

Peace River Project Water Use Plan

Peace River Side Channel Monitoring

Implementation Year 1

Reference: GMSMON-7

Appendices

Study Period: 2013

NHC and Mainstream Aquatics Ltd.

January 20, 2014



GMSMON-7 PEACE RIVER SIDE CHANNEL MONITORING 2013 STUDY



BC Hydro
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Final Report
2014 January 20

GMSMON-7
PEACE RIVER SIDE CHANNEL MONITORING
- 2013 STUDY -

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APPENDIX A SITE INFORMATION

Appendix A Table A1. Fish and habitat site information (Nad 83), 2013 Peace River Side Channel Fisheries Program.

Side Channel	Site Type	Site	Upper		Lower	
			Easting	Northing	Easting	Northing
102.5R SIDE CHANNEL						
	BEACH SEINE	CBS01	644461	6223484		
	BEACH SEINE	CBS02	644035	6223523		
	BEACH SEINE	CBS05	643608	6223619		
	BEACH SEINE	CBS06	643352	6223728		
	BEACH SEINE	CBS07	643227	6223754		
	BEACH SEINE	CBS08	643907	6223555		
	BEACH SEINE	CBS09	644012	6223507		
	BEACH SEINE	CBS10	644178	6223466		
	SMALL FISH BOAT ELECTROFISHER	CSF05	643564	6223949	643393	6223760
	SMALL FISH BOAT ELECTROFISHER	CSF06	643393	6223760	644006	6223532
	SMALL FISH BOAT ELECTROFISHER	CSF07	644006	6223532	644470	6223548
	SMALL FISH BOAT ELECTROFISHER	CSF08	643557	6223952	643403	6223722
	SMALL FISH BOAT ELECTROFISHER	CSF09	643403	6223722	643972	6223505
	SMALL FISH BOAT ELECTROFISHER	CSF10	643972	6223505	644497	6223525
112L SIDCHANNEL						
	BACKPACK ELECTROFISHER	DEF01	653842	6222117		
	BEACH SEINE	DBS01	654151	6222337		
	BEACH SEINE	DBS02	653975	6222347		
	BEACH SEINE	DBS05	654830	6222291		
	BEACH SEINE	DBS07	654070	6222175		
	BEACH SEINE	DBS08	654916	6222289		
	BEACH SEINE	DBS09	654819	6222198		
	BEACH SEINE	DBS10	654504	6222221		
	BEACH SEINE	DBS11	654293	6222224		
	SMALL FISH BOAT ELECTROFISHER	DSF01	653816	6222089	654208	6222218
	SMALL FISH BOAT ELECTROFISHER	DSF02	654208	6222218	654814	6222204
	SMALL FISH BOAT ELECTROFISHER	DSF03	653930	6222153	654209	6222284
	SMALL FISH BOAT ELECTROFISHER	DSF04	654220	6222327	654214	6222314
	SMALL FISH BOAT ELECTROFISHER	DSF05	654220	6222327	654808	6222283
32L SIDE CHANNEL						
	BACKPACK ELECTROFISHER	AEF05	587265	6224513		
	BACKPACK ELECTROFISHER	AEF09	587498	6224994		
	BACKPACK ELECTROFISHER	AEF10	587352	6224834		
	BEACH SEINE	ABS01	587294	6224625		
	BEACH SEINE	ABS03	587506	6225002		
	BEACH SEINE	ABS05	587234	6224689		
	BEACH SEINE	ABS08	587672	6225144		
	BEACH SEINE	ABS09	587605	6225093		
	BEACH SEINE	ABS10	587466	6224940		
	BEACH SEINE	ABS11	587401	6224883		
	BEACH SEINE	ABS12	587274	6224746		

Appendix A Table A1. Fish and habitat site information (Nad 83), 2013 Peace River Side Channel Fisheries Program.

Side Channel	Site Type	Site	Upper		Lower	
			Easting	Northing	Easting	Northing
40L SIDE CHANNEL						
	BACKPACK ELECTROFISHER	BEF01	594612	6229933		
	BACKPACK ELECTROFISHER	BEF03	593810	6229436		
	BEACH SEINE	BBS01	594787	6230036		
	BEACH SEINE	BBS03	594601	6229951		
	BEACH SEINE	BBS04	594420	6229668		
	BEACH SEINE	BBS05	594807	6229925		
	BEACH SEINE	BBS06	594309	6229582		
	BEACH SEINE	BBS07	594306	6229727		
	SMALL FISH BOAT ELECTROFISHER	BSF01	594687	6229928	594931	6230027
	SMALL FISH BOAT ELECTROFISHER	BSF02	594383	6229586	594546	6229890
	SMALL FISH BOAT ELECTROFISHER	BSF03	594314	6229576	594383	6229586
	SMALL FISH BOAT ELECTROFISHER	BSF04	594291	6229625	594260	6229676
	SMALL FISH BOAT ELECTROFISHER	BSF05	594643	6229979	594857	6230092

Appendix A Table A2. Habitat transect site information (Nad 83), 2013 Peace River Side Channel Fisheries Program.

Side Channel	Site Type	Site	Left Bank		Right Bank	
			Easting	Northing	Easting	Northing
102.5R SIDE CHANNEL						
	HABITAT TRANSECT	CHT04	644484	6223574	644516	6223539
	HABITAT TRANSECT	CHT05	644347	6223478	644353	6223443
	HABITAT TRANSECT	CHT06	644246	6223469	644250	6223442
	HABITAT TRANSECT	CHT07	644172	6223480	644162	6223444
	HABITAT TRANSECT	CHT08	644100	6223516	644085	6223474
	HABITAT TRANSECT	CHT09	644007	6223534	643997	6223498
	HABITAT TRANSECT	CHT10	643924	6223557	643918	6223516
	HABITAT TRANSECT	CHT11	643837	6223582	643827	6223541
	HABITAT TRANSECT	CHT12	643746	6223606	643733	6223565
	HABITAT TRANSECT	CHT13	643663	6223640	643651	6223604
	HABITAT TRANSECT	CHT14	643597	6223674	643582	6223640
	HABITAT TRANSECT	CHT15	643506	6223718	643492	6223687
	HABITAT TRANSECT	CHT16	643419	6223751	643407	6223721
	HABITAT TRANSECT	CHT17	644418	6223506	644441	6223471
	HABITAT TRANSECT	CHT18	644118	6223507	644103	6223464
	HABITAT TRANSECT	CHT19	643349	6223777	643333	6223730
112L SIDECHANNEL						
	HABITAT TRANSECT	DHT01	653762	6222120	653791	6222075
	HABITAT TRANSECT	DHT02	653972	6222178	654000	6222114
	HABITAT TRANSECT	DHT03	654164	6222281	654211	6222216
	HABITAT TRANSECT	DHT04	654004	6222352	654010	6222325
	HABITAT TRANSECT	DHT05	654106	6222347	654102	6222328
	HABITAT TRANSECT	DHT06	654166	6222340	654162	6222314
	HABITAT TRANSECT	DHT07	654321	6222319	654318	6222224
	HABITAT TRANSECT	DHT08	654430	6222301	654415	6222221
	HABITAT TRANSECT	DHT09	654515	6222297	654514	6222207
	HABITAT TRANSECT	DHT10	654630	6222299	654626	6222196
	HABITAT TRANSECT	DHT11	654738	6222296	654729	6222192
	HABITAT TRANSECT	DHT12	654829	6222291	654834	6222193

Appendix A Table A2. Habitat transect site information (Nad 83), 2013 Peace River Side Channel Fisheries Program.

Side Channel	Site Type	Site	Left Bank		Right Bank	
			Easting	Northing	Easting	Northing
32L SIDE CHANNEL						
	HABITAT TRANSECT	AHT01	587635	6225130	587647	6225122
	HABITAT TRANSECT	AHT02	587572	6225075	587580	6225065
	HABITAT TRANSECT	AHT03	587512	6225018	587523	6225008
	HABITAT TRANSECT	AHT04	587443	6224951	587457	6224937
	HABITAT TRANSECT	AHT05	587384	6224892	587401	6224882
	HABITAT TRANSECT	AHT06	587329	6224815	587339	6224806
	HABITAT TRANSECT	AHT07	587266	6224760	587274	6224744
	HABITAT TRANSECT	AHT08	587686	6225148	587685	6225139
	HABITAT TRANSECT	AHT09	587245	6224666	587259	6224677
	HABITAT TRANSECT	AHT10	587675	6225149	587677	6225140
	HABITAT TRANSECT	AHT11	587601	6225095	587608	6225089
	HABITAT TRANSECT	AHT12	587537	6225041	587545	6225031
	HABITAT TRANSECT	AHT13	587490	6224992	587500	6224987
	HABITAT TRANSECT	AHT14	587472	6224979	587488	6224967
	HABITAT TRANSECT	AHT15	587408	6224914	587420	6224900
	HABITAT TRANSECT	AHT16	587349	6224838	587360	6224829
	HABITAT TRANSECT	AHT17	587302	6224774	587313	6224768
	HABITAT TRANSECT	AHT18	587231	6224728	587254	6224710
40L SIDE CHANNEL						
	HABITAT TRANSECT	BHT01	594842	6230076	594890	6229977
	HABITAT TRANSECT	BHT02	594781	6230042	594840	6229937
	HABITAT TRANSECT	BHT03	594710	6230005	594771	6229901
	HABITAT TRANSECT	BHT04	594578	6229965	594583	6229907
	HABITAT TRANSECT	BHT05	594458	6229910	594498	6229857
	HABITAT TRANSECT	BHT06	594381	6229843	594467	6229753
	HABITAT TRANSECT	BHT07	594323	6229747	594425	6229662
	HABITAT TRANSECT	BHT08	594212	6229656	594248	6229598
	HABITAT TRANSECT	BHT09	594145	6229628	594184	6229555
	HABITAT TRANSECT	BHT10	594302	6229554	594360	6229529
	HABITAT TRANSECT	BHT11	594284	6229487	594323	6229461
	HABITAT TRANSECT	BHT12	593788	6229469	593812	6229434

APPENDIX B DEFINITIONS

Appendix – B1

Habitat and Substrate Type Classification Systems

Instream Habitat

Provides a qualitative assessment of the physical characteristics of a stream and its potential as fish habitat.

Riffle - Portion of channel with increased velocity relative to Run and Pool habitat types; broken water surface due to effects of submerged or exposed bed materials; shallow (less than 25 cm). Limited value as habitat for larger juveniles and adults (i.e., feeding), but may be used extensively by young-of-the-year and small juveniles.

RF - Typical riffle habitat type; provides limited cover for all life stages.

RF/BG - Riffle habitat type with abundance of large cobble and boulder substrates. Limited cover for juveniles and adults; but, may be used extensively by young-of-the-year fish.

Rapids (RA) - Portion of channel with highest velocity relative to other habitat types. Deep (>25 cm); often formed by channel constriction. Substrate extremely coarse; dominated by large cobble and boulder substrates. Habitat provided for juveniles and adults in pocket eddies associated with substrate.

Run - Portion of channel characterized by moderate to high current velocity relative to Pool and Flat habitats; water surface largely unbroken. Potentially high habitat value for all life stages. Can be differentiated into five types based on depth and cover.

R1 - Maximum depth exceeding 1.5 m; average depth 1.0 m. High cover at all flow conditions. Highest quality habitat for larger juveniles and adults; limited value for young-of-the-year-fish.

R2/BG - Maximum depth reaching 1.0 m and generally exceeding 0.75 m; presence of large cobble or boulder substrates in channel. High cover at all flows. Moderate to high quality habitat for larger juveniles and adults.

R2 - Maximum depth reaching 1.0 m and generally exceeding 0.75 m. High cover during most flows, but not during base flows. Moderate quality habitat for juveniles and adults; limited value for young-of-the-year-fish.

R3/BG - Maximum depth of 0.75 m, but averaging <0.50 m; presence of large cobble or boulder substrates in channel. Moderate cover at all flows. Moderate quality habitat for juveniles and adults; but, the value to young-of-the-year-fish is potentially high.

R3 - Maximum depth of 0.75 m, but averaging <0.50 m. Low cover at all flows. Lowest quality habitat for juveniles and adults; but, the value to young-of-the-year-fish is potentially high.

Flat - Area of channel characterized by low current velocities (relative to RF and Run cover types); near-laminar (i.e., non-turbulent) flow. Depositional area dominated sand/silt substrates. Differentiated from Pool habitat type by high channel uniformity and lack of direct association with riffle/run complex. Potential habitat value for all life stages is moderate to high. Can be differentiated into five types based on depth and cover.

F1 - Maximum depth exceeding 1.5 m; average depth 1.0 m or greater. High cover at all flows. Highest quality habitat for larger juveniles and adults; limited value for young-of-the-year-fish.

F2/BG - Maximum depth reaching 1.0 m and generally exceeding 0.75 m; presence of large cobble or boulder substrates in channel. High cover at all flows. Moderate to high quality habitat for larger juveniles and adults.

F2 - Maximum depth exceeding 1.0 m; generally exceeding 0.75 m. High cover during most flows, but not during base flows. Moderate quality habitat for juveniles and adults; limited value for young-of-the-year-fish.

F3/BG - Maximum depth of 0.75 m, but averaging <0.50 m; presence of large cobble or boulder substrates in channel. Moderate cover at all flows. Moderate quality habitat for juveniles and adults; but, the value to young-of-the-year-fish is potentially high.

F3 - Maximum depth of 0.75 m, averaging less than 0.50 m. Low cover at all flows. Lowest quality habitat for juveniles and adults; but, the value to young-of-the-year-fish is potentially high.

Pool - Discrete portion of channel featuring increased depth and reduced velocity (downstream oriented) relative to Riffle and Run habitat types. Normally featuring Riffle/Run associations. Principal habitat value for all life stages is cover. When in close association with Riffle/Run habitats, value can be very high. Can be differentiated into three types based on depth.

P1 - Maximum depth exceeding 1.5 m; average depth 1.0 m or greater; high cover at all flow conditions. Often intergrades with deep-slow type of R1. Highest quality habitat for larger juveniles and adults; limited value for young-of-the-year-fish.

P2 - Maximum depth reaching or exceeding 1.0 m, generally exceeding 0.75 m. High cover at all but base flows. Moderate quality habitat for juveniles and adults; limited value for young-of-the-year-fish.

P3 - Maximum depth of 0.75 m, averaging <0.50 m. Low instream cover; includes small pocket eddies. Lowest quality habitat for all life stages.

Special Features - Includes the following instream features:

Ledges (LG) - Areas of bedrock intrusion into the channel; often creates Chutes and Pool habitat.

Falls (FAL) - Channel section exhibiting distinct vertical falls over boulder and bedrock. Often a barrier to fish.

Cascade (CAS) - Area of channel exhibiting distinct drop over boulder and bedrock, but, no defined falls. Often a barrier to fish.

Tributary Confluence (TC) - Area of main river channel directly affected by tributary confluence.

Backwater (BW) - Well-defined zone of zero or reverse flow water velocity associated with a large bank irregularity.

Tributary Confluence/Backwater (TCBW) – area of main channel and backwater associated with bank irregularities formed by tributary confluence.

Snye (SN) - Well-defined back channel not subjected to mainstem currents.

Oxbow (OX) – Bend or meander in a stream or river that becomes detached from the stream channel from natural fluvial processes.

Bank Habitat

The zone within the immediate hydraulic influence of the bank-water interface. Typically extends from the annual high-water to low-water mark.

Armoured

Bank is stable and is composed of armoured cobble to boulder substrates that are not subjected to movement during annual floods; can be differentiated into categories based on the amount of bank roughness.

(A1 very rough, A2 moderately rough, A3 not rough)

Canyon

Bank is stable, is near vertical, and is composed of boulder to bedrock substrates; can be differentiated into categories based on the amount of bank roughness (C1 very rough, C2 moderately rough, C3 not rough).

Depositional

Bank exhibits low relief and is composed of silt to cobble substrates; characterized by high substrate mobility and low bank roughness (D1 cobble; D2 gravel; D3 sand and silts). Differentiated into tributary (TD) and mainstem (MD) depositional zones.

Erosional

Bank is dominated silt to gravel substrates that exhibit evidence of active erosion; note that large rock substrates can be present; can be differentiated into categories based on the amount of bank roughness

(E1 very rough, E2 moderately rough, E3 not rough).

Mesohabitat

To address issues caused by sampling several habitat types within on site using small fish and large fish boat electrofisher methods , sampled instream and bank habitat types were categorized into discrete groups based on differences in physical characteristics that included bank slope, water velocity, and the presence of physical cover (see table).

Four mesohabitat types sampled during the program were as follows:

- SFC - Moderate slope; shallow water; high water; velocity; physical cover
- SFN - Gradual slope; shallow water; high water velocity; no physical cover
- SSC - Moderate slope; shallow water; slow; physical cover
- SSN - Gradual slope; shallow water; slow; no physical cover

MesoHabitat Category	Bank Habitat ^a	Instream Habitat	Water Velocity ^a	Channel Bed Slope ^a	Physical Instream Cover	Substrate
SFN	A3	Run	Moderate to High	Low	Absent	Rock
SFC	A1/A2	Run	Moderate to High	Moderate	Present	Rock
SSN	A3	Flat	Low	Low	Absent	Rock or Sand
SSC	A1/A2	Flat	Low	Moderate	Present	Rock or Sand

^a Based on subjective measure by field biologist.

Substrate Classification System

Modified Wentworth classification for substrate particle sizes (from Cummins 1962)

Category	Particle Size Range (mm)
Bedrock	-
Boulder	>256
Cobble	32 - 256
Gravel	1 - 32
Sand	0.0625 - 0.2-1
Silt	0.0039-0.0625
Clay	<0.0039
Organics	-

Appendix – B2 Site Characteristics Definitions

Habitat type:	See Appendix B1 for definitions.
Water conductivity:	Measured using Hanna HI98311 EC/TDS meter ($\mu\text{S}/\text{cm}$) ($\pm 2\%$ full scale).
Water temperature:	Measured using Hanna HI98311 EC/TDS meter ($\pm 0.1^\circ\text{C}$).
Water pH:	Measured using Hanna HI98311 EC/TDS meter (± 0.01).
Water clarity:	Measured to the nearest centimetre using a secchi plate mounted on a pole (plate was 2.5 cm wide x 21 cm long partitioned into three equal sections of black, white, and black).
Sample effort:	Dependent on sample method. Boat electrofishing measured as number of fish/km, backpack electrofishing effort measured as number of fish/m, beach seine effort measured as number fish/100 m ² , gill net effort measured as number fish/100 m ² /24 h, and minnow trap effort measured as number of fish/trap/24 h.
Substrate type (%):	Material forming the bottom of the stream bed (see Substrate Classification System, Appendix B1). Visually rated within a predetermined area of stream bed.
Fish Cover (%):	Overhead (Ovh) cover, rock cover, large organic debris (LOD) cover, submergent (Sub) vegetation cover, emergent (Emer) vegetation cover, algal cover, that provide protection for fish within a predetermined area.
D90 (cm):	Represented the average size of substrate particle that is in the 90 th percentile.
Embeddedness:	Degree to which rock substrates are surrounded and/or are covered by fines (Low, Moderate, High).
Compaction:	Looseness of substrate; ability to be moved during high flow (Low, Moderate, High).
Depth (m):	Depth of water at a point measured to nearest centimetre. At beach seines sites depth is measured at $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$ of the haul width. Depth at electrofisher sites depth is measured in the same manner across the width of sampled area.
Velocity (m/s):	Measured in the same place depth is taken at beach seine and backpack electrofisher sites. Measured with Swoffer Model 2100 flow meter wading wand (wand automatically determines depth at 0.6 m from water surface – best place to determine average velocity of water column in relatively shallow water) (m/s every 6.0 seconds).

**Appendix – B3
Fish Life History Data Abbreviations and Codes**

BC Label	Alberta Label	Common Name	Scientific Name	BC Label	Alberta Label	Common Name	Scientific Name
RB	RNTR	Rainbow trout	<i>Oncorhynchus mykiss</i>	BB	BURB	Burbot	<i>Lota lota</i>
GB	BNTR	Brown trout	<i>Salmo trutta</i>	CCG	SLSC	Slimy sculpin	<i>Cottus cognatus</i>
CT	CTTR	Cutthroat trout	<i>Oncorhynchus clarkii</i>	CRI	SPSC	Spoonhead sculpin	<i>Cottus ricei</i>
BT	BLTR	Bull trout	<i>Salvelinus confluentus</i>	CAS	PRSC	Prickly sculpin	<i>Cottus asper</i>
DV	DLVR	Dolly varden	<i>Salvelinus malma</i>	CAL	CSSC	Coastrange sculpin	<i>Cottus aleuticus</i>
LT	LKTR	Lake trout	<i>Salvelinus namaycush</i>	CCN	SHSC	Shorthead sculpin	<i>Cottus confusus</i>
AC	ARCH	Arctic char	<i>Salvelinus alpinus</i>	CLA	PSSC	Pacific staghorn sculpin	<i>Leptocottus armatus</i>
EB	BKTR	Brook trout	<i>Salvelinus fontinalis</i>	CBA	MTSC	Mottled sculpin	<i>Cottus bairdii</i>
GR	ARGR	Arctic grayling	<i>Thymallus arcticus</i>	CRH	TRSC	Torrent sculpin	<i>Cottus rhotheus</i>
MW	MNWH	Mountain whitefish	<i>Prosopium williamsoni</i>	BSB	BRST	Brook stickleback	<i>Culaea inconstans</i>
RW	RNWH	Round whitefish	<i>Prosopium cylindraceum</i>	NSB	NNST	Ninespine stickleback	<i>Pungitius pungitius</i>
PW	PGWH	Pygmy whitefish	<i>Prosopium coulterii</i>	TSB	THST	Threespine stickleback	<i>Gasterosteus aculeatus</i>
LW	LKWH	Lake whitefish	<i>Coregonus clupeaformis</i>	RSC	RDSH	Redside shiner	<i>Richardsonius balteatus</i>
KO	KOKA	Kokanee	<i>Oncorhynchus nerka</i>	NSC	NPMN	Northern pikeminnow	<i>Ptychocheilus oregonensis</i>
LSU	LNSC	Longnose sucker	<i>Catostomus catostomus</i>	PDC	PRDC	Pearl dace	<i>Margariscus margarita</i>
WSU	WHSC	White sucker	<i>Catostomus commersonii</i>	PCC	PEAM	Peamouth	<i>Mylocheilus caurinus</i>
CSU	LSSC	Largescale sucker	<i>Catostomus macrocheilus</i>	FHC	FLCH	Flathead chub	<i>Platygobio gracilis</i>
BSC	BRSC	Bridgeliip sucker	<i>Catostomus columbianus</i>	LKC	LKCH	Lake chub	<i>Coesius plumbeus</i>
MSC	MNSC	Mountain sucker	<i>Catostomus platyrhynchus</i>	LNC	LNDC	Longnose dace	<i>Rhinichthys cataractae</i>
CMC	CHIS	Chiselmouth	<i>Acrocheilus alutaceus</i>	FDC	FNDC	Finescale dace	<i>Phoxinus neogaeus</i>
LSG	LKST	Lake sturgeon	<i>Acipenser fulvescens</i>	RDC	NRDC	Northern redbelly dace	<i>Phoxinus eos</i>
WSG	WHST	White sturgeon	<i>Acipenser transmontanus</i>	LDC	LPDC	Leopard dace	<i>Rhinichthys falcatus</i>
GE	GOLD	Goldeye	<i>Hiodon alosoides</i>	ESC	EMSH	Emerald shiner	<i>Notropis atherinoides</i>
NP	NRPK	Northern pike	<i>Esox lucius</i>	STC	SPSH	Spottail shiner	<i>Notropis hudsonius</i>
WP	WALL	Walleye	<i>Sander vitreus</i>	FM	FTMN	Fathead minnow	<i>Pimephales promelas</i>
	SAUG	Sauger	<i>Sander canadensis</i>	TP	TRPR	Trout-perch	<i>Percopsis omiscomaycus</i>
YP	YLPR	Yellow perch	<i>Perca flavescens</i>		IWDR	Iowa darter	<i>Etheostoma exile</i>

Sex and Maturity Descriptions

M	F	Class	Description
99		Immature A	Sex indeterminable due to small gonad size.
01	11	Immature B	Small gonad size; fish has never spawned and will not spawn during the coming spawning season.
02	12		Maturing but not ready to spawn; will spawn this year
06	16	Alternate	Small gonad size associated with large size; suggests alternate year spawner.
07	17	Gravid	Sexual organs fill cavity testes white, drops of milt fall with pressure; eggs completely round, some already translucent.
08	18	Ripe	Roe or milt are extruded by slight pressure on the belly.
09	19	Spent	Spawning completed; reabsorption of residual ovarian tissue is not yet complete.
10	20	External	Sex determined by external characteristics
	97	Adult	Based on fish size; sex not determined.
	98	Juvenile	Based on fish size; sex not determined.

