

**SUSITNA  
HYDROELECTRIC PROJECT**

FEDERAL ENERGY REGULATORY COMMISSION  
PROJECT No. 7114



**HYDRAULIC RELATIONSHIPS AND MODEL  
CALIBRATION PROCEDURES AT 1984  
STUDY SITES IN THE TALKEETNA-TO-  
DEVIL CANYON SEGMENT OF THE  
SUSITNA RIVER, ALASKA**

VOLUME 2  
APPENDICES

PREPARED BY



**Trihey &  
Associates**  
Aquatic Resource  
Specialists

UNDER CONTRACT TO

**HARZA-EBASCO**  
SUSITNA JOINT VENTURE

FINAL REPORT

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TALKEETNA-TO-DEVIL CANYON SEGMENT  
OF THE SUSITNA RIVER, ALASKA

APPENDICES

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Under Contract to  
Harza-Ebasco Susitna Joint Venture

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APPENDIX A

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COLLECTED TO DEVELOP STAGE-DISCHARGE,  
FLOW-DISHCARGE AND FLOW-STAGE RELATIONSHIPS.

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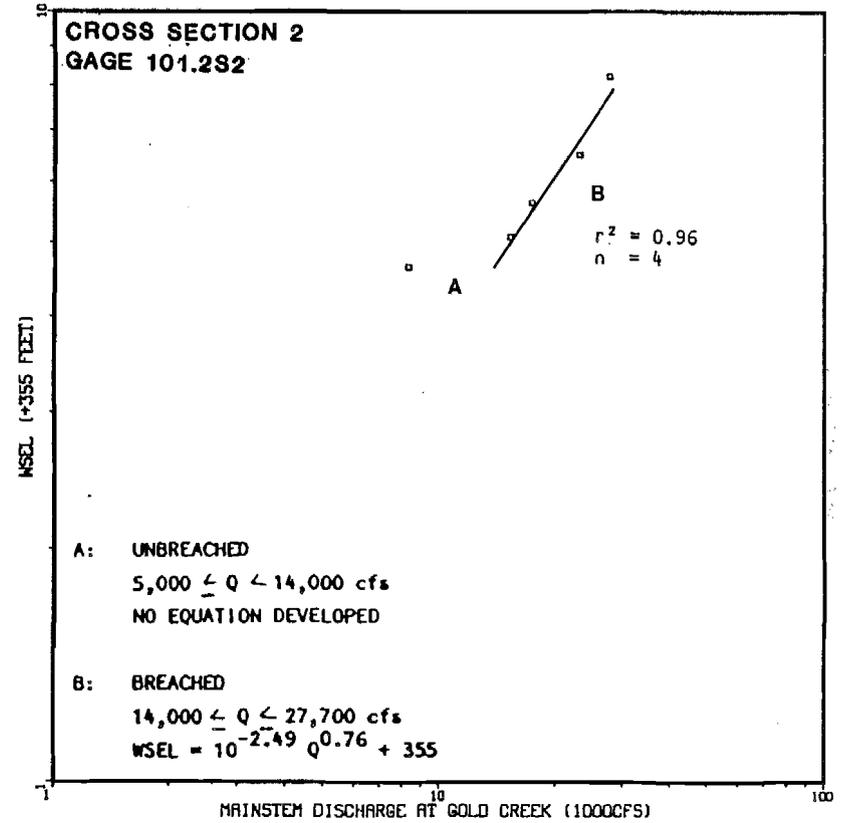
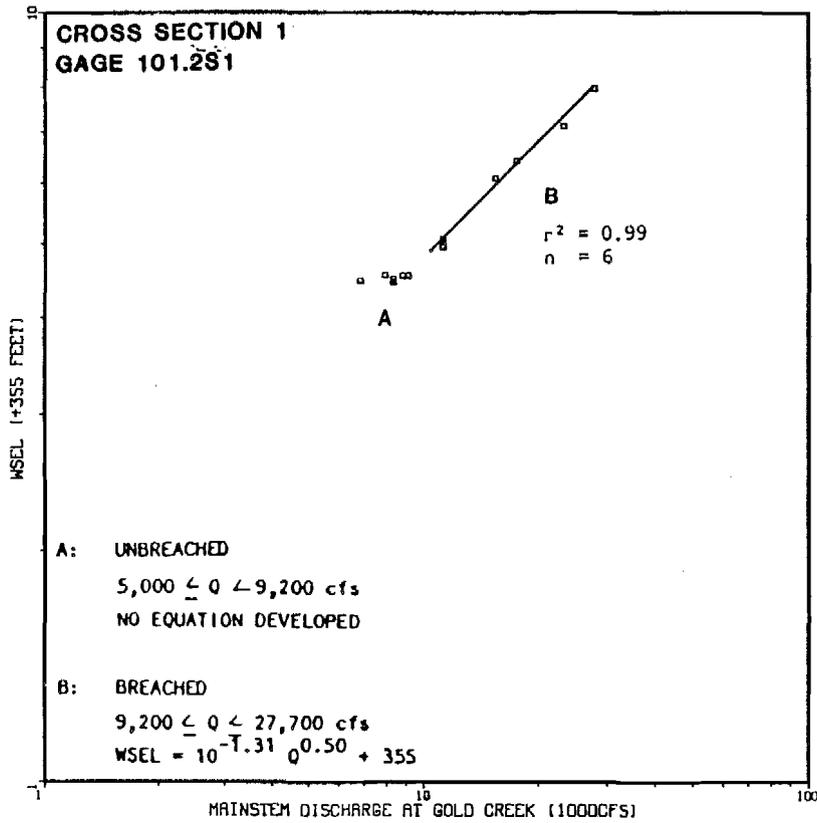


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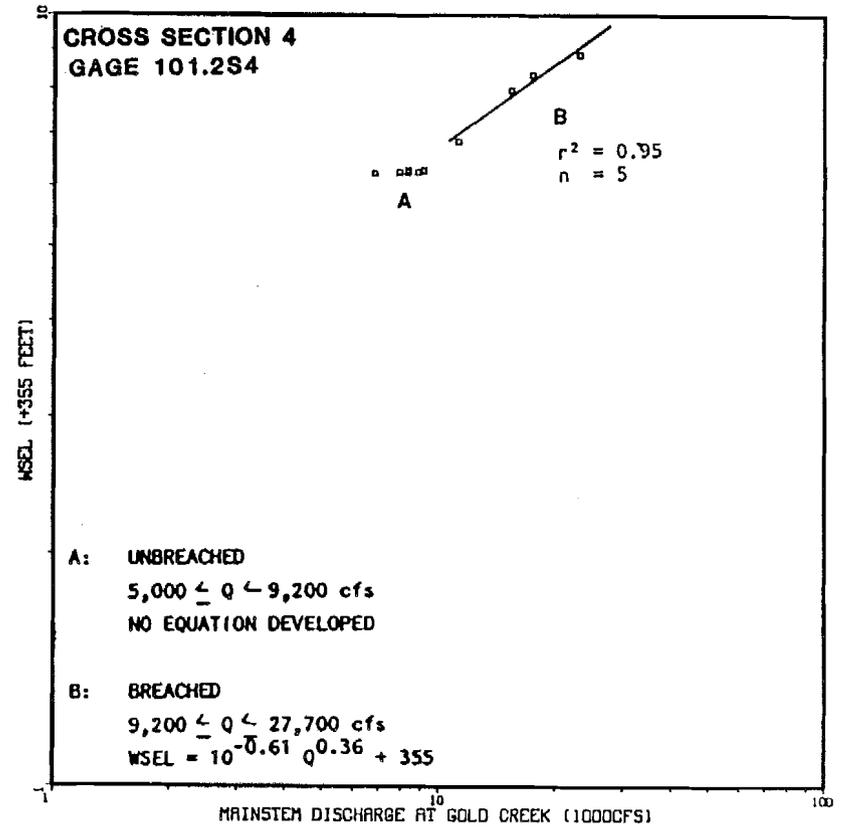
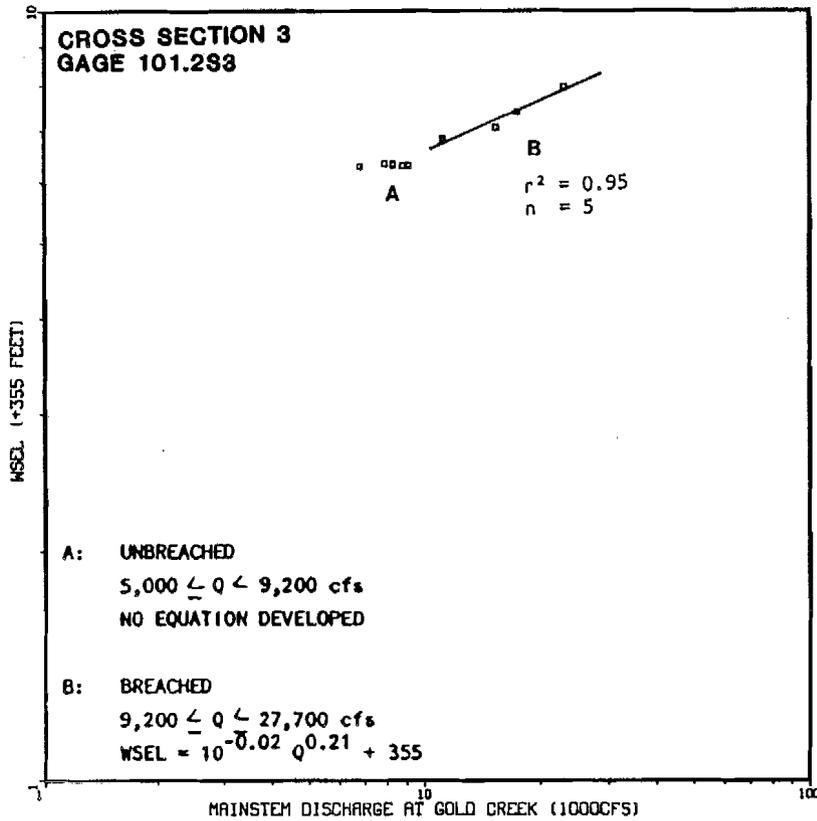


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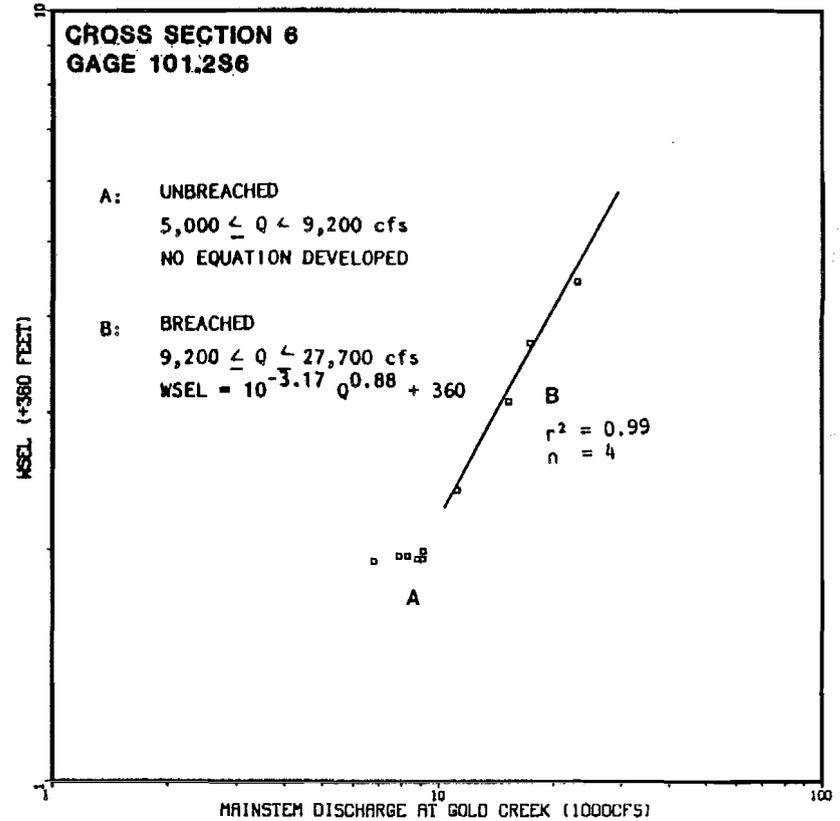
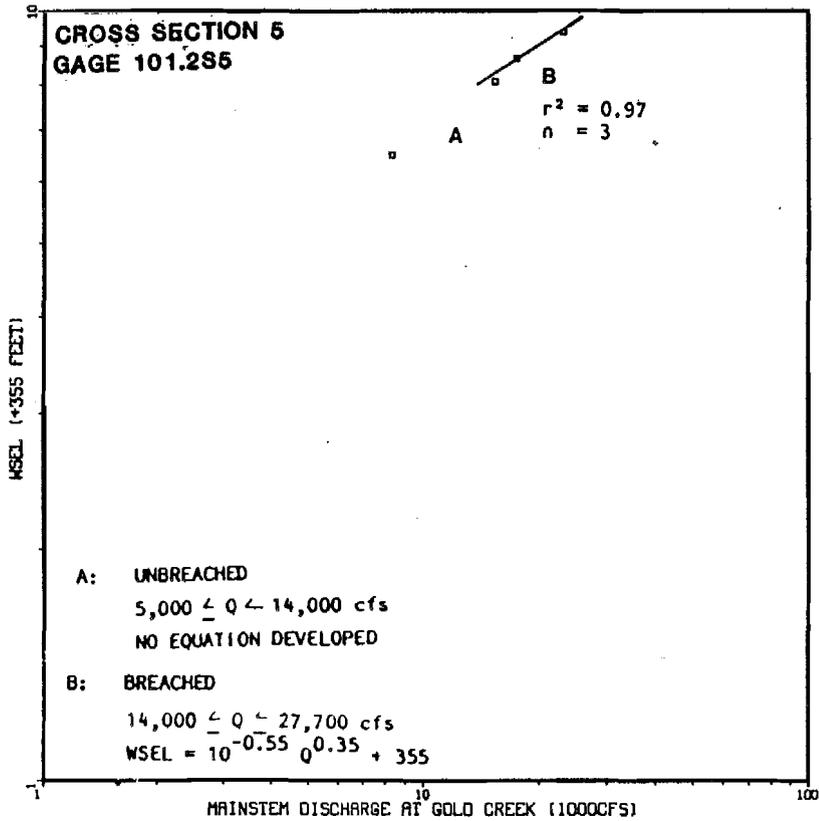


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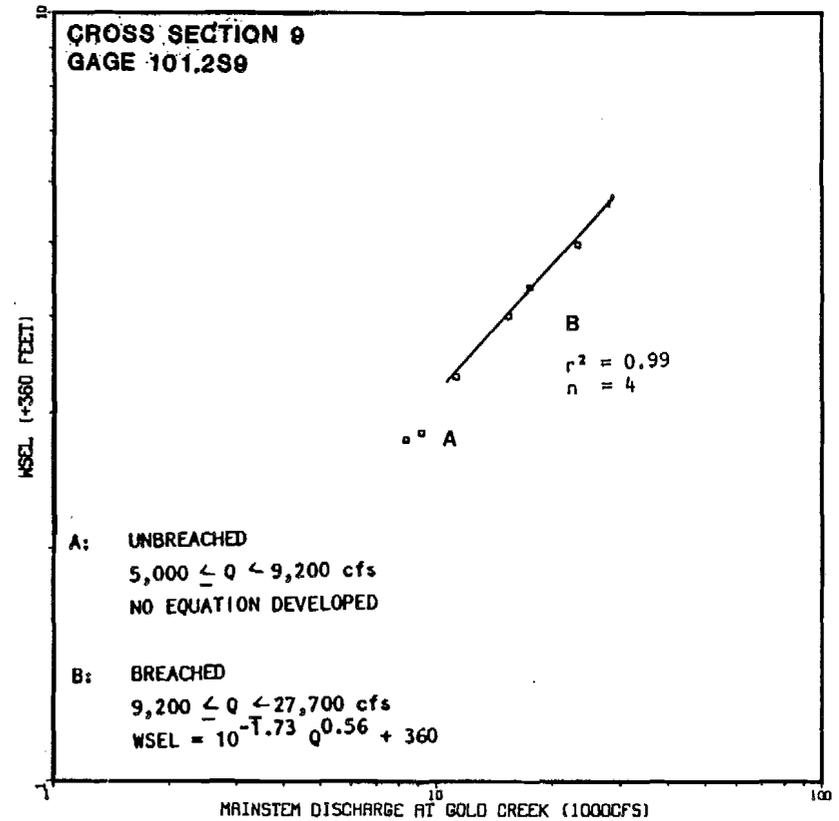
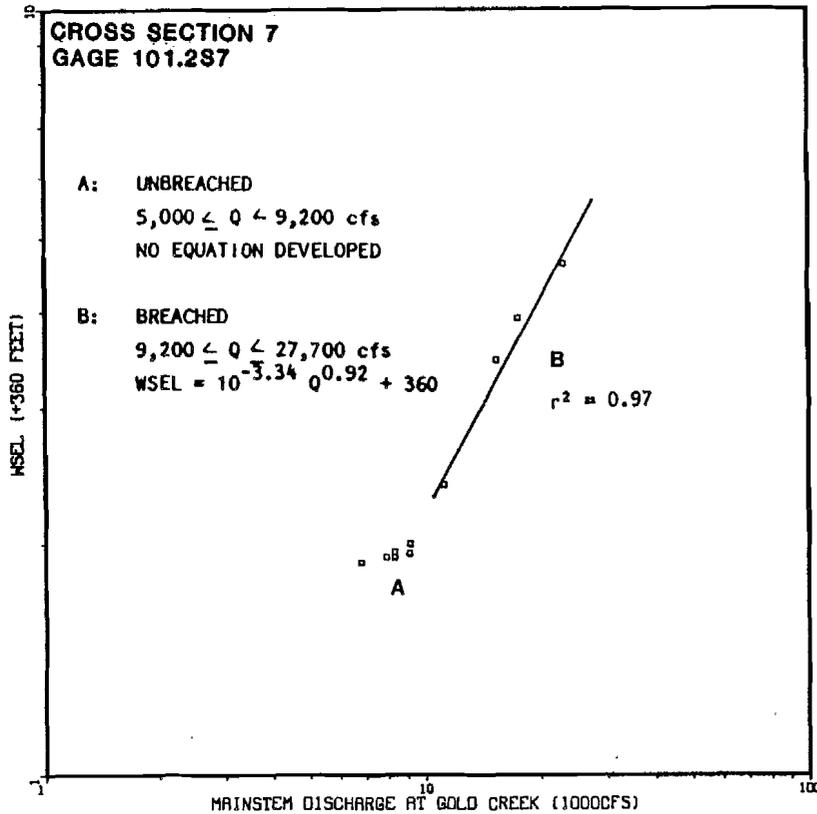


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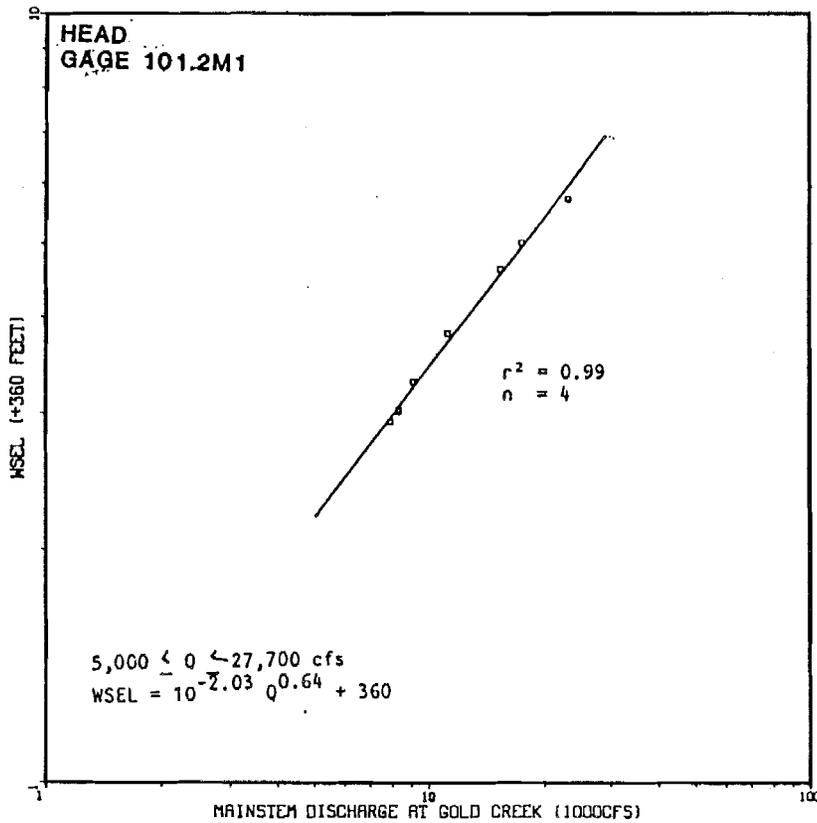


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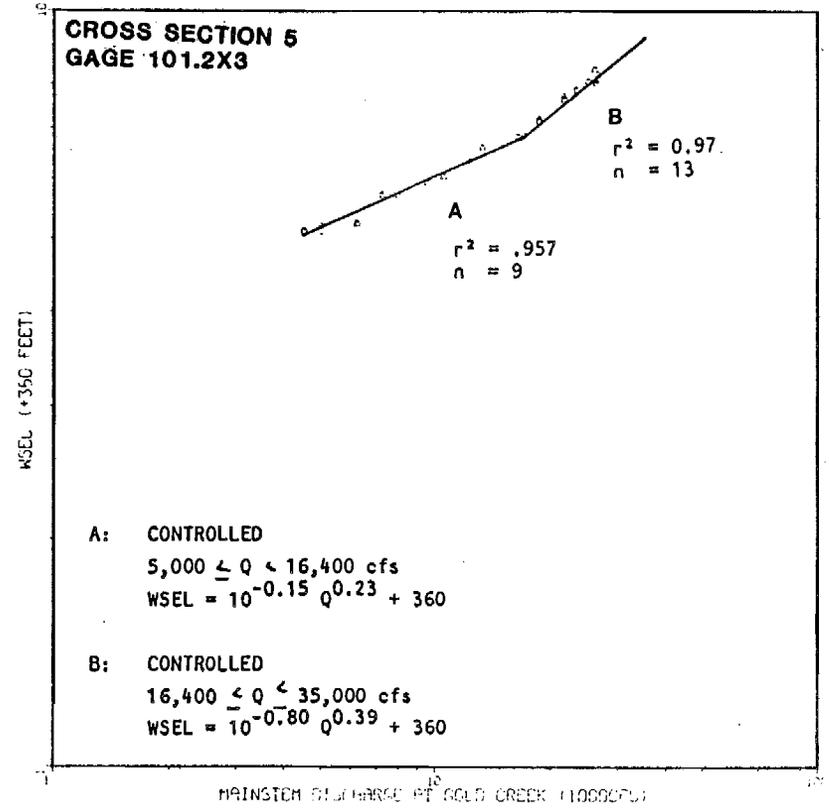
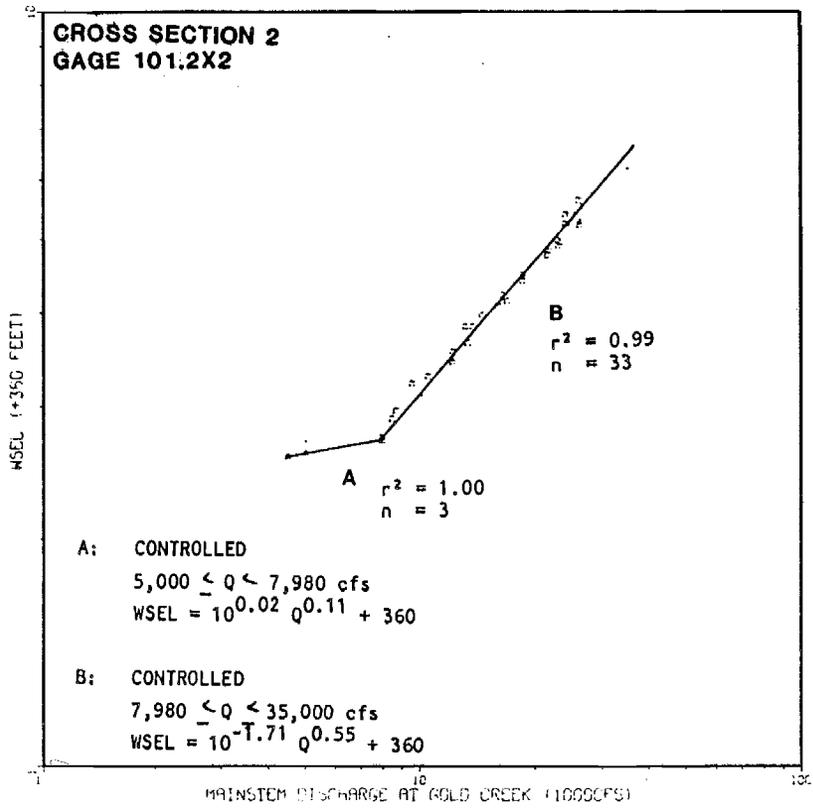


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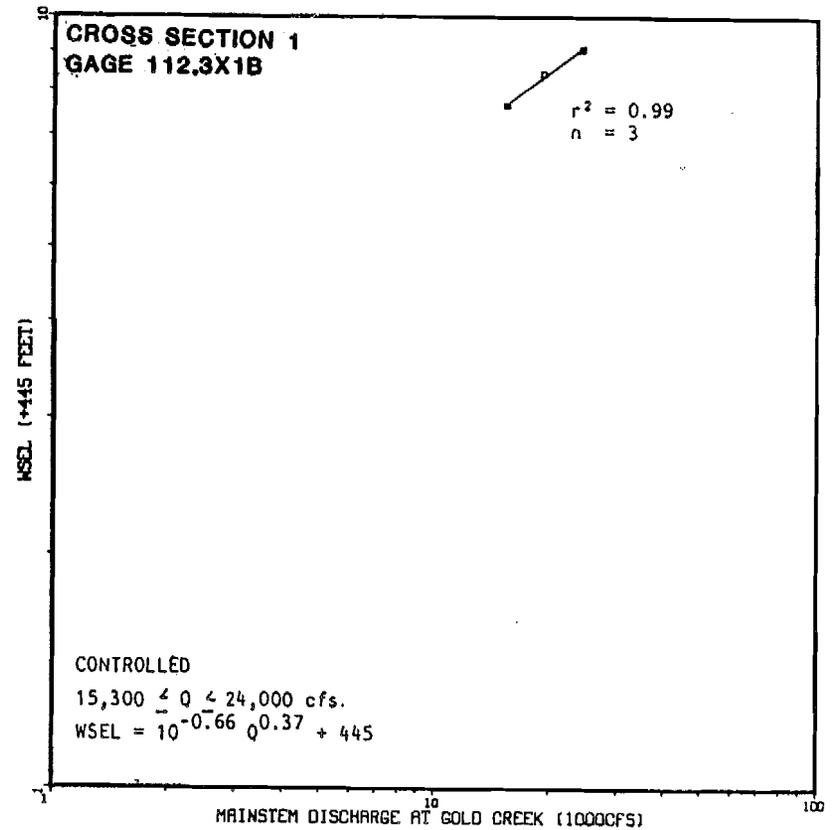
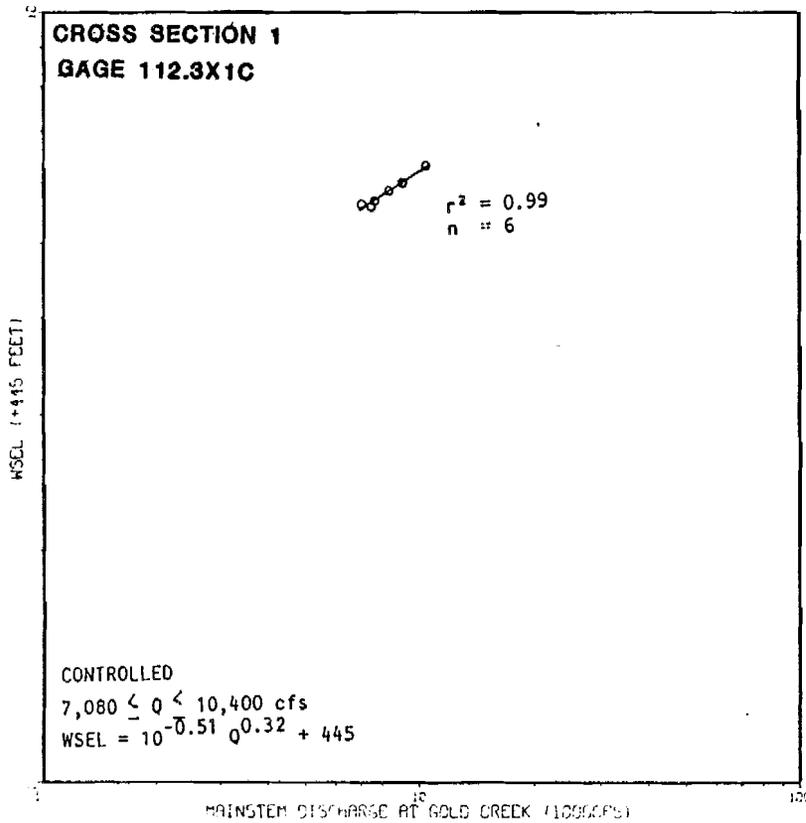


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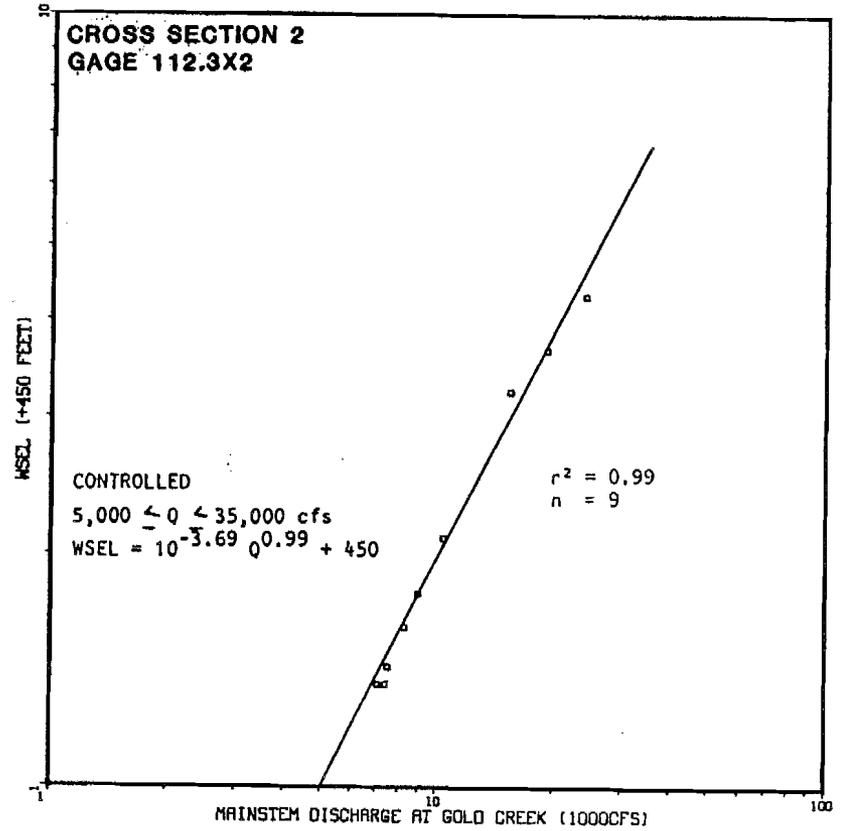
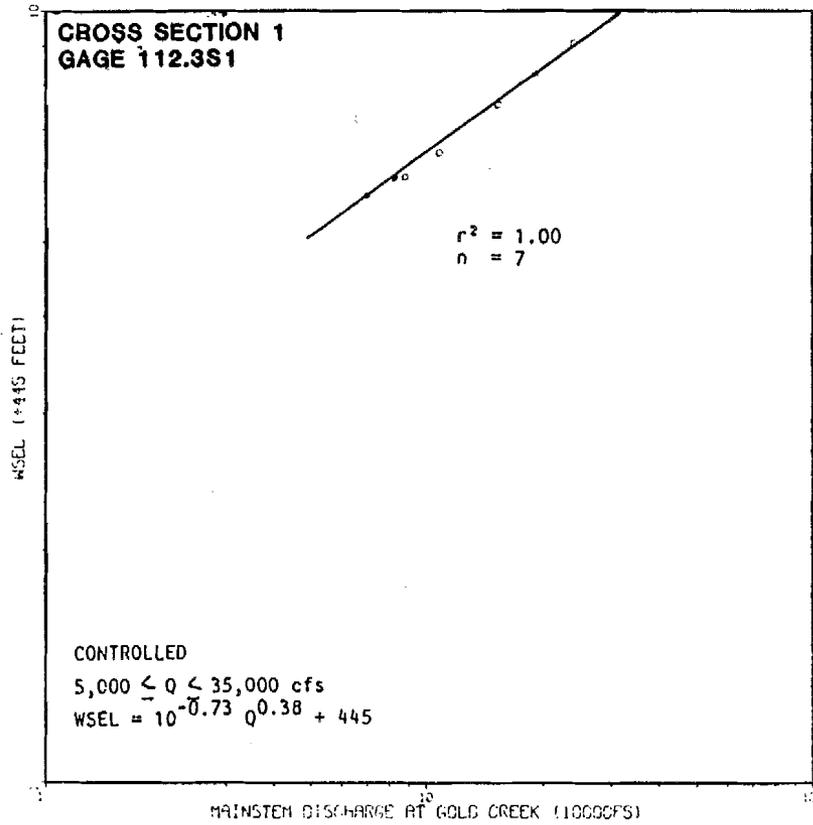


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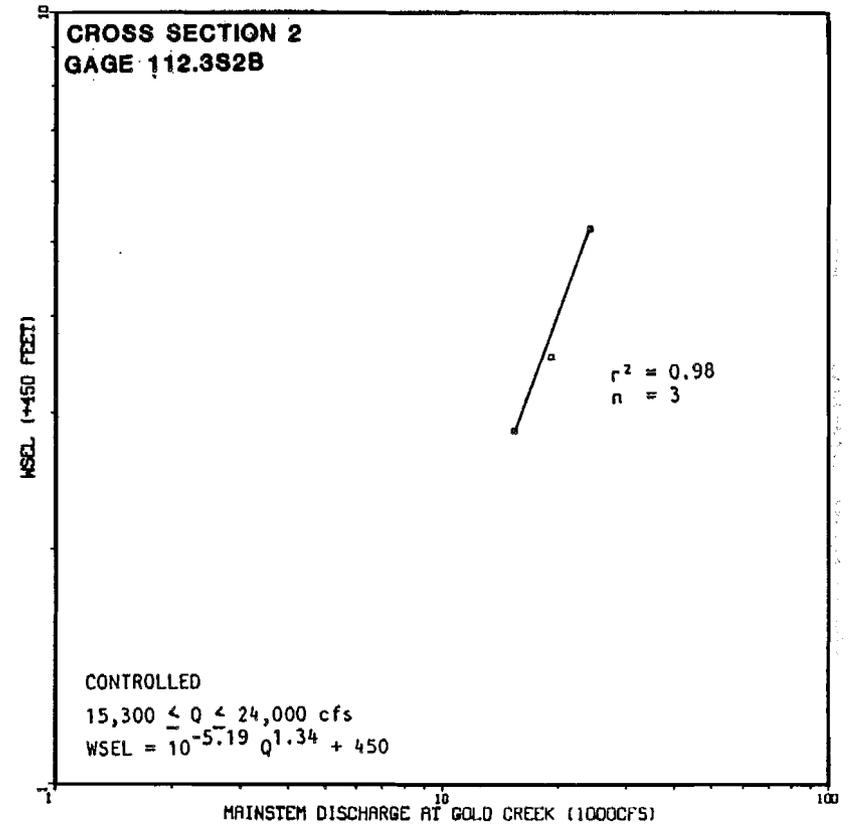
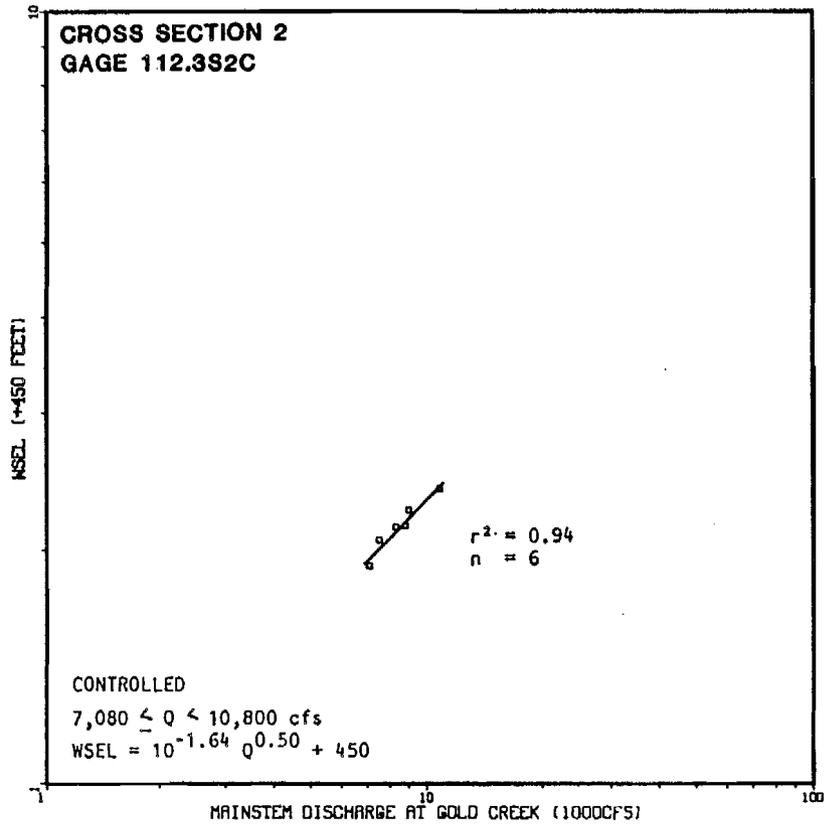


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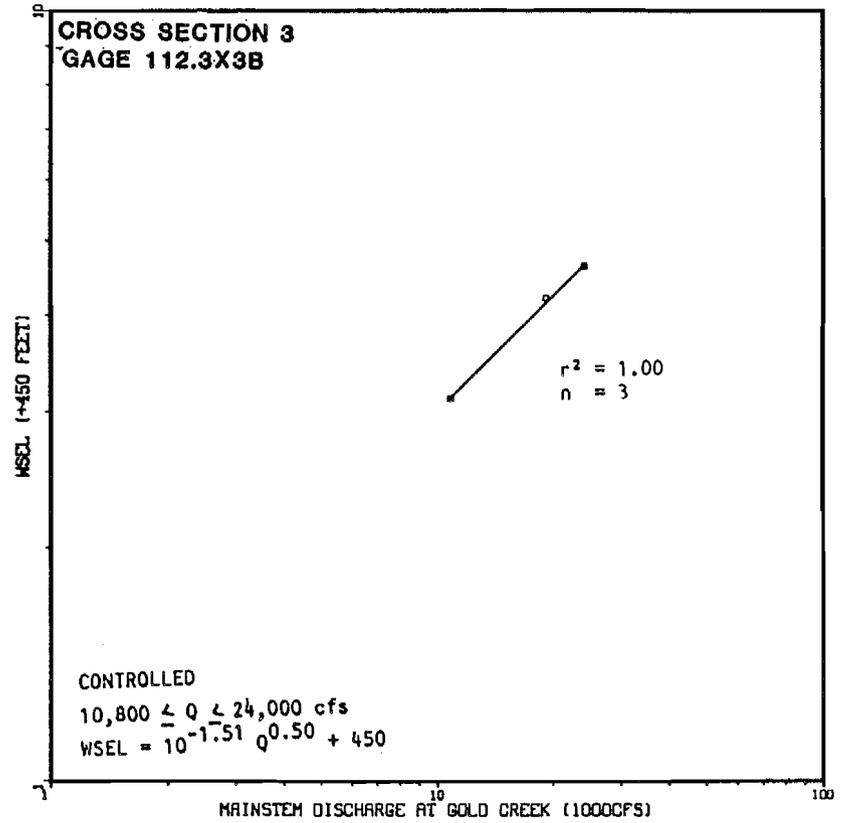
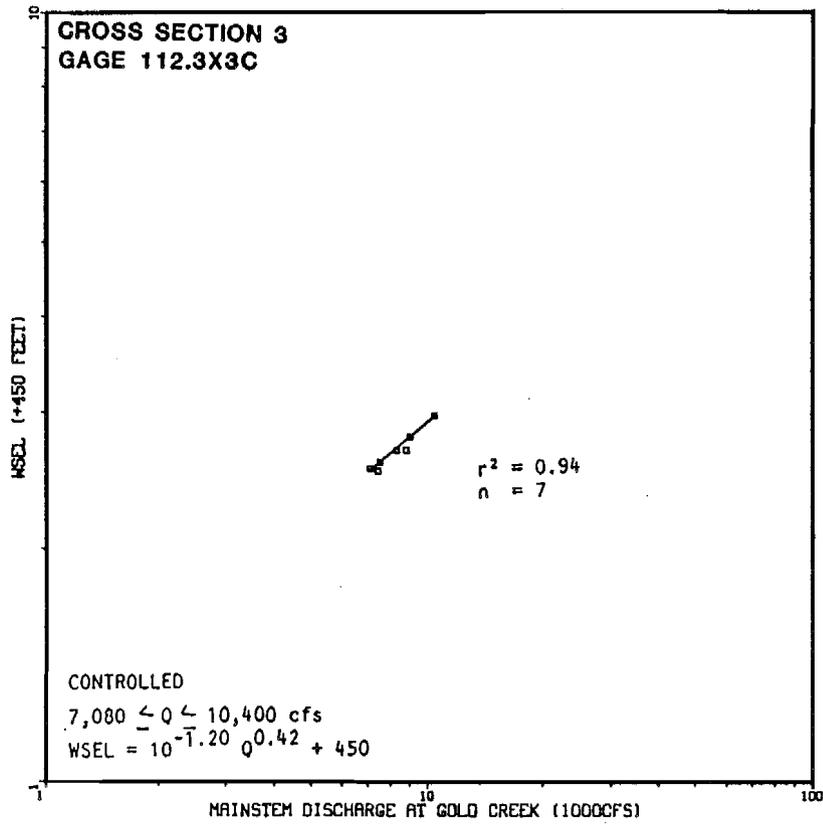


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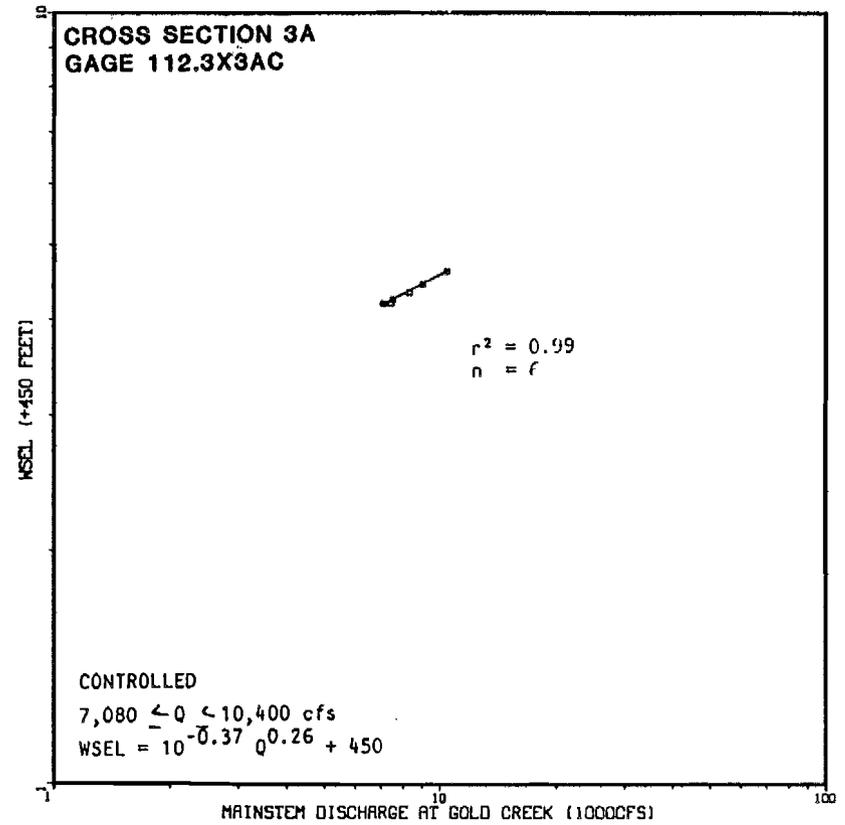
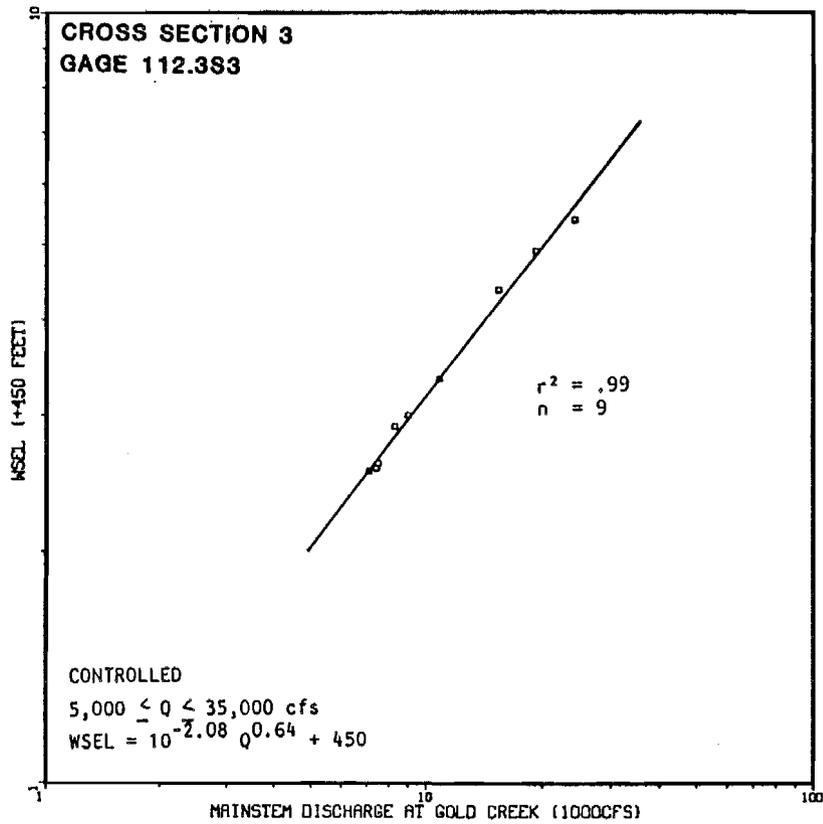


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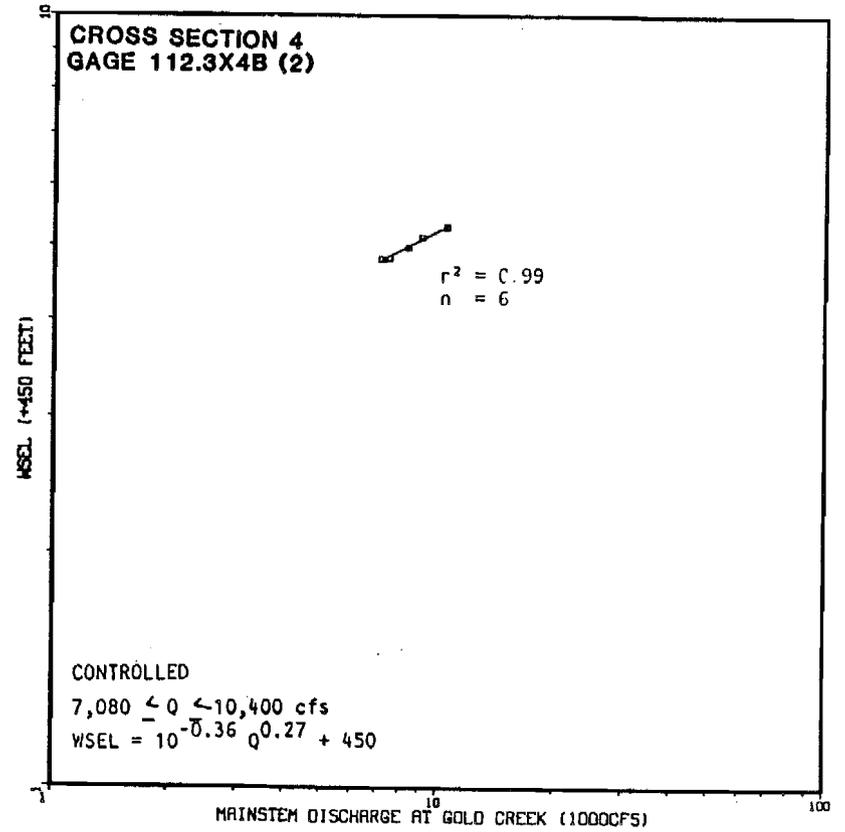
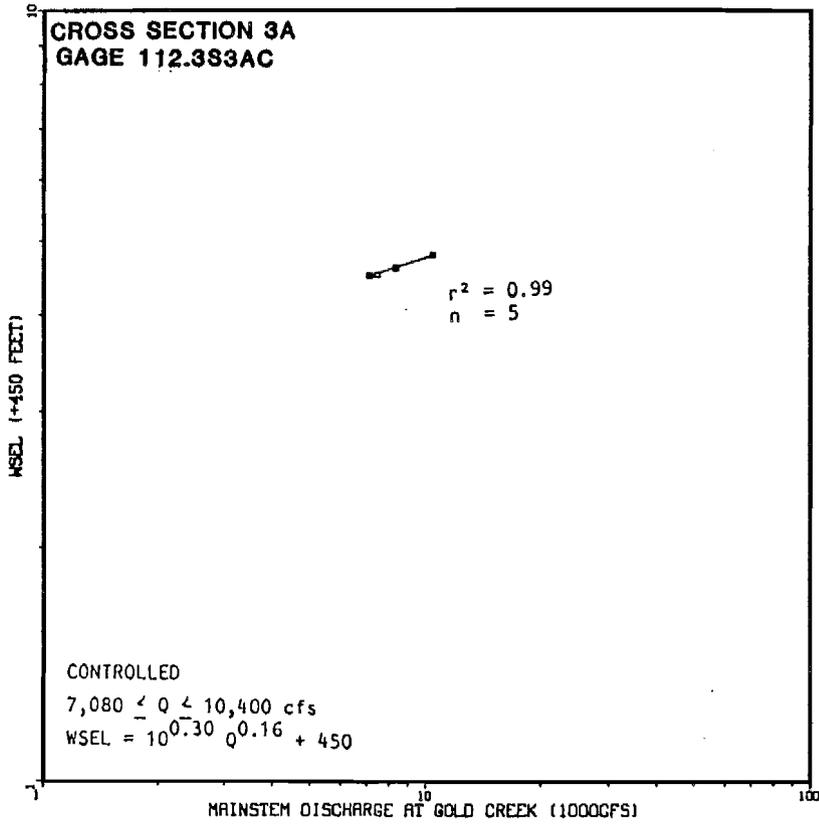


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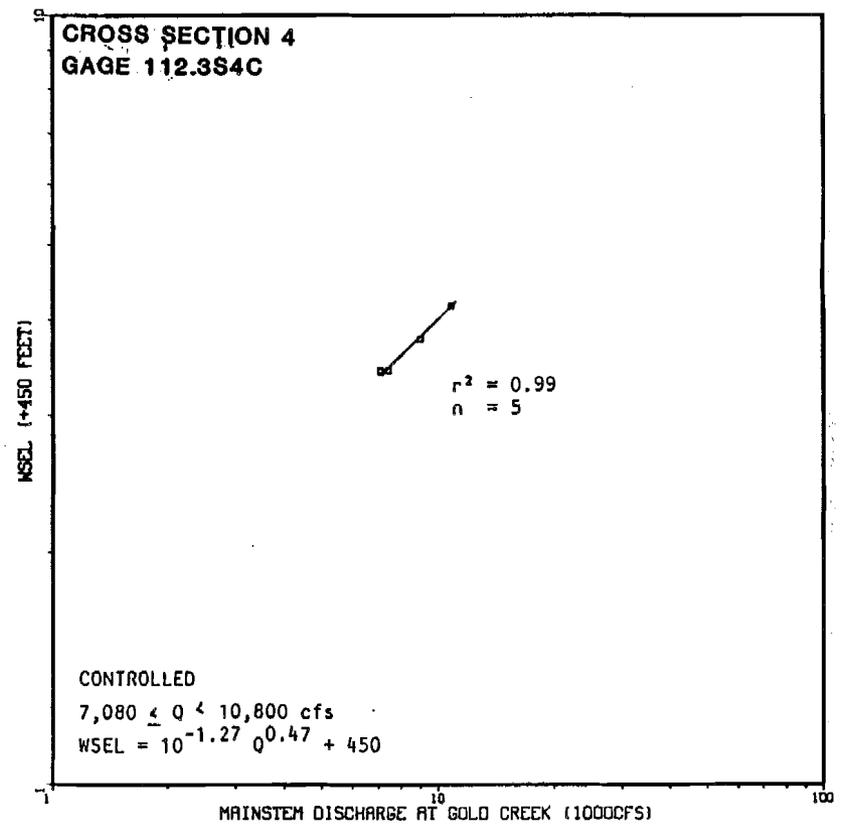
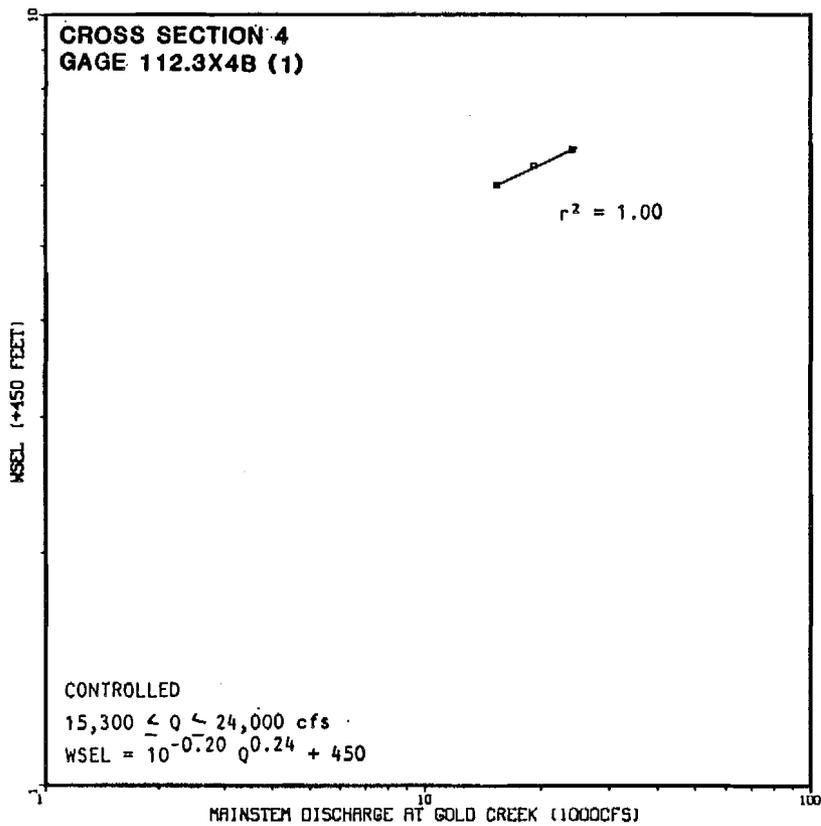


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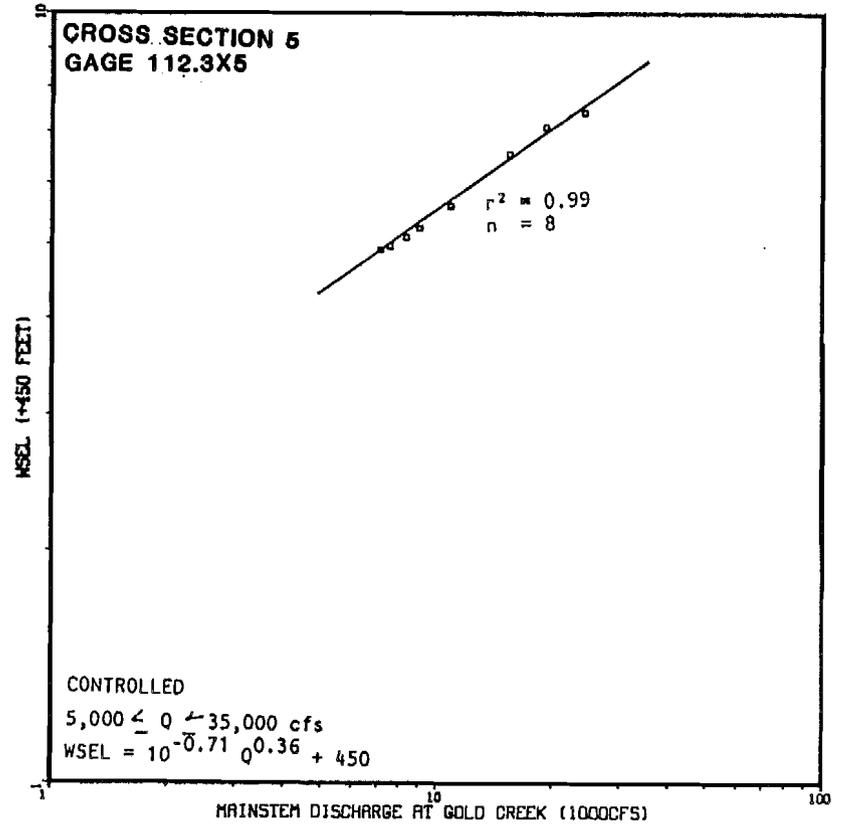
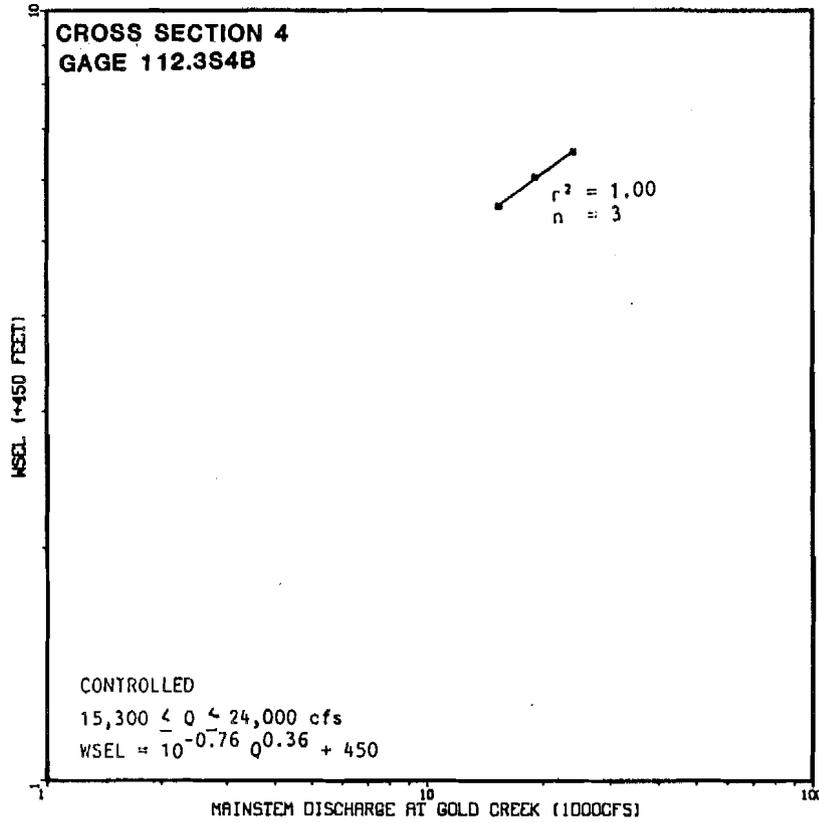


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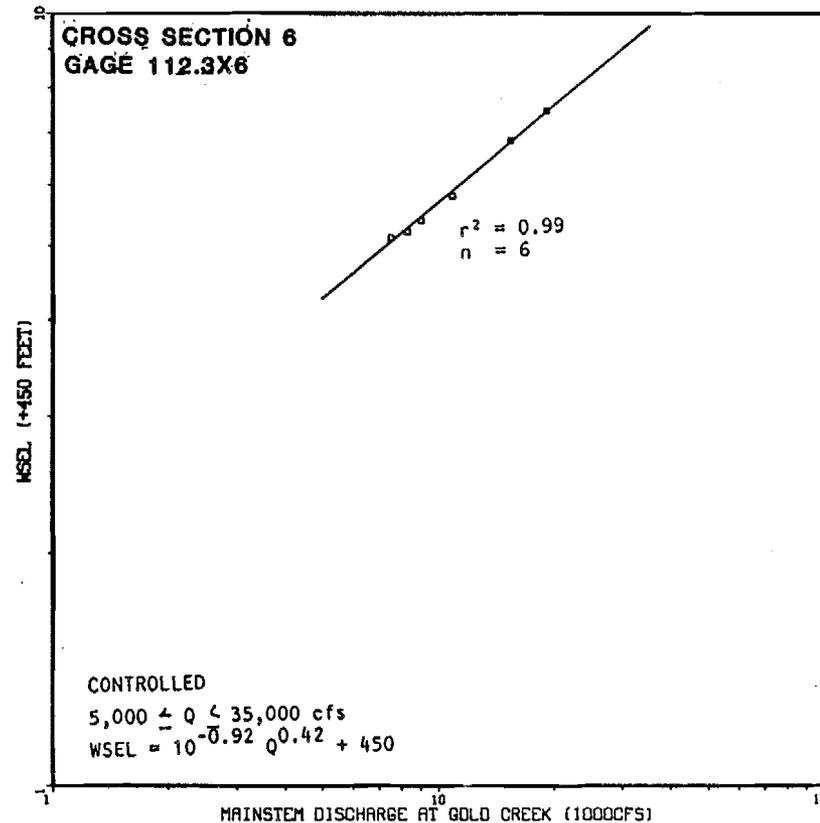
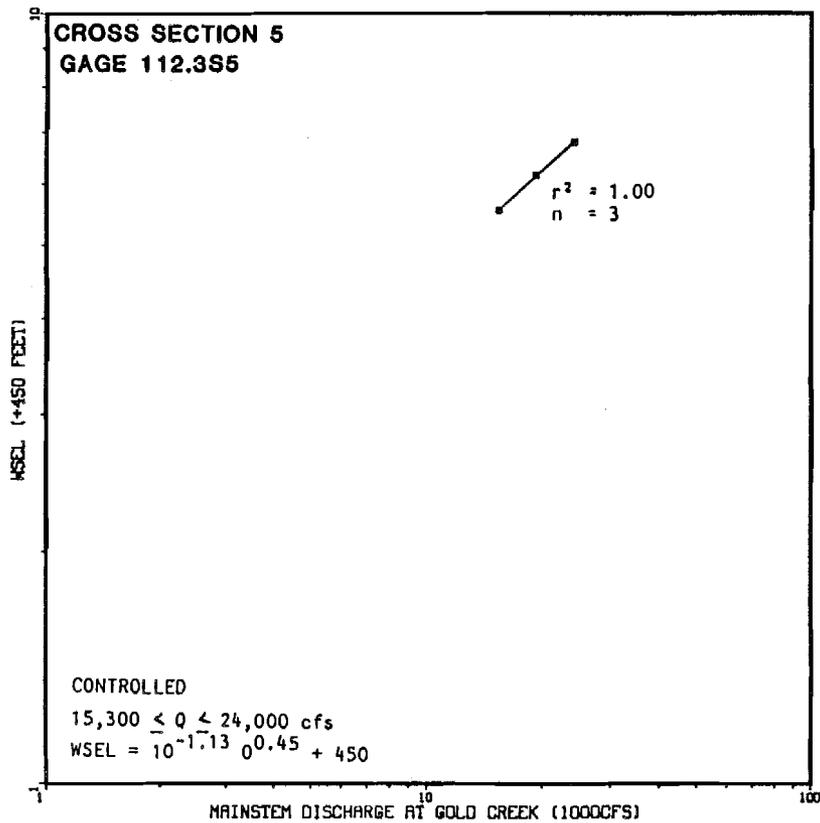


Figure A-1.15. Stage-discharge relationships for cross sections 5 (Gage 112.3S5) and 6 (Gage 112.3X6) at site 112.6L.

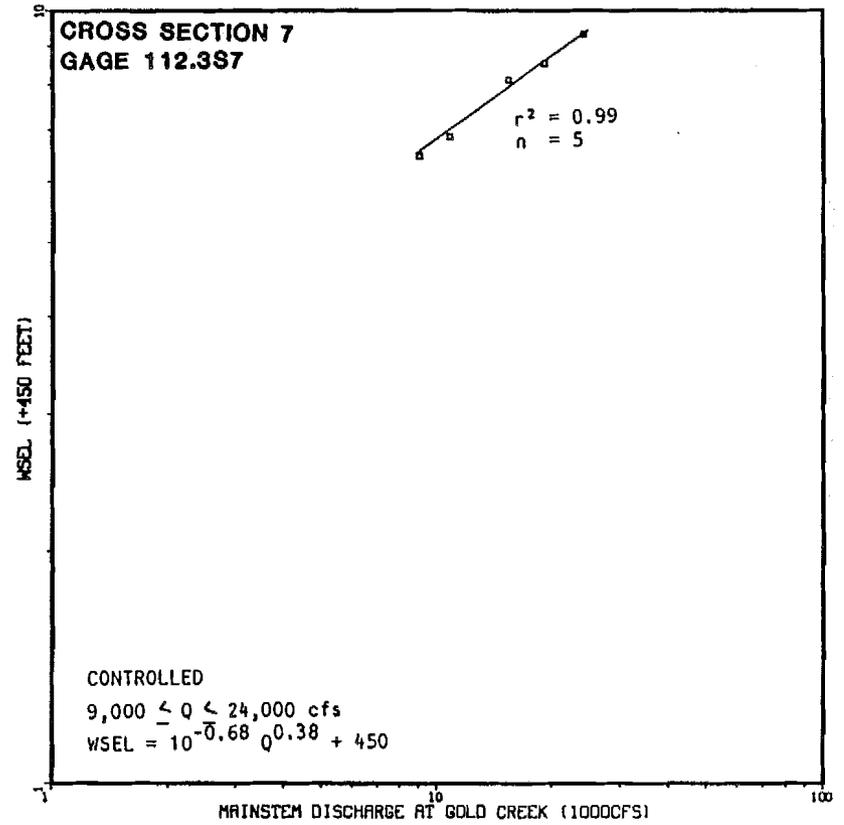
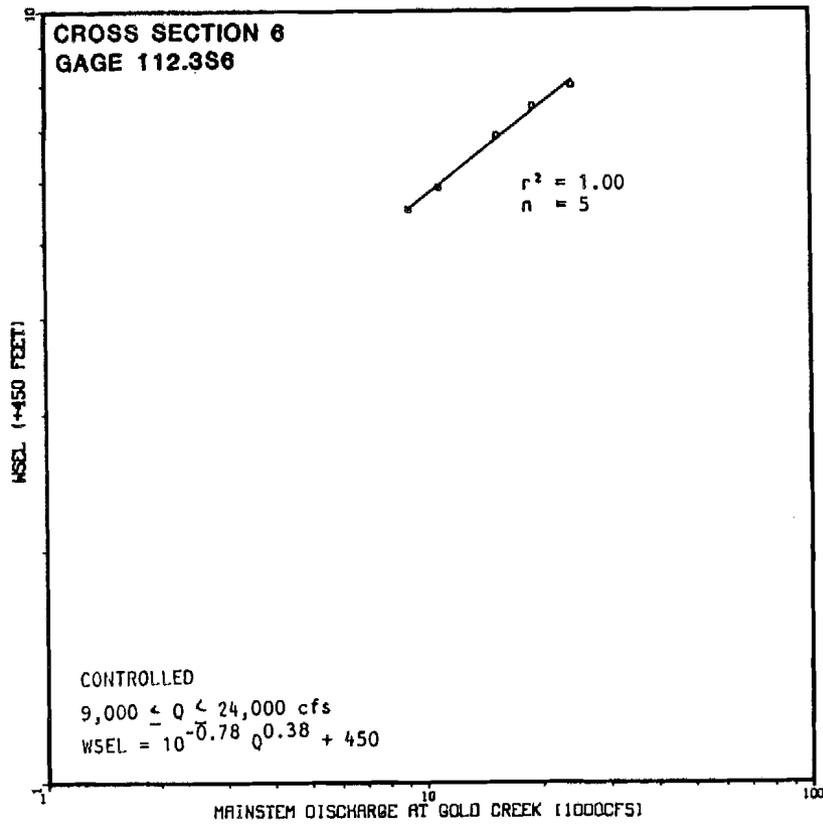


Figure A-1.16. Stage-discharge relationships for cross sections 6 (Gage 112.3S6) and 7 (Gage 112.3S7) at site 112.6L.

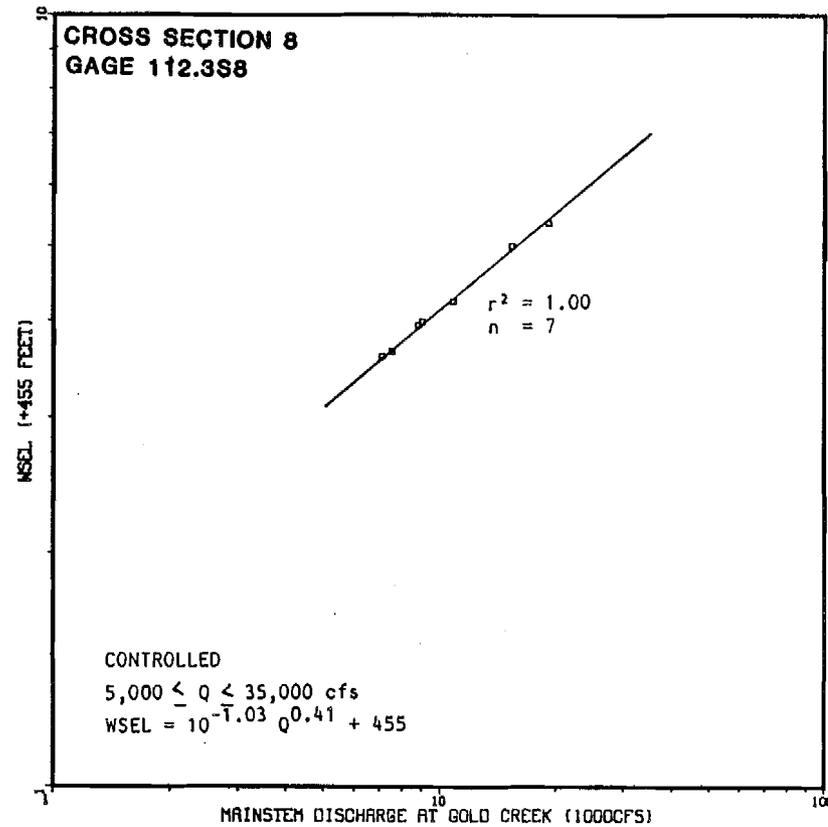
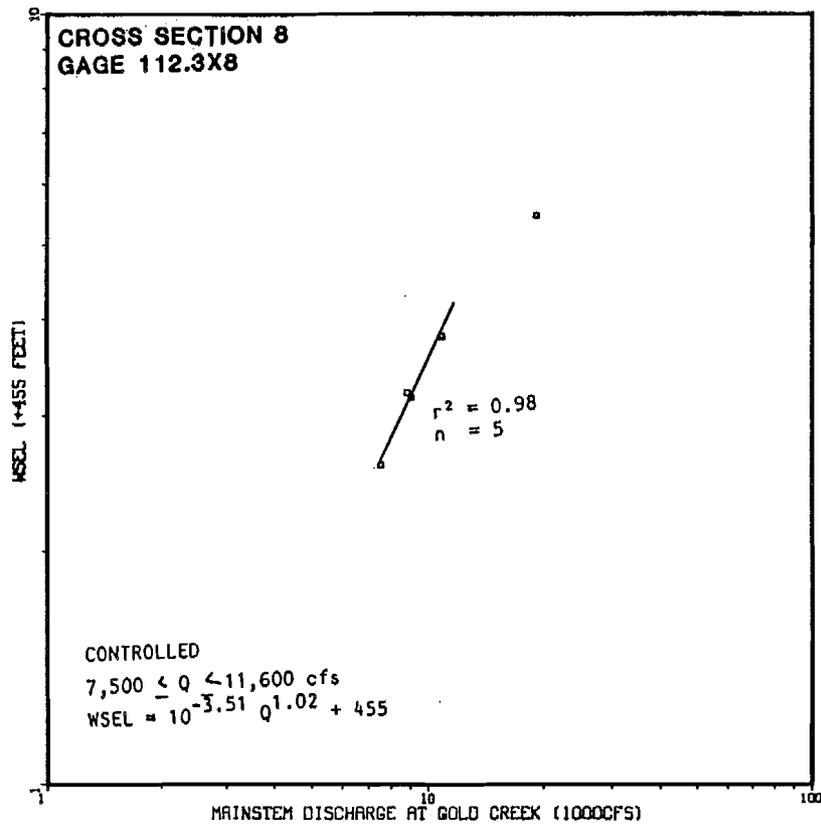


Figure A-1.17. Stage-discharge relationships for cross section 8 (Gages 112.3X8 and 112.3S8) at site 112.6L.

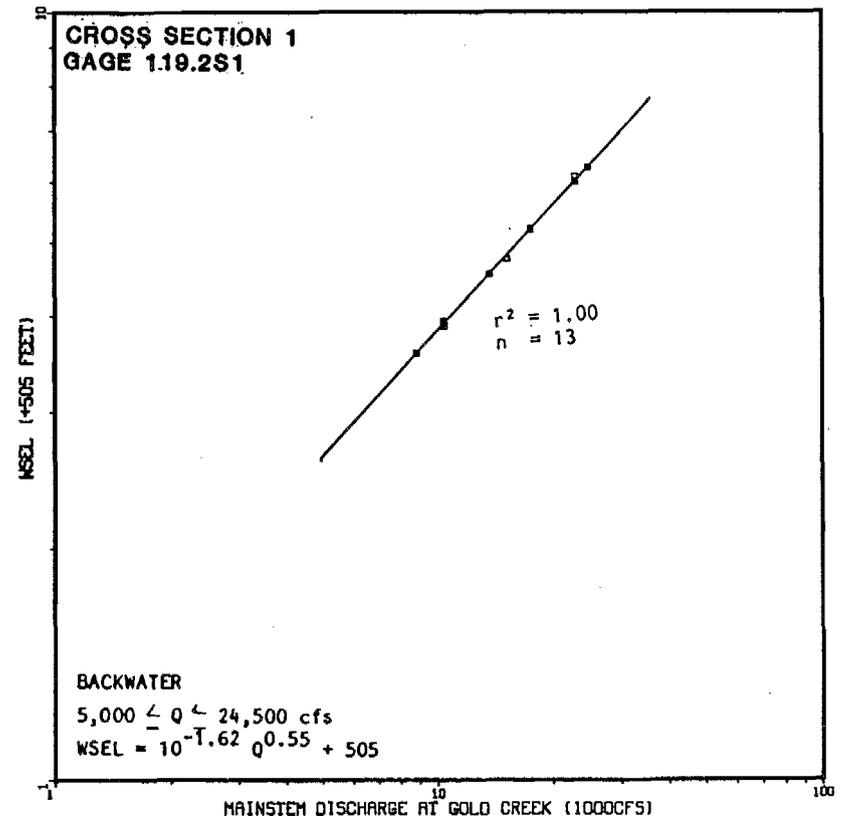
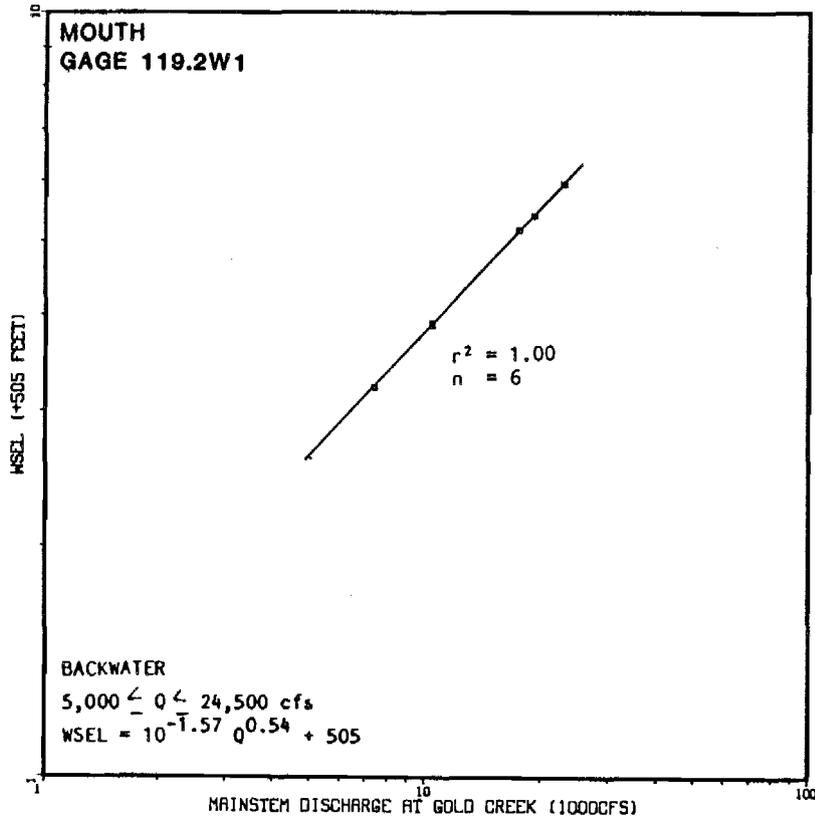


Figure A-1.18. Stage-discharge curves for at the channel mouth (Gage 119.2W1) and cross section 1 (Gage 119.2S1) at site 119.2R.

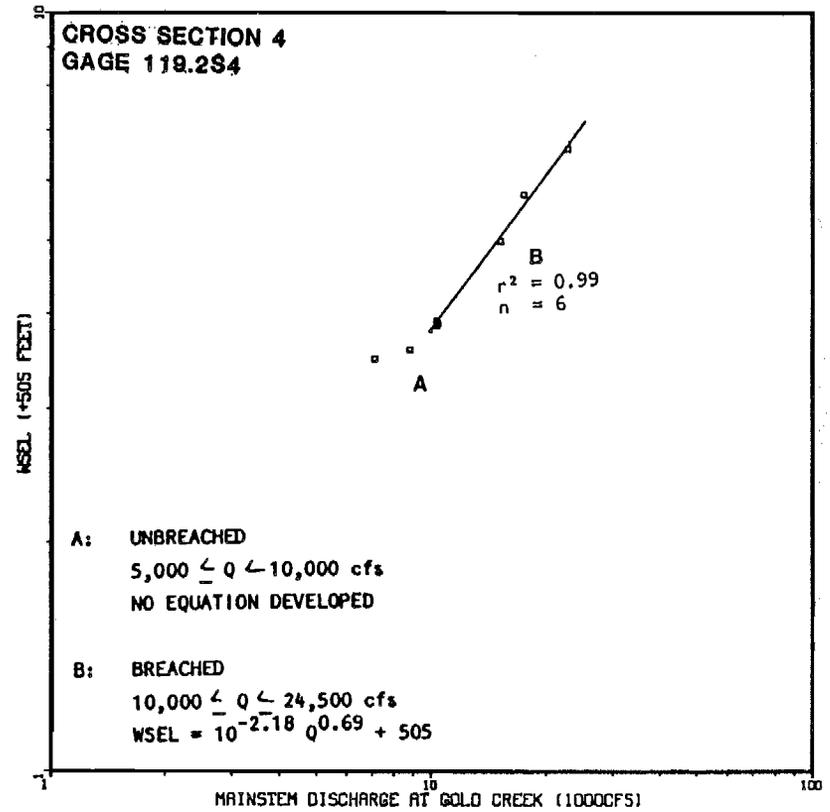
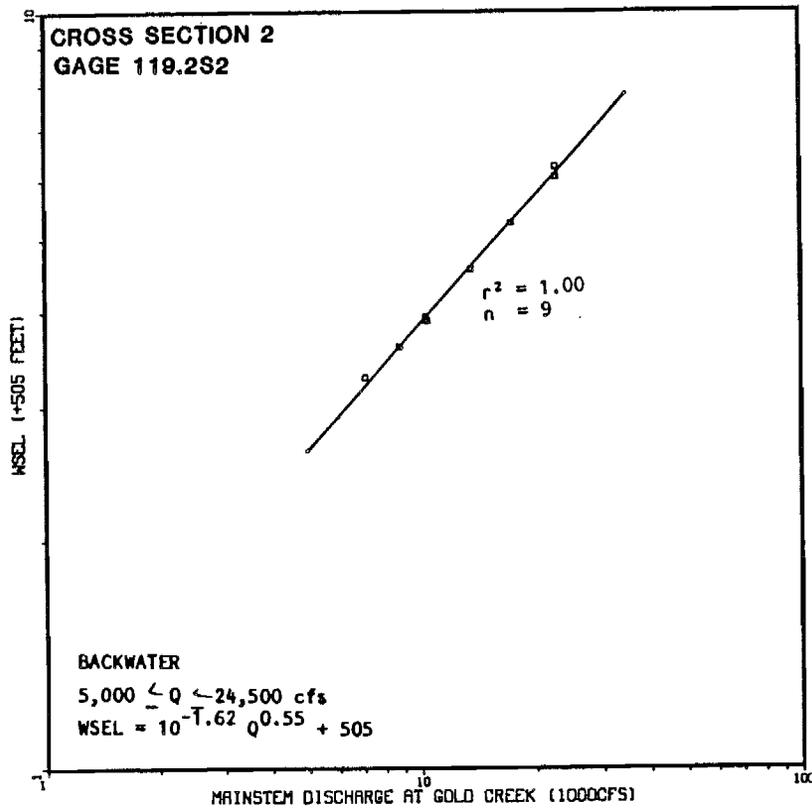


Figure A-1.19. Stage-discharge relationships for cross sections 2 (Gage 119.2S2) and 4 (Gage 119.2S4) at site 119.2R.

