

# 2010 Status of Mercury in Environmental Media for Site C Planning – Peace River and Dinosaur Reservoir



Prepared for:

**BC Hydro**  
**Site C Fisheries and Aquatics**  
**1100 Melville St.**  
**Vancouver BC V6E 4A6**

Prepared by:



**Azimuth Consulting Group Inc.**  
218-2902 West Broadway Vancouver, BC V6K 2G8  
Tel: 604-730-1220 \* Fax: 604-739-8511

## **2010 Status of Mercury in Environmental Media for Site C Planning – Peace River and Dinosaur Reservoir**

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### **BC Hydro**

Site C Fisheries and Aquatics  
Suite 1100 Four Bentall Center  
1055 Dunsmuir St.  
Vancouver BC V7X 1V5

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### **Azimuth Consulting Group Inc.**

218-2902 West Broadway  
Vancouver, BC  
V6K 2G8

Project No. BCH-10-01

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**APPENDIX D**

**FISH COLLECTION, MERISTICS, STABLE ISOTOPE,  
AND MERCURY DATA**

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Appendix D. Fish collection, meristics, stable isotope and mercury data, BC Hydro 2010.

Fish Tissue ID	Waterbody	Location	Date	Species	Length (mm)	Weight (g)	K	Age Structure	Age (yr)	Maturity/Sex
ANG02 BLTR26	DINOSAUR RESERVOIR	GMS Tailrace	20-Aug-10	Bull trout	285	262	1.13	Scale	3	
ANG02 BLTR34	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Bull trout	292	262	1.05	Fin ray	3	
BS01 BLTR1	DINOSAUR RESERVOIR	Gething Creek	27-Aug-10	Bull trout	777			Fin ray	9	Ripe female
BS01 BLTR19	DINOSAUR RESERVOIR	Gething Creek	27-Aug-10	Bull trout	723			Fin ray	7	Ripe female
BS01 BLTR2	DINOSAUR RESERVOIR	Gething Creek	27-Aug-10	Bull trout	761			Fin ray	8	Ripe male
BS01 BLTR20	DINOSAUR RESERVOIR	Gething Creek	21-Aug-10	Bull trout	811	7775	1.46	Fin ray	7	Ripe male
BS01 BLTR25	DINOSAUR RESERVOIR	Gething Creek	20-Aug-10	Bull trout	810			Fin ray	10	
BS01 BLTR3	DINOSAUR RESERVOIR	Gething Creek	27-Aug-10	Bull trout	751			Fin ray	7	Ripe male
BS01 BLTR4	DINOSAUR RESERVOIR	Gething Creek	27-Aug-10	Bull trout	835			Fin ray	10	Ripe male
BS01 BLTR5	DINOSAUR RESERVOIR	Gething Creek	27-Aug-10	Bull trout	796			Fin ray	9	Ripe female
BS01 BLTR6	DINOSAUR RESERVOIR	Gething Creek	27-Aug-10	Bull trout	642			Fin ray	5	Ripe female
BS01 BLTR7	DINOSAUR RESERVOIR	Gething Creek	27-Aug-10	Bull trout	820			Fin ray		Ripe male
BS01 BLTR8	DINOSAUR RESERVOIR	Gething Creek	27-Aug-10	Bull trout	763			Fin ray	8	Ripe male
GN01 BLTR39	DINOSAUR RESERVOIR	Reservoir	27-Aug-10	Bull trout	324	320	0.94	Otolith	7	
#368 BLTR	PEACE RIVER	Section 3	13-Sep-10	Bull trout	303	334	1.20	Fin ray	3	
#399 BLTR	PEACE RIVER	Section 3	13-Sep-10	Bull trout	361	468	0.99	Fin ray	4	
#400 BLTR	PEACE RIVER	Section 3	13-Sep-10	Bull trout	362	514	1.08	Fin ray	4	
#407 BLTR	PEACE RIVER	Section 3	13-Sep-10	Bull trout	806	7160	1.37	Fin ray	6	
EF0301 BLTR PIT: 5772	PEACE RIVER	Section 3	24-Aug-10	Bull trout	351	522	1.21	Fin ray	3	