Capture Method Codes

Code	Capture Method	Code	Capture Method
SL	Set line	ES	Boat electrofisher
DN	Dip net	EF	Backpack electrofisher
GN	Gill net	AL	Angling
BS	Beach seine	GE	Gee minnow trap
HN	Hoop net	RST	Rotary screw trap
TR	Trap		

Tag Codes

Code	Tag Code
Y, W, O	Color code for tag (Yellow, White, Orange)

Tag Type

PIT (Passive Integrated Transponder)
Radio (Radio transmitter tags)
Floy

Capture Codes

Code	Capture Code
0	First capture, released
1	First capture, mortality
2	Recapture, released
3	Recapture, mortality
5	Recapture, fin clip and lost tag

Age Structure Codes

Code	Age Structure	Code	Age Structure
SC	Scales	CL	Cleithra
OT	Otoliths	CS	Cleithra and scales
SO	Scales and otoliths	SF	Scales and fin rays
FR	Fin ray		

Identified to Family

BC/Alberta Label	Family
SU/SUCK	Catostomidae
CC/SCUL	Cottidae
MINN	Cyprinidae

Appendix – B4

Observed and Release-No-data Definitions

Small Fish Catch:	Count of small fish (≤ 200 mm fork length) caught and measured.
Total Catch:	Total count of fish caught and measured.
Adult Observed:	Adult fish (> 200 mm fork length) observed, but not caught.
Small Fish Observed:	Small fish observed, but not caught.
YOY Observed:	YOY (young-of-the-year) observed, but not caught.
All RND:	All age groups caught with (RND, released-no-data) no measurements taken.
Adult RND:	Adult fish caught with no measurements taken.
Small Fish RND:	Small fish caught with no measurements taken.
YOY RND:	YOY fish caught with no measurements taken.
Small Fish Number:	Count of small fish catch, small fish observed, YOY observed, small fish RND, and YOY RND.
Total Number:	Total count of all caught, observed and RND fish.

APPENDIX C WATER QUALITY

Appendix C Table C1. Site water quality information, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Site	Habitat	Date	Time	pH	Cond. (uS/cm)	Temp. (C)	Clarity (cm)	Dis. Oxygen (ppm)	Oxygen (%)	Turbidity (NTU)
102.5R SIDE CHANNE											
	CBS01	FLAT	07-Aug-13	14:45	7.98	280	17.2	0.17	7.0	73.0	
	CBS02	FLAT	07-Aug-13	13:40	7.98	304	17.5	0.16	7.2	74.0	
	CBS05	FLAT	07-Aug-13	9:04	8.16	301	16.9	0.25	7.0	68.0	35.5
	CBS06	FLAT	07-Aug-13	10:30	8.00	289	16.2		7.4	70.0	
	CBS07	FLAT	07-Aug-13	11:15	7.75	312	17.4		6.4	68.0	
	CBS08	FLAT	07-Aug-13	11:45	8.00	283	17.6		7.2	76.0	
	CBS09	FLAT	07-Aug-13	13:02	8.03	287	17.3	0.16	7.4	75.0	
	CBS10	FLAT	07-Aug-13	14:15	8.00	284	17.4	0.18	7.4	76.0	106.0
	CSF05	FLAT	08-Aug-13	10:05	8.00	336	17.9	0.01			3056.0
	CSF06	FLAT	08-Aug-13	10:42	7.96	339	19.1	0.02	7.9	86.0	
	CSF07	FLAT	08-Aug-13	11:07							
	CSF08	FLAT	08-Aug-13	12:30							
	CSF09	FLAT	08-Aug-13	13:00							
	CSF10	FLAT	08-Aug-13	13:30							
112L SIDECHANNEL											
	DBS01	FLAT	01-Aug-13	11:32	7.93	193	18.1		9.0	95.0	
	DBS02	FLAT	01-Aug-13	12:07	8.02	277	26.5		6.9	69.0	
	DBS05	FLAT	05-Aug-13	13:22	7.97	243	18.8	0.20	8.8	95.0	
	DBS07	FLAT	01-Aug-13	13:40	8.12	188	20.4		8.3	93.0	
	DBS08	FLAT	01-Aug-13	15:08	7.91	187	18.4		8.5	88.0	
	DBS09	FLAT	05-Aug-13	9:25	8.09	241	14.6	0.15	8.5	83.0	97.4
	DBS10	FLAT	05-Aug-13	9:45	7.88	237	13.9		9.1	88.0	
	DBS11	FLAT	05-Aug-13	13:59	7.00	242	21.5		8.2	92.0	
	DEF01	RUN	01-Aug-13	14:30	8.10	197	21.1		8.6	98.0	
	DSF01	FLAT	06-Aug-13	12:00	8.02	208	13.0	0.25	9.3	90.0	34.5
	DSF02	FLAT	06-Aug-13	12:30	7.71	212	12.0	0.26	9.7	90.0	
	DSF03	FLAT	06-Aug-13	13:40	7.89	210	12.6	0.25	9.8	90.0	
	DSF04	FLAT	06-Aug-13	13:50	7.71	210	13.3	0.23	9.4	89.0	
	DSF05	FLAT	06-Aug-13	14:35	7.78	212	13.4	0.23	9.3	90.0	

Appendix C Table C1. Site water quality information, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Site	Habitat	Date	Time	pH	Cond. (uS/cm)	Temp. (C)	Clarity (cm)	Dis. Oxygen (ppm)	Oxygen (%)	Turbidity (NTU)
32L SIDE CHANNEL											
	ABS01	FLAT	04-Aug-13	13:40	7.78	195	17.6	999.00	9.4	100.0	
	ABS03	FLAT	03-Aug-13	10:53	7.07	416	15.4	999.00	7.6	75.0	
	ABS05	FLAT	04-Aug-13	13:51	7.37	416	21.0	999.00	7.7	86.0	2.3
	ABS08	FLAT	03-Aug-13	10:15	6.93	351	13.7	999.00	6.9	65.0	2.7
	ABS09	FLAT	03-Aug-13	10:35	6.83	370	14.4	999.00	6.9	66.0	
	ABS10	FLAT	03-Aug-13	12:00	7.24	390	17.6	999.00	9.6	102.0	
	ABS11	FLAT	03-Aug-13	12:30	7.42	400	17.1	999.00	8.4	86.0	
	ABS12	FLAT	03-Aug-13	14:25	7.38	373	18.9	999.00	7.4	79.0	
	AEF05	FLAT	04-Aug-13	15:00	8.65	180	27.4	999.00			
	AEF09	RIFFLE	03-Aug-13	11:20	7.02	408	15.8	999.00	7.4	74.0	
	AEF10	RIFFLE	03-Aug-13	13:45	7.25	397	19.7	999.00	8.6	92.0	
40L SIDE CHANNEL											
	BBS01	FLAT	31-Jul-13	12:15	7.69	173	12.7		9.3	91.0	
	BBS03	FLAT	31-Jul-13	12:00	7.76	210	18.0		9.3	98.0	
	BBS04	FLAT	31-Jul-13	15:15	7.78	163	16.2		10.1	102.0	
	BBS05	FLAT	31-Jul-13	15:45	7.74	169	16.8	1.30	9.5	99.0	5.4
	BBS06	FLAT	02-Aug-13	13:55	7.89	202	19.2	1.80	9.5	103.0	4.0
	BBS07	FLAT	02-Aug-13	14:30	7.63	226	19.9		8.2	91.0	
	BEF01	RIFFLE	31-Jul-13	11:30	7.78	219	18.5	1.65	9.2	97.0	4.4
	BEF03	RIFFLE	02-Aug-13	13:15	8.02	164	19.3		9.6	105.0	
	BSF01	FLAT	30-Jul-13	14:00							
	BSF02	FLAT	30-Jul-13	15:00	7.50	193	13.1	1.65			3.7
	BSF03	FLAT	31-Jul-13	13:30	7.55	195	15.7		9.5	95.0	
	BSF04	FLAT	31-Jul-13	14:00	7.58	206	18.8		9.5	102.0	
	BSF05	FLAT	31-Jul-13	14:45	7.77	164	16.0		10.2	102.0	

APPENDIX D HABITAT DATA

Appendix D Table D1 . Habitat site parameters measured, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Site Type	Site Label	Date	Time	Habitat	Depth (m)			Velocity (m/s)			Substrate %						D90 (cm)	Embed.	Comp.	OH	Instream Cover (%)					
						1/4	1/2	3/4	1/4	1/2	3/4	Om	Si	Sa	PrGr	Co	Bo					Be	R	LWD	TV	SV	EV
102.5R SIDE CHANNEL																											
BEACH SEINE																											
	CBS01		07-Aug-13	14:45	FLAT	0.19	0.30	0.48	0.00	0.00	0.00	0	100	0	0	0	0	0				0	0	0	0	0	0
	CBS02		07-Aug-13	13:40	FLAT	0.15	0.40	0.59	0.00	0.00	0.00	0	90	0	0	10	0	0	13 H	H		0	0	0	0	15	0
	CBS05		07-Aug-13	9:04	FLAT	0.25	0.49	0.75	0.00	0.00	0.12	0	20	0	0	80	0	0	12 M	H		0	0	0	0	0	0
	CBS06		07-Aug-13	10:30	FLAT	0.24	0.27	0.37	0.00	0.1	0.11	0	10	0	0	90	0	0	13 M	H		0	5	0	0	5	0
	CBS07		07-Aug-13	11:15	FLAT	0.15	0.32	0.47	0.00	0.00	0.00	0	100	0	0	0	0	0				0	0	0	0	80	0
	CBS08		07-Aug-13	11:45	FLAT	0.30	0.55	0.74	0.00	0.00	0.00	0	100	0	0	0	0	0				0	0	0	0	0	0
	CBS09		07-Aug-13	13:02	FLAT	0.57	0.65	0.78	0.00	0.00	0.00	0	10	0	30	60	0	0	12 M	H		0	0	0	0	15	0
	CBS10		07-Aug-13	14:15	FLAT	0.24	0.37	0.52	0.00	0.00	0.00	0	10	0	0	90	0	0	12 M	H		0	5	0	0	0	0
112L SIDECHANNEL																											
BACKPACK ELECTROFISHER																											
	DEF01		01-Aug-13	14:30	RUN	0.10	0.18	0.15				0	0	0	85	15	0	0	8 H	H		0	5	0	0	0	0
BEACH SEINE																											
	DBS01		01-Aug-13	11:32	FLAT	0.00	0.00	0.00	0.00	0.00	0.00	0	100	0	0	0	0	0				0	0	0	0	0	0
	DBS02		01-Aug-13	12:07	FLAT	0.30	0.50	1.00	0.00	0.00	0.00	0	100	0	0	0	0	0				0	0	0	0	0	0
	DBS05		05-Aug-13	13:22	FLAT	0.32	0.52	0.76	0.00	0.00	0.00	0	100	0	0	0	0	0				0	0	0	0	0	0
	DBS07		01-Aug-13	13:40	FLAT	0.12	0.25	0.27	0.00	0.00	0.00	0	80	0	15	5	0	0	8 H	H		0	0	0	0	0	0
	DBS08		01-Aug-13	15:08	FLAT	0.22	0.40	0.42	0.00	0.00	0.00	0	95	0	0	5	0	0	14 H	H		0	0	0	0	0	0
	DBS09		05-Aug-13	9:25	FLAT	0.28	0.38	0.52	0.00	0.00	0.00	0	100	0	0	0	0	0				0	0	0	0	0	0
	DBS10		05-Aug-13	9:45	FLAT	0.13	0.18	0.25	0.00	0.00	0.00	0	100	0	0	0	0	0				0	0	0	0	0	0
	DBS11		05-Aug-13	13:59	FLAT	0.21	0.54	0.72	0.00	0.00	0.00	0	100	0	0	0	0	0				0	0	0	0	0	0

Appendix D Table D1 . Habitat site parameters measured, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Site Type	Site Label	Date	Time	Habitat	Depth (m)			Velocity (m/s)			Substrate %						D90 (cm)	Embed.	Comp.	Instream Cover (%)					
						1/4	1/2	3/4	1/4	1/2	3/4	Om	Si	Sa	PrGr	Co	Bo				Be	OH	R	LWD	TV	SV
32L SIDE CHANNEL																										
BACKPACK ELECTROFISHER																										
	AEF05		04-Aug-13	15:00	FLAT	0.07	0.13	0.13	0.00	0.00	0.00	0	10	0	35	50	5	0	16 L	H	0	15	0	0	10	5
	AEF09		03-Aug-13	11:20	RIFFLE	0.05	0.09	0.05	0.20	0.20	0.08	0	0	20	5	70	5	0	18 H	H	0	15	0	0	0	0
	AEF10		03-Aug-13	13:45	RIFFLE	0.08	0.11	0.18	0.01	0.00	0.09	0	0	10	0	80	10	0	22 H	H	0	0	0	0	0	0
BEACH SEINE																										
	ABS01		04-Aug-13	13:40	FLAT	0.46	0.57	0.59	0.00	0.00	0.00	0	95	0	0	0	5	0	36 H	H	0	5	0	0	0	0
	ABS03		03-Aug-13	10:53	FLAT	0.15	0.31	0.34	0.00	0.00	0.00	0	0	15	0	80	5	0	19 H	H	2	5	0	0	0	0
	ABS05		04-Aug-13	13:51	FLAT	0.22	0.35	0.55	0.00	0.00	0.00	0	20	0	10	65	5	0	15 M	H	0	30	0	0	60	0
	ABS08		03-Aug-13	10:15	FLAT	0.28	0.32	0.38	0.00	0.00	0.00	0	0	25	0	70	5	0	19 H	H	0	5	0	0	0	0
	ABS09		03-Aug-13	10:35	FLAT	0.38	0.42	0.39	0.00	0.00	0.00	0	0	25	0	75	0	0	21 H	H	0	5	0	0	0	0
	ABS10		03-Aug-13	12:00	FLAT	0.20	0.24	0.38	0.00	0.00	0.00	0	0	50	0	45	5	0	26 H	H	0	0	0	0	0	15
	ABS11		03-Aug-13	12:30	FLAT	0.24	0.32	0.34	0.00	0.00	0.00	0	0	60	0	40	0	0	13 H	H	0	30	0	0	15	15
	ABS12		03-Aug-13	14:25	FLAT	0.29	0.40	0.46	0.00	0.00	0.00	0	0	60	0	35	5	0	10 H	H	0	0	0	0	0	0
40L SIDE CHANNEL																										
BACKPACK ELECTROFISHER																										
	BEF01		31-Jul-13	11:30	RIFFLE	0.23	0.33	0.36	0.24	0.20	0.18	0	0	0	0	85	15	0	32 M	H	0	25	0	0	0	0
	BEF03		02-Aug-13	13:15	RIFFLE	0.21	0.21	0.26	0.75	1.10	0.97	0	0	0	30	60	10	0	13 M	H	0	15	0	0	0	0
BEACH SEINE																										
	BBS01		31-Jul-13	12:15	FLAT	0.15	0.54	0.68	0.00	0.00	0.00	0	0	90	0	10	0	0	11 H	H	0	5	0	0	0	0
	BBS03		31-Jul-13	12:00	FLAT	0.15	0.23	0.34	0.00	0.00	0.00	0	0	90	0	10	0	0	18 H	H	0	5	0	0	0	0
	BBS04		31-Jul-13	15:15	FLAT	0.33	0.41	0.43	0.00	0.00	0.00	0	0	90	0	5	5	0	27 H	H	0	5	0	0	0	0
	BBS05		31-Jul-13	15:45	FLAT	0.21	0.42	0.53	0.00	0.00	0.00	0	0	90	0	10	0	0	16 H	H	0	0	0	30	0	10
	BBS06		02-Aug-13	13:55	FLAT	0.25	0.45	0.62	0.00	0.00	0.00	0	100	0	0	0	0	0			0	0	0	15	0	0
	BBS07		02-Aug-13	14:30	FLAT	0.52	0.85	0.71	0.00	0.00	0.00	0	100	0	0	0	0	0			0	0	0	15	0	0

Appendix D Table D2 . Habitat transect parameters measured, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Transect Label	Width(m)		Depth (m)			Velocity (m/s)			Substrate %							D90 (cm)	Embed.	Comp.	Instream Cover (%)					
		Wetted	Channel	1/4	1/2	3/4	1/4	1/2	3/4	Om	Si	Sa	Gr	Co	Bo	Be				OH	R	LWD	TV	SV	EV
102.5R SIDE CHANNEL																									
	CHT04	42.0	45.0																						
	CHT05	29.0	34.0																						
	CHT06	25.0	28.0																						
	CHT07	23.0	32.0	0.39	0.55	0.62	0.00	0.00	0.17	0	0	0	30	35	35	0	18	M	M	0	0	0	0	0	0
	CHT08	34.0	41.0																						
	CHT09	29.0	38.0																						
	CHT10	32.0	40.0																						
	CHT11	33.0	43.0																						
	CHT12	30.0	42.0																						
	CHT13	33.0	39.0																						
	CHT14	28.0	37.0																						
	CHT15	12.0	35.0																						
	CHT16	22.0	34.0																						
	CHT17	35.0	42.0																						
	CHT18	22.0	45.0	0.14	0.14	0.13	0.27	0.18	0.37	0	0	0	35	35	30	0	9	M	L	0	0	0	0	0	0
	CHT19	15.0	44.0																						

Appendix D Table D2 . Habitat transect parameters measured, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Transect Label	Width(m)		Depth (m)			Velocity (m/s)			Substrate %						D90 (cm)	Embed.	Comp.	Instream Cover (%)					
		Wetted	Channel	1/4	1/2	3/4	1/4	1/2	3/4	Om	Si	Sa	Gr	Co	Bo				Be	OH	R	LWD	TV	SV
112L SIDECHANNEL																								
	DHT01		45.0		53.0																			
	DHT02		63.0		73.0																			
	DHT03		73.0		99.0																			
	DHT04		20.0		33.0																			
	DHT05		21.0		29.0																			
	DHT06		23.0		32.0																			
	DHT07		93.0		97.0																			
	DHT08		82.0		72.0																			
	DHT09		80.0		93.0																			
	DHT10		87.0		104.0																			
	DHT11		96.0		103.0																			
	DHT12		92.0		102.0																			

Appendix D Table D2 . Habitat transect parameters measured, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Transect Label	Width(m)		Depth (m)			Velocity (m/s)			Substrate %							D90 (cm)	Embed.	Comp.	Instream Cover (%)					
		Wetted	Channel	1/4	1/2	3/4	1/4	1/2	3/4	Om	Si	Sa	Gr	Co	Bo	Be				OH	R	LWD	TV	SV	EV
32L SIDE CHANNEL																									
	AHT01	11.5	13.0	0.37	0.47	0.55	0.00	0.00	0.00	0	90	0	0	5	5	0	19	H	H	0	0	0	0	80	0
	AHT02	12.0	13.0	0.20	0.23	0.27	0.00	0.00	0.00	0	55	0	0	40	5	0	10	H	H	0	0	15	0	15	0
	AHT03	13.5	15.0	0.29	0.37	0.30	0.00	0.00	0.00	0	55	0	0	40	5	0	18	H	H	0	5	5	0	30	0
	AHT04	16.8	19.8	0.46	0.51	0.25	0.00	0.00	0.00	0	70	0	0	30	0	0	18	H	H	0	0	0	0	40	0
	AHT05	11.4	22.0	0.30	0.32	0.12	0.00	0.00	0.00	0	65	0	0	35	0	0	14	H	H	0	0	0	0	0	0
	AHT06	9.0	17.0	0.21	0.19	0.11	0.00	0.00	0.00	0	10	5	45	35	0	5	15	M	H	0	0	15	0	20	5
	AHT07	17.5	22.0	0.36	0.42	0.32	0.00	0.00	0.00	0	35	0	15	50	0	0	17	H	H	5	0	0	0	0	0
	AHT08	5.1	10.0	0.31	0.47	0.19	0.05	0.00	0.00	0	90	0	5	5	0	0	8	H	L	0	0	0	0	0	0
	AHT09	0.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0	0	10	40	50	0	0	18	M	H	0	0	15	20	0	0
	AHT10	2.8	25.0	0.13	0.20	0.12	0.17	0.18	0.06	0	0	30	40	30	0	0	11	L	L	40	0	0	0	0	0
	AHT11	8.5	10.5	0.43	0.47	0.47	0.00	0.00	0.00	0	85	0	0	10	5	0	18	H	H	0	0	0	0	60	0
	AHT12	11.0	11.5	0.20	0.29	0.42	0.00	0.00	0.00	0	50	0	0	45	5	0	15	H	H	0	5	5	0	5	0
	AHT13	11.0	11.5	0.05	0.05	0.07	0.16	0.01	0.27	0	15	0	0	80	5	0	22	M	H	0	0	10	0	15	0
	AHT14	6.3	19.0	0.07	0.11	0.09	0.15	0.23	0.10	0	40	40	0	20	0	0	9	H	H	0	0	5	0	25	0
	AHT15	12.5	17.0	0.18	0.20	0.14	0.00	0.00	0.00	0	65	0	0	35	0	0	20	H	H	0	0	5	0	55	5
	AHT16	3.5	18.0	0.11	0.08	0.50	0.03	0.02	0.20	0	20	0	20	50	0	10	24	L	H	0	0	30	0	15	10
	AHT17	13.5	14.0	0.30	0.33	0.18	0.00	0.00	0.00	0	45	0	20	35	0	0	15	H	H	0	5	5	5	0	0
	AHT18	31.0	31.0	0.69	0.57	0.66	0.00	0.00	0.00	0	60	0	10	30	0	0	7	M	H	0	0	15	0	10	0

Appendix D Table D2 . Habitat transect parameters measured, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Transect Label	Width(m)		Depth (m)			Velocity (m/s)			Substrate %							D90 (cm)	Embed.	Comp.	Instream Cover (%)					
		Wetted	Channel	1/4	1/2	3/4	1/4	1/2	3/4	Om	Si	Sa	Gr	Co	Bo	Be				OH	R	LWD	TV	SV	EV
40L SIDE CHANNEL																									
	BHT01	108.0	118.0																						
	BHT02	107.0	122.0																						
	BHT03	108.0	118.0																						
	BHT04	28.0	57.0	0.09	0.11	0.09	0.26	0.27	0.29	0	0	0	5	85	10	0	17	H	H	0	0	15	0	0	0
	BHT05	64.0	70.0																						
	BHT06	107.0	123.0																						
	BHT07	110.0	117.0																						
	BHT08	51.0	72.0																						
	BHT09	55.0	81.0																						
	BHT10	55.0	57.0																						
	BHT11	43.0	49.0																						
	BHT12	29.0	43.0																						

APPENDIX E
FISH CATCH DATA

Appendix ETable E1. Fish site sample effort information, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Side Type	Site	Date	Time	Electrofisher Settings and Effort					Beach Seine Effort			
					Volts	Freq.	Type	Pulse	A	s	m	Width (m)	Len. (m)
102.5R SIDE CHANNEL													
BEACH SEINE													
		CBS01	07-Aug-13	14:45							4.2	45	189
		CBS02	07-Aug-13	13:40							4.2	45	189
		CBS05	07-Aug-13	9:04							4.2	45	189
		CBS06	07-Aug-13	10:30							4.2	45	189
		CBS07	07-Aug-13	11:15							4.2	45	189
		CBS08	07-Aug-13	11:45							4.2	45	189
		CBS09	07-Aug-13	13:02							4.2	45	189
		CBS10	07-Aug-13	14:15							4.2	45	189
SMALL FISH BOAT ELECTROFISHER													
		CSF05	08-Aug-13	10:05	530	120	DC	3.0		396	350		
		CSF06	08-Aug-13	10:42	530	120	DC	3.0		1009	650		
		CSF07	08-Aug-13	11:07	530	120	DC	3.0		626	500		
		CSF08	08-Aug-13	12:30	530	120	DC	3.0		619	425		
		CSF09	08-Aug-13	13:00	530	120	DC	3.0		684	610		
		CSF10	08-Aug-13	13:30	530	120	DC	3.0		819	560		
112L SIDECHANNEL													
BACKPACK ELECTROFISHER													
		DEF01	01-Aug-13	14:30	350	120	DC	5.0		428	100		
BEACH SEINE													
		DBS01	01-Aug-13	11:32							4.2	45	189
		DBS02	01-Aug-13	12:07							4.2	45	189
		DBS05	05-Aug-13	13:22							4.2	45	189
		DBS07	01-Aug-13	13:40							4.2	45	189
		DBS08	01-Aug-13	15:08							4.2	45	189
		DBS09	05-Aug-13	9:25							4.2	45	189
		DBS10	05-Aug-13	9:45							4.2	45	189
		DBS11	05-Aug-13	13:59							4.2	45	189
SMALL FISH BOAT ELECTROFISHER													
		DSF01	06-Aug-13	12:00	530	120	DC	3.0		605	420		
		DSF02	06-Aug-13	12:30	530	120	DC	3.0		1188	650		
		DSF03	06-Aug-13	13:40	530	120	DC	3.0		481	310		
		DSF04	06-Aug-13	13:50	530	120	DC	3.0		771	510		
		DSF05	06-Aug-13	14:35	530	120	DC	3.0		773	590		