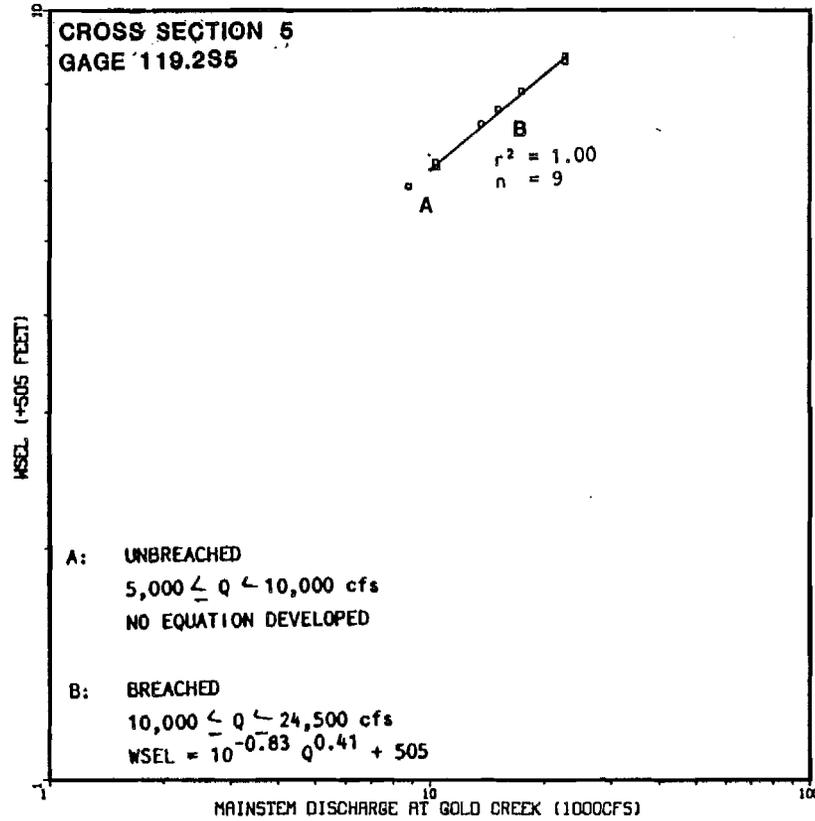


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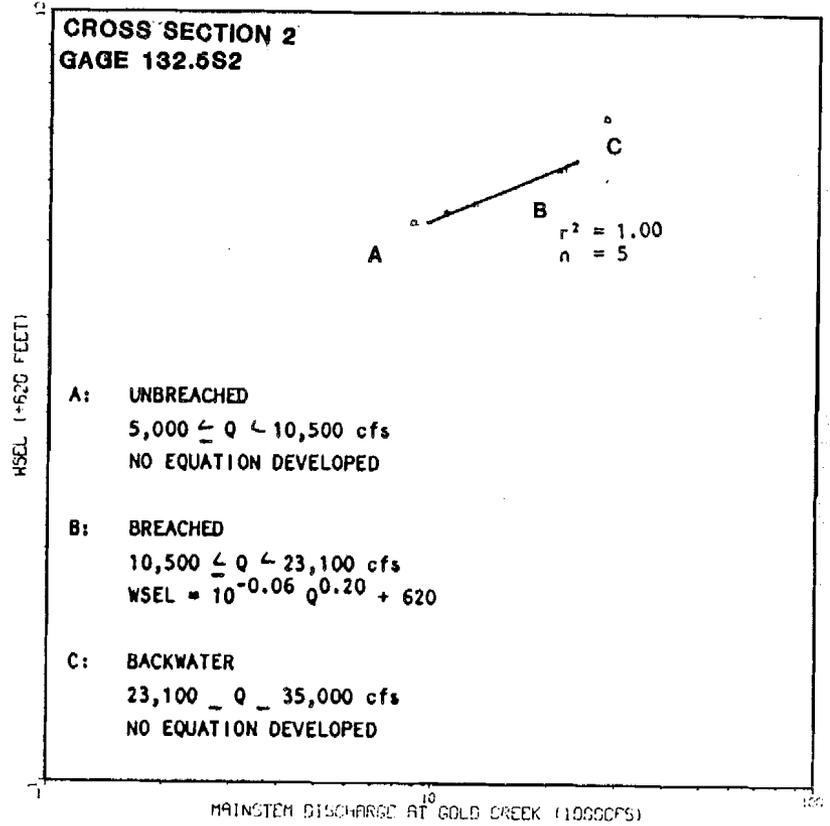
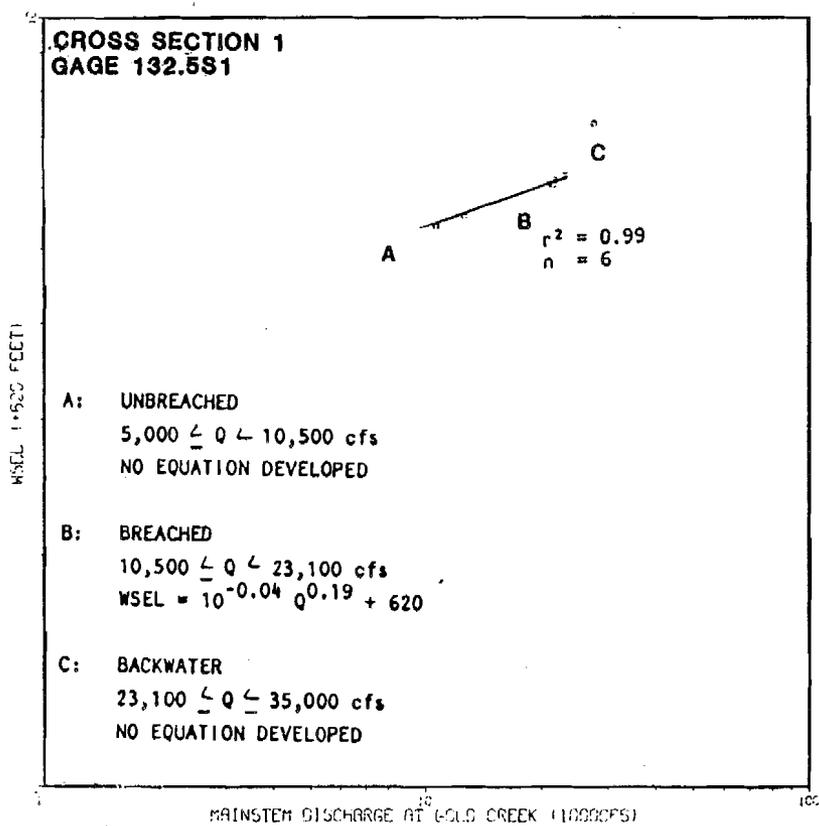


Figure A-1.21. Stage-discharge relationships for cross sections 1 (Gage 132.5S1) and 2 (Gage 132.5S2) at site 132.6L.

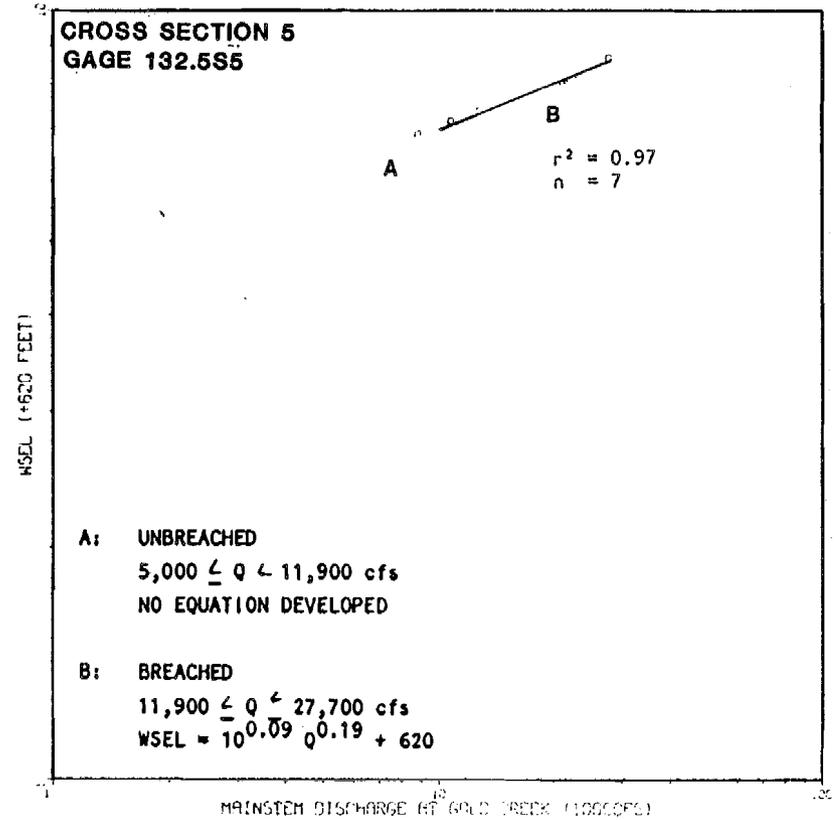
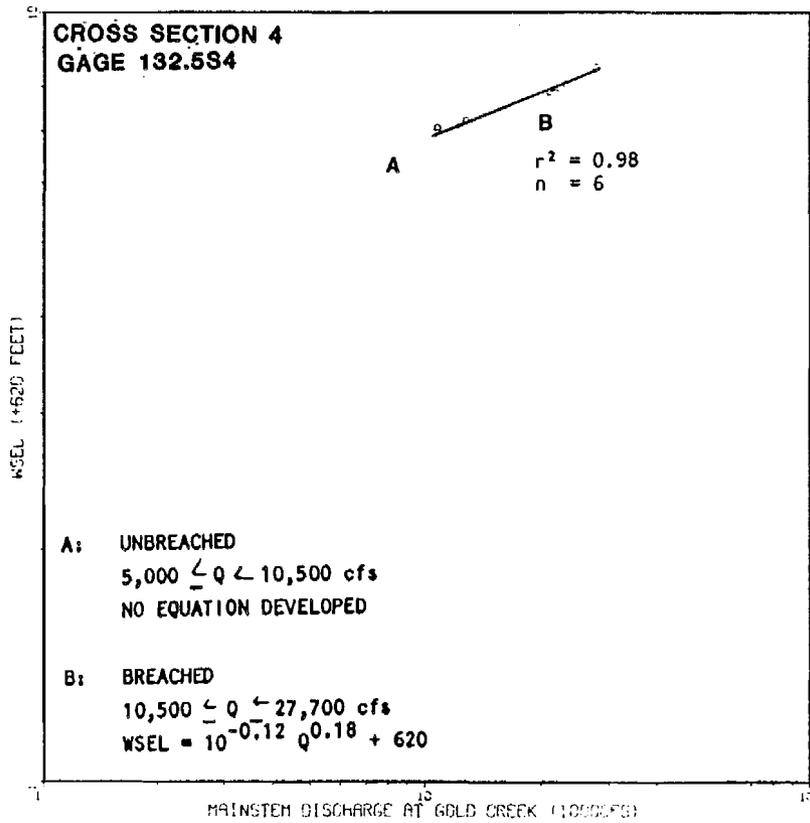


Figure A-1.22. Stage-discharge relationships for cross sections 4 (Gage 132.5S4) and 5 (Gage 132.5S5) at site 132.6L.

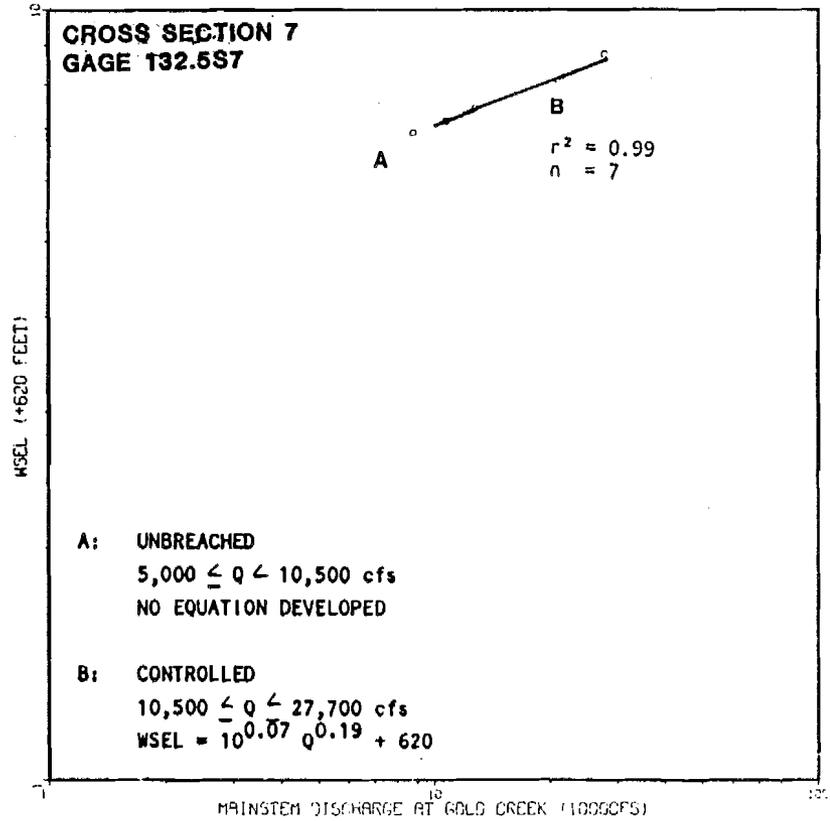
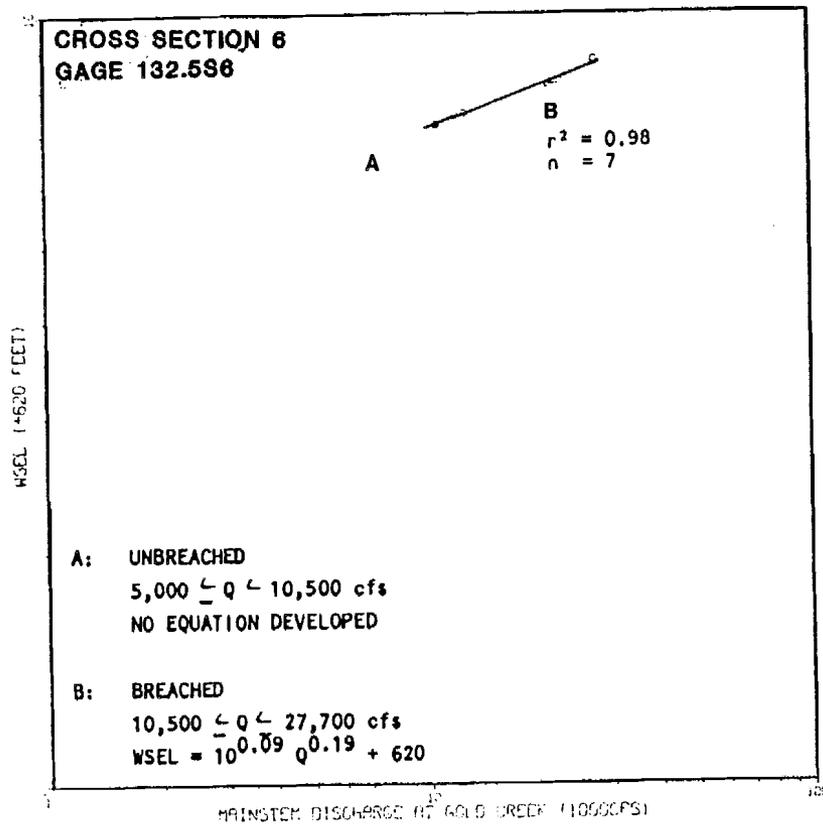


Figure A-1.23. Stage-discharge relationships for cross sections 6 (Gage 132.5S6) and 7 (Gage 132.5S7) at site 132.6L.

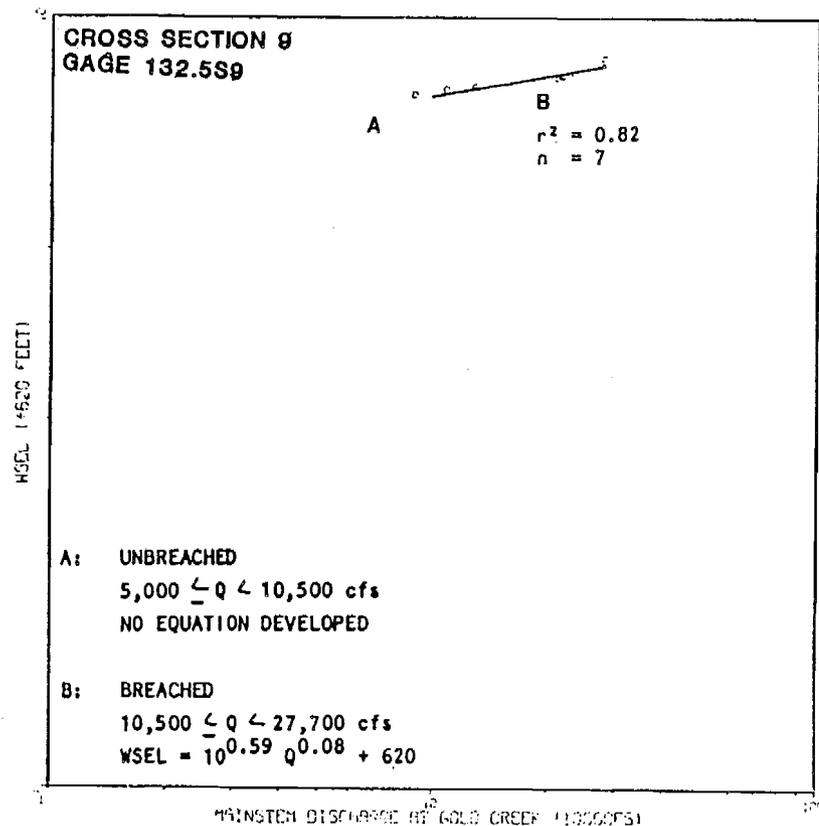
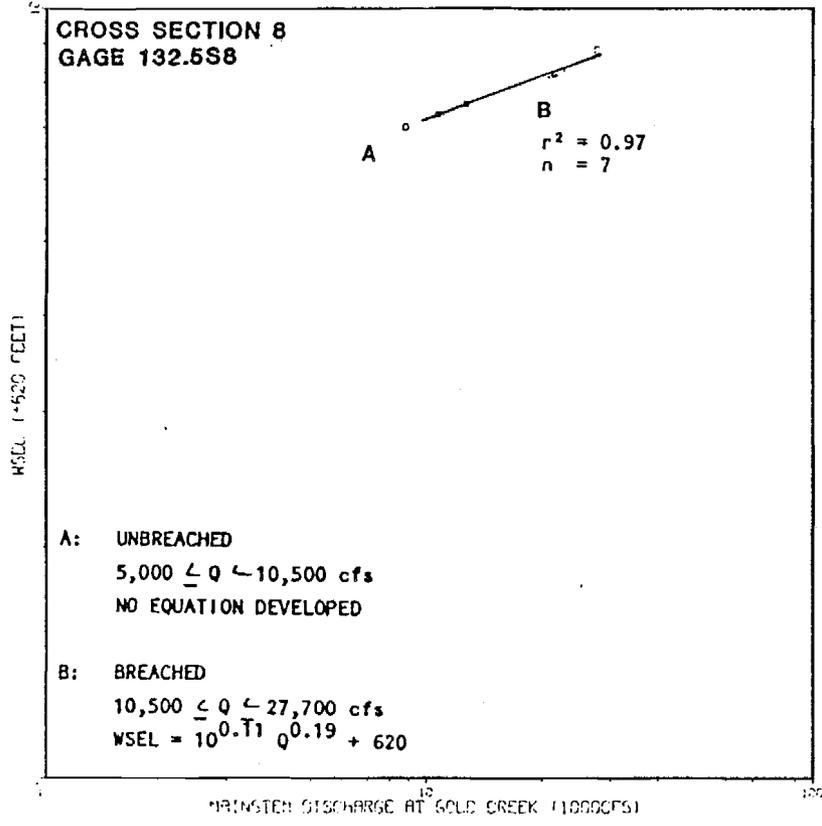


Figure A-1.24. Stage-discharge relationships for cross sections 8 (Gage 132.5S8) and 9 (Gage 132.5S9) at site 132.6L.

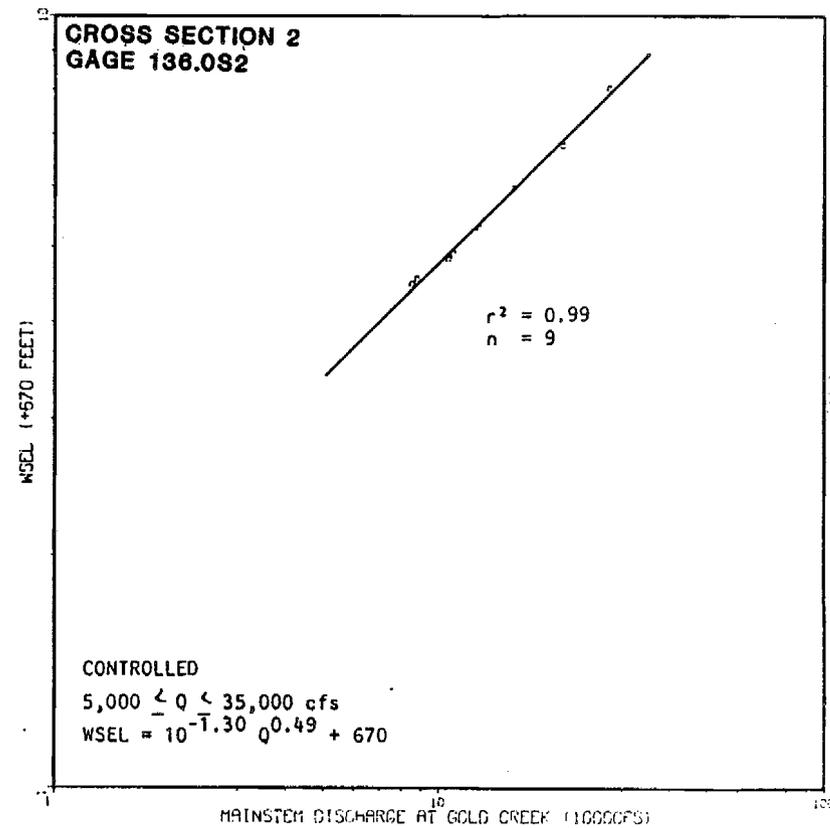
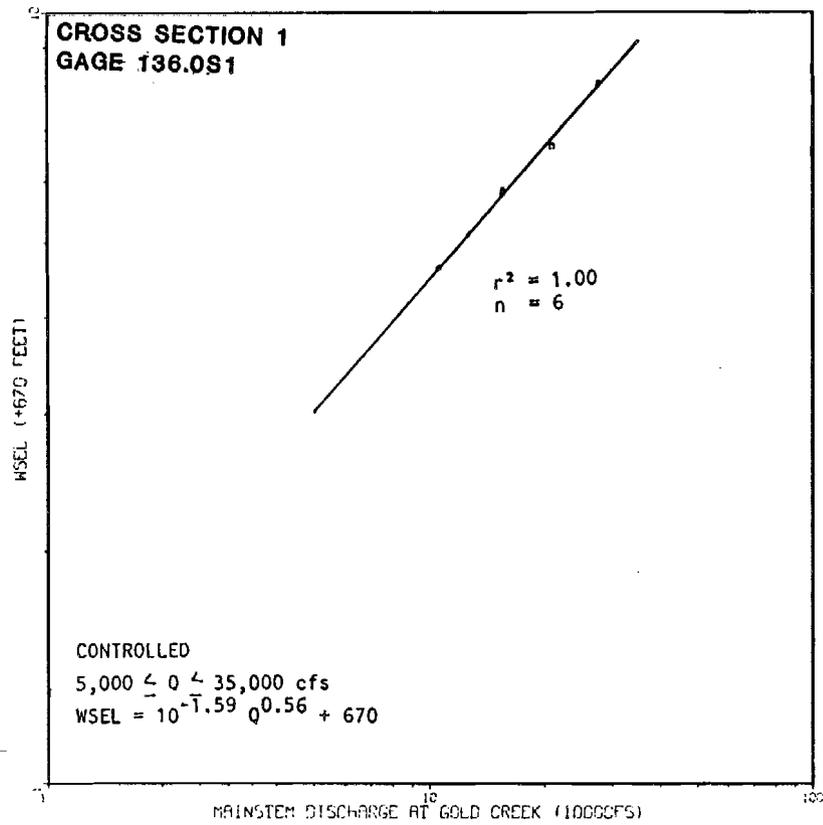


Figure A-1.25. Stage-discharge relationships for cross sections 1 (Gage 136.0S1) and 2 (Gage 136.0S2) at site 136.0L.

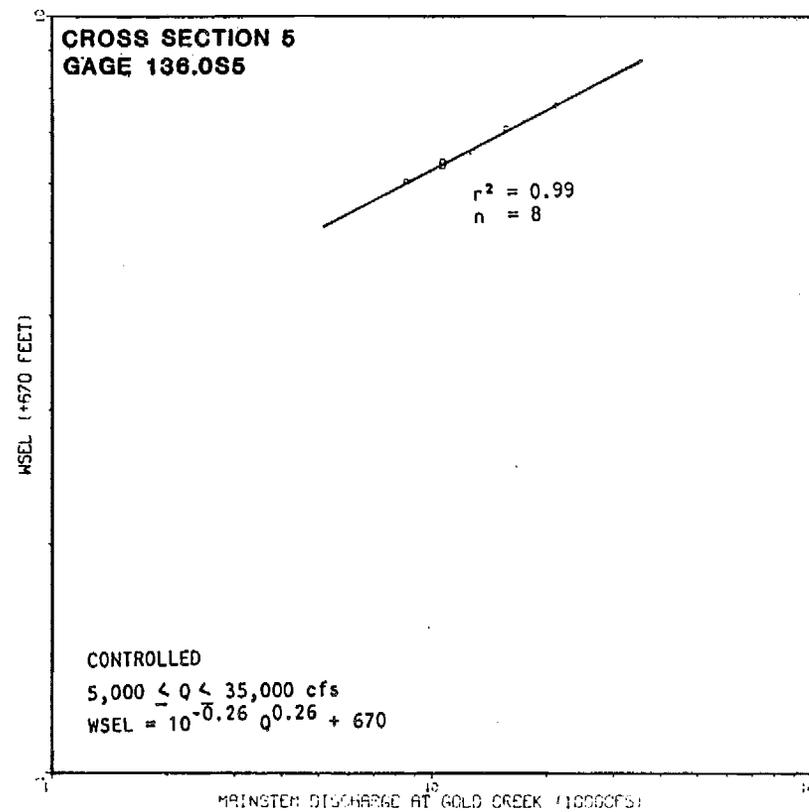
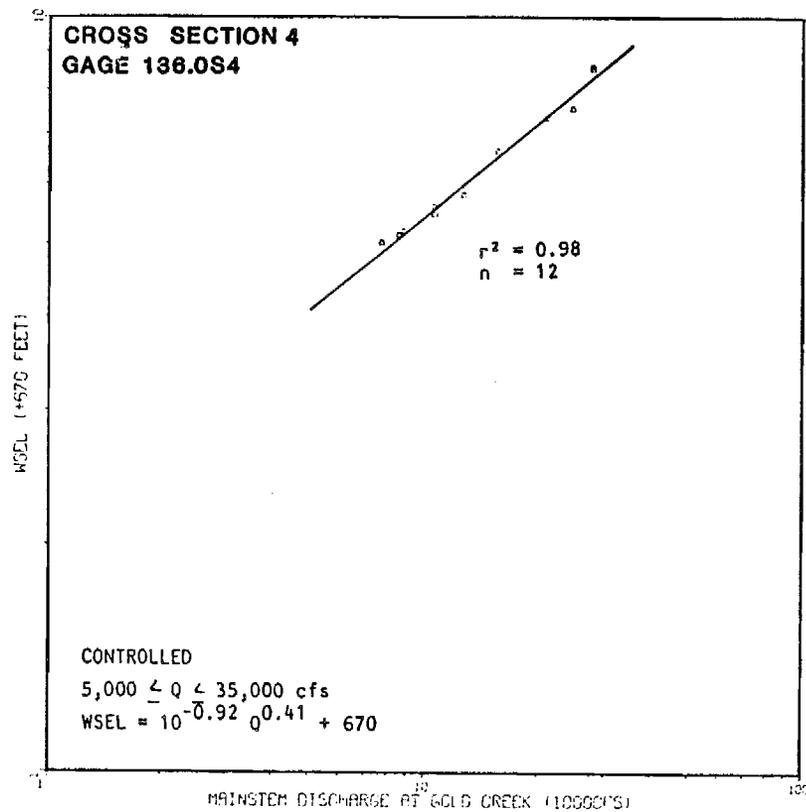


Figure A-1.26. Stage-discharge relationships for cross sections 4 (Gage 136.OS4) and 5 (Gage 136.OS5) at site 136.0L.

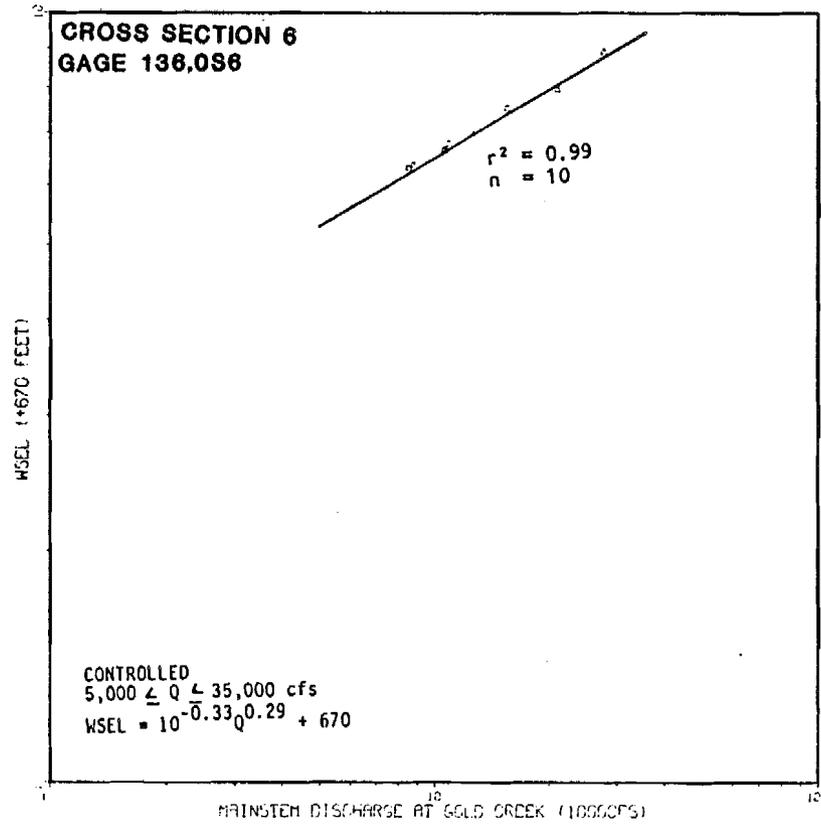


Figure A-1.27. Stage-discharge relationship for cross section 6 (Gage 136.0S6) at site 136.0L.

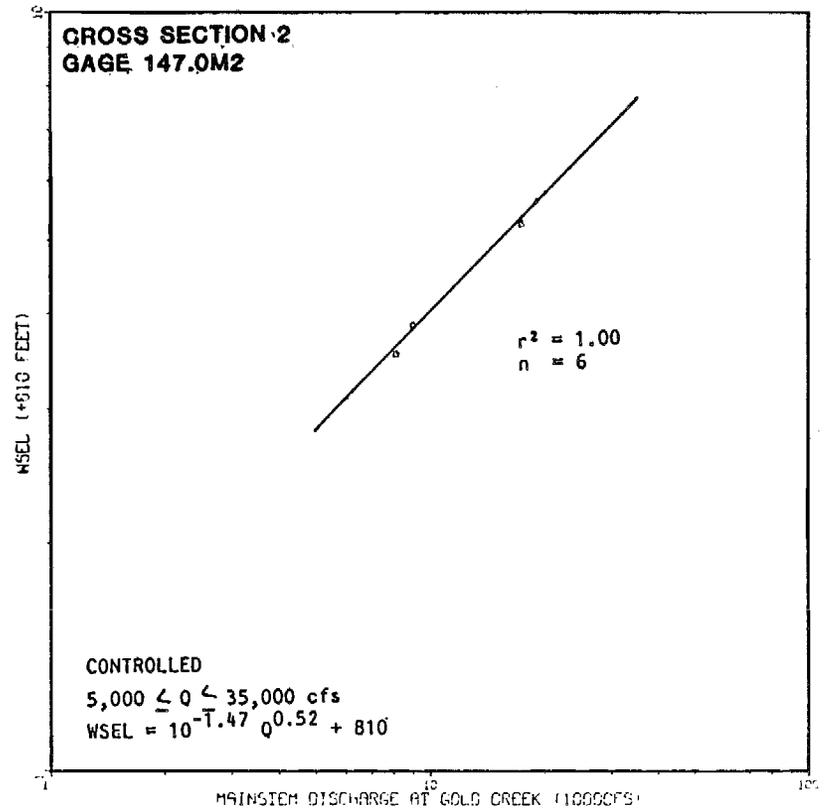
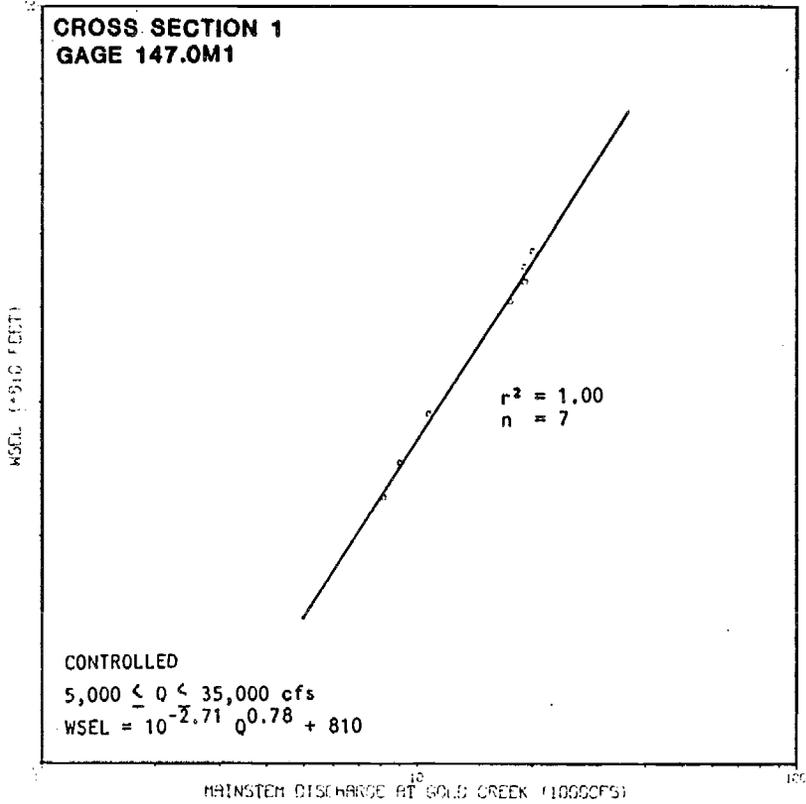


Figure A-1.28. Stage-discharge relationships for cross sections 1 (Gage 147.0M1) and 2 (Gage 147.0M2) at site 147.1L.

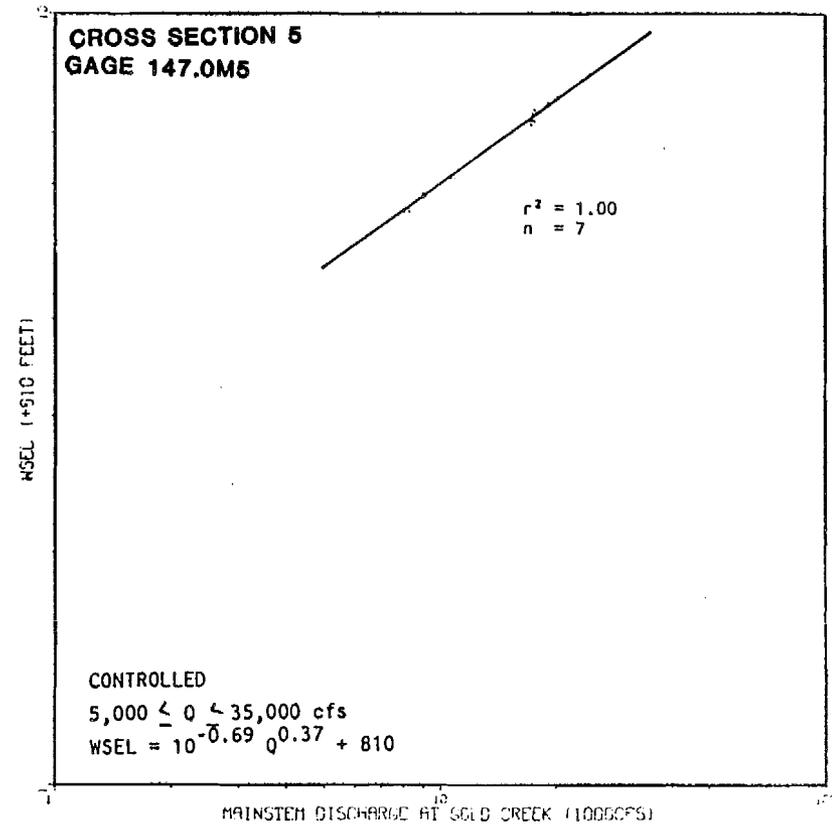
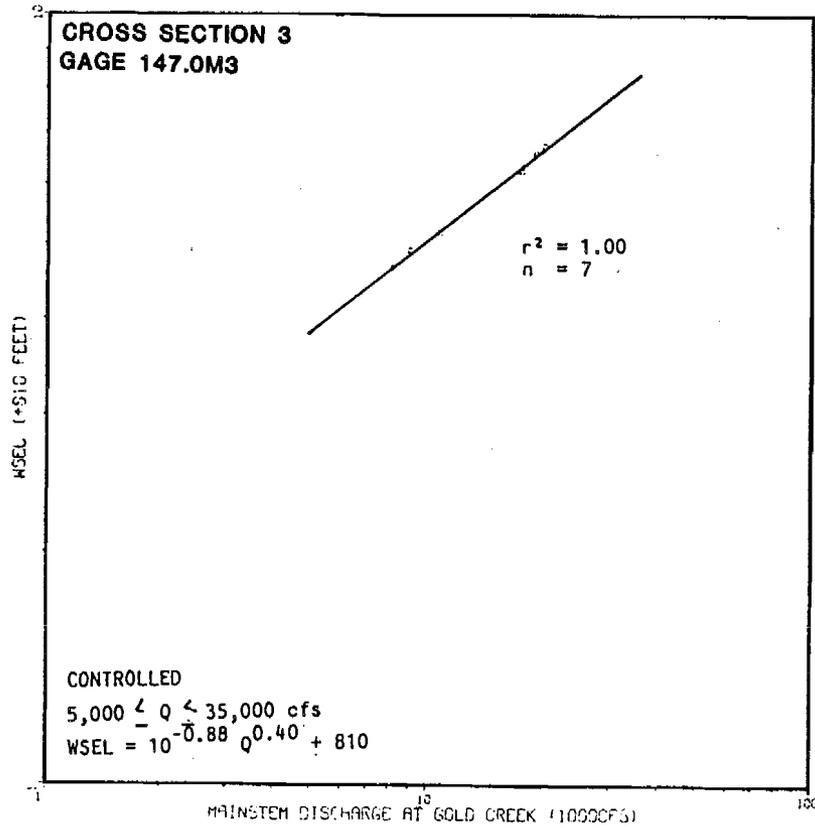


Figure A-1.29. Stage-discharge relationships for cross sections 3 (Gage 147.0M3) and 5 (Gage 147.0M5) at site 147.1L.

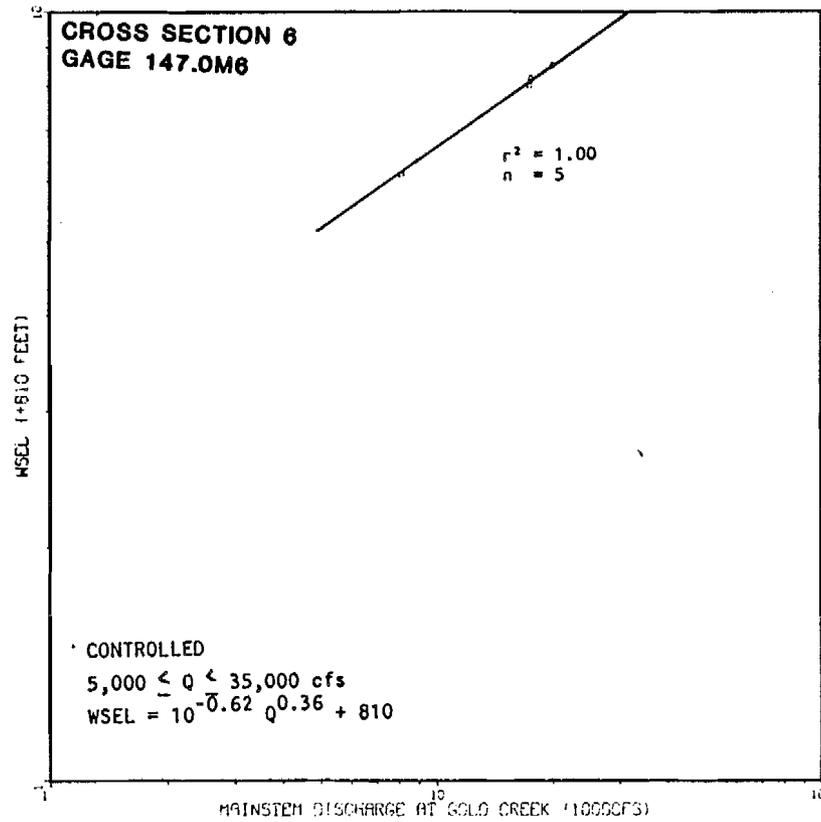


Figure A-1.30. Stage-discharge relationship for cross section 6 (Gage 147.0M6) at site 147.1L.

Table A-1.1

Summary of site-specific data collected for rating curve analysis  
at R.M. 101.2R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
101.251	Cross Section 1	841006	1200	359.47		6,780
		840925	1300	359.55	0	7,890
		840924	1310	359.46		8,290
		840924	1300	359.50		8,290
		840914	1815	359.54		8,800
		840912	1640	359.54		9,080
		840903	1310	359.95	25	11,200
		840903	1535	360.07		11,200
		840830	1150	361.08	280	15,300
		840829	1712	361.41		17,400
101.252	Cross Section 2	840808	1255	362.10		23,000
		840827	1605	362.95		27,700
		840924		359.64		8,290
		840830	1240	360.08	.8	15,300
		840829	1806	360.62		17,400
101.253	Cross Section 3	840808	1400	361.49		23,000
		840827	1607	363.22		27,700
		841006	1200	361.28		6,780
		840925	1416	361.33	0	7,890
		840924	1300	361.31		8,290
840924	1320	361.33		8,290		
840914	1815	361.29		8,800		

Table A-1.1 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 101.2R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
101.253 (cont.)	Cross Section 3	840912	1600	361.29		9,080
		840912		361.31		9,080
		840903	1525	361.80		11,200
		840903	1350	361.83	25	11,200
		840830	1445	362.05	286	15,300
		840829	1715	362.40		17,400
		840808	1250	362.97		23,000
101.254	Cross Section 4	841006	1155	361.23		6,780
		840925	1407	361.26	.2	7,890
		840924	1325	361.26		8,290
		840924		361.30		8,290
		840914	1820	361.26		8,800
		840912	1515	361.28		9,080
		840912		361.30		9,080
		840903	1422	361.85	27	11,200
		840830	1627	362.97	270	15,300
		840830	1606	362.98	270	15,300
		840829	1718	363.34		17,400
		840808	1245	363.88		23,000
101.255	Cross Section 5	840924		361.49		8,290
		840830	1638	363.08	0	15,300
		840829	1647	363.65		17,400
		840808	1355	364.36		23,000

Table A-1.1 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 101.2R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
101.256	Cross Section 6	841006	1150	361.93		6,780
		840925	1340	361.96	.1	7,890
		840924	1330	361.96		8,290
		840914	1830	361.94		8,800
		840912	1336	361.94		9,080
		840912	1345	361.99		9,080
		840903	1452	362.39	26	11,200
		840830	1700	363.10	273	15,300
		840829	1646	363.69		17,400
		840808	1350	364.44		23,000
101.257	Cross Section 7	841006	1145	361.89		6,780
		840925	1345	361.92	.4	7,890
		840924	1335	361.92		8,290
		840924		361.95		8,290
		840912	1308	361.94	0	9,080
		840912	1315	362.00		9,080
		840903	1525	362.39	19	11,200
		840830	1800	363.46	255	15,300
		840829	1640	363.92		17,400
		840808	1215	364.62		23,000
101.258	Cross Section 8	841006	1145	361.84		6,780
		840925	1315	361.90	1.1	7,890
		840924	1340	361.90		8,290

Table A-1.1 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 101.2R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
101.258 (cont.)	Cross Section 8	840912	1239	361.95		9,080
		840912	1245	362.01		9,080
		840903	1605	362.41		11,200
		840903		362.43	19	11,200 *
		840903	1605	362.45		11,200
		840830	1750	363.50	236	15,300
		840829	1542	363.92	533	17,400
		840808	1210	364.71		23,000
101.259	Cross Section 9	840924	1350	362.77		8,290
		840912	1145	362.83		9,080
		840903	1605	363.34	21	11,200
		840830	1832	364.01	269	15,300
		840829	1818	364.37		17,400
		840808	1200	364.97		23,000
101.2M1	Head	840925	1300	362.93		7,890
		840924		363.02		8,290
		840924	1400	363.03		8,290
		840912	1130	363.30		9,080
		840903	1700	363.81		11,200
		840830	1830	364.62		15,300
		840829	1633	365.01		17,400
		840808	1200	365.72		23,000

\* Average of two separate WSEL observations.

Table A-1.2 Summary of site-specific data collected for rating curve analysis at R.M. 101.5L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
101.2X1	Cross Section 1	841012		361.50	1622	6,210
		841001		361.60	1696	7,830
		840911		361.85	2213	9,330
		840831		362.70	3530	14,300 *
		840820		363.17		18,500
		840825		365.20		28,900
101.2X2 **	Cross Section 2	831103	1525	362.57		4,500
		831027	1655	362.60		5,020
		821012	1633	362.73		7,950
		841002		362.70		7,980
		821009	1030	362.89		8,440
		821007	1415	362.96		8,640
		831011	1445	363.22		9,520
		830916	0940	363.29		10,500
		820822	1630	363.44		12,200
		830911	1010	363.55		12,200
		820823	1124	363.47		12,300
		831001	1505	363.83		13,200
		820909	1250	363.64		13,400
		820813	1420	363.70		13,600
		820927	1025	363.83		13,800

\* Instantaneous discharge estimated from time lag analysis.

\*\* Same location as 1982 and 1983 gage 101.2M4.

Table A-1.2 (cont.) Summary of site-specific data collected for rating curve analysis  
at R.M. 101.5L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
101.2X2 ** (cont.)	Cross Section 2	820903	1545	363.97		14,600
		820831		364.07		16,000
		820807	1347	364.13		16,500
		820808	1950	364.22		16,600
		830529	1045	364.14		17,000
		830720	1835	364.40		18,600
		830722	1850	364.45		18,600
		830720	0900	364.49		18,600
		830822	1220	364.76		21,600
		830805	1635	364.82		21,700
		830619	1125	364.90		23,000
		830619	1830	364.99		23,000
		830617	1142	364.95		23,300
		830621	1730	365.24		24,000
		820920	1450	365.39		24,000
		830807	1450	365.25		25,000
		820715	1110	365.38		25,600
		830808	1920	365.63		26,000
830703	1645	365.22		26,200		
830706	1405	365.27		26,300		
830828	1052	365.53		26,600		

\*\* Same location as 1982 and 1983 gage 101.2M4.

Table A-1.2 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 101.5L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
101.2X3 ***	Cross Section 5	831103	1520	365.11		4,500
		831027	1650	365.19		5,020
		841012		365.23		6,210
		831020	1645	365.71		7,230
		841002		365.70		7,980
		831011	1441	365.92		9,520
		830916	1020	366.03		10,500
		830911	0930	366.33		12,200
		831001	1530	366.60		13,200
		830716	1145	366.82		16,400
		830529	1045	366.85		17,000
		830720	1830	367.16		18,600
		830722	1825	367.23		18,600
		830822	1255	367.64		21,600
		830805	1630	367.72		21,700
		830619	1120	367.68		23,000
		830617	1735	367.86		23,300
		830807	1455	368.07		25,000
		830808	1900	368.36		26,000
		830703		368.02		26,200
		830706	1400	368.11		26,300
		830828	1055	368.24		26,600

\*\*\* Same location as 1983 gage 101.2M6.

Table A-1.3

Summary of site-specific data collected for rating curve analysis  
at R.M. 101.7L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
101.8S1	Cross Section 1	841002		366.69		7,980
		840921	1547	367.86		11,400
		840831	1126	368.49		13,600
		840830	1530	368.75		15,300
		840829	1530	369.11		17,400
		840713	1315	369.36		21,200
102.0P1	Cross Section 3	841002		368.21		7,980
		840921	1640	371.43		11,400
		840830	1200	372.35		15,300
		840820		372.80		18,500
		840810	1600	373.92		24,000
		840825	1525	376.15		29,800
102.0P2	Cross Section 4	841002		368.99		7,980
		840820		373.91		18,500
		840810	1600	375.00		24,000
		840825	1525	376.45		29,800

Table A-1.4

Summary of site-specific data collected for rating curve analysis  
at R.M. 105.8L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
105.6P0	Cross Section 1	840928	1230	397.31		7,320
		841001	1520	397.47		7,830
		840914	1600	397.70		8,800
		840914	1606	397.71		8,800
		840911	1500	397.90		9,330
105.6P1	Cross Section 4	840928	1200	400.11		7,320
		841001	1617	400.22		7,830
		841001	1520	400.23		7,830
		840914	1600	400.38		8,800
		840911	1430	400.51		9,330
		840831	1210	401.43		13,600
		840830	1330	401.68		15,300
		840830	1330	401.74		15,300
		840820	1715	402.10		18,500
		840810	1155	402.94		24,000
		840825	1609	404.62		29,800

Table A-1.5

Summary of site-specific data collected for rating curve analysis  
at R.M. 112.6L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
112.3X1C (Low Flow)	Cross Section 1 Left Bank	841005	1500	450.60		7,080
		840929	1555	450.60		7,410
		840930	1546	450.66		7,500
		840916		450.84		8,280
		840913		451.00		9,000
		840905	0830	451.31		10,400
112.3X1B (High Flow)	Cross Section 1 Left Bank	840830		452.67		15,300
		840822	1230	453.42		19,100
		840810		454.06		24,000
112.3S1	Cross Section 1 Right Bank	841005	1500	450.75		7,080
		840916		450.96		8,280
		840914	1620	451.08		8,800
		840904		451.54		10,800
		840830		452.54		15,300
		840822	1248	453.28		19,100
		840810		454.06		24,000

Table A-1.5 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 112.6L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
112.3X2	Cross Section 2 Left Bank	841005	1500	451.36		7,080
		840929	1600	451.36		7,410
		840930	1540	451.43		7,500
		840916		451.61		8,280
		840913		451.78		9,000
		840905		452.10		10,400
		840830		453.25		15,300
		840822	1330	453.67		19,100
		840810		454.31		24,000
112.3S2C (Low Flow)	Cross Section 2 Right Bank	841005	1500	451.91		7,080
		840930	1540	452.06		7,500
		840916		452.14		8,280
		840914	1620	452.15		8,800
		840913	1700	452.25		9,000
		840904		452.40		10,800
112.3S2B (High Flow)	Cross Section 2 Right Bank	840830		452.85		15,300
		840822	1300	453.55		19,100
		840810		455.22		24,000

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Table A-1.5 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 112.6L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
112.3X3C (Low Flow)	Cross Section 3 Left Bank	841005	1500	452.54		7,080
		840929	1605	452.52		7,410
		840930	1512	452.59		7,500
		840916		452.68		8,280
		840914	1620	452.68		8,800
		840913		452.79		9,000
		840905		452.97		10,400
112.3X3B (High Flow)	Cross Section 3 Left Bank	840904		453.12		10,800
		840822	1352	454.20		19,100
		840810		454.62		24,000
112.383	Cross Section 3 Right Bank	841005	1500	452.54		7,080
		840929	1640	452.56		7,410
		840930	1534	452.60		7,500
		840916		452.90		8,280
		840913	1700	453.00		9,000
		840904		453.35		10,800
		840830		454.37		15,300
		840822	1352	454.91		19,100
840810	1540	455.39		24,000		

Table A-1.5 (cont.) Summary of site-specific data collected for rating curve analysis  
at R.M. 112.6L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
112.3X3AC	Cross Section 3A Left Bank	841005	1500	454.21		7,080
		840929	1610	454.21		7,410
		840930	1430	454.26		7,500
		840916		454.35		8,280
		840913		454.46		9,000
		840905		454.63		10,400
112.383AC	Cross Section 3A Right Bank	841005	1500	454.51		7,080
		840929	1620	454.52		7,410
		840916		454.60		8,280
		840916		454.61		8,280
		840905		454.79		10,400
112.3X4B (2) (Low Flow)	Cross Section 4 Left Bank	841005	1500	454.81		7,080
		840929	1615	454.82		7,410
		840916		454.98		8,280
		840913	1700	455.14		9,000
		840905		455.30		10,400
		840905		455.31		10,400
112.3X4B (1) (Low Flow)	Cross Section 4 Left Bank	840830		456.00		15,300
		840822	1430	456.36		19,100
		840810		456.67		24,000

Table A-1.5 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 112.6L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
112.384C (Low Flow)	Cross Section 4 Right Bank	841005	1500	453.42		7,080
		841005	1522	453.43		7,080
		840929	1635	453.43		7,410
		840913	1700	453.77		9,000
		840904		454.17		10,800
112.384B (High Flow)	Cross Section 4 Right Bank	840830		455.56		15,300
		840822	1330	456.06		19,100
		840810		456.54		24,000
112.3X5	Cross Section 5 Left Bank	841005	1500	454.92		7,080
		840930	1320	454.97		7,500
		840916		455.11		8,280
		840913	1700	455.25		9,000
		840904		455.61		10,800
		840830		456.56		15,300
		840822	1445	457.10		19,100
		840810		457.43		24,000
112.385	Cross Section 5 Right Bank	840830		455.56		15,300
		840822	1350	456.16		19,100
		840810		456.80		24,000

Table A-1.5 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 112.6L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
112.3X6	Cross Section 6 Left Bank	840930	1130	455.13		7,500
		840916		455.22		8,280
		840913	1700	455.39		9,000
		840904		455.80		10,800
		840830		456.83		15,300
		840822	1510	457.47		19,100
112.386	Cross Section 6 Right Bank	840913	1700	455.53		9,000
		840904		455.91		10,800
		840830		456.87		15,300
		840822	1420	457.49		19,100
		840810		457.98		24,000
112.3X7	Cross Section 7 Left Bank	841012		455.17	215	6,210
		840930	1030	455.70	355	7,500
		840916		455.94		8,280
		840913	1700	456.19	721	9,000
		840904		456.79	1430	10,800
		840830			2980	15,300
		840822	1540	458.70		19,100
		840810		459.36		24,000

Table A-1.5 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 112.6L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)	
112.387	Cross Section 7 Right Bank	841012			215	6,210	
		840930			355	7,500	
		840913			456.47	721	9,000
		840904			456.85	1450	10,800
		840830			458.13	2980	15,300
		840822	1445		458.52		19,100
		840810			459.31		24,000
112.3X8	Cross Section 8 Left Bank	840930	1018		457.59	7,500	
		840914	1515		458.21	8,800	
		840913	1700		458.17	9,000	
		840904	1109		458.79	10,800	
		840904	1048		458.80	10,800	
		840822	1625		460.45	19,100	
112.388	Cross Section 8 Right Bank	841005	1505		458.60	7,080	
		840930			458.66	7,500	
		840914	1515		458.95	8,800	
		840913	1700		458.99	9,000	
		840904			459.24	10,800	
		840830			460.01	15,300	
		840822	1500		460.36	19,100	

Table A-1.6

Summary of site-specific data collected for rating curve analysis  
at R.M. 114.1R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
114.0P1	Cross Section 2	841005	1130	468.44		7,080
		840926	1153	468.39		7,680
		841001	1447	468.43		7,830
		840914	1650	468.60		8,800
		840911	1240	468.87		9,330
		840823	1200	471.00		17,900
		840812			471.14	

Table A-1.7

Summary of site-specific data collected for rating curve analysis  
at R.M. 115.0R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
114.9P1	Cross Section 1	840926	1300	474.46		7,680
		841001		474.41		7,830
		840914	1540	474.48		8,800
		840911	1145	474.48		9,330
		840920	1120	474.52		10,400
		840816	1353	475.55		14,500
		830526	1830	475.77		16,000
		840823	1425	476.23		17,900
		830720	1305	476.06		18,600
		830715	1330	476.39		18,600
		830611	1930	476.19		19,000
		830613	1155	476.35		19,900
		830612	1830	476.40		20,000
		830803	1245	476.81		21,600
		830805	1435	476.74		21,700
		830806	1933	477.04		23,800
		830824	1530	477.31		24,700
		830808	1134	477.38		26,000
		830825	1115	477.58		27,400
		830826	1755	478.70		31,700

Table A-1.8

Summary of site-specific data collected for rating curve analysis  
at R.M. 118.9L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
118.9P1	Cross Section 2	841004	1720	507.53		7,380
		840930		507.52		7,500
		840926	1528	507.61		7,680
		840914	1500	507.86		8,800
		840914	1300	507.91		8,800
		840910	1735	508.02		9,890
		840922	1414	508.16		10,300
		840831	1300	508.94		13,600
		840815	1400	509.24		15,100
		840815	1415	509.25		15,100
		840823	1645	509.76		17,900
		840812	1500	509.90		19,000

Table A-1.9

Summary of site-specific data collected for rating curve analysis at R.M. 119.1L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
119.1P1	Cross Section 2	841004		509.25		7,380
		841004	1645	509.27		7,380
		840930	1655	509.27		7,500
		840926	1708	509.33		7,680
		841001	1000	509.35		7,830
		840914	1111	509.58		8,800
		840910	1810	509.76		9,890
		840922		509.94		10,300
		840815		511.05		15,100
840812		511.83		19,000		

Table A-1.10

Summary of site-specific data collected for rating curve analysis  
at R.M. 119.2R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
119.2W1	Mouth	840928		508.23		7,320
		840906		508.89		10,300
		840922	1523	508.92		10,300
		840819	1045	510.19		17,400
		840812		510.41		19,000
		840824	1029	510.95		22,700
119.2S1	Cross Section 1	840914	1330	508.58		8,800
		840906		508.88		10,300
		840906		508.89		10,300
		840922	1515	508.93		10,300
		840922	1520	508.95		10,300
		840905	1805	508.89	0	10,400
		840831	1514	509.54		13,600
		840815		509.76		15,100
		840819	1045	510.20	317	17,400
		840819	1215	510.22		17,400
		840824	1030	511.00		22,700
		840824	1225	511.11		22,700
		840809		511.27		24,500

Table A-1.10 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 119.2R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
119.282	Cross Section 2	841005	0915	508.28		7,080
		840914	1330	508.60		8,800
		840906		508.90		10,300
		840922	1500	508.94		10,300
		840905	1730	508.90	0	10,400
		840831	1525	509.56		13,600
		840819	1335	510.26	338	17,400
		840824	1030	511.05		22,700
		840824	1224	511.24		22,700
119.283	Cross Section 3	841005	0930	508.28		7,080
		840914	1330	508.60		8,800
		840906		508.89		10,300
		840922	1500	508.95		10,300
		840905	1700	508.90	0	10,400
		840831	1526	509.54	71	13,600
		840815		509.75		15,100
		840819	1430	510.27	300	17,400
		840824	1112	511.13		22,700
		840824	1145	511.19	1090	22,700
		840824	1220	511.24		22,700
		840809		511.42		24,500

Table A-1.10 (cont.) Summary of site-specific data collected for rating curve analysis  
at R.M. 119.2R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
119.284	Cross Section 4	841005	0945	508.49		7,080
		840914	1330	508.59		8,800
		840906		508.86		10,300
		840922	1510	508.92		10,300
		840905	1645	508.88	.2	10,400
		840815		509.99		15,100
		840819	1330	510.75	348	17,400
		840824	1041	511.61		22,700
119.285	Cross Section 5	840914	1330	510.90		8,800
		840906		511.25		10,300
		840922	1515	511.33		10,300
		840905	1600	511.25	.2	10,400
		840831	1702	512.10		13,600
		840815		512.43		15,100
		840819	1640	512.83	317	17,400
		840824	1042	513.56		22,700
840824	1229	513.70		22,700		

Table A-1.11

Summary of site-specific data collected for rating curve analysis  
at R.M. 125.2R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
125.0P1	Cross Section 1	840929		555.84		7,410
		840930	1255	556.21		7,500
		840913		556.39		9,000
		840910		556.54		9,890
		840831	1744	557.25		13,600
		840814		557.61		16,100
		840819	1710	557.91		17,400
		840822	1440	558.02		19,100
125.0P2	Cross Section 2	841018	1200	555.39	8	4,300
		841012		557.10	169	6,210
		840929		557.50		7,410
		840930	1255	557.59		7,500
		840926	1921	557.67	329	7,680
		840915	1150	557.86		8,520
		840913	1400	557.97	657	9,000
		840910	1650	558.12		9,890
		840831	1736	558.82		13,600
		840814		559.24		16,100
		840819	1700	559.47		17,400
		840822	1615	559.69		19,100

Table A-1.12

Summary of site-specific data collected for rating curve analysis  
at R.M. 130.2R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
129.8P1	Cross Section 2	841004	1445	605.71		7,380
		840927		605.70		7,470
		840930		605.70		7,500
		840926	1615	605.66		7,680
		840915	1015	605.74		8,520
		840910	1535	605.86		9,890
		840816		606.39		14,500
		840814	1550	606.56		16,100
		840814		606.57		16,100
		840821	1745	606.97		19,900
		840821	1745	606.99		19,900
		840811		607.63		22,500
		840827	1110	608.60		27,700
		840826	1536	609.01		31,700

Table A-1.13

Summary of site-specific data collected for rating curve analysis  
at R.M. 131.3L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
131.1P1	Cross Section 3	840928		616.26		7,320
		841004	1150	616.26		7,380
		840927		616.25		7,470
		840926	1430	616.24		7,680
		840913	1700	616.29		9,000
		840907	1830	616.37		10,700
		840902		616.49		11,800
		840814	1445	617.06		16,100
		840814		617.07		16,100
		840821	1644	617.68		19,900
131.1P2	Cross Section 1	840929	1830	614.30		7,410
		840927		614.31		7,470
		840926	1405	614.33		7,680
		840913	1730	614.50		9,000
		840907	1830	614.96		10,700
		840902		615.26		11,500

Table A-1.14

Summary of site-specific data collected for rating curve analysis  
at R.M. 131.7L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
131.553	Cross Section 3	841012		616.35	2.9	6,210
		840927	1234	616.67	20	7,470
		840919	1407	616.92	57	9,390
		840907	1750	617.13	87	10,700
		840902	1720	617.32	159	11,800
		840831	1700	617.58	247	13,600
		840817		617.51	248	14,800
		840828	1330	618.11	625	21,000
		840811		618.18		22,500
840827	1124	619.38		27,700		

Table A-1.15

Summary of site-specific data collected for rating curve analysis  
at R.M. 132.6L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
132.5S1	Cross Section 1	840907		625.36		10,700
		840901	1010	625.52	29	12,700
		840828	1146	626.09		21,000
		840708	1250	626.05	131	21,500
		840707	1700	626.15		21,900
		840711	1500	626.23		23,100
		840827	1145	627.27		27,700
132.5S2	Cross Section 2	840914	1310	625.33		8,800
		840907	1500	625.49		10,700
		840907		625.50		10,700
		840901	1040	625.65	28	12,700
		840828	1147	626.27		21,000
		840708	1330	626.28	146	21,500
		840707	1700	626.34		21,900
		840711	1500	626.41		23,100
		840827	1145	627.29		27,700
		840827	1145	627.31		27,700
132.5S3	Cross Section 3	840907		625.94	10	10,700
		840901	1051	626.28	27	12,700
		840828	1206	627.16		21,000
		840708	1415	627.29	170	21,500
		840707	1700	627.14		21,900
		840711	1505	627.39		23,100

Table A-1.15 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 132.6L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
132.554	Cross Section 4	840907	1415	627.08		10,700
		840901	1112	627.23	26	12,700
		840828	1154	627.86		21,000
		840708	1445	627.95	150	21,500
		840707	1700	627.96		21,900
		840711	1505	628.05		23,100
		840827	1149	628.47		27,700
132.555	Cross Section 5	840914	1335	626.90		8,800
		840907	1400	627.17		10,700
		840907		627.19		10,700
		840901	1127	627.41	27	12,700
		840828	1156	628.06		21,000
		840708	1600	628.10	136	21,500
		840707	1700	628.14		21,900
		840711	1510	628.23		23,100
		840827	1150	628.67		27,700
		840827	1154	628.68		27,700
132.556	Cross Section 6	840907		627.18		10,700
		840907	1330	627.19		10,700
		840901	1146	627.43	27	12,700
		840901	1003	627.44	27	12,700
		840828	1158	628.09		21,000
		840708	1635	628.16	120	21,500
		840707	1635	628.16		21,900
		840711	1510	628.27		23,100
		840827	1153	628.71		27,700

Table A-1.15 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 132.6L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
132.567	Cross Section 7	840914	1345	626.91		8,800
		840907		627.16		10,700
		840907	1300	627.17		10,700
		840901	1204	627.43	24	12,700
		840901	1001	627.44	24	12,700
		840828	1200	628.11		21,000
		840708	1700	628.17	136	21,500
		840707		628.20		21,900
		840711	1515	628.30		23,100
		840827	1156	628.74		27,700
132.568	Cross Section 8	840914	1345	627.00		8,800
		840907		627.27		10,700
		840901	1000	627.50	33	12,700
		840901		627.51	33	12,700
		840828	1202	628.17		21,000
		840708	1740	628.20	129	21,500
		840707		628.24		21,900
		840711	1515	628.33		23,100
		840827	1158	628.83		27,700
132.569	Cross Section 9	840914	1400	627.92		8,800
		840907	1200	628.04		10,700
		840901	0958	628.10	22	12,700
		840901	1245	628.12	22	12,700
		840828	1204	628.33		21,000
		840708	1800	628.40	149	21,500
		840707	1700	628.37		21,900
		840711	1515	628.47		23,100
		840827	1200	628.84		27,700

Table A-1.16

Summary of site-specific data collected for rating curve analysis  
at R.M. 133.8R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
133.7P1	Cross Section 3	840926	1215	649.23		7,680
		840925	1735	649.26		7,890
		840911	1755	649.42		9,330
		840919	1605	649.46		9,390
		840910	1505	649.45		9,890
		840910	1830	649.47		9,890
		840922	1555	649.52		10,300
		840920	1720	649.57		10,400
		840814		650.27		16,100
		840814	1150	650.32		16,100
		840821	1530	650.71		19,100
		840828	1542	650.72		21,000
		840824	1550	651.43		22,700
		840827	1245	651.84		27,700
		840827	1245	651.86		27,700
		840827	1030	651.98		27,700
		840825	1425	652.48		29,800
840826		652.72		31,700		

Table A-1.17

Summary of site-specific data collected for rating curve analysis  
at R.M. 136.0L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
136.0S1	Cross Section 1	840909	1113	674.64	76	10,600
		840901	1605	675.14	150	12,700
		840818	1100	675.81	246	15,600
		840818	1100	675.85		15,600
		840828	1724	676.67		21,000
		840827	1604	678.06		27,700
136.0S2	Cross Section 2	840915	1745	674.49		8,520
		840914	1100	674.56		8,800
		840909		674.84		10,600
		840909	1155	674.88	80	10,600
		840908		674.92		10,900
		840901	1710	675.31	162	12,700
		840818	1130	675.97	281	15,600
		840828	1725	676.78		21,000
136.0S3	Cross Section 3	840827	1603	678.04		27,700
		840915	1520		41	8,520
		840914	1130	675.02		8,800
		840909	1228	675.31	79	10,600
		840909		675.32		10,600
		840908		675.36		10,900
		840901	1750	675.77	149	12,700
		840818	1145	676.39	241	15,600
		840828	1610	676.99	413	21,000
840827	1608	678.21		27,700		

Table A-1.17 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 136.0L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
136.0S4	Cross Section 4	841003	1645	675.03		7,680
		840915	1745	675.15		8,520
		840914	1145	675.21		8,800
		840909		675.48		10,600
		840909	1340	675.61	88	10,600
		840908		675.61		10,900
		840901	1800	675.82	154	12,700
		840818	1324	676.65	253	15,600
		840828	1622	677.36		21,000
		840811	1815	677.56		24,500
		840827	1615	678.54		27,700
		840827	1616	678.60		27,700
		136.0S5	Cross Section 5	840915	1745	676.04
840914	1200			676.05		8,800
840909				676.33		10,600
840909	1405			676.43	79	10,600
840908				676.38		10,900
840901	1830			676.61	153	12,700
840818	1330			677.10	273	15,600
840828	1700			677.62		21,000

Table A-1.17 (cont.) Summary of site-specific data collected for rating curve analysis  
at R.M. 136.0L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
136.056	Cross Section 6	840915	1745	676.30		8,520
		840914	1215	676.35		8,800
		840909	1440	676.63	84	10,600
		840909		676.64		10,600
		840909	1440	676.67		10,600
		840908		676.78		10,900
		840901	1900	676.97	154	12,700
		840818	1400	677.53	288	15,600
		840828	1730	677.96		21,000
		840827	1617	678.91		27,700

Table A-1.18

Summary of site-specific data collected for rating curve analysis  
at R.M. 137.5R.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
137.4P1	Cross Section 1	840928		690.03		7,320
		840929	1540	690.02		7,410
		841003	1600	690.02		7,680
		840914	1230	690.05		8,800
		840910	1335	690.02		9,890
		840902		690.22		11,800
		840812	1630	692.02		19,000
		840812	1630	692.13		19,000
		840821	1509	692.19		19,900
		840828	1749	692.15		21,000
		840828	1751	692.17		21,000
		840827	1545	693.52		27,700
		840826	1500	695.16		31,700
137.4P2	Cross Section 2	840928		690.71		7,320
		840929	1540	690.64		7,410
		841003	1600	690.70		7,680
		840914	1230	690.71		8,800
		840910	1335	690.76		9,890
		840812	1630	692.01		19,000
		840812	1650	692.02		19,000
		840821	1508	692.19		19,900

Table A-1.19

Summary of site-specific data collected for rating curve analysis  
at R.M. 138.7L.

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Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
138.7P1	Cross Section 2	840910	1325	706.04		9,890
		840920	1642	706.26		10,400
		840902		706.55		11,800
		840816	1450	707.25		14,500
		840815	1535	707.40		15,100
		840823	1500	707.77		17,900
		840812	1230	708.06		19,000
		840812		708.10		19,000
840821	1502	708.20		19,900		

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Table A-1.20

Summary of site-specific data collected for rating curve analysis  
at R.M. 139.0L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
139.0P1	Cross Section 2	840910	1320	708.96		9,890
		840920	1328	708.97		10,400
		840902		708.99		11,800
		840816	1430	709.53		14,500
		840823	1218	709.96		17,900
		840812	1410	710.31		19,000
		840812		710.33		19,000
		840828	1817	710.31		21,000
840826	1447	712.62		31,700		

Table A-1.21

Summary of site-specific data collected for rating curve analysis  
at R.M. 139.4L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
139.4F1	Cross Section 2	840929	1610	712.63		7,410
		841003	1310	712.72		7,680
		840918	1707	712.83		8,370
		840910	1300	712.89		9,890
		840902		713.38		11,800
		840816	1512	713.64		14,500
		840823	1100	714.00		17,900
		840812	1545	714.18		19,000
		840821	1458	714.38		19,900

Table A-1.22

Summary of site-specific data collected for rating curve analysis  
at R.M. 147.1L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
147.0M1	Cross Section 1	840917		812.25		8,130
		840913	0930	812.50		9,000
		840907	1312	812.90		10,700
		840829	1600	814.08		17,400
		840813		814.33		19,000
		840828	1910	814.53		19,000 *
		840821	1150	814.75		20,000 *
147.0M2	Cross Section 2	840917		813.54		8,130
		840913	0930	813.87		9,000
		840829	1600	815.25		17,400
		840813		815.36		17,600
		840828	1922	815.63		19,000 *
		840821	1210	815.77		20,000 *
147.0M3	Cross Section 3	840917		814.67		8,130
		840913	0930	814.92		9,000
		840907	1250	815.19		10,700
		840829	1600	816.24		17,400
		840813		816.34		17,600
		840828	1940	816.59		19,000 *
		840821	1225	816.74		20,000 *

\* Instantaneous discharge estimated from time lag analysis.

Table A-1.22 (cont.) Summary of site-specific data collected for rating curve analysis at R.M. 147.1L.

Staff Gage Number	Location within site	Date	Time	WSEL (ft)	Flow (cfs)	Discharge (cfs)
147.0M4	Cross Section 4	840917		815.12	1860	8,130
		840913	0930	815.34	2236	9,000
		840907	1233	815.72		10,700
		840829	1600	816.69	4740	17,400
		840813		816.89		17,600
		840828	1950	817.09		19,000 *
		840821	1235	817.24		20,000 *
		840709	1230	817.46		21,400
147.0M5	Cross Section 5	840917		815.54		8,130
		840913	0930	815.80		9,000
		840907	1220	816.13		10,700
		840829	1600	817.20		17,400
		840813		817.44		17,600
		840828	2000	817.61		19,000 *
		840821	1247	817.76		20,000 *
		840821	1247	817.76		20,000 *
147.0M6	Cross Section 6	840917		816.13		8,130
		840913	0930	816.38		9,000
		840829	1600	818.00		17,400
		840813		818.18		17,600
		840821	1256	818.51		20,000 *

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APPENDIX B

DATA SUPPORTING CALIBRATION AND  
APPLICATION OF IFG HYDRAULIC MODELS.

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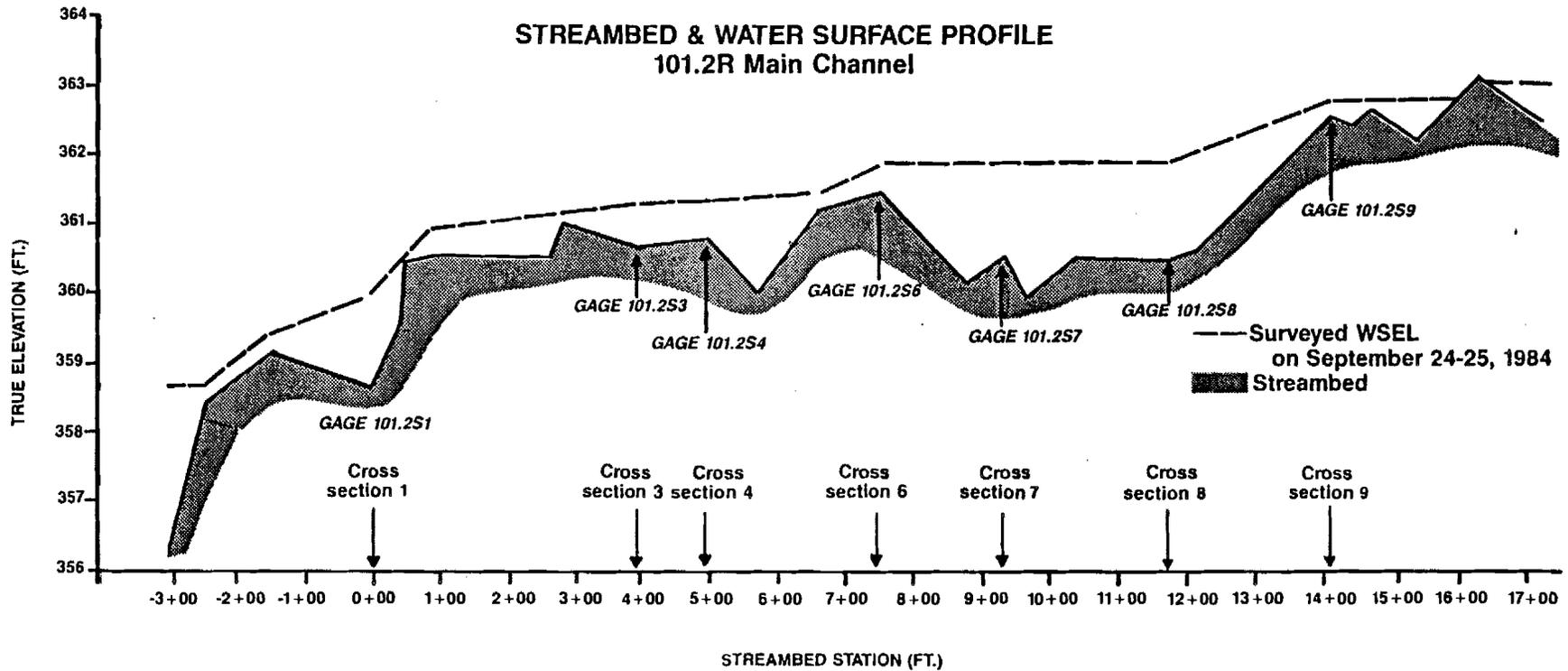


Figure B-1.1. Streambed profile at site 101.2R - main channel.

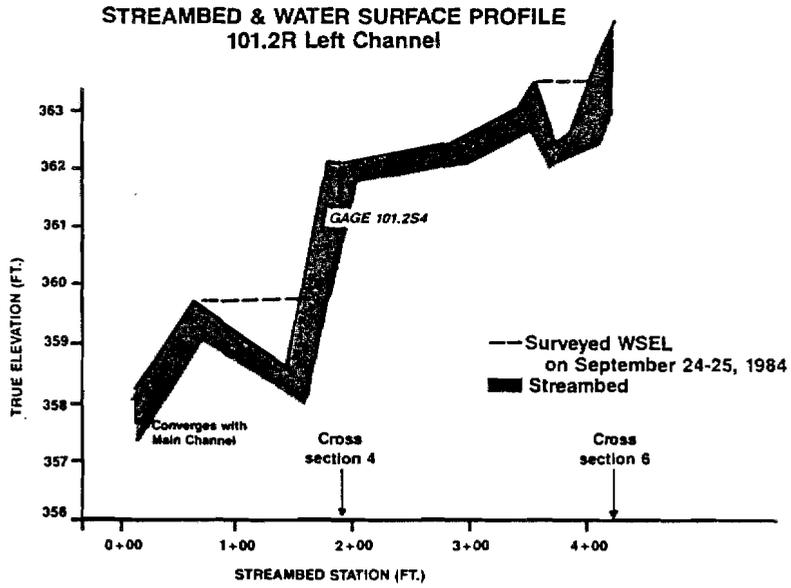


Figure B-1.2. Streambed profile at site 101.2R - left channel.

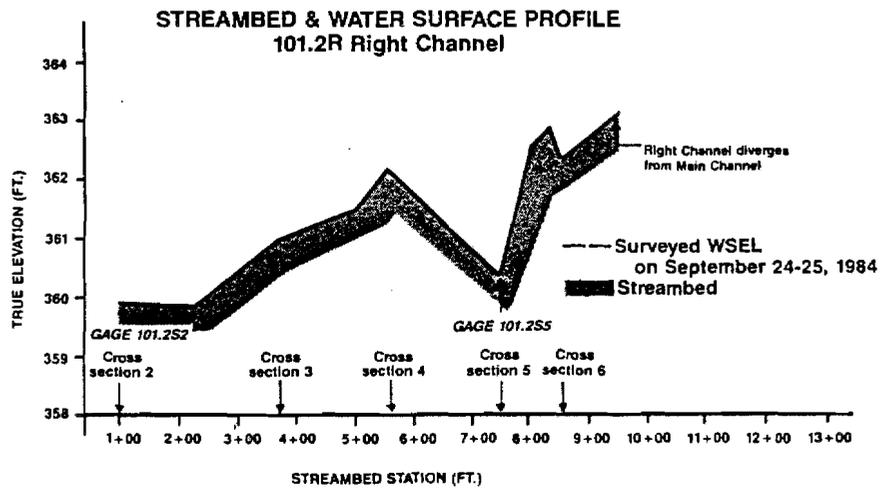


Figure B-1.3. Streambed profile at site 101.2R - right channel.

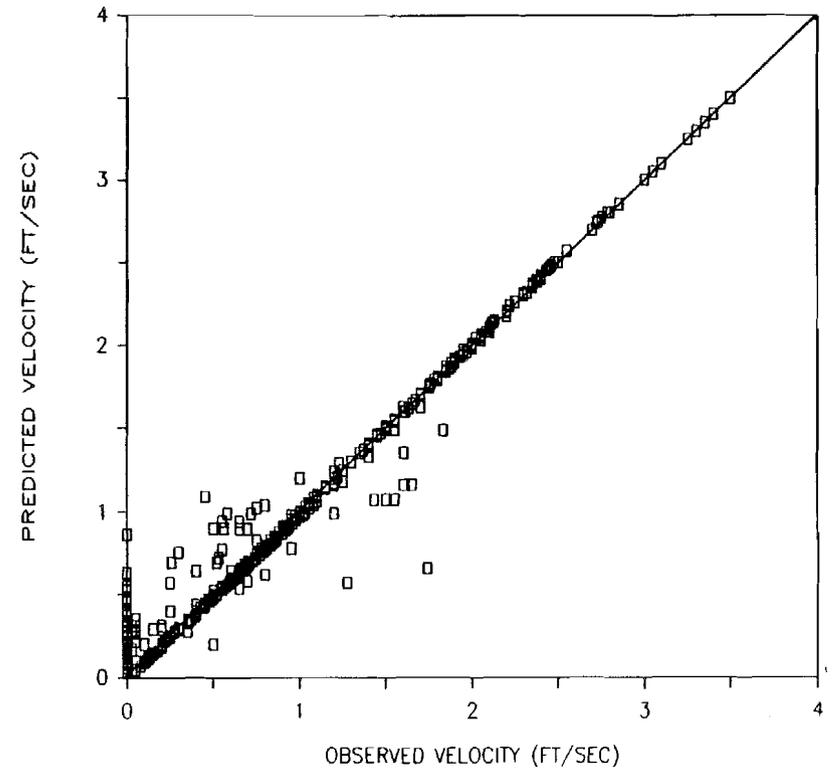
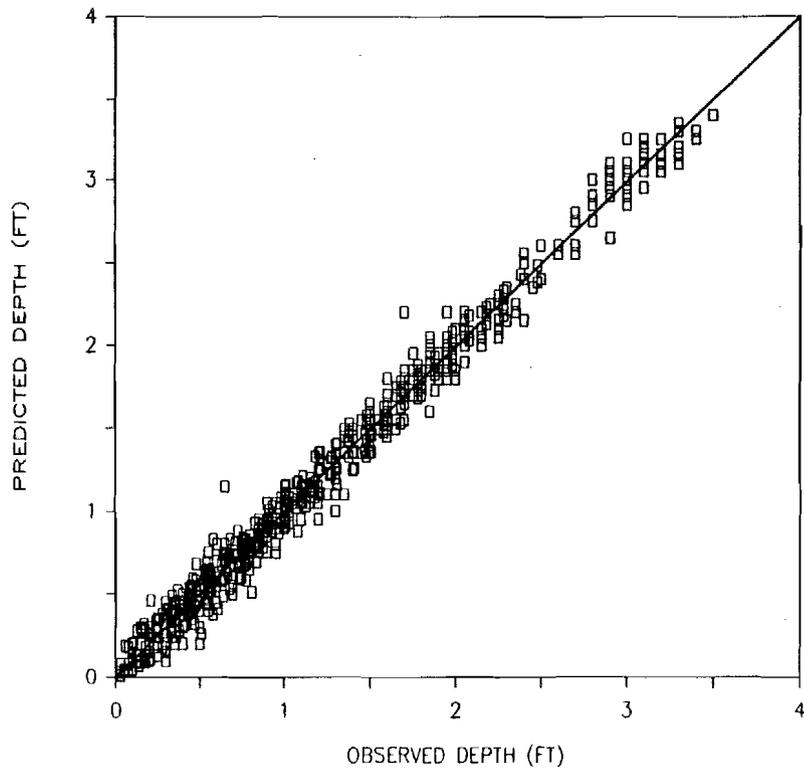


Figure B-2.1. Scatterplots of observed and predicted depths and velocities from the calibrated IFG-4 hydraulic model at 101.2R.

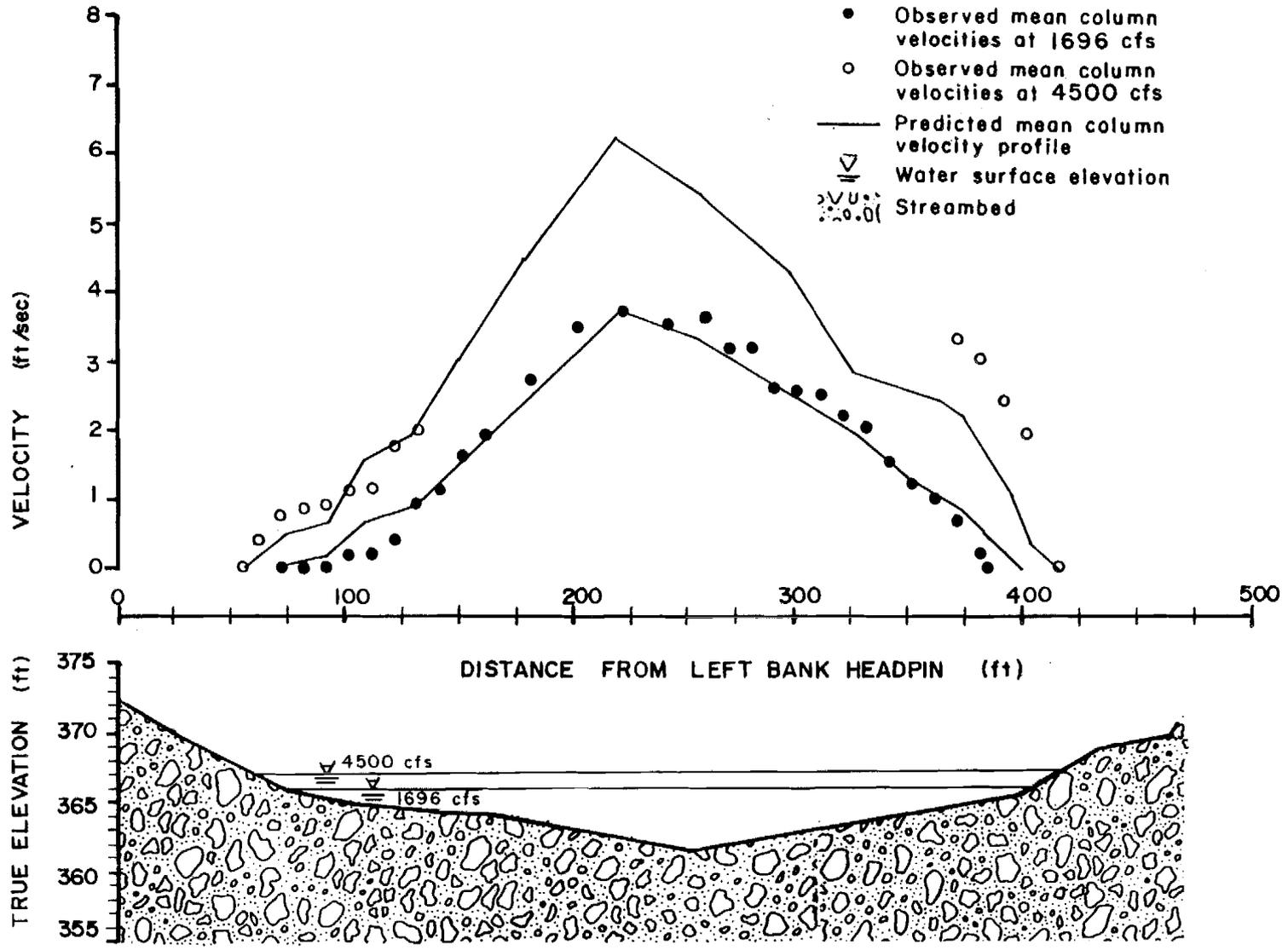


Figure B-2.2. Comparison of observed velocities and velocities predicted by low-flow IFG-2 model at site 101.5L, cross section 5.