EF0301 BLTR PIT: 6292	PEACE RIVER	Section 3	24-Aug-10	Bull trout	519	1426	1.02	Fin ray	4	
EF0302 BLTR 31	PEACE RIVER	Section 3	24-Aug-10	Bull trout	418	750	1.03	Fin ray	5	
EF0302 BLTR49	PEACE RIVER	Section 3	24-Aug-10	Bull trout	376	534	1.00	Fin ray	4	
EF0305 BLTR PIT: 8415	PEACE RIVER	Section 3	24-Aug-10	Bull trout	514	1368	1.01	Fin ray	4	
EF0308 BLTR PIT: 3336	PEACE RIVER	Section 3	25-Aug-10	Bull trout	292	308	1.24	Fin ray	3	
EF0310 BLTR PIT: 1473	PEACE RIVER	Section 3	25-Aug-10	Bull trout	495	1294	1.07	Fin ray	5	
EF0311 BLTR PIT: 6319	PEACE RIVER	Section 3	25-Aug-10	Bull trout	396	692	1.11	Fin ray	5	
EF0316 BLTR PIT: 7155	PEACE RIVER	Section 3	25-Aug-10	Bull trout	643	3510	1.32	Fin ray	6	
EF06 BLTR 10	PEACE RIVER	Section 3	29-Aug-10	Bull trout	483	1154	1.02	Fin ray	5	
EF302 BLTR14	PEACE RIVER	Section 3	24-Aug-10	Bull trout	728	5290	1.37	Fin ray	6	
ANG01 LKTR1	DINOSAUR RESERVOIR	GMS Tailrace	20-Aug-10	Lake trout	342	480	1.20	Scale	5	
ANG01 LKTR19	DINOSAUR RESERVOIR	GMS Tailrace	20-Aug-10	Lake trout	495	1350	1.11	Scale	9	
ANG01 LKTR2	DINOSAUR RESERVOIR	GMS Tailrace	20-Aug-10	Lake trout	324	262	0.77	Scale	5	
ANG01 LKTR20	DINOSAUR RESERVOIR	GMS Tailrace	20-Aug-10	Lake trout	330	326	0.91	Scale	5	
ANG01 LKTR21	DINOSAUR RESERVOIR	GMS Tailrace	20-Aug-10	Lake trout	354	416	0.94	Scale	6	
ANG01 LKTR22	DINOSAUR RESERVOIR	GMS Tailrace	20-Aug-10	Lake trout	322	320	0.96	Scale	6	
ANG01 LKTR3	DINOSAUR RESERVOIR	GMS Tailrace	20-Aug-10	Lake trout	330	320	0.89	Scale	5	
ANG02 LKTR21	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	587	2313	1.14	Fin ray	10	
ANG02 LKTR22	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	405	700	1.05	Fin ray	6	
ANG02 LKTR23	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	538	1724	1.11	Fin ray		
ANG02 LKTR24	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	355	406	0.91	Fin ray	6	
ANG02 LKTR25	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	630	2676	1.07	Fin ray		
ANG02 LKTR26	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	431	922	1.15	Fin ray	7	
ANG02 LKTR27	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	445	720	0.82	Fin ray	7	
ANG02 LKTR28	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	433	910	1.12	Fin ray	7	
ANG02 LKTR29	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	444	896	1.02	Fin ray	10	
ANG02 LKTR30	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	505	1588	1.23	Fin ray	10	
ANG02 LKTR33	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	446	982	1.11	Fin ray	7	
ANG02 LKTR35	DINOSAUR RESERVOIR	GMS Tailrace	21-Aug-10	Lake trout	347	388	0.93	Fin ray	5	
GN04 LKTR57	DINOSAUR RESERVOIR	Reservoir	19-Aug-10	Lake trout	366	410	0.84	Scale	5	Immature female
EF0310 LKTR4	PEACE RIVER	Section 3	25-Aug-10	Lake trout	391	570	0.95	Fin ray	4	

Appendix D. Fish collection, meristics, stable isotope and mercury data, BC Hydro 2010.

