant Taxon	67.46	65.31	42.43	59.27	64.96	71.16	89.74	52.24	54.63	55.37	57.23	53.97	46.77	41.61	41.15	54.51
% 2 Dominant Taxa	81.39	76.19	70.09	73.03	80.53	81.91	80.00	74.42	72.59	80.92	74.42	69.32	55.22	56.85	52.45	62.45
% 3 Dominant Taxa	88.42	83.84	79.48	80.18	85.31	88.23	85.39	80.50	81.85	86.37	87.30	75.05	65.99	68.04	72.61	69.13
Richness Measures																
Species Richness	15.00	20.00	19.00	20.00	23.00	16.00	19.00	18.00	22.00	21.00	20.00	28.00	21.00	21.00	19.00	24.00
EPT Richness	9.00	10.00	11.00	8.00	14.00	6.00	11.00	10.00	12.00	10.00	10.00	11.00	10.00	9.00	10.00	10.00
Ephemeroptera Richness	4.00	5.00	5.00	5.00	6.00	5.00	6.00	5.00	5.00	4.00	4.00	5.00	4.00	4.00	4.00	2.00
Plecoptera Richness	0.00	2.00	2.00	1.00	5.00	0.00	2.00	1.00	2.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00
Trichoptera Richness	5.00	3.00	4.00	4.00	3.00	4.00	3.00	4.00	5.00	4.00	4.00	5.00	3.00	4.00	4.00	7.00
Chironomidae Richness	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Oligochaeta Richness	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Non-Chiro. Non-Olig. Richness	13.00	18.00	17.00	18.00	21.00	14.00	17.00	18.00	20.00	19.00	18.00	26.00	19.00	19.00	17.00	22.00
Rhyacophila Richness	2.00	1.00	2.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Community Composition																
% Ephemeroptera	21.47	19.39	40.00	13.76	23.36	16.38	15.65	31.48	12.29	7.50	6.45	7.76	14.46	15.19	20.93	5.23
% Plecoptera	0.00	0.34	1.22	0.37	1.06	0.00	0.35	0.00	3.59	2.39	2.15	2.77	4.42	4.78	6.68	6.68
% Trichoptera	5.45	2.55	5.91	1.59	1.59	1.59	1.59	7.87	4.91	1.36	2.93	4.25	11.39	15.66	22.19	9.39
% EPT	26.92	22.28	47.13	15.96	26.02	17.58	17.57	39.53	20.79	11.24	11.52	14.79	30.27	35.28	47.89	21.30
% Coleoptera	0.00	0.00	0.00	0.53	0.34	0.36	2.61	0.36	3.21	4.09	3.52	5.73	6.18	13.61	9.95	6.50
% Diptera	67.63	66.33	45.74	61.83	65.13	72.01	70.09	53.31	55.39	55.54	58.59	55.08	47.96	43.35	46.91	55.78
% Oligochaeta	2.73	1.57	5.32	4.78	6.31	5.39	5.55	17.96	25.55	25.55	25.59	15.34	8.84	5.85	1.12	7.94
% Baetidae	13.97	11.05	28.17	7.16	19.47	12.80	12.35	24.15	10.02	6.47	4.69	5.36	9.52	12.82	17.70	0.00
% Brachycentridae	4.43	2.38	3.83	1.24	1.19	1.39	6.62	1.13	1.13	0.00	0.20	0.37	0.85	2.53	7.44	1.26
% Chironomidae	67.46	65.31	42.43	59.27	64.96	71.16	89.74	52.24	54.63	55.37	57.23	53.97	46.77	41.61	41.15	54.51
% Ephemellidae	7.33	7.48	9.39	1.24	1.39	1.39	5.01	0.68	0.78	0.78	1.11	1.11	2.04	0.00	0.00	3.97
% Hydropsychidae	0.34	0.00	0.87	0.18	0.00	0.17	0.88	3.40	1.02	2.15	2.59	1.00	10.54	13.13	14.47	6.86
% Odonata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Perlidae	0.00	0.17	0.00	0.37	0.18	0.00	0.00	0.00	0.00	0.17	0.00	0.18	0.00	0.00	0.00	0.00
% Pteronarcyidae	0.00	0.00	0.17	0.00	0.18	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00
% Simuliidae	0.17	0.00	2.43	0.00	0.00	0.00	0.00	0.89	0.19	0.00	0.39	0.37	0.51	0.63	4.92	0.90
Functional Group Composition																