Appendix ETable E1. Fish site sample effort information, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Side Type	Site	Date	Time	Electrofisher Settings and Effort					Beach Seine Effort			
					Volts	Freq.	Type	Pulse	A	s	m	Width (m)	Len. (m)
32L SIDE CHANNEL													
BACKPACK ELECTROFISHER													
		AEF05	04-Aug-13	15:00	400	120	DC	5.0	386	100			
		AEF09	03-Aug-13	11:20	400	120	DC	5.0	508	60			
		AEF10	03-Aug-13	13:45	400	120	DC	5.0	386	80			
BEACH SEINE													
		ABS01	04-Aug-13	13:40							4.2	45	189
		ABS03	03-Aug-13	10:53							4.2	45	189
		ABS05	04-Aug-13	13:51							4.2	30	126
		ABS08	03-Aug-13	10:15							4.2	45	189
		ABS09	03-Aug-13	10:35							4.2	45	189
		ABS10	03-Aug-13	12:00							4.2	45	189
		ABS11	03-Aug-13	12:30							4.2	45	189
		ABS12	03-Aug-13	14:25							4.2	45	189
40L SIDE CHANNEL													
BACKPACK ELECTROFISHER													
		BEF01	31-Jul-13	11:30	350	120	DC	5.0	485	120			
		BEF03	02-Aug-13	13:15	400	120	DC	5.0	321	85			
BEACH SEINE													
		BBS01	31-Jul-13	12:15							4.2	45	189
		BBS03	31-Jul-13	12:00							4.2	45	189
		BBS04	31-Jul-13	15:15							4.2	45	189
		BBS05	31-Jul-13	15:45							4.2	45	189
		BBS06	02-Aug-13	13:55							4.2	45	189
		BBS07	02-Aug-13	14:30							4.2	45	189
SMALL FISH BOAT ELECTROFISHER													
		BSF01	30-Jul-13	14:00	530	120	DC	3.0	934	300			
		BSF02	30-Jul-13	15:00	530	120	DC	3.0	695	370			
		BSF03	31-Jul-13	13:30	530	120	DC	0.0	1500	400			
		BSF04	31-Jul-13	14:00	530	120	DC	0.0	845	350			
		BSF05	31-Jul-13	14:45	530	120	DC	0.0	479	250			

Appendix E Table E2. Fish catch data, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	Species	Catch Numbers				Catch Rate	
				CATCH No.	OBS. No.	Sub No.	Total No.	Beach Seine (fish/100 m ²)	Backpack Electrofish (fish/100 m)
102.5R SIDE CHANNEL									
BEACH SEINE									
		CBS01	LNC	10	0	0	10	52.91	
			SUCK	16	0	0	16	84.66	
			TP	1	0	0	1	5.29	
		CBS02	LNC	14	0	0	14	74.07	
			NP	2	0	0	2	10.58	
			RSC	1	0	0	1	5.29	
			STC	1	0	0	1	5.29	
			SUCK	15	17	0	32	169.31	
			WSU	1	0	0	1	5.29	
		CBS05	LNC	5	0	0	5	26.46	
			LSU	7	0	0	7	37.04	
			MW	1	0	0	1	5.29	
			RSC	21	0	0	21	111.11	
			STC	4	0	0	4	21.16	
			SUCK	29	0	316	345	1,826.72	
			TP	1	0	0	1	5.29	
			WSU	2	0	0	2	10.58	
		CBS06	SUCK	0	33	0	33	174.60	
		CBS07	LSU	1	0	0	1	5.29	
			SUCK	19	0	0	19	100.53	
		CBS08	LNC	9	0	0	9	47.62	
			NP	2	0	0	2	10.58	
			SCUL	1	0	0	1	5.29	
			STC	1	0	0	1	5.29	
			SUCK	15	87	0	102	539.68	
			WSU	2	0	0	2	10.58	
		CBS09	LNC	8	0	0	8	42.33	
			RSC	2	0	0	2	10.58	
			STC	1	0	0	1	5.29	
			SUCK	16	11	0	27	142.86	

Appendix E Table E2. Fish catch data, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	Species	Catch Numbers				Catch Rate	
				CATCH No.	OBS. No.	Sub No.	Total No.	Beach Seine (fish/100 m ²)	Backpack Electrofish (fish/100 m)
		CBS10							
			CSU	10	0	0	10	52.91	
			LNC	12	6	0	18	95.24	
			LSU	1	0	0	1	5.29	
			NP	1	0	0	1	5.29	
			RSC	4	0	0	4	21.16	
			STC	2	0	0	2	10.58	
			SUCK	16	192	0	208	1,100.53	
			TP	2	0	0	2	10.58	
			WSU	1	0	0	1	5.29	
		SMALL FISH BOAT ELECTROFISHER							
		CSF05							
			LSU	1	0	0	1		2.86
			WSU	0	2	0	2		5.71
		CSF06							
			LSU	1	0	0	1		1.54
			NP	1	0	0	1		1.54
			WSU	0	3	0	3		4.62
		CSF07							
			LSU	1	0	0	1		2.00
			NP	0	1	0	1		2.00
			WSU	1	3	0	4		8.00
		CSF08							
			CCG	1	0	0	1		2.35
			LSU	1	0	0	1		2.35
			NP	1	0	0	1		2.35
		CSF09							
			LNC	1	0	0	1		1.64
			NP	1	9	0	10		16.39
			SUCK	1	0	0	1		1.64
			TP	2	0	0	2		3.28
			WSU	1	0	0	1		1.64
		CSF10							
			LSU	2	0	0	2		3.57
			TP	3	0	0	3		5.36
			WSU	3	0	0	3		5.36
		112L SIDE CHANNEL							
		BACKPACK ELECTROFISHER							
		DEF01							
			CSU	1	0	0	1		1.00
			LNC	1	0	0	1		1.00
			SUCK	1	30	0	31		31.00
		BEACH SEINE							
		DBS01							
			LSU	2	0	0	2	10.58	
			SUCK	17	296	0	313	1,656.08	
			WSU	1	0	0	1	5.29	

Appendix E Table E2. Fish catch data, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	Species	Catch Numbers				Catch Rate	
				CATCH No.	OBS. No.	Sub No.	Total No.	Beach Seine (fish/100 m ²)	Backpack Electrofish (fish/100 m)
		DBS02	CSU	6	0	0	6	31.75	
			LKC	6	0	0	6	31.75	
			LSU	2	0	0	2	10.58	
			NP	3	0	0	3	15.87	
			NSC	1	0	0	1	5.29	
			RSC	30	716	1462	2208	11,679.89	
			STC	19	16	46	81	429.89	
			SUCK	2	0	0	2	10.58	
			TP	1	0	0	1	5.29	
			WSU	2	0	0	2	10.58	
			YP	3	0	0	3	15.87	
		DBS05	LNC	5	0	0	5	26.46	
			LSU	9	0	0	9	47.62	
			MW	1	0	0	1	5.29	
			NP	1	0	0	1	5.29	
			STC	1	0	0	1	5.29	
			SUCK	22	0	0	22	116.40	
			TP	18	0	0	18	95.24	
		DBS07	CSU	1	0	0	1	5.29	
			LNC	2	0	0	2	10.58	
			LSU	3	0	0	3	15.87	
			NSC	1	0	0	1	5.29	
			RSC	6	17	0	23	121.69	
			SUCK	1	65	0	66	349.21	
			WSU	15	26	0	41	216.93	
		DBS08	LSU	4	0	0	4	21.16	
			MW	6	0	0	6	31.75	
			RSC	1	0	0	1	5.29	
			SUCK	8	0	0	8	42.33	
			TP	6	0	0	6	31.75	
			WSU	5	0	0	5	26.46	
		DBS09	LNC	1	0	0	1	5.29	
			LSU	3	0	0	3	15.87	
			LT	1	0	0	1	5.29	
			MW	1	0	0	1	5.29	
			SUCK	15	42	0	57	301.59	
			TP	2	0	0	2	10.58	
			YP	1	0	0	1	5.29	

Appendix E Table E2. Fish catch data, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	Species	Catch Numbers				Beach Seine (fish/100 m ²)	Catch Rate	
				CATCH No.	OBS. No.	Sub No.	Total No.		Backpack Electrofish (fish/100 m)	Boat Electrofish (fish/1000 m)
		DBS10	LNC	1	0	0	1	5.29		
			LSU	2	0	0	2	10.58		
			RSC	1	0	0	1	5.29		
			SUCK	19	14	0	33	174.60		
		DBS11	LSU	3	0	0	3	15.87		
			MW	2	0	0	2	10.58		
			NP	1	0	0	1	5.29		
			SUCK	19	11	0	30	158.73		
			TP	16	0	0	16	84.66		
		SMALL FISH BOAT ELECTROFISHER								
		DSF01	CSU	1	0	0	1		2.38	
			LKC	1	1	0	2		4.76	
			WSU	2	0	0	2		4.76	
		DSF02	CSU	1	0	0	1		1.54	
			LSU	4	0	0	4		6.15	
			RSC	2	0	0	2		3.08	
			TP	2	0	0	2		3.08	
		DSF03	LKC	2	0	0	2		6.45	
			MW	1	0	0	1		3.23	
		DSF04	CSU	1	0	0	1		1.96	
			LKC	1	0	0	1		1.96	
			LSU	1	0	0	1		1.96	
			NP	0	7	0	7		13.73	
			NSC	3	0	0	3		5.88	
			RSC	18	17	0	35		68.63	
			STC	13	0	0	13		25.49	
			TP	5	0	0	5		9.80	
			WP	2	0	0	2		3.92	
			WSU	3	2	0	5		9.80	
		DSF05	LSU	2	0	0	2		3.39	
			MW	2	0	0	2		3.39	
			RSC	1	0	0	1		1.69	
			TP	1	0	0	1		1.69	
			WP	1	1	0	2		3.39	
			WSU	1	2	0	3		5.08	
			YP	1	0	0	1		1.69	
		32L SIDE CHANNEL								
		BACKPACK ELECTROFISHER								
		AEF05	SUCK	8	0	0	8		8.00	

Appendix E Table E2. Fish catch data, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	Species	Catch Numbers				Catch Rate	
				CATCH No.	OBS. No.	Sub No.	Total No.	Beach Seine (fish/100 m ²)	Backpack Electrofish (fish/100 m)
		AEF09	CAS	4	0	0	4		6.67
			CCG	3	0	0	3		5.00
			LKC	1	0	0	1		1.67
			LNC	6	0	0	6		10.00
			RSC	4	0	0	4		6.67
			SUCK	2	0	0	2		3.33
		AEF10	CAS	1	0	0	1		1.25
			CSU	1	0	0	1		1.25
			LKC	11	2	0	13		16.25
			LNC	15	16	0	31		38.75
			LSU	1	0	0	1		1.25
			MW	1	0	0	1		1.25
			RSC	14	11	0	25		31.25
			SUCK	7	11	0	18		22.50
	BEACH SEINE								
		ABS01	MW	1	0	0	1	5.29	
		ABS03	CAS	2	0	0	2	10.58	
			MW	14	0	0	14	74.07	
			RSC	12	0	0	12	63.49	
			SUCK	24	4	0	28	148.15	
		ABS05	CSU	14	0	0	14	111.11	
			LKC	18	3	331	352	2,791.67	
			LNC	1	0	0	1	7.94	
			LSU	5	0	14	19	146.83	
			MW	2	0	7	9	69.44	
			NSC	3	0	54	57	452.38	
			RSC	14	1	581	596	4,726.19	
			SUCK	0	0	338	338	2,678.57	
		ABS08	CAS	1	0	0	1	5.29	
			CCG	1	0	0	1	5.29	
			MW	11	0	0	11	58.20	
			RSC	7	0	0	7	37.04	
			SUCK	1	0	0	1	5.29	
		ABS09	CAS	1	0	0	1	5.29	
			MW	4	0	0	4	21.16	
			RSC	7	0	0	7	37.04	
			SUCK	2	0	0	2	10.58	

Appendix E Table E2. Fish catch data, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	Species	Catch Numbers				Beach Seine (fish/100 m ²)	Catch Rate	
				CATCH No.	OBS. No.	Sub No.	Total No.		Backpack Electrofish (fish/100 m)	Boat Electrofish (fish/1000 m)
		ABS10	CAS	1	0	0	1	5.29		
			CCG	2	0	0	2	10.58		
			LKC	0	0	3	3	15.87		
			LSU	3	0	0	3	15.87		
			MW	14	0	24	38	201.06		
			NSC	1	0	6	7	37.04		
			RSC	12	0	504	516	2,730.16		
			SUCK	3	0	396	399	2,111.11		
			WSU	1	0	0	1	5.29		
		ABS11	LKC	1	0	0	1	5.29		
			LNC	1	0	0	1	5.29		
			LSU	1	0	0	1	5.29		
			MW	8	0	0	8	42.33		
			RSC	24	0	444	468	2,476.19		
			SUCK	20	0	448	468	2,476.19		
		ABS12	RSC	15	2	0	17	89.95		
			SUCK	0	1	0	1	5.29		
		40L SIDE CHANNEL								
		BACKPACK ELECTROFISHER								
		BEF01	CCG	10	0	0	10	8.33		
			RSC	2	0	0	2	1.67		
			SUCK	1	0	0	1	0.83		
		BEF03	SUCK	1	3	0	4	4.71		
		BEACH SEINE								
		BBS01	MW	28	0	0	28	148.15		
		BBS03	SUCK	1	0	0	1	5.29		
		BBS04	MW	2	0	0	2	10.58		
			SUCK	2	0	0	2	10.58		
		BBS05	MW	1	0	0	1	5.29		
			NP	1	0	0	1	5.29		
		BBS06	MW	15	703	0	718	3,798.94		
			RSC	4	0	0	4	21.16		
			SUCK	14	126	0	140	740.74		

Appendix E Table E2. Fish catch data, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	Species	Catch Numbers				Beach Seine (fish/100 m ²)	Catch Rate	
				CATCH No.	OBS. No.	Sub No.	Total No.		Backpack Electrofishing (fish/100 m)	Boat Electrofishing (fish/1000 m)
		BBS07	LKC	1	0	0	1	5.29		
			MW	14	35	0	49	259.26		
			RSC	1	0	0	1	5.29		
			SUCK	1	0	0	1	5.29		
		SMALL FISH BOAT ELECTROFISHER								
		BSF01	MW	2	30	0	32		106.67	
			NP	2	2	0	4		13.33	
			RSC	1	0	0	1		3.33	
		BSF02	MW	27	304	0	331		894.59	
		BSF03	MW	1	1	0	2		5.00	
			RSC	1	0	0	1		2.50	
		BSF04	RSC	4	0	0	4		11.43	
		BSF05	NP	0	1	0	1		4.00	