Fish Tissue ID	Waterbody	Location	Date	Species	Length (mm)	Weight (g)	K	Age Structure	Age (yr)	Maturity/Sex
EF09 LNSC8	DINOSAUR RESERVOIR	reservoir	23-Aug-10	Longnose sucker	400	852	1.33	Fin ray	17	Mature female
EF0303 LNSC1	PEACE RIVER	Section 3	24-Aug-10	Longnose sucker	385	784	1.37	Fin ray	7	Mature male
EF0303 LNSC10	PEACE RIVER	Section 3	24-Aug-10	Longnose sucker	363	518	1.08	Fin ray	7	Mature male
EF0303 LNSC2	PEACE RIVER	Section 3	24-Aug-10	Longnose sucker	394	768	1.26	Fin ray	9	Mature female
EF0303 LNSC3	PEACE RIVER	Section 3	24-Aug-10	Longnose sucker	395	678	1.10	Fin ray	7	Mature female
EF0303 LNSC4	PEACE RIVER	Section 3	24-Aug-10	Longnose sucker	375	646	1.23	Fin ray	8	Mature male
EF0303 LNSC5	PEACE RIVER	Section 3	24-Aug-10	Longnose sucker	384	850	1.50	Fin ray		Mature female
EF0303 LNSC6	PEACE RIVER	Section 3	24-Aug-10	Longnose sucker	393	776	1.28	Fin ray	7	Mature female
EF0303 LNSC7	PEACE RIVER	Section 3	24-Aug-10	Longnose sucker	377	688	1.28	Fin ray	7	Mature male
EF0303 LNSC8	PEACE RIVER	Section 3	24-Aug-10	Longnose sucker	410	888	1.29	Fin ray	8	Mature female
EF0303 LNSC9	PEACE RIVER	Section 3	24-Aug-10	Longnose sucker	379	600	1.10	Fin ray	10	Mature female
EF02 MNWH4	DINOSAUR RESERVOIR	Reservoir	23-Aug-10	Mountain whitefish	348	362	0.86	Scale and otolith	12	Mature female
EF03 MNWH5	DINOSAUR RESERVOIR	Reservoir	23-Aug-10	Mountain whitefish	386	572	0.99	Otolith	13	Mature male
EF03 MNWH6	DINOSAUR RESERVOIR	Reservoir	23-Aug-10	Mountain whitefish	360	494	1.06	Otolith	8	Mature female
EF09 MNWH10	DINOSAUR RESERVOIR	Reservoir	23-Aug-10	Mountain whitefish	275	220	1.06	Otolith	5	Mature female
EF09 MNWH9	DINOSAUR RESERVOIR	Reservoir	23-Aug-10	Mountain whitefish	395	692	1.12	Otolith	15	Mature male
GN02 MNWH3	DINOSAUR RESERVOIR	Reservoir	18-Aug-10	Mountain whitefish	246	230	1.54	Otolith	3	Immature male
GN02 MNWH4	DINOSAUR RESERVOIR	Reservoir	18-Aug-10	Mountain whitefish	301	330	1.21	Scale and otolith	5	Mature male
GN02 MNWH6	DINOSAUR RESERVOIR	Reservoir	18-Aug-10	Mountain whitefish	225	70	0.61	Otolith	3	Immature male
GN02 MNWH8	DINOSAUR RESERVOIR	Reservoir	18-Aug-10	Mountain whitefish	304	670	2.38	Otolith	4	Mature female
GN02 MNWH9	DINOSAUR RESERVOIR	Reservoir	18-Aug-10	Mountain whitefish	349	350	0.82	Otolith	9	Mature female
GN04 MNWH 17	DINOSAUR RESERVOIR	Reservoir	18-Aug-10	Mountain whitefish	302	370	1.34	Otolith	6	Mature male
GN04 MNWH18	DINOSAUR RESERVOIR	Reservoir	18-Aug-10	Mountain whitefish	322	410	1.23	Otolith	7	Mature female
GN06 MNWH31	DINOSAUR RESERVOIR	Reservoir	18-Aug-10	Mountain whitefish	218	70	0.68	Otolith	3	Immature male
GN06 MNWH32	DINOSAUR RESERVOIR	Reservoir	18-Aug-10	Mountain whitefish	234	70	0.55	Otolith	2	Immature male