% Filterers	4.60	1.87	7.13	1.10	0.18	0.00	0.52	3.04	3.97	1.36	2.73	4.25	11.05	14.08	20.08	8.48
% Gatherers	86.20	87.07	79.30	86.79	92.92	94.37	90.61	83.90	85.26	88.25	88.67	79.11	68.20	63.29	63.20	67.51
% Predators	1.53	2.38	1.74	5.69	1.24	1.54	3.30	0.89	5.29	5.11	3.91	7.58	8.33	6.49	5.76	9.57
% Scrapers	0.00	0.34	0.35	0.00	2.48	0.85	3.13	1.07	3.59	4.43	3.71	7.02	9.52	13.92	3.23	8.66
% Shredders	7.33	7.48	10.61	1.77	6.24	2.05	5.01	0.95	7.48	10.61	9.98	1.11	6.24	3.98	4.33	6.50
% Piercer-Herbivores	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.18
% Unclassified	0.34	0.85	0.87	0.18	1.42	1.19	1.04	6.08	0.95	0.00	0.00	0.55	0.85	2.22	6.74	1.26
Filterer Richness	3.00	1.00	2.00	1.00	3.00	0.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	5.00
Gatherer Richness	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	8.00	6.00	6.00	8.00	7.00	8.00	7.00	6.00
Predator Richness	3.00	8.00	4.00	6.00	5.00	4.00	4.00	3.00	4.00	7.00	7.00	9.00	6.00	6.00	4.00	5.00
Scraper Richness	0.00	1.00	1.00	0.00	4.00	2.00	3.00	2.00	3.00	3.00	2.00	4.00	3.00	2.00	3.00	3.00
Shredder Richness	1.00	1.00	3.00	1.00	3.00	1.00	3.00	2.00	2.00	2.00	2.00	2.00	1.00	2.00	2.00	2.00
Piercer-Herbivore Richness	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Unclassified	1.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00	1.00	1.00	2.00
Diversity/Evenness Measures																
Shannon-Weaver H' (log 10)	0.52	0.57	0.76	0.65	0.59	0.51	0.55	0.68	0.70	0.62	0.59	0.78	0.91	0.84	0.93	0.79
Shannon-Weaver H' (log 2)	1.73	1.90	2.52	2.17	1.95	1.69	1.82	2.27	2.32	2.05	1.96	2.59	2.71	2.75	2.82	2.63
Shannon-Weaver H' (log e)	1.20	1.32	1.75	1.50	1.35	1.17	1.26	1.58	1.61	1.42	1.36	1.79	1.88	1.91	1.93	1.82
Margalef's Richness	1.56	1.99	2.13	1.90	2.71	1.77	2.11	1.64	2.45	2.52	2.15	2.62	2.68	2.55	2.21	2.31
Pielou's J'	0.44	0.44	0.59	0.50	0.43	0.42	0.43	0.54	0.52	0.47	0.45	0.54	0.62	0.63	0.65	0.57
Simpson's Heterogeneity	0.52	0.55	0.73	0.62	0.55	0.48	0.50	0.67	0.66	0.62	0.60	0.68	0.74	0.77	0.77	0.68
Biotic Indices																
% Indiv. w/ HBI Value	99.66	98.64	98.96	96.33	98.23	98.29	98.78	93.56	99.05	99.83	99.61	98.15	98.64	97.63	93.12	98.01
Hilsenhoff Biotic Index	5.18	5.43	4.65	5.80	5.57	5.75	5.66	5.18	5.82	6.17	6.14	5.92	5.34	5.28	5.00	5.49
% Indiv. w/ MTI Value	27.60	22.79	47.13	17.61	24.42	17.24	20.70	33.99	24.57	18.06	15.82	23.84	40.48	47.63	48.60	31.41
Metals Tolerance Index	4.17	4.33	4.03	3.88	4.11	4.31	4.26	4.43	4.29	4.43	4.29	4.47	4.58	4.61	4.64	4.22
% Indiv. w/ FSBI Value	26.58	22.28	48.35	16.15	24.60	17.24	24.70	34.74	14.99	14.99	15.43	19.41	39.63	48.26	49.44	26.71
Fine Sediment Biotic Index	37.00	56.00	45.00	30.00	50.00	30.00	51.00	49.00	32.00	32.00	39.00	39.00	53.00	58.00	34.00	34.00
FSBI - average	2.47	2.80	2.37	2.25	2.17	1.89	2.68	2.72	2.14	1.52	2.40	2.52	2.76	2.79	1.42	1.42
FSBI - weighted average	4.99	4.80	4.72	4.68	4.60	4.68	4.38	4.10	3.76	3.82	3.82	3.7				