APPENDIX F
FISH BIOLOGICAL DATA

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
102.5R SIDE CHANNE	BEACH SEINE					
		CBS01				
			1073	SU	25	0
			1074	SU	21	0
			1075	SU	21	0
			1076	SU	19	0
			1077	SU	16	0
			1078	SU	17	0
			1079	SU	16	0
			1080	SU	21	0
			1081	SU	16	0
			1082	SU	16	0
			1083	RSC	18	0
			1084	RSC	17	0
			1085	WSU	18	0
			1086	WSU	16	0
			1087	LNC	14	0
			1088	LNC	19	0
			1089	LSU	18	0
			1090	RSC	18	0
			1091	RSC	12	0
			1092	RSC	19	0
			1093	RSC	19	0
			1094	RSC	18	0
			1095	LSU	16	0
			1096	LSU	11	0
			1097	LSU	49	0
			1098	RSC	18	0
			1099	LSU	19	0
		CBS02				
			990	SU	135	0
			991	SU	159	0
			992	SU	35	0
			993	TP	32	0
			994	LNC	22	0
			995	SU	23	0
			996	SU	22	0
			997	SU	19	0
			998	SU	24	0
			999	SU	23	0
			1000	LNC	22	0
			1001	SU	22	0
			1002	SU	22	0
			1003	LNC	19	0
			1004	SU	19	0
			1005	LNC	24	0
			1006	LNC	18	0
			1007	SU	27	0
			1008	LNC	20	0
			1009	SU	24	0
			1010	SU	23	0
			1011	SU	19	0
			1012	SU	22	0
			1013	SU	23	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			1014	LNC	19	0
			1015	LNC	21	0
			1016	LNC	19	0
			1017	LNC	24	0
			1018	LNC	22	0
			1019	LNC	21	0
			1020	LNC	19	0
			1021	LNC	23	0
			1022	WSU	47	0
			1023	LNC	24	0
		CBS05				
			843	LSU	25	0
			844	SU	21	0
			845	SU	21	0
			846	SU	19	0
			847	SU	15	0
			848	SU	21	0
			849	SU	26	0
			850	SU	23	0
			851	SU	18	0
			852	SU	19	0
			853	SU	18	0
			854	SU	19	0
			855	SU	18	0
			856	SU	21	0
			857	SU	16	0
			858	SU	20	0
			859	SU	19	0
			860	SU	37	0
			861	SU	27	0
			862	SU	38	0
			863	NP	28	0
			864	NP	43	0
			865	SU	38	0
			866	SU	41	0
			867	SU	38	0
			868	SU	43	0
			869	SU	34	0
			870	SU	42	0
			871	SU	37	0
			872	SU	39	0
			873	SU	39	0
			874	SU	32	0
			875	SU	29	0
			876	SU	23	0
			877	SU	43	0
			878	SU	44	0
			879	SU	43	0
			880	LNC	42	0
			881	WSU	38	0
			882	CCG	23	0
			883	LNC	23	0
			884	LNC	24	0
			885	LNC	25	0
			886	STC	26	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			887	LNC	26	0
			888	LNC	25	0
			889	LNC	27	0
			890	WSU	23	0
			891	LNC	24	0
			892	LNC	26	0
			893	RSC	24	0
			894	RSC	19	0
			895	LNC	23	0
			896	SU	43	0
			897	SU	34	0
			898	SU	55	0
			899	SU	45	0
			900	SU	21	0
			901	SU	24	0
			902	STC	63	0
			903	SU	43	0
			904	SU	42	0
			905	SU	42	0
			906	SU	38	0
			907	SU	45	0
			908	SU	51	0
			909	SU	39	0
			910	SU	39	0
			911	LNC	44	0
			912	LNC	52	0
		CBS07				
			913	SU	48	0
			914	SU	20	0
			915	LNC	25	0
			916	LNC	21	0
			917	LNC	21	0
			918	LNC	19	0
			919	LNC	18	0
			920	SU	18	0
			921	SU	23	0
			922	SU	23	0
			923	SU	21	0
			924	STC	21	0
			925	SU	14	0
			926	SU	16	0
			927	SU	22	0
			928	SU	19	0
			929	SU	17	0
			930	SU	21	0
			931	SU	23	0
			932	SU	21	0
		CBS08				
			933	SU	165	0
			934	LNC	167	0
			935	LNC	21	0
			936	CSU	19	0
			937	CSU	22	0
			938	STC	23	0
			939	RSC	21	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			940	NP	23	0
			941	WSU	19	0
			942	CSU	21	0
			943	CSU	22	0
			944	RSC	19	0
			945	RSC	23	0
			946	LNC	21	0
			947	LNC	19	0
			948	LNC	19	0
			949	LSU	21	0
			950	LNC	21	0
			951	RSC	51	0
			952	CSU	23	0
			953	CSU	21	0
			954	CSU	18	0
			955	LNC	21	0
			956	LNC	28	0
			957	LNC	27	0
			958	LNC	15	0
			959	LNC	34	0
			960	LNC	46	0
			961	TP	27	0
			962	TP	21	0
		CBS09				
			963	CSU	47	0
			964	CSU	43	0
			965	CSU	38	0
			966	SU	16	0
			967	SU	21	0
			968	SU	18	0
			969	SU	22	0
			970	SU	17	0
			971	SU	23	0
			972	SU	37	0
			973	SU	22	0
			974	SU	16	0
			975	SU	22	0
			976	SU	17	0
			977	SU	21	0
			978	SU	23	0
			979	SU	14	0
			980	SU	28	0
			981	LNC	21	0
			982	LNC	18	0
			983	LNC	19	0
			984	LNC	18	0
			985	LNC	21	0
			986	LNC	23	0
			987	LNC	22	0
			988	LNC	38	0
			989	LNC	19	0
		CBS10				
			1024	NP	42	0
			1025	NP	39	0
			1026	RSC	45	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			1027	STC	23	0
			1028	SU	21	0
			1029	SU	21	0
			1030	TP	23	0
			1031	LSU	21	0
			1032	SU	23	0
			1033	SU	16	0
			1034	SU	26	0
			1035	SU	24	0
			1036	SU	23	0
			1037	SU	25	0
			1038	SU	25	0
			1039	SU	22	0
			1040	SU	19	0
			1041	SU	21	0
			1042	SU	19	0
			1043	SU	21	0
			1044	SU	36	0
			1045	SU	22	0
			1046	SU	41	0
			1047	RSC	55	0
			1048	STC	33	0
			1049	RSC	37	0
			1050	STC	158	0
			1051	RSC	55	0
			1052	RSC	45	0
			1053	RSC	44	0
			1054	RSC	34	0
			1055	MW	39	0
			1056	STC	35	0
			1057	RSC	21	0
			1058	STC	31	0
			1059	RSC	82	0
			1060	LNC	54	0
			1061	RSC	45	0
			1062	LNC	51	0
			1063	LSU	48	0
			1064	RSC	52	0
			1065	RSC	35	0
			1066	RSC	33	0
			1067	RSC	38	0
			1068	LNC	16	0
			1069	SU	18	0
			1070	SU	18	0
			1071	SU	45	0
			1072	SU	22	0
	SMALL FISH BOAT ELECTROFISHER					
		CSF05				
			1100	LSU	360	0
		CSF06				
			1101	LSU	450	0
			1102	NP	268	0
		CSF07				
			1103	WSU	257	0
			1104	LSU	379	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
		CSF08	1105	NP	181	0
			1106	LSU	167	0
			1107	CCG	55	0
		CSF09	1108	TP	48	0
			1109	SU	17	0
			1110	LNC	37	0
			1111	WSU	429	0
			1112	NP	269	0
			1113	TP	55	0
		CSF10	1114	WSU		0
			1115	WSU	379	0
			1116	LSU	440	0
			1117	LSU	394	0
			1118	WSU	44	0
			1119	TP	56	0
			1120	TP	65	0
			1121	TP	54	0
112L SIDECHANNEL	BACKPACK ELECTROFISHER	DEF01	211	RSC	35	0
			212	RSC	18	0
			213	RSC	40	0
	BEACH SEINE	DBS01	87	RSC	21	0
			88	RSC	17	0
			89	RSC	18	0
			90	LNC	17	0
			91	WSU	18	0
			92	SU	17	0
			93	WSU	21	0
			94	WSU	17	0
			95	WSU	20	0
			96	NSC	26	0
			97	WSU	21	0
			98	WSU	18	0
			99	WSU	22	0
			100	WSU	18	0
			101	WSU	18	0
			102	WSU	16	0
			103	WSU	52	0
			104	WSU	32	0
			105	WSU	30	0
			106	WSU	28	0
		DBS02	107	WSU	558	0
			108	LSU	542	0
			109	CSU	450	0
			110	LSU	56	0
			111	LNC	47	0
			112	RSC	42	0
			113	RSC	43	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			114	RSC	47	0
			115	LSU	54	0
			116	WSU	41	0
			117	TP	43	0
			118	TP	55	0
			119	LSU	36	0
			120	MW	38	0
			121	WSU	64	0
			122	LSU	47	0
			123	TP	47	0
			124	WSU	39	0
			125	MW	54	0
			126	SU	73	0
			127	LSU	64	0
			128	WSU	56	0
			129	SU	79	0
			130	RSC	68	0
			131	LSU	58	0
			132	TP	52	0
			133	MW	71	0
			134	SU	77	0
			135	WSU	68	0
			136	TP	70	0
			137	SU	71	0
			138	MW	67	0
			139	TP	50	0
			140	MW	67	0
			141	MW	58	0
			142	SU	68	0
			143	SU	65	0
			144	SU	62	0
			145	SU	55	0
			146	SU	65	0
			147	SU	50	0
			148	SU	53	0
			149	SU	108	0
			150	SU	45	0
			151	SU	61	0
			152	SU	50	0
			153	SU	43	0
			154	SU	42	0
			155	SU	38	0
			156	SU	41	0
			157	SU	40	0
			158	SU	39	0
			159	SU	42	0
			160	SU	41	0
			161	SU	38	0
			162	WSU	43	0
			163	LSU	41	0
			164	LSU	48	0
			165	SU	35	0
			166	LKC	52	0
			167	CSU	45	0
			168	CSU	19	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			169	NSC	43	0
			170	YP	40	0
			171	LKC	65	0
			172	WSU	40	0
			173	CSU	38	0
			174	RSC	35	0
			175	RSC	45	0
			176	RSC	35	0
			177	RSC	49	0
			178	RSC	49	0
			179	RSC	59	0
			180	RSC	59	0
			181	RSC	19	0
		DBS05				
			673	TP	249	0
			674	NP	58	0
			675	MW	73	0
			676	TP	57	0
			677	SU	62	0
			678	SU	58	0
			679	SU	43	0
			680	SU	19	0
			681	SU	20	0
			682	SU	22	0
			683	TP	19	0
			684	TP	19	0
			685	TP	22	0
			686	TP	21	0
			687	TP	19	0
			688	SU	21	0
			689	SU	21	0
			690	SU	89	0
			691	TP	46	0
			692	TP	46	0
			693	TP	21	0
			694	LSU	21	0
			695	LSU	64	0
			696	SU	69	0
			697	SU	69	0
			698	SU	55	0
			699	SU	23	0
			700	SU	51	0
			701	TP	51	0
			702	TP	67	0
			703	LSU	21	0
			704	SU	46	0
			705	SU	39	0
			706	SU	22	0
			707	SU	22	0
			708	SU	19	0
			709	TP	66	0
			710	MW	57	0
			711	TP	63	0
			712	TP	23	0
			713	TP	22	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			714	SU	19	0
			715	SU	74	0
			716	SU	43	0
			717	SU	57	0
			718	SU	48	0
			719	SU	54	0
			720	SU	23	0
			721	SU	19	0
			722	LSU	21	0
			723	TP	58	0
			724	LNC	69	0
			725	SU	63	0
			726	SU	51	0
			727	TP	52	0
			728	LSU	62	0
			729	TP	59	0
		DBS07				
			182	RSC	42	0
			183	RSC	44	0
			184	RSC	48	0
			185	RSC	43	0
			186	STC	57	0
			187	RSC	31	0
			188	SU	56	0
			189	STC	53	0
			190	RSC	56	0
			191	CSU	79	0
			192	TP	56	0
			193	RSC	58	0
			194	YP	79	0
			195	CSU	60	0
			196	YP	62	0
			197	STC	58	0
			198	CSU	65	0
			199	LSU	59	0
			200	LSU	60	0
			201	SU	65	0
			202	NP	69	0
			203	NP	65	0
			204	NP	66	0
			205	RSC	57	0
			206	RSC	49	0
			207	RSC	49	0
			208	RSC	52	0
			209	RSC	42	0
			210	RSC	57	0
		DBS08				
			214	RSC		0
			215	RSC	28	0
			216	RSC	71	0
			217	RSC		0
			218	RSC	51	0
			219	RSC	74	0
			220	STC	76	0
			221	STC	67	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			222	STC	64	0
			223	STC	46	0
			224	STC	17	0
			225	STC	68	0
			226	STC	58	0
			227	STC	46	0
			228	STC	46	0
			229	STC	51	0
			230	STC		0
			231	STC	50	0
			232	STC	23	0
			233	STC	54	0
			234	STC	48	0
			235	STC	32	0
			236	WSU	42	0
			237	LKC	47	0
			238	LKC	49	0
			239	LKC	53	0
			240	LKC	18	0
			241	CSU	20	0
			242	SU	17	0
			243	LNC	17	0
		DBS09				
			626	SU	17	0
			627	SU	21	0
			628	SU	13	0
			629	SU	17	0
			630	SU	17	0
			631	SU	22	0
			632	SU	20	0
			633	SU	19	0
			634	SU	18	0
			635	SU	22	0
			636	SU	25	0
			637	SU	18	0
			638	SU	19	0
			639	SU	18	0
			640	SU	18	0
			641	LT	49	0
			642	LNC	37	0
			643	TP	66	0
			644	TP	69	0
			645	MW	57	0
			646	LSU	70	0
			647	YP	34	0
			648	LSU	61	0
			649	LSU	62	0
		DBS10				
			650	RSC	39	0
			651	LSU	42	0
			652	SU	21	0
			653	SU	20	0
			654	SU	20	0
			655	SU	17	0
			656	SU	18	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			657	SU	17	0
			658	SU	21	0
			659	SU	20	0
			660	SU	19	0
			661	SU	18	0
			662	SU	28	0
			663	SU	24	0
			664	SU	18	0
			665	LSU	55	0
			666	LNC	40	0
			667	SU	20	0
			668	SU	27	0
			669	SU	17	0
			670	SU	16	0
			671	SU	18	0
			672	SU	16	0
		DBS11				
			730	TP	123	0
			731	SU	63	0
			732	TP	26	0
			733	LSU	18	0
			734	TP	18	0
			735	SU	19	0
			736	TP	21	0
			737	LNC	19	0
			738	LNC	18	0
			739	SU	16	0
			740	SU	56	0
			741	TP	51	0
			742	TP	50	0
			743	LSU	21	0
			744	SU	21	0
			745	SU	19	0
			746	SU	29	0
			747	LSU	57	0
			748	TP	48	0
			749	LSU	62	0
			750	TP	52	0
			751	TP	62	0
			752	SU	21	0
			753	SU	20	0
			754	SU	12	0
			755	LNC	21	0
			756	LNC	19	0
			757	TP	51	0
			758	TP	46	0
			759	TP	68	0
			760	TP	26	0
			761	NP	19	0
			762	LSU	20	0
			763	STC	19	0
			764	TP	18	0
			765	LSU	19	0
			766	TP	41	0
			767	MW	21	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			768	SU	21	0
			769	SU	42	0
			770	LSU	46	0
	SMALL FISH BOAT ELECTROFISHER					
		DSF01				
			771	CSU	54	0
			772	LKC	47	0
			773	WSU	448	0
			774	WSU	379	0
		DSF02				
			775	LSU	471	0
			776	LSU	96	0
			777	TP	49	0
			778	RSC	46	0
			779	LSU	56	0
			780	TP	71	0
			781	RSC	46	0
			782	LSU	59	0
			783	CSU	46	0
		DSF03				
			784	LKC	59	0
			785	LKC	67	0
			786	MW	55	0
		DSF04				
			787	WSU	366	0
			788	WSU	386	0
			789	WP	327	0
			790	WP	423	0
			791	STC	79	0
			792	RSC	44	0
			793	STC	57	0
			794	STC	51	0
			795	RSC	72	0
			796	RSC	56	0
			797	TP	62	0
			798	NSC	127	0
			799	RSC	42	0
			800	RSC	36	0
			801	RSC	45	0
			802	RSC	44	0
			803	RSC	42	0
			804	RSC	47	0
			805	STC	62	0
			806	RSC	51	0
			807	RSC	39	0
			808	RSC	43	0
			809	RSC	41	0
			810	RSC	40	0
			811	RSC	74	0
			812	RSC	41	0
			813	RSC	42	0
			814	RSC	53	0
			815	TP	50	0
			816	STC	55	0
			817	LSU	53	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			818	LKC	62	0
			819	CSU	68	0
			820	NSC	94	0
			821	STC	68	0
			822	WSU	64	0
			823	STC	68	0
			824	NSC	57	0
			825	TP	62	0
			826	STC	51	0
			827	STC	54	0
			828	STC	74	0
			829	TP	57	0
			830	TP	49	0
			831	STC	70	0
			832	STC	58	0
			833	STC	71	0
		DSF05				
			834	WP	397	2
			835	WSU	388	0
			836	LSU	59	0
			837	LSU	63	0
			838	TP	53	0
			839	RSC	43	0
			840	MW	67	0
			841	MW	68	0
			842	YP	40	0
32L SIDE CHANNEL						
	BACKPACK ELECTROFISHER					
		AEF05				
			618	SU	15	0
			619	SU	24	0
			620	SU	17	0
			621	SU	18	0
			622	SU	21	0
			623	SU	24	0
			624	SU	20	0
			625	SU	19	0
		AEF09				
			382	LSU	56	0
			383	WSU	46	0
			384	MW	46	0
			385	MW	47	0
			386	MW	42	0
			387	MW	46	0
			388	MW	39	0
			389	MW	76	0
			390	MW	43	0
			391	MW	21	0
			392	MW	51	0
			393	MW	46	0
			394	MW	56	0
			395	MW	59	0
			396	MW	42	0
			397	MW	33	0
			398	CCG	67	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			399	CCG	56	0
			400	LSU	64	0
			401	NSC	52	0
		AEF10	402	RSC	44	0
			495	LKC	57	0
			496	CCG	39	0
			497	CCG	32	0
			498	SU	35	0
			499	CAS	39	0
			500	LNC	34	0
			501	LNC	39	0
			502	LNC	39	0
			503	LNC	49	0
			504	SU	49	0
			505	CAS	47	0
			506	CAS	45	0
			507	CAS	40	0
			508	LNC	35	0
			509	LKC	40	0
			510	RSC	46	0
			511	RSC	42	0
			512	RSC	39	0
			513	RSC	37	0
			514	RSC	38	0
			515	LKC	41	0
			516	LKC	35	0
			517	LKC	35	0
			518	LNC	36	0
			519	LNC	42	0
			520	LNC	46	0
			521	RSC	45	0
			522	RSC	34	0
			523	LKC	39	0
			524	CAS	41	0
			525	LKC	43	0
			526	RSC	46	0
			527	RSC	39	0
			528	RSC	45	0
			529	RSC	35	0
			530	RSC	40	0
			531	RSC	37	0
			532	RSC	46	0
			533	LKC	43	0
			534	LNC	39	0
			535	LNC	35	0
			536	LNC	32	0
			537	LNC	75	0
			538	LNC	48	0
			539	LNC	21	0
			540	LNC	28	0
			541	LNC	19	0
			542	LKC	26	0
			543	CSU	18	0
			544	SU	48	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
	BEACH SEINE					
		ABS01	560	MW	39	0
		ABS03	330	MW	47	0
			331	RSC	27	0
			332	SU	28	0
			333	SU	22	0
			334	SU	23	0
			335	SU	24	0
			336	SU	24	0
			337	SU	21	0
			338	SU	20	0
			339	SU	19	0
			340	MW	42	0
			341	MW	51	0
			342	RSC	31	0
			343	RSC	29	0
			344	SU	22	0
			345	SU	27	0
			346	SU	24	0
			347	MW	27	0
			348	MW	23	0
			349	MW	24	0
			350	MW	24	0
			351	RSC	24	0
			352	RSC	22	0
			353	RSC	25	0
			354	RSC	48	0
			355	RSC	39	0
			356	RSC	31	0
			357	MW	48	0
			358	CCG	42	0
			359	MW	22	0
			360	RSC	24	0
			361	MW	21	0
			362	MW	23	0
			363	MW	22	0
			364	MW	24	0
			365	SU	48	0
			366	MW	44	0
			367	CAS	45	0
			368	MW	47	0
			369	RSC	54	0
			370	RSC	44	0
			371	RSC	43	0
			372	SU	40	0
			373	RSC	34	0
			374	RSC	28	0
			375	MW	32	0
			376	MW	44	0
			377	CAS	47	0
			378	RSC	30	0
			379	MW	42	0
			380	RSC	57	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
		ABS05	381	SU	60	0
			561	LKC	33	0
			562	LKC	49	0
			563	RSC	34	0
			564	RSC	29	0
			565	RSC	38	0
			566	LKC	45	0
			567	LKC	46	0
			568	LKC	50	0
			569	LKC	52	0
			570	LKC	48	0
			571	LKC	49	0
			572	LKC	45	0
			573	LKC	50	0
			574	LKC	40	0
			575	CSU	70	0
			576	CSU	56	0
			577	MW	61	0
			578	RSC	33	0
			579	RSC	30	0
			580	CSU	51	0
			581	CSU	47	0
			582	CSU	70	0
			583	LKC	43	0
			584	LKC	43	0
			585	LKC	55	0
			586	RSC	37	0
			587	RSC	33	0
			588	RSC	30	0
			589	LSU	70	0
			590	LKC	45	0
			591	NSC	55	0
			592	RSC	35	0
			593	RSC	38	0
			594	RSC	45	0
			595	RSC	36	0
			596	RSC	43	0
			597	RSC	32	0
			598	LSU	72	0
			599	MW	51	0
			600	LNC	43	0
			601	LKC	40	0
			602	LSU	62	0
			603	LSU	67	0
			604	LSU	62	0
			605	CSU	55	0
			606	CSU	47	0
			607	CSU	53	0
			608	CSU	59	0
			609	CSU	69	0
			610	CSU	69	0
			611	LKC	53	0
			612	LKC	49	0
			613	NSC	62	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			614	CSU	68	0
			615	CSU	60	0
			616	CSU	60	0
			617	NSC	58	0
		ABS08				
			295	SU	45	0
			296	SU	50	0
			297	SU	51	0
			298	SU	49	0
			299	SU	31	0
			300	SU	37	0
			301	SU	49	0
			302	MW	38	0
			303	MW	38	0
			304	RSC	39	0
			305	RSC	57	0
			306	CAS	58	0
			307	SU	47	0
			308	SU	38	0
			309	SU	57	0
			310	SU	46	0
			311	SU	58	0
			312	SU	46	0
			313	MW	19	0
			314	MW	53	0
			315	MW	85	0
		ABS09				
			316	MW	46	0
			317	MW	44	0
			318	MW	39	0
			319	RSC	36	0
			320	RSC	22	0
			321	RSC	44	0
			322	RSC	56	0
			323	RSC	42	0
			324	MW	47	0
			325	MW	52	0
			326	RSC	37	0
			327	RSC	39	0
			328	CAS	35	0
			329	MW	23	0
		ABS10				
			403	RSC	70	0
			404	RSC	62	0
			405	RSC	55	0
			406	RSC	46	0
			407	RSC	53	0
			408	RSC	56	0
			409	RSC	49	0
			410	RSC	49	0
			411	RSC	46	0
			412	RSC	53	0
			413	RSC	49	0
			414	SU	49	0
			415	SU	51	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			416	SU	48	0
			417	CAS	46	0
			418	LSU	38	0
			419	SU	55	0
			420	SU	43	0
			421	MW	72	0
			422	MW	55	0
			423	MW	42	0
			424	MW	34	0
			425	MW	39	0
			426	MW	40	0
			427	RSC	32	0
			428	RSC	36	0
			429	RSC	38	0
			430	RSC	39	0
			431	RSC	30	0
			432	RSC	34	0
			433	RSC	34	0
			434	RSC	32	0
			435	RSC	25	0
			436	LNC	21	0
			437	RSC	23	0
			438	SU	53	0
			439	SU	73	0
		ABS11				
			440	SU	57	0
			441	SU	43	0
			442	SU	42	0
			443	SU	32	0
			444	SU	29	0
			445	SU	41	0
			446	SU	32	0
			447	SU	29	0
			448	SU	39	0
			449	SU	37	0
			450	SU	31	0
			451	SU	33	0
			452	MW	31	0
			453	LSU	30	0
			454	RSC	31	0
			455	RSC	24	0
			456	RSC	22	0
			457	RSC	26	0
			458	RSC	23	0
			459	RSC	30	0
			460	RSC	24	0
			461	RSC	22	0
			462	RSC	27	0
			463	MW	31	0
			464	RSC	26	0
			465	RSC	29	0
			466	RSC	27	0
			467	RSC	59	0
			468	RSC	82	0
			469	LKC	41	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			470	SU	42	0
			471	SU	31	0
			472	SU	42	0
			473	SU	32	0
			474	RSC	34	0
			475	RSC	34	0
			476	RSC	34	0
			477	RSC	41	0
			478	RSC	42	0
			479	RSC	36	0
			480	RSC	29	0
			481	RSC	29	0
			482	RSC	29	0
			483	RSC	28	0
			484	RSC	32	0
			485	RSC	27	0
			486	RSC	23	0
			487	RSC	24	0
			488	RSC	23	0
			489	CCG	27	0
			490	RSC	35	0
			491	RSC	32	0
			492	RSC	47	0
			493	RSC	48	0
			494	LNC	61	0
		ABS12				
			545	LKC	28	0
			546	LNC	38	0
			547	LNC	37	0
			548	LNC	34	0
			549	LNC	33	0
			550	LKC	36	0
			551	SU	36	0
			552	LSU	35	0
			553	MW	34	0
			554	SU	37	0
			555	SU	37	0
			556	SU	37	0
			557	SU	38	0
			558	SU	38	0
			559	LKC	27	0
40L SIDE CHANNEL						
	BACKPACK ELECTROFISHER					
		BEF01				
			33	MW	53	0
			34	MW	63	0
			35	MW	59	0
			36	MW	48	0
			37	MW	47	0
			38	MW	49	0
			39	MW	59	0
			40	MW	24	0
			41	MW	43	0
			42	MW	41	0
			43	MW	48	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			44	MW	47	0
			45	MW	43	0
		BEF03				
	BEACH SEINE		244	MW	15	0
		BBS01				
			47	MW	42	0
			48	MW	57	0
			49	MW	53	0
			50	MW	49	0
			51	MW	68	0
			52	MW	50	0
			53	MW	53	0
			54	MW	57	0
			55	MW	65	0
			56	MW	53	0
			57	MW	72	0
			58	MW	61	0
			59	MW	45	0
			60	MW	63	0
			61	CCG	57	0
			62	CCG	60	0
			63	CCG	68	0
			64	CCG	47	0
			65	RSC	62	0
			66	CCG	53	0
			67	CCG	62	0
			68	SU	68	0
			69	RSC	62	0
			70	CCG	53	0
			71	CCG	63	0
			72	CCG	48	0
			73	CCG	62	0
			74	SU	62	0
		BBS03				
			46	MW	23	0
		BBS04				
			81	MW	28	0
			82	RSC	27	0
			83	RSC	46	0
			84	RSC	63	0
		BBS05				
			85	RSC	231	0
			86	RSC	42	0
		BBS06				
			245	MW	68	0
			246	MW	48	0
			247	MW	59	0
			248	MW	74	0
			249	MW	48	0
			250	MW	62	0
			251	MW	58	0
			252	MW	63	0
			253	MW	48	0
			254	MW	53	0
			255	MW	59	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			256	MW	60	0
			257	MW	61	0
			258	MW	59	0
			259	SU	54	0
			260	SU	29	0
			261	SU	27	0
			262	SU	19	0
			263	SU	26	0
			264	SU	26	0
			265	SU	29	0
			266	SU	27	0
			267	SU	26	0
			268	SU	22	0
			269	SU	25	0
			270	SU	27	0
			271	SU	33	0
			272	SU	23	0
			273	RSC	22	0
			274	RSC	46	0
			275	RSC	47	0
			276	RSC	37	0
			277	SU	43	0
		BBS07				
			278	MW	53	0
			279	MW	51	0
			280	MW	62	0
			281	MW	53	0
			282	MW	57	0
			283	MW	51	0
			284	MW	48	0
			285	MW	58	0
			286	MW	56	0
			287	MW	67	0
			288	MW	53	0
			289	MW	49	0
			290	MW	43	0
			291	MW	48	0
			292	LKC	47	0
			293	RSC	50	0
			294	SU	21	0
	SMALL FISH BOAT ELECTROFISHER					
		BSF01				
			1	NP	687	0
			2	NP	261	0
			3	MW	57	0
			4	RSC	77	0
			5	MW	57	0
		BSF02				
			6	MW	255	0
			7	MW	308	0
			8	MW	313	0
			9	MW	277	0
			10	MW	293	0
			11	MW	272	0
			12	MW	54	0

Appendix F Table F1. Biological characteristics data for sampled fish, 2013 Peace River Side Channel Fisheries Program.

Side Channel	Type	Site	FishID	Species	Length (mm)	Capt. Code
			13	MW	66	0
			14	MW	63	0
			15	MW	63	0
			16	MW	55	0
			17	MW	62	0
			18	MW	66	0
			19	MW	53	0
			20	MW	63	0
			21	MW	54	0
			22	MW	63	0
			23	MW	57	0
			24	MW	50	0
			25	MW	68	0
			26	MW	62	0
			27	MW	63	0
			28	MW	53	0
			29	MW	52	0
			30	MW	59	0
			31	MW	61	0
			32	MW	51	0
		BSF03				
			75	SU	305	0
			76	SU	43	0
		BSF04				
			77	MW	51	0
			78	MW	44	0
			79	NP	52	0
			80	MW	43	0

APPENDIX G TEMPERATURE DATA

Appendix G, Table G1. Daily summary of water temperatures measured at periphyton samplers deployed by GSMON-5 (data collected by Schleppe *et al.* 2013)

Channel	Date	Temperature (°C)			Range
		Mean	Minimum	Maximum	
102.5R	5-Jul-13	9.5	6.3	13.5	7.2
102.5R	6-Jul-13	10.1	6.4	15.6	9.2
102.5R	7-Jul-13	14.5	6.8	16.7	9.9
102.5R	8-Jul-13	14.9	6.6	17.8	11.2
102.5R	9-Jul-13	15.8	6.8	17.6	10.8
102.5R	10-Jul-13	15.2	6.9	17.0	10.1
102.5R	11-Jul-13	14.9	6.7	16.9	10.2
102.5R	12-Jul-13	13.7	6.5	15.9	9.4
102.5R	13-Jul-13	13.7	7.3	14.6	7.3
102.5R	14-Jul-13	12.4	6.5	14.3	7.8
102.5R	15-Jul-13	13.3	6.6	16.1	9.5
102.5R	16-Jul-13	15.1	7.4	17.2	9.8
102.5R	17-Jul-13	16.1	7.1	18.4	11.3
102.5R	18-Jul-13	17.1	7.3	19.0	11.7
102.5R	19-Jul-13	17.5	7.1	19.3	12.2
102.5R	20-Jul-13	16.5	6.9	18.8	11.9
102.5R	21-Jul-13	15.7	6.8	18.7	11.9
102.5R	22-Jul-13	14.3	6.5	18.6	12.1
102.5R	23-Jul-13	17.1	9.9	18.1	8.2
102.5R	24-Jul-13	16.1	7.8	18.3	10.5
102.5R	25-Jul-13	16.0	7.7	18.9	11.2
102.5R	26-Jul-13	15.4	6.9	17.6	10.7
102.5R	27-Jul-13	15.3	7.1	17.5	10.4
102.5R	28-Jul-13	12.6	6.7	16.0	9.3
102.5R	29-Jul-13	12.3	6.7	16.0	9.3
102.5R	30-Jul-13	14.7	8.0	16.1	8.1
102.5R	31-Jul-13	15.8	8.1	17.6	9.5
102.5R	1-Aug-13	16.9	7.5	18.9	11.4
102.5R	2-Aug-13	16.9	7.3	19.1	11.8
102.5R	3-Aug-13	17.3	7.3	19.9	12.6
102.5R	4-Aug-13	16.8	7.3	19.0	11.7
102.5R	5-Aug-13	17.5	7.4	19.6	12.2
102.5R	6-Aug-13	17.0	8.0	18.6	10.6
102.5R	7-Aug-13	16.5	7.4	18.9	11.5
102.5R	8-Aug-13	17.6	8.6	19.0	10.4
102.5R	9-Aug-13	16.8	8.5	18.6	10.1
102.5R	10-Aug-13	16.6	8.2	18.2	10.0
102.5R	11-Aug-13	15.3	7.5	17.7	10.2
102.5R	12-Aug-13	14.4	7.1	18.5	11.4
102.5R	13-Aug-13	17.0	8.3	19.1	10.8
102.5R	14-Aug-13	17.1	8.6	19.5	10.9
102.5R	15-Aug-13	16.8	8.5	18.4	9.9
102.5R	16-Aug-13	16.4	8.2	18.0	9.8
102.5R	17-Aug-13	16.2	8.1	19.8	11.7
102.5R	18-Aug-13	15.5	7.9	17.8	9.9
102.5R	19-Aug-13	14.7	7.7	17.2	9.5

Appendix G, Table G1. Daily summary of water temperatures measured at periphyton samplers deployed by GSMON-5 (data collected by Schleppe *et al.* 2013)

Channel	Date	Temperature (°C)			Range
		Mean	Minimum	Maximum	
112L	5-Jul-13	13.7	10.7	16.5	5.8
112L	6-Jul-13	13.3	10.9	16.0	5.1
112L	7-Jul-13	12.9	11.0	13.8	2.8
112L	8-Jul-13	12.5	10.9	13.7	2.8
112L	9-Jul-13	13.5	11.2	16.7	5.5
112L	10-Jul-13	13.8	12.9	15.3	2.4
112L	11-Jul-13	14.1	13.0	16.0	3.0
112L	12-Jul-13	13.8	12.7	14.6	1.9
112L	13-Jul-13	12.3	11.8	13.8	2.0
112L	14-Jul-13	12.0	10.9	13.0	2.1
112L	15-Jul-13	12.1	10.9	14.6	3.7
112L	16-Jul-13	13.5	11.9	16.9	5.0
112L	17-Jul-13	13.4	12.3	14.6	2.3
112L	18-Jul-13	13.3	12.3	14.6	2.3
112L	19-Jul-13	13.4	12.3	16.4	4.1
112L	20-Jul-13	13.7	12.8	15.5	2.7
112L	21-Jul-13	13.4	11.9	17.3	5.4
112L	22-Jul-13	13.0	11.4	14.9	3.5
112L	23-Jul-13	12.0	11.1	15.3	4.2
112L	24-Jul-13	11.0	10.1	15.0	4.9
112L	25-Jul-13	12.5	10.9	16.6	5.7
112L	26-Jul-13	12.3	11.2	13.8	2.6
112L	27-Jul-13	12.7	11.4	14.3	2.9
112L	28-Jul-13	13.1	12.1	14.7	2.6
112L	29-Jul-13	13.2	12.0	14.5	2.5
112L	30-Jul-13	12.5	11.8	13.6	1.8
112L	31-Jul-13	12.4	11.9	13.4	1.5
112L	1-Aug-13	13.3	12.0	16.7	4.7
112L	2-Aug-13	13.3	12.6	14.5	1.9
112L	3-Aug-13	13.5	13.0	14.1	1.1
112L	4-Aug-13	13.3	12.9	14.1	1.2
112L	5-Aug-13	13.2	12.5	14.4	1.9
112L	6-Aug-13	11.4	10.7	14.0	3.3
112L	7-Aug-13	11.6	11.1	12.4	1.3
112L	8-Aug-13	10.9	10.1	12.3	2.2
112L	9-Aug-13	11.1	10.1	13.8	3.7
112L	10-Aug-13	11.3	10.8	13.6	2.8
112L	11-Aug-13	11.3	10.8	16.3	5.5
112L	12-Aug-13	11.7	11.1	13.7	2.6
112L	13-Aug-13	12.2	11.4	13.8	2.4
112L	14-Aug-13	12.0	11.5	13.6	2.1
112L	15-Aug-13	11.7	11.2	13.1	1.9
112L	16-Aug-13	11.7	11.3	12.2	0.9
112L	17-Aug-13	12.2	11.1	14.4	3.3
112L	18-Aug-13	12.9	12.3	14.3	2.0
112L	19-Aug-13	13.0	11.6	14.9	3.3

Appendix G, Table G1. Daily summary of water temperatures measured at periphyton samplers deployed by GMSMON-5 (data collected by Schleppe *et al.* 2013)