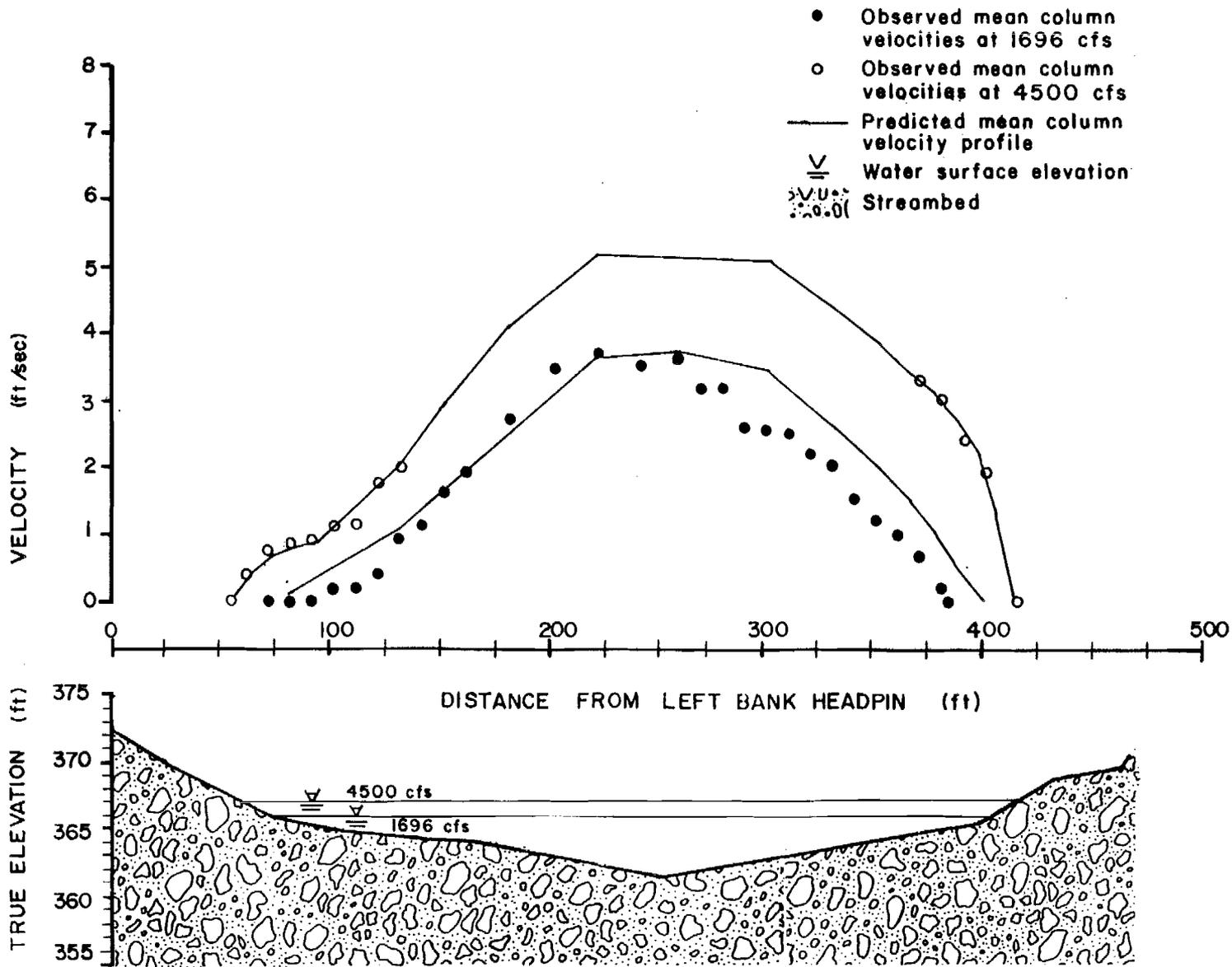


Figure B-2.3. Comparison of observed velocities and velocities predicted by high-flow IFG-2 model at site 101.5L, cross section 5.

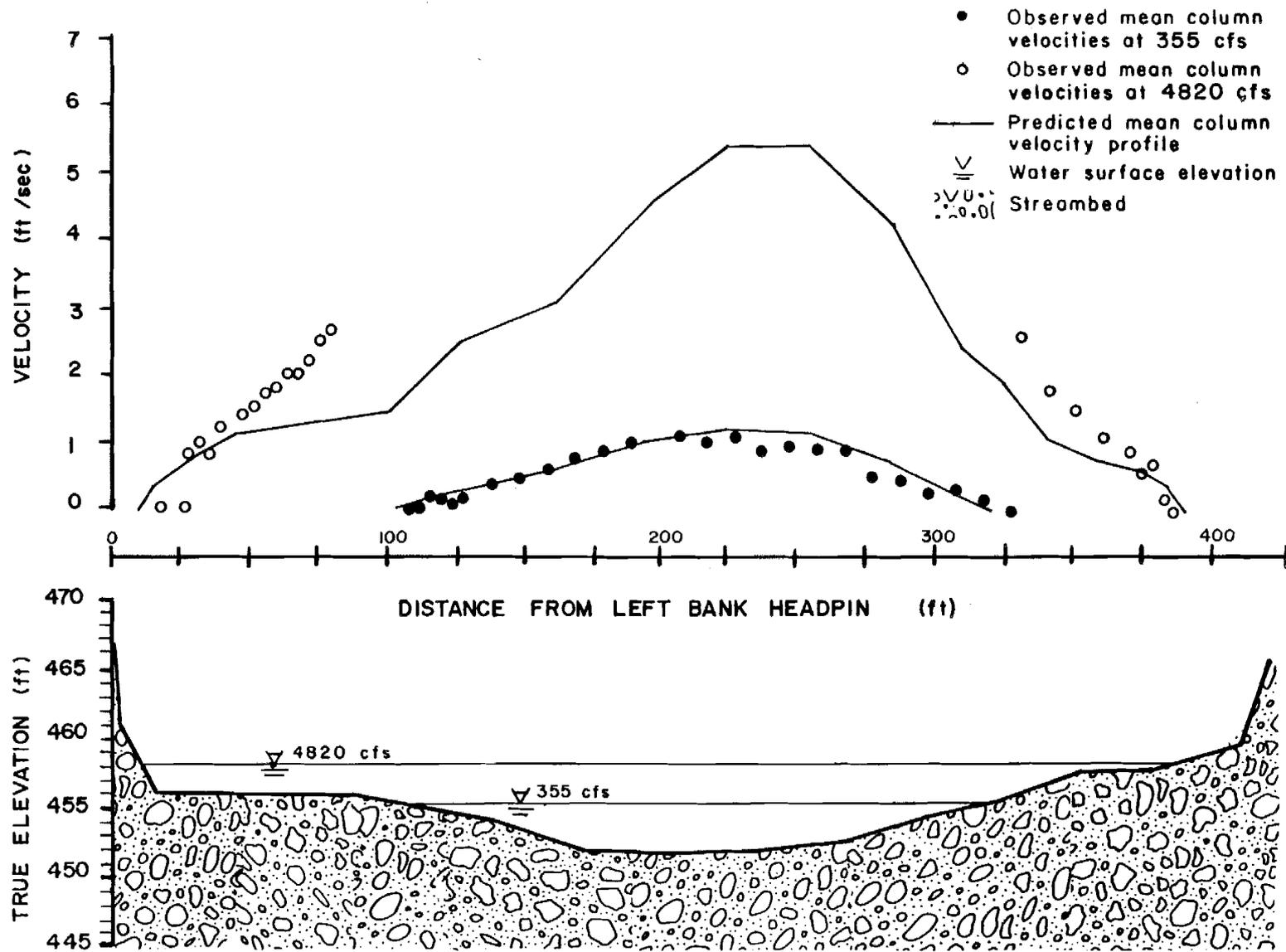


Figure B-2.4. Comparison of observed velocities and velocities predicted by low-flow IFG-2 model at site 112.6L, cross section 7.

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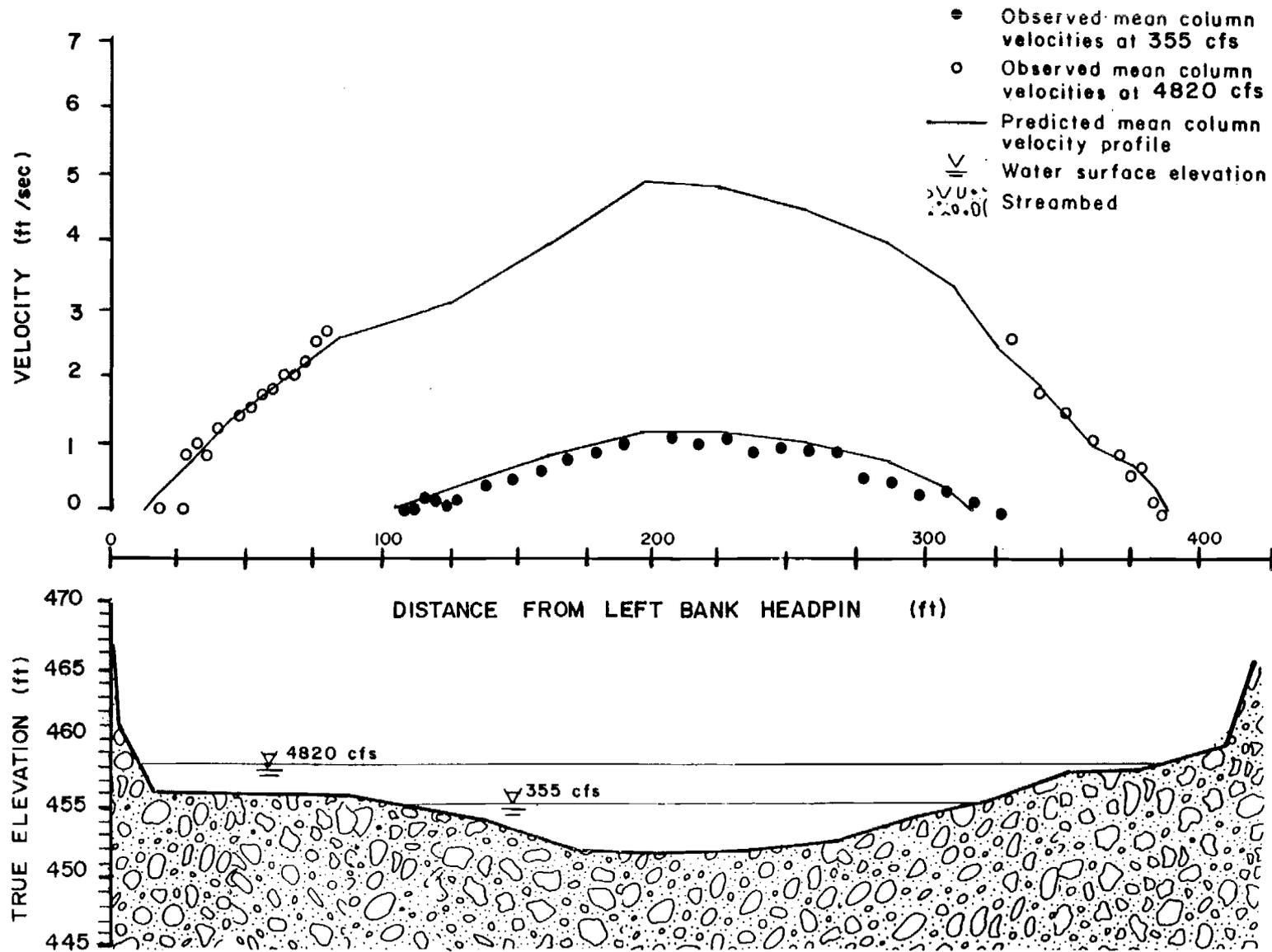


Figure B-2.5. Comparison of observed velocities and velocities predicted by high-flow IFG-2 model at site 112.6L, cross section 7.

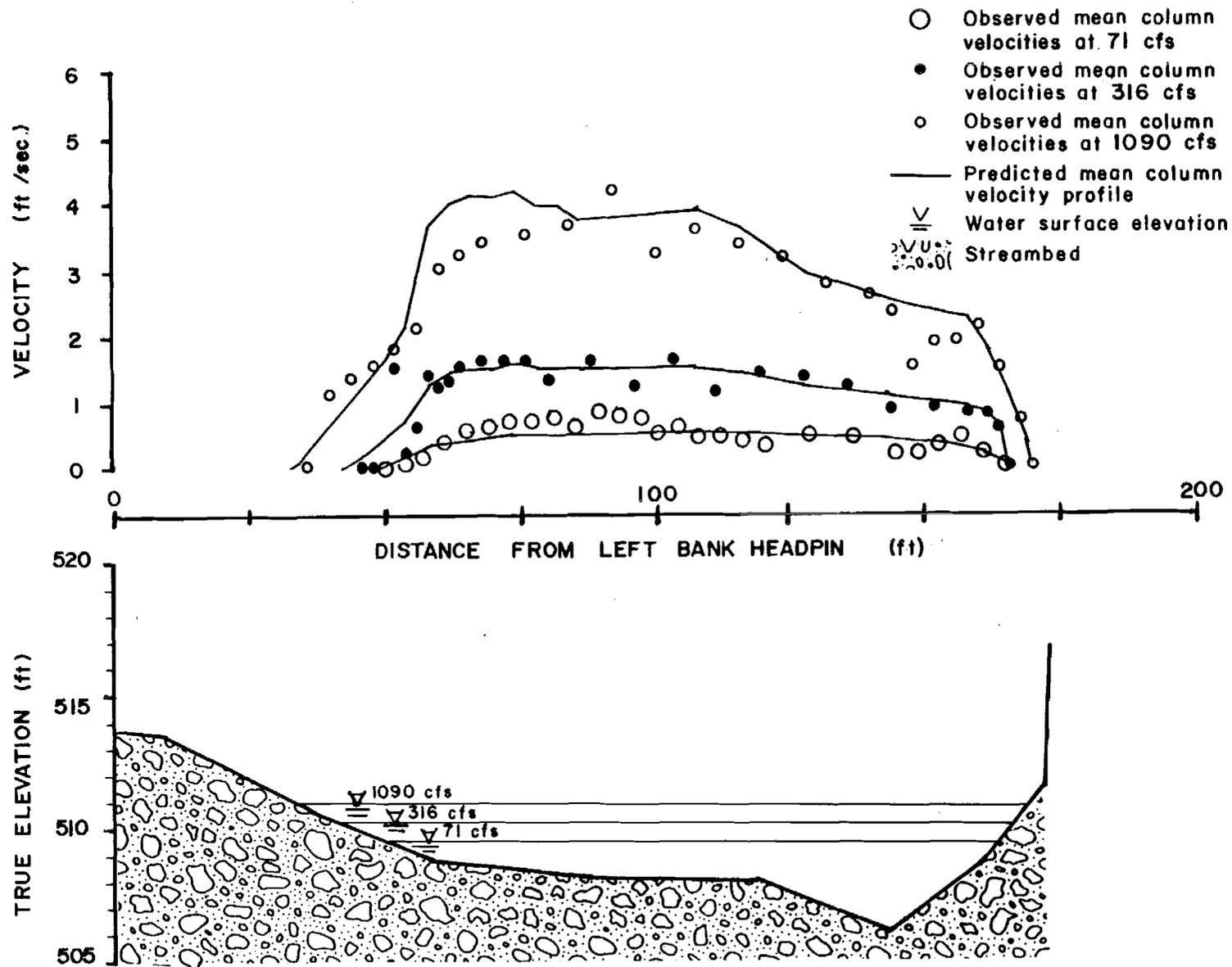


Figure B-2.6. Comparison of observed velocities and velocities predicted by IFG-2 model at site 119.2R, cross section 3.

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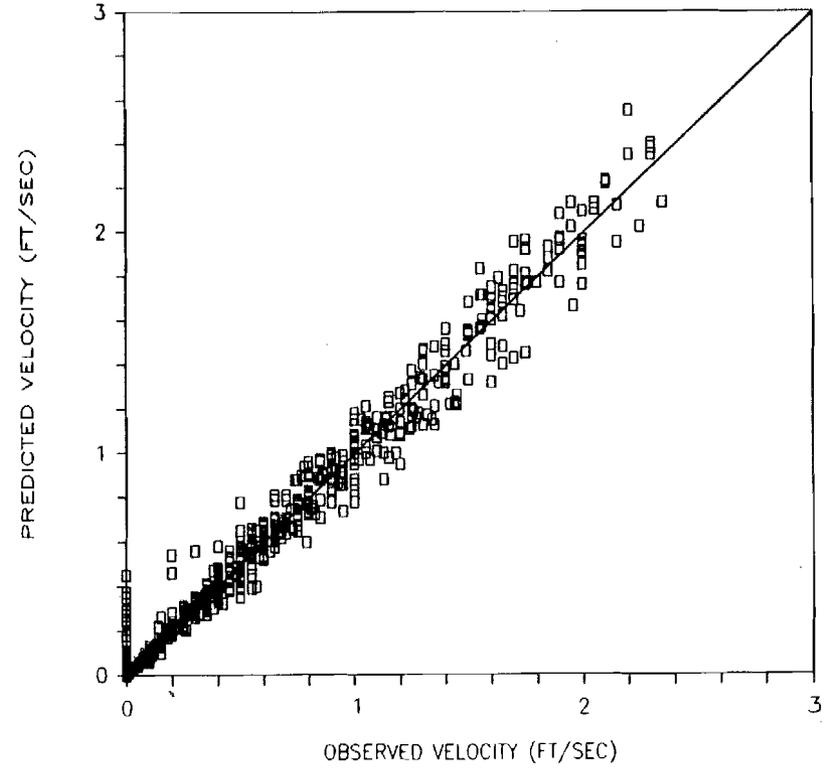
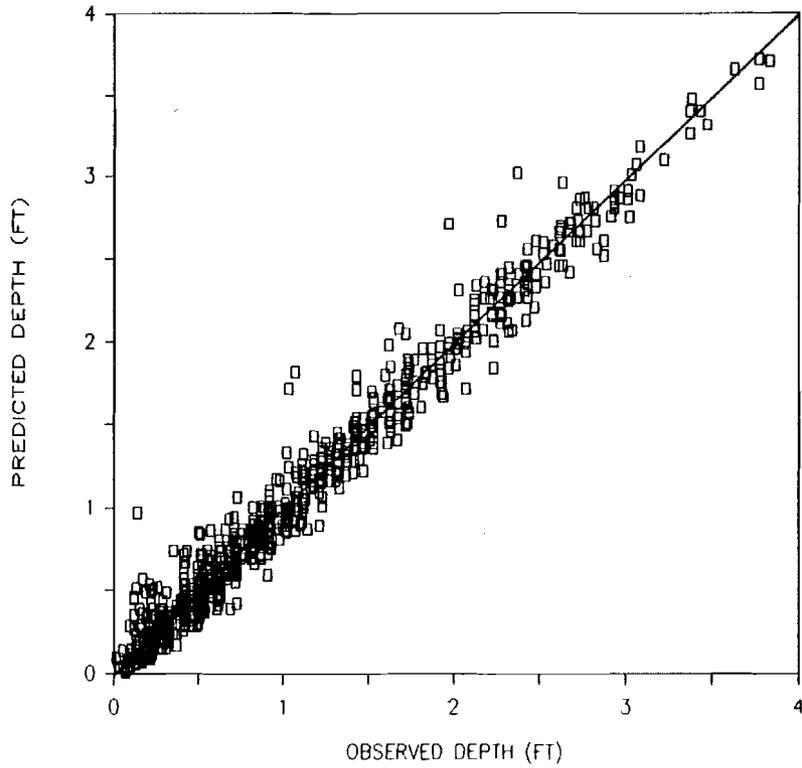


Figure B-2.7. Scatterplots of observed and predicted depths and velocities from the calibrated IFG-4 hydraulic model at 131.7L.

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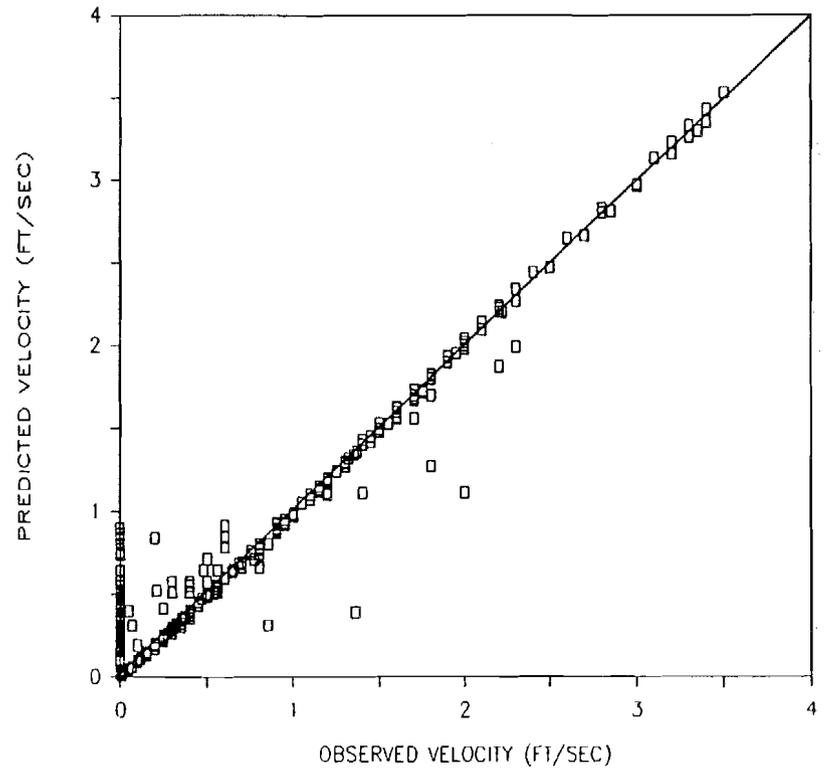
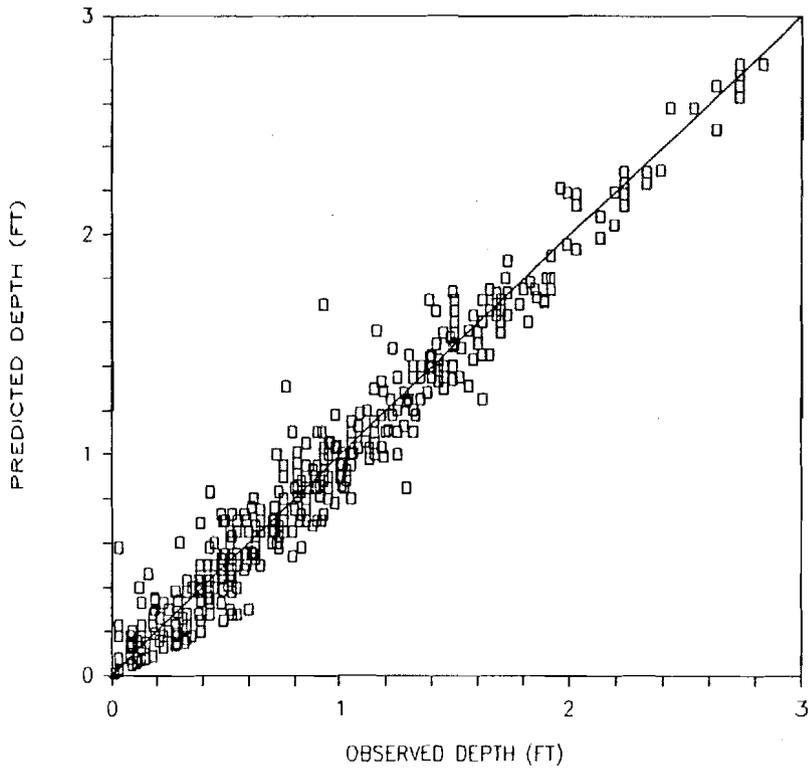


Figure B-2.8. Scatterplots of observed and predicted depths and velocities from the calibrated IFG-4 hydraulic model at 132.6L.

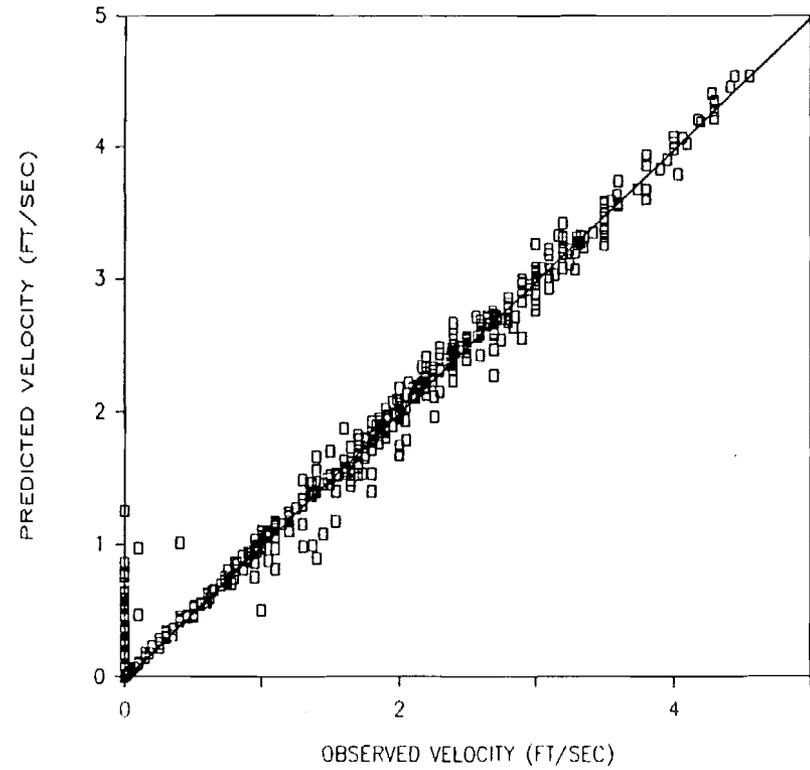
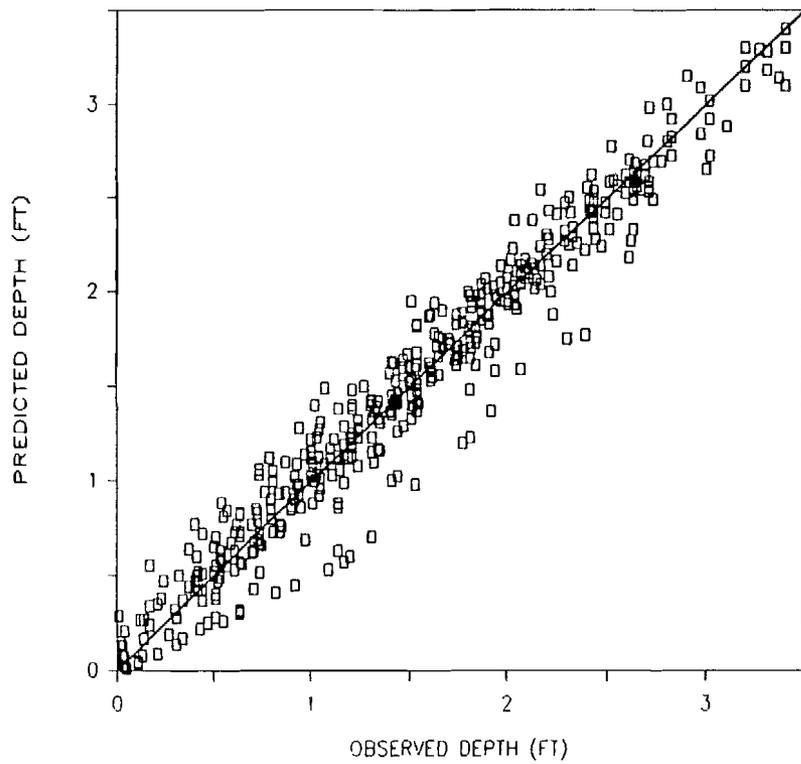


Figure B-2.9. Scatterplots of observed and predicted depths and velocities from the calibrated IFG-4 hydraulic model at 136.0L.

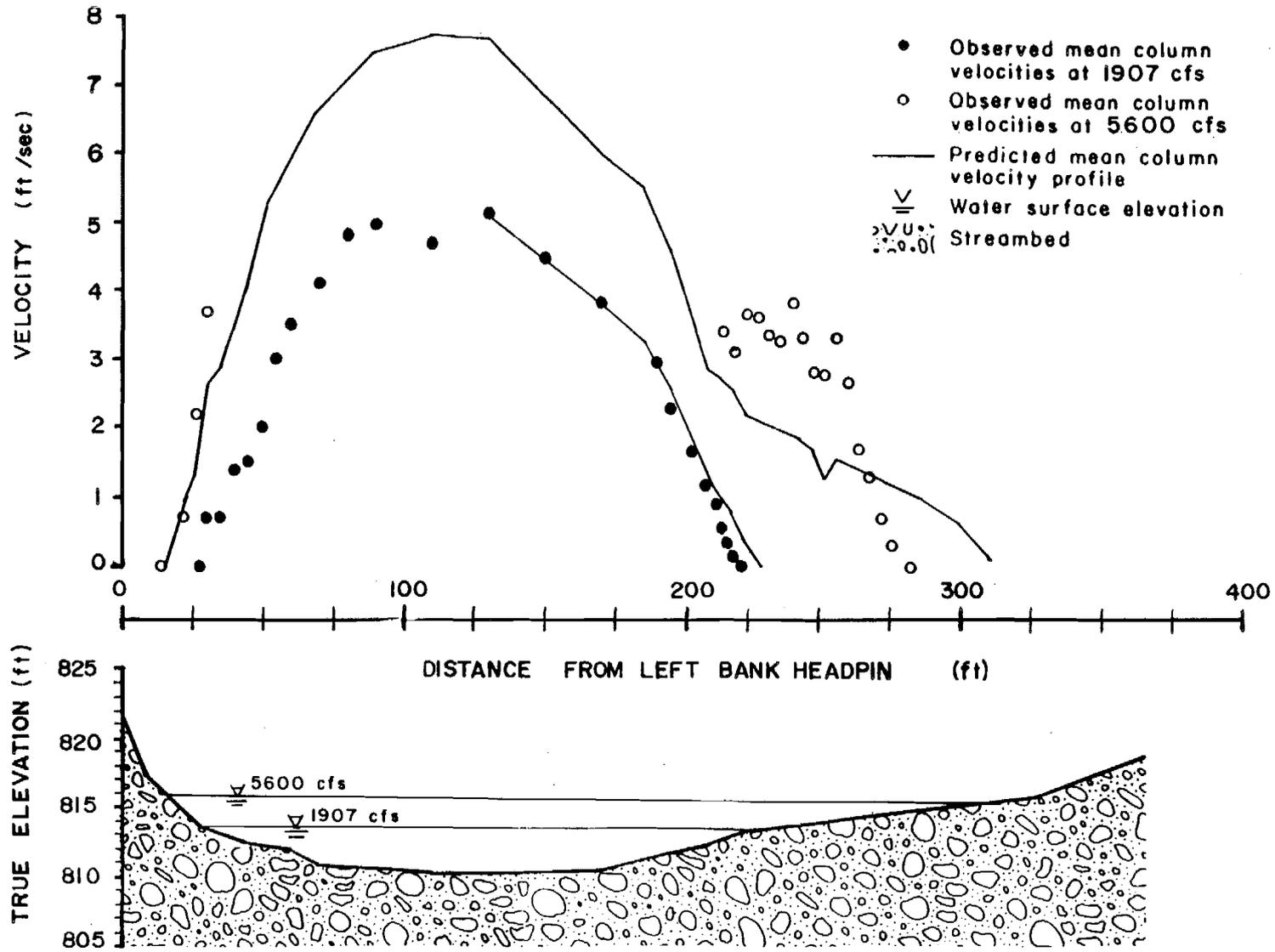


Figure B-2.10. Comparison of observed velocities and velocities predicted by low-flow IFG-2 model at site 147.1L, cross section 2.

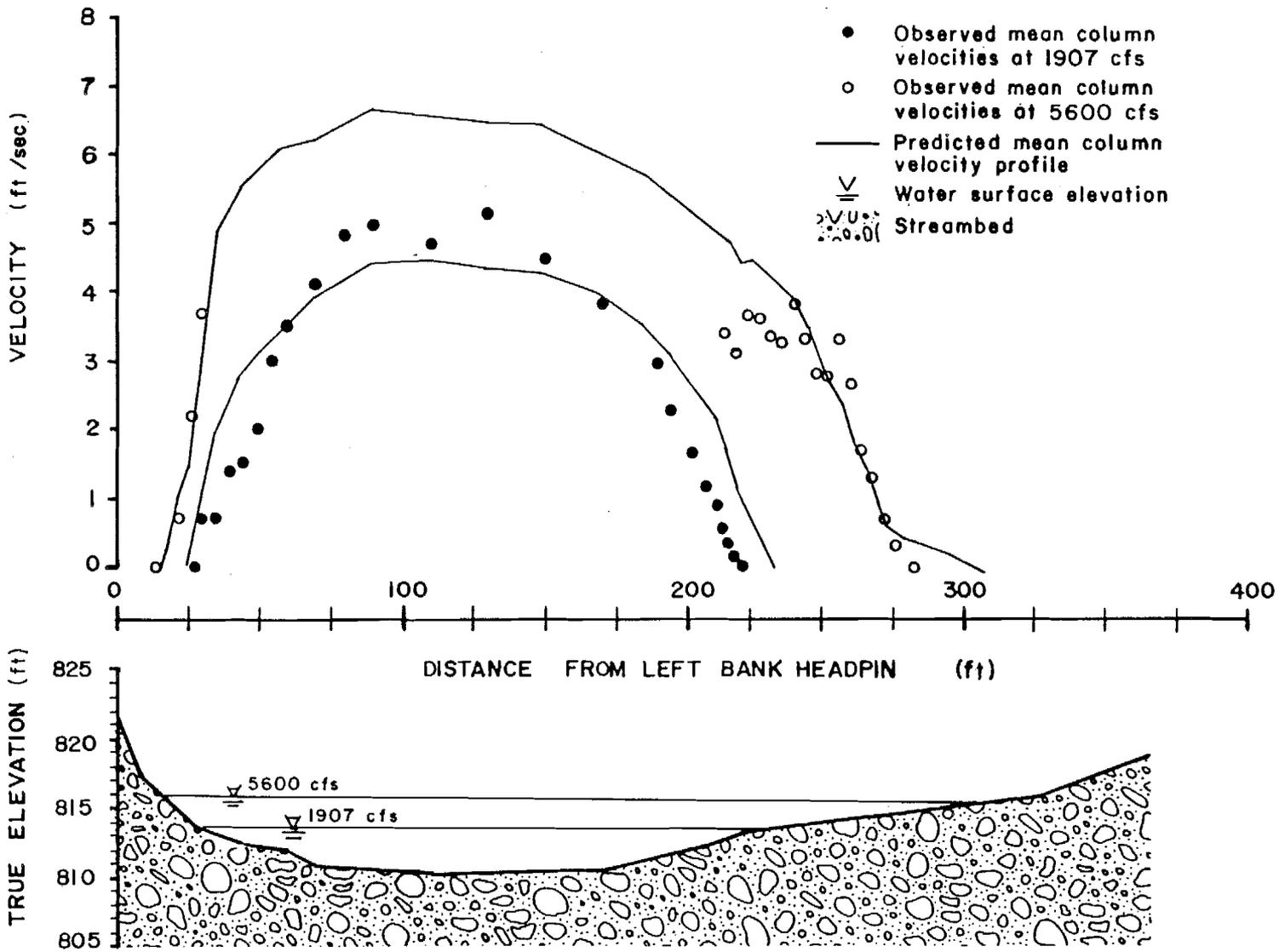


Figure B-2.11. Comparison of observed velocities and velocities predicted by high-flow IFG-2 model at site 147.1L, cross section 2.

Table B-1.1. Streambed profile at site 101.2R main channel.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
-3+05	356.15	358.67	Pool
-2+45	358.44	358.67	Riffle
-1+45	359.17	359.45	Riffle
0+00	358.68	359.55	Cross section 1 - SG 101.2S1
0+43	359.52	360.45	Transition
0+50	360.49	360.50	Transition
0+88	360.56	360.95	
2+60	360.51	361.17	Pool
2+80	361.01	361.19	Pool
3+93	360.69	361.33	Cross section 3 - SG 101.2S3
5+95	360.81	361.26	Cross section 4 - SG 101.2S4
6+70	360.01	361.40	Pool
7+63	361.24	361.58	Riffle
8+50	361.48	361.96	Cross section 6 - SG 101.2S6
9+80	360.14	361.96	Pool
10+33	360.45	361.92	Cross section 7 - SG 101.2S7
10+65	359.91	361.92	Pool
11+40	360.51	361.92	Riffle
12+75	360.49	361.90	Cross section 8 - SG 101.2S8
13+15	360.62	362.05	Pool
15+10	362.54	362.79	Cross section 9 - SG 101.2S9B
15+43	362.44	362.79	Pool
15+70	362.67	362.80	Transition
16+38	362.22	362.80	Pool
17+25	363.13	DRY	
18+25	362.47	363.05	

Surveyed on September 24-25, 1984 (TBM ID: R&M LRX-6 LB 1980).

Table B-1.2. Streambed profile at site 101.2R-left channel.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
0+20	358.24	359.50	Left channel converges with main channel
1+25	359.75	359.70	Pool
2+78	358.64	360.20	Pool
3+53	362.13	DRY	
3+78	362.13	DRY	Cross section 3 - SG 101.2S3
5+65	362.48	DRY	Cross section 4 - SG 101.2S4
6+78	363.07	DRY	
6+88	362.25	DRY	
7+13	363.52	DRY	
7+50	362.49	DRY	
7+70	362.68	DRY	
8+13	363.86	DRY	
8+45	364.59	DRY	Cross section 6 - SG 101.2S6

Surveyed on September 24-25, 1984 (TBM ID: R&M LRX-6 LB 1980).

Table B-1.3. Streambed profile at site 101.2R-right channel.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
0+00			Cross section 1
0+96	359.92	DRY	Cross section 2 - SG 101.2S2
2+29	359.88	DRY	
3+71	361.08	DRY	Cross section 3
5+01	361.52	DRY	
5+55	362.15	DRY	
5+62	362.17	DRY	Cross section 4
7+51	360.37	362.05	Cross section 5 - SG 101.2S5, Pool
8+06	362.57	DRY	
8+31	362.87	DRY	
8+56	362.33	DRY	
9+56	363.11	DRY	Diverges from main channel

Surveyed on August 24-25, 1984 (TBM ID: R&M LRX-6 LB 1980).

TABLE B-2.1

CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	366.10	1	8.4	LB HEADPIN
	2.0	365.60	1	8.4	TOP OF BANK
	8.0	362.10	7	4.3	BOTTOM OF BANK
	16.6	361.10	7	4.3	
	18.0	360.80	7	4.3	
	20.0	360.60	7	4.3	
	22.0	360.40	7	4.3	
	24.0	360.10	7	4.3	
	26.0	359.90	7	4.3	
	28.0	359.60	7	4.3	
	30.0	359.70	7	4.3	LWE
	32.0	359.40	7	4.3	
	34.0	359.50	7	4.3	
	36.0	359.50	7	4.3	
	38.0	359.50	7	4.3	
	40.0	359.40	7	4.3	
	42.0	359.30	7	4.3	
	43.0	359.40	7	4.3	
	44.0	359.30	7	4.3	
	46.0	359.30	7	4.3	
	48.0	359.20	7	4.3	
	50.0	359.10	7	4.3	
	52.0	359.00	7	4.3	
	54.0	358.80	7	4.3	
	55.0	358.70	7	4.3	
	56.0	358.60	7	4.3	
	58.0	358.60	7	4.3	
	60.0	358.80	7	4.3	
	62.0	358.90	7	4.3	
	64.0	358.90	7	4.3	
65.0	359.00	7	4.3		
66.0	359.00	7	4.3		
68.0	359.10	7	4.3		
70.0	359.30	7	4.3		
72.0	359.50	7	4.3		
73.0	359.50	7	4.3	RWE	
74.0	359.60	7	4.3		
76.0	359.90	7	4.3		
78.0	360.10	7	4.3		

-----  
 TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND  
 COVER DATA AT SITE 101.2R.  
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LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
-----	-----	-----	---	---	-----
CROSS SECTION 1	80.0	360.20	7	4.3	
STATION 0+00	82.0	360.30	7	4.3	
(CONT.)	84.0	360.70	7	4.3	
	86.0	360.60	7	4.3	
	88.0	360.70	7	4.2	
	90.0	360.70	7	4.2	
	92.0	360.90	7	4.2	
	94.0	361.00	7	4.2	
	96.0	361.10	7	4.2	
	98.0	361.10	7	4.2	
	124.0	361.80	2	4.2	
	148.0	361.20	2	4.2	
	218.0	362.90	10	8.1	
	249.5	361.60	10	8.1	
	272.0	361.10	10	5.2	
	274.0	360.90	10	5.2	
	276.0	360.90	10	5.2	
	278.0	360.70	10	5.2	
	282.0	360.60	10	5.2	
	285.0	360.20	10	5.2	LWE
	286.0	360.20	10	5.2	
	290.0	360.20	10	5.2	
	293.0	360.10	10	5.2	
	294.0	360.20	10	5.2	
	298.0	360.20	10	5.2	
	302.0	360.30	10	5.2	
	306.0	360.30	10	5.2	
	308.0	360.20	10	5.2	RWE
	310.0	360.40	10	5.2	
	314.0	360.70	10	5.2	
	318.0	360.90	10	5.2	
	322.0	360.90	10	5.2	
	323.0	361.10	10	5.2	
	334.0	361.50	1	5.2	BOTTOM OF BANK
	350.0	363.70	1	5.2	
	357.0	368.30	1	8.3	RB HEADPIN

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TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 2 STATION 0+98	297.5	362.25	7	5.2	TOP OF LB STAKE
	323.5	361.35	7	5.2	
	356.5	359.86	8	5.2	
	393.0	361.74	8	5.2	
	401.0	363.77	1	8.3	TOP OF BANK RB HEADPIN
	409.5	367.97	1	8.3	
	410.0	373.68	1	8.3	
CROSS SECTION 3 STATION 3+74	0.0	366.20	1	8.4	LB HEADPIN
	5.0	365.00	1	2.1	TOP OF BANK
	14.0	362.20	1	1.1	
	16.0	362.20	1	1.1	
	20.0	362.40	1	1.1	
	24.0	362.20	1	1.1	
	28.0	362.20	1	1.1	
	32.0	362.20	1	1.1	
	36.0	362.10	1	1.1	
	40.0	362.00	1	1.1	
	44.0	362.10	1	1.1	
	46.0	362.20	1	1.1	
	48.0	362.00	1	1.1	
	49.0	362.30	1	1.1	
	50.0	362.60	1	1.1	
	54.0	362.70	1	1.1	
	67.0	362.50	9	5.2	
	77.0	363.20	8	5.2	
	87.5	362.60	8	5.3	
	90.0	362.30	8	5.3	
92.0	362.10	8	5.3		
96.0	362.20	8	5.3		
100.0	362.00	8	5.3		
104.0	362.00	8	5.3		
108.0	361.80	8	5.3		
114.0	361.70	8	5.3		
116.0	361.70	8	5.2		
118.0	361.40	8	5.2		
120.0	361.30	8	5.2	LWE	
122.0	361.10	8	5.2		

TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 3 STATION 3+74 (CONT.)	124.0	361.10	8	5.2	
	126.0	360.80	8	5.2	
	128.0	361.00	8	5.2	
	130.0	360.80	8	5.2	
	132.0	360.80	8	5.2	
	134.0	360.70	8	5.2	
	136.0	360.80	8	5.2	
	136.5	360.70	8	5.2	
	138.0	360.90	8	5.2	
	140.0	360.70	8	5.2	
	142.0	360.80	8	5.2	
	144.0	360.90	8	5.2	
	146.0	360.90	8	5.2	
	148.0	360.80	8	5.2	
	150.0	360.90	8	5.2	
	152.0	361.00	8	5.2	
	154.0	361.10	8	5.2	
	156.0	361.20	8	5.2	
	158.0	361.10	8	5.2	
	160.0	361.20	8	5.2	
	162.0	361.30	8	5.2	RWE
	164.0	361.10	8	5.2	
	166.0	361.20	8	5.2	
	168.0	361.30	8	5.2	
	170.0	361.30	8	5.2	
	172.0	361.40	8	5.2	
	174.0	361.50	8	5.2	
	176.0	361.40	8	5.2	
	178.0	361.50	8	5.2	
	180.0	361.50	8	5.2	
182.0	361.50	8	5.2		
184.0	361.60	8	5.2		
186.0	361.70	8	5.2		
188.0	361.70	8	5.2		
189.5	361.80	8	5.2		
192.0	361.80	8	5.2		
196.0	361.80	8	5.2		
200.0	362.10	8	5.2		
204.0	362.00	8	5.2		

TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 3 STATION 3+74 (CONT.)	208.0	362.10	8	5.2	
	212.0	362.30	8	5.2	
	216.0	362.50	8	5.2	
	220.0	362.50	8	5.2	
	224.0	362.60	8	5.2	
	227.0	362.60	10	5.2	
	322.0	362.60	10	4.2	
	339.0	362.60	10	4.2	
	340.0	362.40	10	4.2	
	344.0	362.40	10	4.2	
	347.5	362.50	10	4.2	
	352.0	362.40	10	4.2	
	356.0	362.60	10	4.2	
	376.5	362.60	8	7.2	BOTTOM OF BANK
	381.0	366.50	1	9.4	TOP OF BANK
	381.5	367.10	1	9.4	RB HEADPIN
CROSS SECTION 4 STATION 5+64	0.0	366.10	1	8.3	LB HEADPIN
	3.0	364.90	1	2.2	TOP OF BANK
	7.0	363.50	10	5.3	
	23.0	363.40	10	5.2	
	62.0	363.70	2	8.4	BOTTOM OF BANK
	111.0	364.80	2	5.2	
	123.0	363.30	10	5.3	
	147.0	363.00	10	5.3	
	151.0	362.50	10	5.3	
	155.0	362.40	10	5.3	
	159.0	362.40	10	5.3	
	163.0	361.90	10	5.3	
	164.0	361.70	10	5.3	
	166.0	361.60	10	5.3	
	168.0	361.50	10	5.3	
	170.0	361.40	10	5.3	
	172.0	361.30	8	5.3	LWE
	174.0	361.10	8	5.3	
176.0	361.00	8	5.3		
178.0	361.00	8	5.3		
180.0	361.10	8	5.3		
182.0	361.20	8	5.3		

TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 4 STATION 5+64 (CONT.)	184.0	361.10	8	5.3	
	186.0	361.10	7	5.3	
	188.0	361.20	7	5.3	
	190.0	361.00	7	5.3	
	192.0	360.90	7	5.3	
	194.0	360.90	7	5.3	
	196.0	361.00	10	5.3	
	198.0	360.80	10	5.3	
	200.0	360.80	10	5.3	
	202.0	360.80	10	5.3	
	204.0	360.70	10	5.3	
	206.0	360.70	10	5.3	
	208.0	360.90	10	5.3	
	210.0	361.00	10	5.3	
	212.0	361.00	10	5.3	
	214.0	361.10	10	5.3	
	216.0	361.10	10	5.3	
	218.0	361.10	10	5.3	
	220.0	361.40	10	5.3	
	222.0	361.50	10	5.3	
	224.0	361.30	10	5.3	
	226.0	361.30	10	5.3	RWE
	228.0	361.60	10	5.3	
	230.0	361.40	10	5.3	
	232.0	361.60	10	5.3	
	234.0	361.70	10	5.3	
	236.0	361.80	10	5.3	
	238.0	361.80	10	5.3	
	240.0	361.90	10	5.3	
	243.0	362.30	10	5.3	
	247.0	362.20	10	5.3	
	251.0	362.40	10	5.3	
	255.0	362.80	10	6.3	
259.0	362.80	10	6.3		
263.0	362.90	10	6.3		
266.2	363.00	10	6.3		
331.0	364.70	12	5.2		
362.0	364.00	10	5.2		
369.0	363.00	10	5.2		

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 TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND  
 COVER DATA AT SITE 101.2R.  
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LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 4 STATION 5+64 (CONT.)	383.0	362.90	10	5.3	
	387.0	362.70	10	5.3	
	389.0	362.90	10	5.3	
	391.0	362.90	10	5.3	
	393.0	362.90	10	5.3	
	394.0	363.00	10	5.3	
	408.0	363.50	2	5.2	
	413.0	364.80	1	9.3	BOTTOM OF BANK
	416.0	368.00	1	8.4	TOP OF BANK
	419.0	369.10	1	8.4	RB HEADPIN
CROSS SECTION 5 STATION 7+51	194.0	365.52	1	1.1	TOP OF SAND BAR
	198.0	364.56	1	1.1	
	207.0	364.40	1	1.1	
	211.5	364.43	1	1.1	
	230.0	361.65	1	1.1	
	238.5	362.10	1	1.1	BOTTOM OF CUT BANK
	244.0	369.17	1	1.1	TOP OF CUT BANK
	256.0	373.72	1	1.1	RB HEADPIN
CROSS SECTION 6 STATION 8+37	0.0	365.40	1	5.2	LB HEADPIN
	29.0	365.10	2	5.2	
	42.0	363.90	10	5.2	
	62.0	362.90	10	5.3	
	66.0	362.80	10	5.3	
	70.0	362.60	10	5.3	
	74.0	362.40	10	5.3	
	78.0	363.00	10	5.3	
	80.0	362.30	10	5.3	
	82.0	362.10	10	5.3	
	84.0	362.20	10	5.3	
	86.0	362.00	10	5.3	
	88.0	362.00	10	5.3	LWE
	90.0	361.90	10	5.3	
	92.0	361.90	10	5.3	
	94.0	361.90	10	5.3	
96.0	361.90	10	5.3		
98.0	361.80	10	5.3		
100.0	361.90	10	5.3		

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TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 6 STATION 8+37 (CONT.)	102.0	361.90	10	5.3	
	104.0	361.90	10	5.3	
	106.0	361.80	10	5.3	
	108.0	361.90	10	5.3	
	110.0	361.70	8	5.3	
	112.0	361.70	8	5.3	
	114.0	361.80	8	5.3	
	116.0	361.90	8	5.3	
	118.0	361.70	8	5.3	
	120.0	361.80	8	5.3	
	122.0	361.70	8	5.3	
	124.0	361.70	8	5.3	
	126.0	361.70	8	5.3	
	128.0	361.60	8	5.3	
	129.0	361.70	8	5.3	
	130.0	361.70	8	5.3	
	132.0	361.60	8	5.3	
	134.0	361.60	8	5.3	
	136.0	361.60	8	5.3	
	138.0	361.60	8	5.3	
	140.0	361.60	8	5.3	
	142.0	361.60	8	5.3	
	144.0	361.50	8	5.3	
	146.0	361.60	8	5.3	
	148.0	361.60	8	5.3	
	150.0	361.60	8	5.3	
	152.0	361.60	8	5.3	
154.0	361.70	8	5.3		
155.0	361.60	8	5.3		
156.0	361.70	8	5.3		
158.0	361.70	8	5.3		
160.0	361.70	8	5.3		
162.0	361.60	8	5.3		
164.0	361.70	8	5.3		
166.0	361.80	8	5.3		
168.0	361.90	8	5.3		
170.0	362.10	8	5.3		
172.0	362.00	8	5.3		
173.5	362.00	8	5.3	RWE	

TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 6 STATION 8+37 (CONT.)	176.0	362.10	8	5.3	
	178.0	362.00	8	5.3	
	180.0	362.30	8	5.3	
	182.0	362.40	8	5.3	
	186.0	362.40	8	5.3	
	190.0	362.50	8	5.3	
	194.0	362.50	8	5.3	
	198.0	362.50	8	5.3	
	202.0	362.70	8	5.3	
	206.0	362.90	8	5.3	
	209.0	363.10	8	5.2	
	211.5	363.50	10	5.2	
	248.5	363.10	10	5.2	
	250.0	363.00	10	5.2	
	252.0	362.70	10	5.2	
	254.0	362.90	10	5.2	
	256.0	363.00	10	5.2	
	258.0	362.70	10	7.2	
	260.0	362.70	10	7.2	
	262.0	363.10	10	7.2	
266.0	364.70	10	7.2		
272.0	365.60	2	9.3		
276.0	369.60	1	8.4		
278.0	370.20	1	8.4	RB HEADPIN	
CROSS SECTION 7 STATION 10+23	0.0	365.20	1	5.1	LB HEADPIN
	43.0	364.00	2	5.2	
	79.0	363.60	10	5.2	
	80.0	363.40	10	5.2	
	82.0	363.30	10	5.2	
	84.0	363.20	10	5.2	
	86.0	362.90	10	5.2	
	90.0	362.50	10	5.2	
	92.0	362.50	10	5.2	
	94.0	362.30	10	5.2	
	96.0	362.00	10	5.2	
	98.0	361.90	10	5.2	LWE
	100.0	361.50	10	5.2	
102.0	361.80	10	5.2		

TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 7	104.0	360.80	10	5.2	
STATION 10+23	106.0	360.70	10	5.2	
(CONT.)	108.0	360.60	10	5.2	
	110.0	360.60	10	5.2	
	112.0	360.20	10	5.2	
	114.0	360.40	10	5.2	
	115.0	360.40	10	5.2	
	116.0	360.30	10	5.2	
	118.0	360.40	10	5.2	
	120.0	360.20	10	5.2	
	122.0	360.50	10	5.2	
	124.0	360.50	10	5.2	
	126.0	360.70	10	5.2	
	128.0	360.80	10	5.2	
	130.0	360.60	10	5.2	
	132.0	360.40	10	5.2	
	134.0	360.70	10	5.2	
	136.0	360.30	10	5.2	
	140.0	360.40	10	5.2	
	141.0	360.50	10	5.2	
	142.0	360.70	10	5.2	
	144.0	360.50	10	5.2	
	148.0	360.00	10	5.2	
	151.0	360.20	10	5.2	
	152.0	360.20	10	5.2	
	156.0	360.10	10	5.2	
	158.0	360.40	10	5.2	
	160.0	360.10	10	5.2	
	164.0	360.30	10	5.2	
	166.0	360.50	10	5.2	
	168.0	360.30	10	5.2	
	172.0	360.20	10	5.2	
	174.0	360.60	10	5.2	
	176.0	360.30	10	5.2	
	180.0	360.60	10	5.2	
	182.0	361.10	10	5.2	
	184.0	360.80	10	5.2	RWE
	188.0	361.10	10	5.2	
	190.0	361.60	10	5.2	

TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 7 STATION 10+23 (CONT.)	192.0	361.50	10	5.2	
	194.0	361.90	10	5.2	
	196.0	361.90	10	5.2	
	198.0	362.00	10	5.2	
	200.0	362.00	10	5.2	
	202.0	362.10	10	5.2	
	203.0	361.90	2	5.2	
	204.0	362.10	2	5.2	
	206.0	362.40	2	5.2	
	208.0	362.50	2	5.2	
	210.0	362.70	2	5.2	
	214.0	363.00	2	5.2	
	218.0	363.40	2	5.2	
	222.0	363.40	2	5.2	
	224.0	363.50	2	5.1	
	256.5	366.40	1	9.4	BOTTOM OF CUT BANK
	262.0	370.00	1	8.4	TOP OF BANK
264.0	374.10	1	8.4	RB HEADPIN	
CROSS SECTION 8 STATION 12+79	0.0	366.10	1	8.2	LB HEADPIN
	7.0	365.90	4	1.1	
	27.0	363.60	2	1.1	
	34.0	363.90	2	1.1	
	40.0	363.50	2	1.1	
	42.0	363.40	2	1.1	
	44.0	363.20	2	1.1	
	48.0	362.90	2	5.1	
	52.0	362.70	2	5.1	
	54.0	362.60	7	5.1	
	56.0	362.50	7	5.1	
	60.0	362.20	7	5.1	
	62.0	362.30	7	5.1	
	64.0	362.20	7	5.1	
	66.0	362.10	7	5.1	
68.0	362.00	7	5.1		
70.0	362.00	7	5.1		
72.0	362.00	7	5.1		
73.4	361.90	7	5.1		
74.0	362.00	11	5.1	LWE	

TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 8 STATION 12+79 (CONT.)	76.0	361.80	11	5.1	
	78.0	361.90	11	5.1	
	80.0	361.80	11	5.1	
	82.0	361.70	11	5.1	
	84.0	361.70	11	5.1	
	88.0	361.80	11	5.1	
	92.0	361.60	11	5.1	
	96.0	361.80	11	5.1	
	100.0	361.50	11	5.1	
	104.0	361.30	11	5.1	
	108.0	361.20	11	5.1	
	112.0	361.10	11	5.1	
	116.0	361.10	11	5.1	
	118.0	360.90	11	5.1	
	120.0	360.90	11	5.1	
	121.5	361.00	11	5.1	
	124.0	360.80	11	5.1	
	128.0	360.60	11	5.1	
	132.0	360.60	11	5.1	
	136.0	360.50	11	5.1	
	140.0	360.40	11	5.1	
	144.0	360.40	11	5.1	
	145.0	360.50	11	5.1	
	148.0	360.50	11	5.1	
	152.0	360.60	11	5.1	
	156.0	360.50	11	5.1	
	160.0	360.80	11	5.1	
	164.0	361.00	11	5.1	
	168.0	361.20	11	5.1	
	172.0	361.50	11	5.1	
	176.0	361.90	11	5.1	
178.0	361.90	11	5.1		
179.0	362.00	12	5.1	RWE	
180.0	362.20	12	5.1		
182.0	362.30	12	5.1		
184.0	362.20	12	5.2		
188.0	362.80	12	5.2		
192.0	363.10	12	5.2		

TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 8 STATION 12+79 (CONT.)	196.0	363.50	12	5.2	
	213.5	364.10	12	5.1	
	221.5	365.50	1	9.4	
	224.0	369.60	1	8.4	RB HEADPIN
CROSS SECTION 9 STATION 14+62	0.0	366.10	12	5.2	LB HEADPIN
	27.5	363.50	12	5.3	
	36.5	364.00	12	5.3	
	40.0	363.90	12	5.3	
	44.0	363.70	12	5.3	
	48.0	363.60	12	5.3	
	52.0	363.60	12	5.3	
	56.0	363.80	12	5.3	
	60.0	363.70	12	5.3	
	64.0	363.50	12	5.3	
	68.0	363.40	12	5.3	
	72.0	363.80	12	5.3	
	80.0	363.30	12	5.3	
	82.0	363.20	12	5.3	
	84.0	363.20	12	5.3	
	88.0	363.30	12	5.3	
	92.0	363.10	12	5.3	
	94.0	363.00	12	5.3	
	96.0	363.10	12	5.3	
	100.0	363.10	12	5.3	
	104.0	363.00	12	5.3	
	108.0	363.10	12	5.3	
	112.0	363.10	12	5.3	
	116.0	362.90	12	5.3	
119.5	362.80	12	5.3	LWE	
120.0	363.00	12	5.3		
124.0	362.70	12	5.3		
127.5	362.50	10	5.3		
128.0	362.80	10	5.3		
132.0	362.50	10	5.3		
136.0	362.60	10	5.3		
140.0	362.90	10	5.3		
142.0	362.70	10	5.3		
144.0	362.80	10	5.3		

TABLE B-2.1 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 9 STATION 14+62 (CONT.)	148.0	362.60	10	5.3	
	152.0	362.70	10	5.3	
	156.0	362.80	10	5.3	
	158.0	362.70	10	5.3	
	160.0	363.00	10	5.3	
	162.0	363.00	10	5.3	
	166.0	363.00	10	5.3	
	168.0	362.90	10	5.3	
	170.0	362.90	10	5.3	
	174.0	363.00	10	5.3	
	176.0	362.80	10	5.3	
	178.0	363.00	10	5.3	
	182.0	363.00	10	5.3	RWE
	184.0	363.10	10	5.3	
	186.0	363.00	10	5.3	
	188.0	363.20	10	5.3	
	190.0	363.80	10	5.3	
	192.4	364.00	10	5.3	
	197.0	364.60	10	4.2	
	212.0	366.80	1	9.4	
215.0	371.30	1	8.4		
216.5	371.50	1	8.4	RB HEADPIN	

DATE OF SURVEY: SEPT. 12, 1984.  
REFERENCE ELEVATION: R&M LRX-6 1980.

TABLE B-2.2

CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 101.5L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	367.60	1	8.2	LB HEADPIN
	10.0	362.80	1	8.2	
	19.0	362.60	1	8.2	
	42.0	361.60	1	8.2	LWE
	119.0	358.00	7	5.2	
	176.0	357.50	7	5.2	
	259.0	358.00	7	5.2	
	278.0	359.30	7	5.2	
	297.0	361.10	7	5.2	
	301.0	361.30	7	5.2	RWE
	307.0	363.00	7	5.2	
	317.0	363.10	7	5.2	
	429.0	364.60	1	8.1	
	451.0	365.00	1	8.1	
467.0	365.70	1	8.1	RB HEADPIN	
CROSS SECTION 2 STATION 12+23	0.0	368.20	1	8.2	LB HEADPIN
	12.0	367.90	1	8.2	TOP OF BANK
	14.0	364.60	1	8.2	
	21.0	362.80	1	8.2	LWE
	58.0	360.90	1	8.2	
	104.0	360.50	10	5.2	
	251.0	361.00	10	5.2	
	288.0	361.10	10	5.2	
	325.0	361.20	10	5.2	
	367.0	362.60	10	5.2	RWE
	425.0	365.90	8	4.1	
437.0	366.80	1	8.1	RB HEADPIN	
CROSS SECTION 3* STATION 19+16	0.0	370.80	1	8.2	LB HEADPIN
	62.0	364.80	12	6.2	
	78.0	362.00	12	6.2	
	106.0	360.90	10	5.2	
	126.0	361.00	10	5.2	
	136.0	361.30	10	5.2	
	156.0	361.30	10	5.2	
	186.0	360.60	10	5.2	
206.0	360.60	10	5.2		

TABLE B-2.2 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 101.5L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 3* STATION 19+16 (CONT.)	246.0	362.30	10	5.2	
	276.0	363.80	1	8.1	
	306.0	364.80	1	8.1	
	416.0	366.60	1	8.1	NEXT TO HP
	417.0	368.00	1	8.1	RB HEADPIN
CROSS SECTION 4* STATION 24+47	0.0	369.80	1	8.2	LB HEADPIN
	21.0	367.50	1	8.2	
	58.0	364.50	12	6.2	
	88.0	361.40	10	5.2	
	108.0	361.30	10	5.2	
	128.0	361.90	10	5.2	
	158.0	360.90	10	5.2	
	188.0	362.40	10	5.2	
	218.0	362.90	10	5.2	
	248.0	363.40	10	5.2	
	278.0	363.40	10	5.2	
	338.0	364.50	8	4.1	
	413.0	364.70	8	4.1	
	461.0	365.90	8	4.1	
466.0	368.10	1	8.1	RB HEADPIN	
CROSS SECTION 5 STATION 31+08	0.0	372.40	1	8.2	LB HEADPIN
	24.0	369.90	1	8.2	
	74.0	365.70	1	8.2	LWE
	103.0	364.80	12	6.2	
	140.0	364.20	10	5.2	
	165.0	364.10	10	5.2	
	252.0	361.40	10	5.2	
	344.0	364.00	10	5.2	
	399.0	365.60	10	5.2	RWE
	430.0	368.60	8	4.1	
463.0	369.70	1	8.1		
466.0	370.50	1	8.1	RB HEADPIN	

DATE OF SURVEY: OCT. 2, 1984.

REFERENCE ELEVATION: R&M ALCAP 101.2W1 LB 1982.

\* CROSS SECTION NOT SURVEYED BUT DETERMINED FROM DISCHARGE MEASUREMENT.

TABLE B-2.3

CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 112.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	456.36	1	1.1	LB HEADPIN
	1.0	456.20	1	1.1	
	10.0	453.90	1	1.1	
	11.0	453.66	8	5.1	
	20.0	452.10	8	5.1	
	23.0	451.46	9	5.2	
	40.0	451.50	9	5.2	
	60.0	451.60	9	5.2	
	63.0	451.57	9	5.2	
	80.0	451.10	9	5.2	
	85.0	450.86	9	5.2	LWE
	97.0	449.08	9	5.2	
	100.0	449.20	9	5.2	
	119.0	449.91	9	5.3	
	120.0	449.70	9	5.3	
	125.0	448.48	9	5.3	
	149.0	447.70	9	5.3	
	150.0	447.70	9	5.3	
	180.0	448.30	9	5.3	
	200.0	448.70	9	5.3	
	202.0	448.71	11	5.3	
	230.0	450.03	9	5.2	
	260.0	450.30	9	5.2	
	264.0	450.32	7	4.1	
	290.0	449.00	7	4.2	
	293.0	449.12	3	1.1	
	315.0	447.66	3	1.1	
	337.0	446.74	9	5.2	
	340.0	446.70	9	5.2	
	370.0	447.10	9	5.2	
	374.0	447.22	9	5.2	
	397.0	449.34	8	5.2	
	400.0	449.30	8	5.2	
428.0	449.04	9	5.2		
440.0	449.50	9	5.2		
462.5	450.35	9	5.2		
480.0	451.00	9	5.2		
480.5	450.97	9	5.2	RWE	
495.0	455.12	1	1.1		

TABLE B-2.3 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 112.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 1	505.0	455.36	1	1.1	
STATION 0+00	513.5	460.08	1	1.1	
(CONT.)	520.5	460.24	1	1.1	RB HEADPIN
CROSS SECTION 2	0.0	459.95	3	1.1	LB HEADPIN
STATION 3+97	1.0	458.90	3	1.1	
	4.0	455.70	3	1.1	
	21.0	455.50	3	1.1	
	35.0	451.75	9	5.2	
	47.0	451.37	9	5.2	LWE
	55.0	450.87	9	5.3	
	75.0	450.70	9	5.3	
	95.0	450.60	9	5.3	
	106.0	450.46	9	5.3	
	115.0	450.10	9	5.3	
	124.0	449.65	9	5.3	
	135.0	449.80	9	5.3	
	157.0	450.10	9	5.3	
	160.0	450.20	9	5.3	
	170.0	450.60	9	5.3	
	180.0	450.90	9	5.3	
	187.0	451.25	9	5.3	
	190.0	451.00	9	5.3	
	198.0	450.30	9	5.3	
	239.0	450.70	9	5.3	
	240.0	450.70	9	5.3	
	290.0	450.70	9	5.3	
	311.0	450.70	9	5.3	
	340.0	450.70	9	5.3	
	376.0	450.70	9	5.3	
	390.0	450.60	9	5.3	
	440.0	450.40	9	5.3	
	444.0	450.40	8	5.3	
	480.0	450.90	8	5.3	
	500.0	451.20	8	5.3	
	502.0	451.20	8	5.3	
	520.0	450.80	8	5.3	
	539.0	450.40	9	5.3	
	540.0	450.50	9	5.3	

TABLE B-2.3 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 112.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 2 STATION 3+97 (CONT.)	545.0	451.10	9	5.3	
	547.0	451.30	9	5.3	RWE
	550.0	452.30	9	5.3	
	560.0	455.60	3	1.1	
	567.0	460.78	3	1.1	RB HEADPIN
CROSS SECTION 3 STATION 8+36	0.0	463.77	3	1.1	LB HEADPIN
	1.0	463.10	3	1.1	
	10.0	457.11	3	1.1	BOTTOM OF CUT BANK
	48.0	452.80	9	5.3	LWE
	50.0	452.80	9	1.1	
	70.0	452.40	9	5.3	
	90.0	452.10	9	5.3	
	94.0	452.00	9	5.2	
	110.0	451.90	9	5.2	
	121.0	451.80	9	5.2	
	130.0	452.00	9	5.2	
	150.0	452.40	9	5.2	
	169.0	452.80	9	5.2	RWE
	170.0	452.80	9	5.2	
	200.0	453.10	9	5.2	
	223.0	453.40	9	5.2	
	230.0	453.60	9	5.2	
	267.0	454.71	7	4.3	
	309.0	453.27	9	5.3	
	310.0	453.30	9	5.3	
	335.0	452.80	9	5.3	LWE
	340.0	452.60	9	5.3	
	370.0	451.60	9	5.3	
400.0	450.60	9	5.3		
403.0	450.46	9	5.3		
420.0	450.30	9	5.3		
438.0	450.11	12	6.3		
440.0	450.10	12	6.3		
460.0	450.50	12	6.3		
480.0	450.90	12	6.3		
485.0	450.95	9	5.3		
500.0	451.90	9	5.3		
516.0	452.86	12	6.3	RWE	

TABLE B-2.3 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 112.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 3 STATION 8+36 (CONT.)	520.0	453.00	12	6.3	
	589.0	455.57	12	1.1	
	596.0	459.72	1	1.1	EDGE OF VEGETATION
	598.5	464.73	1	1.1	RB HEADPIN
CROSS SECTION 3A STATION 10+38	0.0	458.34	9	5.3	LB HEADPIN
	1.0	458.10	9	5.3	
	11.0	455.94	9	5.3	
	20.0	454.90	9	5.3	
	27.0	454.21	9	5.3	LWE
	40.0	453.90	9	5.3	
	51.0	453.56	9	5.3	
	60.0	453.30	9	5.3	
	80.0	452.80	9	5.3	
	83.0	452.74	9	5.3	
	98.0	451.82	9	5.3	
	100.0	452.00	9	5.3	
	116.0	453.54	9	5.3	
	120.0	453.30	9	5.3	
	149.0	454.23	9	5.3	RWE
	150.0	454.30	9	5.3	
	169.0	455.82	9	5.2	
	179.0	454.92	9	5.2	LWE
	180.0	454.90	9	5.2	
	199.0	452.79	9	5.2	
	220.0	455.00	9	5.2	
	223.0	454.96	9	5.2	RWE
	255.0	454.60	9	5.2	
289.0	454.10	9	5.3	LWE	
290.0	454.10	9	5.3		
299.0	453.20	9	5.3		
325.0	453.50	9	5.3		
330.0	453.50	9	5.3		
370.0	453.90	9	5.3		
384.0	454.00	9	5.3		
403.0	453.10	9	5.3		
410.0	453.50	9	5.3		
416.0	453.80	9	5.3		

TABLE B-2.3 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 112.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 3A STATION 10+38 (CONT.)	432.0	453.22	9	5.3	
	446.0	453.49	9	5.3	
	450.0	453.40	9	5.3	
	481.0	452.36	9	5.3	
	490.0	452.50	9	5.3	
	529.0	453.11	9	5.3	
	530.0	453.10	9	5.3	
	570.0	453.40	9	5.3	
	589.0	453.62	9	5.3	
	610.0	453.90	9	5.3	
	621.0	454.11	9	5.3	RWE
	669.0	455.79	9	5.3	
	670.0	456.00	9	5.3	
	679.0	457.34	9	5.3	
	693.5	460.06	9	5.3	RB HEADPIN
CROSS SECTION 4 STATION 12+92	0.0	459.33	9	5.3	LB HEADPIN
	1.0	458.80	9	5.3	
	5.0	456.97	9	5.3	
	13.0	455.20	9	5.3	LWE
	15.0	454.90	9	5.3	
	27.0	453.40	9	5.3	
	30.0	453.40	9	5.3	
	60.0	453.80	9	5.3	
	86.0	454.20	9	5.3	
	90.0	454.40	9	5.3	
	110.0	455.20	9	5.2	RWE
	148.0	456.89	9	5.2	
	200.0	454.30	9	5.2	
	208.0	453.92	9	5.3	
	230.0	453.58	12	6.3	
	260.0	453.90	12	6.3	
	262.0	453.94	9	5.3	
	290.0	453.90	9	5.3	
320.0	453.90	9	5.3		
350.0	453.80	9	5.3		
380.0	453.80	9	5.3		
408.0	453.85	9	5.3		
410.0	453.80	9	5.3		

TABLE B-2.3 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 112.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 4 STATION 12+92 (CONT.)	440.0	454.10	9	5.3	
	446.0	454.25	9	5.3	
	470.0	455.00	9	5.3	
	472.0	455.13	7	4.3	RWE
	520.0	456.36	7	4.2	
	556.0	456.26	7	4.2	
	570.0	456.10	7	4.2	
	600.0	455.80	7	4.2	
	630.0	455.40	7	4.2	
	636.0	455.27	7	4.2	
	650.0	455.30	7	4.2	
	670.0	455.20	7	4.2	
	690.0	455.20	7	4.2	
	693.0	455.19	3	1.1	
	710.0	456.10	3	1.1	
	729.0	456.99	3	1.1	
	730.0	457.30	3	1.1	
738.0	459.56	3	1.1	RB HEADPIN	
CROSS SECTION 5 STATION 15+41	0.0	459.26	3	8.3	LB HEADPIN
	1.0	458.60	3	8.3	
	3.0	457.19	3	8.3	
	10.0	455.90	3	8.3	
	14.0	455.11	3	1.1	LWE
	20.0	453.50	9	5.2	
	31.0	453.54	9	5.2	
	40.0	453.70	9	5.2	
	70.0	454.32	9	5.2	
	100.0	453.90	9	5.2	
	130.0	453.40	9	5.3	
	160.0	453.40	9	5.3	
	195.0	453.30	9	5.3	
	200.0	453.30	9	5.3	
	240.0	453.40	9	5.3	
	277.0	453.47	9	5.3	
280.0	453.50	9	5.3		
310.0	453.90	9	5.3		
318.0	453.97	9	5.3		
340.0	454.20	9	5.3		

TABLE B-2.3 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 112.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 5 STATION 15+41 (CONT.)	370.0	454.60	9	5.3	
	380.0	454.71	9	5.3	
	400.0	455.30	9	5.3	
	405.0	455.38	9	5.2	RWE
	433.0	456.26	9	5.2	
	440.0	456.30	9	5.2	
	490.0	456.40	9	5.2	
	491.0	456.43	9	5.2	
	510.0	456.20	9	5.2	
	545.0	455.76	9	5.2	
	570.0	456.20	9	5.2	
	580.0	456.40	9	5.2	
	586.0	456.46	9	5.2	
	595.0	456.20	9	5.2	
	607.0	455.66	3	1.1	
	610.0	455.80	3	1.1	
	630.0	456.60	3	1.1	
	648.0	457.30	3	1.1	
653.0	461.50	3	1.1	RB HEADPIN	
CROSS SECTION 6 STATION 19+86	0.0	460.88	1	1.1	LB HEADPIN
	1.0	460.80	1	7.2	
	20.0	457.87	1	7.2	
	30.0	456.50	1	7.2	
	38.0	455.26	9	7.2	LWE
	40.0	455.20	9	7.2	
	60.0	454.70	9	7.2	
	80.0	454.07	9	5.2	
	110.0	453.00	9	5.2	
	114.0	452.99	9	5.2	
	140.0	452.70	9	5.2	
	154.0	452.64	9	5.2	
	180.0	452.70	9	5.2	
	220.0	452.80	9	5.2	
240.0	452.92	9	5.2		
260.0	453.20	9	5.2		
284.0	453.51	9	5.2		
290.0	453.70	9	5.2		

TABLE B-2.3 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 112.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 6 STATION 19+86 (CONT.)	315.0	454.57	9	5.2	
	320.0	454.70	9	5.2	
	350.0	455.20	9	5.2	
	355.0	455.34	9	5.2	RWE
	370.0	456.20	9	5.2	
	390.0	457.32	9	5.2	
	414.0	457.97	9	5.2	
	435.0	460.90	9	5.2	RB HEADPIN
CROSS SECTION 7 STATION 30+34	0.0	466.59	12	9.3	LB HEADPIN
	1.0	461.31	12	9.3	
	10.0	459.10	12	9.3	
	11.0	458.81	12	5.3	
	20.0	458.20	12	5.3	
	40.0	457.00	12	5.3	
	46.0	456.59	12	5.3	
	50.0	456.50	12	5.3	
	60.0	456.40	12	5.3	
	70.0	456.30	12	5.3	
	80.0	456.10	12	5.3	
	90.0	455.95	12	6.3	LWE
	110.0	455.50	12	6.3	
	140.0	454.80	12	6.3	
	143.0	454.68	9	5.3	
	175.0	452.90	9	5.3	
	180.0	452.80	9	5.3	
	208.0	452.54	12	6.3	
	210.0	452.50	12	6.3	
	238.0	452.97	9	5.3	
240.0	453.00	12	6.3		
270.0	453.70	9	5.3		
271.0	453.71	9	5.3		
298.0	454.67	9	5.2		
300.0	454.80	9	5.3		
320.0	455.70	9	5.2		
326.0	456.04	9	5.2	RWE	
330.0	456.20	9	5.2		
350.0	457.40	9	5.2		
354.0	457.55	12	6.2		
370.0	457.90	12	6.2		

TABLE B-2.3 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 112.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 7 STATION 30+34 (CONT.)	379.5	458.08	12	6.2	
	390.0	458.90	12	6.2	
	410.0	460.50	12	6.2	
	411.0	460.56	12	6.2	
	421.0	463.38	12	6.2	RB HEADPIN
CROSS SECTION 8 STATION 40+98	0.0	470.80	1	8.2	BOTTOM OF CUT BANK
	1.0	469.10	1	8.2	
	3.0	465.81	1	9.2	
	7.0	463.60	1	8.3	
	10.0	463.10	1	8.3	
	25.0	460.70	1	8.3	
	30.0	459.90	9	5.3	LWE
	38.0	458.60	9	5.3	
	40.0	458.20	9	5.3	
	42.0	457.70	9	5.3	
	50.0	457.40	9	5.3	
	52.0	457.30	9	5.3	
	70.0	457.20	9	5.3	
	80.0	457.80	9	5.3	
	82.0	457.90	9	5.3	
	90.0	458.40	9	5.2	
	91.0	458.50	9	5.2	
	110.0	458.40	9	5.2	
	120.0	458.40	9	5.2	
	124.0	458.40	7	4.3	
	160.0	458.30	7	4.3	
	164.0	458.30	7	4.3	
	200.0	458.35	9	5.3	
220.0	458.00	9	5.3		
248.0	457.38	9	5.3		
260.0	457.30	9	5.3		
280.0	457.07	9	5.3		
300.0	457.60	9	5.3		
302.0	457.74	9	5.3		
360.0	457.80	9	5.3		
362.0	457.82	9	5.3		
380.0	458.20	9	5.3		
400.0	458.60	9	5.3		

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 TABLE B-2.3 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND  
 COVER DATA AT SITE 112.6L.  
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LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 8 STATION 40+98 (CONT.)	410.0	458.75	9	5.3	RWE
	430.0	459.10	9	5.3	
	437.0	459.20	9	5.3	
	450.0	459.50	9	5.3	
	460.0	459.80	9	5.3	
	470.0	460.10	9	5.3	
	524.0	461.39	9	5.2	
	579.0	462.90	9	5.2	
	580.0	463.00	9	5.2	
	602.5	465.83	9	5.2	RB HEADPIN

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 DATE OF SURVEY: SEPT. 16, 1984.  
 REFERENCE ELEVATION: R&M LRX-16 RB 1980.  
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TABLE B-2.4

CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 119.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION AT MOUTH STATION -3+51	0.0	511.00	1	7.1	BOTTOM OF BANK
	47.0	508.71	1	7.1	
	104.0	508.25	1	7.1	LWE
	130.0	507.20	1	7.1	
	163.0	506.91	1	7.1	
	184.0	507.05	1	7.1	
	194.0	509.55	1	7.1	
	198.0	508.15	12	9.1	RWE
	203.0	511.23	12	9.1	HALF WAY UP BANK
CROSS SECTION 1 STATION 0+00	0.0	514.94	1	8.2	LB HEADPIN
	10.5	510.12	1	7.1	
	26.0	508.92	1	7.1	LWE
	32.0	508.40	1	7.1	
	84.0	508.00	1	7.1	
	152.0	506.30	1	7.1	
	168.0	506.20	1	7.1	
	180.0	508.83	1	7.1	RWE
	195.0	514.63	1	8.3	RB HEADPIN
CROSS SECTION 2 STATION 3+80	0.0	513.53	1	8.2	LB HEADPIN
	29.5	510.56	1	5.1	
	39.5	508.89	1	5.1	LWE
	48.5	507.94	3	6.1	
	76.0	507.00	3	6.1	
	92.0	506.40	3	6.1	
	108.0	506.50	4	6.1	
	125.0	505.03	4	6.1	
	149.0	508.85	13	5.2	RWE
	162.0	514.21	13	5.2	RB HEADPIN
CROSS SECTION 3 STATION 5+96	0.0	513.69	3	8.2	LB HEADPIN
	10.0	513.48	3	8.2	
	36.5	510.73	11	8.1	
	59.0	508.90	11	5.2	LWE
	87.5	508.20	11	5.2	
	117.0	508.04	11	5.2	

TABLE B-2.4 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 119.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 3 STATION 5+96 (CONT.)	147.0	506.75	11	5.2	
	161.0	508.87	11	5.2	RWE
	172.0	511.73	11	5.2	
	173.0	516.86	11	8.4	RB HEADPIN
CROSS SECTION 4 STATION 9+93	0.0	515.26	11	8.1	LB HEADPIN
	18.5	513.71	11	8.1	
	52.0	512.71	11	5.2	
	65.0	511.98	11	5.2	
	85.0	509.82	11	5.2	
	120.0	509.90	11	6.2	LWE
	137.0	507.90	11	6.2	RWE
	151.0	508.86	11	6.3	
	173.0	512.28	11	6.3	
176.0	513.79	11	8.4	RB HEADPIN	
CROSS SECTION 5 STATION 14+46	0.0	515.52	3	6.2	LB HEADPIN
	27.5	514.36	3	6.2	
	57.5	513.72	11	6.2	
	90.0	513.68	8	6.2	
	149.0	512.72	10	6.2	
	158.0	512.72	10	6.2	
	179.5	512.27	10	6.3	
	193.5	511.42	10	6.3	
	223.0	511.21	10	6.3	LWE
	246.5	510.42	10	6.2	
	293.5	511.21	10	6.2	RWE
	303.0	513.89	1	6.1	
306.0	515.57	1	6.1	RB HEADPIN	

DATE OF SURVEY: SEPT. 6, 1984.  
REFERENCE ELEVATION: USGS A107 1965.