Provo Benthos 05 Batch 1 (ID)

EcoAnalysts, Inc.

Data are NOT adjusted for subsampling

	Site Rep	Below Jordanelle (BJ)	Casperville Road (CA)	Never Channelized (NC)	River Road (RR)
		Pooled	Pooled	Pooled	Pooled
	Percent Subsampled	100.00	100.00	100.00	100.00
	EcoAnalysts Sample ID	17	18	19	20
Ephemeroptera	Baetis tricaudatus	342	244	131	334
	Dipheter hageni	6	19	13	57
	Drunella grandis	0	0	0	1
	Epeorus sp.	4	5	1	17
	Ephemerella inermis/infrequens	175	39	18	54
	Leptophlebiidae	1	0	0	0
	Paraleptophlebia sp.	17	51	21	30
	Rhithrogena sp.	0	1	0	1
Plecoptera	Claassenia sabulosa	0	0	2	0
	Hesperoperla pacifica	3	0	0	1
	Isoperla sp.	0	125	56	2
	Nemouridae	6	0	0	3
	Perlodidae	0	0	0	2
	Pteronarcella sp.	1	0	1	1
	Skwala sp.	1	0	0	0
Hemiptera	Corixidae	0	1	2	0
Coleoptera	Optioservus sp.	0	197	90	22
Diptera-Chironomidae	Chironomidae	1,347	1,133	1,199	1,477
Diptera	Antocha sp.	2	8	5	7
	Atherix sp.	2	4	0	0
	Bezzia/Palpomyia sp.	11	0	4	1
	Ceratopogoninae	0	0	1	0
	Chelifera/Metachela sp.	8	0	0	0
	Dicranota sp.	0	1	1	0
	Hemerodromia sp.	0	2	2	0
	Neoplasta sp.	2	4	0	1
	Simulium sp.	15	47	5	5
Trichoptera	Brachycentrus americanus	61	9	3	5
	Brachycentrus echo	5	72	6	54
	Cheumatopsyche sp.	0	6	2	0
	Culoptila sp.	0	0	1	0
	Helicopsyche sp.	0	3	7	0
	Hydropsyche sp.	9	280	47	7
	Lepidostoma sp.	0	4	2	0
	Oecetis disjuncta	0	2	2	1
	Protoptila sp.	0	0	1	0
	Rhyacophila brunnea gr.	9	0	1	0
	Rhyacophila coloradensis gr.	7	0	0	2
Gastropoda	Gyraulus sp.	0	0	0	2
	Hydrobiidae	0	9	0	0
	Lymnaeidae	0	0	1	0
	Physa (Physella) sp.	0	0	1	0
Bivalvia	Pisidium sp.	0	2	7	0
	Sphaeriidae	0	0	2	4
Annelida	Erpobdellidae	0	0	1	0
	Oligochaeta	68	141	459	126
Acari	Acari	1	2	3	3
	Lebertia sp.	7	1	3	1
	Oribatei	0	0	1	0
	Sperchon sp.	3	4	2	4
	Testudacarus sp.	0	0	0	1
Crustacea	Caecidotea sp.	7	21	4	1
	Ostracoda	157	8	19	36
Other Organisms	Nematoda	18	41	36	22
	Turbellaria	0	0	6	0
		2,295	2,486	2,169	2,285

Provo Benthos 05 Batch 1 (ID)

EcoAnalysts, Inc.