GN06 MNWH33	DINOSAUR RESERVOIR	Reservoir	18-Aug-10	Mountain whitefish	246	90	0.60	Otolith	4	Immature male
EF0303 MNWH12	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	403	830	1.27	Otolith	7	Mature female
EF0305 MNWH13	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	345	498	1.21	Otolith	8	Mature female
EF0305 MNWH14	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	211	108	1.15	Otolith	2	Immature male
EF0305 MNWH15	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	330	422	1.17	Otolith	5	Mature male
EF0305 MNWH16	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	311	420	1.40	Otolith	6	Mature male
EF0305 MNWH17	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	245	170	1.16	Otolith	3	Immature male
EF0305 MNWH18	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	322	438	1.31	Otolith	7	Mature male
EF0305 MNWH19	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	319	388	1.20	Otolith	6	Mature male
EF0305 MNWH22	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	287	308	1.30	Otolith	4	Mature female
EF0305 MNWH23	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	237	148	1.11	Otolith	4	Immature male
EF0305 MNWH24	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	212	116	1.22	Otolith	3	Immature male
EF0305 MNWH25	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	220	112	1.05	Otolith	3	Immature female
EF0305 MNWH26	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	248	168	1.10	Otolith	3	Unknown
EF0305 MNWH28	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	430	678	0.85	Otolith	7	Mature female
EF0306 MNWH30	PEACE RIVER	Section 3	24-Aug-10	Mountain whitefish	401	776	1.20	Otolith	11	Mature female
EF0307 MNWH1	PEACE RIVER	Section 3	25-Aug-10	Mountain whitefish	411	794	1.14	Otolith	9	Mature female
EF0307 MNWH2	PEACE RIVER	Section 3	25-Aug-10	Mountain whitefish	480	1252	1.13	Otolith	12	Mature female
EF01 RDSH18	PEACE RIVER	Section 5	29-Aug-10	Redside shiner	119	26	1.54	Scale	5 - 8	
EF01 RDSH19	PEACE RIVER	Section 5	29-Aug-10	Redside shiner	116	24	1.54	Scale	5 - 8	
EF01 RDSH20	PEACE RIVER	Section 5	29-Aug-10	Redside shiner	112	20	1.42	Scale	5 - 8	
EF01 RDSH21	PEACE RIVER	Section 5	29-Aug-10	Redside shiner	99	14	1.44	Scale	5 - 8	
EF01 RDSH22	PEACE RIVER	Section 5	29-Aug-10	Redside shiner	103	16	1.46	Scale	5 - 8	
EF01 RDSH23	PEACE RIVER	Section 5	29-Aug-10	Redside shiner	90	8	1.10	Scale	5 - 8	
EF01 RDSH24	PEACE RIVER	Section 5	29-Aug-10	Redside shiner	85	6	0.98	Scale	5 - 8	
EF01 RDSH25	PEACE RIVER	Section 5	29-Aug-10	Redside shiner	88	8	1.17	Scale	5 - 8	
EF01 RDSH26	PEACE RIVER	Section 5	29-Aug-10	Redside shiner	91	8	1.06	Scale	5 - 8	
EF01 RDSH27	PEACE RIVER	Section 5	29-Aug-10	Redside shiner	96	12	1.36	Scale	5 - 8	
EF01 RDSH28	PEACE RIVER	Section 5	29-Aug-10	Redside shiner	86	8	1.26	Scale	5 - 8	