TABLE B-2.5

CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	622.20	1	8.5	LB HEADPIN
	1.0	621.90	1	8.5	BESIDE HEADPIN
	8.0	619.30	12	8.2	
	26.0	616.90	12	5.2	
	29.0	616.10	12	5.2	LWE
	32.0	616.30	12	5.2	
	36.0	615.60	12	5.2	
	40.0	615.00	12	1.1	
	44.0	614.60	12	1.1	
	48.0	614.30	12	1.1	
	52.0	614.50	12	1.1	
	56.0	614.80	12	1.1	
	60.0	614.60	1	1.1	
	64.0	614.30	1	1.1	
	68.0	614.00	1	1.1	
	72.0	614.00	1	1.1	
	76.0	614.10	1	1.1	
	80.0	614.60	1	1.1	
	84.0	614.50	1	1.1	
	88.0	614.30	1	1.1	
	92.0	614.10	1	1.1	
	96.0	614.10	1	1.1	
	100.0	614.10	1	1.1	
	104.0	614.20	1	1.1	
	108.0	614.30	1	1.1	
	112.0	614.40	1	1.1	
	116.0	614.40	1	1.1	
	120.0	614.70	1	1.1	
	124.0	614.80	1	1.1	
	128.0	615.00	1	1.1	
	132.0	615.10	1	1.1	
	136.0	615.40	1	1.1	
	140.0	615.50	1	1.1	
	144.0	615.50	1	1.1	
	148.0	615.50	1	1.1	
	152.0	615.50	1	1.1	
	156.0	615.60	1	1.1	
	160.0	615.70	1	1.1	
	164.0	615.90	1	1.1	

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 TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND  
 COVER DATA AT SITE 131.7L.  
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LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 1 STATION 0+00 (CONT.)	168.0	615.90	1	1.1	
	172.0	615.70	1	1.1	
	176.0	615.80	1	1.1	
	180.0	615.80	1	1.1	
	184.0	615.50	1	1.1	
	188.0	615.40	1	1.1	
	192.0	615.20	1	1.1	
	196.0	615.20	1	1.1	
	200.0	615.20	1	1.1	
	204.0	615.20	1	1.1	
	208.0	615.20	1	1.1	
	212.0	615.30	1	1.1	
	216.0	615.40	1	1.1	
	220.0	615.60	1	1.1	
	224.0	615.50	1	1.1	
	228.0	615.80	1	1.1	
	232.0	616.20	1	1.1	
	234.0	616.50	1	1.1	
	236.0	616.90	1	1.1	
	237.0	616.80	1	1.1	
251.0	618.80	1	8.2	BOTTOM OF BANK	
258.0	621.10	1	8.2		
263.0	624.00	1	8.2	RB HEADPIN	
CROSS SECTION 2 STATION 2+45	0.0	620.90	1	8.2	LB HEADPIN
	1.0	620.60	1	8.2	BESIDE HEADPIN
	2.0	619.40	12	8.2	
	14.0	616.90	12	5.2	
	18.0	616.50	12	5.2	LWE
	22.0	615.90	12	5.2	
	26.0	615.80	12	5.2	
	30.0	615.60	12	5.2	
	34.0	615.60	10	5.2	
	38.0	615.60	10	5.2	
	42.0	615.80	10	5.2	
	46.0	616.00	10	5.2	
	50.0	616.40	10	5.2	
54.0	616.30	10	5.2		
58.0	616.50	10	5.2		

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TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 2 STATION 2+45 (CONT.)	62.0	616.20	10	5.2	
	66.0	616.30	10	5.2	
	70.0	616.30	10	5.2	
	73.0	616.20	10	5.2	
	78.0	616.30	10	5.2	
	81.0	616.30	10	5.2	
	86.0	616.40	10	5.2	
	90.0	616.00	10	5.2	
	94.0	616.20	10	5.2	
	98.0	616.10	10	5.2	
	102.0	616.20	10	5.2	
	106.0	615.90	10	5.2	
	110.0	615.90	10	5.2	
	114.0	615.80	10	5.2	
	118.0	616.00	10	5.2	
	122.0	616.10	10	5.2	
	126.0	616.00	10	5.2	
	130.0	616.00	10	5.2	
	134.0	616.10	10	5.2	
	138.0	616.20	10	5.2	
	142.0	616.00	10	5.2	
	147.0	615.70	10	5.2	
	150.0	615.80	10	5.2	
	153.0	615.70	10	5.2	
158.0	615.90	10	5.2		
161.0	615.80	10	5.2		
166.0	616.40	10	5.2		
169.0	616.20	10	5.2		
174.0	616.50	10	5.2		
177.0	616.20	10	5.2		
182.0	616.40	10	5.2		
186.0	616.40	10	5.2		
190.0	616.50	10	5.2		
194.0	616.50	10	5.2		
198.0	616.40	10	5.2		
202.0	616.50	10	5.2		
206.0	616.60	10	5.2		
210.0	616.70	10	5.2		
214.0	616.60	10	5.2		

TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 2 STATION 2+45 (CONT.)	218.0	616.60	10	5.2	
	222.0	616.80	10	4.2	
	227.0	616.80	10	4.2	
	231.0	616.80	10	4.2	
	235.0	616.80	10	4.2	
	239.0	616.90	10	4.2	
	256.0	617.10	1	4.2	
	301.0	622.17	1	8.2	BESIDE HEADPIN
	301.0	622.24	1	8.2	RB HEADPIN
CROSS SECTION 3 STATION 6+45	0.0	621.80	1	9.4	LB HEADPIN
	0.0	621.57	1	9.4	BESIDE HEADPIN
	2.0	621.60	1	6.1	
	15.0	617.60	1	6.1	
	24.0	617.50	1	6.2	
	26.0	617.20	1	6.2	
	28.0	617.10	1	6.2	
	30.0	617.10	1	6.2	
	32.0	617.10	1	6.2	
	34.0	616.60	12	6.2	LWE
	36.0	616.80	12	6.2	
	38.0	616.60	12	6.2	
	40.0	616.60	12	6.2	
	44.0	616.60	12	6.2	
	48.0	616.70	12	6.1	
	52.0	616.40	12	6.1	
	56.0	616.10	12	6.1	
	60.0	616.20	12	6.1	
	64.0	616.50	12	6.1	
	68.0	616.10	12	6.1	
	72.0	616.00	12	6.1	
	76.0	615.80	12	6.1	
	80.0	615.50	12	6.1	
84.0	615.40	12	6.1		
88.0	615.20	12	6.1		
92.0	615.20	12	6.1		
96.0	615.00	12	6.1		
100.0	614.80	12	6.1		
104.0	614.70	12	6.1		

TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 3 STATION 6+45 (CONT.)	108.0	614.90	12	6.1	
	112.0	614.60	12	6.1	
	116.0	614.70	12	6.1	
	120.0	614.60	12	6.1	
	124.0	614.80	12	6.1	
	128.0	614.70	12	6.1	
	132.0	614.90	12	6.1	
	136.0	614.90	12	6.1	
	140.0	615.00	12	6.1	
	144.0	615.00	12	6.1	
	148.0	615.20	12	6.1	
	152.0	615.20	12	6.1	
	156.0	615.30	12	6.1	
	160.0	615.30	12	6.1	
	164.0	615.60	12	6.1	
	168.0	615.60	12	6.1	
	172.0	615.80	12	6.1	
	176.0	615.80	12	7.1	
	180.0	616.10	12	7.1	
	184.0	616.30	12	7.1	
	188.0	616.50	12	7.1	
	192.0	616.70	1	7.1	
	196.0	616.50	1	7.1	
	198.0	616.80	1	7.1	
	200.0	616.60	1	7.1	
	202.0	617.00	1	7.1	
	206.0	617.10	1	7.1	
	208.0	616.90	1	7.1	
	210.0	617.00	1	7.1	
	212.0	617.10	1	7.1	
214.0	617.20	1	7.1		
216.0	617.40	1	7.1		
218.0	617.50	1	7.1		
260.0	620.90	1	8.2	BOTTOM OF BANK	
266.0	622.80	1	8.2	TOP OF BANK	
273.0	623.11	1	8.2	BESIDE HEADPIN	
273.0	623.30	1	8.2	RB HEADPIN	

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 TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND  
 COVER DATA AT SITE 131.7L.  
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LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 4 STATION 9+45	0.0	623.00	1	2.2	LB HEADPIN
	1.0	621.66	1	2.2	BESIDE HEADPIN
	7.0	620.00	1	2.2	
	25.0	617.50	1	6.2	
	27.0	617.40	1	6.2	
	28.0	616.70	12	6.2	LWE
	30.0	616.60	12	6.2	
	32.0	616.20	12	6.2	
	34.0	616.10	12	6.2	
	36.0	615.70	12	6.1	
	38.0	615.90	12	6.1	
	41.0	615.60	12	6.1	
	43.0	614.90	11	6.1	
	45.0	615.00	11	6.1	
	48.0	614.20	11	6.1	
	52.0	614.10	11	6.1	
	54.0	614.00	11	6.1	
	55.0	613.80	11	6.1	
	56.0	613.90	11	6.1	
	57.0	613.80	11	6.1	
	58.0	613.90	11	6.1	
	60.0	614.20	11	6.1	
	64.0	614.70	8	6.1	
	68.0	614.80	8	6.1	
	72.0	615.20	8	6.1	
	76.0	615.40	8	6.1	
	80.0	615.70	8	6.1	
84.0	615.80	8	6.1		
88.0	615.70	8	6.1		
92.0	615.90	8	6.1		
96.0	616.20	8	6.1		
100.0	615.90	8	6.1		
104.0	616.00	8	6.1		
108.0	616.20	8	6.1		
112.0	616.10	8	6.1		
116.0	616.10	8	6.1		
120.0	616.10	8	4.2		
124.0	616.00	8	4.2		
126.0	616.10	8	4.2		

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TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 4 STATION 9+45 (CONT.)	130.0	616.30	8	4.2	
	134.0	616.40	8	4.2	
	138.0	616.60	8	4.2	
	140.0	616.70	8	4.2	
	144.0	616.90	8	4.2	
	148.0	617.00	8	4.2	
	152.0	617.20	8	4.2	
	157.0	617.30	2	4.2	RWE
	163.0	617.30	2	1.1	
	167.0	617.40	2	1.1	
	171.0	617.30	2	1.1	
	175.0	617.40	2	1.1	
	179.0	617.60	2	1.1	
	216.0	619.90	2	1.1	
	231.0	619.90	2	1.1	
	283.0	621.20	2	1.1	
	302.5	623.66	2	8.1	BESIDE HEADPIN
303.0	623.97	2	8.1	RB HEADPIN	
CROSS SECTION 5 STATION 11+90	0.0	622.89	1	8.4	LB HEADPIN
	0.0	622.39	1	8.4	BESIDE HEADPIN
	4.0	622.30	1	9.3	
	7.0	618.00	1	9.3	
	9.0	617.10	12	7.3	LWE
	12.0	615.50	12	7.3	
	14.0	615.30	12	7.3	
	18.0	615.90	12	7.3	
	22.0	615.80	12	5.2	
	26.0	614.40	12	5.2	
	30.0	614.40	12	5.2	
	34.0	614.70	12	5.2	
	38.0	614.90	10	5.2	
	42.0	615.50	10	5.2	
	46.0	615.40	10	5.2	
	50.0	615.50	10	5.2	
	54.0	615.90	10	5.2	
58.0	615.80	10	5.2		
62.0	615.90	10	5.2		
66.0	616.00	10	5.2		

TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 5 STATION 11+90 (CONT.)	70.0	616.10	10	5.2	
	74.0	616.70	10	5.2	
	78.0	617.10	8	5.2	
	82.0	617.30	8	5.2	
	86.0	617.30	8	5.2	
	90.0	617.50	8	5.2	
	94.0	617.50	8	5.2	
	98.0	617.50	8	5.2	
	102.0	617.50	8	5.2	
	106.0	617.40	8	5.2	
	110.0	617.50	8	5.2	
	114.0	617.50	8	5.2	
	118.0	617.50	8	5.2	
	122.0	617.50	8	5.2	
	126.0	617.60	8	5.2	
	130.0	617.60	8	4.2	
	134.0	617.70	8	4.2	
	138.0	617.90	8	4.2	
	142.0	617.80	8	4.2	
	146.0	618.10	8	4.2	
150.0	618.10	8	4.2		
154.0	618.10	8	4.2		
156.0	618.20	8	4.2		
276.0	620.10	1	4.2		
380.0	621.50	1	8.1		
391.0	623.42	1	8.1	BESIDE HEADPIN	
391.0	623.69	1	8.1	RB HEADPIN	
CROSS SECTION 6 STATION 16+30	0.0	628.02	1	8.4	LB HEADPIN
	0.0	627.74	1	8.4	BESIDE HEADPIN
	1.0	623.10	8	8.4	
	11.0	619.40	8	5.2	
	14.0	618.70	8	5.2	LWE
	17.0	618.30	8	5.2	
	20.0	618.10	8	5.2	
	22.0	618.00	8	5.2	
	26.0	618.00	8	5.2	
	30.0	617.90	8	5.2	
34.0	617.80	8	5.2		

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 TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND  
 COVER DATA AT SITE 131.7L.  
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LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 6 STATION 16+30 (CONT.)	37.0	617.60	8	5.2	
	42.0	617.80	8	5.2	
	46.0	617.70	8	5.2	
	50.0	617.80	8	5.2	
	54.0	617.80	8	5.2	
	58.0	617.10	8	5.2	
	62.0	616.70	8	5.2	
	66.0	616.30	8	5.2	
	70.0	616.50	8	5.2	
	74.0	617.00	8	5.2	
	78.0	617.80	8	5.2	
	82.0	618.20	7	5.2	
	86.0	618.40	7	5.2	
	90.0	618.50	6	5.2	
	92.0	618.80	6	5.2	
	96.0	618.90	6	5.2	
	98.0	618.90	6	5.3	
	104.0	618.90	6	5.3	
	106.0	619.20	6	5.3	
	110.0	619.10	6	5.3	
	114.0	619.10	6	5.3	
	117.0	619.10	6	5.3	RWE
	122.0	619.00	6	5.3	
	126.0	619.00	6	5.3	
	130.0	619.00	6	5.3	
	138.0	619.00	6	5.3	
	146.0	619.00	6	5.3	
151.0	619.10	6	5.3		
154.0	619.20	6	5.3		
162.0	619.40	6	5.3		
166.0	619.60	6	5.3		
170.0	619.40	6	5.3		
174.0	618.90	6	5.3		
178.0	618.90	6	5.3		
182.0	618.90	6	5.3		
188.0	618.90	6	5.3		
192.0	618.80	6	5.3		
196.0	618.80	6	5.3		
200.0	619.00	6	5.3		

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TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 6 STATION 16+30 (CONT.)	204.0	618.80	6	5.3	
	208.0	618.90	6	5.3	
	212.0	619.00	6	5.3	
	216.0	618.90	6	5.3	
	220.0	619.20	6	5.3	
	224.0	619.20	6	5.3	
	228.0	619.20	6	5.3	
	232.0	619.20	6	5.3	
	236.0	619.10	6	5.3	
	240.0	619.10	6	5.3	
	244.0	619.10	6	5.2	
	246.0	619.10	6	5.2	
	248.0	619.10	6	5.2	
	252.0	619.30	6	5.2	
	256.0	619.30	6	5.2	
	260.0	619.30	6	5.2	
	264.0	619.30	6	5.2	
	268.0	619.40	6	5.2	
	272.0	619.40	6	5.2	
	276.0	619.40	6	5.2	
280.0	619.30	6	5.2		
284.0	619.50	6	5.2		
342.0	622.40	1	5.2		
358.0	622.92	1	8.2	BESIDE HEADPIN	
358.0	623.17	1	8.2	RB HEADPIN	
CROSS SECTION 7 STATION 19+05	0.0	626.66	1	5.2	LB HEADPIN
	2.0	626.21	1	5.2	BESIDE HEADPIN
	8.0	620.40	1	5.2	
	10.0	620.00	8	5.2	
	14.0	619.70	8	5.2	
	18.0	619.90	8	5.2	
	20.0	619.90	8	5.2	
	24.0	620.10	8	5.2	
	28.0	620.10	8	5.2	
	32.0	620.10	8	5.2	
	36.0	620.00	8	5.2	
	40.0	619.80	8	5.2	
44.0	620.20	8	5.2		

TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 7 STATION 19+05 (CONT.)	48.0	620.10	8	5.2	
	51.0	620.40	6	5.2	LWE
	54.0	620.90	6	5.2	
	71.0	621.20	8	5.3	
	84.0	620.90	8	5.2	
	88.0	620.20	8	5.2	
	92.0	619.50	8	5.2	
	96.0	619.30	8	5.2	
	100.0	619.10	8	4.2	
	104.0	619.50	8	4.2	
	108.0	620.10	8	4.2	
	112.0	620.20	8	4.2	
	116.0	620.00	8	4.2	
	120.0	620.10	8	4.2	
	124.0	620.10	8	4.2	
	128.0	620.10	8	4.2	
	132.0	620.00	6	5.2	
	136.0	619.50	6	5.2	
	140.0	619.70	6	5.2	
	144.0	619.90	6	5.2	
	148.0	620.00	6	5.2	
	152.0	620.00	6	5.2	
	156.0	619.90	6	5.2	
160.0	619.90	6	5.2		
164.0	620.00	6	5.2		
168.0	619.80	6	5.2		
172.0	619.70	6	5.2		
176.0	619.70	6	5.2		
178.0	619.70	6	5.2		
182.0	619.80	6	5.2		
186.0	619.80	6	5.2		
190.0	619.80	6	5.2		
194.0	620.00	6	5.2		
198.0	620.10	6	5.2		
202.0	620.10	6	6.2		
208.0	620.00	6	6.2		
212.0	619.90	6	6.2		
216.0	620.00	6	6.2		
220.0	620.00	6	6.2		

TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 7 STATION 19+05 (CONT.)	224.0	620.10	6	6.2	
	228.0	620.00	6	6.2	
	232.0	619.90	6	6.2	
	236.0	620.10	6	6.2	
	240.0	620.10	6	6.2	
	244.0	620.10	6	6.2	
	248.0	620.10	6	6.2	
	254.0	620.10	6	6.2	
	258.0	620.10	6	6.2	
	262.0	620.10	6	6.2	
	266.0	620.10	6	6.2	
	270.0	620.00	6	6.2	
	274.0	620.10	6	6.2	
	278.0	620.00	6	6.2	
	282.0	620.20	6	6.2	
	285.0	620.00	6	6.2	
	288.0	620.20	6	6.2	
	290.0	620.00	6	6.2	
	294.0	620.40	6	6.2	RWE
	298.0	620.20	6	6.2	
	302.0	620.70	6	5.2	
	305.0	620.70	6	5.2	
	311.0	620.40	6	5.2	
	315.0	620.40	6	5.2	
	319.0	620.40	6	5.2	
	323.0	620.40	6	5.2	
	327.0	620.40	6	5.2	
	331.0	620.40	6	5.2	
	335.0	620.40	6	5.2	
	339.0	620.40	6	5.2	
	343.0	620.40	6	5.2	
	347.0	620.40	6	5.2	
351.0	620.40	6	5.2		
355.0	620.50	6	5.2		
359.0	620.50	6	5.2		
362.0	620.50	6	5.2		

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 TABLE B-2.5 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND  
 COVER DATA AT SITE 131.7L.  
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LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
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CROSS SECTION 7	367.0	620.70	6	5.2	
STATION 19+05	414.0	622.60	10	5.2	
(CONT.)	432.0	623.26	10	8.4	BESIDE HEADPIN
	432.0	623.83	10	8.4	RB HEADPIN

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 DATE OF SURVEY: SEPT. 27, 1984.

REFERENCE ELEVATION: R&M ALCAP 131.1S1 RB 1982.

TABLE B-2.6

CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS	
CROSS SECTION 1 STATION 0+00	0.0	630.20	1	2.5	LB HEADPIN	
	8.7	626.10	1	2.5		
	9.0	625.50	1	2.5		
	9.3	625.50	1	2.5		
	9.5	625.20	10	5.2		
	10.0	625.40	10	5.2		
	12.0	625.30	10	5.2		
	14.0	625.30	10	5.2		
	16.0	625.50	10	5.2		
	18.0	625.20	10	5.2		LWE
	20.0	625.40	10	5.2		
	21.0	625.30	10	5.2		
	24.0	625.00	10	5.2		
	28.0	625.20	10	5.3		
	29.0	625.00	10	5.3		
	31.0	624.80	10	5.3		
	32.0	625.30	10	5.3		
	33.0	625.00	10	5.3		
	36.0	624.90	10	5.3		
	39.0	625.20	10	5.3		
	40.0	625.30	10	5.3		
	43.0	625.30	10	5.3		
	44.0	625.20	10	5.3		
	47.0	625.20	10	5.3		
	48.0	624.80	10	5.3		
	51.0	625.10	10	5.3		
	52.0	624.90	10	5.3		
	55.0	624.90	10	5.3		
	56.0	624.60	10	5.3		
	59.0	624.80	10	5.3		
	60.0	624.60	10	5.2		
	63.0	624.90	10	5.2		
	64.0	624.60	10	5.2		
67.0	624.70	10	5.2			
68.0	624.70	10	5.2			
70.0	624.60	10	5.2			
72.0	624.70	10	5.2			
74.0	624.90	10	5.2			
76.0	625.00	10	2.2	RWE		

TABLE B-2.6 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 1 STATION 0+00 (CONT.)	77.8	625.50	10	2.2	
	78.0	625.50	10	2.2	
	80.0	626.10	10	2.2	
	83.0	627.70	1	8.3	TOP OF BANK
	98.0	627.80	1	8.3	
	109.0	630.20	1	8.3	RB HEADPIN
CROSS SECTION 2 STATION 1+24	0.0	630.30	1	2.5	LB HEADPIN
	4.0	627.10	1	9.3	BOTTOM OF BANK
	18.5	626.60	1	5.2	
	31.5	626.30	1	5.3	
	32.0	626.20	1	5.3	
	34.0	626.00	1	5.3	
	36.0	625.80	1	5.3	
	37.0	625.70	1	5.3	LWE
	38.0	625.40	1	5.3	
	40.0	625.30	1	5.3	
	42.0	625.20	1	5.3	
	44.0	625.30	10	5.3	
	46.0	625.20	10	5.3	
	48.0	625.10	10	5.3	
	50.0	624.80	10	5.3	
	52.0	624.70	10	5.2	
	54.0	624.60	10	5.2	
	56.0	624.60	10	5.2	
	58.0	624.60	10	5.2	
	60.0	624.50	10	5.2	
	62.0	624.70	10	5.2	
	64.0	624.60	10	5.2	
	66.0	624.60	10	5.2	
	68.0	624.60	10	5.2	
70.0	624.70	10	5.3		
72.0	625.00	10	5.3		
74.0	625.00	10	5.3		
76.0	625.30	10	5.3	RWE	
78.0	625.70	10	5.3		
80.0	625.90	10	5.3		
82.0	626.10	10	5.3		
84.0	626.00	10	5.2		

TABLE B-2.6 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 2 STATION 1+24 (CONT.)	86.0	626.20	10	5.2	
	88.0	626.20	10	5.2	
	90.0	626.20	10	5.2	
	92.0	626.20	10	5.2	
	96.0	626.10	10	5.2	
	100.0	626.00	10	5.2	
	104.0	626.30	10	5.2	
	111.5	627.30	1	5.1	TOP OF BANK
	139.0	629.60	1	5.1	
	161.0	630.90	1	5.1	RB HEADPIN
CROSS SECTION 3 STATION 2+46	0.0	631.16	1	2.5	LB HEADPIN
	8.5	629.80	1	2.5	
	23.0	627.30	1	2.5	
	23.5	626.90	8	5.2	
	24.0	626.90	8	5.2	
	26.0	626.30	8	5.2	
	28.0	626.20	8	5.3	
	30.0	626.00	8	5.3	LWE
	32.0	626.10	8	5.3	
	34.0	625.90	8	5.3	
	36.0	625.90	8	5.3	
	38.0	625.80	8	5.3	
	40.0	625.30	8	5.3	
	42.0	624.90	8	5.3	
	44.0	625.10	8	5.3	
	46.0	625.10	8	5.3	
	48.0	625.40	8	5.3	
	50.0	625.80	8	5.3	
	52.0	625.80	8	5.3	
	54.0	626.10	8	5.3	RWE
58.0	626.50	1	5.2		
62.0	627.00	1	5.2		
66.0	627.00	1	5.2		
70.0	627.20	1	5.2		
74.0	627.10	1	5.2		
78.0	627.10	1	5.2		
80.0	626.80	1	5.2		
82.0	627.00	1	5.2		

TABLE B-2.6 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 3 STATION 2+46 (CONT.)	84.0	627.00	1	5.2	
	86.0	626.90	1	5.2	
	88.0	627.00	1	5.2	
	90.0	627.30	1	5.2	
	90.3	627.30	1	5.2	
	95.0	628.10	1	5.1	
	104.4	628.10	1	5.1	
	139.5	630.25	1	5.1	RB HEADPIN
CROSS SECTION 4 STATION 3+90	0.0	631.00	1	2.5	LB HEADPIN
	17.6	628.00	1	2.3	
	18.0	627.50	8	2.3	BOTTOM OF BANK
	20.0	627.50	8	2.3	
	22.0	627.40	8	5.3	
	24.0	627.50	8	5.3	
	30.0	627.20	8	5.3	
	32.0	627.20	8	5.3	
	34.0	627.10	8	5.3	
	36.0	627.10	8	5.3	
	38.0	627.10	8	5.3	
	40.0	627.10	8	5.3	LWE
	42.0	627.00	8	5.3	
	44.0	627.20	8	5.3	
	46.0	626.80	8	5.3	
	48.0	626.50	8	5.3	
	50.0	626.30	8	5.2	
	51.0	626.30	8	5.2	
	53.0	626.10	8	5.2	
	55.0	626.30	8	5.2	
57.0	626.30	8	5.2		
59.0	626.30	8	5.2		
61.0	626.30	8	5.2		
62.0	626.30	8	5.3		
64.0	626.70	8	5.3		
66.0	626.80	8	5.3		
68.0	627.00	8	5.3		
70.8	627.10	10	5.3	RWE	
72.0	627.20	10	5.3		
74.0	627.10	10	5.3		

TABLE B-2.6 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 4 STATION 3+90 (CONT.)	76.0	627.20	10	5.3	
	78.0	627.20	10	5.3	
	80.0	627.20	10	5.3	
	84.0	627.20	10	5.3	
	86.0	627.10	10	5.3	
	88.0	627.20	10	5.3	
	90.0	627.30	10	5.3	
	92.0	627.10	10	5.3	
	94.0	627.40	10	5.3	
	96.0	627.20	10	5.3	
	98.0	627.20	10	5.2	
	102.0	627.40	10	5.2	
	106.0	627.40	10	5.2	
	110.0	627.40	10	5.2	
	114.0	627.40	10	5.2	
	118.0	627.70	10	5.2	
	122.0	627.80	10	5.1	
	124.0	627.80	10	5.1	
	126.0	627.80	10	5.1	
	128.0	627.80	10	5.1	
130.0	627.80	1	5.1		
132.0	628.00	1	5.1		
152.0	628.00	1	5.1		
162.5	629.00	1	5.1		
182.0	629.10	1	5.1		
199.0	630.00	1	5.1	RB HEADPIN	
CROSS SECTION 5 STATION 5+11	0.0	631.00	1	2.5	LB HEADPIN
	40.0	628.10	1	3.2	
	43.5	627.80	1	3.2	TOP OF BANK
	44.0	627.15	10	3.2	LWE
	46.0	626.80	10	3.2	
	48.0	626.50	10	5.2	
	50.0	626.60	10	5.2	
	52.0	626.60	10	5.2	
	54.0	626.20	10	5.2	
	56.0	626.40	10	5.2	
	58.0	626.60	10	5.2	
60.0	626.40	10	5.2		

TABLE B-2.6 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 5 STATION 5+11 (CONT.)	62.0	626.40	10	5.2	
	66.0	626.50	10	5.2	
	68.0	626.60	10	5.2	
	70.0	626.60	10	5.2	
	74.0	626.30	10	5.2	
	78.0	626.40	10	5.2	
	80.0	626.40	10	5.2	
	82.0	626.70	10	5.2	
	86.0	626.60	10	5.2	
	90.0	626.40	10	5.2	
	92.0	626.60	10	5.2	
	94.0	626.50	10	5.2	
	98.0	626.60	10	5.2	
	102.0	626.60	10	5.2	
	104.0	626.50	10	5.2	
	106.0	626.70	10	5.2	
	110.0	626.70	10	5.2	
	114.0	626.70	10	5.2	
	116.0	626.80	10	5.2	
	118.0	626.90	10	5.2	
	122.0	627.10	10	5.2	
	124.0	627.19	10	6.1	RWE
	126.0	627.30	10	6.1	
	128.0	627.20	10	6.1	
	130.0	627.30	10	6.1	
	134.0	627.20	10	6.1	
	136.0	627.10	10	6.1	
138.0	627.30	10	5.1		
140.0	627.40	10	5.1		
142.0	627.40	10	5.1		
144.0	627.60	10	5.1		
146.0	627.20	10	5.1		
148.0	627.60	10	5.1		
150.0	627.50	10	1.1		
152.0	627.40	10	1.1	BOTTOM OF BANK	
154.0	627.50	10	1.1		

TABLE B-2.6 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 5 STATION 5+11 (CONT.)	156.0	628.10	10	1.1	
	162.5	629.00	1	1.1	TOP OF BANK
	182.0	629.10	1	5.1	
	210.0	630.00	1	5.1	RB HEADPIN
CROSS SECTION 6 STATION 6+94	0.0	631.80	1	2.5	LB HEADPIN
	25.0	629.10	1	2.3	
	29.0	628.20	1	2.3	
	30.0	628.00	1	2.3	LWE
	32.0	627.40	1	2.2	
	34.0	626.30	11	2.2	
	36.0	626.60	11	5.2	
	38.0	626.60	11	5.2	
	42.0	627.10	8	5.2	
	44.0	627.20	8	5.2	
	46.0	627.00	8	5.1	
	50.0	626.20	10	5.1	
	54.0	625.70	10	5.1	
	56.0	625.40	10	5.1	
	58.0	625.20	11	5.1	
	62.0	625.10	11	5.1	
	66.0	625.20	11	5.1	
	68.0	625.40	11	5.1	
	70.0	625.10	11	5.1	
	72.5	625.20	1	5.1	
	74.0	625.20	1	5.1	
	76.0	625.30	1	5.1	
	78.0	625.60	1	5.1	
	80.0	625.70	1	5.1	
	82.0	625.70	1	5.1	
	84.0	625.90	1	5.1	
	86.0	626.00	1	5.1	
88.0	626.00	1	5.1		
90.0	626.00	1	1.1		
92.0	626.20	1	1.1		
94.0	626.30	1	1.1		
96.0	626.50	1	1.1		
98.0	626.40	1	1.1		
100.0	626.70	1	1.1		

TABLE B-2.6 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 6 STATION 6+94 (CONT.)	102.0	626.80	1	1.1	
	104.0	626.90	1	1.1	
	106.0	627.10	1	1.1	RWE
	108.0	627.20	1	1.1	
	110.0	627.30	1	1.1	
	112.0	627.30	1	1.1	
	114.0	627.50	1	1.1	
	116.0	627.60	1	1.1	
	118.0	627.80	1	1.1	
	120.0	627.90	1	1.1	
	122.0	628.10	1	1.1	
	124.0	628.20	1	1.1	
	139.0	629.00	1	1.1	
	160.0	629.20	1	8.2	
	181.5	629.40	1	8.2	RB HEADPIN
	CROSS SECTION 7 STATION 8+52	0.0	631.60	1	2.5
18.2		628.20	1	2.2	
20.0		627.90	1	2.1	
22.0		627.60	1	6.2	
22.6		627.40	1	6.2	
23.5		627.60	1	6.2	
24.0		626.90	1	6.2	LWE
26.0		626.90	1	6.2	
28.0		626.50	1	6.2	
30.0		626.60	1	5.2	
32.0		626.60	1	5.2	
34.0		626.50	1	5.2	
36.0		626.50	1	5.2	
40.0		625.00	1	5.2	
44.0		624.70	1	5.2	
48.0		624.80	1	5.2	
52.0		624.70	1	5.2	
56.0		624.70	1	5.2	
58.0	624.60	1	5.2		
60.0	624.70	1	5.2		
62.0	624.90	1	5.2		
64.0	624.80	1	5.2		

TABLE B-2.6 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 7 STATION 8+52 (CONT.)	66.0	625.10	1	5.2	
	68.0	625.30	1	5.2	
	70.0	625.40	1	1.1	
	72.0	625.60	1	1.1	
	74.0	625.70	1	1.1	
	76.0	625.90	1	1.1	
	78.0	626.00	1	1.1	
	80.0	626.10	1	1.1	
	82.0	626.40	1	1.1	
	84.0	626.60	1	1.1	
	86.0	626.80	1	1.1	
	88.0	627.00	1	1.1	
	90.0	627.10	1	1.1	
	92.0	627.20	1	1.1	RWE
	94.0	627.30	1	1.1	
	96.0	627.60	1	1.1	
	98.0	627.60	1	1.1	
	100.0	627.60	1	1.1	
	102.0	627.90	1	1.1	
	104.0	627.90	1	1.1	
106.0	627.90	1	1.1		
108.0	628.20	1	1.1		
116.0	628.30	1	1.1		
121.5	627.60	1	1.1		
131.5	629.40	2	1.1		
145.0	629.50	1	5.1		
168.5	630.60	1	5.1	RB HEADPIN	
CROSS SECTION 8 STATION 9+79	0.0	633.40	1	2.5	LB HEADPIN
	18.0	628.20	1	7.2	
	20.0	627.30	1	7.2	
	21.0	627.30	1	7.2	LWE
	22.0	627.10	1	7.2	
	24.0	626.90	1	5.2	
	26.0	627.00	1	5.2	
	28.0	626.80	11	5.2	
	31.0	627.00	11	5.2	
	32.0	626.70	11	5.2	
33.0	626.90	11	5.2		

TABLE B-2.6 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 8 STATION 9+79 (CONT.)	36.0	626.50	11	5.2	
	39.0	626.80	11	5.2	
	40.0	626.20	11	5.2	
	43.0	626.40	11	5.2	
	44.0	626.20	11	5.2	
	47.0	626.00	11	5.2	
	48.0	626.30	11	5.2	
	51.0	626.20	11	5.3	
	52.0	626.10	11	5.3	
	56.0	625.90	11	5.3	
	60.0	625.90	11	5.3	
	64.0	626.20	11	5.3	
	67.0	626.10	11	5.3	
	68.0	625.90	11	5.3	
	72.0	625.70	11	5.2	
	75.0	626.10	11	5.2	
	76.0	625.60	11	5.2	
	79.0	625.80	11	5.2	
	80.0	625.60	1	5.1	
	83.0	625.60	1	5.1	
84.0	625.60	1	1.1		
CROSS SECTION 8 STATION 9+79 (CONT.)	88.0	625.90	1	1.1	
	91.0	626.60	1	1.1	
	92.0	626.20	1	1.1	
	95.0	626.60	1	1.1	
	96.0	627.00	1	1.1	
	98.0	627.40	1	1.1	
	99.0	626.80	1	1.1	RWE
	100.0	627.00	1	1.1	
	102.0	627.10	1	1.1	
	103.0	627.20	1	1.1	
	105.7	627.50	1	1.1	
	128.0	630.00	3	1.1	
155.0	629.80	3	4.1		
168.0	631.40	3	4.1		
178.0	632.20	3	4.1	RB HEADPIN	

TABLE B-2.6 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 9 STATION 11+31	0.0	631.10	1	2.5	LB HEADPIN
	4.0	628.60	1	2.5	
	6.0	628.40	1	2.5	
	9.0	627.70	1	2.3	LWE
	12.0	627.50	1	2.1	
	14.0	627.30	1	2.1	
	16.0	626.70	1	7.1	
	19.0	626.10	11	7.1	
	25.0	626.20	11	7.1	
	28.0	626.60	11	7.1	
	32.0	626.80	11	7.1	
	34.0	627.70	1	5.2	RWE
	36.0	628.40	1	5.2	
	40.0	629.70	1	5.2	
	55.0	629.60	1	5.2	
	84.0	629.00	1	5.2	
	88.5	628.90	1	5.2	
	90.8	628.40	1	5.2	
	92.0	628.20	1	5.2	
	94.0	628.00	8	5.2	LWE
	96.0	627.90	8	5.2	
	98.0	627.70	8	5.2	
	100.0	627.70	8	5.2	
	103.0	627.60	8	5.2	
	108.0	627.50	8	5.2	
	112.0	627.60	8	5.2	
	116.0	627.70	8	5.2	
	120.0	627.70	8	5.3	
	124.0	627.70	8	5.3	
	127.0	628.00	8	5.3	RWE
	130.0	628.20	8	5.3	
132.0	628.20	8	5.3	LWE	
134.0	627.90	8	5.3		
136.0	627.60	8	5.3		
140.0	627.20	8	5.3		
142.0	627.20	8	5.3		
144.0	627.30	8	5.3		
148.0	627.60	8	4.2		
152.0	627.50	8	4.2		

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TABLE B-2.6 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 132.6L.

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LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 9	156.0	627.70	8	4.2	
STATION 11+31	158.5	627.60	8	5.2	RWE
(CONT.)	164.0	627.60	8	5.2	
	168.0	627.60	8	5.2	
	170.6	628.10	8	5.2	
	176.0	628.10	8	5.2	
	180.0	628.00	8	5.2	
	183.0	627.80	5	8.3	
	184.0	628.20	5	8.3	
	186.0	628.40	5	8.3	
	193.0	629.30	5	8.3	
	210.5	631.00	5	8.3	
	219.0	631.60	5	8.3	RB HEADPIN

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DATE OF SURVEY: SEPT. 7, 1984.

REFERENCE ELEVATION: R&M ALCAP 131.1S1 RB 1982.

TABLE B-2.7

CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	681.70	1	8.3	LB HEADPIN
	1.0	681.00	12	8.3	
	9.0	675.90	12	6.2	
	11.0	674.50	12	6.2	LWE
	14.0	674.20	12	7.1	
	16.0	674.20	12	7.1	
	18.0	674.30	12	7.1	
	19.5	674.60	12	7.1	RWE
	23.0	674.60	12	7.1	
	25.0	674.50	2	7.1	LWE
	26.0	674.40	2	7.1	
	28.0	673.90	1	7.1	
	30.0	674.00	1	7.2	
	32.0	674.10	1	7.2	
	34.0	674.00	1	7.2	
	36.0	673.60	1	7.2	
	38.0	673.40	1	7.2	
	40.0	673.30	1	7.2	
	42.0	673.10	1	7.2	
	44.0	673.30	10	7.2	
	46.0	673.60	10	7.2	
	48.0	673.80	10	7.2	
	50.0	673.90	10	7.2	
	52.0	673.90	10	7.2	
	54.0	674.30	10	7.2	
	56.0	674.20	12	7.2	
	58.0	673.60	12	7.2	
	60.0	673.10	12	7.2	
	62.0	672.50	12	7.2	
	64.0	672.50	6	7.2	
	66.0	672.70	6	7.2	
	68.0	673.10	6	7.2	
	70.0	673.40	6	7.2	
72.0	673.20	1	7.2		
74.0	673.20	1	7.2		
76.0	674.00	1	7.2		
78.7	674.60	1	8.2	RWE	
80.0	674.00	8	8.2		
80.9	675.10	8	8.2		

TABLE B-2.7 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 1 STATION 0+00 (CONT.)	82.0	675.60	8	8.2	
	82.8	675.80	8	8.2	
	88.0	677.90	1	8.2	BOTTOM OF BANK
	91.5	682.50	1	8.4	TOP OF BANK
	93.5	683.00	1	8.4	RB HEADPIN
CROSS SECTION 2 STATION 0+88	0.0	682.84	1	8.5	LB HEADPIN
	3.0	681.00	1	9.4	TOP OF BANK
	4.0	677.40	1	9.4	
	17.0	676.10	12	4.1	
	20.0	676.00	12	4.2	
	22.0	675.80	12	4.2	
	24.0	675.60	12	4.2	
	26.0	675.40	12	4.2	
	28.0	674.80	12	4.2	
	30.0	675.10	12	4.2	
	32.0	674.90	12	4.2	
	34.0	674.77	12	4.2	LWE
	36.0	674.50	12	7.2	
	38.0	674.10	12	7.2	
	40.0	673.80	12	7.2	
	42.0	673.80	12	7.2	
	44.0	673.00	12	7.2	
	46.0	672.70	12	7.2	
	48.0	672.60	10	7.2	
	50.0	673.00	10	7.2	
	52.0	673.20	10	7.2	
	54.0	673.30	10	7.2	
	56.0	673.50	10	7.2	
58.0	673.90	10	7.2		
60.0	673.90	10	7.2		
62.0	674.80	10	7.2		
64.0	674.80	1	8.2	RWE	
73.0	681.00	1	8.4		
76.0	683.30	1	8.4		
78.5	684.91	1	8.4	RB HEADPIN	

TABLE B-2.7 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 3 STATION 1+95	0.0	680.63	1	5.3	LB HEADPIN
	3.0	678.50	10	4.2	
	9.0	675.80	10	4.2	
	10.0	675.60	10	4.2	
	12.0	674.90	12	4.2	
	14.0	674.50	12	4.2	
	16.0	674.10	12	7.2	
	18.0	673.70	8	7.2	
	20.0	673.70	8	7.2	
	22.0	673.80	8	7.2	
	24.0	673.70	8	7.2	
	26.0	673.70	8	7.2	
	28.0	673.80	8	7.2	
	30.0	673.90	8	7.2	
	32.0	673.90	6	7.2	
	34.0	674.00	6	7.2	
	36.0	674.30	6	7.2	
	38.0	674.30	6	7.2	
	40.0	674.10	6	7.2	
	42.0	674.10	6	7.2	
	44.0	674.00	1	7.2	
46.0	675.20	1	7.2		
47.5	675.30	1	7.2	RWE	
55.0	678.50	1	7.2		
59.0	681.00	1	8.5		
61.0	682.80	1	8.5	TOP OF BANK	
63.0	683.86	1	8.5	RB HEADPIN	
CROSS SECTION 4 STATION 2+91	0.0	683.16	1	8.4	LB HEADPIN
	2.5	680.30	1	7.4	
	7.5	677.50	12	6.3	BOTTOM OF BANK
	10.0	676.10	12	6.3	
	12.0	675.50	12	6.3	
	12.5	675.59	12	6.3	LWE
	14.0	675.60	12	6.3	
	16.0	675.00	12	4.1	
	18.0	674.70	12	4.1	
	20.0	674.60	10	4.1	
22.0	674.40	10	4.1		

TABLE B-2.7 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 4 STATION 2+91 (CONT.)	24.0	674.00	10	4.1	
	26.0	674.10	10	4.1	
	28.0	674.00	10	4.1	
	30.0	674.00	10	4.1	
	32.0	674.10	10	4.1	
	34.0	674.30	10	4.1	
	36.0	674.40	10	4.1	
	38.0	674.50	10	4.1	
	40.0	674.60	10	4.1	
	42.0	674.80	8	4.1	
	44.0	674.90	8	4.1	
	46.0	675.00	8	4.1	
	48.0	674.90	8	4.1	
	50.0	674.90	8	4.1	
	52.0	675.00	8	4.1	
	54.0	675.10	8	4.1	
	56.0	675.30	8	4.1	
	58.0	675.30	8	4.1	
	60.0	675.60	8	4.1	
	62.0	675.70	6	4.1	
	64.0	675.80	6	7.2	
66.0	675.90	6	7.2		
68.0	676.00	6	7.2		
68.5	676.10	1	7.2		
72.3	676.60	1	7.2		
82.5	679.60	1	8.4	BOTTOM OF BANK	
84.5	683.16	1	8.4	TOP OF BANK	
87.5	684.41	1	8.4	RB HEADPIN	
CROSS SECTION 5 STATION 4+23	0.0	681.10	2	8.4	LB HEADPIN
	2.5	678.50	2	8.4	
	13.7	677.10	6	6.1	
	14.0	676.60	6	6.1	
	16.0	676.60	6	6.1	
	17.0	676.35	6	6.1	LWE
	18.0	676.30	6	6.1	
	20.0	676.20	6	6.1	
22.0	676.30	6	6.1	RWE	

TABLE B-2.7 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 5 STATION 4+23 (CONT.)	24.0	676.30	6	6.1	
	26.0	676.30	6	6.1	
	28.0	676.30	6	6.1	LWE
	30.5	676.30	10	6.1	
	32.0	676.10	10	6.1	
	34.0	675.80	10	6.1	
	36.0	675.60	13	8.2	
	38.0	675.40	13	8.2	
	40.0	675.30	13	8.2	
	42.0	675.30	13	8.2	
	44.0	674.90	13	8.2	
	46.0	674.90	13	8.2	
	48.0	674.70	13	8.2	
	50.0	674.40	13	8.2	
	52.0	674.20	13	8.2	
	54.0	673.70	13	8.2	
	56.0	673.70	12	8.2	
	58.0	674.30	12	8.2	
	60.0	674.30	12	8.2	
	62.0	673.90	12	8.2	
	64.0	673.70	12	8.2	
	66.0	673.90	12	8.2	
	68.0	673.90	12	8.2	
70.0	673.90	12	8.2		
72.0	673.90	12	8.2		
74.0	674.10	12	8.2		
76.0	674.80	1	8.2		
78.0	675.90	1	8.2		
79.0	677.50	1	8.2		
79.8	677.70	1	8.2		
80.5	677.80	1	8.4		
83.0	680.82	1	8.4	RWE	
89.0	685.40	1	8.4		
91.0	686.10	1	8.4	RB HEADPIN	
CROSS SECTION 6 STATION 5+82	0.0	683.23	1	8.5	LB HEADPIN
	8.0	681.60	1	9.5	TOP OF BANK
	8.5	678.50	10	9.5	
	10.0	677.50	10	4.2	

TABLE B-2.7 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 6 STATION 5+82 (CONT.)	11.0	677.00	10	4.2	
	11.5	677.00	10	4.2	
	12.0	676.80	10	4.2	
	14.0	676.80	10	4.2	
	16.0	676.60	11	4.2	LWE
	18.0	676.20	11	4.2	
	20.0	676.00	11	4.2	
	22.0	675.80	11	4.2	
	24.0	675.90	11	4.2	
	26.0	675.20	11	4.2	
	28.0	675.20	10	4.2	
	30.0	675.10	10	4.2	
	32.0	674.90	10	4.2	
	34.0	674.90	10	4.2	
	36.0	674.90	10	4.2	
	38.0	675.10	10	4.2	
	40.0	675.10	10	4.2	
	42.0	675.20	10	4.2	
	44.0	675.10	10	4.2	
	46.0	674.90	10	4.2	
	48.0	675.00	10	4.2	
	50.0	674.80	10	4.2	
	52.0	674.80	10	4.2	
	54.0	674.80	10	4.2	
	56.0	675.20	10	4.1	
	58.0	675.50	10	4.1	
	60.0	676.00	10	4.1	
	62.0	676.70	6	4.1	RWE
	63.3	677.00	6	4.1	
	65.0	677.20	6	4.1	
	67.0	677.50	6	4.1	
	68.0	677.50	6	4.1	
	76.0	678.10	1	7.3	BOTTOM OF BANK
79.0	681.00	1	9.5	TOP OF BANK	
81.0	681.70	1	9.5	RB HEADPIN	

DATE OF SURVEY: SEPT. 9, 1984.

REFERENCE ELEVATION: R&M ALCAP 136.5Q3 LB 1982.

TABLE B-2.8

CROSS SECTION ELEVATIONS, SUBSTRATE AND  
COVER DATA AT SITE 147.1L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	820.50	1	8.5	LB HEADPIN
	8.5	818.60	1	8.5	
	17.0	816.00	1	8.2	
	38.5	812.50	9	5.2	LWE
	51.0	810.80	9	5.2	
	61.0	809.30	9	5.2	
	70.0	809.20	9	5.2	
	100.0	808.80	9	5.2	
	140.0	808.90	9	5.2	
	177.0	810.00	9	5.2	
	187.0	810.10	9	5.2	
	196.0	810.70	9	5.2	
	213.0	811.70	9	5.2	
	223.0	812.20	9	5.2	RWE
	250.0	814.30	1	5.2	
	292.0	816.40	1	5.2	
	340.0	816.40	1	5.2	
415.0	818.20	1	8.3	RB HEADPIN	
CROSS SECTION 2 STATION 3+62	0.0	821.50	1	8.5	LB HEADPIN
	8.0	817.40	1	8.5	
	27.0	813.70	12	6.3	LWE
	35.0	813.10	10	5.2	
	43.0	812.50	10	5.2	
	60.0	811.90	10	5.2	
	70.0	810.90	10	5.2	
	110.0	810.30	10	5.2	
	170.0	810.50	10	5.2	
	200.0	812.00	10	5.2	
	208.0	812.40	10	5.2	
	216.0	812.90	10	5.2	
	223.0	813.50	10	5.2	RWE
	277.0	814.90	12	6.2	
	326.0	816.40	12	6.2	
346.0	818.00	12	8.1		
362.0	819.20	1	8.3	RB HEADPIN	

TABLE B-2.8 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 147.1L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 3 STATION 7+17	0.0	822.40	1	8.4	LB HEADPIN
	1.5	820.50	1	8.4	
	7.0	818.60	1	8.4	
	27.0	814.90	12	6.3	LWE
	39.0	813.20	10	5.2	
	48.0	812.10	10	5.2	
	57.0	812.00	10	5.2	
	70.0	811.50	10	5.2	
	110.0	810.70	10	5.2	
	160.0	811.80	10	5.2	
	202.0	812.10	10	5.2	
	209.0	812.40	10	5.2	
	214.0	813.00	10	5.2	
	238.0	813.50	10	5.2	
	241.0	813.80	10	5.2	
	249.0	814.30	10	5.2	
	259.0	814.70	10	5.2	RWE
295.0	817.60	9	5.2		
308.5	818.90	9	5.2		
309.0	819.80	1	8.2	RB HEADPIN	
CROSS SECTION 4 STATION 10+00	0.0	830.00	1	8.5	LB HEADPIN
	11.0	820.70	9	5.3	
	18.0	818.00	9	5.3	
	32.5	815.30	9	6.2	LWE
	40.0	813.40	9	6.2	
	60.0	811.90	9	6.2	
	80.0	811.30	9	6.2	
	100.0	810.80	9	6.2	
	120.0	810.90	9	6.2	
	140.0	811.50	9	6.2	
	180.0	811.60	9	6.2	
	200.0	811.90	9	6.2	
	220.0	812.60	9	6.2	
	230.0	812.90	9	6.2	
	238.0	813.50	9	6.2	
245.0	815.20	9	6.2	RWE	
266.0	818.50	12	6.2		
282.0	820.80	1	8.5	RB HEADPIN	

TABLE B-2.8 (CONT.) CROSS SECTION ELEVATIONS, SUBSTRATE AND COVER DATA AT SITE 147.1L.

LOCATION WITHIN SITE	HOR DIST (FT)	BED ELEV (FT)	SUB	COV	COMMENTS
CROSS SECTION 5 STATION 13+35	0.0	822.40	9	5.4	LB HEADPIN
	6.0	819.40	9	5.4	
	22.5	815.60	9	6.3	LWE
	30.5	814.10	9	6.3	
	39.0	813.10	9	6.3	
	48.0	812.80	9	6.3	
	56.0	812.30	9	6.3	
	100.0	811.80	9	6.3	
	150.0	811.40	9	6.3	
	165.0	811.80	9	6.3	
	189.0	812.80	9	6.3	
	198.0	813.90	9	6.3	
	201.0	814.70	12	6.3	
	206.0	815.50	12	6.3	RWE
	245.0	819.60	1	8.2	
261.0	821.90	1	8.5	BESIDE HEADPIN	
261.0	822.87	1	8.5	RB HEADPIN	
CROSS SECTION 6 STATION 17+76	0.0	820.90	12	6.3	LB HEADPIN
	4.0	817.20	12	6.3	
	8.0	816.13	12	6.3	LWE
	12.0	814.70	12	6.3	
	16.0	814.00	12	6.3	
	24.0	813.50	12	6.3	
	27.0	813.30	12	6.3	
	60.0	812.10	12	6.3	
	110.0	812.00	12	6.3	
	140.0	812.70	12	6.3	
	155.0	813.50	12	6.3	
	160.0	814.30	12	6.3	
	165.0	815.30	12	6.3	
	172.0	816.00	12	6.3	RWE
	201.0	817.70	12	6.3	
255.0	820.20	12	6.2		
281.0	821.30	12	6.4		
311.0	822.20	12	6.3	RB HEADPIN	

DATE OF SURVEY: SEPT. 17, 1984.  
REFERENCE ELEVATION: R&M LRX-60 LB 1980.

TABLE B-3.1

IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 1 STATION 0+00	0.0	0.00	0.00
	2.0	0.00	0.00
	8.0	0.00	0.00
	16.6	0.00	0.00
	18.0	0.60	0.00
	20.0	1.05	0.00
	22.0	2.20	0.00
	24.0	2.00	0.00
	26.0	2.30	0.10
	28.0	2.30	0.40
	30.0	2.40	0.60
	32.0	2.38	0.50
	34.0	2.35	0.55
	36.0	2.50	0.70
	38.0	2.70	0.70
	40.0	2.85	0.50
	42.0	3.00	0.55
	43.0	3.25	0.60
	44.0	3.30	0.65
	46.0	3.50	0.60
	48.0	3.40	0.70
	50.0	3.35	0.80
	52.0	3.40	0.70
	54.0	3.50	0.60
	55.0	3.35	0.65
	56.0	3.10	0.70
	58.0	3.05	0.70
60.0	2.85	0.70	
62.0	2.80	0.75	
64.0	2.32	0.65	
65.0	2.08	0.60	
66.0	2.10	0.55	
68.0	2.20	0.50	
70.0	1.60	0.35	
72.0	1.45	0.25	
73.0	1.37	0.20	
74.0	1.30	0.10	
76.0	1.35	0.00	
78.0	1.20	0.00	

TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 1 STATION 0+00 (CONT.)	80.0	1.20	0.00
	82.0	1.25	0.00
	84.0	1.15	0.00
	86.0	1.00	0.00
	88.0	0.70	0.00
	90.0	0.50	0.00
	92.0	0.25	0.00
	94.0	0.00	0.00
	96.0	0.00	0.00
	98.0	0.00	0.00
	124.0	0.00	0.00
	148.0	0.00	0.00
	218.0	0.00	0.00
	249.5	0.00	0.00
	272.0	0.00	0.00
	274.0	0.05	0.00
	276.0	0.05	0.00
	278.0	0.05	0.00
	282.0	0.05	0.00
	285.0	0.10	0.00
	286.0	1.10	0.00
	290.0	0.10	0.00
	293.0	0.10	0.00
	294.0	0.05	0.00
	298.0	0.05	0.00
	302.0	0.05	0.00
	306.0	0.05	0.00
	308.0	0.03	0.00
	310.0	0.03	0.00
	314.0	0.03	0.00
	318.0	0.03	0.00
	322.0	0.00	0.00
323.0	0.00	0.00	
334.0	0.00	0.00	
350.0	0.00	0.00	

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TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 101.2R.

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LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 3	0.0	0.00	0.00
STATION 3+74	5.0	0.00	0.00
	14.0	0.03	0.00
	16.0	0.03	0.00
	20.0	0.03	0.00
	24.0	0.03	0.00
	28.0	0.03	0.00
	32.0	0.03	0.00
	36.0	0.03	0.00
	40.0	0.05	0.00
	44.0	0.05	0.00
	46.0	0.05	0.00
	48.0	0.05	0.00
	49.0	0.05	0.00
	50.0	0.00	0.00
	54.0	0.00	0.00
	67.0	0.00	0.00
	77.0	0.00	0.00
	87.5	0.00	0.00
	90.0	0.60	0.00
	92.0	0.90	0.00
	96.0	1.00	0.00
	100.0	1.00	0.00
	104.0	1.00	0.00
	108.0	1.80	0.00
	114.0	1.75	0.00
	116.0	2.05	0.00
	118.0	2.00	0.20
	120.0	2.00	0.25
	122.0	2.20	0.54
	124.0	2.40	0.59
	126.0	2.35	0.59
	128.0	2.35	0.74
	130.0	2.35	0.54
	132.0	2.30	0.59
	134.0	2.30	0.64
	136.0	2.30	0.69
	136.5	2.30	0.69
	138.0	2.30	0.69

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 TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
 SITE 101.2R.  
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LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 3 STATION 3+74 (CONT.)	140.0	2.30	0.49
	142.0	2.25	0.69
	144.0	2.25	0.85
	146.0	2.25	0.70
	148.0	2.20	0.60
	150.0	2.25	0.60
	152.0	2.25	0.65
	154.0	2.25	0.60
	156.0	2.30	0.60
	158.0	1.88	0.55
	160.0	1.90	0.50
	162.0	2.00	0.50
	164.0	2.30	0.45
	166.0	2.20	0.45
	168.0	2.25	0.50
	170.0	2.30	0.35
	172.0	2.40	0.30
	174.0	2.20	0.30
	176.0	2.00	0.20
	178.0	2.05	0.20
	180.0	2.10	0.15
	182.0	1.90	0.10
	184.0	1.70	0.10
	186.0	1.65	0.00
	188.0	1.60	0.00
	189.5	1.55	0.00
	192.0	1.50	0.00
	196.0	1.50	0.00
	200.0	0.95	0.00
	204.0	0.65	0.00
208.0	0.55	0.00	
212.0	0.45	0.00	
216.0	0.10	0.00	
220.0	0.10	0.00	
224.0	0.00	0.00	
227.0	0.00	0.00	
322.0	0.00	0.00	
339.0	0.00	0.00	
340.0	0.20	0.00	

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 TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
 SITE 101.2R.  
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LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
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CROSS SECTION 3 STATION 3+74 (CONT.)	344.0	0.20	0.00
	347.5	0.15	0.00
	352.0	0.10	0.00
	356.0	0.00	0.00
	376.5	0.00	0.00
	381.0	0.00	0.00
	381.5	0.00	0.00
CROSS SECTION 4 STATION 5+64	0.0	0.00	0.00
	3.0	0.00	0.00
	7.0	0.00	0.00
	23.0	0.00	0.00
	62.0	0.00	0.00
	111.0	0.00	0.00
	123.0	0.00	0.00
	147.0	0.00	0.00
	151.0	0.30	0.00
	155.0	1.05	0.00
	159.0	1.10	0.00
	163.0	1.90	0.00
	164.0	2.00	0.00
	166.0	2.10	0.20
	168.0	2.10	0.15
	170.0	1.80	0.25
	172.0	1.85	0.35
	174.0	1.90	0.35
	176.0	1.95	0.50
	178.0	2.00	0.40
180.0	2.20	0.67	
182.0	2.10	0.50	
184.0	2.10	0.60	
186.0	2.10	0.70	
188.0	2.00	0.70	
190.0	2.00	0.60	
192.0	1.97	0.70	
194.0	1.90	0.77	
196.0	1.87	0.75	
198.0	1.85	0.85	
200.0	1.88	0.67	

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TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 4 STATION 5+64 (CONT.)	202.0	2.00	0.90
	204.0	2.05	0.90
	206.0	2.10	0.80
	208.0	2.05	0.70
	210.0	2.00	0.65
	212.0	2.00	0.60
	214.0	2.05	0.70
	216.0	1.90	0.60
	218.0	1.80	0.47
	220.0	1.50	0.40
	222.0	1.40	0.40
	224.0	1.50	0.15
	226.0	1.61	0.12
	228.0	1.63	0.20
	230.0	1.55	0.20
	232.0	1.55	0.20
	234.0	1.55	0.00
	236.0	1.22	0.00
	238.0	1.15	0.00
	240.0	1.00	0.00
	243.0	1.10	0.00
	247.0	0.80	0.00
	251.0	0.60	0.00
	255.0	0.20	0.00
	259.0	0.20	0.00
	263.0	0.00	0.00
	266.2	0.00	0.00
331.0	0.00	0.00	
362.0	0.00	0.00	
369.0	0.00	0.00	
383.0	0.00	0.00	
387.0	0.20	0.00	
389.0	0.00	0.00	
391.0	0.00	0.00	
393.0	0.00	0.00	
394.0	0.00	0.00	

TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 4 STATION 5+64 (CONT.)	408.0	0.00	0.00
	413.0	0.00	0.00
	416.0	0.00	0.00
	419.0	0.00	0.00
CROSS SECTION 6 STATION 8+37	0.0	0.00	0.00
	29.0	0.00	0.00
	42.0	0.00	0.00
	62.0	0.00	0.00
	66.0	0.75	0.00
	70.0	1.20	0.00
	74.0	0.95	0.00
	78.0	1.25	0.00
	80.0	1.23	0.00
	82.0	1.20	0.00
	84.0	1.20	0.00
	86.0	1.20	0.00
	88.0	1.40	0.20
	90.0	1.50	0.20
	92.0	1.60	0.30
	94.0	1.55	0.35
	96.0	1.55	0.30
	98.0	1.55	0.35
	100.0	1.47	0.35
	102.0	1.40	0.40
	104.0	1.47	0.40
	106.0	1.45	0.40
	108.0	1.50	0.50
	110.0	1.55	0.45
112.0	1.65	0.55	
114.0	1.80	0.55	
116.0	1.70	0.50	
118.0	1.60	0.50	
120.0	1.75	0.55	
122.0	1.90	0.65	
124.0	1.67	0.65	
126.0	1.45	0.70	
128.0	1.70	0.62	
129.0	1.80	0.64	

TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 6 STATION 8+37 (CONT.)	130.0	1.95	0.65
	132.0	1.93	0.67
	134.0	1.90	0.60
	136.0	2.00	0.60
	138.0	2.05	0.65
	140.0	2.00	0.65
	142.0	1.95	0.65
	144.0	1.90	0.60
	146.0	1.85	0.60
	148.0	1.90	0.52
	150.0	2.05	0.55
	152.0	1.70	0.55
	154.0	1.40	0.60
	155.0	1.50	0.49
	156.0	1.55	0.37
	158.0	1.60	0.37
	160.0	1.45	0.36
	162.0	1.30	0.35
	164.0	1.50	0.40
	166.0	1.70	0.48
	168.0	1.50	0.30
	170.0	1.35	0.35
	172.0	1.45	0.20
	173.5	1.55	0.10
	176.0	1.50	0.10
	178.0	1.40	0.00
	180.0	1.43	0.00
182.0	1.45	0.00	
186.0	1.25	0.00	
190.0	1.15	0.00	
194.0	1.00	0.00	
198.0	0.70	0.00	
202.0	0.42	0.00	
206.0	0.10	0.00	
209.0	0.00	0.00	
211.5	0.00	0.00	
248.5	0.00	0.00	
250.0	0.00	0.00	
252.0	0.00	0.00	

TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 6 STATION 8+37 (CONT.)	254.0	0.00	0.00
	256.0	0.00	0.00
	258.0	0.25	0.00
	260.0	0.15	0.00
	262.0	0.00	0.00
	266.0	0.00	0.00
	272.0	0.00	0.00
	276.0	0.00	0.00
	278.0	0.00	0.00
CROSS SECTION 7 STATION 10+23	0.0	0.00	0.00
	43.0	0.00	0.00
	79.0	0.00	0.00
	80.0	0.00	0.00
	82.0	0.00	0.00
	84.0	0.25	0.00
	86.0	0.40	0.00
	90.0	0.65	0.00
	92.0	0.70	0.00
	94.0	0.75	0.00
	96.0	0.75	0.10
	98.0	0.75	0.10
	100.0	0.77	0.10
	102.0	0.80	0.12
	104.0	0.75	0.12
	106.0	0.73	0.15
	108.0	0.75	0.15
	110.0	0.83	0.12
	112.0	0.70	0.15
	114.0	0.75	0.18
115.0	0.66	0.11	
116.0	0.67	0.05	
118.0	0.68	0.05	
120.0	0.79	0.10	
122.0	0.84	0.08	
124.0	0.87	0.10	
126.0	0.90	0.10	
128.0	0.86	0.10	
130.0	0.84	0.15	

TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 7 STATION 10+23 (CONT.)	132.0	0.80	0.10
	134.0	0.83	0.10
	136.0	0.96	0.15
	140.0	1.03	0.20
	141.0	1.06	0.18
	142.0	1.10	0.16
	144.0	1.08	0.15
	148.0	1.08	0.12
	151.0	1.08	0.15
	152.0	1.02	0.18
	156.0	1.00	0.15
	158.0	0.98	0.13
	160.0	0.94	0.10
	164.0	0.93	0.12
	166.0	0.92	0.10
	168.0	0.86	0.10
	176.0	0.80	0.10
	180.0	0.80	0.10
	182.0	0.80	0.10
	184.0	0.80	0.10
	188.0	0.70	0.10
	190.0	0.85	0.10
	192.0	0.80	0.10
	194.0	0.70	0.10
	196.0	0.72	0.00
	198.0	0.65	0.00
200.0	0.55	0.00	
202.0	0.50	0.00	
203.0	0.58	0.00	
204.0	0.56	0.00	
206.0	0.55	0.00	
208.0	0.53	0.00	
210.0	0.50	0.00	
214.0	0.30	0.00	
218.0	0.05	0.00	
222.0	0.05	0.00	

TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 7 STATION 10+23 (CONT.)	224.0	0.00	0.00
	256.5	0.00	0.00
	262.0	0.00	0.00
	264.0	0.00	0.00
CROSS SECTION 8 STATION 12+79	0.0	0.00	0.00
	7.0	0.00	0.00
	27.0	0.00	0.00
	34.0	0.00	0.00
	40.0	0.00	0.00
	42.0	0.00	0.00
	44.0	0.35	0.00
	48.0	0.45	0.00
	52.0	0.65	0.00
	54.0	0.70	0.00
	56.0	0.80	0.10
	60.0	0.65	0.10
	62.0	0.66	0.10
	64.0	0.70	0.10
	66.0	0.70	0.10
	68.0	0.80	0.10
	70.0	0.83	0.10
	72.0	0.85	0.10
	73.4	0.85	0.15
	74.0	0.83	0.15
	76.0	0.80	0.15
	78.0	0.83	0.15
	80.0	0.85	0.15
82.0	0.80	0.12	
84.0	0.75	0.14	
88.0	0.70	0.15	
92.0	0.75	0.10	
96.0	0.80	0.10	
100.0	0.75	0.10	
104.0	0.75	0.10	
108.0	0.80	0.15	
112.0	0.80	0.15	
116.0	0.75	0.15	
118.0	0.80	0.15	

TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 8 STATION 12+79 (CONT.)	120.0	0.85	0.15
	121.5	0.92	0.15
	124.0	0.97	0.10
	128.0	0.92	0.10
	132.0	1.08	0.20
	136.0	1.03	0.25
	140.0	1.08	0.28
	144.0	0.92	0.28
	145.0	0.90	0.20
	148.0	0.88	0.23
	152.0	0.90	0.25
	164.0	0.95	0.35
	168.0	0.95	0.30
	172.0	1.00	0.22
	176.0	0.75	0.10
	178.0	0.60	0.10
	179.0	0.60	0.10
	180.0	0.50	0.10
	182.0	0.40	0.10
	184.0	0.30	0.10
188.0	0.15	0.00	
192.0	0.50	0.00	
196.0	0.00	0.00	
213.5	0.00	0.00	
221.5	0.00	0.00	
224.0	0.00	0.00	
CROSS SECTION 9 STATION 14+62	0.0	0.00	0.00
	27.5	0.00	0.00
	36.5	0.00	0.00
	40.0	0.00	0.00
	44.0	0.25	0.00
	48.0	0.26	0.00
	52.0	0.52	0.00
	56.0	0.40	0.00
	60.0	1.28	0.00
64.0	1.00	0.00	
68.0	1.60	0.00	

TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 101.2R.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 9 STATION 14+62 (CONT.)	72.0	1.74	0.00
	80.0	1.83	0.00
	82.0	1.70	0.00
	84.0	1.60	0.00
	88.0	1.55	0.00
	92.0	1.75	0.40
	94.0	1.85	0.00
	96.0	2.02	0.50
	100.0	2.22	0.40
	104.0	2.43	0.63
	108.0	2.37	0.62
	112.0	2.35	0.84
	116.0	2.40	0.57
	119.5	2.45	0.62
	120.0	2.48	0.68
	124.0	2.46	0.69
	127.5	2.44	0.65
	128.0	2.43	0.59
	132.0	2.55	0.69
	136.0	2.78	0.62
	140.0	2.75	0.81
	142.0	2.73	0.71
	144.0	2.72	0.65
	148.0	2.40	0.62
	152.0	2.13	0.58
	156.0	2.12	0.44
	158.0	2.11	0.39
	160.0	2.11	0.39
	162.0	1.95	0.39
	166.0	1.90	0.25
168.0	1.88	0.25	
170.0	1.75	0.25	
174.0	1.76	0.25	
176.0	1.78	0.30	
184.0	1.40	0.20	
186.0	0.90	0.10	
188.0	0.45	0.00	

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 TABLE B-3.1 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
 SITE 101.2R.  
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LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 279 CFS	VELOCITIES AT 25 CFS
CROSS SECTION 9	190.0	0.40	0.00
STATION 14+62	192.4	0.00	0.00
(CONT.)	197.0	0.00	0.00
	212.0	0.00	0.00
	215.0	0.00	0.00
	216.5	0.00	0.00

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TABLE B-3.2

IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 1	0.0	0.00	0.00	0.00	0.00
STATION 0+00	1.0	0.00	0.00	0.00	0.00
	8.0	0.00	0.00	0.00	0.00
	26.0	0.00	0.00	0.00	0.00
	29.0	0.00	0.00	0.00	0.00
	32.0	0.00	0.00	0.00	0.00
	36.0	0.20	0.15	0.10	0.05
	40.0	0.40	0.30	0.15	0.10
	44.0	0.50	0.40	0.20	0.09
	48.0	0.60	0.50	0.30	0.15
	52.0	0.65	0.50	0.30	0.15
	56.0	0.75	0.55	0.30	0.10
	60.0	0.75	0.60	0.40	0.20
	64.0	0.75	0.60	0.40	0.20
	68.0	0.70	0.68	0.40	0.15
	72.0	0.70	0.65	0.40	0.15
	76.0	0.70	0.62	0.40	0.20
	80.0	0.70	0.60	0.35	0.20
	84.0	0.70	0.50	0.30	0.20
	88.0	0.60	0.50	0.20	0.10
	92.0	0.70	0.45	0.20	0.10
	96.0	0.70	0.50	0.17	0.05
	100.0	0.65	0.40	0.15	0.06
	104.0	0.47	0.38	0.20	0.10
	108.0	0.50	0.40	0.17	0.10
	112.0	0.47	0.35	0.14	0.05
	116.0	0.50	0.37	0.13	0.05
	120.0	0.63	0.37	0.10	0.05
	124.0	0.63	0.37	0.10	0.05
	128.0	0.63	0.37	0.10	0.05
	132.0	0.35	0.30	0.12	0.02
	136.0	0.40	0.30	0.10	0.02
	140.0	0.40	0.28	0.10	0.02
	144.0	0.50	0.30	0.10	0.02
	148.0	0.50	0.30	0.11	0.02
	152.0	0.40	0.32	0.10	0.02
	156.0	0.50	0.35	0.10	0.02
	160.0	0.55	0.40	0.10	0.02
	164.0	0.55	0.50	0.07	0.02

TABLE B-3.2 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 1 STATION 0+00 (CONT.)	168.0	0.50	0.40	0.10	0.02
	172.0	0.60	0.35	0.09	0.02
	176.0	0.65	0.35	0.13	0.02
	180.0	0.50	0.35	0.15	0.02
	184.0	0.45	0.35	0.15	0.02
	188.0	0.55	0.35	0.15	0.00
	192.0	0.50	0.45	0.15	0.00
	196.0	0.50	0.45	0.15	0.00
	200.0	0.50	0.45	0.15	0.00
	204.0	0.60	0.50	0.15	0.00
	208.0	0.65	0.55	0.15	0.00
	212.0	0.62	0.55	0.15	0.00
	216.0	0.57	0.50	0.15	0.00
	220.0	0.60	0.50	0.15	0.00
	224.0	0.50	0.40	0.15	0.00
	228.0	0.40	0.35	0.00	0.00
	232.0	0.30	0.20	0.00	0.00
	234.0	0.00	0.00	0.00	0.00
	236.0	0.00	0.00	0.00	0.00
	237.0	0.00	0.00	0.00	0.00
251.0	0.00	0.00	0.00	0.00	
258.0	0.00	0.00	0.00	0.00	
263.0	0.00	0.00	0.00	0.00	
CROSS SECTION 2 STATION 2+45	0.0	0.00	0.00	0.00	0.00
	1.0	0.00	0.00	0.00	0.00
	2.0	0.00	0.00	0.00	0.00
	14.0	0.00	0.00	0.00	0.00
	18.0	0.20	0.15	0.00	0.00
	22.0	0.25	0.15	0.00	0.00
	26.0	0.34	0.18	0.05	0.00
	30.0	0.40	0.25	0.05	0.00
	34.0	0.35	0.16	0.04	0.00
	38.0	0.35	0.16	0.04	0.00
	42.0	0.40	0.17	0.05	0.00
	46.0	0.45	0.17	0.05	0.00
	50.0	0.40	0.20	0.10	0.00
	54.0	0.50	0.25	0.15	0.00
58.0	0.30	0.15	0.06	0.00	

TABLE B-3.2 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 2	62.0	0.50	0.34	0.19	0.12
STATION 2+45	66.0	0.85	0.55	0.30	0.15
(CONT.)	70.0	1.00	0.70	0.33	0.12
	73.0	1.65	1.44	0.45	0.20
	78.0	1.70	1.60	0.50	0.10
	81.0	1.95	1.70	0.50	0.20
	86.0	2.15	1.96	0.65	0.30
	90.0	2.25	2.00	0.75	0.40
	94.0	2.20	2.00	1.20	0.35
	98.0	2.10	1.85	1.20	0.54
	102.0	2.15	1.61	1.24	0.58
	106.0	2.00	1.76	1.27	0.63
	110.0	2.10	1.79	1.29	0.90
	114.0	2.05	1.80	1.16	0.65
	118.0	2.10	1.80	1.02	0.45
	122.0	2.35	1.60	1.00	0.60
	126.0	2.15	1.50	0.90	0.58
	130.0	2.25	1.50	1.00	0.60
	134.0	2.20	1.28	0.90	0.48
	138.0	1.64	1.22	0.75	0.41
	142.0	1.65	1.35	0.87	0.35
	147.0	1.55	1.40	0.85	0.33
	150.0	1.70	1.44	0.80	0.32
	153.0	1.75	1.50	0.80	0.40
	158.0	1.75	1.60	0.38	0.15
	161.0	1.80	1.63	0.38	0.15
	166.0	1.65	0.64	0.24	0.00
	169.0	1.75	0.63	0.24	0.00
	174.0	1.40	0.90	0.20	0.00
	177.0	1.20	0.80	0.20	0.00
	182.0	1.05	0.75	0.20	0.00
	186.0	1.25	0.82	0.21	0.00
	190.0	1.30	1.00	0.21	0.00
	194.0	1.10	0.87	0.28	0.00
	198.0	1.20	0.84	0.48	0.00
	202.0	1.15	0.83	0.20	0.00
	206.0	1.05	0.74	0.00	0.00
	210.0	1.00	0.68	0.00	0.00
	214.0	0.90	0.68	0.00	0.00

TABLE B-3.2 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 2 STATION 2+45 (CONT.)	218.0	0.65	0.39	0.00	0.00
	222.0	0.40	0.15	0.00	0.00
	227.0	0.10	0.00	0.00	0.00
	231.0	0.00	0.00	0.00	0.00
	235.0	0.00	0.00	0.00	0.00
	239.0	0.00	0.00	0.00	0.00
	256.0	0.00	0.00	0.00	0.00
	301.0	0.00	0.00	0.00	0.00
CROSS SECTION 3 STATION 6+45	0.0	0.00	0.00	0.00	0.00
	2.0	0.00	0.00	0.00	0.00
	15.0	0.00	0.00	0.00	0.00
	24.0	0.00	0.00	0.00	0.00
	26.0	0.00	0.00	0.00	0.00
	28.0	0.00	0.00	0.00	0.00
	30.0	0.00	0.00	0.00	0.00
	32.0	0.00	0.00	0.00	0.00
	34.0	0.00	0.00	0.00	0.00
	36.0	0.10	0.00	0.00	0.00
	38.0	0.20	0.10	0.02	0.00
	40.0	0.20	0.10	0.02	0.00
	44.0	0.10	0.09	0.05	0.00
	48.0	0.23	0.15	0.05	0.00
	52.0	0.20	0.15	0.05	0.00
	56.0	0.20	0.15	0.05	0.00
	60.0	0.20	0.15	0.10	0.05
	64.0	0.25	0.20	0.10	0.05
	68.0	0.27	0.25	0.15	0.10
	72.0	0.30	0.20	0.10	0.05
76.0	0.35	0.25	0.15	0.05	
80.0	0.35	0.25	0.15	0.05	
84.0	0.45	0.32	0.14	0.06	
88.0	0.45	0.32	0.20	0.10	
92.0	0.55	0.39	0.22	0.10	
96.0	0.65	0.50	0.26	0.15	
100.0	0.55	0.45	0.25	0.10	
104.0	0.70	0.50	0.35	0.15	
108.0	0.80	0.55	0.40	0.15	
112.0	0.80	0.65	0.40	0.10	

TABLE B-3.2 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 3 STATION 6+45 (CONT.)	116.0	1.00	0.85	0.40	0.20
	120.0	1.00	0.75	0.40	0.20
	124.0	0.85	0.75	0.30	0.09
	128.0	0.90	0.75	0.35	0.15
	132.0	0.90	0.85	0.30	0.15
	136.0	1.00	0.90	0.35	0.15
	140.0	1.00	0.85	0.40	0.15
	144.0	0.85	0.70	0.40	0.17
	148.0	0.75	0.65	0.35	0.15
	152.0	0.77	0.68	0.38	0.10
	156.0	0.85	0.72	0.35	0.10
	160.0	0.80	0.70	0.35	0.10
	164.0	0.78	0.70	0.35	0.08
	168.0	0.80	0.75	0.32	0.08
	172.0	0.65	0.60	0.30	0.07
	176.0	0.65	0.50	0.25	0.07
	180.0	0.60	0.50	0.10	0.00
	184.0	0.65	0.50	0.15	0.00
	188.0	0.65	0.40	0.10	0.00
	192.0	0.55	0.35	0.10	0.00
	196.0	0.50	0.30	0.07	0.00
	198.0	0.45	0.25	0.00	0.00
	200.0	0.50	0.25	0.00	0.00
	202.0	0.35	0.15	0.00	0.00
	206.0	0.30	0.12	0.00	0.00
	208.0	0.25	0.10	0.00	0.00
	210.0	0.20	0.10	0.00	0.00
212.0	0.20	0.00	0.00	0.00	
214.0	0.20	0.00	0.00	0.00	
216.0	0.00	0.00	0.00	0.00	
218.0	0.00	0.00	0.00	0.00	
260.0	0.00	0.00	0.00	0.00	
266.0	0.00	0.00	0.00	0.00	
273.0	0.00	0.00	0.00	0.00	

TABLE B-3.2 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 4 STATION 9+45	0.0	0.00	0.00	0.00	0.00
	1.0	0.00	0.00	0.00	0.00
	7.0	0.00	0.00	0.00	0.00
	25.0	0.00	0.00	0.00	0.00
	27.0	0.05	0.00	0.00	0.00
	28.0	0.10	0.05	0.00	0.00
	30.0	0.30	0.25	0.20	0.00
	32.0	0.55	0.35	0.25	0.10
	34.0	0.65	0.45	0.25	0.10
	36.0	0.75	0.50	0.25	0.10
	38.0	0.72	0.50	0.35	0.15
	41.0	0.81	0.55	0.45	0.25
	43.0	0.80	0.60	0.50	0.30
	45.0	1.10	0.90	0.59	0.25
	48.0	1.30	1.25	0.72	0.30
	52.0	1.30	1.25	0.70	0.35
	54.0	1.30	1.25	0.60	0.35
	55.0	1.40	1.25	0.65	0.38
	56.0	1.42	1.25	0.68	0.30
	57.0	1.40	1.20	0.68	0.30
	58.0	1.34	1.28	0.58	0.25
	60.0	1.50	0.90	0.40	0.20
	64.0	1.40	0.90	0.43	0.20
	68.0	1.30	1.00	0.40	0.10
	72.0	1.20	0.80	0.29	0.10
	76.0	1.15	0.60	0.14	0.08
	80.0	0.55	0.35	0.10	0.05
	84.0	0.35	0.23	0.10	0.05
	88.0	0.20	0.13	0.08	0.04
	92.0	0.30	0.19	0.10	0.05
96.0	0.60	0.29	0.13	0.05	
100.0	0.65	0.30	0.10	0.03	
104.0	1.00	0.40	0.10	0.05	
108.0	1.00	0.50	0.10	0.05	
112.0	1.10	0.70	0.18	0.00	
116.0	1.10	0.60	0.15	0.00	
120.0	0.95	0.60	0.15	0.00	
124.0	1.00	0.73	0.20	0.00	
126.0	1.00	0.73	0.20	0.00	

TABLE B-3.2 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 4 STATION 9+45 (CONT.)	130.0	0.90	0.65	0.20	0.00
	134.0	0.80	0.50	0.20	0.00
	138.0	0.60	0.35	0.00	0.00
	140.0	0.45	0.25	0.00	0.00
	144.0	0.40	0.20	0.00	0.00
	148.0	0.30	0.00	0.00	0.00
	152.0	0.15	0.00	0.00	0.00
	157.0	0.05	0.00	0.00	0.00
	163.0	0.00	0.00	0.00	0.00
	167.0	0.00	0.00	0.00	0.00
	171.0	0.00	0.00	0.00	0.00
	175.0	0.00	0.00	0.00	0.00
	179.0	0.00	0.00	0.00	0.00
	216.0	0.00	0.00	0.00	0.00
	231.0	0.00	0.00	0.00	0.00
	283.0	0.00	0.00	0.00	0.00
303.0	0.00	0.00	0.00	0.00	
CROSS SECTION 5 STATION 11+90	0.0	0.00	0.00	0.00	0.00
	4.0	0.00	0.00	0.00	0.00
	7.0	0.00	0.00	0.00	0.00
	9.0	0.00	0.00	0.00	0.00
	12.0	0.25	0.20	0.15	0.00
	14.0	0.25	0.20	0.15	0.00
	18.0	0.25	0.20	0.15	0.09
	22.0	0.30	0.20	0.15	0.09
	26.0	1.05	1.00	0.42	0.20
	30.0	1.20	1.07	0.43	0.30
	34.0	1.35	1.15	0.60	0.20
	38.0	1.40	1.25	0.50	0.20
	42.0	1.65	1.15	0.65	0.25
	46.0	1.55	1.25	0.60	0.30
	50.0	1.75	1.40	0.60	0.30
	54.0	1.85	1.60	0.60	0.30
58.0	1.20	0.88	0.45	0.25	
62.0	1.65	1.00	0.65	0.30	
66.0	1.40	0.95	0.60	0.20	
70.0	1.45	0.80	0.20	0.10	
74.0	1.35	0.75	0.15	0.10	

TABLE B-3.2 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 5 STATION 11+90 (CONT.)	78.0	1.10	0.40	0.00	0.00
	82.0	0.90	0.45	0.00	0.00
	86.0	0.90	0.45	0.00	0.00
	90.0	0.93	0.50	0.00	0.00
	94.0	0.95	0.50	0.00	0.00
	98.0	0.95	0.50	0.00	0.00
	102.0	0.85	0.40	0.00	0.00
	106.0	0.60	0.30	0.00	0.00
	110.0	0.65	0.35	0.00	0.00
	114.0	0.48	0.30	0.00	0.00
	118.0	0.50	0.30	0.00	0.00
	122.0	0.45	0.20	0.00	0.00
	126.0	0.45	0.20	0.00	0.00
	130.0	0.50	0.00	0.00	0.00
	134.0	0.60	0.00	0.00	0.00
	138.0	0.40	0.00	0.00	0.00
	142.0	0.30	0.00	0.00	0.00
	146.0	0.00	0.00	0.00	0.00
	150.0	0.00	0.00	0.00	0.00
	154.0	0.00	0.00	0.00	0.00
156.0	0.00	0.00	0.00	0.00	
276.0	0.00	0.00	0.00	0.00	
380.0	0.00	0.00	0.00	0.00	
391.0	0.00	0.00	0.00	0.00	
CROSS SECTION 6 STATION 16+30	0.0	0.00	0.00	0.00	0.00
	1.0	0.00	0.00	0.00	0.00
	11.0	0.00	0.00	0.00	0.00
	14.0	0.65	0.50	0.00	0.00
	17.0	1.20	1.00	0.45	0.00
	20.0	1.60	1.30	0.53	0.25
	22.0	1.90	1.60	0.70	0.40
	26.0	2.05	1.90	1.05	0.65
	30.0	2.00	1.60	0.90	0.60
	34.0	1.90	1.73	1.00	0.60
	37.0	1.95	1.67	1.20	0.60
	42.0	1.75	1.50	1.13	0.40
46.0	1.70	1.49	0.92	0.53	
50.0	1.70	1.37	0.65	0.29	

TABLE B-3.2 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 6 STATION 16+30 (CONT.)	54.0	1.50	1.32	0.50	0.30
	58.0	1.50	1.26	0.60	0.32
	62.0	1.35	0.93	0.59	0.28
	66.0	1.13	0.70	0.48	0.28
	70.0	1.12	0.84	0.48	0.26
	74.0	1.15	0.86	0.52	0.30
	78.0	1.00	0.86	0.48	0.25
	82.0	0.95	0.66	0.30	0.12
	86.0	1.05	0.68	0.33	0.00
	90.0	0.94	0.68	0.36	0.00
	92.0	1.20	0.65	0.00	0.00
	96.0	1.20	0.65	0.00	0.00
	98.0	1.10	0.55	0.00	0.00
	104.0	0.95	0.45	0.00	0.00
	106.0	0.90	0.37	0.00	0.00
	110.0	0.75	0.30	0.00	0.00
	114.0	0.70	0.30	0.00	0.00
	117.0	0.55	0.25	0.00	0.00
	122.0	0.50	0.20	0.00	0.00
	126.0	0.30	0.13	0.00	0.00
	130.0	0.30	0.12	0.00	0.00
	138.0	0.06	0.02	0.00	0.00
	146.0	0.06	0.02	0.00	0.00
	151.0	0.05	0.03	0.00	0.00
	154.0	0.05	0.03	0.00	0.00
	162.0	0.05	0.00	0.00	0.00
	166.0	0.05	0.00	0.00	0.00
170.0	0.25	0.00	0.00	0.00	
174.0	0.70	0.36	0.00	0.00	
178.0	1.30	0.80	0.00	0.00	
182.0	1.30	0.75	0.00	0.00	
188.0	1.10	0.70	0.00	0.00	
192.0	0.90	0.60	0.00	0.00	
196.0	0.80	0.50	0.00	0.00	
200.0	0.70	0.48	0.00	0.00	
204.0	0.40	0.35	0.00	0.00	
208.0	0.29	0.20	0.00	0.00	
212.0	0.24	0.20	0.00	0.00	
216.0	0.30	0.20	0.00	0.00	

TABLE B-3.2 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 6 STATION 16+30 (CONT.)	220.0	0.30	0.23	0.00	0.00
	224.0	0.30	0.15	0.00	0.00
	228.0	0.50	0.39	0.00	0.00
	232.0	0.45	0.30	0.00	0.00
	236.0	0.29	0.20	0.00	0.00
	240.0	0.19	0.00	0.00	0.00
	244.0	0.00	0.00	0.00	0.00
	246.0	0.00	0.00	0.00	0.00
	248.0	0.00	0.00	0.00	0.00
	252.0	0.00	0.00	0.00	0.00
	256.0	0.00	0.00	0.00	0.00
	260.0	0.00	0.00	0.00	0.00
	264.0	0.00	0.00	0.00	0.00
	268.0	0.00	0.00	0.00	0.00
	272.0	0.00	0.00	0.00	0.00
	276.0	0.00	0.00	0.00	0.00
	280.0	0.00	0.00	0.00	0.00
	284.0	0.00	0.00	0.00	0.00
	342.0	0.00	0.00	0.00	0.00
	358.0	0.00	0.00	0.00	0.00
CROSS SECTION 7 STATION 19+05	0.0	0.00	0.00	0.00	0.00
	2.0	0.00	0.00	0.00	0.00
	8.0	0.00	0.00	0.00	0.00
	10.0	0.00	0.00	0.00	0.00
	14.0	0.07	0.05	0.03	0.00
	18.0	0.07	0.05	0.03	0.00
	20.0	0.07	0.05	0.03	0.00
	24.0	0.07	0.05	0.03	0.00
	28.0	0.07	0.05	0.03	0.00
	32.0	0.07	0.05	0.03	0.00
	36.0	0.07	0.05	0.03	0.00
	40.0	0.07	0.05	0.03	0.00
	44.0	0.07	0.05	0.03	0.00
	48.0	0.07	0.05	0.03	0.00
	51.0	0.07	0.05	0.00	0.00
	54.0	0.00	0.00	0.00	0.00
71.0	0.00	0.00	0.00	0.00	
84.0	0.00	0.00	0.00	0.00	