Channel	Date	Temperature (°C)			Range
		Mean	Minimum	Maximum	
32L	5-Jul-13	16.3	11.3	20.5	9.2
32L	6-Jul-13	14.5	12.1	20.5	8.4
32L	7-Jul-13	14.7	11.1	23.7	12.6
32L	8-Jul-13	14.5	13.0	19.0	6.0
32L	9-Jul-13	13.9	11.8	19.3	7.5
32L	10-Jul-13	12.7	11.4	15.5	4.1
32L	11-Jul-13	13.4	11.1	17.7	6.6
32L	12-Jul-13	12.0	9.9	14.9	5.0
32L	13-Jul-13	11.5	9.6	14.5	4.9
32L	14-Jul-13	14.0	11.3	19.9	8.6
32L	15-Jul-13	13.8	11.2	18.5	7.3
32L	16-Jul-13	12.4	10.5	18.1	7.6
32L	17-Jul-13	12.6	10.5	18.0	7.5
32L	18-Jul-13	12.7	9.9	14.9	5.0
32L	19-Jul-13	12.6	10.7	16.2	5.5
32L	20-Jul-13	12.4	10.9	16.1	5.2
32L	21-Jul-13	13.8	10.7	19.2	8.5
32L	22-Jul-13	12.8	8.9	18.6	9.7
32L	23-Jul-13	9.6	8.6	12.2	3.6
32L	24-Jul-13	9.9	8.7	12.9	4.2
32L	25-Jul-13	10.8	9.2	14.1	4.9
32L	26-Jul-13	11.5	10.0	16.6	6.6
32L	27-Jul-13	12.1	10.1	14.9	4.8
32L	28-Jul-13	14.9	11.1	19.9	8.8
32L	29-Jul-13	12.7	9.8	16.7	6.9
32L	30-Jul-13	12.3	10.0	19.0	9.0
32L	31-Jul-13	12.3	9.8	19.9	10.1
32L	1-Aug-13	12.6	10.7	17.6	6.9
32L	2-Aug-13	13.2	10.7	18.5	7.8
32L	3-Aug-13	12.4	9.4	18.5	9.1
32L	4-Aug-13	13.0	9.0	22.9	13.9
32L	5-Aug-13	10.0	7.9	16.7	8.8
32L	6-Aug-13	11.1	7.7	16.4	8.7
32L	7-Aug-13	9.8	7.9	13.0	5.1
32L	8-Aug-13	9.4	7.8	12.4	4.6
32L	9-Aug-13	9.9	7.8	14.6	6.8
32L	10-Aug-13	10.6	8.9	13.8	4.9
32L	11-Aug-13	13.9	10.4	22.4	12.0
32L	12-Aug-13	12.3	9.7	17.6	7.9
32L	13-Aug-13	10.9	9.0	14.7	5.7
32L	14-Aug-13	10.8	8.9	15.4	6.5
32L	15-Aug-13	10.4	9.2	13.8	4.6
32L	16-Aug-13	10.5	9.2	13.8	4.6
32L	17-Aug-13	11.4	9.4	16.9	7.5
32L	18-Aug-13	11.9	9.6	17.7	8.1
32L	19-Aug-13	11.5	9.6	14.2	4.6


Appendix G, Table G1. Daily summary of water temperatures measured at periphyton samplers deployed by GSMON-5 (data collected by Schleppe *et al.* 2013)

Channel	Date	Temperature (°C)			Range
		Mean	Minimum	Maximum	
40L	5-Jul-13	13.5	10.1	18.5	8.4
40L	6-Jul-13	12.0	10.3	18.4	8.1
40L	7-Jul-13	11.9	9.8	18.0	8.2
40L	8-Jul-13	12.4	10.7	16.2	5.5
40L	9-Jul-13	12.4	11.1	17.2	6.1
40L	10-Jul-13	11.4	10.7	14.3	3.6
40L	11-Jul-13	11.5	10.3	15.9	5.6
40L	12-Jul-13	10.8	9.7	12.1	2.4
40L	13-Jul-13	10.3	9.6	11.2	1.6
40L	14-Jul-13	12.1	10.1	17.5	7.4
40L	15-Jul-13	12.0	10.7	17.1	6.4
40L	16-Jul-13	11.1	9.5	15.8	6.3
40L	17-Jul-13	10.7	9.1	15.4	6.3
40L	18-Jul-13	10.5	9.2	13.0	3.8
40L	19-Jul-13	10.8	9.6	13.8	4.2
40L	20-Jul-13	10.9	9.6	14.0	4.4
40L	21-Jul-13	11.4	9.4	16.4	7.0
40L	22-Jul-13	11.0	8.9	15.6	6.7
40L	23-Jul-13	8.8	8.4	10.7	2.3
40L	24-Jul-13	9.0	8.3	11.2	2.9
40L	25-Jul-13	9.4	8.1	12.6	4.5
40L	26-Jul-13	10.1	8.6	14.3	5.7
40L	27-Jul-13	9.9	8.5	12.1	3.6
40L	28-Jul-13	11.9	8.9	17.0	8.1
40L	29-Jul-13	10.8	9.0	15.2	6.2
40L	30-Jul-13	10.7	9.1	15.6	6.5
40L	31-Jul-13	10.7	8.8	16.5	7.7
40L	1-Aug-13	10.5	9.0	15.0	6.0
40L	2-Aug-13	10.8	9.2	16.3	7.1
40L	3-Aug-13	10.4	8.8	15.7	6.9
40L	4-Aug-13	10.5	8.4	18.0	9.6
40L	5-Aug-13	8.9	7.8	12.3	4.5
40L	6-Aug-13	9.0	7.3	12.7	5.4
40L	7-Aug-13	8.6	7.7	10.6	2.9
40L	8-Aug-13	8.3	7.6	10.2	2.6
40L	9-Aug-13	8.7	7.4	11.5	4.1
40L	10-Aug-13	9.1	7.7	11.2	3.5
40L	11-Aug-13	11.6	9.3	17.6	8.3
40L	12-Aug-13	10.5	9.2	14.8	5.6
40L	13-Aug-13	10.0	8.8	13.1	4.3
40L	14-Aug-13	9.6	8.5	12.5	4.0
40L	15-Aug-13	9.3	8.2	11.1	2.9
40L	16-Aug-13	9.8	8.8	12.3	3.5
40L	17-Aug-13	10.4	8.9	14.3	5.4
40L	18-Aug-13	10.4	8.9	14.2	5.3
40L	19-Aug-13	10.0	8.7	12.4	3.7

APPENDIX H
HYDROMETRIC MONITORING SITE INSTALLATION
AND DESCRIPTION SHEETS

Peace River Site 32L Upstream (Discontinued Aug 8, 2013)			
River Name	Peace River		
Installation Date	24-Apr-2013		
Installed By	L. Costain and D. Meier		
Sensor/Data Logger	Solinst Levellogger Edge		
Sensor/Data Logger Serial Number	2021083 (level)		
Logger Location	Left bank of Peace River ~ 12m SE from NHC BM 142		
Logger UTM	N - 6223085.545m E - 585903.653m		
Logger Time	PST		
Sampling Frequency	10 minutes (compressed)		
Download Frequency	When required/on site.		
Geodetic Elevation	436.543		
Offset PT bolt to sensor	0		
Geodetic Datum	CGVD28		
Datum	PT bolt		
BM	Elev.	Geodetic	Description
PT bolt: oriented horizontally	0	436.543	Bolt is 9/16"
NHC 142	2.443	438.986	Via 9mm rebar ~ 12m from logger on LB
NHC 140	1.636	438.179	Via 9mm rebar ~ 85m NE from NHC 142
Location Photo:			
Notes			
T-bar and rebar was pounded down farther during June visit, was originally 0.786m above the water and moved to 0.682 m below the water (see photos).			
Last visit		10-Jun-2013	
Comments			
Current geodetic elevations will have to be shifted since the conducted survey had a poor vertical tie of -0.105m.			

Peace River Site 32L Downstream			
River Name	Peace River		
Installation Date	8-Aug-2013		
Installed By	L. Costain and D. Meier		
Sensor/Data Logger	Solinst Levellogger Edge		
Sensor/Data Logger Serial Number	2023902 (level)		
Logger Location	Side channel on Peace River nearly 2km d/s from site 32 pool		
PT Bolt UTM	N - 6225089.402m E - 587609.336m		
Logger Time	PST		
Sampling Frequency	5 minutes (compressed)		
Download Frequency	When required/on site.		
Offset PT bolt to sensor	0		
Geodetic Elevation	434.593		
Geodetic Datum	CGVD28		
Datum	PT bolt		
BM	Elev.	Geodetic	Description
PT bolt: oriented horizontally	0	434.593	Bolt is 9/16"
NHC 124	2.943	437.536	Via 16mm rebar ~69m from logger on LB
NHC 129	2.673	437.266	Via 16mm rebar ~85m from logger on LB
Top of T-bar	0.593	435.186	
Location Photo:			
Notes (see photos)			
Last visit		10-Aug-2013	
Comments This channel is only connected at the downstream end of the Peace River. As the stage rises, the flow runs backwards and backfills the channel.			

Peace River Site 32L Pool			
River Name	Peace River		
Installation Date	24-Apr-2013		
Installed By	L. Costain and D. Meier		
Sensor/Data Logger	Solinst Levellogger Edge and Barologger Edge		
Sensor/Data Logger Serial Number	2020134 (level) 2020320 (baro)		
Logger Location	Stagnant side channel on Peace River (in line with XS 6)		
Logger UTM	LL - N - 6223654.673m E - 586340.126m		
	Baro - N - 6223647.976m E - 586346.259m		
Logger Time	PST		
Sampling Frequency	10 minutes (compressed)		
Download Frequency	When required/on site.		
Geodetic Elevation	436.811		
Offset PT bolt to sensor	0		
Geodetic Datum	CGVD28		
Datum	PT bolt		
BM	Elev.	Geodetic	Description
PT bolt: oriented horizontally	0	436.811	Bolt is 9/16"
NHC 150	0.806	437.617	Via 9mm rebar ~ 31m SE from logger at back corner of clearing
Top of T-bar	0.477	437.288	
Barologger is in spruce tree 9m from LL (see photos)			
Location Photo:			
			
Notes (see photos)			
Last visit 10-Aug-2013			
Comments On the most recent site visit, the tie for BM NHC 150 had an elevation of 437.824 - since that is 20 cm's different than the original elevation - the accuracy of this BM is in question			

Peace River Site 40L Upstream			
River Name	Peace River		
Installation Date	26-Apr-2013		
Installed By	L. Costain and D. Meier		
Sensor/Data Logger	Solinst Levellogger Edge		
Sensor/Data Logger Serial Number	2020078 (level)		
Logger Location	Right bank of side channel in Peace River		
Logger UTM	N - 6228626.463m E - 592839.790m		
Logger Time	PST		
Sampling Frequency	5 minutes (compressed)		
Download Frequency	When required/on site.		
Geodetic Elevation	433.515		
Offset PT bolt to sensor	0		
Geodetic Datum	CGVD28		
Datum	Top T-bar		
BM	Elev.	Geodetic	Description
Top T-bar	0	433.515	Bolt is 9/16"
NHC 147	3.007	436.522	Via 9mm rebar
NHC 268	2.484	435.999	Via 9mm rebar (below white triangle)
NHC 830	1.128	434.643	Via 16mm rebar 33m from logger on RB
Location Photo:			
Notes			
<p>On Aug 10 during extremely low flow the pipe on the T-Bar was moved 0.285m down to ensure the sensor will always be submerged (this shift will need to be applied to the LL data next time it's downloaded.) Note that the sensor can only be retrieved during low flow (300cms - 400cms)</p>			
Last visit		9-Aug-2013	
Comments			

Peace River Site 40L Downstream			
River Name	Peace River		
Installation Date	26-Apr-2013		
Installed By	L. Costain and D. Meier		
Sensor/Data Logger	Solinst Levellogger Edge		
Sensor/Data Logger Serial Number	2024321 (level)		
Logger Location	Right bank of side channel in Peace River		
Top T-Post UTM	N - 6229844.682m E - 594676.13m		
Logger Time	PST		
Sampling Frequency	5 minutes (compressed)		
Download Frequency	When required/on site.		
Geodetic Elevation	431.619		
Offset PT bolt to sensor	0		
Geodetic Datum	CGVD28		
Datum	Top T-bar		
BM	Elev.	Geodetic	Description
Top T-bar	0	431.619	Bolt is 9/16"
NHC 109	0.985	432.604	Via 16mm rebar ~18m from logger on RB
NHC 328	1.008	432.627	Via 16mm rebar ~37m from logger on RB
NHC 837	0.836	432.455	Via 16mm rebar ~175m from logger U/S
Location Photo:			
Notes (see photos)			
Last visit	9-Aug-2013		
Comments Sensor will only be retrieveable during low flows (300cms - 400cms)			

Peace River Site 102.5R			
River Name	Peace River		
Installation Date	9-Aug-2013		
Installed By	L. Costain/ D. Meier		
Sensor/Data Logger	Solinst Levellogger Edge and Barologger Edge		
Sensor/Data Logger Serial Number	2020109 (level) 2020319 (baro)		
Logger Location	Right bank of side channel on Peace River		
PT Bolt UTM	N - 6223578.889m E - 643714.732m		
Logger Time	PST		
Sampling Frequency	5 minutes (compressed)		
Download Frequency	When required/on site.		
Offset PT bolt to sensor	0		
Geodetic Datum	CGVD28		
Geodetic Elevation	402.919		
Local Datum	PT Bolt		
BM	Elev.	Geodetic	Description
PT bolt: oriented horizontally	0	402.919	Bolt is 9/16"
Top T-bar	0.503	403.422	
NHC 392	2.189	405.108	Via 15mm rebar on LB of side channel
NHC 277	4.299	407.218	Via 15mm rebar ~ 15m up from RB
Barologger is on a spruce tree ~ 6m U/S of BM NHC 277 (see photos)			
Location Photo:			
Notes (see photos)			
Last visit	10-Aug-2013		
Comments New LL location will allow the sensor to constantly be submerged in water, particularly during low flows and when the dam is retaining lots of water. Worth noting that this particular side channel is popular among boaters since it's so close to the boat dock.			

Peace River Site 112.5R Pool			
River Name	Peace River		
Installation Date	9-Aug-2013		
Installed By	L. Costain/ D.Meier		
Sensor/Data Logger	Solinst Levellogger Edge		
Sensor/Data Logger Serial Number	2020096 (level)		
Logger Location	Left bank of side channel on Peace River		
Top T-Bar UTM	N - 6222291.305m E - 654478.146m		
Logger Time	PST		
Sampling Frequency	5 minutes (compressed)		
Download Frequency	When required/on site.		
Offset PT bolt to sensor	0		
Geodetic Datum	397.143		
Geodetic Elevation	CGVD28		
Datum	Top T-Bar		
BM	Elev.	Geodetic	Description
Top of T-bar	0	397.143	LB below cobble bed and BM 1126
BM 1125	7.943	405.086	Via T-bar on righthand side near treeline
BM 1126	2.132	399.275	Via 15mm rebar up LB on cobble bed
Location Photo:			
Notes (see photos)			
Last visit 9-Aug-2013			
Comments LL was discovered to be completely buried in mud on Aug 9. Therefore, the location was moved from RB to LB underneath the cobble bed on which BM 1126 is situated.			

Peace River Site 112.5 Upstream			
River Name	Peace River		
Installation Date	11-Jun-2013		
Installed By	L. Costain		
Sensor/Data Logger	Solinst Levellogger Edge		
Sensor/Data Logger Serial Number	2021093 (level)		
Logger Location	Right bank of side channel on Peace River ~ 41m NW from BM 144		
Logger UTM	N - 6222334.148m E - 651980.639m		
Logger Time	PST		
Sampling Frequency	5 minutes (compressed)		
Download Frequency	When required/on site.		
Geodetic Elevation	398.474m		
Offset PT bolt to sensor	0		
Geodetic Datum	CGVD28		
Datum	PT bolt		
BM	Elev.	Geodetic	Description
PT bolt: oriented horizontally	0	398.474	Bolt is 9/16"
Top of T-bar	0.338	398.812	
NHC 144	3.007	401.481	Via 9mm rebar ~ 41m SE from logger on LB
NHC 848	-0.75	397.724	Via 9mm rebar ~ 128m SE from NHC 144
Location Photo:			
Notes			
Last visit	9-Aug-2013		
Comments			

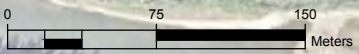
APPENDIX I
SITE LAYOUTS AND SURVEYS



- ⊕ LOGGER LOCATIONS
- SEDIMENT SAMPLING LOCATIONS
- ⊕ BENCHMARK LOCATIONS

Data Sources: Esri World Imagery

Scale
1:7500



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Rev: 1
Drft: JXD
Date: 01Nov13

**PEACE RIVER SIDE CHANNELS
32 LEFT
OVERVIEW - PLAN**



TABLE 1 – SURVEY CONTROL POINTS

POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	DESCRIPTION
7	6 223 153.463	585 962.042	438.179	NHC BENCHMARK No. 140
8	6 223 431.260	586 207.037	438.108	NHC BENCHMARK No. 141
9	6 223 096.691	585 898.097	438.986	NHC BENCHMARK No. 142
10	6 223 455.670	586 181.507	438.207	NHC BENCHMARK No. 146
11	6 223 319.082	586 075.804	439.116	NHC BENCHMARK No. 148
12	6 223 624.634	586 346.938	437.617	NHC BENCHMARK No. 150
T-BAR	6 223 654.745	586 340.193	437.288	NHC T-BAR INSTALLATION
PT BOLT	6 223 654.673	586 340.126	436.811	NHC SURVEY POINT

TABLE 2 – LOGGER LOCATIONS

DESCRIPTION	NORTHING (m)	EASTING (m)	DESCRIPTION
A	6 223 085.545	585 903.653	LEVELLOGGER
B	6 223 647.976	586 346.259	LEVELLOGGER
C	6 223 648	586 346	BARO APPROX. – IN TREE



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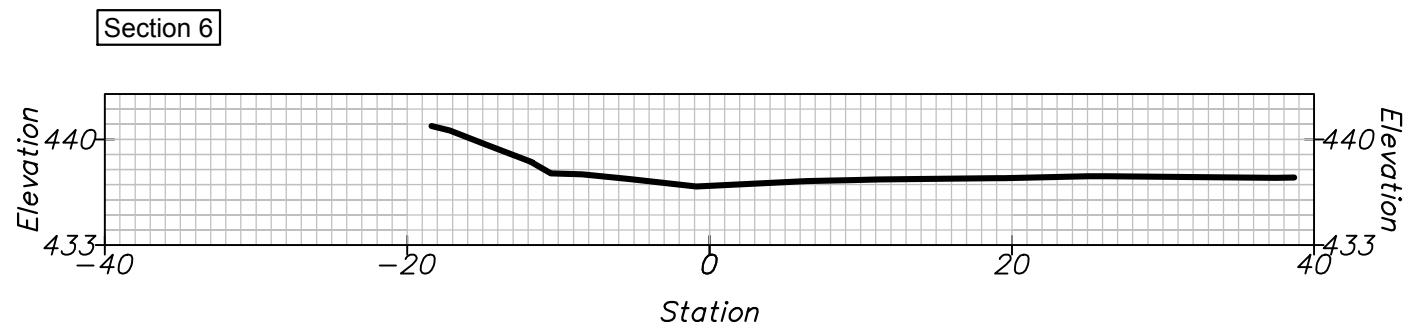
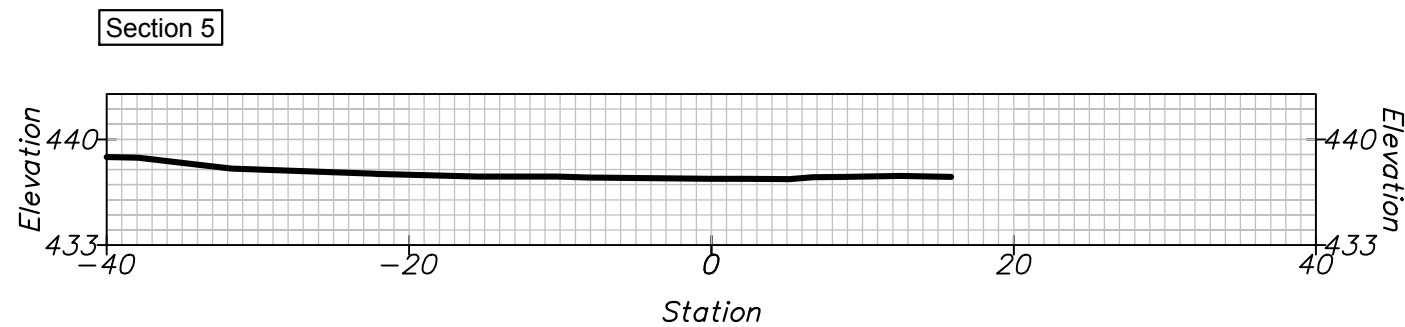
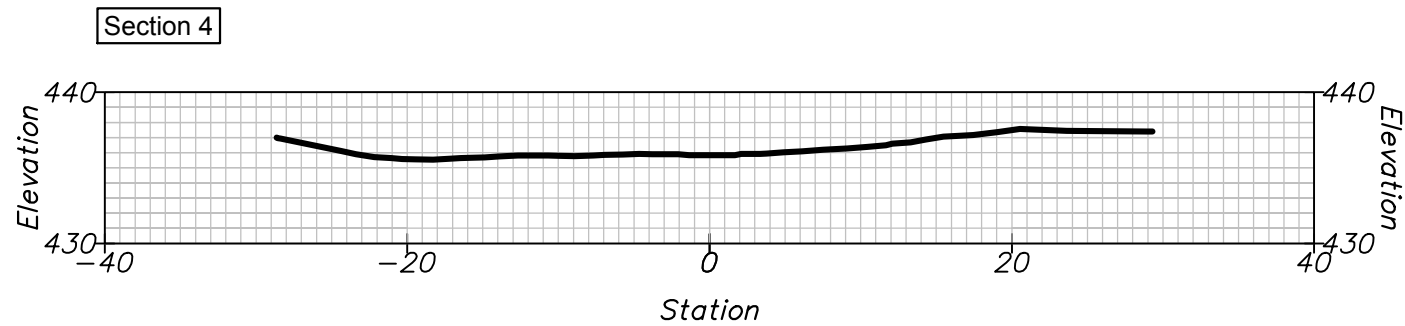
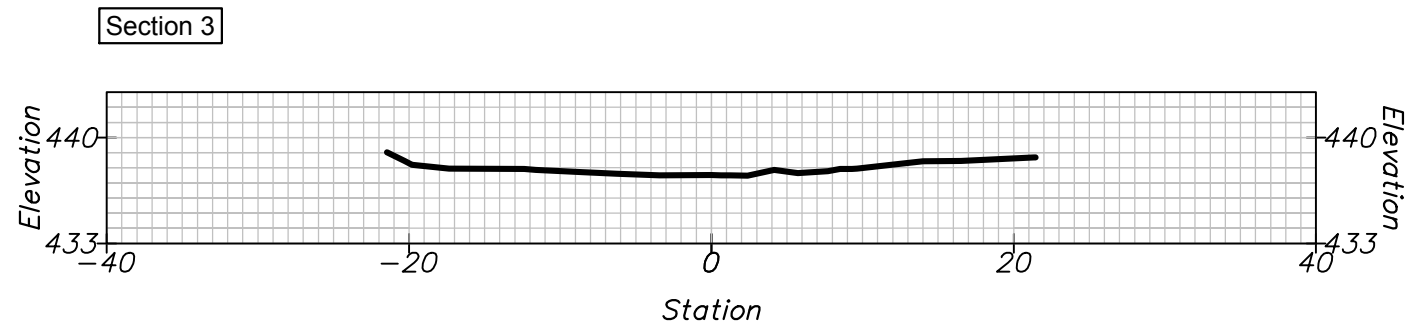
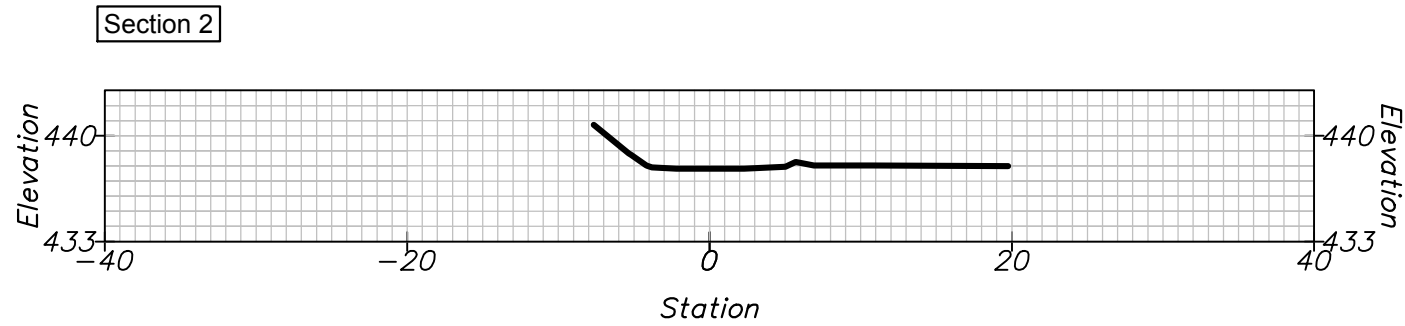
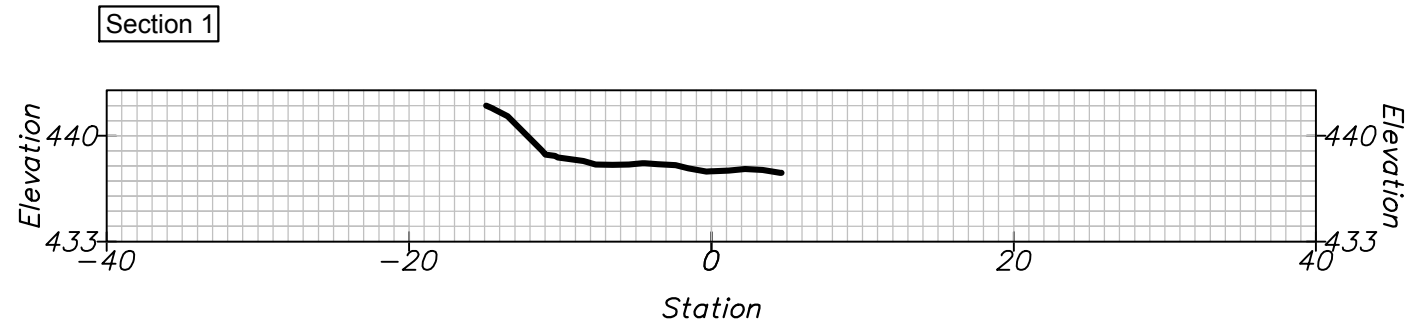
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PEACE RIVER SIDE CHANNELS
32 LEFT
MONITORING SECTIONS - PLAN