Data are NOT adjusted for subsampling

Site Rep	Below Jordanelle (BJ)	Casparville Road (CA)	Never Channelized (NC)	River Road (RR)
Percent Subsampled	100.00	100.00	100.00	100.00
EcoAnalysts Sample ID	17	18	19	20
Abundance Measures				
Corrected Abundance	2295.00	2486.00	2169.00	2285.00
EPT Abundance	647.00	860.00	315.00	572.00
Dominance Measures				
1st Dominant Taxon	Chironomidae	Chironomidae	Chironomidae	Chironomidae
1st Dominant Abundance	1347.00	1133.00	1199.00	1477.00
2nd Dominant Taxon	Baetis tricaudatus	Hydropsyche sp.	Oligochaeta	Baetis tricaudatus
2nd Dominant Abundance	342.00	280.00	459.00	334.00
3rd Dominant Taxon	Ephemerella inermis/infrequens	Baetis tricaudatus	Baetis tricaudatus	Oligochaeta
3rd Dominant Abundance	175.00	244.00	131.00	126.00
% 1 Dominant Taxon	58.69	45.58	55.28	64.64
% 2 Dominant Taxa	73.59	56.84	76.44	79.26
% 3 Dominant Taxa	81.22	66.65	82.48	84.77
Richness Measures				
Species Richness	29.00	32.00	41.00	33.00
EPT Richness	15.00	14.00	18.00	17.00
Ephemeroptera Richness	6.00	6.00	5.00	7.00
Plecoptera Richness	4.00	1.00	3.00	5.00
Trichoptera Richness	5.00	7.00	10.00	5.00
Chironomidae Richness	1.00	1.00	1.00	1.00
Oligochaeta Richness	1.00	1.00	1.00	1.00
Non-Chiro. Non-Olig. Richness	27.00	30.00	39.00	31.00
Rhyacophila Richness	2.00	0.00	1.00	1.00
Community Composition				
% Ephemeroptera	23.75	14.44	8.48	21.62
% Plecoptera	0.48	5.03	2.72	0.39
% Trichoptera	3.97	15.12	3.32	3.02
% EPT	28.19	34.59	14.52	25.03
% Coleoptera	0.00	7.92	4.15	0.96
% Diptera	60.44	48.23	56.11	65.25
% Oligochaeta	2.96	5.67	21.16	5.51
% Baetidae	15.16	10.58	6.64	17.11
% Brachycentridae	2.88	3.26	0.41	2.58
% Chironomidae	58.69	45.58	55.28	64.64
% Ephemerellidae	7.63	1.57	0.83	2.41
% Hydropsychidae	0.39	11.50	2.26	0.31
% Odonata	0.00	0.00	0.00	0.00
% Perlidae	0.13	0.00	0.09	0.04
% Pteronarcyidae	0.04	0.00	0.05	0.04
% Simuliidae	0.65	1.89	0.23	0.22
Functional Group Composition				
% Filterers	3.70	13.84	3.04	0.92
% Gatherers	84.84	65.37	85.34	90.50
% Predators	2.79	7.40	5.49	1.75
% Scrapers	0.17	8.65	4.70	1.88
% Shredders	7.93	1.73	0.97	2.54
% Piercer-Herbivores	0.00	0.04	0.09	0.00
% Unclassified	0.57	2.98	0.37	2.41
Filterer Richness	3.00	5.00	3.00	4.00
Gatherer Richness	9.00	8.00	8.00	8.00
Predator Richness	11.00	9.00	14.00	11.00
Scrapper Richness	1.00	5.00	7.00	5.00
Shredder Richness	3.00	2.00	3.00	3.00
Piercer-Herbivore Richness	0.00	1.00	1.00	0.00
Unclassified	2.00	2.00	2.00	2.00
Diversity/Evenness Measures				
Shannon-Weaver H' (log 10)	0.66	0.87	0.69	0.61
Shannon-Weaver H' (log 2)	2.21	2.89	2.31	2.02
Shannon-Weaver H' (log e)	1.53	2.00	1.60	1.40
Margalef's Richness	3.62	3.96	5.21	4.14
Pielou's J'	0.45	0.58	0.43	0.40
Simpson's Heterogeneity	0.62	0.76	0.64	0.56
Biotic Indices				
% Indiv. w/ HBI Value	98.43	96.66	99.17	97.24
Hilsenhoff Biotic Index	5.26	5.27	6.02	5.55
% Indiv. w/ MTI Value	28.89	42.60	20.56	23.98
Metals Tolerance Index	4.20	4.55	4.39	4.15
% Indiv. w/ FSBI Value	28.45	41.75	18.26	23.85
Fine Sediment Biotic Index	69.00	68.00	61.00	71.00
FSBI - average	2.38	2.13	1.49	2.15
FSBI - weighted average	4.80	3.98	3.87	4.59
% Indiv. w/ TPM Value	85.54	80.13	70.03	86.61
Temp. Pref. Metric - average	2.52	1.69	1.41	2.55
TPM - weighted average	5.10	4.36	4.77	4.94
Karr BIBI Metrics				
Long-Lived Taxa Richness	3.00	4.00	6.00	4.00
Clinger Richness	14.00	15.00	19.00	19.00
% Clingers	20.35	38.50	17.15	20.70
Intolerant Taxa Richness	10.00	7.00	9.00	11.00
% Tolerant Individuals	10.27	7.12	22.59	7.43
% Tolerant Taxa	10.34	12.50	14.63	12.12
Coleoptera Richness	0.00	1.00	1.00	1.00
UIN	616-17	616-18	616-19	616-20