TABLE B-3.2 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 7	88.0	0.40	0.22	0.05	0.00
STATION 19+05	92.0	0.90	0.70	0.20	0.00
(CONT.)	96.0	1.30	0.92	0.55	0.20
	100.0	1.50	1.03	0.70	0.14
	104.0	1.60	1.13	0.30	0.10
	108.0	1.50	0.65	0.10	0.00
	112.0	1.55	0.35	0.10	0.00
	116.0	1.40	1.00	0.52	0.25
	120.0	1.60	0.74	0.30	0.00
	124.0	1.20	0.65	0.20	0.08
	128.0	1.50	0.50	0.15	0.00
	132.0	1.60	1.00	0.55	0.10
	136.0	1.85	1.65	1.14	0.75
	140.0	2.00	1.65	1.14	0.75
	144.0	2.00	1.65	1.13	0.70
	148.0	2.00	1.65	1.07	0.70
	152.0	2.20	2.00	1.00	0.70
	156.0	2.30	2.00	1.22	0.72
	160.0	2.30	1.98	1.27	0.69
	164.0	2.30	1.63	1.10	0.59
	168.0	2.00	1.56	1.30	0.79
	172.0	1.80	1.56	1.17	0.79
	176.0	1.70	1.56	1.20	0.80
	178.0	1.90	1.70	1.18	0.50
	182.0	2.30	1.90	1.16	0.54
	186.0	2.20	2.00	1.15	0.59
	190.0	1.90	1.50	0.90	0.40
	194.0	1.70	1.05	0.67	0.30
	198.0	1.70	1.00	0.57	0.10
	202.0	1.80	1.20	0.10	0.10
	208.0	1.70	1.41	0.36	0.10
	212.0	1.50	0.95	0.39	0.10
	216.0	1.40	1.20	0.40	0.35
	220.0	1.40	1.30	0.50	0.21
	224.0	1.55	1.42	0.50	0.15
	228.0	1.60	1.45	0.45	0.20
	232.0	1.60	1.34	0.40	0.18
	236.0	1.74	1.30	0.55	0.00
	240.0	1.45	1.10	0.55	0.00

TABLE B-3.2 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 131.7L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 240 CFS	VELOCITIES AT 150 CFS	VELOCITIES AT 55 CFS	VELOCITIES AT 18 CFS
CROSS SECTION 7 STATION 19+05 (CONT.)	244.0	1.16	0.95	0.35	0.00
	248.0	1.25	0.90	0.25	0.00
	254.0	1.25	0.85	0.10	0.00
	258.0	1.25	0.72	0.24	0.00
	262.0	1.35	0.65	0.35	0.00
	266.0	1.35	0.60	0.42	0.10
	270.0	1.28	0.65	0.35	0.10
	274.0	1.35	0.94	0.25	0.10
	278.0	1.06	0.95	0.20	0.10
	282.0	1.06	0.79	0.10	0.10
	285.0	0.80	0.60	0.26	0.05
	288.0	0.80	0.50	0.20	0.05
	290.0	0.80	0.40	0.10	0.00
	294.0	0.45	0.25	0.00	0.00
	298.0	0.45	0.20	0.00	0.00
	302.0	0.30	0.10	0.00	0.00
	305.0	0.35	0.10	0.00	0.00
	311.0	0.35	0.10	0.00	0.00
	315.0	0.65	0.25	0.00	0.00
	319.0	0.65	0.20	0.00	0.00
	323.0	0.45	0.25	0.00	0.00
	327.0	0.45	0.25	0.00	0.00
	331.0	0.30	0.15	0.00	0.00
	335.0	0.20	0.12	0.00	0.00
	339.0	0.30	0.10	0.00	0.00
	343.0	0.30	0.10	0.00	0.00
	347.0	0.10	0.00	0.00	0.00
351.0	0.01	0.00	0.00	0.00	
355.0	0.00	0.00	0.00	0.00	
359.0	0.00	0.00	0.00	0.00	
362.0	0.00	0.00	0.00	0.00	
367.0	0.00	0.00	0.00	0.00	
414.0	0.00	0.00	0.00	0.00	
432.0	0.00	0.00	0.00	0.00	

TABLE B-3.3

IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 1	0.0	0.00	0.00
STATION 0+00	8.7	0.00	0.00
	9.0	0.00	0.00
	9.3	0.00	0.00
	9.5	0.00	0.00
	10.0	0.60	0.00
	12.0	0.50	0.00
	14.0	1.50	0.00
	16.0	2.10	0.00
	18.0	2.20	0.00
	20.0	2.20	0.00
	21.0	2.20	0.95
	24.0	2.00	1.15
	28.0	2.80	1.30
	29.0	2.20	1.60
	31.0	1.95	1.20
	32.0	1.80	1.30
	33.0	1.90	1.50
	36.0	2.20	1.32
	39.0	2.20	1.10
	40.0	2.20	1.20
	43.0	1.95	1.10
	44.0	1.60	1.10
	47.0	1.50	0.90
	48.0	1.40	0.50
	51.0	1.30	0.25
	52.0	1.50	0.30
	55.0	1.50	0.65
	56.0	1.60	0.90
	59.0	1.70	1.50
	60.0	1.70	1.30
	63.0	1.70	1.45
	64.0	1.50	1.20
	67.0	1.80	0.90
	68.0	2.00	1.10
	70.0	2.20	1.30
	72.0	1.90	1.20
	74.0	1.80	0.90
	76.0	1.50	0.50

TABLE B-3.3 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 1 STATION 0+00 (CONT.)	77.8	1.20	0.00
	78.0	0.90	0.00
	80.0	0.00	0.00
	83.0	0.00	0.00
	98.0	0.00	0.00
	109.0	0.00	0.00
CROSS SECTION 2 STATION 1+24	0.0	0.00	0.00
	4.0	0.00	0.00
	18.5	0.00	0.00
	31.5	0.00	0.00
	32.0	0.00	0.00
	34.0	0.00	0.00
	36.0	0.00	0.00
	37.0	0.00	0.00
	38.0	0.00	0.00
	40.0	0.60	0.20
	42.0	0.90	0.10
	44.0	1.20	0.10
	46.0	1.75	0.32
	48.0	2.30	0.60
	50.0	2.50	0.47
	52.0	2.70	0.95
	54.0	3.00	1.15
	56.0	3.30	1.20
	58.0	3.35	1.37
	60.0	3.40	1.30
62.0	3.30	1.25	
64.0	3.20	1.30	
66.0	3.20	1.05	
68.0	3.20	0.90	
70.0	2.85	0.80	
72.0	2.50	0.80	
74.0	1.70	0.50	
76.0	0.90	0.45	
78.0	1.00	0.00	
80.0	0.56	0.00	
82.0	1.36	0.00	
84.0	0.21	0.00	

TABLE B-3.3 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 2 STATION 1+24 (CONT.)	86.0	0.00	0.00
	88.0	0.00	0.00
	90.0	0.35	0.00
	92.0	0.68	0.00
	96.0	0.40	0.00
	100.0	0.20	0.00
	104.0	0.00	0.00
	111.5	0.00	0.00
	139.0	0.00	0.00
	161.0	0.00	0.00
CROSS SECTION 3 STATION 2+46	0.0	0.00	0.00
	8.5	0.00	0.00
	23.0	0.00	0.00
	23.5	0.00	0.00
	24.0	0.85	0.00
	26.0	2.20	0.00
	28.0	2.30	0.00
	30.0	2.80	0.64
	32.0	2.80	0.65
	34.0	2.80	0.60
	36.0	2.80	0.70
	38.0	3.10	1.50
	40.0	3.20	2.22
	42.0	3.30	3.00
	44.0	3.40	2.00
	46.0	3.50	1.55
	48.0	3.30	1.35
	50.0	2.20	0.50
	52.0	2.00	0.40
	54.0	1.80	0.00
58.0	1.60	0.00	
62.0	0.40	0.00	
66.0	0.40	0.00	
70.0	0.10	0.00	
74.0	0.07	0.00	
78.0	0.85	0.00	
80.0	0.90	0.00	
82.0	0.70	0.00	

TABLE B-3.3 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 3 STATION 2+46 (CONT.)	84.0	0.80	0.00
	86.0	0.50	0.00
	88.0	0.25	0.00
	90.0	0.00	0.00
	90.3	0.00	0.00
	95.0	0.00	0.00
	104.4	0.00	0.00
	139.5	0.00	0.00
CROSS SECTION 4 STATION 3+90	0.0	0.00	0.00
	17.6	0.00	0.00
	18.0	1.20	0.00
	20.0	1.40	0.00
	22.0	1.80	0.00
	24.0	2.00	0.00
	30.0	1.60	0.00
	32.0	1.70	0.00
	34.0	1.80	0.00
	36.0	1.80	0.00
	38.0	1.90	0.50
	40.0	2.00	0.40
	42.0	1.90	0.40
	44.0	2.00	0.40
	46.0	2.10	0.40
	48.0	2.20	1.00
	50.0	2.30	1.60
	51.0	2.40	1.60
	53.0	2.40	1.70
	55.0	2.60	1.75
	57.0	2.40	1.60
59.0	2.30	1.60	
61.0	2.00	1.45	
62.0	2.00	1.15	
64.0	1.90	0.90	
66.0	1.80	0.75	
68.0	1.60	0.35	
70.8	1.50	0.70	
72.0	1.50	0.00	
74.0	1.60	0.00	

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TABLE B-3.3 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

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LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 4 STATION 3+90 (CONT.)	76.0	1.70	0.00
	78.0	1.90	0.00
	80.0	1.60	0.00
	84.0	1.40	0.00
	86.0	0.90	0.00
	88.0	0.90	0.00
	90.0	0.90	0.00
	92.0	0.90	0.00
	94.0	0.90	0.00
	96.0	0.75	0.00
	98.0	0.60	0.00
	102.0	0.56	0.00
	106.0	0.48	0.00
	110.0	0.56	0.00
	114.0	0.30	0.00
	118.0	0.25	0.00
	122.0	0.00	0.00
	124.0	0.00	0.00
	126.0	0.00	0.00
	128.0	0.00	0.00
130.0	0.00	0.00	
132.0	0.00	0.00	
152.0	0.00	0.00	
162.5	0.00	0.00	
182.0	0.00	0.00	
199.0	0.00	0.00	
CROSS SECTION 5 STATION 5+11	0.0	0.00	0.00
	40.0	0.00	0.00
	43.5	0.05	0.00
	44.0	0.20	0.00
	46.0	0.80	0.20
	48.0	1.10	0.35
	50.0	1.00	0.40
	52.0	1.10	0.35
	54.0	1.20	0.45
	56.0	1.30	0.45
58.0	1.30	0.35	
60.0	1.20	0.40	

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TABLE B-3.3 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

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LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 5	62.0	1.20	0.40
STATION 5+11	66.0	1.20	0.50
(CONT.)	68.0	1.20	0.50
	70.0	1.10	0.55
	74.0	1.00	0.40
	78.0	0.90	0.40
	80.0	0.80	0.45
	82.0	0.90	0.50
	86.0	1.00	0.45
	90.0	0.90	0.37
	92.0	0.80	0.40
	94.0	1.00	0.55
	98.0	1.20	0.45
	102.0	1.15	0.37
	104.0	1.10	0.36
	106.0	1.00	0.35
	110.0	0.90	0.35
	114.0	1.00	0.30
	116.0	1.20	0.40
	118.0	1.00	0.35
	122.0	0.90	0.15
	124.0	0.95	0.10
	126.0	0.95	0.00
	128.0	1.00	0.00
	130.0	0.90	0.00
	134.0	0.80	0.00
	136.0	0.60	0.00
	138.0	0.60	0.00
	140.0	0.50	0.00
	142.0	0.50	0.00
	144.0	0.40	0.00
	146.0	0.60	0.00
	148.0	0.50	0.00
	150.0	0.40	0.00
	152.0	0.30	0.00
	154.0	0.30	0.00

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TABLE B-3.3 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 5	156.0	0.00	0.00
STATION 5+11	162.5	0.00	0.00
(CONT.)	182.0	0.00	0.00
	210.0	0.00	0.00
CROSS SECTION 6	0.0	0.00	0.00
STATION 6+94	25.0	0.00	0.00
	29.0	0.00	0.00
	30.0	0.00	0.00
	32.0	0.35	0.00
	34.0	0.50	0.15
	36.0	0.70	0.15
	38.0	0.90	0.15
	42.0	0.90	0.10
	44.0	0.90	0.20
	46.0	0.90	0.25
	50.0	0.80	0.30
	54.0	0.85	0.30
	56.0	1.00	0.30
	58.0	1.00	0.30
	62.0	0.93	0.30
	66.0	1.00	0.30
	68.0	0.90	0.31
	70.0	0.90	0.32
	72.5	0.90	0.29
	74.0	0.90	0.30
	76.0	0.90	0.30
	78.0	0.90	0.30
	80.0	0.85	0.30
	82.0	0.90	0.27
	84.0	0.90	0.30
	86.0	0.90	0.30
	88.0	0.90	0.30
	90.0	0.90	0.30
	92.0	0.90	0.30
	94.0	0.90	0.20
	96.0	0.90	0.20
	98.0	0.80	0.20
	100.0	0.80	0.15

TABLE B-3.3 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 6 STATION 6+94 (CONT.)	102.0	0.80	0.15
	104.0	0.80	0.00
	106.0	0.60	0.00
	108.0	0.50	0.00
	110.0	0.40	0.00
	112.0	0.40	0.00
	114.0	0.30	0.00
	116.0	0.30	0.00
	118.0	0.10	0.00
	120.0	0.00	0.00
	122.0	0.00	0.00
	124.0	0.00	0.00
	139.0	0.00	0.00
	160.0	0.00	0.00
	181.5	0.00	0.00
CROSS SECTION 7 STATION 8+52	0.0	0.00	0.00
	18.2	0.00	0.00
	20.0	0.00	0.00
	22.0	0.00	0.00
	22.6	0.00	0.00
	23.5	0.00	0.00
	24.0	0.40	0.00
	26.0	0.20	0.00
	28.0	0.30	0.00
	30.0	0.70	0.00
	32.0	0.60	0.00
	34.0	0.60	0.15
	36.0	0.60	0.15
	40.0	0.65	0.15
	44.0	0.70	0.25
	48.0	0.85	0.30
	52.0	0.80	0.25
	56.0	1.10	0.35
58.0	0.90	0.40	
60.0	1.10	0.30	
62.0	1.10	0.35	
64.0	1.00	0.35	
66.0	1.00	0.30	

TABLE B-3.3 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 7 STATION 8+52 (CONT.)	68.0	1.00	0.30
	70.0	1.00	0.40
	72.0	1.00	0.25
	74.0	1.00	0.30
	76.0	1.00	0.20
	78.0	0.85	0.20
	80.0	0.90	0.10
	82.0	0.65	0.10
	84.0	0.60	0.10
	86.0	0.60	0.00
	88.0	0.60	0.00
	90.0	0.50	0.00
	92.0	0.50	0.00
	94.0	0.50	0.00
	96.0	0.50	0.00
	98.0	0.35	0.00
	100.0	0.30	0.00
	102.0	0.20	0.00
	104.0	0.10	0.00
	106.0	0.10	0.00
108.0	0.00	0.00	
116.0	0.00	0.00	
121.5	0.00	0.00	
131.5	0.00	0.00	
145.0	0.00	0.00	
168.5	0.00	0.00	
CROSS SECTION 8 STATION 9+79	0.0	0.00	0.00
	18.0	0.00	0.00
	20.0	0.00	0.00
	21.0	0.00	0.00
	22.0	0.10	0.00
	24.0	0.20	0.01
	26.0	0.30	0.01
	28.0	0.40	0.05
	31.0	0.50	0.10
	32.0	0.50	0.10
33.0	0.60	0.10	
36.0	0.70	0.10	

TABLE B-3.3 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 8 STATION 9+79 (CONT.)	39.0	0.60	0.10
	40.0	0.60	0.10
	43.0	0.60	0.20
	44.0	0.60	0.20
	47.0	0.60	0.20
	48.0	0.50	0.15
	51.0	0.60	0.20
	52.0	0.65	0.25
	56.0	0.70	0.25
	60.0	0.85	0.25
	64.0	0.90	0.20
	67.0	0.90	0.20
	68.0	0.90	0.20
	72.0	1.20	0.25
	75.0	1.30	0.35
	76.0	1.40	0.35
	79.0	1.40	0.30
	80.0	1.30	0.30
	83.0	1.30	0.40
	84.0	1.30	0.50
	88.0	1.20	0.60
	91.0	1.00	0.60
	92.0	0.80	0.50
95.0	0.80	0.50	
96.0	0.60	0.30	
98.0	0.60	0.30	
99.0	0.50	0.25	
100.0	0.40	0.20	
102.0	0.30	0.15	
103.0	0.20	0.10	
105.7	0.10	0.00	
128.0	0.00	0.00	
155.0	0.00	0.00	
168.0	0.00	0.00	
178.0	0.00	0.00	
CROSS SECTION 9 STATION 11+31	0.0	0.00	0.00
	4.0	0.00	0.00
	6.0	0.00	0.00

TABLE B-3.3 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 9	9.0	0.27	0.07
STATION 11+31	12.0	0.54	0.07
(CONT.)	14.0	0.48	0.07
	16.0	0.45	0.12
	19.0	0.35	0.10
	25.0	0.20	0.05
	28.0	0.00	0.00
	32.0	0.00	0.00
	34.0	0.00	0.00
	36.0	0.00	0.00
	40.0	0.00	0.00
	55.0	0.00	0.00
	84.0	0.00	0.00
	88.5	0.00	0.00
	90.8	0.00	0.00
	92.0	0.39	0.00
	94.0	1.20	0.00
	96.0	1.80	0.00
	98.0	1.60	0.25
	100.0	2.55	0.35
	103.0	2.40	0.80
	108.0	1.80	0.77
	112.0	1.60	0.77
	116.0	1.10	0.56
	120.0	1.00	0.54
	124.0	1.00	0.55
	127.0	1.70	0.35
	130.0	1.20	0.00
	132.0	2.30	0.00
	134.0	2.50	0.40
	136.0	2.50	0.55
	140.0	3.00	1.20
	142.0	2.70	1.20
	144.0	3.90	1.20
	148.0	3.20	1.20
	152.0	3.70	1.20
	156.0	2.45	0.80
	158.5	2.00	0.40
	164.0	0.96	0.30

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TABLE B-3.3 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 132.6L.

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LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 141 CFS	VELOCITIES AT 27 CFS
CROSS SECTION 9	168.0	1.50	0.00
STATION 11+31	170.6	1.00	0.00
(CONT.)	176.0	1.10	0.00
	180.0	1.05	0.00
	183.0	0.32	0.00
	184.0	0.00	0.00
	186.0	0.00	0.00
	193.0	0.00	0.00
	210.5	0.00	0.00
	219.0	0.00	0.00

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TABLE B-3.4

IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 265 CFS	VELOCITIES AT 153 CFS	VELOCITIES AT 81 CFS
CROSS SECTION 1	0.0	0.00	0.00	0.00
STATION 0+00	1.0	0.00	0.00	0.00
	9.0	0.00	0.00	0.00
	11.0	0.07	0.03	0.01
	14.0	0.07	0.03	0.01
	16.0	0.07	0.03	0.01
	18.0	0.10	0.05	0.01
	19.5	0.10	0.05	0.02
	23.0	0.10	0.05	0.02
	25.0	0.10	0.05	0.02
	26.0	0.40	0.25	0.10
	28.0	0.60	0.45	0.30
	30.0	0.65	0.55	0.45
	32.0	0.73	0.62	0.45
	34.0	0.86	0.78	0.50
	36.0	0.95	0.75	0.50
	38.0	1.38	0.97	0.60
	40.0	1.54	1.20	0.92
	42.0	1.71	1.54	1.04
	44.0	1.95	1.73	1.04
	46.0	2.40	2.26	1.37
	48.0	2.39	2.26	1.75
	50.0	2.76	2.00	1.60
	52.0	3.80	2.57	2.00
	54.0	4.28	3.29	2.00
	56.0	4.42	3.29	2.20
	58.0	4.56	3.30	2.30
	60.0	4.18	3.42	2.60
	62.0	3.80	3.50	2.60
	64.0	3.20	2.90	2.65
	66.0	2.38	1.85	1.50
	68.0	1.81	1.30	1.00
	70.0	1.40	1.15	0.95
	72.0	1.50	1.00	0.75
	74.0	1.10	0.95	0.60
	76.0	1.20	0.87	0.50
	78.7	1.20	0.73	0.00
	80.0	0.70	0.00	0.00
	80.9	0.00	0.00	0.00

TABLE B-3.4

IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 265 CFS	VELOCITIES AT 153 CFS	VELOCITIES AT 81 CFS
CROSS SECTION 1 STATION 0+00 (CONT.)	82.0	0.00	0.00	0.00
	82.8	0.00	0.00	0.00
	88.0	0.00	0.00	0.00
	91.5	0.00	0.00	0.00
	93.5	0.00	0.00	0.00
CROSS SECTION 2 STATION 0+88	0.0	0.00	0.00	0.00
	3.0	0.00	0.00	0.00
	4.0	0.00	0.00	0.00
	17.0	0.00	0.00	0.00
	20.0	0.00	0.00	0.00
	22.0	1.00	0.00	0.00
	24.0	1.00	0.00	0.00
	26.0	1.80	0.00	0.00
	28.0	1.90	0.00	0.00
	30.0	2.00	1.10	0.00
	32.0	2.20	1.50	0.00
	34.0	2.30	1.80	0.80
	36.0	3.00	2.70	1.35
	38.0	3.20	2.80	2.20
	40.0	3.55	3.20	2.50
	42.0	4.00	3.50	2.50
	44.0	4.30	3.50	2.45
	46.0	4.30	3.50	2.40
	48.0	4.45	3.80	2.65
	50.0	4.30	3.50	2.65
52.0	4.20	3.95	3.50	
54.0	4.10	3.50	3.10	
56.0	3.60	3.30	3.00	
58.0	3.00	2.50	1.75	
60.0	1.80	0.95	0.58	
62.0	0.80	0.50	0.20	
64.0	0.40	0.00	0.00	
73.0	0.00	0.00	0.00	
76.0	0.00	0.00	0.00	

TABLE B-3.4 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 265 CFS	VELOCITIES AT 153 CFS	VELOCITIES AT 81 CFS
CROSS SECTION 3 STATION 1+95	0.0	0.00	0.00	0.00
	3.0	0.00	0.00	0.00
	9.0	0.00	0.00	0.00
	10.0	0.30	0.10	0.00
	12.0	0.60	0.25	0.00
	14.0	1.80	1.10	0.40
	16.0	3.05	1.95	1.05
	18.0	3.90	2.50	1.60
	20.0	3.59	2.80	1.87
	22.0	3.60	2.80	2.12
	24.0	3.74	2.80	2.12
	26.0	4.30	3.00	2.12
	28.0	4.00	3.10	2.10
	30.0	4.07	3.00	2.02
	32.0	4.03	2.40	1.85
	34.0	4.00	2.80	1.82
	36.0	3.80	2.80	1.70
	38.0	3.60	3.00	1.85
	40.0	3.25	2.50	1.87
	42.0	2.90	2.60	1.83
	44.0	2.00	1.85	1.70
46.0	0.80	0.30	0.15	
47.5	0.10	0.00	0.00	
55.0	0.00	0.00	0.00	
59.0	0.00	0.00	0.00	
61.0	0.00	0.00	0.00	
63.0	0.00	0.00	0.00	
CROSS SECTION 4 STATION 2+91	0.0	0.00	0.00	0.00
	2.5	0.00	0.00	0.00
	7.5	0.00	0.00	0.00
	10.0	0.50	0.00	0.00
	12.0	1.00	0.50	0.00
	12.5	1.00	0.50	0.00
	14.0	1.70	0.90	0.00
	16.0	1.98	1.70	1.00
	18.0	2.20	2.00	1.00
	20.0	2.60	2.35	2.20
22.0	2.67	2.40	2.15	

TABLE B-3.4 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 265 CFS	VELOCITIES AT 153 CFS	VELOCITIES AT 81 CFS
CROSS SECTION 4 STATION 2+91 (CONT.)	24.0	2.70	2.40	2.19
	26.0	2.70	2.40	2.09
	28.0	2.60	2.40	1.92
	30.0	2.70	2.50	2.14
	32.0	2.90	2.70	2.16
	34.0	3.10	2.85	2.20
	36.0	3.20	3.00	2.25
	38.0	2.90	2.70	2.14
	40.0	3.20	3.00	2.25
	42.0	3.50	3.00	2.20
	44.0	3.20	2.90	2.38
	46.0	3.00	2.80	2.20
	48.0	2.95	2.72	2.47
	50.0	3.00	2.72	2.38
	52.0	3.10	2.84	2.00
	54.0	3.20	2.90	1.70
	56.0	3.17	2.70	1.65
	58.0	3.14	2.07	1.60
	60.0	1.70	0.90	0.50
	62.0	1.54	0.00	0.00
64.0	1.45	0.00	0.00	
66.0	1.37	0.00	0.00	
68.0	1.40	0.00	0.00	
68.5	0.00	0.00	0.00	
72.3	0.00	0.00	0.00	
82.5	0.00	0.00	0.00	
84.5	0.00	0.00	0.00	
87.5	0.00	0.00	0.00	
CROSS SECTION 5 STATION 4+23	0.0	0.00	0.00	0.00
	2.5	0.00	0.00	0.00
	13.7	0.00	0.00	0.00
	14.0	0.00	0.00	0.00
	16.0	0.10	0.00	0.00
	18.0	0.35	0.15	0.10
	20.0	0.50	0.20	0.10
	22.0	0.75	0.25	0.10
	24.0	1.00	0.40	0.15
26.0	1.20	0.60	0.30	

TABLE B-3.4 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 265 CFS	VELOCITIES AT 153 CFS	VELOCITIES AT 81 CFS
CROSS SECTION 5 STATION 4+23 (CONT.)	28.0	1.30	0.95	0.30
	30.5	1.40	1.10	0.30
	32.0	1.60	1.30	0.40
	34.0	2.40	1.45	0.80
	36.0	2.25	1.65	1.05
	38.0	2.10	1.65	1.00
	40.0	2.20	1.65	0.82
	42.0	2.30	1.70	1.10
	44.0	2.25	1.65	0.97
	46.0	2.20	1.40	0.95
	48.0	2.45	1.90	1.35
	50.0	2.70	1.75	1.00
	52.0	2.40	1.80	1.37
	54.0	2.05	1.70	1.05
	56.0	2.10	1.70	1.03
	58.0	2.15	1.55	0.95
	60.0	2.17	1.65	0.75
	62.0	2.18	1.75	1.10
	64.0	2.40	1.50	0.90
	66.0	2.75	1.50	1.10
	68.0	2.38	1.70	0.95
	70.0	2.00	1.48	1.05
	72.0	1.70	1.30	1.00
74.0	1.40	1.05	0.40	
76.0	1.00	0.50	0.25	
78.0	0.90	0.40	0.18	
79.0	0.00	0.00	0.00	
79.8	0.00	0.00	0.00	
80.5	0.00	0.00	0.00	
83.0	0.00	0.00	0.00	
89.0	0.00	0.00	0.00	
91.0	0.00	0.00	0.00	
CROSS SECTION 6 STATION 5+82	0.0	0.00	0.00	0.00
	8.0	0.00	0.00	0.00
	8.5	0.00	0.00	0.00
	10.0	0.00	0.00	0.00
	11.0	0.00	0.00	0.00
	11.5	0.00	0.00	0.00

TABLE B-3.4 (CONT.) IFG-4 CALIBRATION VELOCITIES (FT/SEC) AT  
SITE 136.0L.

LOCATION WITHIN SITE	HOR DIST (FT)	VELOCITIES AT 265 CFS	VELOCITIES AT 153 CFS	VELOCITIES AT 81 CFS
CROSS SECTION 6	12.0	0.00	0.00	0.00
STATION 5+82	14.0	1.00	0.63	0.00
(CONT.)	16.0	1.65	1.20	0.00
	18.0	1.85	1.30	0.60
	20.0	2.58	1.90	1.30
	22.0	3.10	2.00	1.62
	24.0	3.25	2.20	1.75
	26.0	3.33	2.50	1.90
	28.0	3.36	2.50	1.80
	30.0	3.35	2.40	1.90
	32.0	3.33	2.70	1.97
	34.0	3.32	2.60	2.00
	36.0	3.31	2.50	1.85
	38.0	2.95	2.60	2.25
	40.0	2.78	2.20	1.95
	42.0	2.69	2.40	1.70
	44.0	2.65	2.30	1.60
	46.0	2.40	1.90	1.25
	48.0	2.40	2.05	1.10
	50.0	2.30	2.00	1.10
	52.0	2.05	1.40	0.90
	54.0	2.04	1.00	0.60
	56.0	1.90	1.20	0.55
	58.0	1.32	0.80	0.35
	60.0	0.98	0.00	0.00
	62.0	0.32	0.00	0.00
	63.3	0.00	0.00	0.00
	65.0	0.00	0.00	0.00
	67.0	0.00	0.00	0.00
	68.0	0.00	0.00	0.00
	76.0	0.00	0.00	0.00
	79.0	0.00	0.00	0.00
	81.0	0.00	0.00	0.00

Table B-4.1. Comparison between observed and predicted water surface elevations, discharges, and velocities for site 101.2R hydraulic model.

Streambed Station (ft)	Water Surface Elevation		Discharge		Velocity Adjustment Factor
	Observed (ft)	Predicted (ft)	Observed (cfs)	Predicted (cfs)	
Calibration Flow 279 cfs					
0+00	361.08	361.08	272.6	272.4	1.00
3+74	362.60	362.60	270.5	270.2	1.01
5+64	362.98	362.98	272.5	272.2	.99
8+37	363.20	363.20	258.0	257.7	.99
10+23	363.50	363.50	267.5	267.2	.97
12+79	363.50	363.50	243.8	243.6	1.00
14+62	364.01	364.01	270.5	270.2	1.01
Calibration Flow 25 cfs					
0+00	360.07	360.07	25.1	25.1	.99
3+74	361.83	361.83	26.7	26.7	.98
5+64	361.85	361.85	28.9	28.9	.99
8+37	362.36	362.36	26.5	26.5	.96
10+23	362.95	362.45	21.9	21.9	.92
12+79	362.45	362.45	28.4	28.4	1.00
14+62	363.34	363.34	23.5	23.5	.96

Table B-4.2. Comparison between observed and predicted water surface elevations, discharges, and velocities for site 131.7L hydraulic model.

Streambed Station (ft)	Water Surface Elevation		Discharge		Velocity Adjustment Factor
	Observed (ft)	Predicted (ft)	Observed (cfs)	Predicted (cfs)	
Calibration Flow 240 cfs					
0+00	617.03	617.01	230.8	240.0	.98
2+45	617.07	617.06	253.3	239.5	.98
6+45	617.61	617.56	221.8	230.6	.97
9+45	617.63	617.56	227.5	219.1	.99
11+90	618.17	618.12	242.5	235.8	.98
16+30	619.52	619.50	250.8	247.1	.98
19+05	620.71	620.69	259.7	257.3	.99
Calibration Flow 150 cfs					
0+00	616.78	616.81	156.7	150.9	1.01
2+45	616.91	616.92	160.2	153.7	1.02
6+45	617.32	617.35	156.0	151.6	1.01
9+45	617.28	617.33	137.4	142.0	1.03
11+90	617.77	617.82	144.2	147.9	1.03
16+30	619.23	619.25	152.5	155.3	1.02
19+05	620.55	620.59	151.9	162.0	1.02
Calibration Flow 55 cfs					
0+00	616.42	616.41	57.3	56.1	1.00
2+45	616.69	616.69	58.4	56.6	1.04
6+45	616.92	616.97	61.9	58.8	1.03
9+45	616.86	616.92	51.0	53.4	1.03
11+90	617.24	617.26	49.8	52.3	1.04
16+30	618.73	618.74	54.5	54.5	1.01
19+05	620.41	620.39	62.0	57.1	1.01
Calibration Flow 18 cfs					
0+00	616.03	616.04	17.9	18.6	.92
2+45	616.49	616.49	18.6	19.5	.96
6+45	616.67	616.65	20.2	21.5	.99
9+45	616.62	616.59	19.2	18.8	.94
11+90	616.83	616.82	17.5	17.3	.94
16+30	618.30	618.30	17.6	17.9	1.00
19+05	620.20	620.20	17.9	18.8	.96

Table B-4.3. Comparison between observed and predicted water surface elevations, discharges, and velocities for site 132.6L hydraulic model.

Streambed Station (ft)	Water Surface Elevation		Discharge		Velocity Adjustment Factor
	Observed (ft)	Predicted (ft)	Observed (cfs)	Predicted (cfs)	
Calibration Flow 141 cfs					
0+00	626.05	626.05	127.2	127.4	1.00
1+24	626.28	626.28	142.0	142.3	.99
2+46	627.29	627.29	145.9	146.2	1.01
3+90	627.95	627.95	145.2	145.5	1.02
5+11	628.10	628.10	140.2	140.5	.97
6+94	628.16	628.16	142.4	142.7	.96
8+52	628.17	628.17	142.2	142.4	.95
9+79	628.19	628.19	132.3	132.6	.98
11+31	628.43	628.43	142.7	142.9	1.00
Calibration Flow 27 cfs					
0+00	625.33	625.33	23.1	23.1	1.00
1+24	625.65	625.65	27.2	27.2	1.00
2+46	626.28	626.28	26.5	26.5	.99
3+90	627.23	627.23	25.1	25.1	.98
5+11	627.41	627.41	26.4	26.4	.97
6+94	627.43	627.43	28.0	28.0	.96
8+52	627.43	627.43	29.2	29.2	.87
9+79	627.52	627.52	27.6	27.6	.99
11+31	628.09	628.09	26.5	26.5	.92

Table B-4.4. Comparison between observed and predicted water surface elevations, discharges, and velocities for site 136.0L hydraulic model.

Streambed Station (ft)	Water Surface Elevation		Discharge		Velocity Adjustment Factor
	Observed (ft)	Predicted (ft)	Observed (cfs)	Predicted (cfs)	
Calibration Flow 265 cfs					
0+00	675.81	675.78	266.4	266.4	1.00
0+80	675.97	675.94	268.1	267.3	.99
1+95	676.39	676.37	274.3	272.4	.99
2+91	676.65	676.61	273.0	270.3	1.00
4+23	677.10	677.10	263.0	266.9	.99
5+82	677.53	677.49	268.4	264.4	.99
Calibration Flow 153 cfs					
0+00	675.14	675.18	151.8	151.0	.99
0+88	675.31	675.35	158.5	158.8	1.00
1+95	675.77	675.80	148.7	150.1	1.00
2+91	676.00	676.07	157.2	160.1	1.00
4+23	676.72	676.72	156.9	152.1	1.01
5+82	676.97	677.04	151.4	156.2	.99
Calibration Flow 81 cfs					
0+00	674.64	674.62	78.2	78.3	1.00
0+88	674.82	674.80	87.1	86.9	1.00
1+95	675.31	675.30	75.8	75.3	1.00
2+91	675.61	675.58	88.3	87.3	1.01
4+23	676.33	676.33	78.3	79.3	1.00
5+82	676.64	676.61	86.6	84.9	.99

Table B-5. Statistics evaluating predictive ability of IFG-4 hydraulic models.

		N	$\bar{O}$	$\bar{P}$	Std. O	Std. P	a	b	Total RMSE	System RMSE	Unsystem RMSE	d
Site 101.2R	DEP	715	1.1704	1.1599	0.6114	0.6071	0.0023	0.9891	0.0957	0.0100	0.0943	0.9962
	VEL	715	0.8910	0.9086	0.6363	0.6012	0.0532	0.9600	0.1269	0.0361	0.1212	0.9934
Site 131.7L	DEP	900	1.0175	1.0102	0.6251	0.6130	0.0155	0.9776	0.1262	0.0173	0.1245	0.9935
	VEL	900	0.5370	0.5454	0.2917	0.2864	0.0186	0.9809	0.0770	0.0100	0.0755	0.9948
Site 132.6L	DEP	629	1.0732	1.0663	0.5619	0.5547	0.0157	0.9789	0.1284	0.0171	0.1273	0.9925
	VEL	629	0.8495	0.8882	0.6349	0.5711	0.0988	0.9291	0.1659	0.0683	0.1511	0.9884
Site 136.0L	DEP	474	1.5189	1.5127	0.6589	0.6408	0.0478	0.9644	0.1701	0.0283	0.1673	0.9887
	VEL	474	1.7559	1.7711	1.2827	1.2037	0.0878	0.9586	0.1647	0.0490	0.1572	0.9945

N = number of observations.

$\bar{O}$ ,  $\bar{P}$  = mean of observed and predicted values.

Std. O, Std. P = standard deviation of observed and predicted values.

a, b = y-intercept and slope of least squares regression between O and P.

RMSE = root mean square error, total, systematic, and unsystematic.

d = index of agreement.

\* See Willmott (1981) for discussion and use of these statistics.

Table B-6.1 Weighted Usable Areas (WUA) and Wetted Surface Areas (WSA) with corresponding site flows and mainstem discharges for site 101.2R.

MAINSTEM DISCHARGE (cfs)	SITE FLOW (cfs)	WETTED SURFACE AREA ft <sup>2</sup> /1000 ft	JUVENILE CHINOOK WUA ft <sup>2</sup> /1000 ft
5000	-	31588 (1)	0 (4)
6000	-	39026 (2)	0 (4)
7000	-	46463 (1)	1471 (2)
8000	-	58631 (2)	5570 (2)
9000	-	70798 (2,3)	11210 (2,3)
10000	8	83712	26261
11000	16	90471	29533
12000	32	99200	26931
13000	59	11981	24498
14000	104	127928	22709
15000	177	140939	20795
16000	290	152957 (5)	18431 (6)
17000	463	158304 (5)	18073 (6)
18000	720	163322 (5)	17722 (6)
19000	1092	168031 (5)	17042 (6)
20000	1622	172452 (5)	16392 (6)
21000	2363	176601 (5)	15768 (6)
22000	3383	180495 (5)	15171 (6)
23000	-	184150 (5)	14598 (6)
24000	-	187580 (5)	14049 (6)
25000	-	190800 (5)	13523 (6)
26000	-	193822 (5)	13019 (6)
27000	-	196659 (5)	12535 (6)
28000	-	199321 (5)	12071 (6)
29000	-	201819 (5)	11626 (6)
30000	-	204165 (5)	11200 (6)
31000	-	206366 (5)	10790 (6)
32000	-	208432 (5)	10397 (6)
33000	-	210371 (5)	10020 (6)
34000	-	212190 (5)	9658 (6)
35000	-	213899 (5)	9310 (6)

- (1) Surface area based on aerial photography measurements
- (2) Interpolated value
- (3) Low turbidity conditions assumed for this and lower flows
- (4) Site ponded
- (5)  $WSA(t) = WSA(max)(1)(1 - e^{-(Q(1) - 6.339E-5)})$ ; where  $WSA(max) = 240000$  sq ft,  $Q =$  discharge, and using  $6.339E-5$  predicts 150154 (vs 150156) at  $Q = 15,500$  cfs, and 196659 (vs 197317 measured from aerial photography) at  $Q = 27,000$  cfs
- (6)  $WUA(t) = WUA(t-1)^{0.998}$

Table B-6.2 Weighted Usable Areas (WUA) and Wetted Surface Areas (WSA) with corresponding site flows and mainstem discharges for site 101.5L.

MAINSTEM DISCHARGE (cfs)	SITE FLOW (cfs)	WETTED SURFACE AREA ft <sup>2</sup> /1000 ft	JUVENILE CHINOOK WUA ft <sup>2</sup> /1000 ft
5000	1466	280658	10944
6000	1570	284270	11895
7000	1664	290918	12764
8000	1784	200690	12870
9000	2056	308659 (1)	16262 (1)
10000	2333	314499	15600
11000	2616	320018	14928
12000	2905	325201	13222
13000	3198	331026	13783
14000	3496	337097	14000
15000	3798	342076	13521
16000	4105	345779	13030
17000	4415	351556	12000
18000	4729	357494	12323
19000	5047	362829	13110
20000	5368	367902	13266
21000	5692	372894	15676
22000	6019	377825	16513
23000	6349	382703	17109
24000	6683	387329	17333
25000	7019	392115	17920
26000	7357	397761	20112
27000	7699	402279	20826
28000	8043	407213	21381
29000	8389	410691	21240
30000	8738	412090	20329
31000	9090	415340	19662
32000	9443	417341	19458
33000	9799	419460	18846
34000	10156	421598	18207
35000	10516	422987	17632

(1) High flow model used for discharges greater than 8500 cfs

Table B-6.3 Weighted Usable Areas (WUA) and Wetted Surface Areas (WSA) with corresponding site flows and mainstem discharges for site 112.6L.

MAINSTEM DISCHARGE (cfs)	SITE FLOW (cfs)	WETTED SURFACE AREA ft <sup>2</sup> /1000 ft	JUVENILE CHINOOK WUA ft <sup>2</sup> /1000 ft
5000	96	241007	76512
6000	181	280371	72545
7000	310	318562	72571
8000	493	340249	63242
9000	742	357920	51672
10000	1069	375250	40909
11000	1488	387719 (1)	28522 (1)
12000	1808	402981 (2)	22284 (2)
13000	2141	412202	20101
14000	2504	427124	19212
15000	2896	442689	22461
16000	3318	453276	24175
17000	3771	462377	24900
18000	4255	467125	22166
19000	4769	471074	19233
20000	5314	474600	16707
21000	5891	477784	14799
22000	6498	481584	13045
23000	7137	484249	11943
24000	7808	486796	10814
25000	8510	489256	10066
26000	9244	491644	9368
27000	10011	493951	8684
28000	10809	496166	8028
29000	11640	498304	7396
30000	12503	500362	6855
31000	13399	502333	6419
32000	14327	503909	5990
33000	15288	505493	5576
34000	16282	508227	5530
35000	17309	509728	5441

- (1) Value is based on an average of low and high flow model predictions  
(2) High flow model used for discharges greater than 11000 cfs

Table B-6.4 Weighted Usable Areas (WUA) and Wetted Surface Areas (WSA) with corresponding site flows and mainstem discharges for site 119.2R.

MAINSTEM DISCHARGE (cfs)	SITE FLOW (cfs)	WETTED SURFACE AREA ft <sup>2</sup> /1000 ft	JUVENILE CHINOOK WUA ft <sup>2</sup> /1000 ft
5000	-	56282 (1)	10468 (4)
6000	-	56282 (1)	10468 (4)
7000	-	56282 (1)	10468 (4)
8000	-	62946 (2)	14239 (2)
9000	-	76275 (2)	23389 (2)
10000	15	88953	34430
11000	25	93316	36815
12000	40	105765	36461
13000	61	108515	38365
14000	90	111092	33527
15000	130	114256	28625
16000	184	117710	23436
17000	254	122129	19443
18000	344	127617	17479
19000	459	130593	14588
20000	603	132479	11345
21000	782	135822 (3)	9959 (5)
22000	1001	138517 (3)	8759 (5)
23000	1268	141027 (3)	7717 (5)
24000	-	143364 (3)	6811 (5)
25000	-	145540 (3)	6292 (5)
26000	-	147566 (3)	6076 (5)
27000	-	149454 (3)	5868 (5)
28000	-	151211 (3)	5668 (5)
29000	-	152847 (3)	5475 (5)
30000	-	154371 (3)	5290 (5)
31000	-	155790 (3)	5112 (5)
32000	-	157112 (3)	4941 (5)
33000	-	158342 (3)	4776 (5)
34000	-	159488 (3)	4617 (5)
35000	-	160555 (3)	4464 (5)

- (1) Constant surface area based on aerial photography
- (2) Interpolated value
- (3)  $WSA(t) = WSA(max) * (1 - e^{-(Q * 7.127E-5)})$ ; where  $WSA(max) = 750000$  sq ft  $Q =$  discharge, and using  $7.127E-5$  predicts  $WSA = 134401$  (vs 134402) at  $Q = 20,500$  cfs.
- (4)  $WUA = 18.6\%$   $WSA$ ; i.e., exactly half of HAI provided under low turbidity condition just prior to breaching
- (5)  $WUA(t) = WUA(t-1) * 0.993$  (20500 - 25000 cfs) or  $0.998$  (25000 - 35000 cfs)

Table B-6.5 Weighted Usable Area (WUA) and Wetted Surface Areas (WSA) with corresponding site flow and mainstem discharges for site 131.7L.

MAINSTEM DISCHARGE (cfs)	SITE FLOW (cfs)	WETTED SURFACE AREA ft <sup>2</sup> /1000 ft	JUVENILE CHINOOK WUA ft <sup>2</sup> /1000 ft
5000	5	110283	30682
6000	10	124729	37190
7000	15	132910	41639
8000	33	137543	45749
9000	49	141307	46418
10000	69	151082	44748
11000	95	170959	43905
12000	127	188850	47372
13000	166	199710	47448
14000	213	212738	45855
15000	268	218808	44294
16000	332	222433	41786
17000	407	225968	40576
18000	493	229558	38416
19000	590	233119	36863
20000	701	237055	36037
21000	825	240933	35640 (1)
22000	-	244797	34538 (1)
23000	-	248680	33472 (1)
24000	-	252579	32443 (1)
25000	-	256542	31449 (1)
26000	-	260776	30487 (1)
27000	-	264794	29558 (1)
28000	-	268763	28660 (1)
29000	-	272754	27791 (1)
30000	-	276765	26952 (1)
31000	-	283550	26140 (1)
32000	-	287123	25355 (1)
33000	-	289547	24596 (1)
34000	-	291975	23862 (1)
35000	-	294407	23151 (1)

(1)  $WUA(t) = WUA(t-1)^{0.9985}$

Table B-6.6 Weighted Usable Areas (WUA) and Wetted Surface Areas (WSA) with corresponding site flow and mainstem discharges for site 132.6L.

MAINSTEM DISCHARGE (cfs)	SITE FLOW (cfs)	WETTED SURFACE AREA ft <sup>2</sup> /1000 ft	JUVENILE CHINOOK WUA ft <sup>2</sup> /1000 ft
5000	-	0 (1)	0
6000	-	14976 (2)	0
7000	-	29951 (1)	2145 (2)
8000	-	39165 (2)	4290 (2)
9000	-	48378 (2)	6435 (2)
10000	10	57592	8580
11000	12	59274	16791
12000	17	63544	17214
13000	24	67533	17695
14000	32	72391	18219
15000	41	74895	18207
16000	53	78605	17264
17000	67	80215	16508
18000	84	82569	14932
19000	103	87157	13221
20000	126	91843	12328
21000	152	93754	12464
22000	182	98212	11201
23000	217	100202	10602
24000	256	102175	10896
25000	300	104025	10314
26000	-	107262	9848
27000	-	109398	9982
28000	-	111506	10300
29000	-	115114	10209
30000	-	121236	10028
31000	-	125460 (3)	9845 (4)
32000	-	127436 (3)	9666 (4)
33000	-	129334 (3)	9490 (4)
34000	-	131156 (3)	9318 (4)
35000	-	132905 (3)	9149 (4)

- (1) Surface area based on aerial photography measurements  
(2) Interpolated value  
(3)  $WSA(t) = WSA(MAX) * (1 - E(Q * -4.071E-5))$ ; WHERE  $WSA(MAX) = 175000$  sq ft  $Q =$  discharge, and using  $4.071E-5$  predicts  $WSA = 123402$  at  $Q = 30,500$  cfs.  
(4)  $WUA(t) = WUA(t-1)^{.998}$

Table B-6.7 Weighted Usable Areas (WUA) and Wetted Surface Areas (WSA) with corresponding site flows and mainstem discharges for site 136.0L.

MAINSTEM DISCHARGE (cfs)	SITE FLOW (cfs)	WETTED SURFACE AREA ft <sup>2</sup> /1000 ft	JUVENILE CHINOOK WUA ft <sup>2</sup> /1000 ft
5000	12	27437	6950
6000	19	30809	6763
7000	28	34724	6414
8000	39	37087	5716
9000	53	39590	5214
10000	69	41659	4615
11000	88	47451	4126
12000	110	49748	5534
13000	136	52091	5630
14000	165	53183	5364
15000	197	54323	4554
16000	233	55501	4420
17000	272	56779	4112
18000	315	58510	3764
19000	362	59782	3812
20000	414	61071	4364
21000	469	62368	4422
22000	529	63575	4430
23000	593	64765	4375
24000	662	65892	4362
25000	735	66920	4293
26000	814	67582	4036
27000	897	68235	4030
28000	985	68886	4022
29000	1079	69503	3959
30000	1177	70079	3900
31000	1281	70608	3959
32000	1390	71042	3918
33000	1505	71478	3879
34000	1626	71897	3857
35000	1722	72316	3835

Table B-6.8 Weighted Usable Areas (WUA) and Wetted Surface Areas (WSA) with corresponding site flows and mainstem discharges for site 147.1L.

MAINSTEM DISCHARGE (cfs)	SITE FLOW (cfs)	WETTED SURFACE AREA ft <sup>2</sup> /1000 ft	JUVENILE CHINOOK WUA ft <sup>2</sup> /1000 ft
5000	1066	181547	5336
6000	1326	186590	5025
7000	1594	191466	4661
8000	1870	197137	4687
9000	2154	202694	5330
10000	2443	207277	5262
11000	2738	211652	5313
12000	3039	215721	5031
13000	3344	219555	5441
14000	3654	223249	6165
15000	3969	224896	5488
16000	4288	228118	6393
17000	4610	231796	5781
18000	4937	235321	6789
19000	5267	238269	7267
20000	5600	241213	7104
21000	5938	245660 (1)	7045 (1)
22000	6278	249462	7813
23000	6621	252498	8276
24000	6967	255393	9190
25000	7315	259098	9376
26000	7667	261927	9340
27000	8021	264711	9359
28000	8378	267971	9321
29000	8738	270162	8708
30000	9099	272314	8781
31000	9464	274395	9710
32000	9830	276473	9564
33000	10199	279054	8959
34000	10570	280941	8462
35000	10943	282797	8000

(1) High flow model used for this and greater discharges

APPENDIX C

DATA SUPPORTING DEVELOPMENT  
AND APPLICATION OF DIHAB MODELS.

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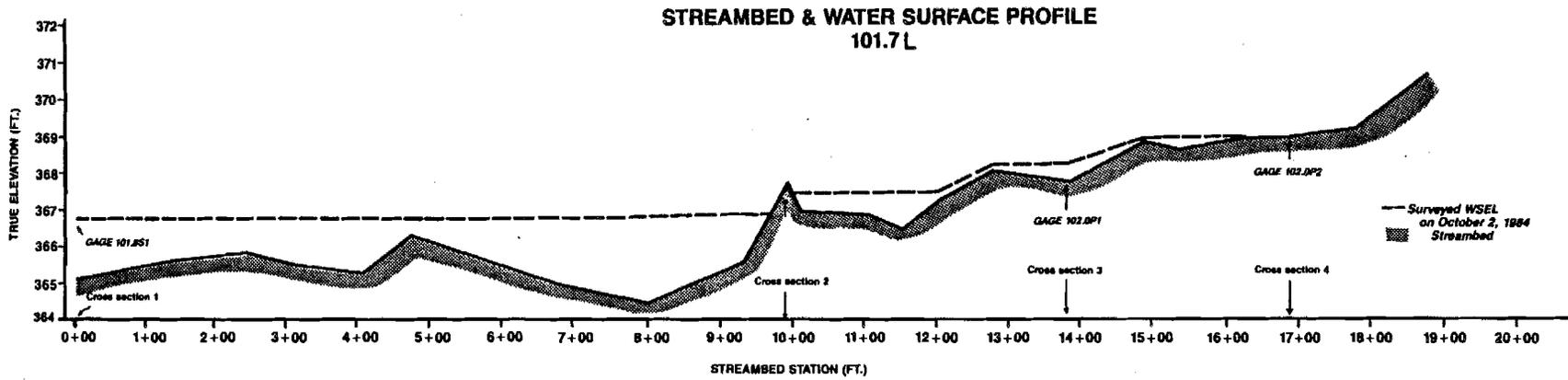
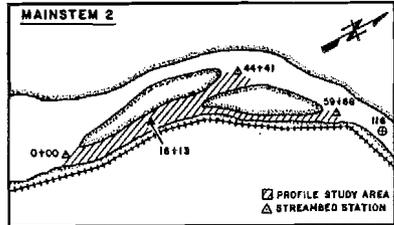


Figure C-1.1. Streambed profile at site 101.7L.



### MAINSTEM 2 THALWEG PROFILE

SURVEY DATE: 830928  
 MAINSTEM Q (at Gold Creek): 9,080 cfs  
 SITE Q: NORTHWEST CHANNEL 4.5 cfs  
 SITE Q: NORTHEAST CHANNEL 4.1 cfs  
 SUSITHA RIVER REACH GRADIENT: 9.2 ft/mi  
 SITE GRADIENT: NORTHEAST CHANNEL 12.5 ft/mi

— WATER SURFACE ON DATE OF SURVEY  
 — WATER SURFACE FROM STAGE DATA  
 [Stippled pattern] SILT/SAND  
 [Cross-hatched pattern] GRAVEL/RUBBLE  
 [Dotted pattern] COBBLE/Boulder

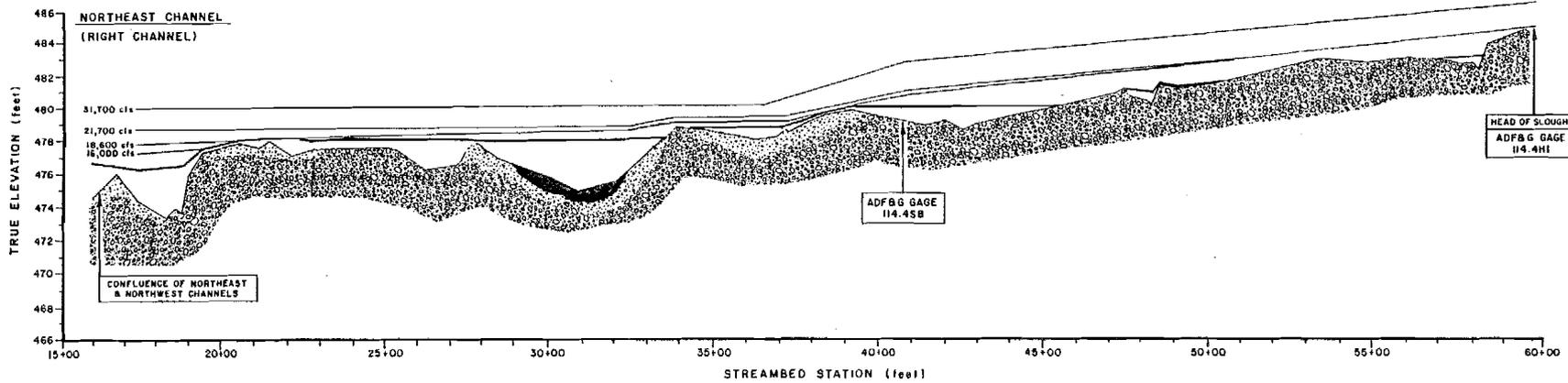
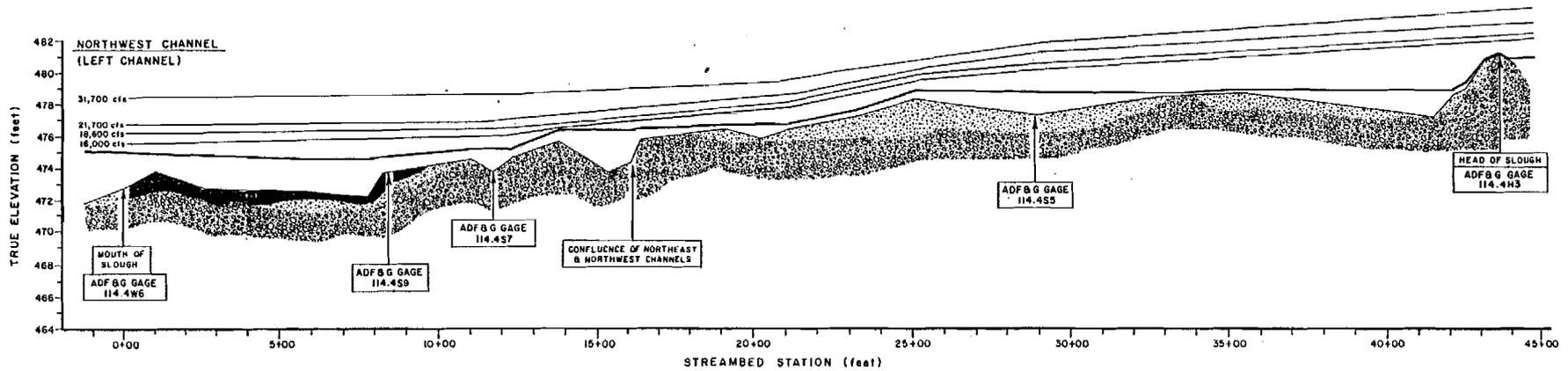


Figure C-1.2. Streambed profile at site 115.0R - northwest and northeast channels. Source: Estes and Vincent-Lang, eds. 1984b.

C-3

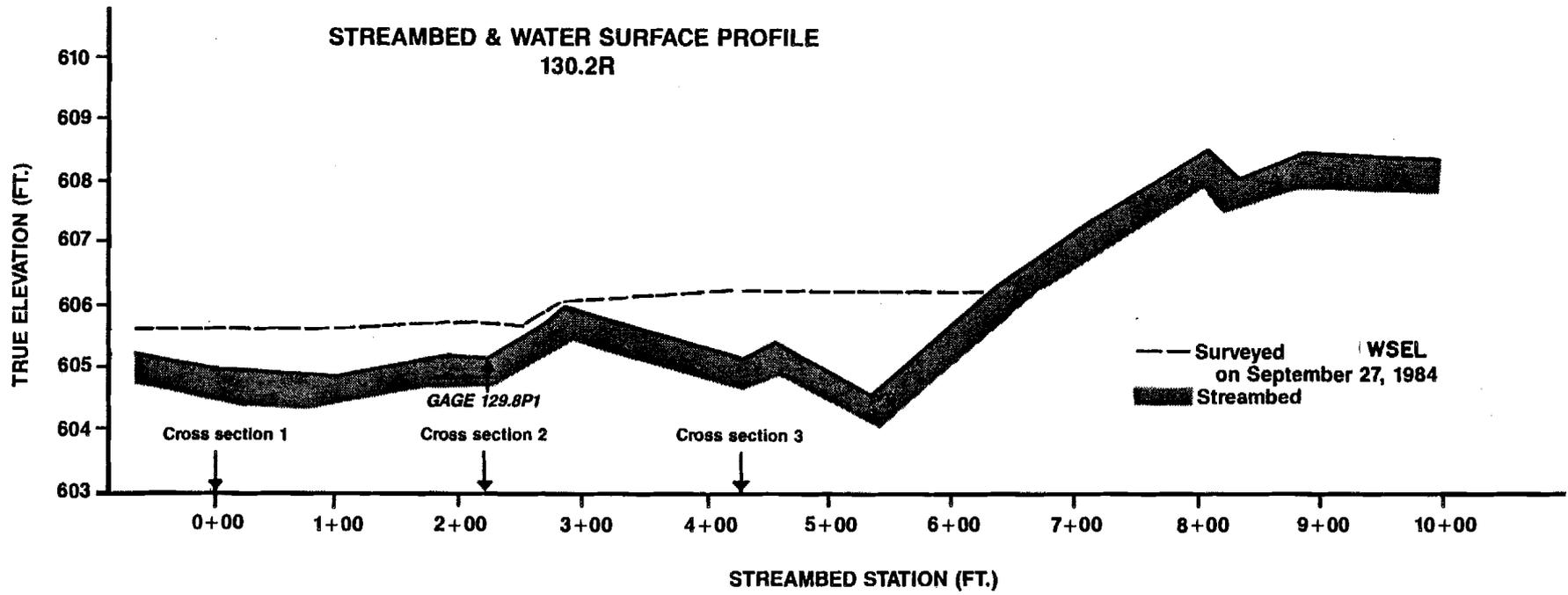


Figure C-1.3. Streambed profile at site 130.2R.

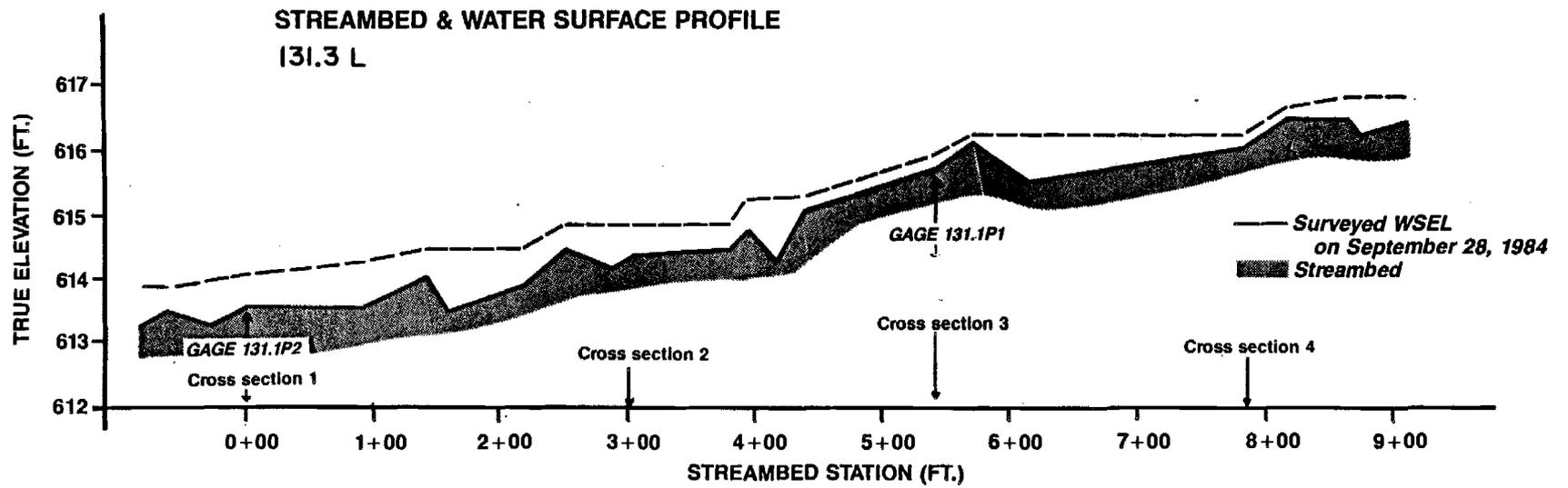


Figure C-1.4. Streambed profile at site 131.3L.

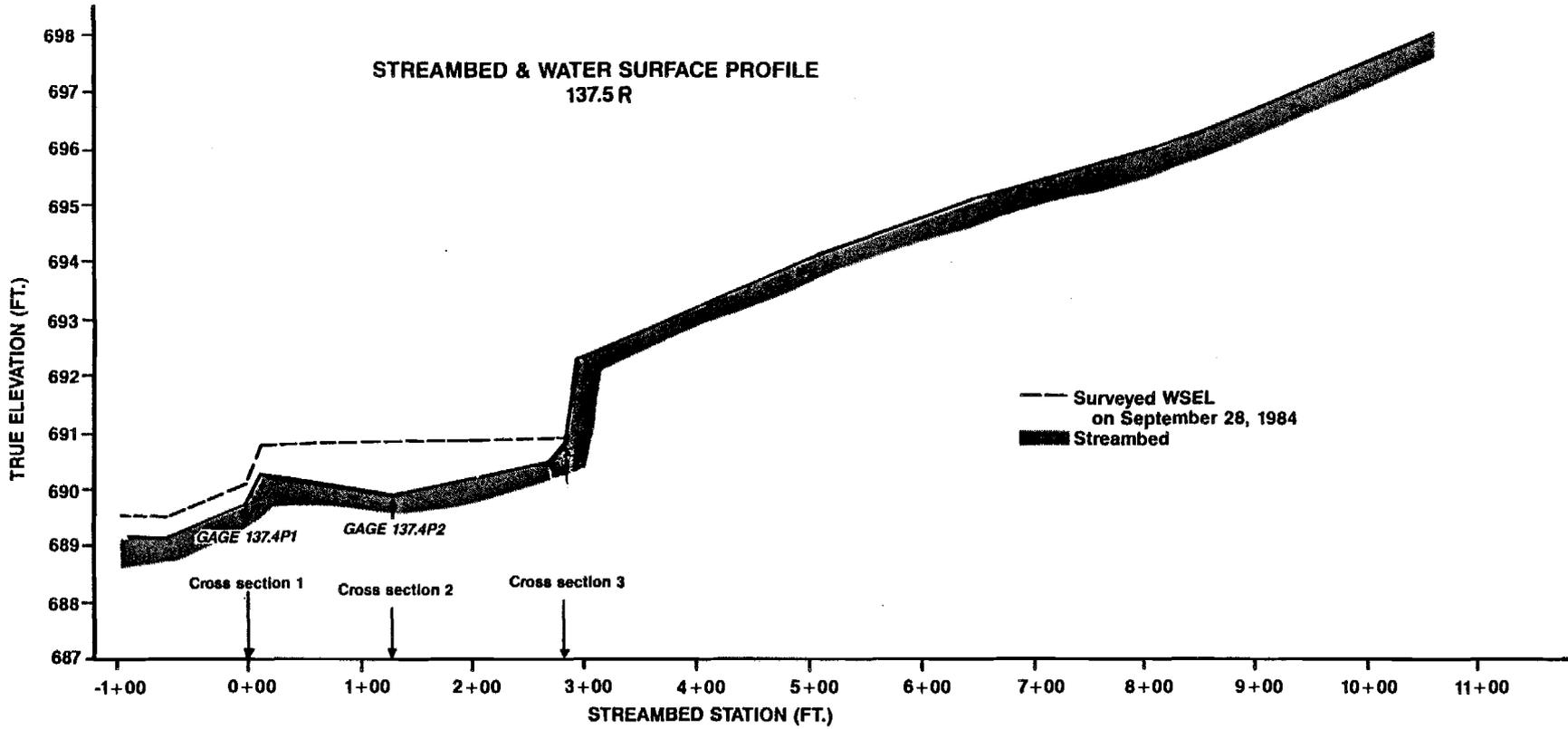


Figure C-1.5. Streambed profile at site 137.5R.

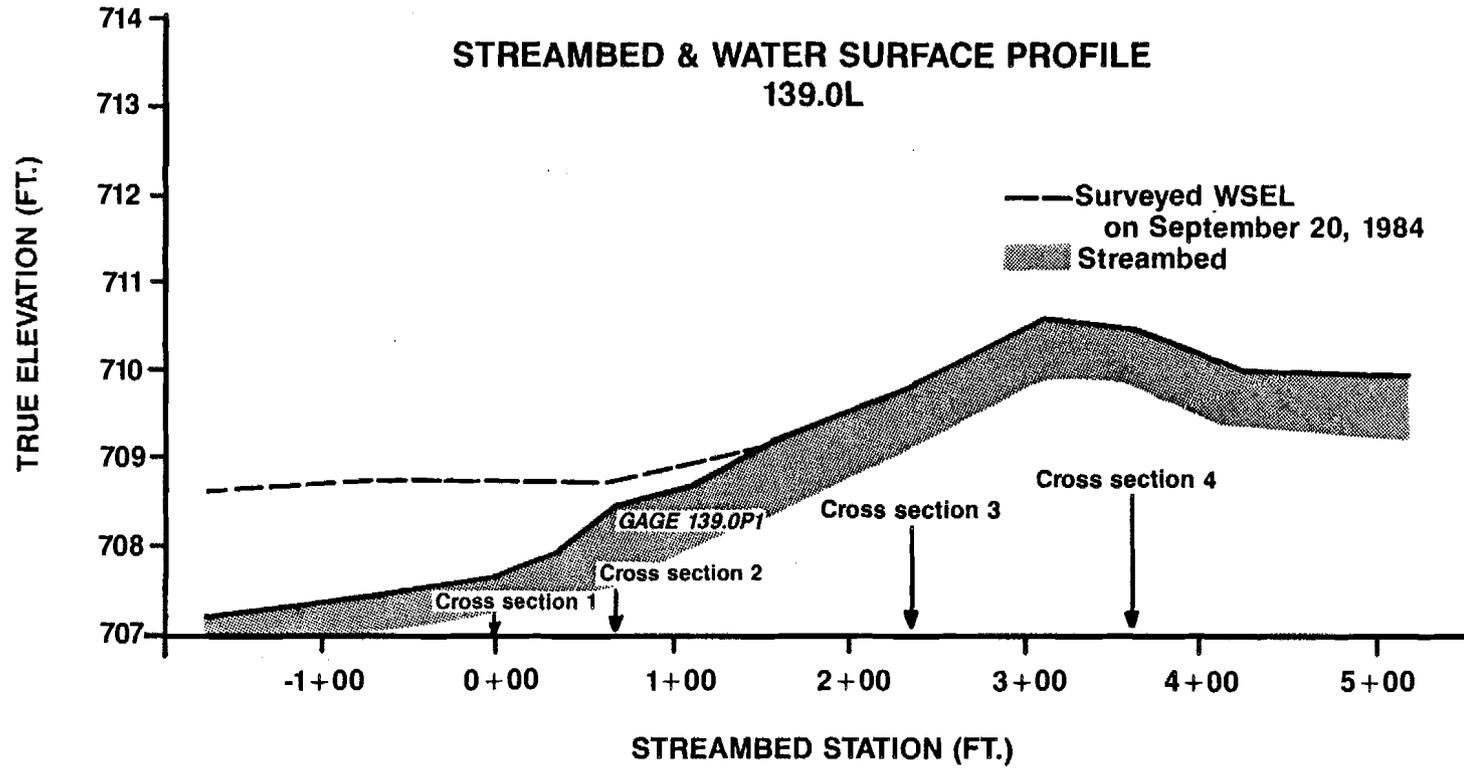


Figure C-1.6. Streambed profile at site 139.0L.

Table C-1.1. Streambed profile at site 101.7L.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
0+00	365.03	366.68	Cross section 1 - SG 101.8S1
1+39	365.56	366.73	Pool
2+40	365.78	366.76	Pool
3+19	365.45	365.76	Pool
4+05	365.25	366.72	Divided channel
4+74	366.26	366.72	Pool
6+72	364.96	366.79	Construction in pool
7+99	364.42	366.84	Pool
9+30	365.63	366.89	Pool
9+85	367.67	DRY	Cross section 2
10+09	366.90	367.46	Large pool
11+01	366.86	367.46	Pool
11+50	366.49	367.46	Pool
11+96	367.20	367.44	End on pool
12+75	368.02	368.22	Pool
13+77	367.76	368.21	Cross section 3 - SG 102.0P1
14+83	368.82	368.90	Beginning of pool/end of run
15+30	368.61	368.94	Middle of pool
16+37	368.97	DRY	
16+88	368.92	368.99	Cross section 4 - SG 102.0P2
17+67	369.18	DRY	Edge of upwelling
18+77	370.65	DRY	Edge of gravel

Surveyed on October 2, 1984 (TBM ID: R&M 101.2W1 LB 1982).

Table C-1.2. Streambed profile at site 115.0R Northwest Channel.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
-1+21	471.86	474.85	Mainstem
0+00	472.61	474.78	Mouth of Mainstem II, Backwater
1+06	473.74	474.64	High point in backwater pool
2+91	472.47	747.50	Backwater
5+99	472.47	474.54	Backwater pool
7+96	472.08	474.52	Backwater pool
8+26	473.60	474.42	Riffle/backwater
11+02	474.45	474.81	Pool/riffle
11+60	473.66	474.83	Pool at Gage 114.4S7, mid pool
12+39	474.53	474.85	Riffle/pool
13+86	475.82	476.21	Pool/riffle
15+36	473.48	476.22	Pool
16+13	474.21	476.22	Pool, right channel joins at this point
16+47	475.74	476.26	Riffle/pool
19+19	476.30	476.69	Pool/riffle
20+18	475.88	476.68	Pool
21+06	476.32	476.60	Riffle/pool
23+20	477.11	477.48	Riffle
25+04	478.34	478.70	Pool/riffle
28+91	477.29	478.73	Pool
33+08	478.32	478.59	Riffle/pool

Surveyed on September 28, 1983 (TBM: ADF&G Alcap 114.4H3 RB). Source: Estes and Vincent-Lang, eds. 1984b.

Table C-1.2 (Continued). Streambed profile at site 115.0R Northwest Channel.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
35+40	478.60	478.95	Pool/riffle
38+99	477.66	478.80	Pool
41+53	477.11	478.82	Pool
42+03	478.61	478.83	Riffle/pool
42+41	479.09	479.39	
43+02	481.09	481.09	High point
43+52	480.90	480.90	SG 114.4H3
44+06	480.30	480.68	Edge of solid ice
44+41	478.85	480.70	Mainstem, head of left fork

Surveyed on September 28, 1983 (TBM: ADF&G Alcap 114.4H3 RB). Source: Estes and Vincent-Lang, eds. 1984b.

Table C-1.3. Streambed profile at site 115.0R northeast channel.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
16+13	474.21	476.22	Mouth of right channel
16+73	475.63	476.20	
16+85	475.94	476.18	
17+13	475.13	476.10	
17+48	474.09	476.09	
18+26	473.29	476.14	
18+69	473.85	476.15	
18+87	473.41	476.16	
19+05	475.77	476.17	
19+21	476.63	476.78	
19+53	477.20	477.35	
20+64	477.65	477.75	
21+18	477.17	477.77	
21+57	477.46	477.76	
22+17	476.82	477.77	
22+84	477.32	477.22	
23+90	477.35	477.75	
25+07	477.38	477.83	
25+43	477.24	477.76	
26+30	475.87	477.77	
27+25	476.32	477.72	
27+37	476.77	477.77	
27+46	477.35	477.70	
27+80	477.72	477.77	
28+48	476.69	477.64	

Surveyed on September 28, 1983 (TBM ID: ADF&G Alcap 114.4H3 RB).  
 Source: Estes and Vincent-Lang, eds. 1984 b.

Table C-1.3. Streambed profile at site 115.0R northeast channel.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
30+10	475.44	477.64	
30+96	474.48	477.68	
32+08	475.05	477.70	
33+85	478.77	478.77	
34+62	478.30	478.40	
36+32	477.62	478.42	
37+03	477.92	478.42	
37+18	478.38	478.58	
37+31	478.29	478.58	
37+83	478.65	478.75	
38+46	479.55	479.65	
39+20	479.67	479.77	
39+33	479.62	479.77	
40+16	479.28	479.78	
41+48	478.47	479.79	
42+07	478.81	479.81	
42+54	478.40	479.80	
42+96	478.84	479.79	
44+36	479.33	479.73	
45+34	479.71	479.71	
46+69	480.25	480.25	
47+32	480.51	480.51	
47+48	480.68	480.68	
47+59	480.14	480.54	

Surveyed on September 28, 1983 (TBM ID: ADF&G Alcap 114.4H3 RB).  
 Source: Estes and Vincent-Lang, eds. 1984b.

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Table C-1.3. Streambed profile at site 115.0R Northeast Channel.

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Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
48+17	480.05	480.46	
48+43	479.83	480.47	
48+67	481.54	481.54	
49+20	481.00	481.00	
50+34	481.12	481.12	
53+39	482.71	482.71	
55+00	482.59	482.59	
56+41	482.77	482.77	
56+98	482.65	482.65	
57+39	482.55	482.65	
57+66	482.42	482.67	
58+07	482.55	482.67	
58+26	481.80	482.69	
58+40	482.61	482.61	
58+46	483.84	483.84	
59+88	484.55	484.55	

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Surveyed on September 28, 1983 (TBM ID: ADF&G Alcap 114.4H3 RB).

Source: Estes and Vincent-Lang, eds. 1984b.

Table C-1.4. Streambed profile at site 130.2R.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
-0+68	605.22	605.61	Mouth
0+00	605.00	605.64	Cross section 1 pool
1+00	604.87	605.63	Pool
1+92	605.20	605.68	Pool
2+22	605.17	605.67	Cross section 2 SG 129.8P1
2+48	605.50	605.69	Top of pool/bottom of riffle
2+69	605.71	605.92	Riffle
2+84	605.99	606.20	Top of riffle/bottom of pool
4+29	605.14	606.22	Cross section 3 pool
4+55	605.40	606.22	Pool
5+35	604.54	606.21	Pool
6+43	606.33		Edge of pool
7+16	607.38		Beginning of cobble/rubble
8+07	608.50		Sand
8+32	608.02		Sand
7+85	608.48		Sand
9+96	608.36		Edge of vegetation

Surveyed on September 27, 1984 (TBM ID: R&M TBM 9-1 1982).

Table C-1.5. Streambed profile at site 131.3L.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
-0+89	613.20	613.88	Backwater
-0+64	613.49	613.88	Riffle
-0+29	613.27	613.98	Riffle
0+00	613.53	614.07	Cross section 1 - SG 131.1P2 Riffle
0+94	613.59	614.29	Riffle
1+42	614.01	614.46	Bottom of pool
1+60	613.47	614.47	Pool
2+17	613.88	614.47	Bottom of riffle
2+51	614.47	614.82	Bottom of pool
2+88	614.08	614.82	Pool
3+02	614.37	614.84	Cross section 2 - SG 131.1P1 Bottom of riffle
3+79	614.45	614.83	Riffle
3+93	614.78	615.23	Bottom of pool
4+18	614.27	615.27	Pool
4+39	615.08	615.27	Bottom of riffle
5+42	615.76	615.95	Cross section 3
5+70	616.11	616.23	Bottom of pool
6+15	615.51	616.25	Pool
7+83	616.08	616.27	Bottom of riffle
8+16	616.50	616.69	Cross section 4 - riffle
8+64	616.50	616.85	Bottom of pool
8+72	616.24	616.84	Pool
9+14	616.47	616.84	Bottom of riffle

Surveyed on September 28, 1984 (TBM ID: R&M LRX-35 LB 1980).

Table C-1.6. Streambed profile at site 137.5R.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
-1+13	687.43	689.43	Bottom of riffle
-1+02	689.20	689.55	Bottom of pool
-0+69	689.17	689.52	Pool
0+00	689.74	690.11	Cross section 1 - SG 137.4P1 Bottom of riffle
0+13	690.30	690.79	Bottom of pool
1+34	689.90	690.81	Cross section 2 - SG 137.4P2 Pool
2+72	690.55	690.91	Bottom of riffle
2+86	690.80	690.93	Cross section 3
2+97	692.31		Top of rise - boulder/cobble
5+08	694.16		Top of rise - boulder/cobble
6+39	695.07		Top of rise - boulder/cobble
8+07	696.05		Top of rise - boulder/cobble
8+39	696.27		Top of rise - boulder/cobble
10+65	698.15		Head of channel

Surveyed on September 28, 1984 (TRM ID: R&M LRX-48 LB 1980).

Table C-1.7. Streambed profile at site 139.0L.

Streambed Station (ft)	Streambed Elevation (ft)	WSEL (ft)	Comments
-1+69	707.20	708.60	
-0+68	707.46	708.72	Beginning of gravel bar
0+00	707.79	708.71	Cross section 1 - clear
0+35	707.94	708.71	
0+69	708.48	708.71	Edge of pool
1+13	708.70	708.95	Cross section 2 - SG 139.0_1
1+56	709.18		Edge of upwelling
2+36	709.82		Cross section 3
3+08	710.58		
3+65	710.46		Cross section 4
4+25	709.99		Rubble/large gravel
5+19	709.92		Rubble/sand

Surveyed on September 20, 1984 (TBM ID: R&M "Indian" LRX-51 1980).

TABLE C-2.1

## CROSS SECTION ELEVATIONS AT SITE 101.7L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1	0.0		LB MARKER
STATION 0+00	67.0	369.90	
	68.0	368.93	
	70.0	367.79	
	74.0	367.79	
	75.0	367.79	
	77.0	367.54	
	78.0	367.48	
	82.0	367.25	
	83.0	367.19	
	86.0	367.01	
	88.0	366.89	
	92.0	366.84	
	94.0	366.54	
	97.0	366.24	
	98.0	366.17	
	102.0	365.89	
	107.0	365.59	
	108.0	365.60	
	110.0	365.62	
	112.0	365.64	
	117.0	365.59	
	118.0	365.62	
	122.0	365.74	
	126.0	365.76	
	128.0	365.77	
	132.0	365.79	
	134.0	365.76	
	138.0	365.70	
	142.0	365.64	
	148.0	365.61	
	150.0	365.60	
	152.0	365.59	
	158.0	365.47	
	162.0	365.39	
	164.0	365.34	
	166.0	365.29	
	172.0	365.14	
	174.0	365.15	
	180.0	365.18	
	182.0	365.19	

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 TABLE C-2.1 (CONT.) CROSS SECTION ELEVATIONS AT SITE 101.7L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00 (CONT.)	187.0	365.19	
	188.0	365.32	
	190.0	365.58	
	192.0	365.84	
	196.0	365.44	
	197.0	365.34	
	202.0	365.44	
	204.0	365.34	
	207.0	365.19	
	208.0	365.23	
	212.0	365.39	
	214.0	365.61	
	217.0	365.94	
	220.0	365.97	
	222.0	365.99	
	226.0	366.55	
	227.0	366.69	
	228.0	366.81	
	232.0	367.29	
	235.0	367.79	
236.0	367.79		
238.0	367.79		
239.3	367.79		
241.0	367.79		
CROSS SECTION 2 STATION 9+85	0.0		LB MARKER
	19.0	372.99	
	20.0	371.87	
	21.0	371.50	
	22.0	371.10	
	24.0	370.60	
	26.0	370.10	
	28.0	370.10	
	34.0	370.10	
	36.0	370.10	
	40.0	370.14	
	46.0	370.20	
	52.0	369.96	
56.0	369.80		
58.0	369.80		
64.0	369.80		

-----  
 TABLE C-2.1 (CONT.) CROSS SECTION ELEVATIONS AT SITE 101.7L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2 STATION 9+85 (CONT.)	66.0	369.80	
	70.0	370.08	
	76.0	370.50	
	82.0	370.50	
	86.0	370.50	
	88.0	370.54	
	94.0	370.66	
	96.0	370.70	
	100.0	370.74	
	106.0	370.80	
	112.0	371.19	
	117.0	371.50	
	118.0	371.50	
	125.0	371.50	
CROSS SECTION 3 STATION 13+32	0.0		LB MARKER
	51.5	372.99	
	56.0	372.69	
	60.0	372.69	
	64.0	372.39	
	66.0	372.33	
	68.0	372.27	
	72.0	372.15	
	74.0	372.09	
	76.0	372.09	
	79.0	371.50	
	80.0	371.45	
	83.0	371.30	
	84.0	371.32	
	87.0	371.40	
	90.0	370.95	
	91.0	370.80	
94.0	370.87		
95.0	370.90		
99.0	370.70		
100.0	370.72		
103.0	370.80		
104.0	370.80		
107.0	370.80		
110.0	370.80		
111.0	370.80		

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TABLE C-2.1 (CONT.) CROSS SECTION ELEVATIONS AT SITE 101.7L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 3 STATION 13+32 (CONT.)	114.0	370.80	
	115.0	370.80	
	119.0	370.80	
	120.0	370.77	
	123.0	370.70	
	124.0	370.65	
	127.0	370.50	
	130.0	370.27	
	131.0	370.20	
	134.0	370.12	
	135.0	370.10	
	139.0	370.30	
	140.0	370.47	
	143.0	371.00	
	144.0	371.10	
	148.0	371.06	
	150.0	371.17	
	154.0	371.39	
	160.0	371.50	
	164.0	372.19	
168.0	372.34		
170.0	372.61		
172.8	372.99		
CROSS SECTION 4 STATION 16+44	0.0		LB MARKER
	28.7	373.66	
	30.0	373.16	
	31.2	373.09	
	32.0	373.04	
	34.0	372.91	
	36.0	372.84	
	38.0	372.76	
	40.0	372.73	
	42.0	372.71	
	46.0	372.68	
	52.0	372.66	
	58.0	372.56	
62.0	372.46		
64.0	372.52		
70.0	372.70		
72.0	372.76		

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TABLE C-2.1 (CONT.) CROSS SECTION ELEVATIONS AT SITE 101.7L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 4	74.0	372.94	
STATION 16+44	76.0	373.11	
(CONT.)	77.6	373.28	
	81.2	373.66	
	87.4	373.66	
	92.0	373.36	
	96.0	373.66	

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REFERENCE ELEVATION: R&M ALCAP 101.2W1 LB 1982.  
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TABLE C-2.2

## CROSS SECTION ELEVATIONS AT SITE 105.8L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	400.10	LB MARKER
	42.0	399.31	
	45.0	398.34	
	47.0	398.31	
	48.5	398.23	
	49.0	398.20	
	51.0	398.09	
	53.0	397.97	
	55.0	397.86	
	56.0	397.26	
	57.0	397.06	
	58.0	396.86	
	59.0	396.81	
	60.0	396.76	
	61.0	396.66	
	62.0	396.56	
	63.0	396.46	
	64.0	396.36	
	65.0	396.26	
	66.0	396.16	
68.0	396.26		
70.0	395.96		
72.0	395.96		
74.0	395.66		
76.0	395.56		
78.0	395.46		
80.0	394.96		
82.0	394.76		
CROSS SECTION 2 STATION 2+88	0.0		LB MARKER
	30.5	401.90	
	33.0	401.70	
	34.0	401.65	
	35.0	401.60	
	37.0	401.50	
	39.0	401.35	
	41.0	401.20	
	43.0	400.70	
	45.0	400.20	
47.0	399.70		
49.0	399.90		

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 TABLE C-2.2 (CONT.) CROSS SECTION ELEVATIONS AT SITE 105.8L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2 STATION 2+88 (CONT.)	50.0	399.90	
	51.0	399.65	
	52.0	399.40	
	53.0	399.35	
	54.0	399.30	
	56.0	399.00	
	58.0	399.20	
	60.0	398.70	
	62.0	398.70	
	64.0	398.20	
	66.0	397.50	
	68.0	397.40	
70.0	397.20		
CROSS SECTION 3 STATION 4+64	0.0		LB MARKER
	17.4	401.94	
	18.0	401.69	
	21.0	401.43	
	22.0	401.33	
	23.0	401.23	
	25.0	400.93	
	26.0	400.83	
	27.0	400.73	
	29.0	400.53	
	30.0	400.28	
	31.0	400.03	
	33.0	399.93	
	34.0	399.73	
	35.0	399.53	
	36.0	399.48	
	37.0	399.43	
	38.0	399.18	
	39.0	398.93	
	40.0	398.88	
41.0	398.83		
42.0	398.90		
44.0	398.70		
46.0	398.50		
48.0	398.30		
50.0	398.10		
52.0	398.30		
54.0	397.90		

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 TABLE C-2.2 (CONT.) CROSS SECTION ELEVATIONS AT SITE 105.8L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 4	0.0		LB MARKER
STATION 7+49	24.0	401.94	
	25.5	401.43	
	27.0	401.23	
	28.0	401.03	
	29.0	400.83	
	31.0	400.43	
	32.0	400.33	
	33.0	400.23	
	35.0	399.83	
	36.0	399.73	
	37.0	399.63	
	38.0	399.58	
	39.0	399.53	
	40.0	399.38	
	41.0	399.23	
	42.0	399.28	
	43.0	399.33	
	44.0	399.13	
	45.0	398.93	
	46.0	399.10	
	48.0	398.60	
	50.0	398.40	
	52.0	398.10	
	54.0	397.80	
	56.0	397.50	
	58.0	397.30	

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 REFERENCE ELEVATION: R&M ALCAP LRX-10B RB 1982.