Scale
1:500



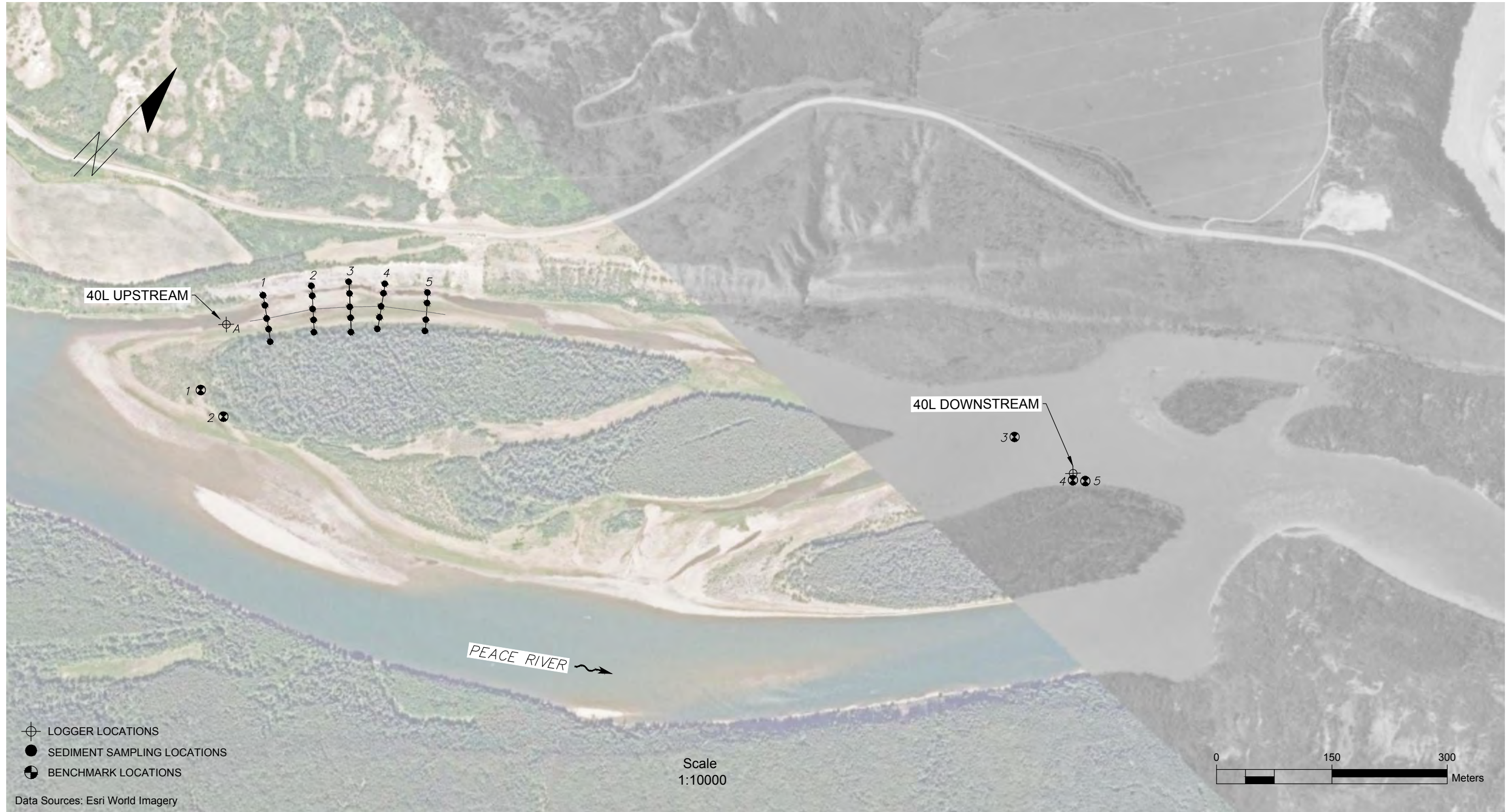
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PEACE RIVER SIDE CHANNELS
32 LEFT
MONITORING SECTIONS - SECTION



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Drft: JXD

Date: 01Nov13

PEACE RIVER SIDE CHANNELS
40 LEFT
OVERVIEW - PLAN



TABLE 1 – SURVEY CONTROL POINTS

POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	DESCRIPTION
1	6 228 463.266	592 908.757	436.00	NHC BENCHMARK No. 268
2	6 228 453.754	592 998.146	436.52	NHC BENCHMARK No. 147

TABLE 2 – LOGGER LOCATIONS

DESCRIPTION	NORTHING (m)	EASTING (m)	DESCRIPTION
A	6 223 085.545	585 903.653	LEVELLOGGER



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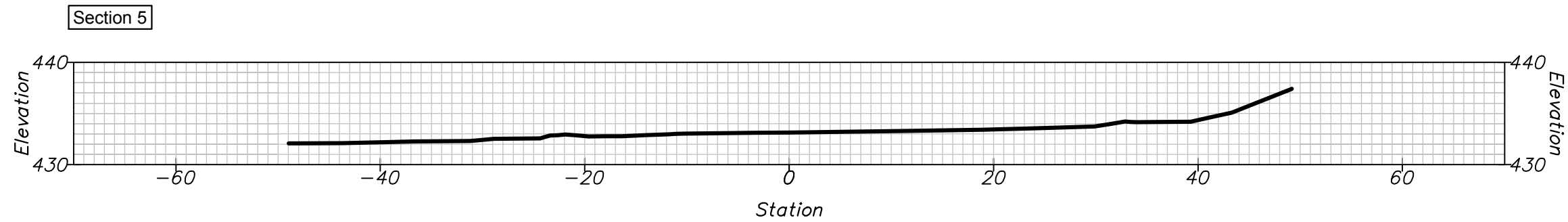
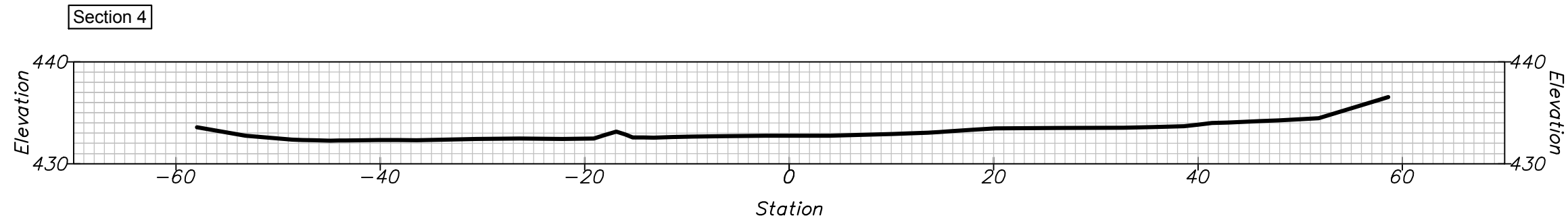
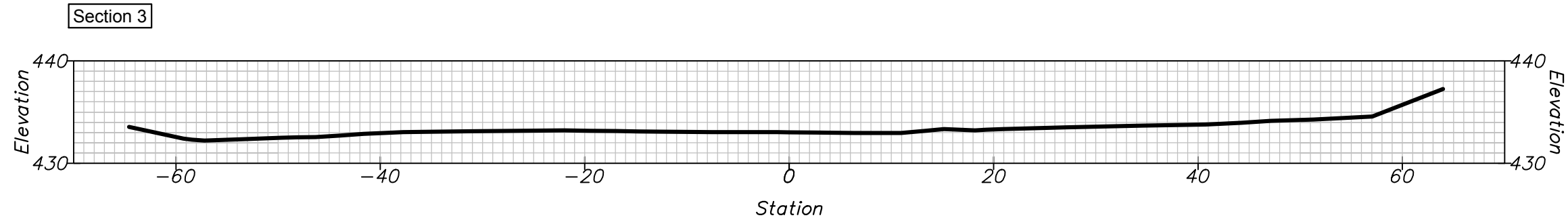
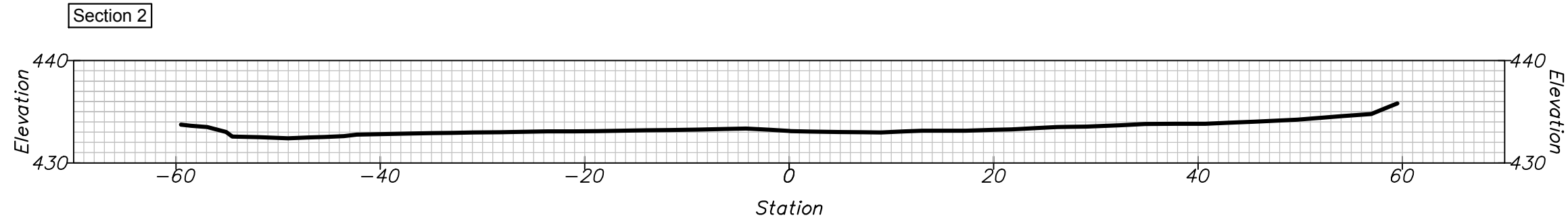
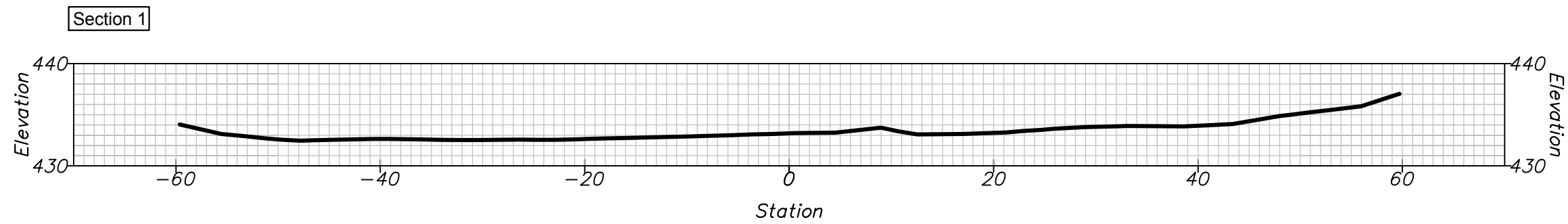
Job: 300220

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Date: 21Jun13

PEACE RIVER SIDE CHANNELS
40 LEFT
MONITORING SECTIONS - PLAN



Scale
1:500



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PEACE RIVER SIDE CHANNELS
40 LEFT
MONITORING SECTIONS - SECTION



- ⊕ LOGGER LOCATIONS
- ⊗ BENCHMARK LOCATIONS

Data Sources: Esri World Imagery

Scale
1:2500

5
(200 m)
6
(200 m)

0 75 150
Meters



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Rev: 1

Drft: WES, JXD

Date: 01Nov13

PEACE RIVER SIDE CHANNELS
102.5 RIGHT
OVERVIEW - PLAN



TABLE 1 – SURVEY CONTROL POINTS

POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	DESCRIPTION
1	6 223 673.588	643 772.286	404.93	NHC BENCHMARK No. 149
2	6 223 674.454	643795.179	405.09	NHC BENCHMARK No. 275
NHC 392	2000	1000	100.00	NHC LOCAL BENCHMARK No. 392
NHC 277	2057.398	979.109	102.26	NHC LOCAL BENCHMARK No. 277
PT BOLT	2039.044	994.680	97.83	NHC LOCAL SURVEY POINT
TOP T-BAR	2039.049	994.679	98.30	NHC LOCAL SURVEY POINT

TABLE 2 – LOGGER LOCATIONS

DESCRIPTION	NORTHING (m)	EASTING (m)	DESCRIPTION
A	6 223 578	643 717	APPROX. LOCATION OF LEVELLOGGER
B	6 223 564	643 691	BARO APPROX. – IN TREE



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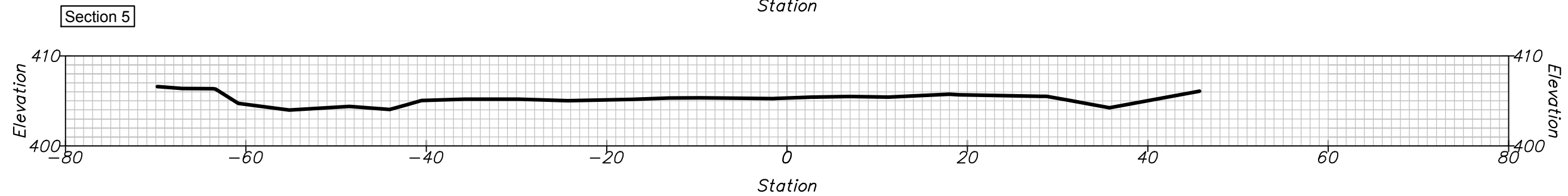
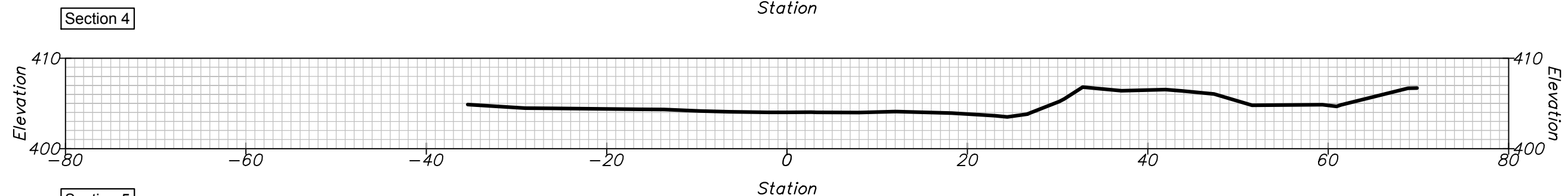
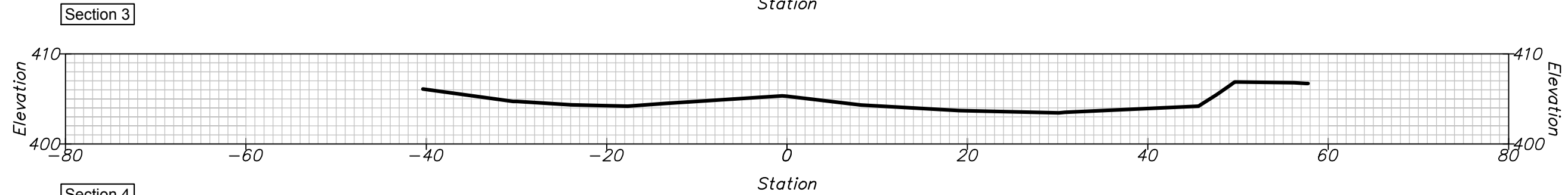
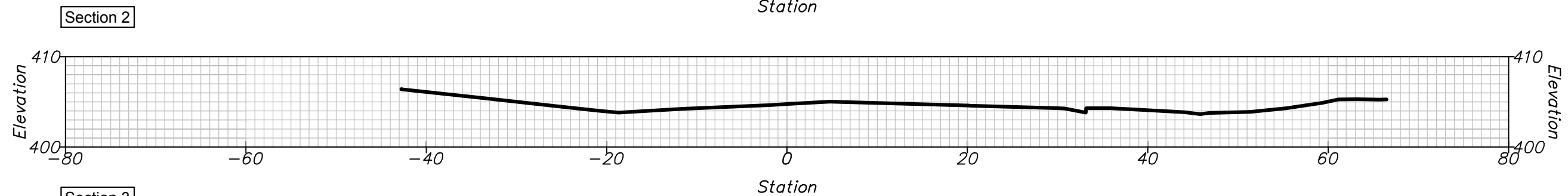
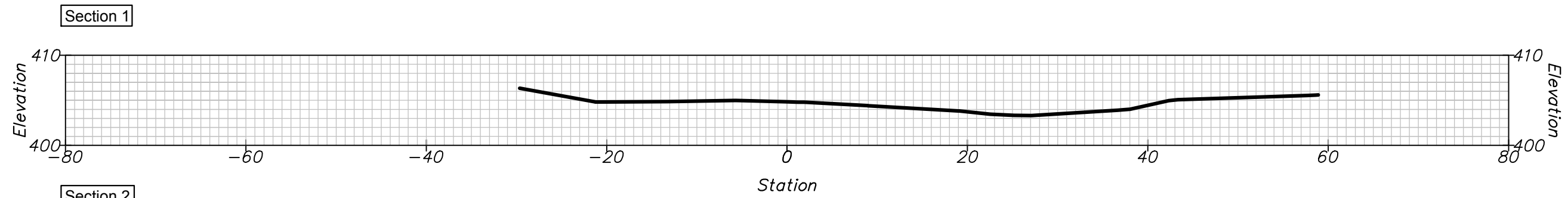
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PEACE RIVER SIDE CHANNELS
102.5 RIGHT
MONITORING SECTIONS - PLAN



Scale
1:500



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




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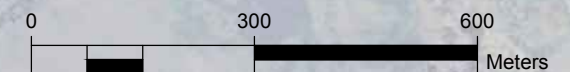
PEACE RIVER SIDE CHANNELS
102.5 RIGHT
MONITORING SECTIONS - SECTION



-  LOGGER LOCATIONS
-  SEDIMENT SAMPLING LOCATIONS
-  BENCHMARK LOCATIONS

Data Sources: Esri World Imagery

Scale
1:10000



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PEACE RIVER SIDE CHANNELS
112 LEFT
OVERVIEW - PLAN



Data Sources: Esri World Imagery

Scale
1:10000

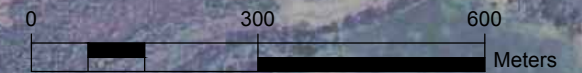


TABLE 1 – SURVEY CONTROL POINTS

POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	DESCRIPTION
1	6 222 295.895	651 995.509	401.48	NHC BENCHMARK No. 144
2	6 222 207.272	652 087.465	397.72	NHC BENCHMARK No. 848
BM 1126	2000	1000	100.00	LOCAL BENCHMARK No. 1126
BM 1125	2100.98	972.955	105.78	LOCAL BENCHMARK No. 1125
PT BOLT	2022.624	989.090	97.71	NHC LOCAL SURVEY POINT

TABLE 2 – LOGGER LOCATIONS

DESCRIPTION	NORTHING (m)	EASTING (m)	DESCRIPTION
A	6222334	651982	APPROX. LOCATION OF LEVELLOGGER
B	6222234	654462	APPROX. LOCATION OF LEVELLOGGER



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PEACE RIVER SIDE CHANNELS
112 LEFT
CONTROL - PLAN



TABLE 1 – SURVEY CONTROL POINTS

POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	DESCRIPTION
1	6 222 295.895	651 995.509	401.48	NHC BENCHMARK No. 144
2	6 222 207.272	652 087.465	397.72	NHC BENCHMARK No. 848
3	6 222 308.554	654 480.601	405.08	NHC BENCHMARK No. 1125



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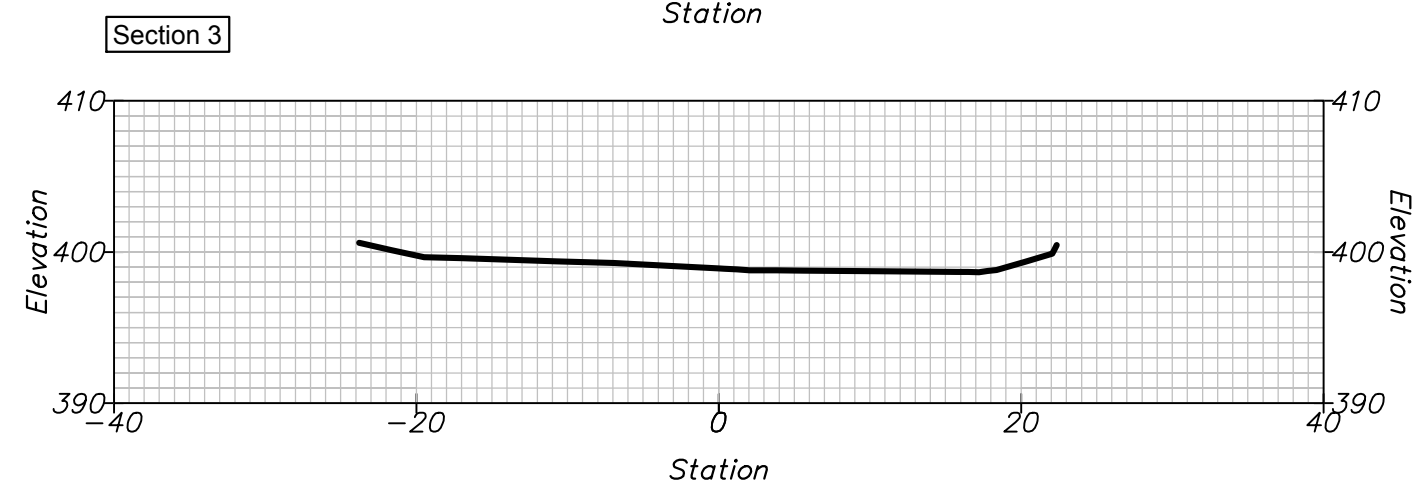
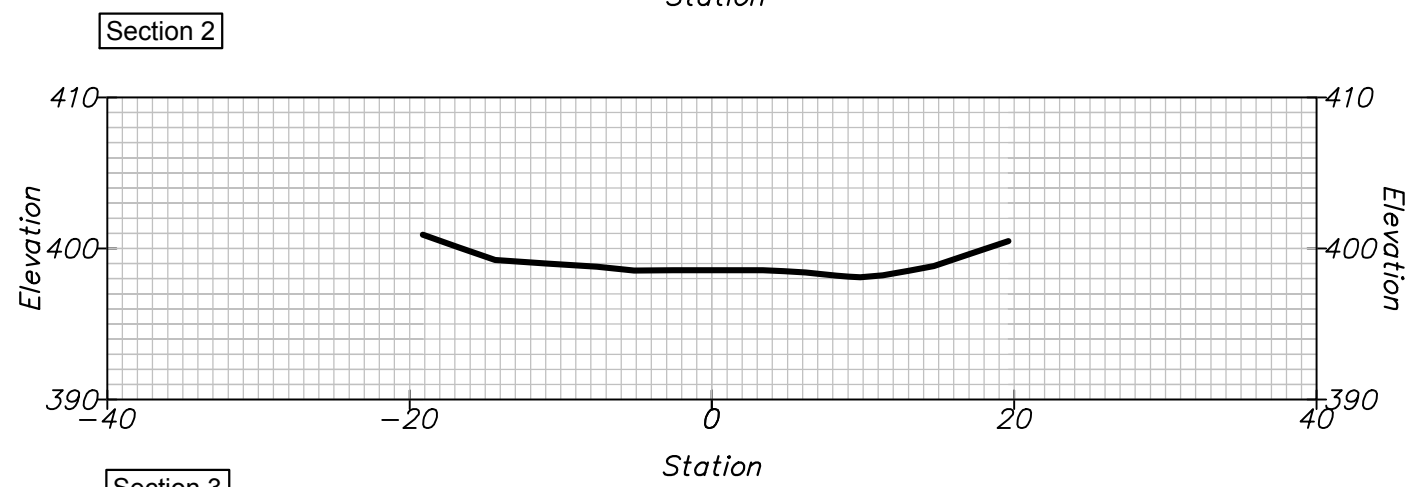
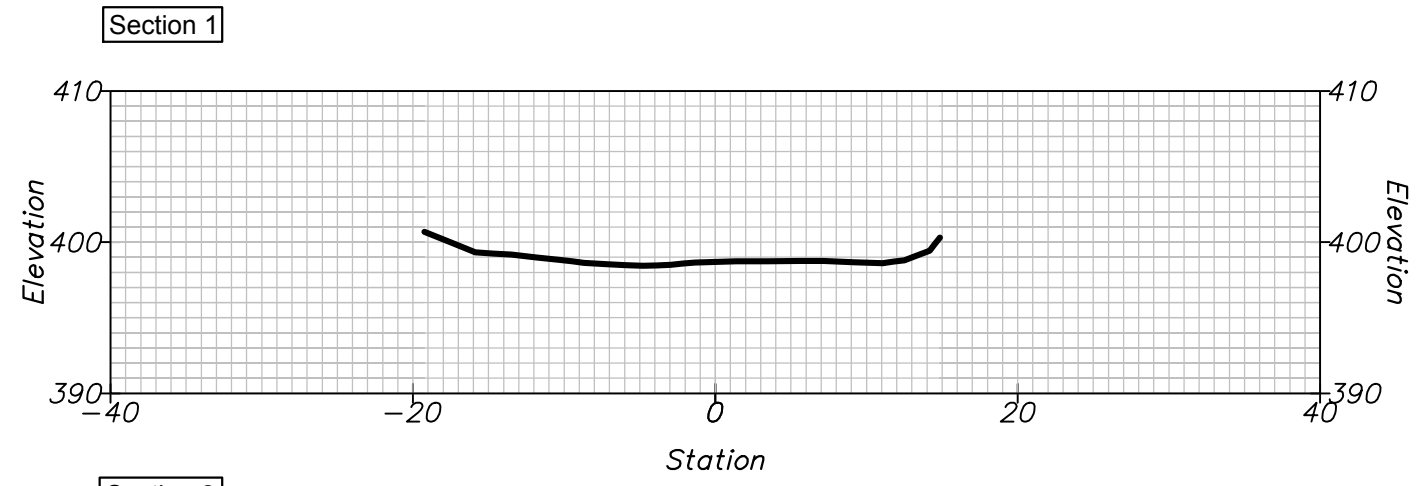
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Date: 29Nov13

PEACE RIVER SIDE CHANNELS
112 LEFT
CONTROL - PLAN



Scale
1:500



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Date: 29Nov13

PEACE RIVER SIDE CHANNELS
112 LEFT
Monitoring Sections - Section

APPENDIX J
SUBSTRATE PHOTOGRAPHS

Processed Substrate Photographs

Photo 140L Upstream at Cross-Section 1 - Site 1.