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Fish Tissue ID	$\delta^{13}\text{C}$ (‰)	$\delta^{15}\text{N}$ (‰)	Moisture (%)	Total Mercury (mg/kg dry)	Total Mercury (mg/kg wet)	QA Notes	Comments
ANG02 BLTR26	-31.73	10.37	77.1	0.678	0.1492		
ANG02 BLTR34	-32.66	10.50	70.7	0.171	0.0376		
BS01 BLTR1	-34.50	11.78	65.2	0.799	0.1758		
BS01 BLTR19	NA	NA	68.9	0.720	0.1584		
BS01 BLTR2	-35.37	10.96	51.2	0.262	0.0576		
BS01 BLTR20	-33.32	11.70	52.8	0.342	0.0752		
BS01 BLTR25	-34.52	11.90	44.9	0.220	0.0484		
BS01 BLTR3	-36.18	10.99	56.8	0.254	0.0559		
BS01 BLTR4	-35.53	11.32	69.5	0.567	0.1247		
BS01 BLTR5	-36.24	11.65	60.5	0.533	0.1173		
BS01 BLTR6	-35.34	11.54	58.1	0.342	0.0752		
BS01 BLTR7	-35.48	11.56	68.4	0.551	0.1212		
BS01 BLTR8	-34.37	11.15	70.9	0.570	0.1254		
GN01 BLTR39	-29.09	11.08	75.9	0.339	0.0746	DUP-DI-FISH-4	
#368 BLTR	-28.68	8.98	76.3	0.140	0.0308		
#399 BLTR	-27.55	10.00	75.1	0.194	0.0427		
#400 BLTR	-28.43	9.98	73.9	0.199	0.0438		
#407 BLTR	-29.09	10.44	68.4	0.313	0.0689		
EF0301 BLTR PIT: 5772	-29.39	9.59	54.6	0.150	0.0330		
EF0301 BLTR PIT: 6292	-29.97	10.25	68.2	0.230	0.0506		
EF0302 BLTR 31	-28.72	10.40	76.9	0.270	0.0594		
EF0302 BLTR49	-28.79	9.95	77.9	0.250	0.0550		
EF0305 BLTR PIT: 8415	-29.07	10.52	64.1	0.310	0.0682		
EF0308 BLTR PIT: 3336	-28.25	9.51	73.1	0.159	0.0350		
EF0310 BLTR PIT: 1473	-28.91	10.15	70.1	0.311	0.0684		
EF0311 BLTR PIT: 6319	-27.85	10.51	76.3	0.372	0.0818		
EF0316 BLTR PIT: 7155	-29.39	10.61	71.1	0.242	0.0532		
EF06 BLTR 10	-27.63	10.75	67.4	0.310	0.0682		
EF302 BLTR14	-29.91	10.72	62.6	0.325	0.0715		
ANG01 LKTR1	-31.68	12.33	74.5	0.509	0.1120		
ANG01 LKTR19	-31.97	11.46	78.5	0.508	0.1118		
ANG01 LKTR2	-31.91	13.07	80.3	0.622	0.1368		
ANG01 LKTR20	-31.58	12.40	77.0	0.487	0.1071		
ANG01 LKTR21	-33.66	11.85	77.5	0.506	0.1113		
ANG01 LKTR22	-31.56	12.44	80.2	0.446	0.0981		
ANG01 LKTR3	-30.03	11.18	81.6	0.565	0.1243		
ANG02 LKTR21	-31.76	11.69	69.9	0.375	0.0825		
ANG02 LKTR22	-32.52	11.49	70.8	0.429	0.0944		
ANG02 LKTR23	-33.55	11.95	59.1	0.387	0.0851		
ANG02 LKTR24	-32.98	12.12	76.1	0.337	0.0741		
ANG02 LKTR25	-35.40	11.62	66.6	0.375	0.0825		
ANG02 LKTR26	-32.77	11.81	63.5	0.296	0.0651		
ANG02 LKTR27	-35.11	11.32	70.0	0.325	0.0715		
ANG02 LKTR28	-35.13	12.29	67.9	0.218	0.0480		
ANG02 LKTR29	-32.39	11.52	68.3	0.409	0.0900		
ANG02 LKTR30	-34.07	11.54	53.2	0.232	0.0510		
ANG02 LKTR33	-32.86	11.49	63.0	0.308	0.0678		
ANG02 LKTR35	-31.43	11.79	75.3	0.387	0.0851		
GN04 LKTR57	-30.48	11.64	75.3	0.598	0.1316		
EF0310 LKTR4	-26.86	11.01	76.0	0.300	0.0660		