TABLE C-2.3

## CROSS SECTION ELEVATIONS AT SITE 114.1L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1	0.0		LB MARKER
STATION 0+00	11.0	470.65	
	15.0	470.25	
	24.0	469.98	
	25.0	469.95	
	26.0	469.88	
	30.0	469.60	
	35.0	469.25	
	36.0	469.15	
	40.0	468.75	
	45.0	468.25	
	50.0	468.20	
	55.0	468.15	
	60.0	468.25	
	65.0	468.35	
	70.0	468.35	
	75.0	468.35	
	80.0	468.35	
	85.0	468.35	
	90.0	468.35	
	92.4	468.29	
	94.0	468.19	
	95.0	468.14	
	96.0	468.09	
	98.0	467.69	
	100.0	467.49	
	102.0	467.49	
	104.0	467.49	
	105.0	467.44	
	106.0	467.39	
	108.0	467.19	
	110.0	467.29	
	112.0	467.29	
	114.0	467.39	
	115.0	467.44	
	116.0	467.49	
	118.0	467.59	
	120.0	467.79	
	122.0	467.89	
	124.0	467.89	
	125.0	467.94	

TABLE C-2.3 (CONT.) CROSS SECTION ELEVATIONS AT SITE 114.1L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00 (CONT.)	126.0	467.99	
	128.0	467.99	
	130.0	467.89	
	131.0	467.89	
	132.0	467.89	
	133.0	467.89	
	134.0	467.79	
	135.0	467.89	
	137.8	468.29	
	140.0	468.25	
	145.0	469.25	
	148.0	469.85	
	149.0	470.05	
	152.0	470.65	
CROSS SECTION 2 STATION 3+25	0.0		LB MARKER
	53.0	470.65	
	57.0	470.02	
	58.0	469.86	
	60.0	469.55	
	64.0	469.07	
	68.0	468.59	
	70.0	468.35	
	72.0	468.31	
	78.0	468.19	
	80.0	468.15	
	82.0	468.15	
	84.0	468.15	
	86.0	468.15	
	88.0	468.15	
	90.0	468.15	
92.0	468.11		
94.0	468.08		
96.0	468.05		
98.0	468.01		
100.0	467.98		
102.0	467.95		
104.0	467.91		
106.0	467.88		
108.0	467.85		
110.0	467.81		

TABLE C-2.3 (CONT.) CROSS SECTION ELEVATIONS AT SITE 114.1L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2 STATION 3+25 (CONT.)	114.0	467.75	
	116.0	467.71	
	118.0	467.68	
	120.0	467.65	
	122.0	467.81	
	124.0	467.97	
	126.0	468.13	
	128.0	468.29	
	130.0	468.45	
	138.0	469.25	
	140.0	469.45	
	150.0	469.85	
	160.0	469.45	
	163.0	470.17	
	165.0	470.65	
CROSS SECTION 3 STATION 7+45	0.0	470.65	LB MARKER
	71.0	470.65	
	72.0	470.55	
	76.0	470.25	
	76.5	470.15	
	80.0	469.45	
	84.0	468.81	
	85.0	468.65	
	90.0	468.65	
	91.0	468.29	
	92.0	468.24	
	94.0	468.19	
	96.0	468.09	
	98.0	467.89	
	100.0	467.79	
	102.0	467.69	
	104.0	467.49	
106.0	467.39		
108.0	467.29		
110.0	467.19		
112.0	467.29		
114.0	467.49		
116.0	467.59		
118.0	467.69		
120.0	467.79		

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 TABLE C-2.3 (CONT.) CROSS SECTION ELEVATIONS AT SITE 114.1L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 3	122.0	467.89	
STATION 7+45	124.0	467.99	
(CONT.)	128.0	468.24	
	130.0	468.90	
	132.0	469.05	
	134.0	469.15	
	136.0	469.25	
	140.0	469.45	
	142.0	469.41	
	144.0	469.37	
	148.0	469.29	
	150.0	469.25	
	152.0	469.34	
	156.0	469.53	
	158.0	469.62	
	160.0	469.71	
	162.0	469.81	
	165.0	469.95	
	168.0	470.25	
	172.0	470.65	

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 REFERENCE ELEVATIONS: R&M ALCAP 114.1H1 RB 1982.

TABLE C-2.4

## CROSS SECTION ELEVATIONS AT SITE 115.OR.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	480.25	LB MARKER
	11.0	478.93	
	29.0	476.62	
	52.0	476.12	
	60.0	475.92	
	70.4	475.41	
	74.0	475.01	
	75.0	474.91	
	78.0	474.81	
	82.0	474.61	
	86.0	474.61	
	90.0	474.61	
	100.0	474.11	
	101.0	474.10	
	102.0	474.08	
	104.0	474.05	
	105.0	474.04	
	106.0	474.02	
	108.0	473.99	
	110.0	473.96	
	112.0	473.88	
	114.0	473.80	
	116.0	473.72	
	118.0	473.64	
	120.0	473.56	
	122.0	473.48	
	124.0	473.40	
	126.0	473.32	
	128.0	473.24	
	130.0	473.16	
132.0	473.19		
134.0	473.22		
135.0	473.24		
136.0	473.25		
138.0	473.28		
140.0	473.31		
142.0	473.50		
144.0	473.69		
146.0	473.88		
148.0	474.07		
150.0	474.26		

TABLE C-2.4 (CONT.) CROSS SECTION ELEVATIONS AT SITE 115.0R.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00 (CONT.)	152.0	474.23	
	154.0	474.20	
	156.0	474.17	
	160.0	474.11	
	161.7	474.17	
	165.0	474.26	
	170.0	474.41	
	180.0	474.41	
	190.0	474.31	
	195.0	474.16	
	200.0	474.01	
	210.0	474.36	
	220.0	474.61	
	225.0	474.89	
	230.0	475.16	
	240.0	475.21	
	244.0	475.11	
	246.0	475.21	
	247.0	475.41	
	255.0	475.52	
278.0	476.12		
299.0	476.12		
CROSS SECTION 2 STATION 2+73	0.0	483.03	LB MARKER
	2.00	477.86	
	5.50	476.68	
	31.0	475.55	
	33.0	475.35	
	35.0	475.35	
	37.0	475.25	
	41.0	475.05	
	41.5	474.46	
	42.0	474.36	
	45.0	473.96	
	48.0	473.76	
	49.0	473.63	
51.0	473.36		
53.0	472.83		
54.0	472.56		
57.0	472.56		
60.0	473.36		

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 TABLE C-2.4 (CONT.) CROSS SECTION ELEVATIONS AT SITE 115.0R.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2 STATION 2+73 (CONT.)	61.0	473.46	
	63.0	473.66	
	65.0	473.79	
	66.0	473.86	
	69.0	473.76	
	72.0	473.96	
	73.0	474.06	
	75.0	474.26	
	77.0	474.33	
	78.0	474.36	
	81.0	474.43	
	82.5	474.46	
	83.0	474.46	
	85.0	474.46	
	87.0	474.46	
	88.9	474.46	
CROSS SECTION 3 STATION 5+82	0.0	477.84	LB MARKER
	8.0	477.21	
	14.0	475.55	
	16.0	474.46	
	17.0	473.96	
	18.0	473.26	
	20.0	472.46	
	22.0	471.61	
	24.0	471.56	
	26.0	471.46	
	28.0	471.26	
	30.0	470.86	
	32.0	470.26	
	42.0	470.46	
	44.0	470.86	
	46.0	471.76	
	48.0	472.36	
	50.0	473.06	
	52.0	473.96	
54.0	474.26		
55.0	474.46		
60.0	474.46		
61.8	474.46		
107.0	476.15		

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TABLE C-2.4 (CONT.) CROSS SECTION ELEVATIONS AT SITE 115.OR.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 4 STATION 9+28	0.0	477.60	LB MARKER
	11.0	474.97	
	25.0	474.51	
	25.2	474.46	
	26.0	474.46	
	27.0	474.36	
	29.0	474.26	
	31.0	474.26	
	33.0	473.96	
	35.0	474.01	
	37.0	474.06	
	39.0	474.01	
	41.0	473.96	
	43.0	474.06	
	45.0	474.16	
	47.0	474.11	
	49.0	474.06	
	51.0	474.01	
	53.0	473.96	
	55.0	473.96	
57.0	473.96		
59.0	473.91		
61.0	473.86		
63.0	473.71		
65.0	473.56		
67.0	473.46		
69.0	473.36		
71.0	473.31		
73.0	473.26		
75.0	473.21		
77.0	473.16		
79.0	473.21		
81.0	473.26		
83.0	473.36		
85.0	473.36		
87.0	473.36		
89.0	473.36		
91.0	473.36		
93.0	473.56		
95.0	473.76		
97.0	473.96		

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TABLE C-2.4 (CONT.) CROSS SECTION ELEVATIONS AT SITE 115.OR.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 4	99.0	473.96	
STATION 9+28	101.0	474.36	
(CONT.)	102.0	474.46	
	103.0	474.59	
	117.0	475.04	
	126.0	475.55	
	133.0	481.10	

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REFERENCE ELEVATIONS: ADF&G TBM NAIL IN TREE BASE 1984.

TABLE C-2.5

## CROSS SECTION ELEVATIONS AT SITE 118.9L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	509.92	LB MARKER
	7.0	509.92	
	8.0	509.42	
	9.0	509.17	
	10.0	508.92	
	12.0	508.42	
	12.5	508.32	
	14.0	508.02	
	16.0	507.62	
	17.0	507.35	
	18.0	507.05	
	19.0	506.85	
	20.0	506.85	
	21.0	506.25	
	22.0	506.25	
	23.0	506.15	
	24.0	506.15	
	25.0	505.85	
	26.0	505.85	
27.0	505.85		
28.0	505.45		
CROSS SECTION 2 STATION 1+36	0.0		LB MARKER
	8.0	509.57	
	10.0	509.07	
	12.0	508.57	
	14.0	508.17	
	15.0	507.97	
	16.0	507.77	
	17.5	507.39	
	18.0	507.27	
	20.0	506.77	
	22.0	506.80	
	24.0	506.70	
	26.0	506.50	
28.0	506.60		
30.0	506.60		
32.0	506.90		
34.0	506.85		
36.0	506.90		
38.0	506.90		

TABLE C-2.5 (CONT.) CROSS SECTION ELEVATIONS AT SITE 118.9L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2 STATION 1+36 (CONT.)	40.0	506.90	
	42.0	506.95	
	44.0	506.90	
	46.0	506.70	
	48.0	507.00	
	50.0	507.10	
	54.0	507.00	
	56.0	506.95	
	58.0	506.90	
	62.0	506.70	
	64.0	506.65	
	70.0	506.50	
	78.0	506.70	
	86.0	506.30	
94.0	506.20		
102.0	505.80		
CROSS SECTION 3 STATION 2+45	0.0		LB MARKER
	12.0	509.57	
	16.0	509.17	
	18.0	508.55	
	22.0	508.75	
	24.0	508.75	
	26.0	508.75	
	30.0	508.75	
	34.0	508.65	
	36.0	508.40	
	38.0	508.15	
	42.0	508.05	
	44.0	508.02	
	48.0	507.97	
	50.0	507.95	
	52.0	507.97	
54.0	507.99		
56.0	508.01		
60.0	508.05		
64.0	508.01		
68.0	507.97		
70.0	507.95		
76.0	507.71		
80.0	507.55		

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TABLE C-2.5 (CONT.) CROSS SECTION ELEVATIONS AT SITE 118.9L.  
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<u>LOCATION WITHIN SITE</u>	<u>HORIZONTAL DISTANCE (FT)</u>	<u>STREAMBED ELEVATION (FT)</u>	<u>COMMENTS</u>
CROSS SECTION 3	84.0	507.35	
STATION 2+45	88.0	507.15	
(CONT.)	90.0	507.05	
	92.0	506.95	
	96.0	507.10	
	100.0	507.10	
	104.0	506.60	
	108.0	506.40	
	112.0	506.40	
	116.0	506.40	
	120.0	506.30	
	124.0	505.70	
	128.0	505.70	
	132.0	505.60	

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REFERENCE ELEVATION: USGS A107 1965.  
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TABLE C-2.6

## CROSS SECTION ELEVATIONS AT SITE 119.1L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	511.02	LB MARKER
	14.0	511.02	
	16.0	510.62	
	18.5	510.37	
	20.0	510.22	
	21.0	510.04	
	22.0	509.87	
	24.0	509.52	
	26.0	509.07	
	28.0	508.62	
	30.0	508.27	
	32.0	507.92	
	34.0	507.95	
	36.0	507.85	
	38.0	507.80	
	40.0	507.75	
	42.0	507.55	
	44.0	507.35	
	46.0	507.25	
	48.0	507.15	
	50.0	506.85	
CROSS SECTION 2 STATION 1+66	0.0	511.02	LB MARKER
	14.0	511.02	
	16.0	510.62	
	18.0	510.22	
	21.4	509.20	
	22.0	509.02	
	24.0	508.82	
	25.0	508.72	
	26.0	508.62	
	27.0	508.54	
	28.0	508.47	
	30.0	508.32	
	32.0	508.12	
	34.0	507.92	
	36.0	507.50	
	38.0	506.97	

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 TABLE C-2.6 (CONT.) CROSS SECTION ELEVATIONS AT SITE 119.1L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2	40.0	506.45	
STATION 1+66	42.0	506.40	
(CONT.)	44.0	506.35	
	46.0	505.55	
CROSS SECTION 3	0.0		LB MARKER
STATION 2+42	31.0	511.02	
	32.0	510.82	
	36.0	510.32	
	40.0	509.72	
	43.5	509.28	
	44.0	509.22	
	44.5	509.12	
	46.0	508.99	
	48.0	508.69	
	50.0	508.49	
	52.0	508.34	
	54.0	508.09	
	56.0	507.89	
	58.0	507.64	
	60.0	507.49	
	62.0	507.69	
	64.0	506.89	
	66.0	506.89	
	68.0	506.39	
	70.0	506.29	

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 REFERENCE ELEVATION USGS A107 1965.  
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TABLE C-2.7

## CROSS SECTION ELEVATIONS AT SITE 125.2R.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1	0.0	558.10	LB MARKER
STATION 0+00	9.0	558.10	
	12.3	557.49	
	13.0	557.36	
	16.0	556.80	
	17.0	556.57	
	20.0	555.90	
	21.0	555.82	
	25.0	555.50	
	29.0	555.18	
	30.0	555.10	
	33.0	554.91	
	43.0	554.11	
	85.0	554.20	
	89.0	554.40	
	93.0	554.70	
	97.0	554.80	
	101.0	555.20	
	105.0	555.50	
	109.0	555.50	
	110.0	555.50	
	113.0	555.50	
	117.0	555.40	
	121.0	555.10	
	125.0	555.00	
	129.0	554.70	
	133.0	554.60	
	137.0	554.70	
	141.0	554.80	
	145.0	554.60	
	149.0	554.80	
	150.0	554.80	
	153.0	554.80	
	157.0	554.60	
	161.0	554.50	
	165.0	554.40	
	169.0	554.30	
	173.0	554.50	
	177.0	554.30	
	180.0	554.30	
	185.0	554.30	

TABLE C-2.7 (CONT.) CROSS SECTION ELEVATIONS AT SITE 125.2R.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00 (CONT.)	186.0	554.30	
	189.0	554.10	
	193.0	554.30	
	197.0	554.30	
	201.0	554.30	
	209.0	554.40	
	210.0	554.40	
	213.0	554.70	
	214.0	554.75	
	217.0	554.90	
	221.0	555.10	
	222.0	555.14	
	225.0	555.25	
	229.0	555.40	
	232.0	555.45	
	235.0	555.50	
	237.0	555.60	
	241.0	555.70	
	242.0	555.80	
	245.0	556.10	
	246.0	556.20	
	250.0	556.20	
	252.0	556.81	
	254.0	556.85	
	255.0	556.40	
	258.0	556.49	
	262.0	556.61	
	265.0	556.70	
	266.0	556.77	
	269.0	557.00	
	270.0	557.07	
	273.0	557.30	
	274.0	557.40	
277.0	557.70		
278.0	557.72		
281.0	557.80		
282.0	557.87		
285.0	558.10		
310.0	559.63		
325.0	560.55		
335.0	561.03	RB MARKER	

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 TABLE C-2.7 (CONT.) CROSS SECTION ELEVATIONS AT SITE 125.2R.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2 STATION 7+97	0.0	561.32	LB MARKER
	68.0	560.51	
	110.0	559.36	
	130.0	559.36	
	140.0	559.16	
	144.0	558.96	
	147.0	558.81	
	150.0	558.66	
	151.0	558.63	
	155.0	558.51	
	159.0	558.39	
	160.0	558.36	
	163.0	558.21	
	167.0	558.01	
	170.0	557.86	
	171.0	557.77	
	172.0	557.67	
	176.0	557.57	
	177.0	557.27	
	180.0	557.57	
	184.0	557.32	
	187.0	557.28	
	188.0	557.27	
	192.0	557.37	
	196.0	557.37	
	197.0	557.37	
	200.0	557.52	
	204.0	557.52	
	207.0	557.41	
	208.0	557.37	
216.0	557.17		
217.0	557.16		
224.0	557.07		
227.0	557.14		
232.0	557.27		
237.0	557.27		
240.0	557.27		
248.0	557.47		
256.0	557.67		
257.0	557.62		
258.0	557.57		

TABLE C-2.7 (CONT.) CROSS SECTION ELEVATIONS AT SITE 125.2R.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2 STATION 7+97 (CONT.)	274.0	557.47	
	277.0	557.38	
	284.0	557.17	
	294.0	557.17	
	300.0	556.93	
	304.0	556.77	
	314.0	556.77	
	324.0	556.57	
	330.0	556.57	
	334.0	556.57	
	344.0	556.07	
	354.0	555.87	
	364.0	555.67	
	374.0	556.07	
	384.0	556.77	
	394.0	556.07	
	402.0	556.31	
	404.0	556.37	
	408.5	556.86	
	410.5	557.08	
	412.5	557.30	
	414.0	557.47	
	414.5	557.54	
	416.0	557.77	
	416.5	556.83	
	418.5	557.33	
	419.5	556.76	
	421.3	556.96	
	423.5	557.76	
	425.5	558.56	
427.5	559.66		
428.5	559.86		
435.0	565.71		
437.5	566.12	RB MARKER	

DATE OF SURVEY: SEPT. 29, 1984.

REFERENCE ELEVATION: R&M ALCAP 124.7T1 RB 1982.

TABLE C-2.8

## CROSS SECTION ELEVATIONS AT SITE 130.2R.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	609.60	LB MARKER
	20.0	606.74	
	24.0	606.34	
	25.0	606.26	
	26.0	606.19	
	28.0	606.04	
	30.0	605.94	
	34.0	605.74	
	36.0	605.64	
	38.0	605.54	
	40.0	605.44	
	42.0	605.34	
	46.0	605.14	
	50.0	604.94	
	54.0	604.74	
	58.0	604.54	
	60.0	604.63	
	62.0	604.73	
	66.0	604.92	
	70.0	605.11	
	74.0	605.30	
	78.0	605.49	
	80.0	605.54	
82.0	605.60		
86.0	605.71		
90.0	605.82		
94.0	605.93		
98.0	606.04		
100.0	606.06		
108.0	606.14		
110.0	606.16		
118.0	606.24		
123.0	606.39		
128.0	606.54		
136.5	606.74		
146.0	606.62		

TABLE C-2.8 (CONT.) CROSS SECTION ELEVATIONS AT SITE 130.2R.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2 STATION 2+27	0.0	609.21	LB MARKER
	11.2	606.74	
	20.0	606.64	
	30.0	606.54	
	40.0	606.24	
	41.0	606.18	
	41.6	606.14	
	42.0	606.12	
	46.0	605.88	
	50.0	605.64	
	53.0	605.46	
	54.0	605.40	
	58.0	605.16	
	60.0	605.04	
	62.0	605.07	
	66.0	605.13	
	70.0	605.19	
	74.0	605.25	
	78.0	605.31	
	80.0	605.34	
82.0	605.52		
86.0	605.89		
87.8	606.05		
90.5	606.29		
91.0	606.34		
95.0	606.54		
99.0	606.74		
131.0	607.91		
CROSS SECTION 3 STATION 4+21	0.0	609.12	LB MARKER
	9.0	606.74	
	10.0	606.56	
	11.8	606.25	
	12.0	606.21	
	13.0	606.04	
	14.0	605.91	
	15.0	605.79	
	16.0	605.66	
	17.0	605.54	
20.0	605.35		
21.0	605.29		

TABLE C-2.8 (CONT.) CROSS SECTION ELEVATIONS AT SITE 130.2R.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 3 STATION 4+21 (CONT.)	24.0	605.10	
	25.0	605.03	
	28.0	604.84	
	29.0	604.61	
	30.0	604.39	
	32.0	604.51	
	33.0	604.58	
	34.0	604.64	
	36.0	604.69	
	37.0	604.71	
	38.0	604.74	
	40.0	604.94	
	41.0	605.04	
	42.0	605.14	
	44.0	605.31	
	45.0	605.40	
	46.0	605.49	
	48.0	605.69	
	49.0	605.79	
	50.0	605.89	
53.0	606.04		
54.0	606.09		
55.0	606.15		
57.0	606.28		
58.0	606.34		
62.4	606.74		
74.0	606.04		
97.0	607.62		

DATE OF SURVEY: SEPT. 27, 1985.  
 REFERENCE ELEVATION: R&M TBM 9-1 1982.

TABLE C-2.9

## CROSS SECTION ELEVATIONS AT SITE 131.3L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0	609.13	LB MARKER
	17.0	616.00	
	20.0	615.50	
	24.0	615.10	
	28.0	615.00	
	32.0	614.90	
	40.0	614.80	
	50.0	614.20	
	60.0	613.40	
	70.0	613.00	
	80.0	612.90	
	90.0	613.40	
	91.0	613.40	
	93.0	613.40	
	95.0	613.40	
	97.0	613.40	
	99.0	613.40	
	100.0	613.40	
	101.0	613.40	
	103.0	613.40	
	104.0	613.40	
	110.0	613.40	
	115.0	613.60	
	117.0	613.62	
	119.0	613.59	
	120.0	613.58	
	121.0	613.57	
	123.0	613.52	
	125.0	613.47	
	127.0	613.69	
129.0	613.92		
130.0	614.01		
131.0	614.09		
133.0	614.27		
135.0	614.32		
137.0	614.37		
141.0	614.67		
145.0	615.47		
149.0	616.32		
150.2	616.77	RB MARKER	

TABLE C-2.9 (CONT.) CROSS SECTION ELEVATIONS AT SITE 131.3L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2 STATION 2+93	0.0	617.08	LB MARKER
	11.0	616.52	
	34.0	616.00	
	38.0	615.80	
	42.0	615.30	
	46.0	615.20	
	50.0	615.00	
	54.0	614.90	
	60.0	614.50	
	64.0	614.33	
	66.0	613.93	
	68.0	613.93	
	70.0	613.83	
	72.0	613.73	
	74.0	613.83	
	76.0	613.93	
	78.0	613.73	
	80.0	613.83	
	82.0	613.83	
	84.0	613.83	
	86.0	613.93	
	88.0	614.07	
	90.0	614.17	
92.0	614.27		
94.0	614.37		
95.0	614.42		
98.0	614.57		
100.0	614.71		
108.0	615.27		
110.0	615.44		
118.0	616.12		
120.0	616.32		
122.0	616.52		
124.0	616.77		
126.0	616.77		
131.0	616.38		
140.0	617.15	RB MARKER	

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 TABLE C-2.9 (CONT.) CROSS SECTION ELEVATIONS AT SITE 131.3L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 3	0.0	619.62	LB MARKER
STATION 5+37	8.0	617.71	
	10.0	617.71	
	14.0	617.71	
	20.0	617.29	
	30.0	616.59	
	34.0	616.31	
	35.0	616.28	
	40.0	616.13	
	44.0	616.01	
	48.0	615.89	
	50.0	615.83	
	54.0	615.71	
	56.0	615.72	
	60.0	615.74	
	64.0	615.76	
	66.0	615.82	
	70.0	615.94	
	72.0	616.00	
	74.0	616.06	
	76.0	616.09	
	80.0	616.15	
	84.0	616.21	
	88.0	616.17	
	90.0	616.15	
	92.0	616.13	
	94.0	616.11	
	96.0	616.13	
	100.0	616.17	
	104.0	616.21	
	108.0	616.17	
	110.0	616.15	
	112.0	616.13	
	114.0	616.11	
	116.0	616.11	
	120.0	616.11	
	124.0	616.11	
	128.0	616.11	
	130.0	616.11	
	132.0	616.11	
	134.0	616.11	

TABLE C-2.9 (CONT.) CROSS SECTION ELEVATIONS AT SITE 131.3L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 3 STATION 5+37 (CONT.)	136.0	616.09	
	140.0	616.05	
	144.0	616.01	
	148.0	616.25	
	150.0	616.37	
	152.0	616.49	
	154.0	616.61	
	156.0	616.59	
	157.0	616.58	
	160.0	616.55	
	164.0	616.51	
	170.0	616.57	
	174.0	616.61	
	180.0	616.49	
	182.0	616.45	
	184.0	616.41	
	194.0	616.61	
	204.0	617.21	
	214.0	617.41	
	224.0	617.46	
228.0	617.41		
231.5	617.71		
236.0	618.36		
245.0	619.90		
264.0	619.50		
278.0	622.10	RB MARKER	
CROSS SECTION 4 STATION 7+66	0.0		LB MARKER
	11.0	617.19	
	28.0	617.19	
	48.0	616.76	
	50.0	616.76	
	52.0	616.76	
	54.0	616.66	
	56.0	616.56	
	58.0	616.46	
	60.0	616.36	
62.0	616.26		
64.0	616.32		
66.0	616.38		
68.0	616.44		

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 TABLE C-2.9 (CONT.) CROSS SECTION ELEVATIONS AT SITE 131.3L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 4 STATION 7+66 (CONT.)	70.0	616.50	
	72.0	616.56	
	74.0	616.66	
	76.0	616.76	
	88.0	616.76	
	92.0	616.76	
	102.0	616.76	
	108.0	616.70	
	112.0	616.66	
	122.0	616.56	
	128.0	616.44	
	132.0	616.36	
	142.0	616.26	
	148.0	616.26	
	152.0	616.26	
	162.0	616.36	
	168.0	616.18	
	172.0	616.06	
	178.0	616.00	
	182.0	615.96	
188.0	616.08		
192.0	616.16		
196.0	616.12		
197.7	616.10		
202.0	616.06		
212.0	616.16		
222.0	616.26		
227.0	616.76	RB MARKER	

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 DATE OF SURVEY: SEPT. 27, 1984  
 REFERENCE ELEVATION: R&M ALCAP 131.1S1 RB 1982.

TABLE C-2.10

CROSS SECTION ELEVATIONS AT SITE 133.8R.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1	0.0		RB MARKER
STATION 0+00	13.6	650.64	
	16.0	650.34	
	20.0	649.84	
	24.0	649.44	
	28.0	648.84	
	32.0	648.34	
	34.0	648.14	
	36.0	647.47	
	40.0	647.62	
	44.0	647.77	
	50.0	647.84	
	52.0	647.87	
	60.0	647.87	
	68.0	647.47	
	70.0	647.37	
	76.0	647.07	
	80.0	647.07	
	84.0	647.07	
	92.0	646.87	
	100.0	647.37	
	108.0	647.07	
	116.0	647.07	
	124.0	647.27	
	132.0	647.77	
	140.0	647.37	
CROSS SECTION 2	0.0		RB MARKER
STATION 0+44	19.7	650.64	
	22.0	649.94	
	26.0	649.24	
	30.0	648.44	
	34.0	647.74	
	36.0	647.67	
	38.0	647.42	
	40.0	647.17	
	42.0	647.32	
	44.0	647.47	
	48.0	647.57	
	50.0	647.57	
	52.0	647.57	

TABLE C-2.10 (CONT.) CROSS SECTION ELEVATIONS AT SITE 133.8R.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2 STATION 0+44 (CONT.)	56.0	647.57	
	60.0	647.37	
	64.0	647.37	
	68.0	647.17	
	70.0	647.07	
	72.0	646.97	
	76.0	646.77	
	80.0	647.67	
	84.0	647.87	
	88.0	647.87	
	90.0	647.87	
	92.0	647.87	
	96.0	647.87	
	100.0	647.87	
	103.0	648.37	
	110.0	648.37	
	113.0	648.37	
	114.0	648.27	
	118.0	647.87	
	120.0	647.72	
	122.0	647.57	
	126.0	647.37	
	130.0	647.07	
140.0	646.97		
150.0	646.97		
160.0	647.07		
170.0	647.37		
180.0	647.37		
190.0	648.07		
195.0	648.37		
CROSS SECTION 3 STATION 1+46	0.0		RB MARKER
	16.7	650.64	
	18.0	650.44	
	20.0	649.99	
	22.0	649.54	
	24.0	649.51	
	26.0	649.49	
	28.0	649.26	
	29.0	649.15	
	30.0	649.04	

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 TABLE C-2.10 (CONT.) CROSS SECTION ELEVATIONS AT SITE 133.8R.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 3 STATION 1+46 (CONT.)	32.0	648.86	
	34.0	648.69	
	36.0	648.46	
	38.0	648.24	
	40.0	648.29	
	42.0	648.34	
	46.0	648.25	
	50.0	648.33	
	54.0	648.13	
	58.0	647.93	
	60.0	647.83	
	62.0	647.91	
	66.0	648.07	
	70.0	648.23	
	74.0	648.35	
	78.0	648.47	
	80.0	648.53	
	82.0	648.53	
	86.0	648.53	
	90.0	648.53	
	92.0	648.57	
	100.0	648.73	
	110.0	648.73	
	120.0	648.93	
	130.0	648.93	
	140.0	649.23	
	150.0	649.23	
	187.0	649.23	
	188.0	649.03	
	192.0	648.33	
196.0	647.83		
200.0	647.63		
204.0	648.23		
208.0	648.43		
212.0	648.53		
216.0	648.53		

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 REFERENCE ELEVATION: ADF&G ALCAP 133.8W RB 1983.  
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TABLE C-2.11

## CROSS SECTION ELEVATIONS AT SITE 137.5R.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0		LB MARKER
	20.0	692.00	
	26.0	690.80	
	32.0	690.50	
	36.0	690.90	
	42.0	692.00	
	58.0	692.00	
	60.0	691.70	
	64.0	691.50	
	74.0	690.70	
	82.0	690.00	
	88.0	689.30	
	96.0	689.30	
	100.0	690.00	
106.0	690.70		
111.0	692.00		
CROSS SECTION 2 STATION 1+84	0.0		LB MARKER
	23.0	692.00	
	24.0	691.80	
	26.0	691.60	
	36.0	690.90	
	40.0	690.90	
	46.0	690.60	
	56.0	690.60	
	60.0	690.60	
	64.0	690.40	
	70.0	691.00	
	80.0	690.90	
	90.0	691.50	
97.0	692.00		
CROSS SECTION 3 STATION 4+16	0.0		LB MARKER
	20.0	692.00	
	22.0	691.70	
	28.0	691.20	
	30.0	690.80	
	36.0	691.20	
	38.0	691.20	

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TABLE C-2.11 (CONT.) CROSS SECTION ELEVATIONS AT SITE 137.5R.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 3	42.0	691.30	
STATION 4+16	46.0	691.20	
(CONT.)	50.0	691.80	
	54.0	692.00	

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REFERENCE ELEVATION: R&M ALCAP LRX-48 1982.

TABLE C-2.12

CROSS SECTION ELEVATIONS AT SITE 138.7L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1	0.0		LB MARKER
STATION 0+00	11.0	710.61	
	16.0	709.81	
	20.0	709.41	
	21.0	709.31	
	24.0	709.01	
	24.3	708.98	
	26.0	708.81	
	28.0	708.61	
	30.0	708.46	
	32.0	708.31	
	34.0	707.45	
	36.0	707.25	
	38.0	707.05	
	40.0	706.78	
	42.0	706.52	
	44.0	706.25	
	46.0	706.10	
	48.0	705.95	
	49.0	705.81	
	50.0	705.67	
	53.0	705.26	
	54.0	705.12	
	56.0	704.85	
	57.0	705.05	
	60.0	704.67	
	61.0	704.55	
	65.0	704.05	
	68.0	703.82	
	69.0	703.75	
	73.0	703.35	
CROSS SECTION 2	0.0		LB MARKER
STATION 2+83	8.0	710.91	
	12.0	710.71	
	16.0	710.41	
	20.0	710.31	
	24.0	710.11	
	28.0	709.81	
	31.7	709.44	
	32.0	709.41	

TABLE C-2.12 (CONT.) CROSS SECTION ELEVATIONS AT SITE 138.7L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2 STATION 2+83 (CONT.)	34.0	709.16	
	36.0	708.91	
	38.0	708.76	
	39.0	708.68	
	40.0	708.61	
	42.0	708.46	
	44.0	708.31	
	46.0	707.21	
	48.0	707.01	
	50.0	706.81	
	53.0	706.31	
	54.0	706.21	
	57.0	706.16	
	58.0	706.01	
	60.0	705.98	
	61.0	705.93	
	62.0	705.91	
	64.0	705.87	
	65.0	705.79	
	69.0	705.76	
70.0	705.71		
73.0	705.56		
77.0	705.31		
80.0	704.93		
81.0	704.81		
84.0	704.81		
85.0	704.81		
89.0	704.81		
93.0	704.21		
CROSS SECTION 3 STATION 5+09	0.0		LB MARKER
	9.0	710.61	
	12.0	710.31	
	18.0	709.71	
	20.0	708.15	
	22.0	707.95	
	22.6	707.89	
	24.0	707.75	
	26.0	707.80	
	28.0	707.85	
30.0	707.65		

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 TABLE C-2.12 (CONT.) CROSS SECTION ELEVATIONS AT SITE 138.7L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 3	32.0	707.45	
STATION 5+09	34.0	707.40	
(CONT.)	36.0	707.35	
	38.0	707.18	
	40.0	707.02	
	42.0	706.85	
	44.0	706.75	
	47.0	706.60	
	48.0	706.55	
	51.0	706.02	
	52.0	705.85	
	55.0	705.65	
	59.0	705.15	
	60.0	704.95	
	63.0	704.35	
	67.0	704.15	

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 REFERENCE ELEVATION: R&M ALCAP 138.6T1 LB 1982.

TABLE C-2.13

## CROSS SECTION ELEVATIONS AT SITE 139.OL.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1	0.0		LB MARKER
STATION 0+00	2.0	712.62	
	4.0	711.52	
	8.0	711.02	
	11.0	710.57	
	12.0	710.42	
	13.7	710.16	
	14.0	710.12	
	16.0	709.82	
	18.0	709.44	
	20.0	709.44	
	22.0	709.22	
	24.0	709.00	
	26.0	708.78	
	27.0	708.67	
	30.0	708.34	
	31.0	708.26	
	32.0	708.18	
	35.0	707.94	
	39.0	707.62	
	40.0	707.54	
	43.0	707.66	
	47.0	707.82	
	50.0	707.94	
	51.0	707.97	
	54.0	708.06	
	55.0	708.09	
	60.0	708.24	
	61.0	708.34	
	63.0	708.54	
	68.0	709.04	
	70.0	709.24	
	74.0	709.12	
	80.0	708.94	
	82.0	708.78	
	90.0	708.14	
	100.0	707.84	
	110.0	707.54	
	120.0	706.54	
	130.0	707.14	
	140.0	706.84	
	150.0	706.54	

TABLE C-2.13 (CONT.) CROSS SECTION ELEVATIONS AT SITE 139.0L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2	0.0		LB MARKER
STATION 1+05	4.0	711.62	
	8.0	710.52	
	9.0	710.06	
	10.2	709.82	
	12.0	709.46	
	13.0	709.38	
	14.0	709.29	
	16.0	709.13	
	18.0	708.96	
	19.5	708.93	
	20.0	708.93	
	22.0	708.89	
	22.7	708.88	
	24.0	708.86	
	27.6	708.68	
	29.0	708.61	
	30.0	708.56	
	32.0	708.73	
	34.0	708.89	
	36.0	709.06	
	41.6	709.59	
	42.0	709.66	
	46.0	709.63	
	56.9	709.57	
	58.0	709.56	
	60.0	709.46	
	64.0	709.26	
	68.0	709.06	
	70.0	708.96	
	78.0	709.12	
	80.0	709.16	
	88.0	709.16	
	90.0	709.09	
	94.0	708.96	
	98.0	708.83	
	100.0	708.76	
	106.0	708.56	
	108.0	708.37	
	110.0	708.19	
	118.0	707.45	

TABLE C-2.13 (CONT.) CROSS SECTION ELEVATIONS AT SITE 139.0L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 2	120.0	707.26	
STATION 1+05	130.0	706.84	
(CONT.)	140.0	706.34	
CROSS SECTION 3	0.0		LB MARKER
STATION 2+29	1.3	712.62	
	4.0	711.72	
	8.0	710.62	
	10.0	710.06	
	12.0	709.96	
	14.1	709.85	
	16.0	709.76	
	22.0	709.66	
	26.0	709.56	
	30.0	709.46	
	35.0	710.06	
	35.6	710.06	
	54.0	710.06	
	56.0	709.76	
	61.7	709.47	
	63.0	709.41	
	64.0	709.36	
	66.0	709.39	
	68.0	709.43	
	70.0	709.46	
	74.0	709.26	
	78.0	709.06	
	80.0	708.96	
	82.0	708.86	
	84.0	708.76	
	86.0	708.46	
	89.0	708.01	
	90.0	707.86	
	92.0	707.76	
	93.0	707.71	
	94.0	707.66	
	97.0	707.51	
	98.0	707.46	
	100.0	707.36	
	101.0	707.28	
	104.0	707.06	

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 TABLE C-2.13 (CONT.) CROSS SECTION ELEVATIONS AT SITE 139.0L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 3	105.0	707.29	
STATION 2+29	108.0	707.14	
(CONT.)	111.0	706.99	
	121.0	706.29	
	126.0	706.09	
CROSS SECTION 4	0.0	711.72	LB MARKER
STATION 3+58	4.0	711.22	
	8.0	710.52	
	12.0	710.32	
	13.0	710.30	
	15.8	710.24	
	16.0	710.12	
	22.0	710.12	
	24.6	709.74	
	28.0	709.64	
	40.5	710.01	
	42.0	710.06	
	44.0	709.81	
	46.0	709.56	
	47.0	709.43	
	48.0	709.31	
	50.0	709.06	
	52.0	708.86	
	54.0	708.66	
	55.0	708.61	
	56.0	708.56	
	58.0	708.46	
	60.0	708.31	
	62.0	708.16	
	64.0	708.13	
	66.0	708.09	
	68.0	707.76	
	70.0	707.46	
	72.0	707.49	
	74.0	707.29	
	76.0	707.09	
	80.0	706.69	
	90.0	706.19	

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 REFERENCE ELEVATION: R&M TBM "INDIAN" LRX-51 1982.

TABLE C-2.13

## CROSS SECTION ELEVATIONS AT SITE 139.4L.

LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 1 STATION 0+00	0.0		LB MARKER
	8.8	714.99	
	14.0	714.59	
	18.0	713.99	
	20.0	713.74	
	20.2	713.71	
	22.0	713.49	
	23.0	713.29	
	24.0	713.09	
	26.0	712.69	
	27.5	712.70	
	28.0	712.64	
	30.0	712.40	
	32.0	712.40	
	34.0	712.30	
	36.0	712.00	
	38.0	711.80	
	40.0	711.55	
	42.0	711.30	
	44.0	711.15	
46.0	711.00		
48.0	710.75		
50.0	710.50		
54.0	709.90		
58.0	709.70		
CROSS SECTION 2 STATION 1+68	0.0		LB MARKER
	3.5	714.99	
	8.0	713.89	
	10.0	713.34	
	11.5	712.93	
	12.0	712.79	
	14.0	713.24	
	16.0	712.70	
	18.0	712.25	
	20.0	712.20	
	22.0	712.25	
	24.0	711.50	
26.0	711.20		
28.0	711.20		
30.0	710.94		

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 TABLE C-2.14 (CONT.) CROSS SECTION ELEVATIONS AT SITE 139.4L.  
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LOCATION WITHIN SITE	HORIZONTAL DISTANCE (FT)	STREAMBED ELEVATION (FT)	COMMENTS
CROSS SECTION 3	0.0		LB MARKER
STATION 2+72	2.0	715.19	
	6.0	714.39	
	9.0	713.34	
	9.6	713.13	
	10.0	712.99	
	11.0	712.79	
	12.0	712.59	
	14.0	712.19	
	16.0	712.70	
	18.0	712.50	
	20.0	712.25	
	22.0	711.90	
	24.0	711.40	
	26.0	711.20	
	28.0	711.30	
	30.0	711.10	
	32.0	710.90	
	34.0	710.70	
	38.0	710.20	

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 REFERENCE ELEVATION: R&M "INDIAN" LRX-51 1982.  
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Table C-3.1

Summary of hydraulic data collected at site 101.7L, Cross section 1.

RATING CURVE:			A = -2.25	B = 0.67	CF = 365.00	DATE:			DATE:			SUBSTRATE INFO					
DATE: SEPT 21 a			DATE: AUG 30 b			DATE: AUG 20 b			DATE:								
REACH US = 300.00	REACH US = 300.00	REACH US = 300.00	REACH US =	REACH US =	REACH US =	REACH US =	REACH US =	REACH US =	REACH US =	REACH US =	REACH US =	REACH US =	REACH US =	REACH US =			
DS = 300.00	DS = 300.00	DS = 300.00	DS =	DS =	DS =	DS =	DS =	DS =	DS =	DS =	DS =	DS =	DS =	DS =			
GCO: 11400	GCO: 15300	GCO: 18500	GCO:	GCO:	GCO:	GCO:	GCO:	GCO:	GCO:	GCO:	GCO:	GCO:	GCO:	GCO:			
WSEL: 367.94	WSEL: 368.58	WSEL: 369.06	WSEL:	WSEL:	WSEL:	WSEL:	WSEL:	WSEL:	WSEL:	WSEL:	WSEL:	WSEL:	WSEL:	WSEL:			
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
	0.0	.00	.00		.00	.00		.00	.00							10.00	5.30
	54.5	.00	.00		0.03	.00		1.00	.00							10.00	5.30
	56.0	.00	.00		0.23	.00		1.20	.00							10.00	5.30
	58.0	.00	.00		0.33	.00		1.30	.00							10.00	5.30
	67.0	.00	.00		0.62	.00		2.02	.00							10.00	5.30
	68.0	.00	.00		0.74	.00		2.10	0.32							10.00	5.30
	70.0	.00	.00		0.97	0.05		2.16	0.37							10.00	5.30
	74.0	.00	.00		1.14	0.05		2.29	0.46							10.00	5.30
	75.0	.00	.00		1.22	0.06		2.32	0.48							10.00	5.30
	77.0	0.25	0.00		1.37	0.09		2.38	0.53							10.00	5.30
	78.0	0.31	0.00		1.44	0.10		2.41	0.55							10.00	5.30
	82.0	0.54	0.00		1.68	0.10		2.65	0.65							10.00	5.30
	83.0	0.60	0.00		1.74	0.13		2.71	0.68							10.00	5.30
	86.0	0.78	0.03		1.92	0.20		2.88	0.75							10.00	5.30
	88.0	0.90	0.05		2.04	0.26		3.00	0.80							10.00	5.30
	92.0	0.95	0.10		2.27	0.39		3.29	1.08							10.00	5.30
	94.0	1.25	0.12		2.39	0.45		3.43	1.22							10.00	5.30
	97.0	1.55	0.15		2.67	0.45		3.65	1.43							10.00	5.30
	98.0	1.62	0.15		2.76	0.45		3.72	1.50							10.00	5.30
	102.0	1.90	0.15		3.04	0.60		3.95	1.58							10.00	5.30
	107.0	2.20	0.15		3.28	0.85		4.23	1.68							10.00	5.30
	108.0	2.19	0.19		3.33	0.90		4.29	1.70							10.00	5.30
	110.0	2.17	0.27		3.33	0.98		4.28	1.76							10.00	5.30
	112.0	2.15	0.35		3.32	1.06		4.28	1.82							10.00	5.30
	117.0	2.20	0.40		3.31	1.26		4.27	1.97							10.00	5.30
	118.0	2.17	0.41		3.31	1.30		4.27	2.00							10.00	5.30
	122.0	2.05	0.45		3.24	1.30		4.21	1.98							10.00	5.30
	126.0	2.03	0.49		3.17	1.30		4.15	1.96							10.00	5.30
	128.0	2.02	0.51		3.17	1.35		4.12	1.95							10.00	5.30
	132.0	2.00	0.55		3.17	1.45		4.15	1.81							10.00	5.30
	134.0	2.03	0.52		3.17	1.50		4.16	1.74							10.00	5.30
	138.0	2.09	0.46		3.23	1.35		4.19	1.60							10.00	5.30

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Table C-3.1 (cont.) Summary of hydraulic data collected at site 101.7L, Cross Section 1.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	CDV
		1			2			3			4			5			
142.0	2.15	0.40		3.29	1.20		4.23	1.70								10.00	5.30
148.0	2.18	0.34		3.32	1.20		4.28	1.85								10.00	5.30
150.0	2.19	0.32		3.33	1.20		4.31	1.81								10.00	5.30
152.0	2.20	0.30		3.36	1.21		4.34	1.77								10.00	5.30
158.0	2.32	0.36		3.46	1.25		4.42	1.65								10.00	5.30
162.0	2.40	0.40		3.55	1.25		4.51	1.85								10.00	5.30
164.0	2.45	0.40		3.59	1.25		4.56	1.95								10.00	5.30
166.0	2.50	0.40		3.64	1.24		4.60	2.05								10.00	5.30
172.0	2.65	0.40		3.79	1.20		4.71	1.83								10.00	5.30
174.0	2.64	0.41		3.78	1.19		4.74	1.75								10.00	5.30
180.0	2.61	0.44		3.75	1.15		4.71	1.75								10.00	5.30
182.0	2.60	0.45		3.72	1.15		4.70	1.75								10.00	5.30
187.0	2.60	0.53		3.63	1.15		4.46	1.81								10.00	5.30
188.0	2.47	0.53		3.61	1.15		4.41	1.83								10.00	5.30
190.0	2.21	0.54		3.58	1.19		4.31	1.85								10.00	5.30
192.0	1.95	0.55		3.55	1.23		4.36	1.90								10.00	5.30
196.0	2.35	0.63		3.49	1.30		4.45	2.00								10.00	5.30
197.0	2.45	0.65		3.50	1.29		4.45	1.93								10.00	5.30
202.0	2.35	0.45		3.57	1.26		4.45	1.55								10.00	5.30
204.0	2.45	0.45		3.59	1.25		4.52	1.45								10.00	5.30
207.0	2.60	0.45		3.57	1.14		4.63	1.30								10.00	5.30
208.0	2.56	0.43		3.57	1.10		4.66	1.25								10.00	5.30
212.0	2.40	0.35		3.54	0.95		4.41	1.42								10.00	5.30
214.0	2.18	0.33		3.40	0.94		4.28	1.50								10.00	5.30
217.0	1.85	0.30		3.18	0.92		4.10	1.40								10.00	5.30
220.0	1.82	0.27		2.96	0.90		3.92	1.30								10.00	5.30
222.0	1.80	0.25		2.75	0.85		3.73	1.12								10.00	5.30
226.0	1.24	0.21		2.33	0.75		3.34	0.75								10.00	5.30
227.0	1.10	0.20		2.23	0.73		3.22	0.70								10.00	5.30
228.0	0.98	0.16		2.12	0.70		3.09	0.65								10.00	5.30
232.0	0.50	0.00		1.72	0.40		2.60	0.45								10.00	5.30
235.0	.00	.00		1.35	0.18		2.22	0.45								10.00	5.30
236.0	.00	.00		1.22	0.10		2.10	0.45								10.00	5.30
238.0	.00	.00		0.86	0.06		1.40	0.10								10.00	5.30
239.3	.00	.00		0.62	0.03		1.23	0.06								10.00	5.30
241.0	.00	.00		0.00	.00		1.00	.00								10.00	5.30

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a Clear water.

b Aug 20th and 30th, calculated data.

| Extrapolated or interpolated value.

Table C-3.1 (cont.) Summary of hydraulic data collected at site 101.7L, Cross section 2.

RATING CURVE:			A = -2.28	B = 0.72	CF = 367.00	DATE: SEPT 21 a			DATE: AUG 30 b			DATE: AUG 20			SUBSTRATE INFO		
REACH US = 172.00			REACH US = 172.00			REACH US = 172.00			REACH US =			REACH US =					
DS = 100.00			DS = 100.00			DS = 100.00			DS =			DS =					
GCQ: 11400			GCQ: 15300			GCQ: 18500			GCQ:			GCQ:					
WSEL: 371.37			WSEL: 372.41			WSEL: 373.20			WSEL:			WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
0.0	.00	0.00		.00	0.00		.00	0.00								3.00	2.50
19.0	.00	0.00		.00	0.00		0.64	0.00								10.00	5.30
20.0	.00	0.00		0.30	0.00		1.12	0.00								10.00	5.30
21.0	.00	0.00		0.65	0.00		1.49	0.00								8.00	5.30
22.0	0.40	0.00		1.00	0.00		1.89	0.00								8.00	5.30
24.0	0.90	0.05		1.50	0.70	0.90	2.39	0.80								8.00	5.30
26.0	1.40	0.10		2.10	1.20	0.60	2.89	1.50								8.00	5.30
28.0	1.40	0.26		2.30	2.10	0.60	2.89	2.60								8.00	5.30
34.0	1.40	0.74		2.40	2.10	1.80	2.89	2.75								8.00	5.30
36.0	1.40	0.90		2.57	2.17		2.89	2.80								8.00	5.30
40.0	1.36	0.90		2.90	2.30	1.70	2.85	2.90								8.00	5.30
46.0	1.30	0.90	0.70	2.90	2.00	1.20	2.79	3.25								10.00	5.30
52.0	1.54	0.93		2.40	2.90	2.40	3.03	3.60								10.00	5.30
56.0	1.70	0.95	0.70	2.73	2.37		3.19	3.60								10.00	5.30
58.0	1.70	0.91		2.90	2.10	1.60	3.19	3.50								10.00	5.30
64.0	1.70	0.79		2.80	1.90	1.60	3.19	3.50								10.00	5.30
66.0	1.70	0.75	0.60	2.73	2.17		3.19	3.40								10.00	5.30
70.0	1.42	0.91		2.60	2.70	1.30	2.91	3.40								10.00	5.30
76.0	1.00	1.15		2.30	1.80	1.00	2.49	3.25								10.00	5.30
82.0	1.00	1.15		2.30	2.50	1.60	2.49	3.10								10.00	5.30
86.0	1.00	1.15		2.10	2.17		2.49	3.10								10.00	5.30
88.0	0.96	1.12		2.00	2.00	1.60	2.45	3.10								10.00	5.30
94.0	0.84	1.03		1.90	2.40	2.00	2.33	3.00								10.00	5.30
96.0	0.80	1.00		1.97	2.30		2.29	2.90								10.00	5.30
100.0	0.76	0.86		2.10	2.10	1.70	2.25	2.80								10.00	5.30
106.0	0.70	0.65		1.90	1.60	1.30	2.19	2.60								10.00	5.30
112.0	0.32	0.30		1.50	1.70	1.60	1.81	2.30								10.00	5.30
117.0	.00	0.00		0.67	1.70		1.49	2.10								10.00	5.30
118.0	.00	0.00		0.50	1.70	1.90	1.49	2.10								10.00	5.30
125.0	.00	0.00		.00	0.00		1.49	0.88								10.00	5.30
130.0	.00	0.00		.00	0.00		1.49	0.00								10.00	5.30

a Turbid water, cross section below breached head.

b Turbid water, backwater, negative flow 20-22'.

| Extrapolated or interpolated value.

Table C-3.1 (cont.) Summary of hydraulic data collected at site 101.7L, Cross section 3.

RATING CURVE: A = -2.28 B = 0.72 CF = 367.00																			
DATE: SEPT 21 a						DATE: AUG 30 b						DATE: AUG 20 c						DATE:	
REACH US = 156.00						REACH US = 156.00						REACH US = 156.00						REACH US =	
DS = 172.00						DS = 172.00						DS = 172.00						DS =	
GCO: 11400						GCO: 15300						GCO: 18500						GCO:	
WSEL: 371.37						WSEL: 372.41						WSEL: 373.20						WSEL:	
																SUBSTRATE INFO			
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV		
1			2			3			4			5							
0.0	.00	.00		.00	.00		.00	.00								3.00	2.50		
51.5	.00	.00		.00	.00		.00	.00								10.00	5.30		
56.0	.00	.00		.00	.00		0.30	0.00								10.00	5.30		
60.0	.00	.00		.00	.00		0.30	0.00								10.00	5.30		
64.0	.00	.00		.00	.00	0.00	0.60	0.00	0.00							10.00	5.30		
66.0	.00	.00		0.50	0.00	0.00	0.66	0.00								10.00	5.30		
68.0	.00	.00		0.60	0.00	0.00	0.72	0.00								10.00	5.30		
72.0	.00	.00		0.80	0.00	0.00	0.84	0.00								10.00	5.30		
74.0	.00	.00		0.80	0.00		0.90	0.00	0.00							10.00	5.30		
76.0	.00	.00		0.80	0.00	0.00	0.90	0.00								9.00	5.30		
79.0	.00	.00		0.95	0.00		0.90	0.00								9.00	5.30		
80.0	0.05	.00		1.00	0.00	0.00	0.90	0.00								9.00	5.30		
83.0	0.20	.00		1.12	0.00		0.90	0.00								9.00	5.20		
84.0	0.18	.00		1.16	0.00		0.90	0.00	0.00							9.00	5.20		
87.0	0.10	.00		1.28	0.00		1.16	0.00								9.00	5.20		
90.0	0.55	0.04		1.40	0.00	0.00	1.41	0.00								9.00	5.20		
91.0	0.70	0.05		1.43	0.00		1.50	0.00								9.00	5.20		
94.0	0.63	0.24		1.52	0.00		1.75	0.00	0.00							9.00	5.20		
95.0	0.60	0.30		1.55	0.00		1.78	0.00								9.00	5.20		
99.0	0.80	0.30		1.67	0.00		1.88	0.00								9.00	5.20		
100.0	0.78	0.35		1.70	0.00	0.00	1.90	0.00								9.00	5.20		
103.0	0.70	0.50		1.70	0.00		1.98	0.00								3.00	5.20		
104.0	0.70	0.51		1.70	0.00		2.00	0.00	0.00							3.00	5.10		
107.0	0.70	0.55		1.70	0.00		2.02	0.02								3.00	5.10		
110.0	0.70	0.51		1.70	0.00	0.00	2.03	0.03								3.00	5.10		
111.0	0.70	0.50		1.70	0.00		2.04	0.04								3.00	5.10		
114.0	0.70	0.54		1.70	0.00		2.05	0.05	0.05							3.00	5.10		
115.0	0.70	0.55		1.70	0.00		2.07	0.06								3.00	5.10		
119.0	0.70	0.00		1.70	0.00		2.13	0.10								3.00	5.10		
120.0	0.73	0.00		1.70	0.00	0.00	2.14	0.11								3.00	5.10		
123.0	0.80	0.00		1.79	0.03		2.19	0.14								3.00	5.10		
124.0	0.85	0.01		1.82	0.04		2.20	0.15	0.10							3.00	5.10		

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Table C-3.1 (cont.) Summary of hydraulic data collected at site 101.7L, Cross section 3.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
127.0	1.00	0.05		1.91	0.07		2.20	0.15								3.00	5.10
130.0	1.23	0.13		2.00	0.10	0.10	2.20	0.15								3.00	5.10
131.0	1.30	0.15		2.01	0.10		2.20	0.15								3.00	5.10
134.0	1.38	0.11		2.04	0.10		2.20	0.15	0.15							3.00	5.10
135.0	1.40	0.10		2.05	0.10		2.20	0.14								3.00	5.10
139.0	1.20	0.05		2.09	0.10		2.18	0.08								3.00	5.10
140.0	1.03	0.04		2.10	0.10	0.10	2.17	0.06								3.00	5.10
143.0	0.50	0.00		1.83	0.07		2.16	0.02								3.00	5.10
144.0	0.40	0.00		1.74	0.06		2.15	0.00	0.00							3.00	1.10
148.0	0.44	0.00		1.38	0.02		1.93	0.00								3.00	1.10
150.0	0.33	0.00		1.20	0.00	0.00	1.82	0.00								3.00	1.10
154.0	0.11	0.00		1.12	0.00		1.60	0.00	0.00							3.00	1.10
160.0	.00	0.00		1.00	0.00		1.12	0.00								3.00	1.10
164.0	.00	0.00		0.60	0.00		0.80	0.00	0.00							3.00	1.10
168.0	.00	0.00		0.20	0.00		0.65	0.00	0.00							3.00	1.10
170.0	.00	0.00		.00	0.00		0.38	0.00								3.00	1.10
172.8	.00	0.00		.00	0.00		.00	0.00	0.00							3.00	1.10

a Mostly clear backwater above cross section 3, head breached below cross section, causing slight turbidity & circular current.

b Clear water.

c No fish observed.

| Extrapolated or interpolated value.

Table C-3.1 (cont.) Summary of hydraulic data collected at site 101.7L, Cross section 4.

d RATING CURVE: A = -1.95 B = 65.00 CF = 367.00  
 DATE: SEPT 21 a DATE: AUG 30 b DATE: AUG 20 c DATE: DATE:  
 REACH US = 40.00 REACH US = 40.00 REACH US = 50.00 REACH US =  
 DS = 156.00 DS = 156.00 DS = 156.00 DS =  
 GCQ: 11400 GCQ: 15300 GCQ: 18500 GCQ:  
 WSEL: 371.86 WSEL: 372.89 WSEL: 373.66 WSEL: SUBSTRATE INFO

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
0.0	.00	.00		.00	.00		.00	.00								3.00	2.50
28.7	.00	.00		.00	.00		.00	.00								3.00	1.10
30.0	.00	.00		.00	.00		0.50	0.00								3.00	1.10
31.2	.00	.00		.00	.00		0.58	0.00								3.00	1.10
32.0	.00	.00		0.30	0.00	0.00	0.63	0.00								3.00	1.10
34.0	.00	.00		0.20	0.00	0.00	0.75	0.00								3.00	1.10
36.0	.00	.00		0.70	0.00	0.00	0.83	0.00								3.00	6.20
38.0	.00	.00		0.60	0.05		0.90	0.00								3.00	6.20
40.0	.00	.00		0.50	0.10	0.00	0.93	0.00								3.00	6.20
42.0	.00	.00		0.57	0.07		0.95	0.00								3.00	6.20
46.0	.00	.00		0.70	0.00	0.00	0.98	0.00								3.00	6.20
52.0	.00	.00		0.60	0.00	0.00	1.00	0.00								3.00	6.20
58.0	.00	.00		0.70	0.00	0.00	1.10	0.00								3.00	6.20
62.0	.00	.00		0.83	0.00		1.20	0.00								3.00	6.20
64.0	.00	.00		0.90	0.00	0.00	1.14	0.00								3.00	6.20
70.0	.00	.00		0.70	0.00	0.00	0.96	0.00								3.00	6.20
72.0	.00	.00		0.52	0.00		0.90	0.00								3.00	6.20
74.0	.00	.00		0.33	0.00		0.73	0.00								3.00	6.20
76.0	.00	.00		0.15	0.00		0.55	0.00								3.00	6.20
77.6	.00	.00		.00	.00		0.38	0.00								3.00	6.20
81.2	.00	.00		.00	.00		.00	0.00								3.00	6.20
87.4	.00	.00		.00	.00		.00	0.00								3.00	6.20
92.0	.00	.00		.00	.00		0.30	0.00								3.00	5.20
96.0	.00	.00		.00	.00		.00	0.00								3.00	5.20

a Shallow clear pool, upwelling above cross section, not deep enough for measurements, not breached.

b Clear water

c No fish, changed depth from 0.1 to 1.0 at 52'.

d Used rating curve from staff gage P1B.

| Extrapolated or interpolated value.

Table C-3.2

Summary of hydraulic data collected at site 105.0L, Cross section 1.

RATING CURVE:			A = -3.09	B = 0.89	CF = 395.00										SUBSTRATE INFO		
DATE: SEPT 28			DATE: AUG 30 <sup>a</sup>			DATE: AUG 20 <sup>a</sup>			DATE:			DATE:					
REACH US = 144.00			REACH US = 144.00			REACH US = 144.00			REACH US =			REACH US =					
DS = 999.00			DS = 999.00			DS = 999.00			DS =			DS =					
GCQ: 7320			GCQ: 15300			GCQ: 18500			GCQ:			GCQ:					
WSEL: 397.24			WSEL: 399.31			WSEL: 400.10			WSEL:			WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
0.0	.00	.00		.00	.00		.00	.00								10.00	8.20
42.0	.00	.00		.00	.00		1.50	.00								10.00	8.20
45.0	.00	.00		0.97	.00		1.67	.00								10.00	8.20
47.0	.00	.00		0.97	.00		1.79	0.20								10.00	8.20
48.5	.00	.00		0.97	0.10		1.87	0.20								10.00	8.20
49.0	.00	.00		0.97	0.20		1.90	0.38								10.00	8.20
51.0	.00	.00		0.97	0.20		2.01	1.09								10.00	8.20
53.0	.00	.00		0.97	0.30		2.13	1.80								10.00	8.20
55.0	.00	.00		0.97	1.50		2.24	2.37								10.00	8.20
56.0	.00	.00		1.51	1.90		2.30	2.65								12.00	5.30
57.0	0.20	0.00		1.71	2.30		2.50	2.93								12.00	5.30
58.0	0.40	0.00		1.91	2.45		2.70	3.22								12.00	5.30
59.0	0.45	0.10		1.96	2.60		2.75	3.50								12.00	5.30
60.0	0.50	0.20		2.01	2.85		2.80	4.00								12.00	5.30
61.0	0.60	0.20		2.11	3.10		2.90	4.00								12.00	5.30
62.0	0.70	0.20		2.21	3.30		3.00	4.00								12.00	5.30
63.0	0.80	0.20		2.31	3.50		3.10	4.00								12.00	5.30
64.0	0.90	0.20		2.41	3.75		3.20	4.00								12.00	5.30
65.0	1.00	0.23		2.51	4.00		3.30	4.00								12.00	5.30
66.0	1.10	0.25	0.25	2.61	4.00		3.40	4.00								12.00	5.30
68.0	1.00	0.40	0.40	2.51	4.00		3.30	4.00								12.00	5.30
70.0	1.30	0.40		2.81	4.00		3.60	4.00								12.00	5.30
72.0	1.30	0.90	0.90	2.81	4.00		3.60	4.00								12.00	5.30
74.0	1.60	1.35		3.11	4.00		3.90	4.00								12.00	5.30
76.0	1.70	1.70	1.70	3.21	4.00		4.00	4.00								12.00	5.30
78.0	1.80	1.90	1.60	3.31	4.00		4.10	4.00								12.00	5.30
80.0	2.30	1.90		3.81	4.00		4.60	4.00								12.00	5.30
82.0	2.50	2.80	2.30	4.01	4.00		4.80	4.00								12.00	5.30

<sup>a</sup> Data calculated from Cross section 1.

| Extrapolated or interpolated value.

Table C-3.2 (cont.) Summary of hydraulic data collected at site 105.8L, Cross section 2.

RATING CURVE: A = -0.74 B = 0.37 CF = 395.00																	
DATE: SEPT 28					DATE: AUG 30					DATE: AUG 20					DATE:		
REACH US = 88.00				REACH US = 70.00				REACH US = 88.00				REACH US =				SUBSTRATE INFO	
DS = 144.00				DS = 100.00				DS = 500.00				DS =					
GCQ: 7320				GCQ: 15300				GCQ: 18500				GCQ:					
WSEL: 399.90				WSEL: 401.43				WSEL: 401.90				WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1												5			
0.0	.00	.00		.00	.00		.00	.00								1.00	6.30
30.5	.00	.00		.00	.00		.00	.00								12.00	6.30
33.0	.00	.00		.00	.00		0.20	0.20								12.00	6.30
34.0	.00	.00		.00	.00		0.25	0.20								12.00	6.30
35.0	.00	.00		0.20	0.00		0.30	0.20								12.00	6.30
37.0	.00	.00		0.50	0.20		0.40	0.20								12.00	6.30
39.0	.00	.00		0.60	0.10	0.10	0.55	1.00								12.00	6.30
41.0	.00	.00		0.80	0.40	0.40	0.70	1.80	2.70							12.00	6.30
43.0	.00	.00		1.50	1.50	1.40	1.20	2.37								12.00	6.30
45.0	.00	.00		1.90	2.30	0.40	1.70	2.93								12.00	6.30
47.0	.00	.00		2.20	2.60	0.60	2.20	3.50	3.20							12.00	6.30
49.0	.00	.00		2.30	3.10	2.70	2.00	4.00								12.00	6.30
50.0	.00	.00		2.35	3.30		2.00	4.00								12.00	6.30
51.0	0.25	0.00		2.40	3.50	3.00	2.25	4.00								10.00	6.30
52.0	0.50	0.00		2.60	3.75		2.50	4.00								10.00	6.30
53.0	0.55	0.15		2.80	4.00	2.30	2.55	4.00								10.00	6.30
54.0	0.60	0.30		2.14	4.00		2.60	4.00								10.00	6.30
56.0	0.90	0.50	0.50	2.44	4.00		2.90	4.00								10.00	6.30
58.0	0.70	0.70		2.24	4.00		2.70	4.00								10.00	6.30
60.0	1.20	1.20		2.74	4.00		3.20	4.00								10.00	6.30
62.0	1.20	1.60	1.50	2.74	4.00		3.20	4.00								12.00	6.30
64.0	1.70	1.50	1.20	3.24	4.00		3.70	4.00								12.00	6.30
66.0	2.40	1.20	0.40	3.94	4.00		4.40	4.00								12.00	6.30
68.0	2.50	2.00	1.20	4.04	4.00		4.50	4.00								12.00	6.30
70.0	2.70	2.90	1.60	4.24	4.00		4.70	4.00								12.00	6.30

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Table C-3.2 (cont.) Summary of hydraulic data collected at site 105.8L, Cross section 3.

RATING CURVE:			A = -0.74	B = 0.37	CF = 395.00	DATE: SEPT 28 a			DATE: AUG 30			DATE: AUG 20			DATE:			SUBSTRATE INFO	
REACH US = 143.00			REACH US = 143.00			REACH US = 143.00			REACH US =			REACH US =							
DS = 88.00			DS = 106.00			DS = 88.00			DS =			DS =							
GCQ: 7320			GCQ: 15300			GCQ: 18500			GCQ:			GCQ:							
WSEL: 399.90			WSEL: 401.43			WSEL: 401.90			WSEL:			WSEL:							
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV		
		1		2			3			4			5						
0.0	.00	.00		.00	.00		.00	.00								13.00	6.30		
17.4	.00	.00		.00	.00		.00	.00								10.00	6.30		
18.0	.00	.00		.00	.00		0.25	0.20								10.00	6.30		
21.0	.00	.00		.00	.00		0.66	0.73								10.00	6.30		
22.0	.00	.00		0.10	0.00		0.80	0.90	1.00							10.00	6.30		
23.0	.00	.00		0.20	0.00	0.00	0.90	1.13								10.00	6.30		
25.0	.00	.00		0.50	0.30	0.30	1.10	1.58								10.00	6.30		
26.0	.00	.00		0.60	0.75		1.20	1.80	1.50							10.00	6.30		
27.0	.00	.00		0.70	1.20	1.30	1.33	2.10								10.00	6.30		
29.0	.00	.00		0.90	1.40	1.50	1.58	2.70								10.00	6.30		
30.0	.00	.00		1.15	1.75		1.70	3.00	2.60							10.00	6.30		
31.0	.00	.00		1.40	2.10	1.70	1.85	3.25								10.00	6.30		
33.0	.00	.00		1.50	2.50	2.10	2.15	3.75								10.00	6.30		
34.0	.00	.00		1.70	2.75		2.30	4.00	3.60							10.00	6.30		
35.0	.00	.00		1.90	3.00	2.00	2.35	4.15								10.00	6.30		
36.0	0.30	0.50		1.95	3.30		2.40	4.30	3.70							12.00	6.30		
37.0	0.45	0.60		2.00	3.60	3.40	2.45	4.40								12.00	6.30		
38.0	0.60	0.70		2.25	3.55		2.60	4.40								12.00	6.30		
39.0	0.75	0.90		2.50	3.50	2.20	2.75	4.40								12.00	6.30		
40.0	0.90	1.10		2.55	3.50		2.90	4.40								12.00	6.30		
41.0	0.95	0.40		2.60	3.50	2.40	2.95	4.40								12.00	6.30		
42.0	1.00	1.70	1.70	2.54	4.40		3.00	4.40								12.00	6.30		
44.0	1.20	2.60	1.70	2.74	4.40		3.20	4.40								12.00	6.30		
46.0	1.40	3.20	2.90	2.94	4.40		3.40	4.40								12.00	6.30		
48.0	1.60	3.50	3.20	3.14	4.40		3.60	4.40								12.00	6.30		
50.0	1.80	4.00	2.90	3.34	4.40		3.80	4.40								12.00	6.30		
52.0	1.60	4.70	4.00	3.14	4.40		3.60	4.40								12.00	6.30		
54.0	2.00	4.40	2.90	3.54	4.40		4.00	4.40								12.00	6.30		

a Turbid water.

| Extrapolated or interpolated value.

Table C-3.2 (cont.) Summary of hydraulic data collected at site 105.8L, Cross section 4.

RATING CURVE:			A = -0.74	B = 0.37	CF = 395.00	DATE: SEPT 28 <sup>a</sup>			DATE: AUG 30			DATE: AUG 20			DATE:			SUBSTRATE INFO	
REACH US = 500.00			REACH US = 50.00			REACH US = 250.00			REACH US =			REACH US =							
DS = 143.00			DS = 143.00			DS = 143.00			DS =			DS =							
GCD: 7320			GCD: 15300			GCD: 18500			GCD:			GCD:							
WSEL: 399.90			WSEL: 401.43			WSEL: 401.90			WSEL:			WSEL:							
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV		
		1			2			3			4			5					
0.0	.00	.00		.00	.00		.00	.00								10.00	6.30		
24.0	.00	.00		.00	.00		.00	.00								12.00	6.30		
25.5	.00	.00		.00	.00		0.26	0.26								12.00	6.30		
27.0	.00	.00		0.20	0.00	0.00	0.53	0.53								12.00	6.30		
28.0	.00	.00		0.40	0.15		0.70	0.70	0.70							12.00	6.30		
29.0	.00	.00		0.60	0.30	0.40	0.88	0.88								10.00	6.30		
31.0	.00	.00		1.00	0.60	0.60	1.23	1.00								10.00	6.30		
32.0	.00	.00		1.10	0.80		1.40	1.10	1.20							10.00	6.30		
33.0	.00	.00		1.20	1.00	1.10	1.50	1.23								10.00	6.30		
35.0	.00	.00		1.60	1.10	0.50	1.70	1.48								10.00	6.30		
36.0	.00	.00		1.70	1.20		1.80	1.60	1.50							10.00	6.30		
37.0	0.20	0.00		1.80	1.30	1.10	1.95	1.75								10.00	6.30		
38.0	0.40	0.00		1.85	1.70		2.10	1.90								10.00	6.30		
39.0	0.45	0.03		1.90	2.10	1.60	2.25	2.05								10.00	6.30		
40.0	0.50	0.05		2.05	2.20		2.40	2.20	2.00							10.00	6.30		
41.0	0.45	0.03		2.20	2.30	1.50	2.38	2.45								10.00	6.30		
42.0	0.40	0.00		2.15	2.35		2.35	2.70								10.00	6.30		
43.0	0.60	0.05		2.10	2.40	2.00	2.33	2.95								10.00	6.30		
44.0	0.80	0.10		2.30	2.40		2.30	3.20	3.20							10.00	6.30		
45.0	0.80	0.35		2.50	2.40	1.70	2.50	3.10								10.00	6.30		
46.0	0.80	0.60		2.34	2.40		2.70	3.00	2.00							10.00	6.30		
48.0	1.30	0.60		2.84	2.40		3.30	3.00								10.00	6.30		
50.0	1.50	1.20		3.04	2.40		3.50	3.00								10.00	6.30		
52.0	1.80	1.30	1.10	3.34	2.40		3.80	3.00								10.00	6.30		
54.0	2.10	1.60		3.64	2.40		4.10	3.00								10.00	6.30		
56.0	2.40	1.90	1.30	3.94	2.40		4.40	3.00								10.00	6.30		
58.0	2.60	1.90	0.90	4.14	2.40		4.60	3.00								10.00	6.30		

<sup>a</sup> Turbid water.

† Extrapolated or interpolated value.

Table C-3.3

Summary of hydraulic data collected at site 114.1R, Cross section 1.

RATING CURVE:			A = -2.14	B = 0.69	CF = 465.00										SUBSTRATE INFO		
DATE: SEPT 26 a			DATE: AUG 15			DATE: AUG 23 b			DATE:			DATE:					
REACH US = 228.00			REACH US = 162.00			REACH US = 162.00			REACH US =			REACH US =					
DS = 100.00			DS = 20.00			DS = 50.00			DS =			DS =					
GCQ: 7680			GCQ: 15100			GCQ: 17900			GCQ:			GCQ:					
WSEL: 468.47			WSEL: 470.54			WSEL: 471.23			WSEL:			WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	CDV
		1			2			3			4			5			
0.0	.00	.00		.00	.00		.00	.00								3.00	8.10
11.0	.00	.00		.00	.00		.00	.00								3.00	4.20
15.0	.00	.00		.00	.00		.00	0.41								3.00	4.20
24.0	.00	.00		.00	.00		0.67	0.97								3.00	4.20
25.0	.00	.00		0.10	0.10		0.70	1.03								3.00	4.20
26.0	.00	.00		0.20	0.20		0.77	1.07								3.00	4.20
30.0	.00	.00		0.50	0.25		1.05	1.21								3.00	4.20
35.0	.00	.00		0.83	0.46		1.40	1.38								3.00	4.20
36.0	.00	.00		0.90	0.50		1.50	1.44								3.00	4.20
40.0	.00	.00		1.30	0.90		1.90	1.67								3.00	4.20
45.0	.00	.00		1.40	1.00		2.40	1.96								4.00	4.20
50.0	.00	.00		1.50	1.10		2.45	2.03								4.00	4.20
55.0	.00	.00		1.55	0.95		2.50	2.10								3.00	4.20
60.0	.00	.00		1.60	0.80		2.40	2.15								3.00	4.20
65.0	.00	.00		1.50	0.90		2.30	2.20								3.00	1.10
70.0	.00	.00		1.40	1.00	1.00	2.30	2.04								3.00	1.10
75.0	.00	.00		1.45	0.97		2.30	1.88	1.80							6.00	1.10
80.0	.00	.00		1.50	0.95	0.90	2.30	1.97								6.00	1.10
85.0	.00	.00		1.65	0.80		2.30	2.05								6.00	1.10
90.0	.00	.00		1.80	0.65	0.60	2.30	2.01								6.00	1.10
92.4	.00	.00		1.85	0.67		2.30	1.98								6.00	1.10
94.0	0.10	.00		1.88	0.69		2.30	1.97								6.00	1.10
95.0	0.15	.00		1.90	0.70		2.30	1.96								6.00	1.10
96.0	0.20	0.90		1.92	0.71		2.29	1.96								3.00	1.10
98.0	0.60	1.50		1.96	0.73		2.27	1.97								3.00	1.10
100.0	0.80	1.80		2.00	0.75	0.70	2.25	1.98								3.00	1.10
102.0	0.80	1.95		2.08	0.79		2.23	1.99								3.00	1.10
104.0	0.80	1.75		2.16	0.83		2.21	2.00								3.00	1.10
105.0	0.85	1.73		2.20	0.85		2.20	2.00	1.54							3.00	1.10
106.0	0.90	1.70		2.24	0.87		2.24	2.01								3.00	1.10
108.0	1.10	1.90		2.32	0.91		2.32	2.02								3.00	1.10
110.0	1.00	1.70		2.40	0.95	0.70	2.40	2.03								3.00	1.10

Table C-3.3 (cont.) Summary of hydraulic data collected at site 114.1R, Cross section 1.

STA	DEPTH	1		DEPTH	2		DEPTH	3		DEPTH	4		DEPTH	5		SUB	COV
		VEL	V.4		VEL	V.4		VEL	V.4		VEL	V.4		VEL	V.4		
112.0	1.00	1.55	1.25	2.42	0.93		2.48	2.04								3.00	1.10
114.0	0.90	1.60		2.44	0.91		2.56	2.05								3.00	1.10
115.0	0.85	1.50		2.45	0.90		2.60	2.05	1.62							3.00	1.10
116.0	0.80	1.40		2.46	0.89		2.64	2.04								3.00	1.10
118.0	0.70	1.10		2.48	0.87		2.72	2.02								3.00	1.10
120.0	0.50	1.10		2.50	0.85	0.90	2.80	2.01								3.00	1.10
122.0	0.40	0.90		2.64	0.85		2.88	1.99								3.00	1.10
124.0	0.40	0.80		2.78	0.85		2.96	1.97								3.00	1.10
125.0	0.35	0.80		2.85	0.85		3.00	1.96								3.00	1.10
126.0	0.30	0.95		2.92	0.85		3.04	1.94								3.00	1.10
128.0	0.30	0.75		3.06	0.85		3.12	1.89								3.00	1.10
130.0	0.40	1.00		3.20	0.85	0.80	3.20	1.85								3.00	1.10
131.0	0.40	1.00		3.19	0.87		3.24	1.82								3.00	1.10
132.0	0.40	0.95		3.18	0.88		3.28	1.80								3.00	1.10
133.0	0.40	0.85		3.17	0.90		3.32	1.78								3.00	1.10
134.0	0.50	0.85		3.16	0.91		3.36	1.75								3.00	1.10
135.0	0.40	1.00		3.15	0.93		3.40	1.73								3.00	1.10
137.8	.00	0.00		3.12	0.97		2.84	1.45								3.00	1.10
140.0	0.00	0.00		3.10	1.00	0.70	2.40	1.22								3.00	1.10
145.0	0.00	0.00		1.90	0.70	0.50	1.40	0.71								3.00	4.20
148.0	.00	0.00		0.50	0.00	0.00	0.80	0.41								3.00	4.20
149.0	.00	0.00		.00	0.00		0.60	0.31								3.00	4.20
152.0	.00	0.00		.00	0.00		.00	0.00								3.00	4.20

a Breached.

b No upwelling, no fish observed.

| Extrapolated or interpolated value.

Table C-3.3 (cont.) Summary of hydraulic data collected at site 114.1R, Cross section 2.

RATING CURVE:			A = -2.14	B = 0.69	CF = 465.00	DATE: SEPT 26 a			DATE: AUG 15 b			DATE: AUG 23 c			DATE:			SUBSTRATE INFO	
REACH US = 105.00			REACH US = 189.00			REACH US = 105.00			REACH US =			REACH US =							
DS = 98.00			DS = 162.00			DS = 162.00			DS =			DS =							
GCQ: 7680			GCQ: 15100			GCQ: 17900			GCQ:			GCQ:							
WSEL: 468.47			WSEL: 470.54			WSEL: 471.23			WSEL:			WSEL:							
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV		
		1			2			3			4			5					
0.0	.00	.00		.00	.00		.00	.00								3.00	8.10		
53.0	.00	.00		.00	.00		.00	.00								3.00	5.20		
57.0	.00	.00		.00	.00		0.63	0.38								3.00	5.20		
58.0	.00	.00		0.20	0.00		0.79	0.48								3.00	5.20		
60.0	.00	.00		0.60	0.05		1.10	0.67								3.00	5.20		
64.0	.00	.00		1.30	0.30		1.58	1.28								3.00	5.20		
68.0	.00	.00		1.70	0.50		2.06	1.89								3.00	5.20		
70.0	.00	.00		1.75	0.75		2.30	2.20								3.00	5.20		
72.0	.00	.00		1.80	1.00		2.34	2.37								3.00	5.20		
78.0	.00	.00		1.80	1.30		2.46	2.89								3.00	5.20		
80.0	0.05	.00		1.80	1.40		2.50	3.06	2.39							3.00	5.20		
82.0	0.05	.00		1.84	1.42		2.50	3.10								3.00	5.20		
84.0	0.10	.00		1.88	1.44		2.50	3.15								3.00	5.20		
86.0	0.10	.00		1.92	1.46		2.50	3.19								3.00	5.20		
88.0	0.10	.00		1.96	1.48		2.50	3.24								3.00	5.20		
90.0	0.15	.00		2.00	1.50		2.50	3.28								3.00	5.20		
92.0	0.10	.00		2.00	1.48		2.53	3.22								3.00	5.20		
94.0	0.10	.00		2.00	1.46		2.57	3.17								3.00	1.10		
96.0	0.20	0.70		2.00	1.44		2.60	3.11								6.00	1.10		
98.0	0.50	1.20		2.00	1.42		2.63	3.06								6.00	1.10		
100.0	0.50	2.00		2.00	1.40		2.67	3.00								6.00	1.10		
102.0	0.50	2.35		2.06	1.32		2.70	2.94								6.00	1.10		
104.0	0.40	2.00		2.12	1.24		2.73	2.89								6.00	1.10		
106.0	0.40	2.20		2.18	1.16		2.77	2.83								6.00	1.10		
108.0	0.60	1.85		2.24	1.08		2.80	2.78								6.00	1.10		
110.0	0.50	1.55		2.30	1.00		2.83	2.72								6.00	1.10		
114.0	0.80	1.75		2.34	0.80		2.90	2.61								6.00	1.10		
116.0	0.80	2.05		2.36	0.70		2.93	2.55								6.00	1.10		
118.0	0.80	2.25		2.38	0.60		2.97	2.50								6.00	1.10		
120.0	0.90	2.40		2.40	0.50		3.00	2.44								6.00	1.10		
122.0	0.80	2.25		2.30	0.48		2.84	2.38								6.00	1.10		
124.0	0.60	2.50		2.20	0.46		2.68	2.32								6.00	1.10		

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Table C-3.3 (cont.) Summary of hydraulic data collected at site 114.1R, Cross section 2.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
126.0	0.60	2.40		2.10	0.44		2.52	2.27								6.00	1.10
128.0	0.50	1.75		2.00	0.42		2.36	2.21								6.00	1.10
130.0	0.40	1.00		1.90	0.40		2.20	2.15	1.88							6.00	1.10
138.0	.00	0.00		1.18	0.24		1.40	1.81								6.00	1.10
140.0	.00	0.00		1.00	0.20		1.20	1.73	1.47							6.00	1.10
150.0	.00	0.00		0.50	0.20		0.80	0.80								6.00	1.10
160.0	.00	0.00		0.58	0.08		1.20	0.29								3.00	1.10
163.0	.00	0.00		0.60	0.05		0.48	0.12								3.00	1.10
165.0	.00	0.00		.00	0.05		.00	0.00								3.00	4.10

a Gage graveled in at bottom.

b Fish observed.

c No upwelling or fish observed, middle station skipped, current too swift.

| Extrapolated or interpolated value.

Table C-3.3 (cont.) Summary of hydraulic data collected at site 114.1R, Cross section 3.