Photo 2 40L Upstream at Cross-Section 1 - Site 3.



Photo 3 **40L Upstream at Cross-Section 1 - Site 4.**



Photo 4 **40L Upstream at Cross-Section 1 - Site 5.**



Photo 5 **40L Upstream at Cross-Section 1 - Site 6.**



Photo 6 **40L Upstream at Cross-Section 2 - Site 4.**



Photo 7 **40L Upstream at Cross-Section 2 - Site 5.**

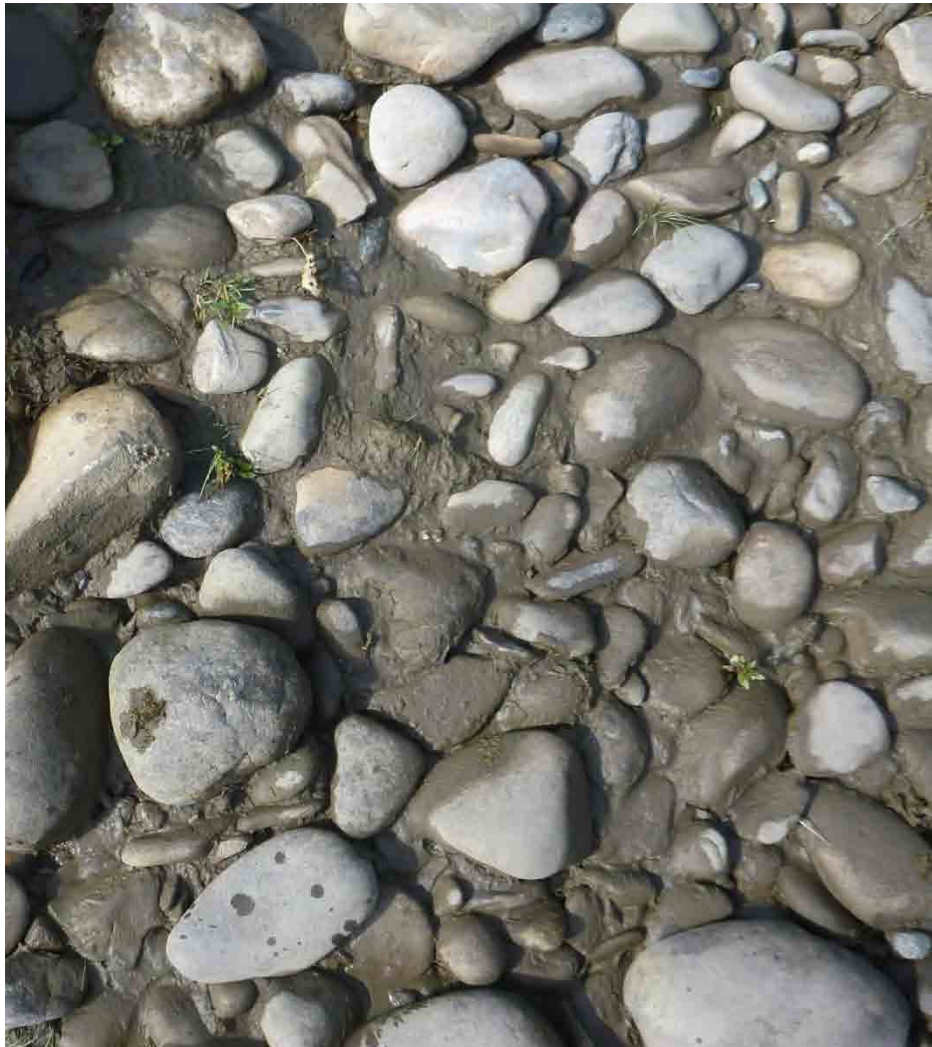


Photo 8 **40L Upstream at Cross-Section 2 - Site 6.**



Photo 9 **40L Upstream at Cross-Section 2 - Site 7.**



Photo 10 **40L Upstream at Cross-Section 2 - Site 8.**



Photo 11 **40L Upstream at Cross-Section 2 - Site 9.**



Photo 12 **40L Upstream at Cross-Section 2 - Site 10.**



Photo 13 **40L Upstream at Cross-Section 3 - Site 4.**



Photo 14 **40L Upstream at Cross-Section 3 - Site 6.**



Photo 15 **40L Upstream at Cross-Section 3 - Site 8.**



Photo 16 **40L Upstream at Cross-Section 4 - Site 6.**



Photo 17 40L Upstream at Cross-Section 4 - Site 7.



Photo 18 40L Upstream at Cross-Section 4 - Site 8.



Photo 19 **40L Upstream at Cross-Section 4 – Site 9.**

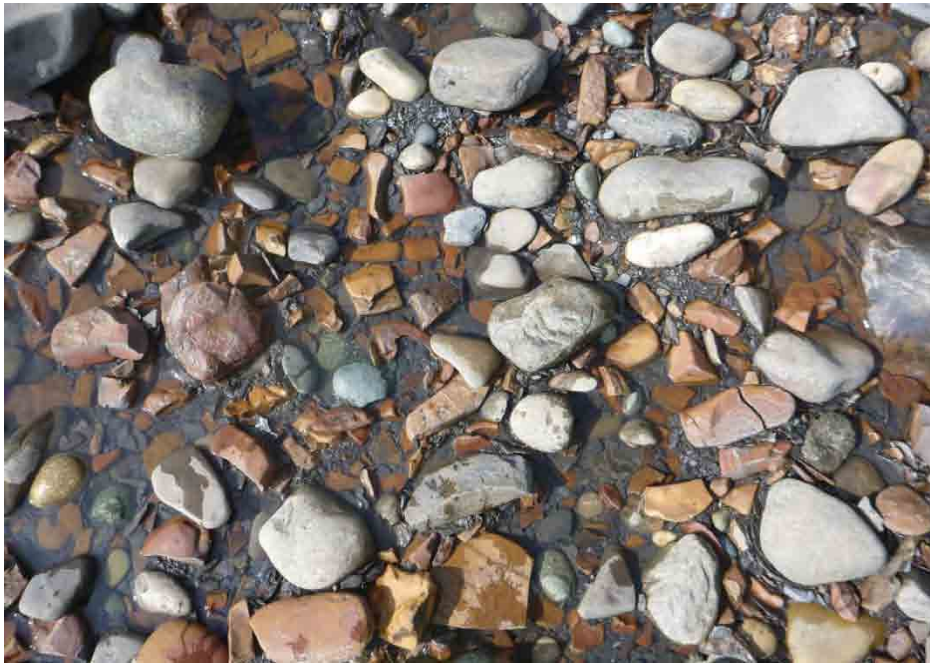


Photo 20 **40L Upstream at Cross-Section 4 - Site 10.**

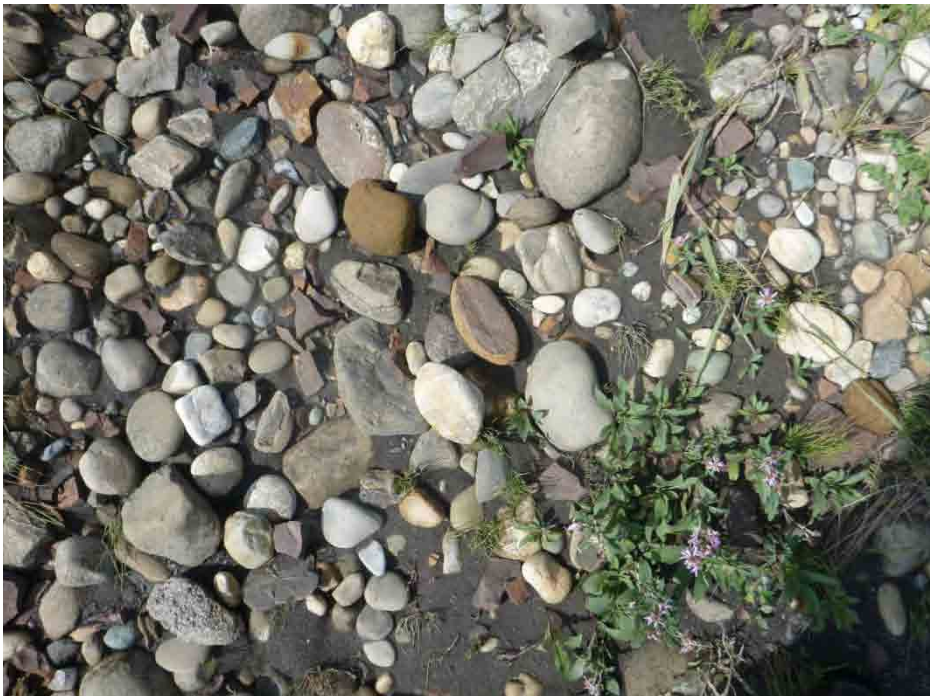


Photo 21 **40L Upstream at Cross-Section 5 - Site 6.**

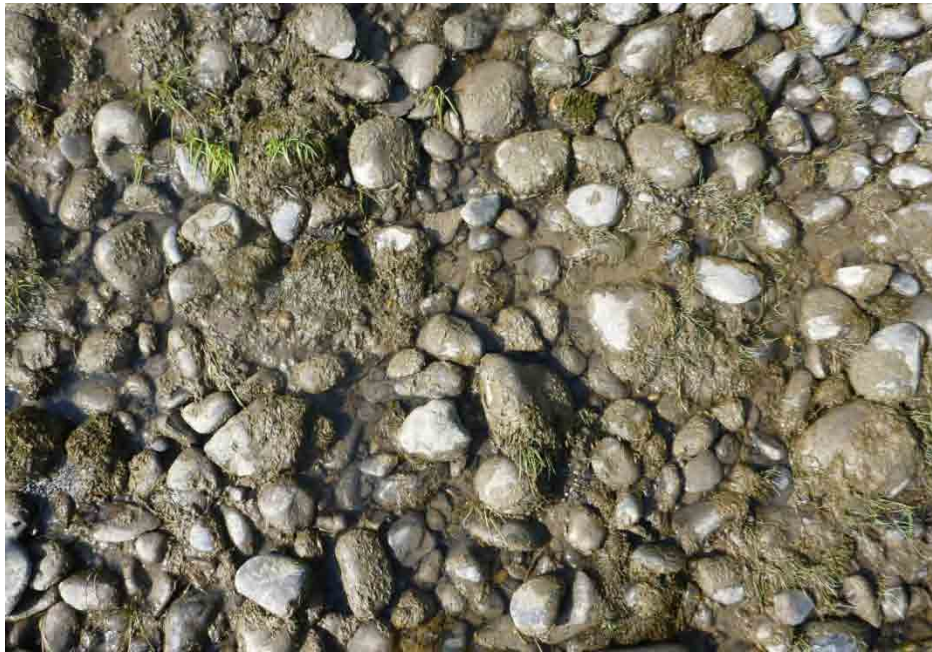


Photo 22 **40L Upstream at Cross-Section 5 - Site 7.**

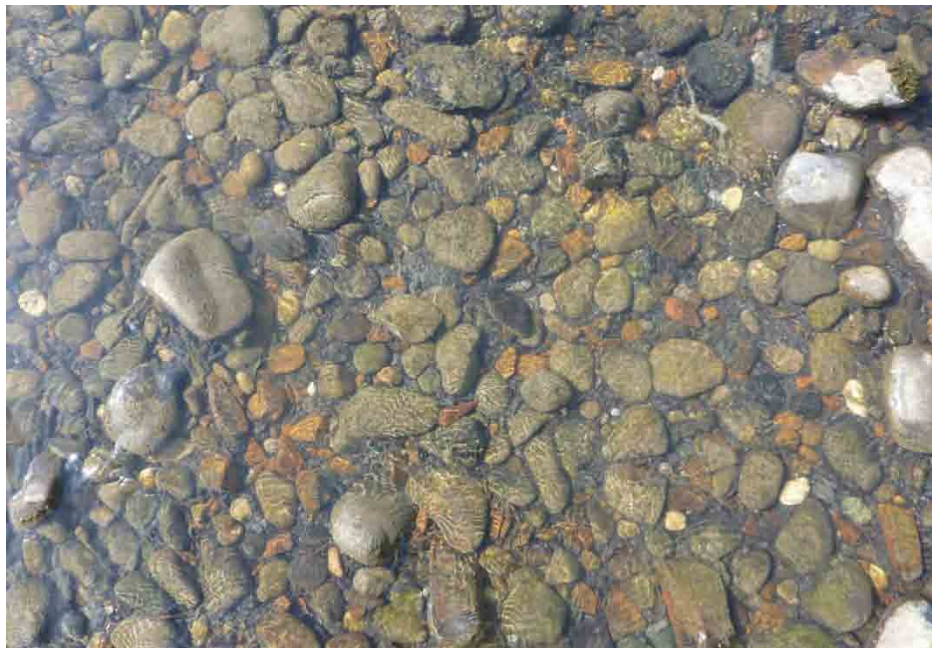


Photo 23 **40L Upstream at Cross-Section 5 - Site 8.**



Photo 24 **40L Upstream at Cross-Section 5 - Site 9.**



Photo 25 **40L Upstream at Cross-Section 5 - Site 10.**



Photo 26 **112.5R at Cross-Section 1 - Site 2.**

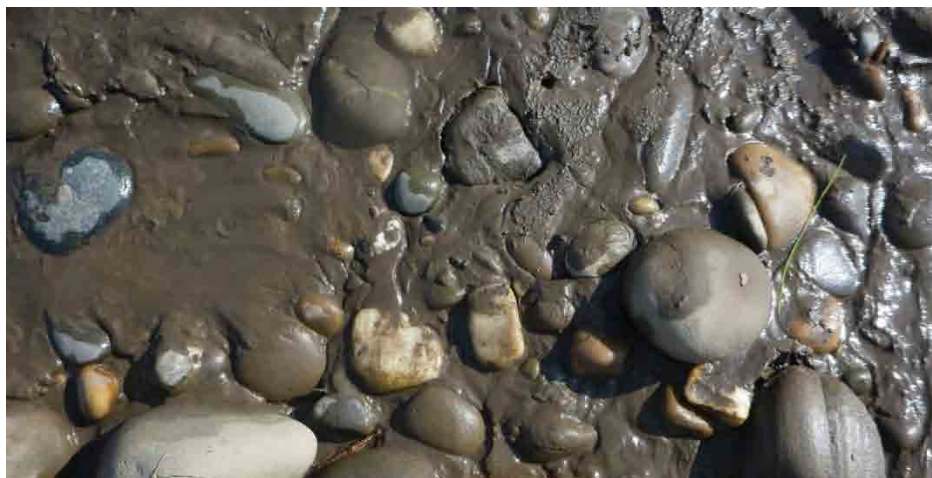


Photo 27 **112.5R at Cross-Section 1 - Site 5.**

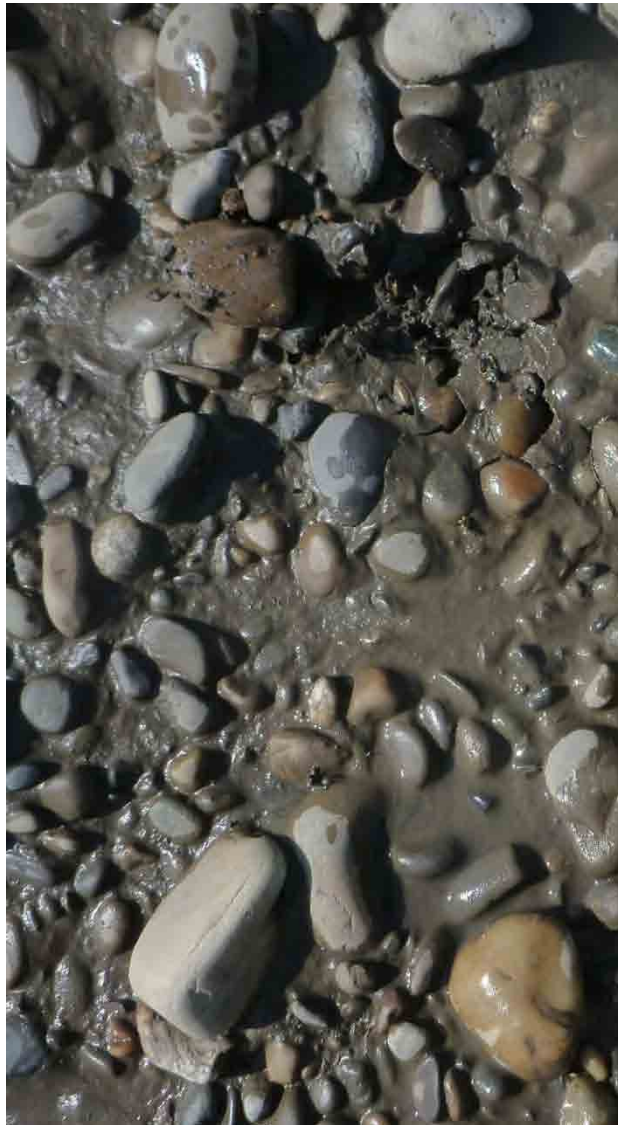


Photo 28 **112.5R at Cross-Section 2 - Site 1.**



Photo 29 **112.5R at Cross-Section 2 - Site 2.**



Photo 30 **112.5R at Cross-Section 2 - Site 3.**

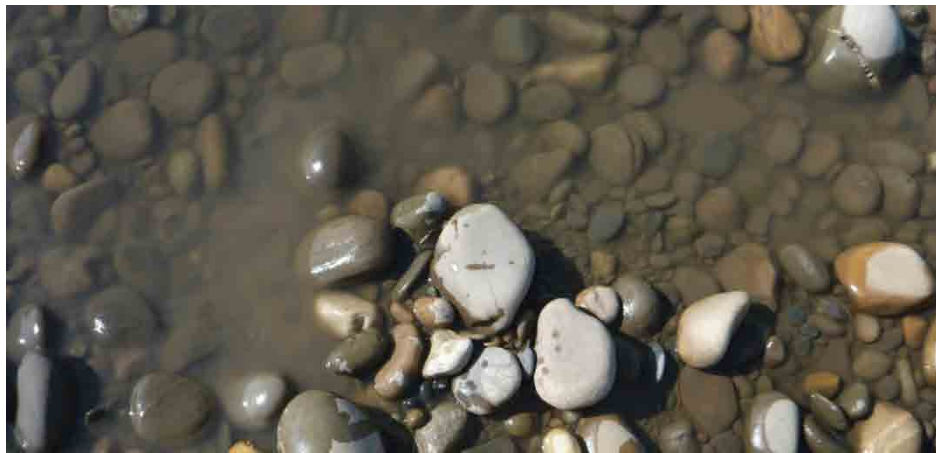


Photo 31 **112.5R at Cross-Section 2 - Site 4.**



Photo 32 **112.5R at Cross-Section 2 - Site 5.**

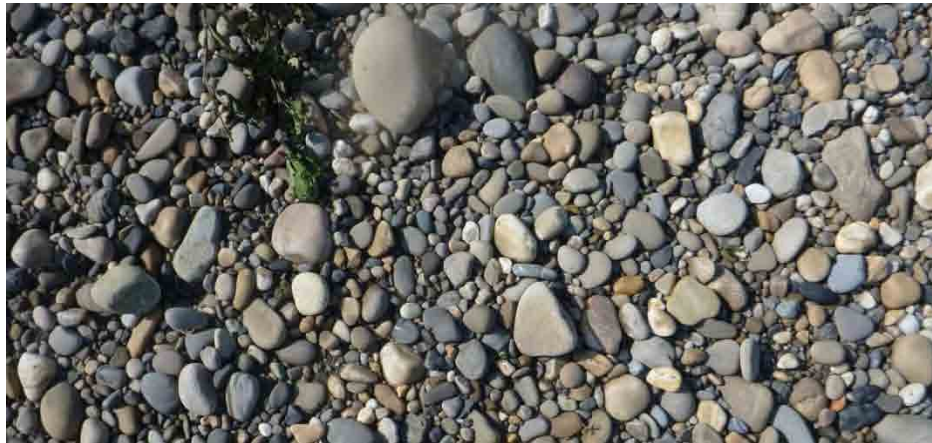


Photo 33 **112.5R at Cross-Section 2 - Site 6.**



Photo 34 **112.5R at Cross-Section 3 - Site 1.**

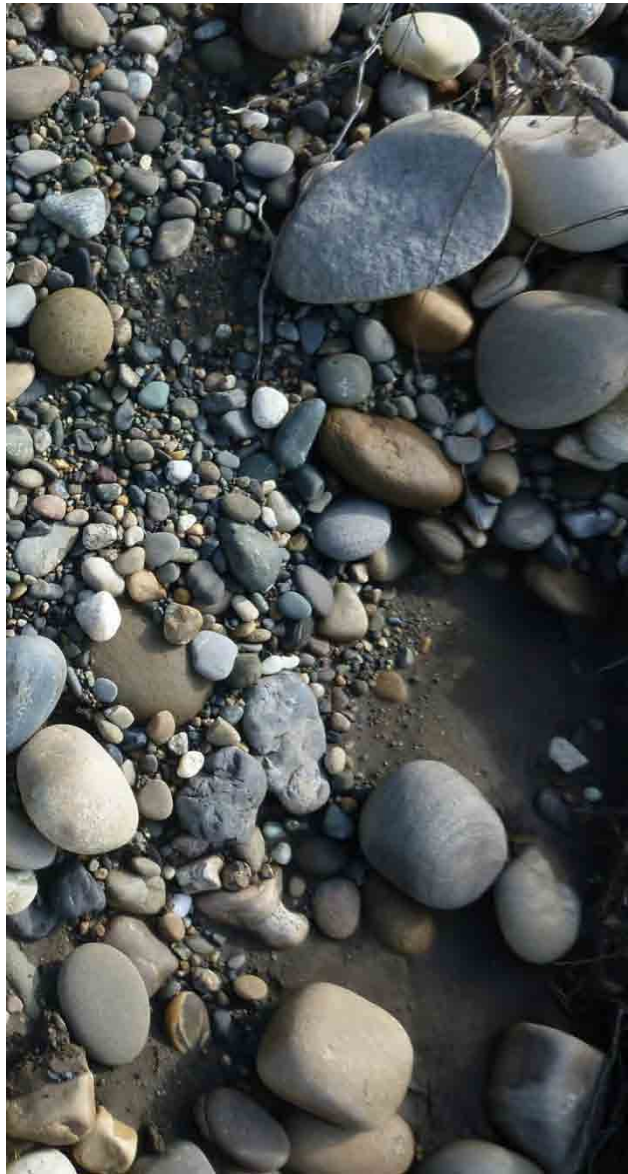
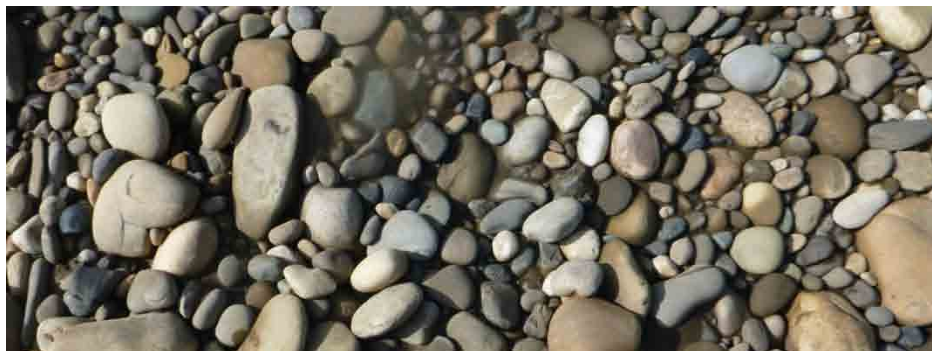


Photo 35 **112.5R at Cross-Section 3 - Site 3.**



Unprocessed Substrate Photographs

Photo 36 Unprocessed 32L Downstream at Cross-Section 1 – Site 1.