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Fish Tissue ID	$\delta^{13}\text{C}$ (‰)	$\delta^{15}\text{N}$ (‰)	Moisture (%)	Total Mercury (mg/kg dry)	Total Mercury (mg/kg wet)	QA Notes	Comments
EF09 LNSC8	-28.46	9.37	80.6	0.919	0.1783	DUP-DI-FISH-3	
EF0303 LNSC1	-29.50	6.51	76.5	0.113	0.0266		
EF0303 LNSC10	-30.39	7.25	77.3	0.127	0.0288		
EF0303 LNSC2	-29.73	6.80	80.1	0.219	0.0436		
EF0303 LNSC3	-27.19	8.49	78.1	0.117	0.0256		
EF0303 LNSC4	-28.55	6.01	77.4	0.176	0.0398		
EF0303 LNSC5	-29.18	6.16	78.6	0.572	0.1224		
EF0303 LNSC6	-29.26	6.32	76.2	0.084	0.0199	DUP-PE-FISH-1	
EF0303 LNSC7	-29.16	8.12	78.2	0.122	0.0266		
EF0303 LNSC8	-29.08	6.67	78.8	0.169	0.0358		
EF0303 LNSC9	-30.06	6.14	77.3	0.144	0.0327	DUP-PE-FISH-2	
EF02 MNWH4	-26.26	9.14	80.3	0.259	0.0510		
EF03 MNWH5	-29.46	8.83	78.2	0.342	0.0746		
EF03 MNWH6	-28.73	9.48	78.4	0.225	0.0486		
EF09 MNWH10	-25.04	8.42	78.2	0.307	0.0669		
EF09 MNWH9	-27.72	8.90	75.9	0.158	0.0381		
GN02 MNWH3	-27.02	7.76	75.3	0.097	0.0239		
GN02 MNWH4	-27.50	8.38	78.0	0.191	0.0420		
GN02 MNWH6	-26.21	7.93	77.0	0.188	0.0432		* determined to be an outlier
GN02 MNWH8	-26.56	7.97	77.3	0.170	0.0386	DUP-DI-FISH-1	* determined to be an outlier
GN02 MNWH9	-26.43	8.56	78.5	0.339	0.0729	DUP-DI-FISH-2	
GN04 MNWH 17	-27.88	8.76	75.2	0.122	0.0303		
GN04 MNWH18	-26.77	8.85	77.9	0.284	0.0628		
GN06 MNWH31	-28.06	7.98	73.5	0.076	0.0202		
GN06 MNWH32	-27.83	8.08	73.5	0.084	0.0223		* determined to be an outlier
GN06 MNWH33	-28.74	8.27	71.9	0.083	0.0234		* determined to be an outlier
EF0303 MNWH12	-30.03	7.93	69.3	0.083	0.0255		
EF0305 MNWH13	-27.41	7.48	71.4	0.107	0.0306		
EF0305 MNWH14	-29.49	7.30	75.4	0.065	0.0159		
EF0305 MNWH15	-29.59	8.05	73.7	0.116	0.0305		
EF0305 MNWH16	-29.25	7.60	71.6	0.078	0.0221		
EF0305 MNWH17	-29.02	7.22	77.0	0.060	0.0138		
EF0305 MNWH18	-29.86	7.65	75.1	0.142	0.0354		
EF0305 MNWH19	-28.94	6.99	72.3	0.090	0.0248	DUP-PE-FISH-3	
EF0305 MNWH22	-30.15	7.40	73.4	0.094	0.0249		
EF0305 MNWH23	-28.93	7.16	76.3	0.073	0.0174		
EF0305 MNWH24	-29.46	7.39	73.2	0.068	0.0183		
EF0305 MNWH25	-28.71	6.74	75.3	0.042	0.0105		
EF0305 MNWH26	-28.75	6.49	74.4	0.103	0.0264		
EF0305 MNWH28	-29.69	9.04	78.2	0.257	0.0560		
EF0306 MNWH30	-33.06	9.75	71.2	0.153	0.0441		