RATING CURVE: A = -2.14 B = 0.69 CF = 465.00																	
DATE: SEPT 26 a					DATE: AUG 15					DATE: AUG 23 b					DATE:		
REACH US = 30.00					REACH US = 50.00					REACH US = 100.00					REACH US =		
DS = 105.00					DS = 21.00					DS = 105.00					DS =		
GCQ: 7680					GCQ: 15100					GCQ: 17900					GCQ:		
WSEL: 468.47					WSEL: 470.54					WSEL: 471.23					WSEL:		
															SUBSTRATE INFO		
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
	1			2			3			4			5				
0.0	.00	.00		.00	.00		.00	.00								11.00	8.10
71.0	.00	.00		.00	.00		.00	.00								8.00	4.20
72.0	.00	.00		.00	.00		0.10	.00								8.00	4.20
76.0	.00	.00		.00	.00		0.40	.00								6.00	4.20
76.5	.00	.00		.00	.00		0.50	.00								6.00	4.20
80.0	.00	.00		0.75	0.65	0.75	1.20	2.20	2.05							6.00	4.20
84.0	.00	.00		1.50	1.00	1.10	1.84	3.24								6.00	4.20
85.0	.00	.00		1.50	1.08		2.00	3.50	2.44							6.00	4.20
90.0	.00	.00		1.50	1.50	2.00	2.00	4.16	3.43							6.00	4.20
91.0	.00	.00		1.52	1.68		1.99	4.14								6.00	4.20
92.0	0.05	.00		1.53	1.87		1.99	4.11								6.00	4.20
94.0	0.10	.00		1.57	2.23		1.97	4.07								6.00	4.20
96.0	0.20	0.50		1.60	2.60	2.80	1.96	4.02								8.00	4.20
98.0	0.40	1.10		1.67	2.53		1.94	3.97								8.00	4.20
100.0	0.50	1.45		1.73	2.47		1.93	3.92								8.00	4.20
102.0	0.60	2.00		1.80	2.40	2.90	1.91	3.88								8.00	4.20
104.0	0.80	2.75		1.80	2.27		1.90	3.83								8.00	4.20
106.0	0.90	2.80		1.80	2.13		1.88	3.78								8.00	4.20
108.0	1.00	2.95		1.80	2.00	1.80	1.87	3.73								8.00	4.20
110.0	1.10	2.40		1.83	2.07		1.85	3.69								8.00	4.20
112.0	1.00	2.85	1.95	1.87	2.13		1.84	3.64								8.00	5.20
114.0	0.80	2.85		1.90	2.20	2.00	1.82	3.59								8.00	5.20
116.0	0.70	2.15		1.83	2.23		1.81	3.54								8.00	5.20
118.0	0.60	1.80		1.77	2.27		1.79	3.50								8.00	5.20
120.0	0.50	1.15		1.70	2.30	2.10	1.78	3.45								8.00	5.20
122.0	0.40	0.00		1.60	2.28		1.76	3.40								8.00	5.20
124.0	0.30	0.60		1.50	2.25		1.75	3.35								8.00	5.20
128.0	0.05	.00		1.30	2.20	2.50	1.72	3.26								8.00	5.20
130.0	0.05	.00		1.17	2.00		1.70	3.21								8.00	5.20
132.0	0.05	.00		1.03	1.80		1.60	3.22								8.00	5.20
134.0	0.05	.00		0.90	1.60	1.70	1.50	3.24								8.00	5.20
136.0	0.05	.00		0.88	1.51		1.40	3.25								6.00	5.20

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Table C-3.3 (cont.) Summary of hydraulic data collected at site 114.1R, Cross section 3.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
140.0	0.10	.00		0.83	1.34		1.20	3.20	2.92							6.00	5.20
142.0	0.08	.00		0.80	1.25	1.30	1.24	3.24								6.00	5.20
144.0	0.05	.00		0.80	1.34		1.20	3.19								6.00	5.20
148.0	0.05	.00		0.80	1.51		1.36	3.10								6.00	5.20
150.0	0.05	.00		0.80	1.60	1.70	1.40	3.06								6.00	5.20
152.0	0.05	.00		0.80	1.65		1.31	3.06								6.00	4.20
156.0	0.05	.00		0.80	1.75		1.12	3.06								6.00	4.20
158.0	0.05	.00		0.80	1.80	1.80	1.03	3.06								6.00	4.20
160.0	0.05	.00		0.70	1.40		0.93	3.06								6.00	4.20
162.0	.00	.00		0.60	1.00	1.60	0.84	3.06								6.00	4.20
165.0	.00	.00		0.30	0.50		0.70	3.06								6.00	4.20
168.0	.00	.00		.00	0.00		0.40	1.75								3.00	4.20
172.0	.00	.00		.00	0.00		.00	0.00								3.00	4.20

a Deep hole from 90-130'.

b No fish observed, some ground seepage.

| Extrapolated or interpolated value.

Table C-3.4

Summary of hydraulic data collected at site 115.0R, Cross section 1.

RATING CURVE:			A = -1.54	B = 0.55	CF = 470.00	DATE: SEPT 26 a			DATE: AUG 16 b			DATE: OCT 1 c			SUBSTRATE INFO		
REACH US = 75.00			REACH US = 137.00			REACH US =			REACH US =								
DS = 75.00			DS = 500.00			DS =			DS =								
GCQ: 7680			GCQ: 14500			GCQ:			GCQ: 7740								
WSEL: 474.46			WSEL: 475.61			WSEL:			WSEL: 474.41								
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
0.0	.00	.00		.00	.00											1.00	8.00
11.0	.00	.00		.00	.00											1.00	9.00
29.0	.00	.00		.00	.00											1.00	1.10
52.0	.00	.00		.00	.00											1.00	1.10
60.0	.00	.00		.00	.00											1.00	1.10
70.4	.00	.00		.00	.00											1.00	1.10
74.0	.00	.00		0.40	0.00	0.00										9.00	5.10
75.0	.00	.00		0.50	0.00											9.00	5.10
78.0	.00	.00		0.60	0.00	0.00										9.00	5.10
82.0	.00	.00		0.80	0.00	0.00										9.00	5.10
86.0	.00	.00		0.80	0.00	0.00										9.00	5.10
90.0	.00	.00		0.80	0.00	0.00										9.00	5.10
100.0	.00	.00		1.30	0.00	0.00										9.00	5.10
101.0	.00	.00		1.32	0.00											9.00	5.10
102.0	0.05	0.00		1.33	0.00											9.00	5.10
104.0	0.20	0.00		1.36	0.00											9.00	5.10
105.0	0.25	0.00		1.38	0.00											9.00	5.10
106.0	0.30	0.00		1.39	0.00											9.00	5.10
108.0	0.25	0.00		1.42	0.00											9.00	5.10
110.0	0.20	0.00		1.45	0.00	0.00										9.00	5.10
112.0	0.30	0.00		1.53	0.02											9.00	5.10
114.0	0.40	0.00		1.61	0.04											9.00	5.10
116.0	0.40	0.00		1.69	0.06											9.00	5.10
118.0	0.50	0.00		1.77	0.08											9.00	5.10
120.0	0.60	0.00		1.85	0.10	0.00										9.00	5.10
122.0	0.70	0.00		1.93	0.12											9.00	5.10
124.0	0.90	0.00		2.01	0.14											9.00	5.10
126.0	0.90	0.05		2.09	0.16											9.00	5.10
128.0	1.00	0.10		2.17	0.18											9.00	5.10
130.0	1.00	0.00		2.25	0.20											9.00	5.10
132.0	1.20	0.00		2.22	0.26											9.00	5.10
134.0	1.10	0.00		2.19	0.32											9.00	5.10

Table C-3.4 (cont.) Summary of hydraulic data collected at site 115.0R, Cross section 1.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
135.0	1.05	0.00		2.18	0.35											9.00	5.10
136.0	1.00	0.00		2.16	0.38											9.00	5.10
138.0	0.90	0.00		2.13	0.44											9.00	5.10
140.0	0.90	0.00		2.10	0.50											9.00	5.10
142.0	0.90	0.00		1.91	0.46											9.00	5.10
144.0	0.90	0.00		1.72	0.42											9.00	5.10
146.0	0.90	0.00		1.53	0.38											9.00	5.10
148.0	0.80	0.00		1.34	0.34											9.00	5.10
150.0	0.80	0.00		1.15	0.30											9.00	5.20
152.0	0.80	0.00		1.18	0.30											9.00	5.20
154.0	0.85	0.00		1.21	0.30											9.00	5.20
156.0	0.70	0.00		1.24	0.30											9.00	5.20
160.0	0.21	0.00		1.30	0.30	0.10										9.00	5.20
161.7	.00	0.00		1.25	0.32											5.00	4.20
165.0	.00	0.00		1.15	0.35											5.00	4.20
170.0	.00	0.00		1.00	0.40											5.00	4.20
180.0	.00	0.00		1.00	0.50											5.00	4.20
190.0	.00	0.00		1.10	0.30	0.20										5.00	4.20
195.0	.00	0.00		1.25	0.30											5.00	4.20
200.0	.00	0.00		1.40	0.30											5.00	4.20
210.0	.00	0.00		1.05	0.10											5.00	4.20
220.0	.00	0.00		0.80	0.00	0.00										5.00	5.10
225.0	.00	0.00		0.53	0.00											9.00	5.10
230.0	.00	0.00		0.25	0.00											9.00	5.10
240.0	.00	0.00		0.20	0.00											9.00	5.10
244.0	.00	0.00		0.30	0.00											9.00	5.10
246.0	.00	0.00		0.20	0.00											9.00	5.10
247.0	.00	0.00		.00	0.00											9.00	5.10
255.0	.00	0.00		.00	0.00											9.00	5.10
278.0	.00	0.00		.00	0.00											3.00	4.10
299.0	.00	0.00		.00	0.00											3.00	4.10

a Used true WSEL.

b No fish seen, cross section representative of channel from riffle to mouth.

c Cross section survey.

| Extrapolated or interpolated value.

Table C-3.4 (cont.) Summary of hydraulic data collected at site 115.0R, Cross section 2.

RATING CURVE:			A = -1.54	B = 0.55	CF = 470.00										SUBSTRATE INFO		
DATE: SEP 26 a			DATE: AUG 16 b			DATE:			DATE: OCT 1 c								
REACH US = 155.00	DS = 137.00	GCO: 7680	REACH US = 155.00	DS = 137.00	GCO: 14500	REACH US =	DS =	GCO:	REACH US =	DS =	GCO: 7740						
WSEL: 474.46			WSEL: 475.61			WSEL:			WSEL:		WSEL: 474.41	SUB	COV				
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
	1			2			3			4			5				
0.0	.00	.00		.00	.00											3.00	5.10
2.0	.00	.00		.00	.00											3.00	5.10
5.5	.00	.00		.00	.00											9.00	5.10
31.0	.00	.00		.00	.00											9.00	5.10
33.0	.00	.00		0.20	0.00	0.00										9.00	5.10
35.0	.00	.00		0.20	0.00	0.00										9.00	5.10
37.0	.00	.00		0.30	0.12	0.20										9.00	5.20
41.0	.00	.00		0.40	0.37	0.20										9.00	5.20
41.5	.00	.00		0.50	0.40											9.00	5.20
42.0	0.10	0.00		0.60	0.43											9.00	5.20
45.0	0.50	0.05		1.20	0.61	0.30										9.00	5.20
48.0	0.70	0.10		1.35	0.79											9.00	5.20
49.0	0.83	0.10		1.40	0.86	0.50										9.00	5.20
51.0	1.10	0.10		1.63	0.98											9.00	5.20
53.0	1.63	0.07		1.85	1.10											9.00	5.20
54.0	1.90	0.05		1.89	1.10											9.00	5.20
57.0	1.90	0.03		2.00	1.10	0.40										9.00	5.20
60.0	1.10	0.05		1.85	1.33											9.00	5.20
61.0	1.00	0.07		1.80	1.40											9.00	5.20
63.0	0.80	0.10		1.65	1.55											9.00	5.20
65.0	0.67	0.07		1.50	1.70											9.00	5.20
66.0	0.60	0.05		1.45	1.63											9.00	5.20
69.0	0.70	0.05		1.30	1.40	0.90										9.00	5.20
72.0	0.50	0.00		1.23	1.25											9.00	5.20
73.0	0.40	0.01		1.20	1.20											9.00	5.20
75.0	0.20	0.03		1.15	1.10											9.00	5.10
77.0	0.13	0.01		1.10	1.00											9.00	5.10
78.0	0.10	.00		1.04	0.85											9.00	5.10
81.0	0.03	.00		0.85	0.40											9.00	5.10
82.5	.00	.00		0.74	0.33											9.00	5.10
83.0	.00	.00		0.70	0.30	0.40										9.00	5.10
85.0	.00	.00		0.60	0.00	0.00										9.00	5.10

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Table C-3.4 (cont.) Summary of hydraulic data collected at site 115.0R, Cross section 2.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
87.0	.00	.00		0.40	0.00	0.00										9.00	5.10
88.9	.00	.00		.00	0.00											9.00	5.10

a Data from Oct 1st.

b No fish seen.

c Cross section survey.

| Extrapolated or interpolated value.

Table C-3.4 (cont.) Summary of hydraulic data collected at site 115.0R, Cross section 3.

RATING CURVE:			A = -1.54	B = 0.55	CF = 470.00				DATE: OCT 1 c			SUBSTRATE INFO					
DATE: SEP 26 a			DATE: AUG 16 b			DATE:			REACH US =								
REACH US = 50.00			REACH US = 160.00			REACH US =			REACH US =								
DS = 75.00			DS = 155.00			DS =			DS =								
GCQ: 7600			GCQ: 14500			GCQ:			GCQ: 7740								
WSEL: 474.46			WSEL: 474.46			WSEL:			WSEL: 474.41								
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
0.0	.00	.00		.00	.00											3.00	1.10
8.0	.00	.00		.00	.00											3.00	1.10
14.0	.00	.00		.00	.00											3.00	1.10
16.0	.00	.00		.00	.00											3.00	1.10
17.0	0.50	0.00		0.50	0.00	0.00										3.00	1.10
18.0	1.20	0.00		1.00	0.00	0.00										9.00	1.10
20.0	2.00	0.00	0.00	2.00	0.00	0.00										9.00	1.10
22.0	2.85	0.00		2.70	0.00	0.00										9.00	1.10
24.0	2.90	0.00		3.10	0.00	0.00										9.00	1.10
26.0	3.00	0.00	0.00	3.90	0.00	0.00										9.00	1.10
28.0	3.20	0.00		3.90	0.00	0.00										9.00	1.10
30.0	3.60	0.00		4.20	0.00	0.00										9.00	1.10
32.0	4.20	0.00		4.20	0.00											9.00	1.10
42.0	4.00	0.00	0.00	4.20	0.00	0.00										9.00	1.10
44.0	3.60	0.00		3.60	0.00	0.00										9.00	1.10
46.0	2.70	0.00		3.05	0.00	0.00										9.00	1.10
48.0	2.10	0.00	0.00	2.13	0.00											9.00	1.10
50.0	1.40	0.00		1.20	0.00	0.00										9.00	5.20
52.0	0.50	0.00		1.08	0.00											9.00	5.20
54.0	0.20	0.00		0.95	0.00	0.00										9.00	5.20
55.0	.00	.00		0.85	0.00											9.00	5.20
60.0	.00	.00		0.35	0.00	0.00										9.00	5.20
61.8	.00	.00		0.20	0.00											9.00	5.20

a Clear water.

b Three fish seen, nose velocities 0, cross section represents deep pool above junction of channel, used WSEL from time 1 in time 2.

c Cross section survey.

| Extrapolated or interpolated value.

Table C-3.4 (cont.) Summary of hydraulic data collected at site 115.0R, Cross section 4.

RATING CURVE:			A = -1.54	B = 0.55	CF = 470.00	DATE:			DATE: OCT 1 b			SUBSTRATE INFO					
DATE: SEP 26			DATE: AUG 16 a			DATE:			DATE:								
REACH US = 75.00			REACH US = 200.00			REACH US =			REACH US =								
DS = 30.00			DS = 160.00			DS =			DS =								
GCQ: 7680			GCQ: 14500			GCQ:			GCQ: 7740								
WSEL: 474.46			WSEL: 474.46			WSEL:			WSEL: 474.41								
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
0.0	.00	.00		.00	.00											3.00	1.10
11.0	.00	.00		.00	.00												
25.0	.00	.00		.00	.00												
25.2	.00	.00		.00	.00											9.00	1.10
26.0	.00	.00		0.03	.00											9.00	1.10
27.0	0.10	0.00		0.06	.00											9.00	1.10
29.0	0.20	0.00		0.13	.00											9.00	1.10
31.0	0.20	0.00		0.20	.00	0.00										9.00	1.10
33.0	0.50	0.00		0.35	.00											9.00	1.10
35.0	0.45	0.03		0.50	.00	0.00										9.00	1.10
37.0	0.40	0.05		0.50	.00											9.00	1.10
39.0	0.45	0.04		0.50	.00	0.00										9.00	1.10
41.0	0.50	0.02		0.45	.00											9.00	1.10
43.0	0.40	0.01		0.40	.00	0.00										9.00	1.10
45.0	0.30	0.00		0.30	.00											9.00	1.10
47.0	0.35	0.00		0.20	.00	0.00										9.00	1.10
49.0	0.40	0.00		0.35	.00											9.00	1.10
51.0	0.45	0.00		0.50	.00	0.00										9.00	1.10
53.0	0.50	0.00		0.53	.00											9.00	1.10
55.0	0.50	0.00		0.55	.00	0.00										9.00	1.10
57.0	0.50	0.00		0.63	.00											9.00	1.10
59.0	0.55	0.00		0.70	.00	0.00										9.00	1.10
61.0	0.60	0.00		0.80	.00											9.00	1.10
63.0	0.75	0.00		0.90	.00	0.00										9.00	1.10
65.0	0.90	0.00		0.95	.00											9.00	1.10
67.0	1.00	0.01		1.00	.00	0.00										9.00	1.10
69.0	1.10	0.02		1.10	.00											9.00	1.10
71.0	1.15	0.01		1.20	.00	0.00										9.00	1.10
73.0	1.20	0.00	0.00	1.18	.00											9.00	1.10
75.0	1.25	0.00		1.15	.00	0.00										9.00	1.10
77.0	1.30	0.00		1.10	.00											9.00	1.10
79.0	1.25	0.00		1.05	.00	0.00										9.00	1.10

Table C-3.4 (cont.) Summary of hydraulic data collected at site 115.0R, Cross section 4.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1		2			3			4			5				
81.0	1.20	0.00	0.00	1.04	.00											9.00	1.10
83.0	1.10	0.00		1.03	.00											9.00	1.10
85.0	1.10	0.00		1.01	.00											9.00	5.20
87.0	1.10	0.00	0.00	1.00	.00	0.00										9.00	5.20
89.0	1.10	0.00		0.85	.00											9.00	5.20
91.0	1.10	0.00		0.70	.00	0.00										9.00	5.20
93.0	0.90	0.00		0.65	.00											9.00	5.20
95.0	0.70	0.00		0.60	.00	0.00										9.00	5.20
97.0	0.50	0.00		0.35	.00											9.00	5.20
99.0	0.50	0.00		0.10	.00	0.00										9.00	5.20
101.0	0.10	0.00		0.05	.00											9.00	5.20
102.0	.00	0.00		.00	.00											9.00	5.20
103.0	.00	0.00		.00	.00											9.00	5.20
117.0	.00	0.00		.00	.00											9.00	5.20
126.0	.00	0.00		.00	.00											9.00	5.20
133.0	.00	0.00		.00	.00											12.00	6.30

a No fish seen, changed WSEL to same as time 1, all nose velocities 0.

b Cross section survey.

| Extrapolated or interpolated value.

Table C-3.5

Summary of hydraulic data collected at site 118.9L, Cross section 1.

RATING CURVE: A = -2.37 B = 0.72 CF = 505.00																	
DATE: SEPT 26			DATE: SEPT 22			DATE: AUG 15 a			DATE: AUG 23			DATE:			SUBSTRATE INFO		
REACH US = 68.00			REACH US = 68.00			REACH US = 68.00			REACH US = 68.00			REACH US =					
DS = 50.00			DS = 100.00			DS = 200.00			DS = ft			DS =					
GCQ: 7680			GCQ: 10300			GCQ: 15100			GCQ: 17900			GCQ:					
WSEL: 507.68			WSEL: 508.31			WSEL: 509.35			WSEL: 509.92			WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
	1			2			3			4			5				
0.0	.00	.00		.00	.00		.00	.00		.00	.00					10.00	5.20
7.0	.00	.00		.00	.00		.00	.00		.00	.00					10.00	5.20
8.0	.00	.00		.00	.00		.00	.00		0.50	0.84					10.00	5.20
9.0	.00	.00		.00	.00		.00	.00		0.75	1.27					10.00	5.20
10.0	.00	.00		.00	.00		0.40	0.40	0.70	1.00	1.70					10.00	5.20
12.0	.00	.00		.00	.00		1.10	1.40	0.60	1.50	2.55	2.15				10.00	5.20
12.5	.00	.00		.00	.00		1.20	1.50		1.60	2.67					10.00	5.20
14.0	.00	.00		0.45	0.20		1.50	1.80	0.60	1.90	3.03					10.00	5.20
16.0	.00	.00		0.80	1.50		2.00	2.10	0.30	2.30	3.50	2.39				10.00	5.20
17.0	0.50	0.30		0.95	1.90		2.35	2.60		2.57	3.50					10.00	5.20
18.0	0.80	1.10		1.10	2.30	1.90	2.70	3.10	0.60	2.87	3.50					10.00	5.20
19.0	1.00	1.30	0.10	1.50	2.40		3.00	3.30		3.07	3.50					10.00	5.20
20.0	1.00	1.90		1.90	2.50	1.80	3.30	3.50	0.00	3.07	3.50					10.00	5.20
21.0	1.60	1.10		1.95	2.85		3.15	3.50		3.67	3.50					10.00	5.20
22.0	1.60	1.90	1.00	2.00	3.20		3.15	3.50		3.67	3.50					10.00	5.20
23.0	1.70	2.10		2.25	2.98		3.25	3.50		3.77	3.50					10.00	5.20
24.0	1.70	2.40		2.50	2.75	1.30	3.25	3.50		3.77	3.50					10.00	5.20
25.0	2.00	2.30	0.70	2.65	2.88		3.55	3.50		4.07	3.50					10.00	5.20
26.0	2.00	2.30		2.80	3.00	1.65	3.55	3.50		4.07	3.50					10.00	5.20
27.0	2.00	2.60		2.58	3.00		3.55	3.50		4.07	3.50					10.00	5.20
28.0	2.40	1.70	1.10	2.98	3.00		3.95	3.50		4.47	3.50					10.00	5.20

a No fish or upwelling, negative nose velocity at 20'.

| Extrapolated or interpolated value.

Table C-3.5 (cont.) Summary of hydraulic data collected at site 118.9L, Cross section 2.

RATING CURVE:			A = -2.37	B = 0.72	CF = 505.00				DATE: AUG 23			DATE:			SUBSTRATE INFO		
DATE: SEPT 26			DATE: SEPT 22			DATE: AUG 15 a			DATE: AUG 23			DATE:					
REACH US = 59.00			REACH US = ft			REACH US = 71.00			REACH US = 59.00			REACH US =					
DS = 68.00			DS = ft			DS = 68.00			DS = 68.00			DS =					
GCQ: 7680			GCQ: 10300			GCQ: 15100			GCQ: 17900			GCQ:					
WSEL: 507.68			WSEL: 508.31			WSEL: 509.35			WSEL: 509.92			WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
	1			2			3			4			5				
0.0	.00	.00		.00	.00		.00	.00		.00	.00					10.00	6.30
8.0	.00	.00		.00	.00		.00	.00		.00	.00					10.00	6.30
10.0	.00	.00		.00	.00		.00	.00		0.50	0.81					10.00	6.30
12.0	.00	.00		.00	.00		0.60	0.30	0.30	1.00	1.62	1.62				10.00	6.30
14.0	.00	.00		.00	.00		0.90	1.50	0.30	1.40	2.18					10.00	6.30
15.0	.00	.00		.00	.00		1.05	1.60		1.60	2.46					10.00	6.30
16.0	.00	.00		0.20	0.00		1.20	1.70	1.00	1.80	2.74	1.92				10.00	6.30
17.5	.00	.00		0.54	0.68		1.73	2.00		2.18	2.94					10.00	6.30
18.0	0.10	0.00		0.65	0.90		1.90	2.10		2.30	3.01					10.00	6.30
20.0	0.40	1.20		1.20	1.45	1.35	2.30	2.30		2.80	3.28	1.92				10.00	6.30
22.0	0.70	1.40		1.50	1.90		2.50	2.90	0.50	2.77	3.28					10.00	6.30
24.0	0.80	1.60		1.40	1.95	1.95	2.50	3.10		2.87	3.28					10.00	6.30
26.0	1.00	1.60		1.50	2.08		2.60	2.90		3.07	3.28					10.00	6.30
28.0	0.90	1.50		1.60	2.20	2.10	2.60	2.80		2.97	3.28					10.00	6.30
30.0	0.90	1.00		1.45	2.05		2.60	2.70	1.00	2.97	3.28					10.00	6.30
32.0	0.60	1.00		1.30	1.90	1.80	2.45	2.60		2.67	3.28					10.00	6.30
34.0	0.65	1.00		1.30	2.18		2.30	2.50		2.72	3.28					10.00	6.30
36.0	0.60	0.60		1.30	2.45	2.35	2.30	2.75		2.67	3.28					10.00	6.30
38.0	0.60	0.40		1.15	2.13		2.30	3.00	1.30	2.67	3.28					10.00	6.30
40.0	0.60	0.80		1.00	1.80	1.80	2.20	2.85		2.67	3.28					10.00	6.30
42.0	0.55	0.30		1.10	1.60		2.10	2.70		2.62	3.28					10.00	6.30
44.0	0.60	0.00		1.20	1.40	1.30	2.10	2.95		2.67	3.28					10.00	6.30
46.0	0.80	0.05		1.15	2.10		2.10	3.20	0.90	2.87	3.28					10.00	6.30
48.0	0.50	1.00		1.10	2.80	2.60	2.00	3.10		2.57	3.28					10.00	6.30
50.0	0.40	1.10		1.10	2.85		1.90	3.00	0.80	2.47	3.28					10.00	6.30
54.0	0.50	2.50		1.10	2.95		2.05	3.00		2.57	3.28					10.00	6.30
56.0	0.55	2.25		1.10	3.00	3.10	2.10	3.00		2.62	3.28					10.00	6.30
58.0	0.60	2.00		1.19	3.00		2.15	3.00		2.67	3.28					10.00	6.30
62.0	0.80	1.90		1.36	3.00		2.35	3.00		2.87	3.28					10.00	6.30
64.0	0.85	1.90		1.45	3.00	2.50	2.40	3.00		2.92	3.28					10.00	6.30
70.0	1.00	1.90		1.58	3.00		2.55	3.00		3.07	3.28					10.00	6.30
78.0	0.80	2.40		1.38	3.00		2.35	3.00		2.87	3.28					10.00	6.30

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Table C-3.5 (cont.) Summary of hydraulic data collected at site 118.9L, Cross section 2.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1		2			3			4			5				
86.0	1.20	0.80	0.30	1.78	3.00		2.75	3.00		3.27	3.28					10.00	6.30
94.0	1.30	1.10		1.88	3.00		2.85	3.00		3.37	3.28					10.00	6.30
102.0	1.70	1.40	0.60	2.28	3.00		3.25	3.00		3.77	3.28					10.00	6.30

a No fish or upwelling.  
 | Extrapolated or interpolated value.

Table C-3.5 (cont.) Summary of hydraulic data collected at site 118.9L, Cross section 3.

RATING CURVE: A = -2.37 B = 0.72 CF = 505.00																	
DATE: SEPT 26			DATE: SEPT 22			DATE: AUG 15 a			DATE: AUG 23 b			DATE:			SUBSTRATE INFO		
REACH US = 60.00			REACH US =			REACH US = 50.00			REACH US = 100.00			REACH US =					
DS = 59.00			DS =			DS = 47.00			DS = 59.00			DS =					
GCQ: 7660			GCQ: 10300			GCQ: 15100			GCQ: 17900			GCQ:					
WSEL: 507.68			WSEL: 508.31			WSEL: 509.35			WSEL: 509.92			WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
	1			2			3			4			5				
0.0	.00	.00		.00	.00		.00	.00		.00	.00					3.00	8.50
12.0	.00	.00		.00	.00		.00	.00		.00	.00					3.00	5.10
16.0	.00	.00		.00	.00		.00	.00		0.40	0.12					3.00	1.10
18.0	.00	.00		.00	.00		0.50	0.00		0.60	0.18					3.00	1.10
22.0	.00	.00		.00	.00		0.30	0.00		0.67	0.18					3.00	1.10
24.0	.00	.00		.00	.00		0.30	0.00		0.70	0.18					3.00	1.10
26.0	.00	.00		.00	.00		0.30	0.00		0.60	0.12					3.00	1.10
30.0	.00	.00		.00	.00		0.30	0.00		0.40	0.00					3.00	1.10
34.0	.00	.00		.00	.00		0.40	0.30	0.60	0.47	0.21					3.00	1.10
36.0	.00	.00		.00	.00		0.65	0.45		0.50	0.32					3.00	1.10
38.0	.00	.00		.00	.00		0.90	0.60	0.30	0.63	0.42					10.00	1.10
42.0	.00	.00		.00	.00		1.00	0.80	0.40	0.90	0.63					10.00	1.10
44.0	.00	.00		.00	.00		1.03	0.88		1.03	0.66					10.00	1.10
48.0	.00	.00		0.15	0.00		1.08	1.03		1.30	0.72	0.65				10.00	5.20
50.0	.00	.00		0.18	0.30		1.10	1.10	0.40	1.23	0.93					10.00	5.20
52.0	.00	.00		0.20	0.60		1.08	1.18		1.17	1.14					10.00	5.20
54.0	.00	.00		0.15	0.30		1.06	1.26		1.10	1.35	1.35				10.00	5.20
56.0	.00	.00		0.10	0.00		1.04	1.34		1.20	1.55					10.00	5.20
60.0	.00	.00		0.30	1.00		1.00	1.50	1.70	1.40	1.96	1.70				10.00	5.20
64.0	.00	.00		0.30	0.45		1.04	1.54		1.44	2.34					10.00	5.20
68.0	.00	.00		0.30	0.10		1.08	1.58		1.48	2.73					10.00	5.20
70.0	.00	.00		0.30	0.28		1.10	1.60	1.50	1.50	2.92	2.39				10.00	5.20
76.0	.00	.00		0.30	0.80		1.34	1.96		1.50	3.27					10.00	5.20
80.0	.00	.00		0.40	0.55		1.50	2.20	0.80	1.50	3.50	3.13				10.00	5.20
84.0	.00	.00		0.50	0.30		1.70	2.64		1.58	3.53					10.00	5.20
88.0	0.10	0.00		0.60	0.78		1.90	3.08		1.66	3.56					10.00	5.20
90.0	0.30	0.10		0.65	1.01		2.00	3.30	2.40	1.70	3.57					10.00	5.20
92.0	0.50	0.20		0.70	1.25		2.10	3.47		2.75	3.80					10.00	5.20
96.0	0.40	0.30		0.75	1.73		2.30	3.80	2.00	2.65	3.80					10.00	5.20
100.0	0.40	1.10		0.80	2.20		2.08	3.80		2.65	3.80					10.00	5.20
104.0	0.90	1.50		1.15	2.15		2.58	3.80		3.15	3.80					10.00	5.20
108.0	1.10	1.40		1.50	2.10	1.95	2.78	3.80		3.35	3.80					10.00	5.20

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Table C-3.5 (cont.) Summary of hydraulic data collected at site 118.9L, Cross section 3.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
112.0	1.10	2.00	1.20	1.45	2.05		2.78	3.80		3.35	3.80					10.00	5.20
116.0	1.10	2.70		1.40	2.00	1.90	2.78	3.80		3.35	3.80					10.00	5.20
120.0	1.20	2.50		1.50	2.10		2.88	3.80		3.45	3.80					10.00	5.20
124.0	1.80	3.30	1.80	1.60	2.20	1.70	3.48	3.80		4.05	3.80					10.00	5.20
128.0	1.80	2.80		2.43	2.80		3.48	3.80		4.05	3.80					10.00	5.20
132.0	1.90	2.80	1.60	2.53	2.80		3.58	3.80		4.15	3.80					10.00	5.20

a Upwelling above cross section, no fish observed.

b Fish at 90 ft.

| Extrapolated or interpolated value.

Table C-3.6

Summary of hydraulic data collected at site 119.1L, Cross section 1.

RATING CURVE:			A = -1.30	B = 0.50	CF = 505.00	DATE: SEPT 26			DATE: SEPT 22			DATE: AUG 15			DATE:			SUBSTRATE INFO	
REACH US = 67.00			REACH US = 67.00			REACH US = 67.00			REACH US =			REACH US =							
DS = 25.00			DS = 150.00			DS = ft			DS =			DS =							
GCQ: 7680			GCQ: 10300			GCQ: 15100			GCQ:			GCQ:							
WSEL: 509.39			WSEL: 510.09			WSEL: 511.16			WSEL:			WSEL:							
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	CDV		
	1			2			3			4			5						
0.0	.00	.00		.00	.00		.00	.00								8.00	8.50		
14.0	.00	.00		.00	.00		.00	.00								8.00	7.30		
16.0	.00	.00		.00	.00		0.40	0.00	0.10							8.00	4.20		
18.5	.00	.00		.00	.00		0.65	0.44								8.00	4.20		
20.0	.00	.00		0.50	0.05		0.80	0.70	0.50							8.00	4.20		
21.0	.00	.00		0.63	0.05		0.98	0.88								8.00	4.20		
22.0	0.15	0.00		0.75	0.05	0.03	1.15	1.05								8.00	4.20		
24.0	0.50	0.10		1.10	0.15	0.15	1.50	1.40	1.00							8.00	4.20		
26.0	0.75	0.10		1.35	0.25	0.63	1.95	1.55								9.00	4.20		
28.0	0.90	0.15		1.50	0.60	0.45	2.40	1.70	0.70							9.00	4.20		
30.0	1.10	0.25		1.70	0.73		2.75	1.95								9.00	4.20		
32.0	1.25	0.20		1.90	0.85	0.60	3.10	2.20	0.60							12.00	4.20		
34.0	1.30	0.40	0.30	2.00	0.90		3.07	2.20								12.00	4.20		
36.0	1.45	0.40		2.10	0.95	0.60	3.17	2.20								12.00	4.20		
38.0	1.60	0.60		2.15	1.20		3.22	2.20								12.00	4.20		
40.0	1.65	0.80	0.55	2.20	1.45	1.00	3.27	2.20								12.00	4.20		
42.0	1.80	0.60		2.40	1.50		3.47	2.20								12.00	4.20		
44.0	1.90	0.80		2.60	1.55	1.10	3.67	2.20								12.00	4.20		
46.0	2.20	1.05	0.40	2.70	1.60		3.77	2.20								12.00	4.20		
48.0	2.20	1.40		2.80	1.65	1.65	3.87	2.20								12.00	4.20		
50.0	2.40	1.30	0.75	3.10	1.65		4.17	2.20								12.00	4.20		

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Table C-3.6 (cont.) Summary of hydraulic data collected at site 119.1L, Cross section 2.

RATING CURVE: A = -1.30 B = 0.50 CF = 505.00																	
DATE: SEPT 26						DATE: SEPT 22						DATE: AUG 15 a					
REACH US = 38.00			REACH US = 38.00			REACH US = 38.00			REACH US =			REACH US =			SUBSTRATE INFO		
DS = 67.00			DS = 67.00			DS = 300.00			DS =			DS =					
GCQ: 7680			GCQ: 10300			GCQ: 15100			GCQ:			GCQ:					
WSEL: 509.39			WSEL: 510.09			WSEL: 511.16			WSEL:			WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
0.0	.00	.00		.00	.00		.00	.00								8.00	6.20
14.0	.00	.00		.00	.00		.00	.00								8.00	5.20
16.0	.00	.00		.00	.00		0.40	0.00	0.00							5.00	5.20
18.0	.00	.00		.00	.00		0.80	0.00	0.00							5.00	4.20
21.4	.00	.00		.00	.00		1.82	0.34								5.00	4.20
22.0	.00	.00		10.10	0.12		2.00	0.40	0.30							5.00	4.20
24.0	.00	.00		0.45	0.50		2.20	0.70								5.00	4.20
25.0	.00	.00		10.63	0.60		2.30	0.85								5.00	4.20
26.0	0.20	0.30		0.80	0.70		2.40	1.00	0.60							10.00	4.20
27.0	0.50	0.50		11.05	0.78		2.48	1.13								10.00	4.20
28.0	0.70	0.45		1.30	0.85	0.85	2.55	1.25								10.00	4.20
30.0	1.00	0.50		1.60	1.00		2.70	1.50	0.30							10.00	4.20
32.0	1.55	0.40		1.75	0.15	0.15	2.90	1.65								10.00	4.20
34.0	1.75	0.80	0.60	12.10	1.23		3.10	1.80	0.60							10.00	4.20
36.0	1.90	0.85		2.45	1.35	1.30	3.52	1.80								10.00	4.20
38.0	2.30	0.95		12.98	1.38		4.05	1.80								10.00	4.20
40.0	2.30	0.95	0.80	3.50	1.40	1.25	4.57	1.80								10.00	4.20
42.0	2.70	0.90		13.55	1.43		4.62	1.80								10.00	4.20
44.0	3.00	1.05		3.60	1.45	1.35	4.67	1.80								10.00	4.20
46.0	3.70	1.30	0.70	14.40	1.45		5.47	1.80								10.00	4.20

a Upwelling just above cross section at 32', below large boulder.  
 | Extrapolated or interpolated value.

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Table C-3.6 (cont.) Summary of hydraulic data collected at site 119.1L, Cross section 3.

RATING CURVE:			A = -1.30	B = 0.50	CF = 505.00				DATE:			DATE:			SUBSTRATE INFO		
DATE: SEPT 26			DATE: SEPT 22			DATE: AUG 15 <sup>a</sup>			DATE:			DATE:					
REACH US = 71.00			REACH US = 26.00			REACH US = 51.00			REACH US =			REACH US =					
DS = 38.00			DS = 38.00			DS = 38.00			DS =			DS =					
GCQ: 7680			GCQ: 10300			GCQ: 15100			GCQ:			GCQ:					
WSEL: 509.39			WSEL: 510.09			WSEL: 511.16			WSEL:			WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
0.0	.00	.00		.00	.00		.00	.00								12.00	6.10
31.0	.00	.00		.00	.00		.00	.00								6.00	4.20
32.0	.00	.00		.00	.00		0.20	0.00								6.00	4.20
36.0	.00	.00		.00	.00		0.70	0.00	0.00							6.00	4.20
40.0	.00	.00		.00	.00		1.30	0.00	0.00							6.00	4.20
43.5	.00	.00		.00	.00		1.74	0.70								6.00	4.20
44.0	.00	.00		0.10	0.00		1.80	0.80	0.40							6.00	4.20
44.5	.00	.00		0.20	0.00		1.90	0.85								6.00	4.20
46.0	0.30	0.05		0.50	0.00		2.20	1.00								6.00	4.20
48.0	0.60	0.20		0.80	0.45		2.60	1.20	0.70							6.00	4.20
50.0	0.80	0.50		1.20	0.85		2.95	1.60								6.00	4.20
52.0	0.95	0.70		1.55	1.45		3.30	2.00	1.00							6.00	4.20
54.0	1.20	1.00		1.78	1.48		2.93	2.00								6.00	4.20
56.0	1.40	1.05		2.00	1.50		3.13	2.00								6.00	4.20
58.0	1.65	1.10	0.90	2.28	1.63		3.38	2.00								6.00	4.20
60.0	1.80	1.30		2.55	1.75		3.53	2.00								6.00	4.20
62.0	1.60	1.30		2.88	1.63		3.33	2.00								6.00	4.20
64.0	2.40	1.45	0.80	3.20	1.50		4.13	2.00								6.00	4.20
66.0	2.40	1.30		3.30	1.75		4.13	2.00								6.00	4.20
68.0	2.90	1.70		3.40	2.00		4.63	2.00								6.00	4.20
70.0	3.00	1.60	0.55	3.68	2.00		4.73	2.00								6.00	4.20

<sup>a</sup> Lots of upwelling at the edge.  
 | Extrapolated or interpolated value.

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Table C-3.7

Summary of hydraulic data collected at site 125.2R, Cross section 1.

RATING CURVE:			A = -0.97	B = 0.41	CF = 552.00				DATE: SEPT 29 d			SUBSTRATE INFO		
DATE: SEPT 26 a			DATE: AUG 31 b			DATE: AUG 22 c			DATE: SEPT 29 d					
REACH US = 200.00			REACH US = 200.00			REACH US = 100.00			REACH US =					
DS = 150.00			DS = 400.00			DS = 200.00			DS =					
GCQ: 7680			GCQ: 13600			GCQ: 19100			GCQ: 7410					
WSEL: 556.20			WSEL: 557.31			WSEL: 558.10			WSEL: 556.14					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
	1			2			3			4			5	
0.0	0.00	0.00		0.00	0.00		0.00	0.00					3.00	1.10
9.0	0.00	0.00		0.00	0.00		0.00	0.00					3.00	1.10
12.3	0.00	0.00		0.00	0.00		0.61	0.08					3.00	1.10
13.0	0.00	0.00		0.30	0.00		0.74	0.10					3.00	1.10
16.0	0.00	0.00		1.05	0.00		1.30	0.18	0.18				3.00	1.10
17.0	0.00	0.00		1.30	0.00		1.53	0.18					3.00	1.10
20.0	0.30	0.00		1.60	0.08		2.20	0.18	0.26				3.00	1.10
21.0	0.38	0.00		1.70	0.10	0.00	2.28	0.16					3.00	7.10
25.0	0.70	0.00		2.15	0.00	0.00	2.60	0.09					3.00	7.10
29.0	1.02	0.00		2.20	0.05	0.00	2.92	0.02					3.00	7.10
30.0	1.10	0.00		2.30	0.04		3.00	0.00	0.00				3.00	1.10
33.0	1.49	0.00		2.60	0.00	0.00	3.39	0.13					3.00	1.10
43.0	2.29	0.00		3.40	0.00	0.00	4.19	0.57					3.00	1.10
85.0	2.00	0.00		3.11	1.88		3.90	2.41					8.00	5.20
89.0	1.80	0.05	0.00	2.91	2.06		3.70	2.58					8.00	5.20
93.0	1.50	0.01		2.61	2.24		3.40	2.76					8.00	5.20
97.0	1.40	0.30		2.51	2.42		3.30	2.93					8.00	5.20
101.0	1.00	0.50	0.30	2.11	2.60		2.90	3.11					8.00	5.20
105.0	0.70	0.50		1.81	2.78		2.60	3.28					8.00	5.20
109.0	0.70	1.00		1.81	2.96		2.60	3.46					8.00	5.20
110.0	0.70	1.00		1.81	3.00		2.60	3.50					8.00	5.20
113.0	0.70	1.00		1.81	3.05		2.60	3.58					8.00	5.20
117.0	0.80	1.30		1.91	3.12		2.70	3.68					8.00	5.20
121.0	1.10	1.90		2.21	3.19		3.00	3.78					10.00	6.20
125.0	1.20	1.80	1.10	2.31	3.26		3.10	3.88					10.00	6.20
129.0	1.50	0.90		2.61	3.33		3.40	3.98					10.00	6.20
133.0	1.60	2.20		2.71	3.40		3.50	4.08					10.00	6.20
137.0	1.50	2.40		2.61	3.47		3.40	4.18					10.00	6.20
141.0	1.40	2.50	1.50	2.51	3.54		3.30	4.28					10.00	6.20
145.0	1.60	1.90		2.71	3.61		3.50	4.38					10.00	6.20
149.0	1.40	2.20		2.51	3.68		3.30	4.48					10.00	6.20
150.0	1.40	2.18		2.51	3.70		3.30	4.50					10.00	6.20

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Table C-3.7 (cont.) Summary of hydraulic data collected at site 125.2R, Cross section 1.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	CDV
		1			2			3			4			5			
153.0	1.40	2.10	1.40	2.51	3.73		3.30	4.51								10.00	6.20
157.0	1.60	2.10		2.71	3.77		3.50	4.52								10.00	6.20
161.0	1.70	2.50		2.81	3.81		3.60	4.54								10.00	6.20
165.0	1.80	2.30	0.30	2.91	3.85		3.70	4.55								10.00	6.20
169.0	1.90	2.20		3.01	3.89		3.80	4.56								10.00	6.20
173.0	1.70	2.60		2.81	3.93		3.60	4.58								10.00	6.20
177.0	1.90	2.30	0.90	3.01	3.97		3.80	4.59								10.00	6.20
180.0	1.90	2.34		3.01	4.00		3.80	4.60								10.00	6.20
185.0	1.90	2.40		3.01	3.93		3.80	4.26								10.00	6.20
186.0	1.90	2.10		3.01	3.91		3.80	4.26								10.00	6.20
189.0	2.10	2.30		3.21	3.87		4.00	4.24								10.00	6.20
193.0	1.90	2.40	1.50	3.01	3.81		3.80	4.22								10.00	6.20
197.0	1.90	2.10		3.01	3.75		3.80	4.20								10.00	6.20
201.0	1.90	2.20		3.01	3.69		3.80	4.18								10.00	6.20
209.0	1.80	2.00		2.91	3.57		3.70	4.14								10.00	6.20
210.0	1.80	1.90	1.20	2.91	3.56		3.70	4.13								10.00	6.20
213.0	1.50	1.30		2.61	3.51		3.40	4.12								10.00	6.20
214.0	1.45	1.33		2.56	3.50		3.35	4.10								10.00	6.20
217.0	1.30	1.40		2.41	3.23		3.20	4.01								10.00	6.20
221.0	1.10	1.30		2.21	2.89		3.00	3.90								10.00	6.20
222.0	1.06	1.20	0.90	2.60	2.80	2.10	2.96	3.87								10.00	6.20
225.0	0.95	0.90		2.45	2.76		2.85	3.78								10.00	6.20
229.0	0.80	1.10		2.25	2.70		2.70	3.67								10.00	6.20
232.0	0.75	0.90		2.10	2.65	2.30	2.65	3.58								10.00	6.20
235.0	0.70	0.70		1.98	2.68		2.60	3.50								10.00	6.20
237.0	0.60	0.60		1.90	2.70		2.50	3.44								10.00	6.20
241.0	0.50	0.20		1.74	2.74		2.40	3.32								10.00	6.20
242.0	0.40	0.15		1.70	2.75	2.80	2.30	3.29								10.00	6.20
245.0	0.10	0.00		1.40	2.38		2.00	3.21								10.00	6.20
246.0	.00	0.00		1.30	2.25		1.90	3.18								10.00	6.20
250.0	.00	0.00		0.90	1.75		1.90	3.06								10.00	6.20
252.0	.00	0.00		0.70	1.50		1.90	3.01								10.00	6.20
254.0	.00	0.00		0.66	1.40		1.90	2.95								10.00	6.20
255.0	.00	0.00		0.64	1.35		1.70	2.92	2.55							10.00	6.20
258.0	.00	0.00		0.58	1.20		1.61	2.78								10.00	6.20
262.0	.00	0.00		0.50	1.00		1.49	2.58								10.00	6.20
265.0	.00	0.00		0.35	0.78		1.40	2.44	2.20							10.00	6.20
266.0	.00	0.00		0.30	0.70		1.33	2.30								10.00	6.20
269.0	.00	0.00		0.15	0.18		1.10	1.88	1.51							10.00	6.20
270.0	.00	0.00		0.10	0.00		1.03	1.73								10.00	6.20
273.0	.00	0.00		0.03	0.00		0.80	1.29	1.62							10.00	6.20

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Table C-3.7 (cont.) Summary of hydraulic data collected at site 125.2R, Cross section 1.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1		2			3			4			5				
274.0	.00	0.00		0.00	0.00		0.70	1.09								10.00	6.20
277.0	.00	0.00		0.00	0.00		0.40	0.49								10.00	6.20
278.0	.00	0.00		0.00	0.00		0.38	0.37								10.00	6.20
281.0	.00	0.00		0.00	0.00		0.30	0.00								10.00	6.20
282.0	.00	0.00		0.00	0.00		0.23	0.00								10.00	6.20
285.0	.00	0.00		0.00	0.00		0.00	0.00								10.00	6.20
310.0	.00	0.00		0.00	0.00		0.00	0.00								8.00	5.20
325.0	.00	0.00		0.00	0.00		0.00	0.00								8.00	5.20
335.0	.00	0.00		0.00	0.00		0.00	0.00								8.00	5.20

- a LWE is deep pool with no velocity.
- b Channel divides about 100' upstream.
- c No fish or upwelling seen.
- d Cross section survey.
- | Extrapolated or interpolated value.

Table C-3.7 (cont.) Summary of hydraulic data collected at site 125.2R, Cross section 2.

RATING CURVE:			A = -0.56	B = 0.34	CF = 552.00				DATE:	DATE: SEPT 29 c			SUBSTRATE INFO				
DATE: SEPT 26			DATE: AUG 31 a			DATE: AUG 22 b			DATE: SEPT 29 c								
REACH US =	DS =	GCO:	WSEL:	REACH US =	DS =	GCO:	WSEL:	REACH US =	DS =	GCO:	WSEL:	REACH US =	DS =	GCO:	WSEL:	SUB	COV
200.00	20.00	7680	557.77	179.00	100.00	13600	559.00	300.00	150.00	19100	559.86			7410	557.70		
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
0.0	.00	.00		.00	.00		.00	0.00								6.00	5.20
68.0	.00	.00		.00	.00		.00	0.00								10.00	5.20
110.0	.00	.00		.00	.00		0.50	0.00								10.00	5.20
130.0	.00	.00		.00	.00		0.50	0.56								10.00	5.20
140.0	.00	.00		.00	.00		0.70	1.32								10.00	5.20
144.0	.00	.00		.00	.00		0.90	1.77								10.00	5.20
147.0	.00	.00		0.05	0.00		1.05	2.10								10.00	5.20
150.0	.00	.00		0.20	0.04		1.20	2.44	2.24							10.00	5.20
151.0	.00	.00		0.25	0.05		1.23	2.50								10.00	5.20
155.0	.00	.00		0.35	1.00		1.35	2.75								10.00	5.20
159.0	.00	.00		0.50	0.85		1.47	3.00								10.00	5.20
160.0	.00	.00		0.50	1.10		1.50	3.06	2.86							10.00	5.20
163.0	.00	.00		0.50	1.85		1.65	3.19								10.00	5.20
167.0	.00	.00		1.00	1.90	1.90	1.85	3.37								10.00	5.20
170.0	.00	.00		1.15	2.02		2.00	3.50	2.50							10.00	5.20
171.0	.00	0.00		1.20	2.06		2.09	3.51								10.00	5.20
172.0	0.10	0.00		1.25	2.10		2.19	3.52								10.00	5.20
176.0	0.20	0.50		1.45	2.26		2.29	3.56								10.00	5.20
177.0	0.20	0.50		1.50	2.30	2.10	2.59	3.57								10.00	5.20
180.0	0.20	0.50		1.50	2.51		2.29	3.61								10.00	5.20
184.0	0.45	0.70		1.50	2.79		2.54	3.65								10.00	5.20
187.0	0.49	0.81		1.50	3.00	2.95	2.58	3.68								10.00	5.20
188.0	0.50	0.85		1.50	3.01		2.59	3.69								10.00	5.20
192.0	0.40	1.10		1.50	3.03		2.49	3.73								10.00	5.20
196.0	0.40	0.70		1.50	3.05		2.49	3.78								10.00	5.20
197.0	0.40	0.80		1.50	3.05	2.75	2.49	3.79								10.00	5.20
200.0	0.25	0.50		1.47	2.89		2.34	3.82								10.00	5.20
204.0	0.25	0.40		1.43	2.67		2.34	3.86								10.00	5.20
207.0	0.36	0.25		1.40	2.50	2.20	2.46	3.89								10.00	5.20
208.0	0.40	0.20		1.42	2.52		2.49	3.90								10.00	5.20
216.0	0.60	0.60		1.58	2.68		2.69	3.99								10.00	5.20
217.0	0.61	0.61		1.60	2.70	2.50	2.71	4.00								10.00	5.20

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Table C-3.7 (cont.) Summary of hydraulic data collected at site 125.2R, Cross section 2.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
224.0	0.70	0.70		1.67	2.49		2.79	4.02								10.00	5.20
227.0	0.63	0.74		1.70	2.40	2.40	2.72	4.02								10.00	5.20
232.0	0.50	0.80		1.65	2.38		2.59	4.04								10.00	5.20
237.0	0.50	0.55		1.60	2.35	2.00	2.59	4.05								10.00	5.20
240.0	0.50	0.40		1.51	2.36		2.59	4.06								10.00	5.20
248.0	0.30	0.40		1.27	2.38		2.39	4.07								10.00	5.20
256.0	0.10	0.00		1.03	2.40		2.19	4.09								10.00	5.20
257.0	0.15	0.60		1.00	2.40	2.40	2.24	4.10								10.00	5.20
258.0	0.20	1.20		1.03	2.41		2.29	4.10								10.00	5.20
274.0	0.30	0.50		1.51	2.57		2.39	4.14								10.00	5.20
277.0	0.39	0.50		1.60	2.60	2.40	2.48	4.14								10.00	5.20
284.0	0.60	0.50		1.70	2.64		2.69	4.16								10.00	5.20
294.0	0.60	1.20		1.83	2.70		2.69	4.19								10.00	5.20
300.0	0.84	1.38		1.91	2.73		2.93	4.20								10.00	5.20
304.0	1.00	1.50		1.97	2.75		3.09	4.23								10.00	5.20
314.0	1.00	1.30	0.90	2.11	2.81		3.09	4.31								10.00	5.20
324.0	1.20	2.00		2.24	2.87		3.29	4.39								10.00	5.20
330.0	1.20	1.52		2.33	2.90		3.29	4.44								10.00	5.20
334.0	1.20	1.20		2.38	2.94		3.29	4.47								10.00	5.20
344.0	1.70	2.30	0.30	2.52	3.04		3.79	4.55								3.00	4.20
354.0	1.90	1.90		2.65	3.13		3.99	4.62								3.00	4.20
364.0	2.10	1.90		2.79	3.23		4.19	4.70								3.00	4.20
374.0	1.70	1.60	0.60	2.93	3.33		3.79	4.78								3.00	4.20
384.0	1.00	2.40		3.06	3.43		3.09	4.86								3.00	4.20
394.0	1.70	2.20		3.20	3.52		3.79	4.94								3.00	4.20
402.0	1.46	2.68		3.31	3.60		3.55	5.00								3.00	4.20
404.0	1.40	2.80	2.40	3.34	3.38		3.49	4.62								3.00	4.20
408.5	0.91	2.35		3.40	2.90	2.22	3.00	3.76								3.00	4.20
410.5	0.69	2.15		2.80	2.50	2.35	2.78	3.37								3.00	4.20
412.5	0.47	1.95		2.40	2.05	2.00	2.56	2.99								3.00	4.20
414.0	0.30	1.80		2.25	2.05		2.39	2.70								3.00	4.20
414.5	0.23	1.35		2.20	2.05	1.80	2.32	2.61								3.00	4.20
416.0	.00	0.00		1.90	1.98		2.09	2.32								3.00	4.20
416.5	.00	0.00		1.80	1.95	1.75	3.03	2.22								3.00	4.20
418.5	.00	0.00		1.30	1.20	1.20	2.53	1.84								3.00	4.20
419.5	.00	0.00		0.84	0.77		3.10	1.65	1.65							3.00	4.20
421.3	.00	0.00		.00	.00		2.90	1.10	0.97							3.00	9.10
423.5	.00	0.00		.00	.00		2.10	0.76	0.75							3.00	9.10
425.5	.00	0.00		.00	.00		1.30	0.65	0.76							3.00	9.10
427.5	.00	0.00		.00	.00		0.20	0.00								3.00	9.10
428.5	.00	0.00		.00	.00		.00	.00								3.00	9.10

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Table C-3.7 (cont.) Summary of hydraulic data collected at site 125.2R, Cross section 2.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1		2			3			4			5				
435.0	.00	0.00		.00	.00		.00	.00								3.00	9.30
437.5	.00	0.00		.00	.00		.00	.00								3.00	8.30

a Chum seen.

b No upwelling, fish on left bank.

c Cross section survey.

| Extrapolated or interpolated value.

Table C-3.8

Summary of hydraulic data collected at site 130.2R, Cross section 1.

RATING CURVE: A = -1.25 B = 0.49 CF = 600.00																																			
DATE: SEPT 26 a						DATE: AUG 16 b						DATE: AUG 14 c						DATE: AUG 21 d						DATE: SEPT 27 e											
REACH US = 114.00						REACH US = 114.00						REACH US = 114.00						REACH US = 114.00						REACH US =											
DS = 75.00						DS = 100.00						DS = 75.00						DS = 75.00						DS =											
GCQ: 7680						GCQ: 14500						GCQ: 16100						GCQ: 19900						GCQ: 7470											
WSEL: 605.70						WSEL: 606.15						WSEL: 606.48						WSEL: 607.19						WSEL: 605.70						SUBSTRATE INFO					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV															
1				2				3				4				5																			
0.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00					3.00	2.20															
20.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00					3.00	1.10															
24.0	.00	.00		.00	.00		.00	.00		0.40	0.00	0.00							3.00	1.10															
25.0	.00	.00		.00	.00		.00	.00		0.48	0.01								3.00	1.10															
26.0	.00	.00		.00	.00		0.06	0.00		0.55	0.03								3.00	1.10															
28.0	.00	.00		0.10	0.00		0.18	0.00		0.70	0.05	0.10							3.00	1.10															
30.0	.00	.00		0.20	0.00		0.30	0.00		0.80	0.08								3.00	1.10															
34.0	.00	.00		0.50	0.00		0.63	0.00		1.00	0.14								3.00	1.10															
36.0	.00	.00		0.50	0.00		0.80	0.00		1.10	0.17								3.00	1.10															
38.0	0.10	0.00		0.50	0.00		0.85	0.00		1.20	0.20	0.15							3.00	1.10															
40.0	0.10	0.00		0.70	0.00		0.90	0.00		1.30	0.23								3.00	1.10															
42.0	0.10	0.00		0.90	0.00		1.02	0.00		1.40	0.26								3.00	4.10															
46.0	0.10	0.00		0.90	0.00		1.26	0.00		1.60	0.32								3.00	4.10															
50.0	0.40	0.00		1.30	0.00		1.50	0.00		1.80	0.38								3.00	4.10															
54.0	0.50	0.10		1.50	0.00		1.58	0.00		2.00	0.44								3.00	1.10															
58.0	0.50	0.00		1.60	0.00		1.66	0.00		2.20	0.50	0.20							3.00	1.10															
60.0	0.45	0.00		1.50	0.00		1.70	0.00		2.11	0.48								3.00	1.10															
62.0	0.40	0.00		1.40	0.00		1.50	0.00		2.01	0.46								3.00	1.10															
66.0	0.40	0.00		1.50	0.00		1.10	0.00		1.82	0.42								3.00	1.10															
70.0	0.30	0.00		1.00	0.00		0.70	0.00		1.63	0.38								3.00	1.10															
74.0	0.10	0.00		0.80	0.00		0.70	0.00		1.44	0.34								3.00	1.10															
78.0	0.10	0.00		0.60	0.00		0.70	0.00		1.25	0.30	0.20							3.00	1.10															
80.0	0.05	0.00		0.55	0.00		0.70	0.00		1.20	0.30								3.00	1.10															
82.0	.00	0.00		0.50	0.00		0.62	0.00		1.14	0.30								3.00	1.10															
86.0	.00	0.00		0.30	0.00		0.46	0.00		1.03	0.30								3.00	1.10															
90.0	.00	0.00		0.30	0.00		0.30	0.00		0.92	0.30								3.00	1.10															
94.0	.00	0.00		0.10	0.00		0.26	0.00		0.81	0.30								3.00	1.10															
98.0	.00	0.00		0.03	0.00		0.22	0.00		0.70	0.30	0.20							3.00	1.10															
100.0	.00	0.00		.00	0.00		0.20	0.00		0.68	0.32								3.00	1.10															
108.0	.00	0.00		0.13	0.00		0.20	0.00		0.60	0.40	0.30							3.00	1.10															
110.0	.00	0.00		0.11	0.00		0.20	0.00		0.58	0.36								3.00	1.10															
118.0	.00	0.00		0.03	0.00		0.08	0.00		0.50	0.20	0.30							3.00	1.10															

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Table C-3.8 (cont.) Summary of hydraulic data collected at site 130.2R, Cross section 1.

STA	1			2			3			4			5			SUB	COV
	DEPTH	VEL	V.4	DEPTH	VEL	V.4											
123.0	.00	0.00		.00	0.00		.00	0.00		0.35	0.15					3.00	1.10
128.0	.00	0.00		.00	0.00		0.03	0.00		0.20	0.10					3.00	1.10
136.5	.00	0.00		.00	0.00		.00	0.00		.00	0.00					3.00	1.10

a Clear water, used true WSEL.

b Not breached, clear water, no fish observed.

c Backwater, silty, turbid water, no fish observed.

d Breached, turbid water, no fish observed.

e Cross section survey, used true WSEL.

| Extrapolated or interpolated value.

Table C-3.8 (cont.) Summary of hydraulic data collected at site 130.2R, Cross section 2.

RATING CURVE: A = -1.25 B = 0.49 CF = 600.00																			
DATE: SEPT 26 a						DATE: AUG 16 b			DATE: AUG 14 c			DATE: AUG 21 d			DATE: SEPT 27 e				
REACH US = 20.00						REACH US = 97.00			REACH US = 97.00			REACH US = 97.00			REACH US =				
DS = 114.00						DS = 114.00			DS = 114.00			DS = 114.00			DS =				
GCO: 7600						GCO: 14500			GCO: 16100			GCO: 19900			GCO: 7470				
WSEL: 605.70						WSEL: 606.15			WSEL: 606.48			WSEL: 607.19			WSEL: 605.70			SUBSTRATE INFO	
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV		
	1			2			3			4			5						
	0.0	.00	.00	.00	.00		.00	.00		.00	.00					10.00	2.20		
	11.2	.00	.00	.00	.00		.00	.00		.00	.00					10.00	5.20		
	20.0	.00	.00	.00	.00		.00	.00		0.10	0.00					10.00	5.20		
	30.0	.00	.00	.00	.00		.00	.00		0.20	0.00					10.00	5.20		
	40.0	.00	.00	.00	.00		.00	.00		0.50	0.10					10.00	5.20		
	41.0	.00	.00	.00	.00		.00	.00		0.56	0.12					10.00	5.20		
	41.6	.00	.00	0.30	0.00		0.12	0.00		0.60	0.12					10.00	5.20		
	42.0	.00	.00	0.32	0.00		0.20	0.00		0.62	0.13					10.00	5.20		
	46.0	.00	.00	0.50	0.00		0.40	0.00		0.86	0.19					3.00	5.20		
	50.0	.00	.00	0.90	0.00		0.60	0.00		1.10	0.25					3.00	5.20		
	53.0	.00	.00	0.98	0.00		0.80	0.00		1.28	0.30					3.00	1.10		
	54.0	0.10	0.00	1.00	0.00		0.86	0.00		1.34	0.31					3.00	1.10		
	58.0	0.10	0.00	1.10	0.00		1.12	0.00		1.58	0.37					3.00	1.10		
	60.0	0.10	0.00	1.25	0.00		1.25	0.00		1.70	0.40	0.35				3.00	1.10		
	62.0	0.10	0.00	1.40	0.00		1.26	0.00		1.67	0.42					3.00	1.10		
	66.0	0.20	0.00	1.40	0.00		1.28	0.00		1.61	0.45					3.00	1.10		
	70.0	0.30	0.00	1.30	0.00		1.30	0.00		1.55	0.48					3.00	1.10		
	74.0	0.50	0.10	1.30	0.00		1.18	0.00		1.49	0.51					3.00	1.10		
	78.0	0.40	0.00	1.40	0.00		1.06	0.00		1.43	0.54					3.00	1.10		
	80.0	0.30	0.00	1.05	0.00		1.00	0.00		1.40	0.55	0.50				3.00	4.20		
	82.0	.00	.00	0.70	0.00		0.75	0.00		1.22	0.47					3.00	4.20		
	86.0	.00	.00	0.10	0.00		0.25	0.00		0.85	0.30					3.00	4.20		
	87.8	.00	.00	.00	0.00		0.15	0.00		0.69	0.23					3.00	4.20		
	90.5	.00	.00	.00	0.00		.00	0.00		0.45	0.12					3.00	4.20		
	91.0	.00	.00	.00	0.00		0.08	0.00		0.40	0.10					3.00	4.20		
	95.0	.00	.00	.00	0.00		.00	0.00		0.20	0.10					3.00	4.20		
	99.0	.00	.00	.00	0.00		.00	0.00		.00	0.00					3.00	4.20		

a Clear water, 25' riffle between cross section 2 & cross section 3, used true WSEL.

b Not breached, clear water, no fish observed.

c No fish observed, turbidity less than at cross section 1.

d No fish observed, breached, turbid water.

e Cross section, used true WSEL.

| Extrapolated or interpolated value.



Table C-3.8 (cont.) Summary of hydraulic data collected at site 130.2R, Cross section 3.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
53.0	.00	.00		0.15	0.00		0.17	0.00		0.70	0.19					3.00	4.10
54.0	.00	.00		0.08	0.00		0.13	0.00		0.65	0.20	0.20				3.00	4.10
55.0	.00	.00		.00	.00		0.09	0.00		0.59	0.15					3.00	4.10
57.0	.00	.00		.00	.00		.00	0.00		0.46	0.05					3.00	4.10
58.0	.00	.00		.00	.00		0.08	.00		0.40	0.00					3.00	4.10
62.4	.00	.00		.00	.00		.00	.00		.00	0.00					3.00	4.10

a Used true WSEL.

b Not breached, clear water, no fish observed.

c Near head of backwater, low turbidity clear water, no fish observed.

d Breached, turbid water, no fish observed, changed velocity 1.5 to .15 at 13' & 50'.

e Cross section survey, used true WSEL.

| Extrapolated or interpolated value.

Table C-3.9

Summary of hydraulic data collected at site 131.3L, Cross section 1.

RATING CURVE: A = -1.62 B = 0.57 CF = 610.00				DATE: SEPT 26 a				DATE: AUG 14 b				DATE: AUG 21 c				DATE: SEPT 27 d			
REACH US = 238.00				REACH US = 149.00				REACH US = 149.00				REACH US =				SUBSTRATE INFO			
DS = 100.00				DS = 250.00				DS = 300.00				DS =							
GCO: 7680				GCO: 16100				GCO: 19900				GCO: 7470							
WSEL: 614.30				WSEL: 616.00				WSEL: 616.77				WSEL: 616.25							
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV		
	1			2			3			4			5						
0.0	.00	.00		.00	0.00		0.00									3.00	4.10		
17.0	.00	.00		.00	0.00		0.77									3.00	1.10		
20.0	.00	.00		0.50	0.00		1.27									3.00	1.10		
24.0	.00	.00		0.90	0.30		1.67									3.00	1.10		
28.0	.00	.00		1.00	0.30		1.77									3.00	1.10		
32.0	.00	.00		1.10	0.50		1.87									3.00	1.10		
40.0	.00	.00		1.20	0.70		1.97									3.00	1.10		
50.0	.00	.00		1.80	0.80		2.57									3.00	1.10		
60.0	.00	.00		2.60	1.20		3.37									3.00	1.10		
70.0	.00	.00		3.00	1.40		3.77									3.00	1.10		
80.0	.00	.00		3.10	1.15		3.87									3.00	1.10		
90.0	.00	.00		2.60	0.95		3.37									3.00	1.10		
91.0	0.20	0.70		2.60	0.92		3.37									3.00	1.10		
93.0	0.20	0.70		2.60	0.86		3.37									3.00	1.10		
95.0	0.30	0.90		2.60	0.80		3.37									3.00	1.10		
97.0	0.20	0.80		2.60	0.74		3.37									3.00	1.10		
99.0	.00	0.85		2.60	0.68		3.37									3.00	1.10		
100.0	0.15	0.88		2.60	0.65		3.37									3.00	1.10		
101.0	0.20	0.90		2.60	0.61		3.37									3.00	1.10		
103.0	0.10	0.80		2.60	0.53		3.37									3.00	1.10		
104.0	.00	0.80		2.60	0.49		3.37									3.00	1.10		
110.0	.00	0.80		2.60	0.25		3.37									3.00	1.10		
115.0	.00	0.80		2.40	0.13		3.17									3.00	1.10		
117.0	0.05	0.80		2.32	0.08		3.15	1.50	1.25							3.00	1.10		
119.0	0.10	0.80		2.24	0.03		3.18	1.50								3.00	1.10		
120.0	0.10	0.80		2.20	0.00		3.19	1.50								3.00	1.10		
121.0	0.10	0.80		2.10	0.00		3.20	1.50	1.15							3.00	1.10		
123.0	0.10	0.80		1.90	0.00		3.25	1.25								3.00	1.10		
125.0	0.20	0.60		1.70	0.00		3.30	1.00	1.05							3.00	1.10		
127.0	0.40	0.70		1.50	0.00		3.08	0.90								3.00	1.10		
129.0	0.40	1.20		1.30	0.00		2.85	0.80	0.90							3.00	1.10		
130.0	0.40	1.10		1.20	0.00		2.76	0.80								3.00	1.10		

Table C-3.9 (cont.) Summary of hydraulic data collected at site 131.3L, Cross section 1.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
	1			2			3			4			5				
131.0	0.40	1.00		0.96	0.00		2.60	0.00								3.00	1.10
133.0	.00	0.00		0.40	0.00		2.50	0.00	0.60							3.00	1.10
135.0	.00	0.00		.00	0.00		2.45	0.00								3.00	1.10
137.0	.00	0.00		.00	0.00		2.40	0.00	0.60							3.00	1.10
141.0	.00	0.00		.00	0.00		2.10	0.50	0.50							3.00	1.10
145.0	.00	0.00		.00	0.00		1.30	0.30	0.00							3.00	1.10
149.0	.00	0.00		.00	0.00		0.45	0.00								3.00	1.10
150.2	.00	0.00		.00	0.00		.00	0.00								3.00	1.10

a Clear water.

b Turbid, many chum.

c Fish observed.

d Cross section survey.

| Extrapolated or interpolated value.

Table C-3.9 (cont.) Summary of hydraulic data collected at site 131.3L, Cross section 2.

RATING CURVE: A = -1.62 B = 0.57 CF = 610.00  
 DATE: SEPT 26 a DATE: AUG 14 b DATE: AUG 21 c DATE: SEPT 27 d  
 REACH US = 123.00 REACH US = 123.00 REACH US = 221.00 REACH US =  
 DS = 60.00 DS = 149.00 DS = 149.00 DS =  
 GCQ: 7680 GCQ: 16100 GCQ: 19900 GCQ: 7470  
 WSEL: 614.30 WSEL: 616.00 WSEL: 616.77 WSEL: 614.31 SUBSTRATE INFO

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1		2			3			4			5				
	0.0	.00		.00	.00		.00									5.00	4.30
	34.0	.00		.00	.00		0.77									5.00	5.20
	38.0	.00		0.20	0.40		0.97									5.00	5.20
	42.0	.00		0.70	2.20		1.47									5.00	5.20
	46.0	.00		0.80	2.20		1.57									5.00	5.20
	50.0	.00		1.00	1.90		1.77									5.00	5.20
	54.0	.00		1.10	2.00		1.87									5.00	5.20
	60.0	.00		1.50	1.60		2.27									5.00	5.20
	64.0	.00		1.50	1.30		2.27									5.00	5.20
	66.0	0.40	0.20	1.60	1.45		2.37									5.00	5.20
	68.0	0.40	0.20	1.70	1.60		2.47									5.00	5.20
	70.0	0.50	0.30	1.75	1.70		2.52									5.00	5.20
	72.0	0.60	0.30	1.80	1.80		2.57									5.00	5.20
	74.0	0.50	0.30	1.85	1.90		2.62									5.00	5.20
	76.0	0.40	0.10	1.90	2.00		2.67									5.00	5.20
	78.0	0.60	0.20	1.95	2.10		2.72									5.00	5.20
	80.0	0.50	0.30	2.00	2.20		2.77									5.00	5.20
	82.0	0.50	0.20	2.02	2.12		2.79									3.00	5.20
	84.0	0.50	0.10	2.04	2.04		2.81									3.00	5.20
	86.0	0.40	0.00	2.06	1.96		2.83	3.30								3.00	5.20
	88.0	0.40	0.00	2.08	1.88		2.70	3.30	1.90							3.00	5.20
	90.0	0.30	0.00	2.10	1.80		2.60	3.23								3.00	5.20
	92.0	0.20	0.00	2.08	1.74		2.50	3.16								3.00	5.20
	94.0	0.10	0.00	2.06	1.68		2.40	3.09								3.00	5.20
	95.0	.00	0.00	2.05	1.65		2.35	3.06								3.00	5.20
	98.0	0.35	0.00	2.02	1.56		2.20	2.95	2.60							3.00	5.20
	100.0	0.33	0.00	2.00	1.50		2.06	2.80								3.00	5.20
	108.0	.00	0.00	1.28	1.18		1.50	2.20	2.15							3.00	5.20
	110.0	.00	0.00	1.10	1.10		1.33	1.93								3.00	5.20
	118.0	.00	0.00	0.62	0.78		0.65	0.85	1.20							3.00	5.10
	120.0	.00	0.00	0.50	0.70		0.45	0.63								3.00	5.10
	122.0	.00	0.00	0.33	0.47		0.25	0.40								3.00	5.10

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Table C-3.9 (cont.) Summary of hydraulic data collected at site 131.3L, Cross section 2.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1		2			3			4			5				
124.0	.00	0.00		10.17	0.23		.00	0.00								3.00	5.10
126.0	.00	0.00		.00	0.00		.00	0.00								3.00	5.10

a Changed to true WSEL.

b Upwelling with spawning chum along right bank at cross section.

c Fish seen.

d Cross section survey.

| Extrapolated or interpolated value.

Table C-3.9 (cont.) Summary of hydraulic data collected at site 131.3L, Cross section 3.

RATING CURVE: A = -0.39 B = 0.29 CF = 610.00																					
DATE: SEPT 26 a				DATE: AUG 14 b				DATE: AUG 21 c				DATE: SEPT 27 d									
REACH US = 152.00				REACH US = 130.00				REACH US = 109.00				REACH US =									
DS = 123.00				DS = 123.00				DS = 25.00				DS =									
GCG: 7680				GCG: 16100				GCG: 19900				GCG: 7470									
WSEL: 616.24				WSEL: 616.76				WSEL: 617.19				WSEL: 615.41									
SUBSTRATE INFO																					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV				
			1				2				3				4				5		
8.0	0.00	0.00		0.00	0.00		0.00	0.00								9.00	5.30				
10.0	0.00	0.00		0.00	0.00		0.00	0.00								9.00	5.20				
14.0	0.00	0.00		0.50	0.00		0.00	0.00								9.00	5.20				
20.0	0.00	0.00		0.62	0.00		0.00	0.00								9.00	5.20				
30.0	0.00	0.00		0.80	0.00		0.42	0.15								9.00	4.20				
34.0	0.00	0.00		1.20	0.20		1.12	0.40								9.00	4.20				
35.0	0.00	0.00		1.20	0.12		1.40	0.50	0.50							5.00	4.20				
40.0	0.00	0.00		1.20	0.10		1.43	0.47								5.00	4.20				
44.0	0.19	0.00		1.20	0.00		1.58	0.32								5.00	4.20				
48.0	0.35	0.00		1.28	0.04		1.70	0.20	0.25							5.00	4.20				
48.0	0.50	0.00		1.36	0.08		1.82	0.46								5.00	4.20				
50.0	0.53	0.00		1.40	0.10		1.88	0.59								5.00	4.20				
54.0	0.58	0.00		1.24	0.14		2.00	0.85	0.80							5.00	4.20				
56.0	0.60	0.00		1.16	0.16		1.99	0.86								5.00	4.20				
60.0	0.60	0.00		1.00	0.20		1.97	0.88								5.00	4.20				
64.0	0.47	0.00		0.96	0.40		1.95	0.90	0.80							5.00	4.20				
66.0	0.40	0.00		0.94	0.50		1.89	0.94								5.00	4.20				
70.0	0.27	0.00		0.90	0.70		1.77	1.02								5.00	4.20				
72.0	0.20	0.00		0.90	0.76		1.71	1.06								5.00	4.20				
74.0	0.20	0.05		0.90	0.82		1.65	1.10	0.95							5.00	4.20				
76.0	0.20	0.10		0.90	0.88		1.62	1.13								5.00	4.20				
80.0	0.10	0.00		0.90	1.00		1.56	1.19								5.00	4.20				
84.0	0.10	0.00		0.86	1.04		1.50	1.25	1.10							5.00	4.20				
88.0	0.10	0.00		0.82	1.08		1.54	1.27								5.00	4.20				
90.0	0.15	0.05		0.80	1.10		1.56	1.28								5.00	4.20				
92.0	0.20	0.10		0.84	1.16		1.58	1.29								5.00	4.20				
94.0	0.20	0.05		0.88	1.22		1.60	1.30								5.00	4.20				
96.0	0.20	0.00		0.92	1.28		1.58	1.35								5.00	4.20				
100.0	0.10	0.00		1.00	1.40		1.54	1.45								5.00	4.20				
104.0	0.10	0.00		0.92	1.72		1.50	1.55								5.00	4.20				
108.0	0.20	0.00		0.84	2.04		1.54	1.59								5.00	4.20				
110.0	0.25	0.05		0.80	2.20		1.56	1.61								5.00	4.20				

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Table C-3.9 (cont.) Summary of hydraulic data collected at site 131.3L, Cross section 3.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
112.0	0.30	0.10		0.84	2.18		1.58	1.63								5.00	4.20
114.0	0.20	0.05		0.88	2.16		1.60	1.65	1.10							5.00	4.20
116.0	0.10	0.00		0.92	2.14		1.60	1.60								5.00	4.20
120.0	0.10	0.00		1.00	2.10		1.60	1.50								5.00	4.20
124.0	0.10	0.00		1.00	2.02		1.60	1.40								5.00	4.20
128.0	0.10	0.00		1.00	1.94		1.60	1.40								5.00	4.20
130.0	0.10	0.00		1.00	1.90		1.60	1.40								5.00	4.20
132.0	0.10	0.00		0.98	1.94		1.60	1.40								5.00	4.20
134.0	0.10	0.00		0.96	1.98		1.60	1.40								5.00	4.20
136.0	0.10	0.00		0.94	2.02		1.62	1.42								5.00	4.20
140.0	0.10	0.00		0.90	2.10		1.66	1.46								5.00	4.20
144.0	0.20	0.30		0.94	1.58		1.70	1.50	1.10							5.00	4.20
148.0	0.20	0.10		0.98	1.06		1.46	1.46								5.00	4.20
150.0	0.15	0.05		1.00	0.80		1.34	1.44								5.00	4.20
152.0	0.10	0.00		0.98	0.70		1.22	1.42								3.00	4.20
154.0	0.10	0.00		0.96	0.60		1.10	1.40								3.00	4.20
156.0	0.10	0.00		0.94	0.50		1.12	1.37								3.00	1.10
157.0	.00	.00		0.93	0.45		1.13	1.36								3.00	1.10
160.0	.00	.00		0.90	0.30		1.16	1.31								3.00	1.10
164.0	.00	.00		0.86	0.94		1.20	1.25	1.60							3.00	1.10
170.0	.00	.00		0.80	1.90		1.14	1.40								3.00	1.10
174.0	.00	.00		0.64	1.54		1.10	1.50								3.00	1.10
180.0	.00	.00		0.40	1.00		1.22	1.44								3.00	1.10
182.0	.00	.00		.00	.00		1.26	1.42								3.00	1.10
184.0	.00	.00		0.74	.00		1.30	1.40								3.00	1.10
194.0	.00	.00		0.54	.00		1.10	1.30								3.00	1.10
204.0	.00	.00		.00	.00		0.50	1.20	1.50							3.00	1.10
214.0	.00	.00		.00	.00		0.30	1.25								3.00	1.10
224.0	.00	.00		.00	.00		0.25	0.45								3.00	1.10
228.0	.00	.00		.00	.00		0.30	0.40								3.00	1.10
231.5	.00	.00		.00	.00		.00	0.00								3.00	1.10

- a Clear water, algal hairs on rocks.
- b Turbid water, no fish seen.
- c Fish observed.
- d Cross section survey.
- | Extrapolated or interpolated value.

Table C-3.9 (cont.) Summary of hydraulic data collected at site 131.3L, Cross section 4.

RATING CURVE:	A = -0.39	B = 0.29	CF = 610.00			
DATE: SEP 26 a	DATE: AUG 14 b	DATE: AUG 21 c	DATE:	DATE:	DATE:	
REACH US = 75.00	REACH US = 150.00	REACH US = 50.00	REACH US =	REACH US =	REACH US =	
DS = 65.00	DS = 87.00	DS = 109.00	DS =	DS =	DS =	
GCO: 7680	GCO: 16100	GCO: 19900	GCO:	GCO:	GCO:	
WSEL: 616.24	WSEL: 616.76	WSEL: 617.19	WSEL:	WSEL:	WSEL:	SUBSTRATE INFO

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
	1			2			3			4			5				
0.0	.00	.00		.00	.00		.00	.00								9.00	6.20
11.0	.00	.00		.00	.00		.00	.00								9.00	5.20
28.0	.00	.00		.00	.00		1.00	0.90	0.90							8.00	4.30
48.0	.00	.00		.00	.00		1.00	2.50	2.50							8.00	4.30
50.0	0.10	.00		.00	.00		0.99	2.63								8.00	4.30
52.0	0.10	.00		.00	.00		0.98	2.76								8.00	4.30
54.0	0.10	.00		0.10	.00		0.97	2.89								8.00	4.30
56.0	0.10	.00		0.20	.00		0.96	3.02								8.00	4.30
58.0	0.20	0.30		0.30	.00		0.95	3.15								8.00	4.30
60.0	0.20	0.10		0.40	.00		0.94	3.28								8.00	4.30
62.0	0.20	0.20		0.50	.00		0.93	3.41								8.00	4.30
64.0	0.20	0.10		0.44	.00		0.92	3.54								8.00	4.30
66.0	0.20	0.20		0.38	.00		0.91	3.67								8.00	4.30
68.0	0.10	.00		0.32	.00		0.90	3.80	4.00							8.00	4.30
70.0	0.20	.00		0.26	.00		0.91	3.74								8.00	4.30
72.0	0.10	.00		0.20	.00		0.92	3.68								8.00	4.30
74.0	0.10	.00		0.10	.00		0.93	3.62								8.00	4.30
76.0	.00	.00		.00	.00		0.94	3.56								8.00	4.30
88.0	.00	.00		.00	.00		1.00	3.20	3.20							8.00	4.30
92.0	.00	.00		.00	.00		0.96	3.15								8.00	4.30
102.0	.00	.00		.00	.00		0.86	3.03								8.00	4.30
108.0	.00	.00		0.06	.00		0.80	2.95	3.00							8.00	4.30
112.0	.00	.00		0.10	.00		0.77	2.66								8.00	4.30
122.0	.00	.00		0.20	1.00		0.70	1.94								3.00	4.30
128.0	.00	.00		0.32	1.54		0.65	1.50	1.70							3.00	4.30
132.0	.00	.00		0.40	1.90		0.69	1.26								3.00	1.10
142.0	.00	.00		0.50	1.80		0.79	0.66								3.00	1.10
148.0	.00	.00		0.50	1.56		0.85	0.30	0.25							3.00	1.10
152.0	.00	.00		0.50	1.40		0.84	0.40								3.00	1.10
162.0	.00	.00		0.40	1.80		0.82	0.65								3.00	1.10
168.0	.00	.00		0.58	2.16		0.80	0.80	0.80							3.00	1.10
172.0	.00	.00		0.70	2.40		0.96	1.00								3.00	1.10

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Table C-3.9 (cont.) Summary of hydraulic data collected at site 131.3L, Cross section 4.

STA	1			2			3			4			5			SUB	COV
	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4		
178.0	.00	.00		0.76	2.40		1.20	1.30	0.80							3.00	1.10
182.0	.00	.00		0.80	2.40		0.96	1.38								3.00	1.10
188.0	.00	.00		0.68	2.34		0.60	1.50	1.60							3.00	1.10
192.0	.00	.00		0.60	2.30		0.65	1.30	1.55							3.00	1.10
196.0	.00	.00		0.64	2.22		0.50	0.85	1.10							3.00	1.10
197.7	.00	.00		0.66	2.19		.00	.00								3.00	1.10
202.0	.00	.00		0.70	2.10		.00	.00								3.00	1.10
212.0	.00	.00		0.60	2.00		.00	.00								3.00	1.10
222.0	.00	.00		0.50	0.40		.00	.00								3.00	1.10
227.0	.00	.00		.00	.00		.00	.00								3.00	1.10

a Clear water, algal infested rocks.

b No fish seen, turbid water 112-227', clear water 52-102'.

c Chum seen.

| Extrapolated or interpolated value.

Table C-3.10

Summary of hydraulic data collected at site 133.0R, Cross section 1. a

RATING CURVE:			A = -1.57	B = 0.54	CF = 645.00										SUBSTRATE INFO		
DATE: SEPT 26 b			DATE: AUG 14 c			DATE: AUG 21 d			DATE:			DATE:					
REACH US = 44.00			REACH US = 44.00			REACH US = 44.00			REACH US =			REACH US =					
DS = 0.00			DS = 0.00			DS = 0.00			DS =			DS =					
GCQ: 7600			GCQ: 16100			GCQ: 19900			GCQ:			GCQ:					
WSEL: 649.20			WSEL: 650.03			WSEL: 650.64			WSEL:			WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1		2			3			4			5				
0.0	.00	.00		.00	.00		.00	.00								3.00	1.10
13.6	.00	.00		.00	.00		.00	.00								8.00	5.20
16.0	.00	.00		.00	.00		0.30	0.05								8.00	5.20
20.0	.00	.00		.00	.00		0.80	1.45	1.00							8.00	5.20
24.0	.00	.00		0.40	0.90		1.20	2.70	2.30							8.00	5.20
28.0	.00	.00		0.60	2.00		1.80	3.40	2.40							9.00	5.20
32.0	.00	.00		1.10	2.30		2.30	3.50	2.90							9.00	5.20
34.0	0.45	0.30		1.45	2.55		2.50	3.60	2.50							9.00	5.20
36.0	0.90	0.60		1.80	2.80		3.17	3.60								9.00	5.20
40.0	0.75	0.40		2.40	3.30		3.02	3.60								9.00	5.20
44.0	0.60	0.20		2.40	3.30		2.87	3.60								9.00	5.20
50.0	0.53	0.35		2.40	3.30		2.80	3.60								9.00	5.20
52.0	0.50	0.40		2.40	3.24		2.77	3.60								9.00	5.20
60.0	0.50	0.40		2.40	3.00		2.77	3.60								9.00	5.20
68.0	0.90	1.10	1.10	2.80	2.56		3.17	3.60								9.00	5.20
70.0	1.00	1.53		3.00	2.45		3.27	3.60								9.00	5.20
76.0	1.30	2.80	2.70	2.94	2.63		3.57	3.60								9.00	5.20
80.0	1.30	2.55		2.90	2.75		3.57	3.60								9.00	5.20
84.0	1.30	2.30	2.80	2.96	2.75		3.57	3.60								9.00	5.20
92.0	1.50	2.40	2.00	3.16	2.75		3.77	3.60								9.00	5.20
100.0	1.00	2.30		2.66	2.75		3.27	3.60								9.00	5.20
108.0	1.30	1.30	1.20	2.96	2.75		3.57	3.60								9.00	5.20
116.0	1.30	1.50	1.50	2.96	2.75		3.57	3.60								9.00	5.20
124.0	1.10	1.60		2.76	2.75		3.37	3.60								9.00	5.20
132.0	0.60	1.50		2.26	2.75		2.87	3.60								9.00	5.20
140.0	.00	0.00		2.66	2.75		3.27	3.60								9.00	5.20

a All measurements from RWE.

b Velocity changed from 2.6 to 1.6.

c Turbid water, adult salmon observed.

d Fish seen.

| Extrapolated or interpolated value.