Photo 37 Unprocessed 32L Downstream at Cross-Section 1 – Site 2.



Photo 38 **Unprocessed 32L Downstream at Cross-Section 2 – Site 1.**



Photo 39 **Unprocessed 32L Downstream at Cross-Section 3 – Site 1.**



Photo 40 **Unprocessed 32L Upstream at Cross-Section 1 – Site 2.**



Photo 41 **Unprocessed 32L Upstream at Cross-Section 1 – Site 3.**



Photo 42 Unprocessed 32L Upstream at Cross-Section 2 – Site 3.



Photo 43 Unprocessed 32L Upstream at Cross-Section 3 – Site 3.



Photo 44 **Unprocessed 32L Upstream at Cross-Section 3 – Site 5.**



Photo 45 **Unprocessed 32L Upstream at Cross-Section 4 – Site 1.**



Photo 46 **Unprocessed 32L Upstream at Cross-Section 4 – Site 2.**



Photo 47 **Unprocessed 32L Upstream at Cross-Section 4 – Site 3.**



Photo 48 **Unprocessed 32L Upstream at Cross-Section 5– Site 1.**



Photo 49 **Unprocessed 32L Upstream at Cross-Section 5 – Site 3.**



Photo 50 **Unprocessed 40L Upstream at Cross-Section 1 – Site 1.**



Photo 51 **Unprocessed 40L Upstream at Cross-Section 1 – Site 2.**



Photo 52 **Unprocessed 40L Upstream at Cross-Section 1 – Site 3**



Photo 53 **Unprocessed 40L Upstream at Cross-Section 1 – Site 4.**



Photo 54 Unprocessed 40L Upstream at Cross-Section 1 – Site 5.



Photo 55 Unprocessed 40L Upstream at Cross-Section 1 – Site 6.



Photo 56 Unprocessed 40L Upstream at Cross-Section 1 – Site 7.



Photo 57 Unprocessed 40L Upstream at Cross-Section 1 – Site 8.



Photo 58 **Unprocessed 40L Upstream at Cross-Section 1 – Site 9.**



Photo 59 **Unprocessed 40L Upstream at Cross-Section 1 – Site 10.**



Photo 60 Unprocessed 40L Upstream at Cross-Section 2 – Site 3.



Photo 61 Unprocessed 40L Upstream at Cross-Section 2 – Site 4.



Photo 62 **Unprocessed 40L Upstream at Cross-Section 2 – Site 5.**



Photo 63 **Unprocessed 40L Upstream at Cross-Section 2 – Site 6.**

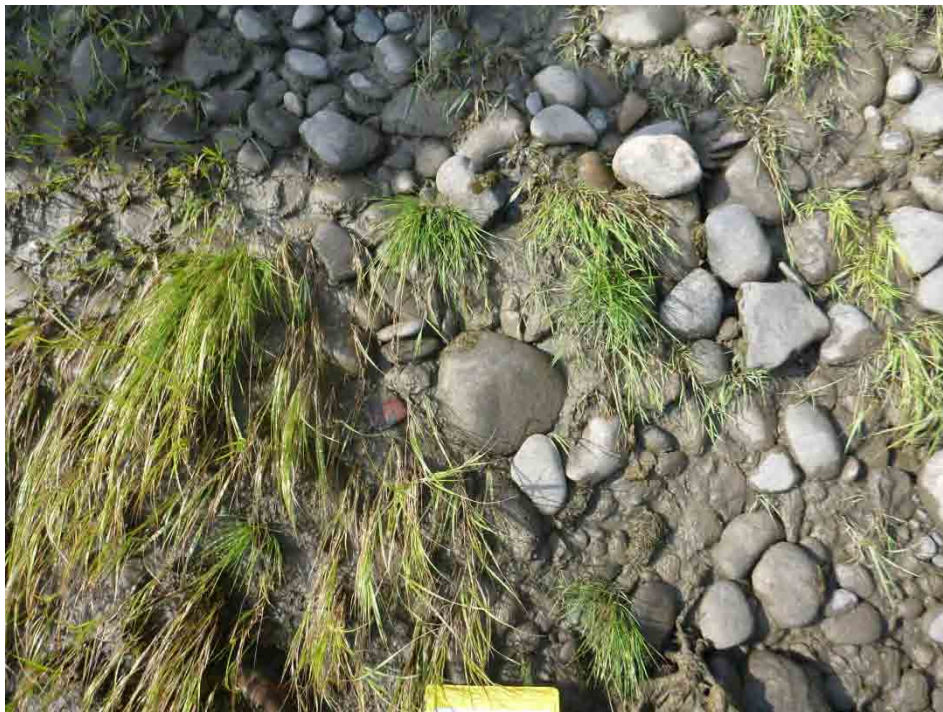


Photo 64 **Unprocessed 40L Upstream at Cross-Section 2 – Site 7.**



Photo 65 **Unprocessed 40L Upstream at Cross-Section 2 – Site 8.**



Photo 66 **Unprocessed 40L Upstream at Cross-Section 2 – Site 9.**



Photo 67 **Unprocessed 40L Upstream at Cross-Section 2 – Site 10.**



Photo 68 **Unprocessed 40L Upstream at Cross-Section 3 – Site 3.**



Photo 69 **Unprocessed 40L Upstream at Cross-Section 3 – Site 4.**



Photo 70 **Unprocessed 40L Upstream at Cross-Section 3 – Site 5.**



Photo 71 **Unprocessed 40L Upstream at Cross-Section 3 – Site 6.**



Photo 72 **Unprocessed 40L Upstream at Cross-Section 3 – Site 7.**



Photo 73 **Unprocessed 40L Upstream at Cross-Section 3 – Site 8.**



Photo 74 **Unprocessed 40L Upstream at Cross-Section 3 – Site 9.**



Photo 75 **Unprocessed 40L Upstream at Cross-Section 3 – Site 10.**



Photo 76 **Unprocessed 40L Upstream at Cross-Section 4 – Site 4.**



Photo 77 **Unprocessed 40L Upstream at Cross-Section 4 – Site 5.**



Photo 78 **Unprocessed 40L Upstream at Cross-Section 4 – Site 6.**



Photo 79 **Unprocessed 40L Upstream at Cross-Section 4 – Site 7.**



Photo 80 **Unprocessed 40L Upstream at Cross-Section 4 – Site 8.**



Photo 81 **Unprocessed 40L Upstream at Cross-Section 4 – Site 9.**

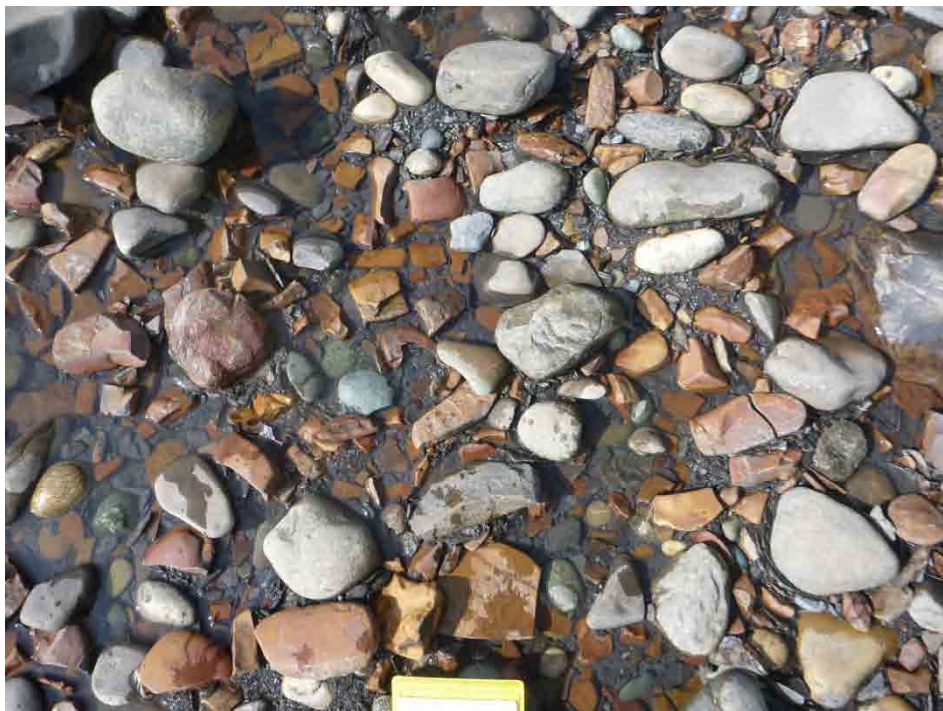


Photo 82 Unprocessed 40L Upstream at Cross-Section 4 – Site 10.



Photo 83 Unprocessed 40L Upstream at Cross-Section 5 – Site 1.



Photo 84 **Unprocessed 40L Upstream at Cross-Section 5 – Site 5.**



Photo 85 **Unprocessed 40L Upstream at Cross-Section 5 – Site 6.**



Photo 86 Unprocessed 40L Upstream at Cross-Section 5 – Site 7.



Photo 87 Unprocessed 40L Upstream at Cross-Section 5 – Site 8.



Photo 88 **Unprocessed 40L Upstream at Cross-Section 5 – Site 9.**



Photo 89 **Unprocessed 40L Upstream at Cross-Section 5 – Site 10.**



Photo 90 **Unprocessed 112.5R at Cross-Section 1 – Site 1.**

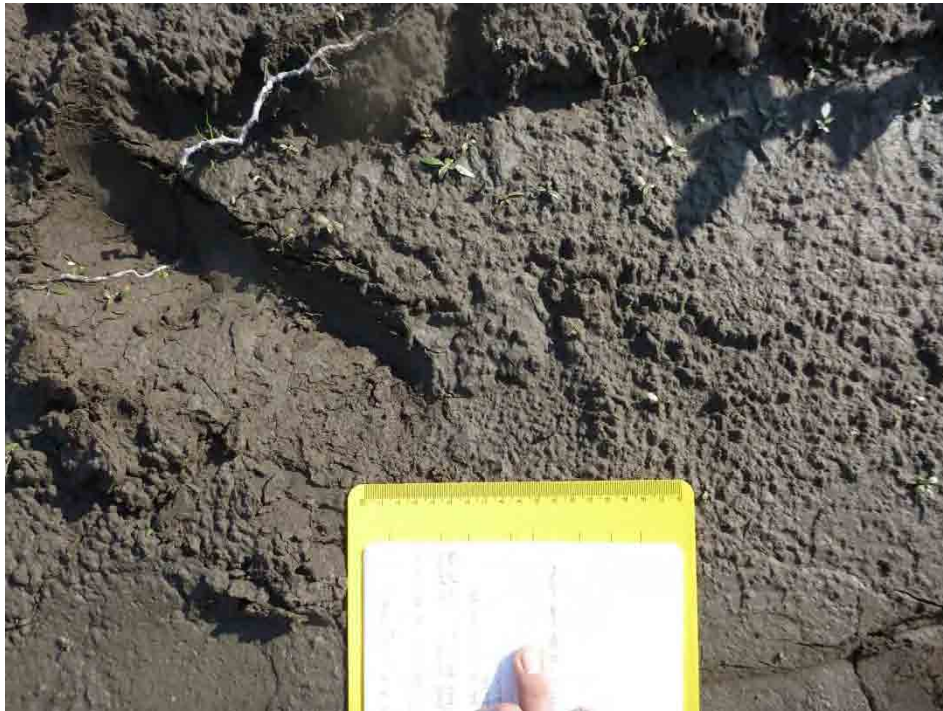


Photo 91 **Unprocessed 112.5R at Cross-Section 1 – Site 2.**

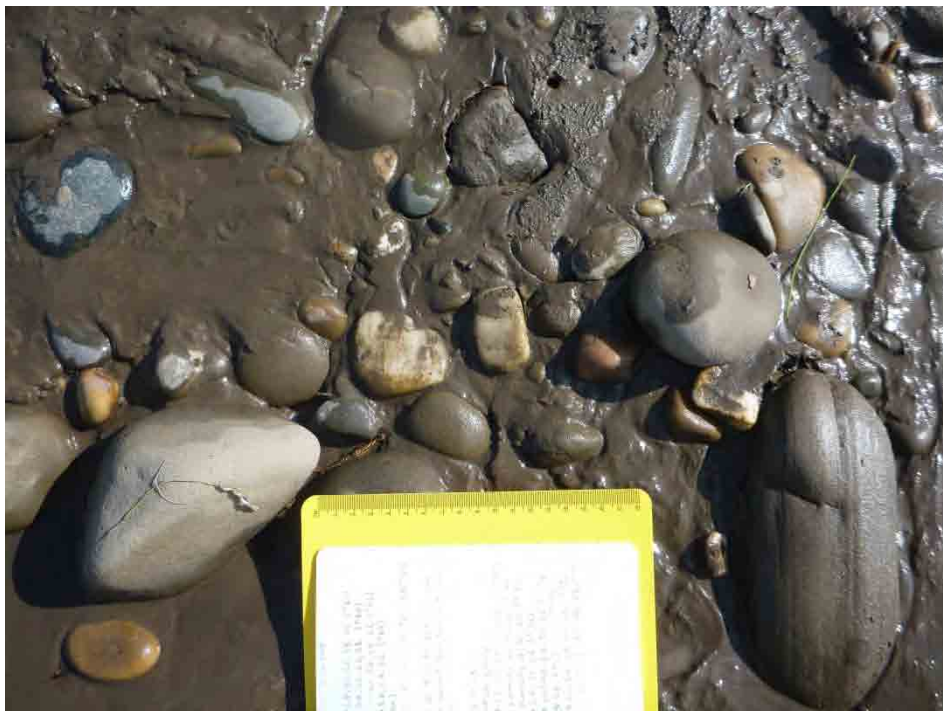


Photo 92 **Unprocessed 112.5R at Cross-Section 1 – Site 5.**



Photo 93 **Unprocessed 112.5R at Cross-Section 2 – Site 1.**

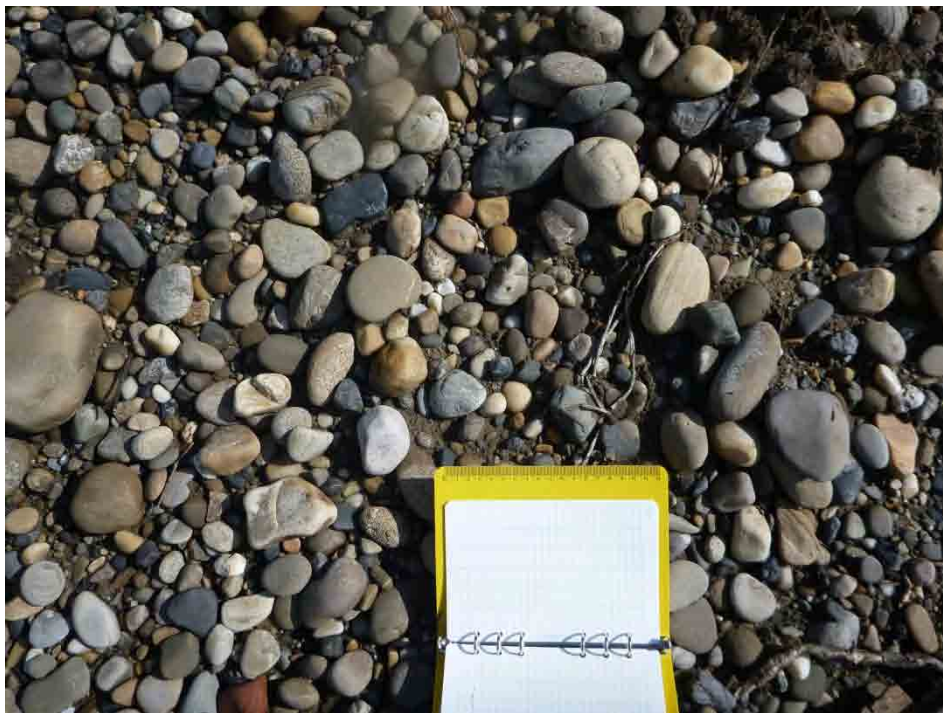


Photo 94 **Unprocessed 112.5R at Cross-Section 2 – Site 2.**

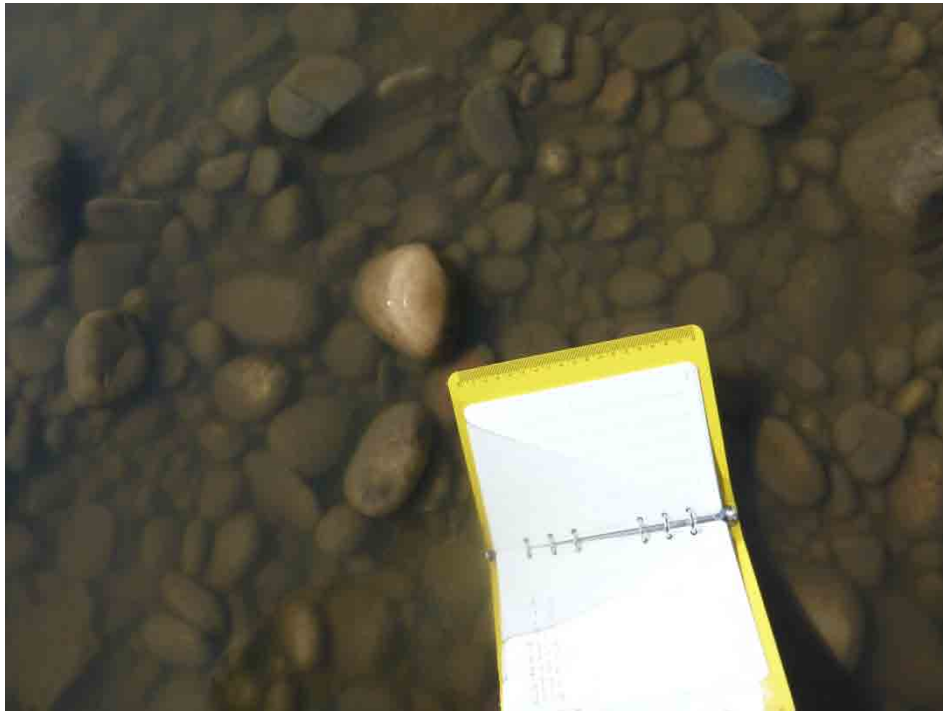


Photo 95 **Unprocessed 112.5R at Cross-Section 2 – Site 3.**

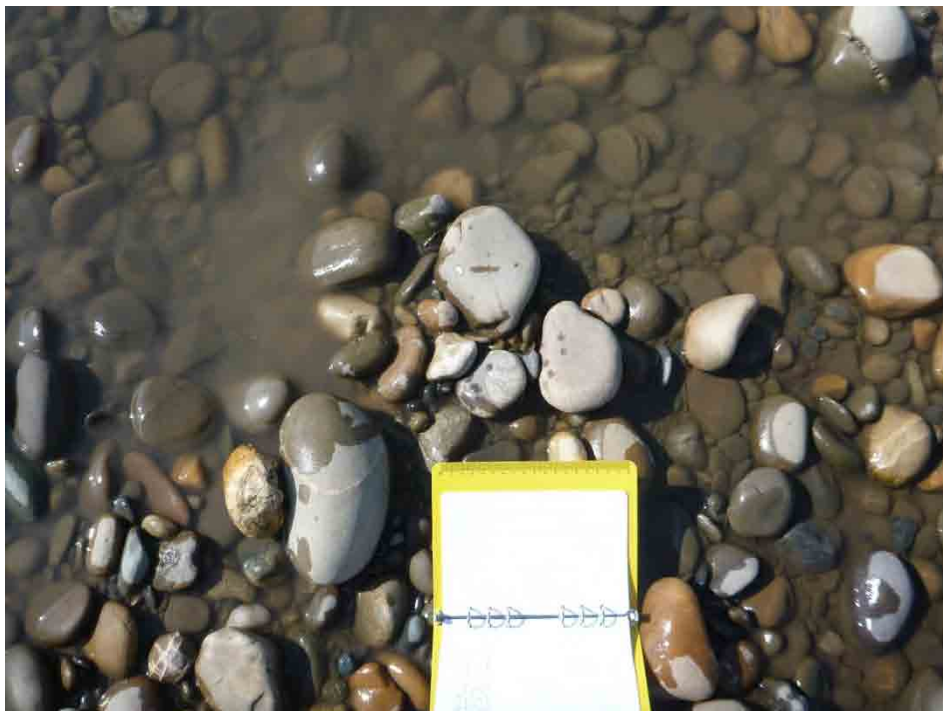


Photo 96 **Unprocessed 112.5R at Cross-Section 2 – Site 4.**



Photo 97 **Unprocessed 112.5R at Cross-Section 2 – Site 5.**

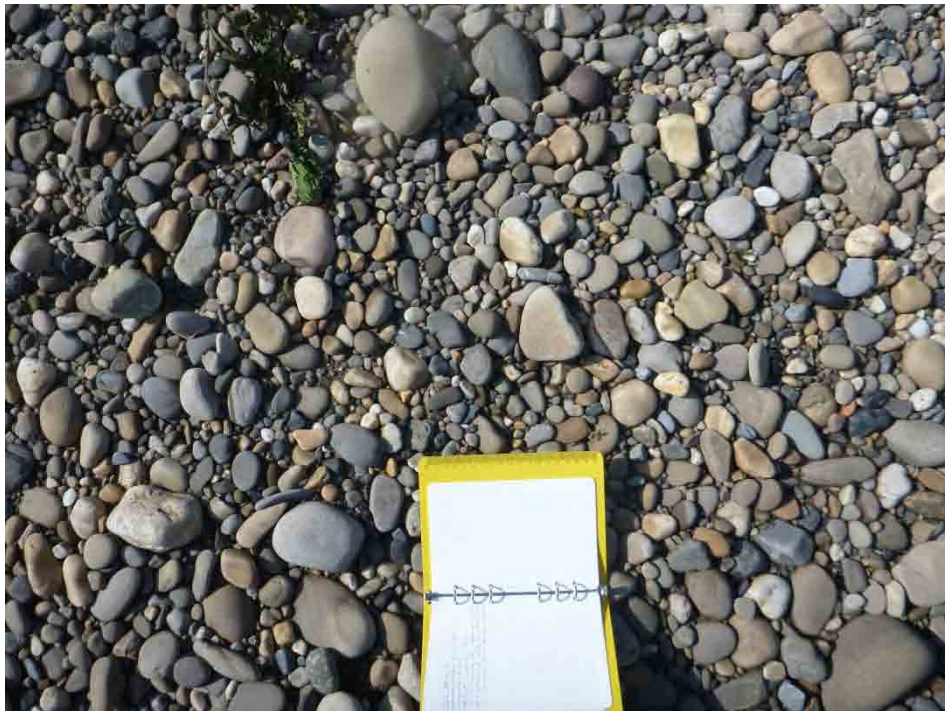


Photo 98 **Unprocessed 112.5R at Cross-Section 2 – Site 6.**



Photo 99 **Unprocessed 112.5R at Cross-Section 3 – Site 1.**



Photo 100 **Unprocessed 112.5R at Cross-Section 3 – Site 2.**



Photo 101 **Unprocessed 112.5R at Cross-Section 3 – Site 3.**

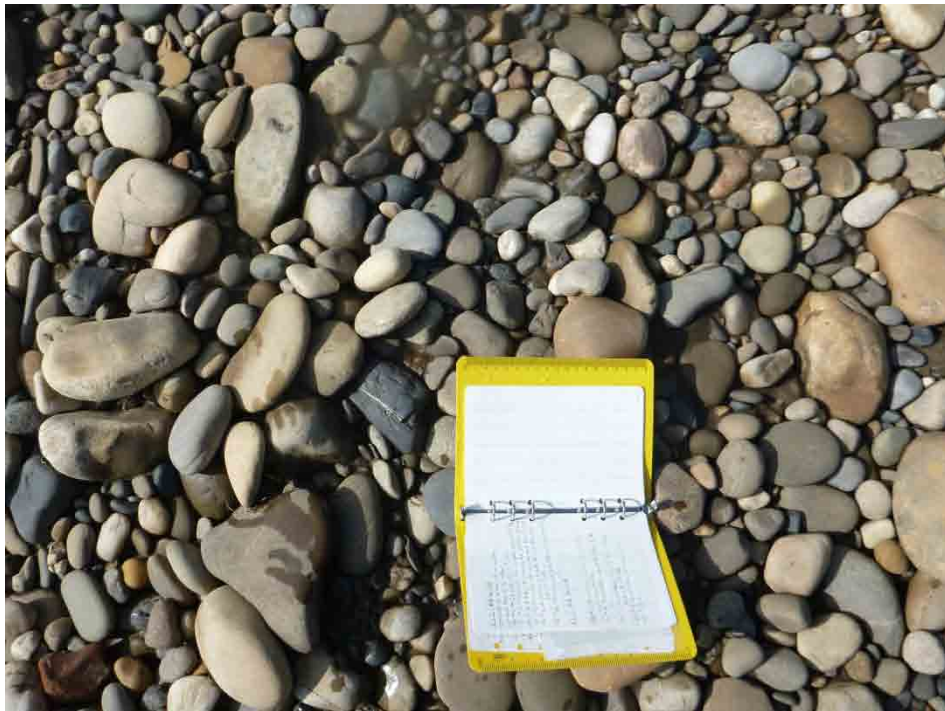


Photo 102 **Unprocessed 112.5R at Cross-Section 3 – Site 5.**