Table C-3.10 (cont.) Summary of hydraulic data collected at site 133.BR, Cross section 2. a

RATING CURVE: A = -1.57 B = 0.54 CF = 645.00																	
DATE: SEPT 26 b						DATE: AUG 14 c						DATE: AUG 21 d					
REACH US = 102.50			REACH US = 102.50			REACH US = 102.50			REACH US =			REACH US =			SUBSTRATE INFO		
DS = 44.00			DS = 44.00			DS = 44.00			DS =			DS =					
GCO: 7680			GCO: 16100			GCO: 19900			GCO:			GCO:					
WSEL: 649.20			WSEL: 650.03			WSEL: 650.64			WSEL:			WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
	1			2			3			4			5				
0.0	.00	.00		.00	.00		.00	.00								3.00	1.10
19.7	.00	.00		.00	.00		.00	.00								10.00	6.20
22.0	.00	.00		.00	.00		0.70	0.20								10.00	6.20
26.0	.00	.00		.00	.00		1.40	1.15	0.95							10.00	6.20
30.0	.00	.00		0.80	0.60		2.20	2.60	1.90							10.00	6.20
34.0	.00	.00		2.00	1.80		2.90	2.65	1.50							11.00	6.20
36.0	0.70	0.10		2.25	1.88		2.97	3.05								11.00	6.20
38.0	0.95	0.20		2.50	1.95		3.22	3.05								11.00	6.20
40.0	1.20	0.30	0.30	2.55	2.38		3.47	3.05								11.00	6.20
42.0	1.05	0.40		2.60	2.80		3.32	3.05								11.00	6.20
44.0	0.90	0.50		2.50	2.85		3.17	3.05								11.00	6.20
48.0	0.80	0.70		2.30	2.95		3.07	3.05								11.00	6.20
50.0	0.80	0.80		2.20	3.00		3.07	3.05								11.00	6.20
52.0	0.80	0.90		2.28	2.88		3.07	3.05								8.00	5.20
56.0	0.80	0.90		2.44	2.64		3.07	3.05								8.00	5.20
60.0	1.00	0.50	0.50	2.60	2.40		3.27	3.05								8.00	5.20
64.0	1.00	0.70	0.70	2.40	2.36		3.27	3.05								8.00	5.20
68.0	1.20	0.70		2.20	2.32		3.47	3.05								8.00	5.20
70.0	1.30	0.95		2.10	2.30		3.57	3.05								8.00	5.20
72.0	1.40	1.20		2.08	2.30		3.67	3.05								8.00	5.20
76.0	1.60	1.10		2.04	2.30		3.87	3.05								8.00	5.20
80.0	0.70	1.00		2.00	2.30		2.97	3.05								8.00	5.20
84.0	0.50	0.90		1.84	2.14		2.77	3.05								8.00	5.20
88.0	0.50	0.70		1.68	1.98		2.77	3.05								8.00	5.20
90.0	0.50	0.70		1.60	1.90		2.77	3.05								8.00	5.20
92.0	0.50	0.70		1.68	1.88		2.77	3.05								8.00	5.20
96.0	0.50	.00	.00	1.84	1.84		2.77	3.05								8.00	5.20
100.0	0.50	0.40	0.40	2.00	1.80		2.77	3.05								8.00	5.20
103.0	.00	.00		1.79	1.56		2.27	3.05								3.00	1.10
110.0	.00	.00		1.30	1.00		2.27	3.05								3.00	1.10
113.0	.00	.00		1.51	0.82		2.27	3.05								9.00	5.20
114.0	0.10	0.50		1.58	0.76		2.37	3.05								9.00	5.20

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Table C-3.10 (cont.) Summary of hydraulic data collected at site 133.BR, Cross section 2. a

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1		2		3		4		5							
118.0	0.50	0.90		1.86	0.52		2.77	3.05								9.00	5.20
120.0	0.65	0.95		2.00	0.40		2.92	3.05								9.00	5.20
122.0	0.80	1.00		2.12	0.56		3.07	3.05								9.00	5.20
126.0	1.00	1.90	1.90	2.36	0.88		3.27	3.05								9.00	5.20
130.0	1.30	2.20	2.20	2.60	1.20		3.57	3.05								9.00	5.20
140.0	1.40	2.50	2.40	2.90	2.00		3.67	3.05								9.00	5.20
150.0	1.40	2.60	2.40	3.00	3.05		3.67	3.05								9.00	5.20
160.0	1.30	2.20	2.20	2.96	3.05		3.57	3.05								9.00	5.20
170.0	1.00	2.50	2.50	2.66	3.05		3.27	3.05								9.00	5.20
180.0	1.00	2.30	2.30	2.66	3.05		3.27	3.05								9.00	5.20
190.0	0.30	0.40		1.96	3.05		2.57	3.05								9.00	5.20
195.0	.00	.00		1.66	3.05		2.27	3.05								9.00	5.20

a All measurements from RWE.

b Clear water.

c Turbid water.

d No fish.

| Extrapolated or interpolated value.

Table C-3.10 (cont.) Summary of hydraulic data collected at site 133.0R, Cross section 3. a

RATING CURVE: A = -1.57 B = 0.54 CF = 645.00			DATE: SEPT 26 b			DATE: AUG 14 c			DATE: AUG 21			DATE:			DATE:			SUBSTRATE INFO	
REACH US = 0.00 DS = 102.50 GCG: 7680 WSEL: 649.23			REACH US = 0.00 DS = 102.50 GCG: 16100 WSEL: 650.03			REACH US = 0.00 DS = 102.50 GCG: 19900 WSEL: 650.64			REACH US =			REACH US =							
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV		
	1			2			3			4			5						
0.0	0.00	0.00		0.00	0.00		0.00	0.00								6.00	4.20		
16.7	0.00	0.00		0.00	0.00		0.00	0.00								5.00	4.20		
18.0	0.00	0.00		0.00	0.00		0.20	0.00								5.00	4.20		
20.0	0.00	0.00		0.00	0.00		0.65	0.18								5.00	4.20		
22.0	0.00	0.00		0.25	0.50		1.10	0.35	0.65							5.00	4.20		
24.0	0.00	0.00		0.50	1.00		1.13	0.85								5.00	4.20		
26.0	0.00	0.00		0.65	1.35		1.15	1.35	1.45							5.00	4.20		
28.0	0.00	0.00		0.80	1.70		1.38	1.78								5.00	4.20		
29.0	0.00	0.00		0.93	1.85		1.49	1.99								5.00	4.20		
30.0	0.10	0.00		1.05	2.00		1.60	2.20	2.00							5.00	4.20		
32.0	0.35	0.40		1.30	2.30		1.78	2.55								5.00	4.20		
34.0	0.60	0.80		1.45	2.35		1.95	2.90	2.40							5.00	4.20		
36.0	0.70	1.10		1.60	2.40		2.18	2.90								5.00	4.20		
38.0	0.80	1.40		1.75	2.60		2.40	2.90	2.95							8.00	5.20		
40.0	0.80	1.25		1.90	2.80		2.35	3.10								8.00	5.20		
42.0	0.80	1.10		1.86	3.02		2.30	3.30	3.40							8.00	5.20		
46.0	0.50	1.40		1.78	3.46		2.39	3.30								8.00	5.20		
50.0	0.60	0.90		1.70	3.90		2.31	3.30								8.00	5.20		
54.0	0.60	0.70		1.90	4.06		2.51	3.30								8.00	5.20		
58.0	0.50	0.30		2.10	4.22		2.71	3.30								9.00	5.20		
60.0	0.50	0.45		2.20	4.30		2.81	3.30								9.00	5.20		
62.0	0.50	0.60		2.12	4.10		2.73	3.30								9.00	5.20		
66.0	0.50	0.50		1.96	3.70		2.57	3.30								9.00	5.20		
70.0	0.50	0.40		1.80	3.30		2.41	3.30								9.00	5.20		
74.0	0.50	0.40		1.68	3.10		2.29	3.30								9.00	5.20		
78.0	0.60	0.00		1.56	2.90		2.17	3.30								9.00	5.20		
80.0	0.55	0.10		1.50	2.80		2.11	3.30								9.00	5.20		
82.0	0.50	0.20		1.50	2.78		2.11	3.30								9.00	5.20		
86.0	0.40	0.20		1.50	2.74		2.11	3.30								9.00	5.20		
90.0	0.13	0.07		1.50	2.70		2.11	3.30								9.00	5.20		
92.0	0.00	0.00		1.46	2.64		2.07	3.30								9.00	5.20		
100.0	0.00	0.00		1.30	2.40		1.91	3.30								9.00	5.20		

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Table C-3.10 (cont.) Summary of hydraulic data collected at site 133.8R, Cross section 3.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1		2		3		4		5							
110.0	.00	0.00		1.30	1.80		1.91	3.30								9.00	5.20
120.0	.00	0.00		1.10	2.20		1.71	3.30								9.00	5.20
130.0	.00	0.00		1.10	2.60		1.71	3.30								9.00	5.20
140.0	.00	0.00		0.80	2.50		1.41	3.30								9.00	5.20
150.0	.00	0.00		1.20	2.40		1.41	3.30								9.00	5.20
187.0	.00	0.00		0.80	2.40		1.41	3.30								9.00	5.20
188.0	0.20	0.00		1.00	2.40		1.61	3.30								9.00	5.20
192.0	0.90	0.00		1.70	2.40		2.31	3.30								9.00	5.20
196.0	1.40	0.00		2.20	2.40		2.81	3.30								9.00	5.20
200.0	1.60	0.00		2.40	2.40		3.01	3.30								9.00	5.20
204.0	1.00	0.50		1.80	2.40		2.41	3.30								9.00	5.20
208.0	0.80	0.90		1.60	2.40		2.21	3.30								9.00	5.20
212.0	0.70	1.50		1.50	2.40		2.11	3.30								9.00	5.20
216.0	0.70	1.30		1.50	2.40		2.11	3.30								9.00	5.20

a All measurements from RWE.

b Clear water, algal growth on rocks.

c Turbid water, one adult salmon observed.

| Extrapolated or interpolated value.

Table C-3.11

Summary of hydraulic data collected at site 137.5R, Cross section 1.

RATING CURVE: A = -3.11 B = 0.89 CF = 687.00																	
DATE: AUG 12 a			DATE:			DATE:			DATE:			DATE:			SUBSTRATE INFO		
REACH US = 92.00			REACH US =			REACH US =			REACH US =			REACH US =					
DS = 50.00			DS =			DS =			DS =			DS =					
GCD: 19000			GCD:			GCD:			GCD:			GCD:					
WSEL: 691.99			WSEL:			WSEL:			WSEL:			WSEL:					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
0.0	.00	.00														3.00	8.10
20.0	.00	.00														3.00	6.10
26.0	1.20	0.10														3.00	6.10
32.0	1.50	0.00														3.00	1.10
36.0	1.10	0.05														3.00	1.10
42.0	.00	0.00														3.00	1.10
58.0	.00	0.00														3.00	1.10
60.0	0.30	0.00														3.00	1.10
64.0	0.50	0.00														3.00	1.10
74.0	1.30	0.00														3.00	1.10
82.0	2.00	0.00														3.00	1.10
88.0	2.70	0.00														3.00	1.10
96.0	2.70	0.00														3.00	1.10
100.0	2.00	0.00														3.00	1.10
106.0	1.30	0.00														3.00	1.10
111.0	.00	0.00														3.00	1.10

a Turbid water, backwater.  
 | Extrapolated or interpolated value.



Table C-3.11 (cont.) Summary of hydraulic data collected at site 137.5R, Cross section 3.

RATING CURVE:			A =	B =	CF =	DATE:			DATE:			DATE:			SUBSTRATE INFO		
DATE: AUG 12 a			DATE:	DATE:	DATE:	REACH US =			REACH US =			REACH US =			SUB	COV	
REACH US = 50.00			REACH US =	REACH US =	REACH US =	DS =			DS =			DS =					
DS = 116.00			DS =	DS =	DS =	GCD: 19000			GCD: 19000			GCD: 19000					
GCD: 19000			GCD:	GCD:	GCD:	WSEL: 691.97			WSEL: 691.97			WSEL: 691.97					
WSEL: 691.97			WSEL:	WSEL:	WSEL:												
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
0.0	.00	.00														13.00	8.20
20.0	.00	.00														13.00	6.30
22.0	0.30	0.00														13.00	6.30
28.0	0.80	0.00														13.00	6.30
30.0	1.20	0.00														13.00	6.30
36.0	0.80	0.00														13.00	6.30
38.0	0.80	0.00														13.00	6.30
42.0	0.70	0.00														13.00	6.30
46.0	0.80	0.00														13.00	6.30
50.0	0.20	0.00														13.00	6.30
54.0	.00	0.00														13.00	6.30

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a Clear water, unbreached.  
 † Extrapolated or interpolated value.

Table C-3.12

Summary of hydraulic data collected at site 138.7L, Cross section 1.

RATING CURVE: A = -6.07 B = 1.54 CF = 705.00																			
DATE: SEPT 20 a					DATE: AUG 16					DATE: AUG 23 b					DATE: AUG 27 c				
REACH US = 142.00				REACH US = 142.00				REACH US = 142.00				REACH US = 142.00				REACH US =			
DS = 250.00				DS = 200.00				DS = 250.00				DS = 300.00				DS =			
GCQ: 10400				GCQ: 14500				GCQ: 17900				GCQ: 19000				GCQ: 27700			
WSEL: 706.25				WSEL: 707.08				WSEL: 707.87				WSEL: 708.15				WSEL: 710.61		SUBSTRATE INFO	
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV		
	1			2			3			4			5						
0.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		3.00	8.20		
11.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		8.00	8.20		
16.0	.00	.00		.00	.00		.00	.00		.00	.00		0.80	1.40	1.40	8.00	4.20		
20.0	.00	.00		.00	.00		.00	.00		.00	.00		1.20	2.00	2.00	8.00	4.20		
21.0	.00	.00		.00	.00		.00	.00		.00	.00		1.30	2.00		8.00	4.20		
24.0	.00	.00		.00	.00		.00	.00		0.20	1.25		1.60	2.30	2.20	8.00	4.20		
24.3	.00	.00		.00	.00		.00	.00		0.23	1.30		1.63	2.33		8.00	4.20		
26.0	.00	.00		.00	.00		0.18	0.62		0.40	1.60		1.80	2.50		8.00	4.20		
28.0	.00	.00		.00	.00		0.40	1.35		0.60	1.80		2.00	2.70	2.50	8.00	4.20		
30.0	.00	.00		.00	.00		0.55	1.35		0.80	2.00		2.15	2.70		8.00	4.20		
32.0	.00	.00		0.10	0.00		0.70	1.35	1.60	0.75	2.10		2.30	2.70	2.10	8.00	4.20		
34.0	.00	.00		0.10	0.00		0.70	1.60		0.70	2.20		2.40	2.70		8.00	5.20		
36.0	.00	.00		0.10	0.00		0.70	1.85	1.90	0.90	2.30		2.50	2.70	2.40	10.00	5.20		
38.0	.00	.00		0.20	0.50		0.95	1.90		1.10	2.40		2.75	3.15		10.00	5.20		
40.0	.00	.00		0.50	0.95		1.20	1.95	1.90	1.37	2.20		3.00	3.60	2.80	10.00	5.20		
42.0	.00	.00		0.80	1.40	1.60	1.25	2.05		1.63	2.00		3.99	3.60		10.00	5.20		
44.0	.00	.00		0.85	1.70		1.30	2.15	2.40	1.90	1.80		4.04	3.60		10.00	5.20		
46.0	0.08	0.04		0.90	2.00	2.00	1.63	2.28		2.05	2.25		4.44	3.60		10.00	5.20		
48.0	0.16	0.08		1.25	2.04		1.97	2.40		2.20	2.70		4.52	3.60		10.00	5.20		
49.0	0.20	0.10		1.43	2.06		2.13	2.40		2.34	2.75		4.56	3.60		10.00	5.20		
50.0	0.35	0.33		1.60	1.40	1.40	2.30	2.40	1.90	2.48	2.80		4.71	3.60		10.00	5.20		
53.0	0.80	1.00		2.02	2.15		2.83	2.25		2.89	2.95		5.16	3.60		10.00	5.20		
54.0	0.90	1.10		2.16	2.17		3.00	2.20	2.10	3.03	3.00		5.26	3.60		10.00	5.20		
56.0	1.10	1.30		2.44	2.21		2.72	2.90		3.30	3.10		5.46	3.60		10.00	5.20		
57.0	1.20	1.40	1.30	2.58	2.24		2.82	2.90		3.10	3.10		5.56	3.60		10.00	5.20		
60.0	1.58	1.59		3.00	2.30	1.60	3.20	2.90		3.48	3.10		5.94	3.60		10.00	5.20		
61.0	1.70	1.65	1.55	3.09	2.38		3.32	2.90		3.60	3.10		6.06	3.60		8.00	5.20		
65.0	2.20	1.60	1.40	3.44	2.68		3.82	2.90		4.10	3.10		6.56	3.60		8.00	5.20		
68.0	2.43	1.71		3.70	2.90	2.40	4.05	2.90		4.33	3.10		6.79	3.60		8.00	5.20		
69.0	2.50	1.75	1.60	3.33	2.90		4.12	2.90		4.40	3.10		6.86	3.60		8.00	5.20		
73.0	2.90	2.25	1.60	3.73	2.90		4.52	2.90		4.80	3.10		7.26	3.60		12.00	5.20		

a Bank seepage extends 50 ft upstream.

b Fish, bank seepage between cross section 1 &amp; cross section 2 to mouth of Indian River.

c Upwelling, chum.

| Extrapolated or interpolated value.

Table C-3.12 (cont.) Summary of hydraulic data collected at site 138.7L, Cross section 2.

RATING CURVE: A = -6.07 B = 1.54 CF = 705.00																	
DATE: SEPT 20			DATE: AUG 16			DATE: AUG 23 a			DATE: AUG 12			DATE: AUG 27			SUBSTRATE INFO		
REACH US = 113.00			REACH US = 113.00			REACH US = 113.00			REACH US = 113.00			REACH US =					
DS = 142.00			DS = 142.00			DS = 142.00			DS = 142.00			DS =					
GCC: 10400			GCC: 14500			GCC: 17900			GCC: 19000			GCC: 27700					
WSEL: 706.31			WSEL: 707.18			WSEL: 708.02			WSEL: 708.31			WSEL: 710.91					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
	1			2			3			4			5				
0.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		10.00	5.20
8.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		10.00	5.20
12.0	.00	.00		.00	.00		.00	.00		.00	.00		0.20	0.00	1.10	10.00	5.30
16.0	.00	.00		.00	.00		.00	.00		.00	.00		0.50	1.00	1.10	10.00	5.30
20.0	.00	.00		.00	.00		.00	.00		.00	.00		0.60	1.60	1.50	10.00	5.30
24.0	.00	.00		.00	.00		.00	.00		.00	.00		0.80	1.70	1.80	10.00	6.30
28.0	.00	.00		.00	.00		.00	.00		.00	.00		1.10	2.20	2.10	12.00	6.30
31.7	.00	.00		.00	.00		.00	.00		.00	.00		1.47	2.57		12.00	6.30
32.0	.00	.00		.00	.00		0.03	0.05		.00	.00		1.50	2.60	2.20	12.00	6.30
34.0	.00	.00		.00	.00		0.25	0.35		.00	.00		1.75	2.60		12.00	6.30
36.0	.00	.00		.00	.00		0.28	0.50		0.50	0.20		2.00	2.60	2.40	12.00	6.30
38.0	.00	.00		.00	.00		0.30	0.65		0.55	0.50		2.15	3.00		12.00	6.30
39.0	.00	.00		.00	.00		0.48	0.84		0.58	0.65		2.23	3.20		12.00	6.30
40.0	.00	.00		0.10	0.10		0.65	1.03		0.60	0.80		2.30	3.40	3.00	12.00	6.30
42.0	.00	.00		0.30	0.30		1.00	1.40	1.40	0.75	0.88		2.45	3.65		12.00	6.30
44.0	.00	.00		0.40	0.45		1.15	1.80		0.90	0.95		2.60	3.90	3.70	12.00	6.30
46.0	.00	.00		0.50	0.60	1.00	1.30	2.20	2.05	1.10	1.50		3.70	4.20		12.00	6.30
48.0	.00	.00		0.65	1.15		1.40	2.28		1.30	2.05		3.90	4.20		12.00	6.30
50.0	.00	.00		0.80	1.70	1.70	1.50	2.35	2.00	1.50	2.10		4.10	4.20		12.00	6.30
53.0	0.10	0.00		0.80	1.70		1.88	2.43		1.80	2.18		4.60	4.20		12.00	6.30
54.0	0.15	0.15		0.80	1.70	1.80	2.00	2.45	2.00	1.90	2.20		4.70	4.20		12.00	6.30
57.0	0.30	0.60		1.10	2.10		1.93	2.45		2.05	2.95		4.75	4.20		12.00	6.30
58.0	0.33	0.65		1.20	2.23		1.90	2.45	2.40	2.10	3.20		4.90	4.20		12.00	6.30
60.0	0.38	0.75		1.40	2.50	2.40	2.10	3.08		2.17	3.23		4.93	4.20		12.00	6.30
61.0	0.40	0.80		1.54	2.54		2.20	3.39		2.20	3.25		4.98	4.20		12.00	6.30
62.0	0.44	0.94		1.68	2.58		2.30	3.70	2.80	2.23	3.27		5.00	4.20		12.00	6.30
64.0	0.52	1.22		1.96	2.66		2.15	4.20		2.30	3.30		5.04	4.20		12.00	6.30
65.0	0.55	1.35		2.10	2.70		2.23	4.20		2.52	4.20		5.12	4.20		12.00	6.30
69.0	0.55	1.70		2.66	2.86		2.26	4.20		2.55	4.20		5.15	4.20		12.00	6.30
70.0	0.60	1.58		2.80	2.90	1.70	2.31	4.20		2.60	4.20		5.20	4.20		12.00	6.30
73.0	0.75	1.20		2.74	3.02		2.46	4.20		2.75	4.20		5.35	4.20		12.00	6.30
77.0	1.00	2.10		2.66	3.18		2.71	4.20		3.00	4.20		5.60	4.20		12.00	6.30

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Table D-3.12 (cont.) Summary of hydraulic data collected at site 138.7L, Cross section 2.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
80.0	1.38	1.95		2.60	3.30	2.00	3.09	4.20		3.38	4.20		5.98	4.20		12.00	6.30
81.0	1.50	1.90		2.58	3.53		3.21	4.20		3.50	4.20		6.10	4.20		12.00	6.30
84.0	1.50	2.28		2.50	4.20	3.00	3.21	4.20		3.50	4.20		6.10	4.20		12.00	6.30
85.0	1.50	2.40		2.37	4.20		3.21	4.20		3.50	4.20		6.10	4.20		12.00	6.30
89.0	1.50	3.20		2.37	4.20		3.21	4.20		3.50	4.20		6.10	4.20		12.00	6.30
93.0	2.10	3.30		2.97	4.20		3.81	4.20		4.10	4.20		6.70	4.20		12.00	6.30

a No fish observed.

| Extrapolated or interpolated value.

Table C-3.12 (cont.) Summary of hydraulic data collected at site 138.7L, Cross section 3.

RATING CURVE: A = -6.07 B = 1.54 CF = 705.00																							
DATE: SEPT 20						DATE: AUG 16 a						DATE: AUG 23 b						DATE: AUG 27 c					
REACH US = 170.00				REACH US = 300.00				REACH US = 200.00				REACH US = 100.00				REACH US = ft							
DS = 113.00				DS = 113.00				DS = 113.00				DS = 113.00				DS = ft							
GCQ: 10400				GCQ: 14500				GCQ: 17900				GCQ: 19000				GCQ: 27700							
WSEL: 706.25				WSEL: 707.08				WSEL: 707.87				WSEL: 708.15				WSEL: 710.61				SUBSTRATE INFO			
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV						
----- 1 ----- 2 ----- 3 ----- 4 ----- 5 -----																							
0.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		12.00	8.50						
9.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		12.00	6.30						
12.0	.00	.00		.00	.00		.00	.00		.00	.00		0.30	0.60		12.00	6.30						
18.0	.00	.00		.00	.00		.00	.00		.00	.00		0.90	1.90	2.10	12.00	6.30						
20.0	.00	.00		.00	.00		.00	.00		.00	.00		1.10	2.05		12.00	6.30						
22.0	.00	.00		.00	.00		.00	.00		0.20	0.50		1.30	2.20	1.30	12.00	6.30						
22.6	.00	.00		.00	.00		.00	.00		0.26	0.53		1.36	2.26		12.00	6.30						
24.0	.00	.00		.00	.00		.00	.00		0.40	0.60		1.50	2.40		12.00	6.30						
26.0	.00	.00		.00	.00		0.05	0.00		0.35	0.90		1.70	2.60	1.10	12.00	6.30						
28.0	.00	.00		.00	.00		0.10	0.00		0.30	1.20		1.75	2.90		12.00	6.30						
30.0	.00	.00		.00	.00		0.18	0.45		0.50	0.85		1.80	3.20	1.20	12.00	6.30						
32.0	.00	.00		.00	.00		0.25	0.90		0.70	0.50		1.70	3.50		12.00	6.30						
34.0	.00	.00		.00	.00		0.28	0.85		0.75	1.05		1.60	3.80	1.90	12.00	6.30						
36.0	.00	.00		.00	.00		0.30	0.80		0.80	1.60		1.85	4.20		12.00	6.30						
38.0	.00	.00		0.20	0.15		0.70	1.03		0.97	2.03		2.10	4.60	3.60	12.00	6.30						
40.0	.00	.00		0.40	0.30	0.60	1.10	1.25	1.05	1.13	2.47		3.59	4.60		12.00	6.30						
42.0	.00	.00		0.55	0.75		1.20	2.08		1.30	2.90		3.76	4.60		12.00	6.30						
44.0	.00	.00		0.70	1.20	1.00	1.30	2.90	2.40	1.40	3.20		3.86	4.60		12.00	6.30						
47.0	.00	.00		0.93	2.10		1.45	2.98		1.55	3.65		4.01	4.60		12.00	6.30						
48.0	0.01	0.00		1.00	2.40	2.40	1.50	3.00	2.70	1.60	3.80		4.06	4.60		12.00	6.30						
51.0	0.05	0.00		1.30	1.88		1.80	3.23		2.13	4.25		4.41	4.60		10.00	6.30						
52.0	0.19	0.35		1.40	1.70	1.40	1.90	3.30	3.10	2.30	4.40		4.55	4.60		10.00	6.30						
55.0	0.60	1.40		1.93	2.41		2.22	3.60		2.50	4.40		4.96	4.60		10.00	6.30						
59.0	1.10	2.70	2.75	2.63	3.36		2.72	3.60		3.00	4.40		5.46	4.60		10.00	6.30						
60.0	1.30	2.70		2.80	3.60	2.30	2.92	3.60		3.20	4.40		5.60	4.60		10.00	6.30						
63.0	1.90	2.70	2.20	2.73	3.60		3.52	3.60		3.80	4.40		6.26	4.60		10.00	6.30						
67.0	2.10	3.35	2.50	2.93	3.60		3.72	3.60		4.00	4.40		6.46	4.60		10.00	6.30						

a Silty, turbid water, adult chum observed.  
 b No fish observed.  
 c Velocity at 30', changed from 4.2 to 3.2'.  
 | Extrapolated or interpolated value.

Table C-3.13

Summary of hydraulic data collected at site 139.0L, Cross section 1.

RATING CURVE: A = -2.01 B = 0.64 CF = 705.00																					
DATE: SEPT 20 a						DATE: AUG 16 b						DATE: AUG 23 c						DATE: AUG 12 d		DATE: AUG 26 e	
REACH US = 74.00			REACH US = 21.00			REACH US = 53.00			REACH US = 53.00			REACH US = 53.00		REACH US = 53.00		SUBSTRATE INFO					
DS = 70.00			DS = 75.00			DS = 150.00			DS = 300.00			DS = 300.00									
GCD: 10400			GCD: 14500			GCD: 17900			GCD: 19000			GCD: 31700									
WSEL: 708.96			WSEL: 709.50			WSEL: 710.15			WSEL: 710.35			WSEL: 712.62									
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV													
	1			2			3			4			5								
0.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		7.00	8.50				
2.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		7.00	9.50				
4.0	.00	.00		.00	.00		.00	.00		.00	.00		1.10	1.60	1.55	7.00	4.30				
8.0	.00	.00		.00	.00		.00	.00		.00	.00		1.60	3.10	2.65	7.00	4.30				
11.0	.00	.00		.00	.00		.00	.00		.00	.00		2.05	3.59		7.00	4.30				
12.0	.00	.00		.00	.00		.00	.00		0.10	0.17		2.20	3.75	3.60	7.00	4.30				
13.7	.00	.00		.00	.00		.00	.00		0.27	0.46		2.46	3.75		7.00	4.30				
14.0	.00	.00		.00	.00		0.10	0.00		0.30	0.51		2.50	3.75		7.00	4.30				
16.0	.00	.00		.00	.00		0.25	0.03		0.50	0.85		2.80	3.75	3.00	7.00	5.30				
18.0	.00	.00		.00	.00		0.40	0.05		0.70	0.89		3.18	3.75		7.00	5.30				
20.0	.00	.00		.00	.00	0.00	0.55	0.23		0.90	0.93		3.18	3.75		7.00	5.30				
22.0	.00	.00		0.22	0.00		0.70	0.40	0.45	1.10	0.96		3.40	3.75		7.00	5.30				
24.0	.00	.00		0.44	0.00		0.85	0.45		1.30	1.00		3.62	3.75		7.00	5.30				
26.0	.00	.00		0.66	0.00		1.00	0.50	0.50	1.50	1.04		3.84	3.75		7.00	5.30				
27.0	.00	0.00		0.77	0.00		1.18	0.50		1.60	1.06		3.95	3.75		7.00	5.30				
30.0	0.26	0.04		1.10	0.00	0.00	1.70	0.50	0.45	1.90	1.11		4.28	3.75		7.00	5.30				
31.0	0.35	0.05		1.18	0.00		1.75	0.49		2.00	1.13		4.36	3.75		7.00	5.30				
32.0	0.41	0.05		1.26	0.00		1.80	0.48		2.10	1.15		4.44	3.75		7.00	5.30				
35.0	0.60	0.05		1.50	0.00		1.95	0.45		2.29	0.94		4.68	3.75		7.00	5.30				
39.0	0.80	0.05		1.82	0.00		2.15	0.41		2.54	0.67		5.00	3.75		7.00	5.30				
40.0	0.83	0.05		1.90	0.00	0.00	2.20	0.40	0.30	2.60	0.60		5.08	3.75		7.00	5.30				
43.0	0.90	0.05		1.78	0.00		2.14	0.42		2.48	0.57		4.96	3.75		7.00	5.30				
47.0	0.70	0.05		1.62	0.00		2.06	0.44		2.32	0.53		4.80	3.75		7.00	5.30				
50.0	0.70	0.05		1.50	0.00	0.00	2.00	0.45	0.40	2.20	0.50		4.68	3.75		7.00	5.30				
51.0	0.70	0.05		1.47	0.00		1.93	0.49		2.18	0.65		4.65	3.75		7.00	5.30				
54.0	0.63	0.05		1.38	0.00		1.72	0.61		2.10	1.10		4.56	3.75		7.00	5.30				
55.0	0.60	0.05		1.35	0.00		1.65	0.65		2.02	1.13		4.53	3.75		7.00	5.30				
60.0	0.27	0.01		1.20	0.00	0.00	1.30	0.85	0.80	1.60	1.30		4.38	3.75		7.00	5.30				
61.0	0.20	0.00		1.10	0.01		1.24	0.92		1.53	1.36		4.28	3.75		9.00	5.30				
63.0	.00	0.00		0.90	0.03		1.12	1.05		1.38	1.49		4.08	3.75		9.00	5.30				
68.0	.00	0.00		0.40	0.08		0.82	1.37		1.00	1.80		3.58	3.75		9.00	5.30				
70.0	.00	0.00		0.20	0.10	0.00	0.70	1.50	1.70	1.00	1.97		3.38	3.75		9.00	5.30				

Table C-3.13 (cont.) Summary of hydraulic data collected at site 139.0L, Cross section 1.

STA	DEPTH	VEL 1	V.4	DEPTH	VEL 2	V.4	DEPTH	VEL 3	V.4	DEPTH	VEL 4	V.4	DEPTH	VEL 5	V.4	SUR	COV
74.0	.00	0.00		0.32	0.18		0.62	1.98		1.00	2.30		3.50	3.75		9.00	5.30
80.0	.00	0.00		0.50	0.30	2.30	1.00	2.70	2.70	1.08	2.49		3.68	3.75		9.00	5.30
82.0	0.01	0.00		0.66	0.54		1.08	2.72		1.10	2.55		3.84	3.75		9.00	5.30
90.0	0.65	0.00		1.30	1.50	1.90	1.40	2.80	2.60	1.90	3.40		4.40	3.75		9.00	5.30
100.0	0.95	0.00		1.60	1.90	1.50	2.00	3.10	2.50	2.20	3.30		4.78	3.75		9.00	5.30
110.0	1.25	0.00		1.90	2.00	1.90	2.30	3.00	2.50	2.40	3.40		5.08	3.75		9.00	5.30
120.0	2.25	0.00		2.90	2.40	2.10	3.37	3.00		3.52	3.40		6.08	3.75		9.00	5.30
130.0	1.65	0.00		2.30	2.40	1.70	2.77	3.00		2.92	3.40		5.48	3.75		9.00	5.30
140.0	1.95	0.00		2.60	2.80	1.60	3.07	3.00		3.22	3.40		5.78	3.75		9.00	5.30
150.0	2.25	0.00		2.90	2.90	2.40	3.37	3.00		3.52	3.40		6.08	3.75		9.00	5.30

- a Clear water, measured only where upwelling occurred, dead chum.
- b Measurements by 10' increments on rope.
- c Gravel bar extends from cross section 2 to 5' above cross section 1.
- d Chum seen.
- e Used true WSEL.
- f Extrapolated or interpolated value.

Table C-3.13 (cont.) Summary of hydraulic data collected at site 139.0L, Cross section 2.

RATING CURVE: A = -2.01 B = 0.64 CF = 705.00																	
DATE: SEPT 20 a						DATE: AUG 16 b			DATE: AUG 23 c			DATE: AUG 12 d			DATE: AUG 26 e		
REACH US = 10.00			REACH US = 50.00			REACH US = 62.00			REACH US = 62.00			REACH US = 62.00			SUBSTRATE INFO		
DS = 21.00			DS = 84.00			DS = 53.00			DS = 53.00			DS = 53.00					
GCO: 10400			GCO: 14500			GCO: 17900			GCO: 19000			GCO: 31700					
WSEL: 708.96			WSEL: 709.50			WSEL: 710.15			WSEL: 710.35			WSEL: 712.62					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV									
		1			2			3			4			5			
0.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		6.00	7.30
4.0	.00	.00		.00	.00		.00	.00		.00	.00		1.00	1.00	1.00	6.00	4.20
8.0	.00	.00		.00	.00		.00	.00		.00	.00		2.10	2.05	1.55	6.00	4.20
9.0	.00	.00		.00	.00		.00	.00		.00	.00		2.30	1.98		6.00	4.20
10.2	.00	.00		.00	.00		.00	.00		10.24	0.38		2.54	1.90		8.00	4.20
12.0	.00	.00		.00	.00		0.31	0.31		0.60	0.95		2.90	1.77		8.00	4.20
13.0	.00	.00		.00	.00	0.00	0.48	0.48		0.68	0.99		3.10	1.70	1.30	8.00	4.20
14.0	.00	.00		0.03	0.00		0.65	0.65		0.77	1.03		3.36	3.60		8.00	4.20
16.0	.00	.00		0.10	0.00	0.00	0.68	0.73		0.93	1.12		3.39	3.60		8.00	4.20
18.0	.00	.00		0.35	0.00		0.70	0.80	0.95	1.10	1.20		3.41	3.60		8.00	4.20
19.5	.00	.00		0.54	0.00		0.70	0.76		1.13	1.25		3.49	3.60		8.00	4.20
20.0	.00	.00		0.60	0.00	0.00	0.80	0.75		1.13	1.27		3.51	3.60		8.00	4.20
22.0	.00	.00		0.62	0.00		0.90	0.70	0.90	1.17	1.33		3.61	3.60		8.00	4.20
22.7	.00	.00		0.63	0.00		0.91	0.69		1.18	1.36		3.62	3.60		8.00	4.20
24.0	.00	.00		0.64	0.00		0.92	0.67		1.20	1.40		3.63	3.60		8.00	4.20
27.6	.00	.00		0.68	0.00		0.96	0.62		1.38	1.31		3.67	3.60		8.00	4.20
29.0	0.20	0.00		0.69	0.00		0.97	0.60		1.45	1.28		3.68	3.60		8.00	4.20
30.0	0.18	0.00		0.70	0.00	0.00	0.98	0.58		1.50	1.25		3.69	3.60		8.00	4.20
32.0	0.15	0.00		0.47	0.00		1.00	0.55	0.55	1.33	0.90		3.71	3.60		10.00	4.20
34.0	.00	0.00		0.23	0.00		0.79	0.44		1.17	0.55		3.50	3.60		10.00	4.20
36.0	.00	0.00		.00	0.00	0.00	0.58	0.32		1.00	0.20		3.29	3.60		10.00	5.30
41.6	.00	0.00		.00	0.00		.00	0.00		10.47	0.99		2.71	3.60		10.00	5.30
42.0	.00	0.00		.00	0.00		10.03	0.05		0.40	1.05		2.74	3.60		10.00	5.30
46.0	.00	0.00		.00	0.00		0.30	0.60		0.43	0.90		3.01	3.60		10.00	5.30
56.9	.00	0.00		.00	0.00		0.20	0.00		0.49	0.49		2.91	3.60		10.00	5.30
58.0	.00	0.00		.00	0.00	0.00	10.24	0.00		0.50	0.45		2.95	3.60		10.00	5.30
60.0	.00	0.00		0.20	0.00	0.00	0.30	0.00		0.60	0.39		3.01	3.60		10.00	5.30
64.0	.00	0.00		0.20	0.00		0.40	0.00		0.80	0.28		3.11	3.60		10.00	5.30
68.0	.00	0.00		0.20	0.00		0.70	0.05		1.00	0.16		3.41	3.60		10.00	5.30
70.0	.00	0.00		0.20	0.00	0.00	10.70	0.13		1.10	0.10		3.41	3.60		10.00	5.30
78.0	.00	0.00		0.12	0.00		0.70	0.45	0.60	10.94	0.58		3.41	3.60		10.00	5.30
80.0	.00	0.00		0.10	0.00	0.00	10.72	0.58		0.90	0.70		3.43	3.60		10.00	5.30

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Table C-3.13 (cont.) Summary of hydraulic data collected at site 139.0L, Cross section 2.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
88.0	.00	0.00		0.26	0.08		0.80	1.10	1.40	0.90	1.70		3.51	3.60		10.00	5.30
90.0	.00	0.00		0.30	0.10	0.00	0.86	1.32		0.97	1.83		3.57	3.60		10.00	5.30
94.0	.00	0.00		0.42	0.54		0.98	1.76		1.10	2.10		3.69	3.60		10.00	5.30
98.0	.00	0.00		0.54	0.98		1.10	2.20	2.00	1.23	2.40		3.81	3.60		10.00	5.30
100.0	0.06	0.00		0.60	1.20	1.50	1.18	2.36		1.30	2.55		3.89	3.60		10.00	5.30
106.0	0.30	0.00		0.78	1.74		1.42	2.84		1.50	3.00		4.13	3.60		10.00	5.30
108.0	0.38	0.00		0.84	1.92		1.50	3.00	2.80	1.69	3.09		4.21	3.60		10.00	5.30
110.0	0.56	0.00		0.90	2.10	1.50	1.68	3.08		1.87	3.17		4.39	3.60		10.00	5.30
118.0	1.28	0.00		1.70	2.42		2.40	3.40	2.80	2.61	3.51		5.11	3.60		10.00	5.30
120.0	1.25	0.00		1.90	2.50	1.90	2.37	3.40		2.80	3.60		5.08	3.60		10.00	5.30
130.0	1.95	0.00		2.60	3.20	1.80	3.07	3.40		3.22	3.60		5.78	3.60		10.00	5.30
140.0	2.45	0.00		3.10	3.20	2.60	3.57	3.40		3.72	3.60		6.28	3.60		10.00	5.30

a Only backwater where upwelling occurs.

b Measured in 10' increments with rope.

c Chum seen, gravel bar at 41.6-56.9', Overtopped with flow at 90 degree angle.

d Chum seen.

e Next to staff gage at 13'.

f Extrapolated or interpolated value.

Table C-3.13 (cont.) Summary of hydraulic data collected at site 139.0L, Cross section 3.

RATING CURVE:			A = -2.01	B = 0.64	CF = 705.00	DATE: AUG 12			DATE: AUG 26			SUBSTRATE INFO					
DATE: SEPT 20			DATE: AUG 16 a			DATE: AUG 23 b			DATE: AUG 26								
REACH US = 65.00	DS = 62.00	GCR: 10400	REACH US = 65.00	DS = 62.00	GCR: 14500	REACH US = 65.00	DS = 62.00	GCR: 17900	REACH US = 65.00	DS = 62.00	GCR: 19000	REACH US = 65.00	DS = 62.00	GCR: 31700			
WSEL: 708.96			WSEL: 709.50			WSEL: 710.15			WSEL: 710.35			WSEL: 712.62					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
0.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		6.00	8.40
1.3	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		6.00	8.40
4.0	.00	.00		.00	.00		.00	.00		.00	.00		0.90	1.10	1.00	6.00	8.40
8.0	.00	.00		.00	.00		.00	.00		.00	.00		2.00	1.40	1.20	6.00	4.20
10.0	.00	.00		.00	.00		.00	.00		.00	.00		2.30	1.93		6.00	4.20
12.0	.00	.00		.00	.00		.00	.00		0.10	0.13		2.60	2.45	1.85	6.00	5.20
14.1	.00	.00		.00	.00		.00	.00		0.21	0.27		2.71	2.42		6.00	5.20
16.0	.00	.00		.00	.00		0.02	.00		0.30	0.40		2.80	2.40	1.85	6.00	4.20
22.0	.00	.00		.00	.00		0.10	.00		0.40	1.10		2.96	2.95		6.00	4.20
26.0	.00	.00		.00	.00		0.15	.00		0.50	0.63		3.06	2.95		6.00	4.20
30.0	.00	.00		.00	.00		0.10	.00		0.60	0.15		3.16	2.95		6.00	4.20
35.0	.00	.00		.00	.00		0.01	.00		.00	0.00		2.56	2.95		10.00	6.20
35.6	.00	.00		.00	.00		.00	.00		.00	0.00		2.56	2.95		10.00	6.20
54.0	.00	.00		.00	.00		.00	.00		.00	0.00		2.56	2.95		10.00	6.20
56.0	.00	.00		.00	.00		.00	.00		0.30	0.05		2.86	2.95		10.00	6.20
61.7	.00	.00		.00	.00		.00	.00		0.59	0.30		3.15	2.95		10.00	6.20
63.0	.00	.00		.00	.00		0.12	0.11		0.65	0.36		3.21	2.95		10.00	6.20
64.0	.00	.00		0.08	0.03		0.21	0.19		0.70	0.40		3.26	2.95		10.00	6.20
66.0	.00	.00		0.24	0.09		0.40	0.35		0.67	0.52		3.23	2.95		10.00	6.20
68.0	.00	.00		0.40	0.15		0.60	0.53		0.63	0.63		3.19	2.95		10.00	6.20
70.0	.00	.00		0.40	0.27		0.80	0.70	0.85	0.60	0.75		3.22	2.95		10.00	6.20
74.0	.00	.00		0.40	0.50		0.90	0.80	0.85	0.80	1.13		3.36	2.95		12.00	5.20
78.0	.00	.00		0.40	0.83		0.80	1.05	1.00	1.00	1.50		3.56	2.95		12.00	5.20
80.0	.00	.00		0.40	1.00		0.85	1.18		1.10	1.60		3.66	2.95		12.00	5.20
82.0	.00	.00		0.67	1.13		0.90	1.30	1.25	1.20	1.70		3.76	2.95		12.00	5.20
84.0	.00	.00		0.93	1.27		1.25	1.40		1.30	1.80		3.86	2.95		12.00	5.20
86.0	0.32	0.18		1.20	1.40		1.60	1.50	1.30	1.60	1.93		4.16	2.95		12.00	5.20
89.0	0.80	0.45		1.40	1.70		1.83	1.65		2.05	2.13		4.61	2.95		12.00	5.20
90.0	0.83	0.64		1.47	1.80		1.90	1.70	1.55	2.20	2.20		4.76	2.95		12.00	5.20
92.0	0.88	1.01		1.60	2.00	1.70	2.00	1.83		2.30	2.27		4.86	2.95		12.00	5.20
93.0	0.90	1.20	1.30	1.65	1.98		2.05	1.89		2.35	2.31		4.91	2.95		12.00	5.20
94.0	0.93	1.28		1.70	1.95		2.10	1.95	1.55	2.40	2.34		4.96	2.95		12.00	5.20

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Table C-3.13 (cont.) Summary of hydraulic data collected at site 139.0L, Cross section 3.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
97.0	1.00	1.50	1.50	1.85	1.88		2.25	2.06		2.55	2.45		5.11	2.95		12.00	5.20
98.0	1.08	1.50		1.90	1.85		2.30	2.10	1.65	2.60	2.48		5.16	2.95		12.00	5.20
100.0	1.23	1.50		2.00	1.80	1.30	2.36	2.22		2.70	2.55		5.26	2.95		12.00	5.20
101.0	1.30	1.50	1.42	2.10	1.92		2.39	2.28		2.78	2.65		5.34	2.95		12.00	5.20
104.0	1.45	1.73		2.40	2.28		2.48	2.46		3.00	2.95		5.56	2.95		12.00	5.20
105.0	1.50	1.80		2.50	2.40	2.00	2.51	2.52		2.77	2.95		5.33	2.95		12.00	5.20
108.0	1.65	2.03		2.30	2.40		2.60	2.70	2.30	2.92	2.95		5.48	2.95		12.00	5.20
111.0	1.80	2.25	1.50	2.45	2.40		2.92	2.70		3.07	2.95		5.63	2.95		12.00	5.20
121.0	2.50	1.90	1.90	3.15	2.40		3.62	2.70		3.77	2.95		6.33	2.95		12.00	5.20
126.0	2.70	2.40	2.20	3.35	2.40		3.82	2.70		3.97	2.95		6.53	2.95		12.00	5.20

a No fish observed.

b Fish tag on bank, ponded from 14.1 to 35.6'.

| Extrapolated or interpolated value.

Table C-3.13 (cont.) Summary of hydraulic data collected at site 139.0L, Cross section 4.

RATING CURVE:			A = -2.01	B = 0.64	CF = 705.00				DATE: AUG 12 c			DATE: AUG 26 d			SUBSTRATE INFO		
DATE: SEPT 20			DATE: AUG 16 a			DATE: AUG 23 b			REACH US = 50.00			REACH US = 75.00					
REACH US = 150.00			REACH US = 80.00			REACH US = 300.00			REACH US = 50.00			REACH US = 75.00					
DS = 65.00			DS = 65.00			DS = 65.00			DS = 65.00			DS = 65.00					
GCO: 10400			GCO: 14500			GCO: 17900			GCO: 19000			GCO: 31700					
WSEL: 708.96			WSEL: 709.50			WSEL: 710.15			WSEL: 710.35			WSEL: 712.62					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
1			2			3			4			5					
0.0	.00	.00		.00	.00		.00	.00		.00	.00		0.90	1.35	1.20	6.00	4.20
4.0	.00	.00		.00	.00		.00	.00		.00	.00		1.40	1.80	1.75	6.00	4.20
8.0	.00	.00		.00	.00		.00	.00		.00	.00		2.10	2.15	1.85	6.00	4.20
12.0	.00	.00		.00	.00		.00	.00		.00	.00		2.30	2.60	1.70	6.00	4.20
13.0	.00	.00		.00	.00		.00	.00		.00	.00		2.32	2.73		6.00	4.20
15.0	.00	.00		.00	.00		.00	.00		.00	.00		2.30	3.00		6.00	4.20
16.0	.00	.00		.00	.00		.00	.00		.00	.00		2.50	3.10	2.15	6.00	4.20
22.0	.00	.00		.00	.00		.00	.00		.00	.00		2.50	2.65	2.35	6.00	4.20
24.6	.00	.00		.00	.00		.00	.00		.00	.00		2.88	2.80		6.00	4.20
28.0	.00	.00		.00	.00		.00	.00		.00	.00		2.98	2.80		6.00	5.20
40.5	.00	.00		.00	.00		.00	.00		.00	.00		2.61	2.80		10.00	5.20
42.0	.00	.00		.00	.00		0.17	0.15		.00	.00		2.56	2.80		10.00	5.20
44.0	.00	.00		.00	.00		0.40	0.35		0.25	0.20		2.81	2.80		10.00	5.20
46.0	.00	.00		.00	.00		0.45	0.43		0.50	0.40		3.06	2.80		10.00	5.20
47.0	.00	.00		.00	.00		0.48	0.46		0.63	0.43		3.19	2.80		10.00	5.20
48.0	.00	.00		0.13	0.05		0.50	0.50		0.75	0.45		3.31	2.80		10.00	5.20
50.0	.00	.00		0.40	0.15		0.70	0.60		1.00	0.50		3.56	2.80		10.00	5.20
52.0	.00	.00		0.57	0.33		0.90	0.70	0.70	1.20	0.65		3.76	2.80		12.00	5.20
54.0	.00	.00		0.73	0.52		1.05	0.78		1.40	0.80		3.96	2.80		12.00	5.20
55.0	.00	.00		0.82	0.61		1.13	0.81		1.45	0.83		4.01	2.80		12.00	5.20
56.0	0.07	0.02		0.90	0.70		1.20	0.85	0.80	1.50	0.85		4.06	2.80		12.00	5.20
58.0	0.20	0.05		1.00	0.80		1.35	1.05		1.60	0.90		4.16	2.80		12.00	5.20
60.0	0.25	0.23		1.10	0.90		1.50	1.25	1.20	1.75	1.20		4.31	2.80		12.00	5.20
62.0	0.30	0.40		1.20	1.00		1.70	1.40		1.90	1.50		4.46	2.80		12.00	5.20
64.0	0.60	0.61		1.30	1.17		1.90	1.55	1.20	1.93	1.65		4.49	2.80		12.00	5.20
66.0	0.90	0.82		1.40	1.33		2.15	1.73		1.97	1.80		4.53	2.80		12.00	5.20
68.0	1.00	1.09		1.50	1.50		2.40	1.90	1.35	2.00	1.95		4.86	2.80		12.00	5.20
70.0	1.10	1.35	1.20	1.83	1.53		2.50	1.95		2.30	2.30		5.16	2.80		12.00	5.20
72.0	1.30	1.50		2.17	1.57		2.60	2.00	1.70	2.60	2.65		5.13	2.80		12.00	5.20
74.0	1.50	1.65		2.50	1.60		2.80	2.40		2.77	2.80		5.33	2.80		12.00	5.20
76.0	1.70	1.80		2.60	2.30		3.00	2.80	1.90	2.97	2.80		5.53	2.80		12.00	5.20
80.0	2.10	2.10	1.75	2.75	2.50		3.22	2.80		3.37	2.80		5.93	2.80		12.00	5.20

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Table C-3.13 (cont.) Summary of hydraulic data collected at site 139.00L, Cross section 4.

STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1			2			3			4			5			
90.0	2.60	2.50	1.60	13.25	2.50		13.72	2.80		13.87	2.80		16.43	2.80		12.00	5.20

a Chum seen.

b Chum seen ponded 15.8 to 24.6'.

c Ponded below gravel bar 13-42'.

d Fish seen, head pin under water.

| Extrapolated or interpolated value.

Table C-3.14

Summary of hydraulic data collected at site 139.4L, Cross section 1.

RATING CURVE: A = -1.49 B = 0.49 CF = 710.00																		
DATE: SEPT 18 a				DATE: AUG 16 b				DATE: AUG 23 c				DATE: AUG 12 d				DATE: AUG 26		
REACH US = 84.00				REACH US = 59.00				REACH US = 84.00				REACH US = 84.00				REACH US =		
DS = 100.00				DS = 60.00				DS = 200.00				DS = 300.00				DS =		
GCR: 8,370				GCR: 14,500				GCR: 17,900				GCR: 19,000				GCR: 31,700		
WSEL: 712.70				WSEL: 713.54				WSEL: 713.93				WSEL: 714.04				WSEL: 715.19	SUBSTRATE INFO	
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV	
	1			2			3			4			5					
0.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		3.00	9.50	
8.8	.00	.00		.00	.00		.00	.00		.00	.00		0.20	0.96		3.00	4.20	
14.0	.00	.00		.00	.00		.00	.00		.00	.00		0.60	1.85	1.75	3.00	4.20	
18.0	.00	.00		.00	.00		.00	.00		.00	.00		1.20	2.60	2.30	6.00	4.20	
20.0	.00	.00		.00	.00		.00	.00		.00	.00		1.45	2.65		6.00	4.20	
20.2	.00	.00		.00	.00		.00	.00		0.03	0.03		1.48	2.66		6.00	5.20	
22.0	.00	.00		.00	.00		0.19	0.24		0.30	0.25		1.70	2.70	2.80	6.00	5.20	
23.0	.00	.00		.00	.00		0.29	0.37		0.45	0.38		1.90	2.78		6.00	5.20	
24.0	.00	.00		0.20	0.08		0.40	0.50		0.60	0.50		2.10	2.85		6.00	5.20	
26.0	.00	.00		0.60	0.24		0.55	0.55		1.00	0.70		2.50	3.00	3.00	8.00	5.20	
27.5	.00	.00		0.90	0.36		0.63	0.59		1.30	0.74		2.73	3.17		8.00	5.20	
28.0	0.06	0.02		1.00	0.40		0.70	0.60		1.40	0.75		2.80	3.23		8.00	5.20	
30.0	0.30	0.10		1.10	0.47		1.20	0.78		1.60	0.98		3.10	3.45	3.25	8.00	5.20	
32.0	0.30	0.10		1.20	0.53		1.70	0.95		1.80	1.20		2.79	3.45		8.00	5.20	
34.0	0.40	0.20		1.30	0.60		1.85	1.18		1.90	1.45		2.89	3.45		8.00	5.20	
36.0	0.70	0.22		1.47	0.80		2.00	1.40		2.00	1.70		3.19	3.45		3.00	5.20	
38.0	0.90	0.85	0.30	1.63	1.00		2.20	1.60		2.20	2.03		3.39	3.45		3.00	5.20	
40.0	1.15	0.65		1.80	1.20	1.10	2.40	1.80		2.40	2.35		3.64	3.45		3.00	5.20	
42.0	1.40	0.45	0.45	2.07	1.43		2.65	2.13		2.70	2.49		3.89	3.45		3.00	5.20	
44.0	1.55	0.63		2.33	1.67		2.90	2.45		3.00	2.62		4.04	3.45		3.00	5.20	
46.0	1.70	0.80	0.45	2.60	1.90	1.20	3.05	2.83		3.20	3.04		4.19	3.45		3.00	5.20	
48.0	1.95	0.95		2.79	2.00		3.20	3.20		3.40	3.45		4.44	3.45		3.00	5.20	
50.0	2.20	1.10	0.70	3.04	2.00		3.43	3.20		3.54	3.45		4.69	3.45		3.00	5.20	
54.0	2.80	1.45	0.85	3.64	2.00		4.03	3.20		4.14	3.45		5.29	3.45		9.00	5.20	
58.0	3.00	2.00	1.60	3.84	2.00		4.23	3.20		4.34	3.45		5.49	3.45		9.00	5.20	

a No fish seen.

b Rapid increase in depth &amp; velocity for next 10', no fish seen.

c No fish seen.

d Backwater extends 10', surface velocity fast to 135', gravel bar extends 65' DS.

| Extrapolated or interpolated value.

Table C-3.14 (cont.) Summary of hydraulic data collected at site 139.4L, Cross section 2.

RATING CURVE: A = -1.49 B = 0.49 CF = 710.00															SUBSTRATE INFO		
DATE: SEPT 18 a			DATE: AUG 16			DATE: AUG 23 b			DATE: AUG 12 c			DATE: AUG 26 d					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV
		1		2			3			4			5				
0.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		6.00	8.50
3.5	.00	.00		.00	.00		.00	.00		.00	.00		0.20	1.10		6.00	4.30
8.0	.00	.00		.00	.00		.00	.00		.00	.00		1.30	2.90	2.90	12.00	8.30
10.0	.00	.00		.00	.00		.00	.00		0.60	0.40		1.85	3.65		12.00	8.30
11.5	.00	.00		.00	.00		.00	.00		0.98	1.19		2.26	4.21		12.00	8.30
12.0	.00	.00		.00	.00		.00	.00		1.10	1.45		2.40	4.40	3.20	12.00	8.30
14.0	.00	.00		0.30	1.40		0.30	0.90		1.30	2.60		1.95	4.70		10.00	8.30
16.0	.00	.00		0.65	1.55		0.60	1.80		1.50	2.40		2.30	4.70		10.00	8.30
18.0	0.45	0.45		1.00	1.70	1.70	0.70	1.98		1.70	2.40		2.65	4.70		10.00	8.30
20.0	0.50	1.45		1.30	2.60		0.80	2.15	2.15	2.10	4.30		2.95	4.70		10.00	8.30
22.0	0.45	2.25	2.20	1.60	3.50	3.00	1.50	3.23		2.50	3.30		3.25	4.70		10.00	8.30
24.0	1.20	3.00	2.75	1.85	4.00		2.20	4.30	3.20	2.35	4.70		3.50	4.70		10.00	8.30
26.0	1.50	3.15	2.25	2.10	4.50	3.80	2.49	4.70		2.60	4.70		3.75	4.70		10.00	8.30
28.0	1.50	3.90	3.20	2.35	4.60		2.74	4.70		2.85	4.70		4.00	4.70		10.00	8.30
30.0	1.76	3.90		2.60	4.70	3.80	2.99	4.70		3.10	4.70		4.25	4.70		10.00	8.30

- a Gravel bar 125 ft.
- b No fish observed.
- c Turbid water, no fish.
- d Gage not visible.
- | Extrapolated or interpolated value.

Table C-3.14 (cont.) Summary of hydraulic data collected at site 139.4L, Cross section 3.

RATING CURVE: A = -1.49 B = 0.49 CF = 710.00																	
DATE: SEPT 18 a			DATE: AUG 16 b			DATE: AUG 23 c			DATE: AUG 12 d			DATE: AUG 26 e			SUBSTRATE INFO		
REACH US = 350.00			REACH US = 500.00			REACH US = 300.00			REACH US = 500.00			REACH US = 100.00					
DS = 77.00			DS = 52.00			DS = 31.00			DS = 52.00			DS = 52.00					
GCC: 8370			GCC: 14500			GCC: 17900			GCC: 19000			GCC: 31700					
WSEL: 712.70			WSEL: 713.54			WSEL: 713.93			WSEL: 714.04			WSEL: 715.19					
STA	DEPTH	VEL	V.4	DEPTH	VEL	V.4	SUB	COV									
		1			2			3			4			5			
0.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		10.00	8.50
2.0	.00	.00		.00	.00		.00	.00		.00	.00		.00	.00		10.00	9.50
6.0	.00	.00		.00	.00		.00	.00		.00	.00		0.80	2.95	3.30	10.00	8.30
9.0	.00	.00		.00	.00		.00	.00		0.30	0.00		1.85	3.59		10.00	4.30
9.6	.00	.00		.00	.00		.00	.00		10.30	0.18		2.06	3.72		10.00	4.30
10.0	.00	.00		.00	.00		0.15	0.00		0.30	0.30		2.20	3.80	3.40	10.00	4.30
11.0	.00	.00		.00	.00		0.39	0.45		10.85	0.95		2.40	3.93		10.00	4.30
12.0	.00	.00		0.20	0.10		0.63	0.90		1.40	1.60		2.60	4.05		10.00	4.30
14.0	.00	.00		10.50	0.80		1.10	1.80		1.50	2.05		3.00	4.30	4.10	10.00	4.30
16.0	.00	.00		0.80	1.50	1.50	1.50	2.55		2.10	3.30		2.49	4.30		10.00	4.30
18.0	0.20	0.20		1.20	2.20		1.90	3.30	2.30	2.40	3.50		2.69	4.30		10.00	4.30
20.0	0.45	1.00		1.60	2.90	2.20	2.25	3.40		3.20	3.50		2.94	4.30		10.00	4.30
22.0	0.80	1.45	1.50	1.87	3.10		2.60	3.50	2.20	2.60	3.58		3.29	4.30		8.00	4.30
24.0	1.30	2.05	2.00	2.13	3.30		1.70	3.40	2.75	2.00	3.65		3.79	4.30		8.00	4.30
26.0	1.50	2.30	2.05	2.40	3.50	2.50	2.73	3.40		2.84	3.65		3.99	4.30		8.00	4.30
28.0	1.40	2.30	2.30	2.45	3.50		2.63	3.40		2.74	3.65		3.89	4.30		8.00	4.30
30.0	1.60	2.80	2.45	2.50	3.50	2.80	2.83	3.40		2.94	3.65		4.09	4.30		8.00	4.30
32.0	1.80	2.88		2.80	3.40	2.70	3.03	3.40		3.14	3.65		4.29	4.30		8.00	4.30
34.0	2.00	2.95	2.10	2.84	3.40		3.23	3.40		3.34	3.65		4.49	4.30		8.00	4.30
38.0	2.50	2.65	1.90	3.34	3.40		3.73	3.40		3.84	3.65		4.99	4.30		8.00	4.30

a Sharp drop off.

b Distance measured with rope marked with 10 ft intervals.

c No fish observed, but tags on bank.

d Water turbid.

e Large high velocity channel.

| Extrapolated or interpolated value.

Table C-4. Summary of surface areas and strengths of upwelling at DIHAB modeling sites.

Study Site	Cross Section	Horizontal Distance (ft)	Reach Length (ft)	Upwelling Strength	
101.7L	1	-	-	-	
	2	0-21	225	SLI	
		21-28	675	MOD	
		28-34	650	SLI	
		34-58	325	MOD	
		58-76	850	MOD	
		76-125	325	MOD	
		3	64-170	250	MOD
	4	52-62	200	MOD	
		62-92	40	STR	
105.8L	1	56-57	350	SLI	
		57-66	50	MOD	
	2	30.5-51	320	SLI	
		51-54	125	STR	
	3	23-33	250	SLI	
	4	36-38	175	MOD	
	114.1R	1	92.4-102	300	SLI
			102-132	240	SLI
2		53-57	250	SLI	
		78-90	225	MOD	
3		91-102	150	MOD	

Table C-4 (Continued). Summary of surface areas and strengths of upwelling at DIHAB modeling sites.

Study Site	Cross Section	Horizontal Distance (ft)	Reach Length (ft)	Upwelling Strength
115.0R	1	101-106	250	MOD
		148-152	90	SLI
	2	42-48	200	SLI
	3	50-55	80	MOD
	4	35-45	80	SLI
		45-55	100	SLI
118.9L	1	16-26	120	SLI
	2	17.5-22	150	SLI
	3	45-56	120	MOD
119.1L	1	18.5-22	250	SLI
		16-26	125	SLI
	3	31-40	40	SLI
		40-48	50	SLI
	4	40-100	20	SLI
		9-20	80	SLI
125.2R	1	20-25	450	MOD
		25-30	200	STR
		105-110	450	MOD
		250-262	450	SLI
	2	232-237	125	MOD
		237-240	250	MOD
		410.5-412.5	155	SLI
		412.5-416	80	SLI

Table C-4 (Continued). Summary of surface areas and strengths of upwelling at DIHAB modeling sites.

Study Site	Cross Section	Horizontal Distance (ft)	Reach Length (ft)	Upwelling Strength
130.2R	1	0	0	
	2	0	0	
	3	0	0	
131.3L	1	17-20	75	SLI
		110-117	175	MOD
		133-137	140	SLI
	2	34-38	100	SLI
		98-108	350	MOD
		108-122	30	STR
		122-124	350	SLI
	3	20-30	90	MOD
		174-204	60	MOD
	4	48-52	200	MOD
70-86		90	MOD	
133.8R	1	32-36	5	SLI
		92-100	3	MOD
	2	34-44	40	SLI
	3	0		
137.5R	1	32-36	125	STR
	2	32-36	65	MOD
		90-97	305	MOD
	3	50-54	100	MOD

Table C-4 (Continued). Summary of surface areas and strengths of upwelling at DIHAB modeling sites.

Study Site	Cross Section	Horizontal Distance (ft)	Reach Length (ft)	Upwelling Strength
138.7L	1	44-61	175	STR
	2	50-70	275	MOD
	3	44-55	225	MOD
139.0L	1	39-40	100	SLI
	2	30-32	100	SLI
	3	0	0	
	4	0	0	
139.4L	1	0	0	
	2	0	0	
	3	0	0	

Table C-5. Example of input data deck for DIHAB model at site 131.3L.

FOURTH OF JULY SPAWNING SITE RM(131.3L)											
SITE											
NXSEC	4					7680.0		16100.0		19900.0	
NQS	3					613.93		616.00		616.77	
WSELS											
XSEC	1	40	1	225.0	225.0						
CELL	X	S	C	U	RL	D1	V1	D2	V2	D3	V3
1	.0	3.	.0	.0	.0	.0	.0	.0	.0	.8	.0
2	17.0	3.	.0	1.0	75.0	.0	.0	.0	.0	.8	.9
3	20.0	3.	.0	.0	.0	.0	.0	.5	.0	1.3	.99
4	24.0	3.	.0	.0	.0	.0	.0	.9	.3	1.7	1.11
5	28.0	3.	.0	.0	.0	.0	.0	1.0	.3	1.8	1.23
6	32.0	3.	.0	.0	.0	.0	.0	1.1	.5	1.9	1.36
7	40.0	3.	.0	.0	.0	.0	.0	1.2	.7	2.0	1.60
8	50.0	3.	.0	.0	.0	.0	.0	1.8	.8	2.6	1.83
9	60.0	3.	.0	.0	.0	.0	.0	2.6	1.2	3.4	2.07
10	70.0	3.	.0	.0	.0	.0	.0	3.0	1.4	3.8	2.30
11	80.0	3.	.0	.0	.0	.0	.0	3.1	1.1	3.9	2.13
12	90.0	3.	.0	.0	.0	.0	.0	2.6	.9	3.4	1.96
13	91.0	3.	.0	.0	.0	.2	.7	2.6	.9	3.4	1.94
14	93.0	3.	.0	.0	.0	.2	.7	2.6	.9	3.4	1.91
15	95.0	3.	.0	.0	.0	.3	.9	2.6	.8	3.4	1.87
16	97.0	3.	.0	.0	.0	.2	.8	2.6	.7	3.4	1.84
17	99.0	3.	.0	.0	.0	.0	.9	2.6	.7	3.4	1.81
18	100.0	3.	.0	.0	.0	.2	.9	2.6	.6	3.4	1.79
19	101.0	3.	.0	.0	.0	.2	.9	2.6	.6	3.4	1.77
20	103.0	3.	.0	.0	.0	.1	.0	2.6	.5	3.4	1.74
21	104.0	3.	.0	.0	.0	.0	.0	2.6	.5	3.4	1.72
22	110.0	3.	.0	2.0	175.0	.0	.0	2.6	.3	3.4	1.62
23	115.0	3.	.0	2.0	175.0	.0	.0	2.4	.1	3.2	1.53
24	117.0	3.	.0	.0	.0	.1	.0	2.3	.1	3.2	1.5
25	119.0	3.	.0	.0	.0	.1	.0	2.2	.0	3.2	1.5
26	120.0	3.	.0	.0	.0	.1	.0	2.2	.0	3.2	1.5
27	121.0	3.	.0	.0	.0	.1	.0	2.1	.0	3.2	1.5
28	123.0	3.	.0	.0	.0	.1	.0	1.9	.0	3.3	1.3
29	125.0	3.	.0	.0	.0	.2	.6	1.7	.0	3.3	1.0
30	127.0	3.	.0	.0	.0	.4	.7	1.5	.0	3.1	.9
31	129.0	3.	.0	.0	.0	.4	1.2	1.3	.0	2.8	.8
32	130.0	3.	.0	.0	.0	.4	1.1	1.2	.0	2.8	.8
33	131.0	3.	.0	.0	.0	.4	1.0	1.0	.0	2.7	.8
34	133.0	3.	.0	1.0	140.0	.0	.0	.5	.0	2.5	.8
35	135.0	3.	.0	1.0	140.0	.0	.0	.0	.0	2.5	.8
36	137.0	3.	.0	.0	.0	.0	.0	.0	.0	2.4	.8
37	141.0	3.	.0	.0	.0	.0	.0	.0	.0	2.1	.5
38	145.0	3.	.0	.0	.0	.0	.0	.0	.0	1.3	.3
39	149.0	3.	.0	.0	.0	.0	.0	.0	.0	.4	.0
40	150.2	3.	.0	.0	.0	.0	.0	.0	.0	.0	.0

Table C-5. Example of input data deck for DIHAB model at site 131.3L.

WSELS						614.33	616.00	616.77			
XSEC	2	34	1	350.0	350.0						
CELL	X	S	C	U	RL	D1	V1	D2	V2	D3	V3
1	.0	5.	.0	.0	.0	.0	.0	.0	.0	.8	.0
2	34.0	5.	.0	1.0	100.0	.0	.0	.0	.0	.8	.3
3	38.0	5.	.0	.0	.0	.0	.0	.2	.4	1.0	2.8
4	42.0	5.	.0	.0	.0	.0	.0	.7	2.2	1.5	3.1
5	46.0	5.	.0	.0	.0	.0	.0	.8	2.2	1.6	3.15
6	50.0	5.	.0	.0	.0	.0	.0	1.0	1.9	1.8	3.2
7	54.0	5.	.0	.0	.0	.0	.0	1.1	2.0	1.9	3.09
8	60.0	5.	.0	.0	.0	.0	.0	1.5	1.6	2.3	2.99
9	64.0	5.	.0	.0	.0	.0	.0	1.5	1.3	2.3	2.80
10	66.0	5.	.0	.0	.0	.4	.2	1.6	1.5	2.4	2.9
11	68.0	5.	.0	.0	.0	.4	.2	1.7	1.6	2.5	3.0
12	70.0	5.	.0	.0	.0	.5	.3	1.8	1.7	2.5	3.1
13	72.0	5.	.0	.0	.0	.6	.3	1.8	1.8	2.6	3.2
14	74.0	5.	.0	.0	.0	.5	.3	1.9	1.9	2.6	3.3
15	76.0	5.	.0	.0	.0	.4	.1	1.9	2.0	2.7	3.4
16	78.0	5.	.0	.0	.0	.6	.2	2.0	2.1	2.7	3.5
17	80.0	5.	.0	.0	.0	.5	.3	2.0	2.2	2.8	3.6
18	82.0	3.	.0	.0	.0	.5	.2	2.0	2.1	2.8	3.52
19	84.0	3.	.0	.0	.0	.5	.1	2.0	2.0	2.8	3.45
20	86.0	3.	.0	.0	.0	.4	.0	2.1	2.0	2.8	3.38
21	88.0	3.	.0	.0	.0	.4	.0	2.1	1.9	2.7	3.3
22	90.0	3.	.0	.0	.0	.3	.0	2.1	1.8	2.6	3.2
23	92.0	3.	.0	.0	.0	.2	.0	2.1	1.7	2.5	3.2
24	94.0	3.	.0	.0	.0	.1	.0	2.1	1.7	2.4	3.1
25	95.0	3.	.0	.0	.0	.0	.0	2.1	1.6	2.3	3.1
26	98.0	3.	.0	2.0	350.0	.3	.0	2.0	1.6	2.2	3.0
27	100.0	3.	.0	2.0	350.0	.3	.0	2.0	1.5	2.1	2.8
28	108.0	3.	.0	3.0	30.0	.0	.0	1.3	1.2	1.5	2.2
29	110.0	3.	.0	3.0	30.0	.0	.0	1.1	1.1	1.3	1.9
30	118.0	3.	.0	3.0	30.0	.0	.0	.6	.8	.6	.9
31	120.0	3.	.0	3.0	30.0	.0	.0	.5	.7	.4	.6
32	122.0	3.	.0	1.0	350.0	.0	.0	.3	.5	.3	.4
33	124.0	3.	.0	.0	.0	.0	.0	.2	.2	.0	.0
34	126.0	3.	.0	.0	.0	.0	.0	.0	.0	.0	.0
WSELS						616.24	616.76	617.19			
XSEC	3	63	1	450.0	400.0						
CELL	X	S	C	U	RL	D1	V1	D2	V2	D3	V3
1	.0	9.	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	8.0	9.	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	10.0	9.	.0	.0	.0	.0	.0	.5	.0	.0	.0
4	14.0	9.	.0	.0	.0	.0	.0	.6	.0	.0	.0
5	20.0	9.	.0	2.0	90.0	.0	.0	.8	.0	.4	.2
6	30.0	9.	.0	.0	.0	.0	.0	1.2	.2	1.1	.4
7	34.0	5.	.0	.0	.0	.0	.0	1.2	.1	1.4	.5
8	35.0	5.	.0	.0	.0	.0	.0	1.2	.1	1.4	.5
9	40.0	5.	.0	.0	.0	.2	.0	1.2	.0	1.6	.3

Table C-5. Example of input data deck for DIHAB model at site 131.3L.

10	44.0	5.	.0	.0	.0	.3	.0	1.3	.0	1.7	.2
11	48.0	5.	.0	.0	.0	.5	.0	1.4	.1	1.8	.5
12	50.0	5.	.0	.0	.0	.5	.0	1.4	.1	1.9	.6
13	54.0	5.	.0	.0	.0	.6	.0	1.2	.1	2.0	.9
14	56.0	5.	.0	.0	.0	.6	.0	1.2	.2	2.0	.9
15	60.0	5.	.0	.0	.0	.6	.0	1.0	.2	2.0	.9
16	64.0	5.	.0	.0	.0	.5	.0	1.0	.4	2.0	.9
17	66.0	5.	.0	.0	.0	.4	.0	.9	.5	1.9	.9
18	70.0	5.	.0	.0	.0	.3	.0	.9	.7	1.8	1.0
19	72.0	5.	.0	.0	.0	.2	.0	.9	.8	1.7	1.1
20	74.0	5.	.0	.0	.0	.2	.1	.9	.8	1.6	1.1
21	76.0	5.	.0	.0	.0	.2	.1	.9	.9	1.6	1.1
22	80.0	5.	.0	.0	.0	.1	.0	.9	1.0	1.6	1.2
23	84.0	5.	.0	.0	.0	.1	.0	.9	1.0	1.5	1.3
24	88.0	5.	.0	.0	.0	.1	.0	.8	1.1	1.5	1.3
25	90.0	5.	.0	.0	.0	.2	.1	.8	1.1	1.6	1.3
26	92.0	5.	.0	.0	.0	.2	.1	.8	1.2	1.6	1.3
27	94.0	5.	.0	.0	.0	.2	.1	.9	1.2	1.6	1.3
28	96.0	5.	.0	.0	.0	.2	.0	.9	1.3	1.6	1.4
29	100.0	5.	.0	.0	.0	.1	.0	1.0	1.4	1.5	1.5
30	104.0	5.	.0	.0	.0	.1	.0	.9	1.7	1.5	1.5
31	108.0	5.	.0	.0	.0	.2	.0	.8	2.0	1.5	1.6
32	110.0	5.	.0	.0	.0	.3	.1	.8	2.2	1.6	1.6
33	112.0	5.	.0	.0	.0	.3	.1	.8	2.2	1.6	1.6
34	114.0	5.	.0	.0	.0	.2	.1	.9	2.2	1.6	1.6
35	116.0	5.	.0	.0	.0	.1	.0	.9	2.1	1.6	1.6
36	120.0	5.	.0	.0	.0	.1	.0	1.0	2.1	1.6	1.5
37	124.0	5.	.0	.0	.0	.1	.0	1.0	2.0	1.6	1.4
38	128.0	5.	.0	.0	.0	.1	.0	1.0	1.9	1.6	1.4
39	130.0	5.	.0	.0	.0	.1	.0	1.0	1.9	1.6	1.4
40	132.0	5.	.0	.0	.0	.1	.0	1.0	1.9	1.6	1.4
41	134.0	5.	.0	.0	.0	.1	.0	1.0	2.0	1.6	1.4
42	136.0	5.	.0	.0	.0	.1	.0	.9	2.0	1.6	1.4
43	140.0	5.	.0	.0	.0	.1	.0	.9	2.1	1.7	1.5
44	144.0	5.	.0	.0	.0	.2	.3	.9	1.6	1.7	1.5
45	148.0	5.	.0	.0	.0	.2	.1	1.0	1.1	1.5	1.5
46	150.0	5.	.0	.0	.0	.2	.1	1.0	.8	1.3	1.4
47	152.0	3.	.0	.0	.0	.1	.0	1.0	.7	1.2	1.4
48	154.0	3.	.0	.0	.0	.1	.0	1.0	.6	1.1	1.4
49	156.0	3.	.0	.0	.0	.1	.0	.9	.5	1.1	1.4
50	157.0	3.	.0	.0	.0	.0	.0	.9	.4	1.1	1.4
51	160.0	3.	.0	.0	.0	.0	.0	.9	.3	1.2	1.3
52	164.0	3.	.0	.0	.0	.0	.0	.9	.9	1.2	1.3
53	170.0	3.	.0	.0	.0	.0	.0	.8	1.9	1.1	1.4
54	174.0	3.	.0	2.0	60.0	.0	.0	.6	1.5	1.1	1.5
55	180.0	3.	.0	2.0	60.0	.0	.0	.4	1.0	1.2	1.4
56	182.0	3.	.0	2.0	60.0	.0	.0	.0	.0	1.3	1.4
57	184.0	3.	.0	2.0	60.0	.0	.0	.7	.0	1.3	1.4

Table C-5. Example of input data deck for DIHAB model at site 131.3L.

58	194.0	3.	.0	2.0	60.0	.0	.0	.5	.0	1.1	1.3
59	204.0	3.	.0	.0	.0	.0	.0	.0	.0	.5	1.2
60	214.0	3.	.0	.0	.0	.0	.0	.0	.0	.3	1.3
61	224.0	3.	.0	.0	.0	.0	.0	.0	.0	.3	.4
62	228.0	3.	.0	.0	.0	.0	.0	.0	.0	.3	.4
63	231.5	3.	.0	.0	.0	.0	.0	.0	.0	.0	.0
WSELS						616.24		616.76		617.19	
XSEC	4	42	1	275.0	275.0						
CELL	X	S	C	U	RL	D1	V1	D2	V2	D3	V3
1	.0	9.	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	11.0	9.	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	28.0	8.	.0	.0	.0	.0	.0	.0	.0	1.0	.9
4	48.0	8.	.0	2.0	200.0	.0	.0	.0	.0	1.0	2.5
5	50.0	8.	.0	2.0	200.0	.1	.0	.0	.0	1.0	2.6
6	52.0	8.	.0	.0	.0	.1	.0	.0	.0	1.0	2.8
7	54.0	8.	.0	.0	.0	.1	.0	.1	.0	1.0	2.9
8	56.0	8.	.0	.0	.0	.1	.0	.2	.0	1.0	3.0
9	58.0	8.	.0	.0	.0	.2	.3	.3	.0	.9	3.2
10	60.0	8.	.0	.0	.0	.2	.1	.4	.0	.9	3.3
11	62.0	8.	.0	.0	.0	.2	.2	.5	.0	.9	3.4
12	64.0	8.	.0	.0	.0	.2	.1	.4	.0	.9	3.5
13	66.0	8.	.0	.0	.0	.2	.2	.4	.0	.9	3.7
14	68.0	8.	.0	.0	.0	.1	.0	.3	.0	.9	3.8
15	70.0	8.	.0	2.0	90.0	.2	.0	.3	.0	.9	3.7
16	72.0	8.	.0	2.0	90.0	.1	.0	.2	.0	.9	3.7
17	74.0	8.	.0	2.0	90.0	.1	.0	.1	.0	.9	3.6
18	76.0	8.	.0	2.0	90.0	.0	.0	.0	.0	.9	3.6
19	88.0	8.	.0	.0	.0	.0	.0	.0	.0	1.0	3.2
20	92.0	8.	.0	.0	.0	.0	.0	.0	.0	1.0	3.2
21	102.0	8.	.0	.0	.0	.0	.0	.0	.0	.9	3.0
22	108.0	8.	.0	.0	.0	.0	.0	.1	.0	.8	3.0
23	112.0	8.	.0	.0	.0	.0	.0	.1	.0	.8	2.7
24	122.0	3.	.0	.0	.0	.0	.0	.2	1.0	.7	1.9
25	128.0	3.	.0	.0	.0	.0	.0	.3	1.5	.6	1.5
26	132.0	3.	.0	.0	.0	.0	.0	.4	1.9	.7	1.3
27	142.0	3.	.0	.0	.0	.0	.0	.5	1.8	.8	.7
28	148.0	3.	.0	.0	.0	.0	.0	.5	1.6	.9	.3
29	152.0	3.	.0	.0	.0	.0	.0	.5	1.4	.8	.4
30	162.0	3.	.0	.0	.0	.0	.0	.4	1.8	.8	.6
31	168.0	3.	.0	.0	.0	.0	.0	.6	2.2	.8	.8
32	172.0	3.	.0	.0	.0	.0	.0	.7	2.4	1.0	1.0
33	178.0	3.	.0	.0	.0	.0	.0	.8	2.4	1.2	1.3
34	182.0	3.	.0	.0	.0	.0	.0	.8	2.4	1.0	1.4
35	188.0	3.	.0	.0	.0	.0	.0	.7	2.3	.6	1.5
36	192.0	3.	.0	.0	.0	.0	.0	.6	2.3	.6	1.3
37	196.0	3.	.0	.0	.0	.0	.0	.6	2.2	.5	.9
38	197.7	3.	.0	.0	.0	.0	.0	.7	2.2	.0	.0

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Table C-5. Example of input data deck for DIHAB model at site 131.3L.

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39	202.0	3.	.0	.0	.0	.0	.0	.7	2.1	.0	.0
40	212.0	3.	.0	.0	.0	.0	.0	.6	2.0	.0	.0
41	222.0	3.	.0	.0	.0	.0	.0	.5	.4	.0	.0
42	227.0	3.	.0	.0	.0	.0	.0	.0	.0	.0	.0

Table C-6. Weighted Usable Areas and Wetted Surface Areas with corresponding discharges for DIHAB model sites.

Study Site	Mainstem Discharge (cfs)	Wetted Surface Area (ft <sup>2</sup> )	Spawning Chum WUA (ft <sup>2</sup> )
101.7L	5100.	134000.	0
	9600.	134000.	0
	11400.	255925.	36842.
	15300.	313420.	32037.
	18500.	372685.	23098.
	24000.	-	17613.
105.8L	5100.	17575.	6.
	7320.	21700.	136.
	11300.	30150.	1028.
	15300.	35144.	2111.
	18500.	44850.	1817.
	24000.	-	2700.
114.1R	5100.	37560.	206.
	7680.	35760.	206.
	11000.	55725.	1795.
	15100.	74400.	1684.
	17900.	80550.	761.
	23000.	-	513.
115.0R	5100.	82900.	926.
	7680.	82900.	926.
	12000.	86517.	2882.
	14500.	151743.	3059.
	23000.	-	4800.
	118.9L	5100.	18590.
7680.		22413.	661.
10300.		30238.	793.
15100.		36550.	2093.
17900.		37675.	1787.
23000.		-	1495.
119.1L	5100.	9332.	0
	7680.	10925.	604.
	10300.	12038.	1581.
	15100.	14550.	2655.
	23000.	-	2995.

Table C-6. Weighted Usable Areas and Wetted Surface Areas with corresponding discharges for DIHAB model sites.

Study Site	Mainstem Discharge (cfs)	Wetted Surface Area (ft <sup>2</sup> )	Spawning Chum WUA (ft <sup>2</sup> )
125.2R	5100.	108280.	0
	7680.	373188.	19122.
	13600.	419133.	9872.
	19100.	482218.	5728.
	23000.	-	697.
130.2R			0
131.3L	5100.	77344.	4.
	7680.	77344.	4.
	10700.	96456.	4.
	16100.	176463.	855.
	19900.	215549.	1775.
	23000.		957.
133.8R	5100.	19251.	184.
	7680.	19643.	221.
	10400.	27676.	302.
	16100.	27860.	195.
	19900.	28064.	78.
	22700.	-	55.
137.5R	5100.	14725.	0.
	16100.	27050.	15.
	19000.	34038.	30.
	21000.	-	60.
138.7L	5100.	11100.	427.
	10400.	20250.	1513.
	14500.	28813.	3189.
	17900.	34324.	1664.
	19000.	35138.	1290.
	27700.	45950.	475.
139.0L	5100.	33875.	250.
	10400.	43838.	250.
	14500.	63313.	360.
	17900.	71331.	400.
	19000.	80950.	400.
	31700.	91919.	46.
139.4L			0