EF0307 MNWH1	-30.66	8.77	75.1	0.161	0.0401	DUP-PE-FISH-4	
EF0307 MNWH2	-29.77	8.60	76.4	0.266	0.0628		
EF01 RDSH18	-25.83	8.17	74.7	0.268	0.0678		Not aged; based on data presented in Houston and Belk (2006)
EF01 RDSH19	-25.56	8.57	76.1	0.229	0.0547		Not aged; based on data presented in Houston and Belk (2006)
EF01 RDSH20	-25.41	7.59	75.2	0.179	0.0444		Not aged; based on data presented in Houston and Belk (2006)
EF01 RDSH21	-25.58	7.91	75.3	0.224	0.0553		Not aged; based on data presented in Houston and Belk (2006)
EF01 RDSH22	-25.49	8.46	76.8	0.260	0.0603		Not aged; based on data presented in Houston and Belk (2006)
EF01 RDSH23	-25.22	8.21	76.0	0.272	0.0653		Not aged; based on data presented in Houston and Belk (2006)
EF01 RDSH24	-24.30	8.27	76.6	0.243	0.0569		Not aged; based on data presented in Houston and Belk (2006)
EF01 RDSH25	-25.63	7.88	77.0	0.147	0.0338		Not aged; based on data presented in Houston and Belk (2006)
EF01 RDSH26	-25.34	8.04	75.6	0.185	0.0451		Not aged; based on data presented in Houston and Belk (2006)
EF01 RDSH27	-25.88	8.17	75.4	0.268	0.0659		Not aged; based on data presented in Houston and Belk (2006)
EF01 RDSH28	-25.96	8.02	75.9	0.189	0.0455		Not aged; based on data presented in Houston and Belk (2006)

**APPENDIX E**

**SOIL AND VEGETATION SAMPLING FIELD NOTES  
AND PHOTO DOCUMENTATION**

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## Site Notes

**Location:** Peace River

**Station ID:** P1

**Zone:** 10 V

**UTM N:** 6207931

**UTM E:** 566725

**Date:** 11-Jul-10

**Time:** 0900

**Cover Type:** WH

Willow-Horsetail-Sedge-Riparian Wetland

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Brown, rooted, semi-dry soil beneath *Sphagnum*.

**B Horizon:** Fine, sandy mineral soil; well-sorted, undisturbed.

**Soil A Sampled:** Top 3-5cm

**Soil B Sampled:** No

### **Vegetation**

Mature white spruce forest, sparse cottonwood and alder.

Understory - grass, prickly rose, alder, juv. spruce, *Sphagnum*.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P2

**Zone:** 10 V  
**UTM N:** 6208354  
**UTM E:** 567243

**Date:** 11-Jul-10  
**Time:** 0940

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thin, undisturbed, fibrous; *Sphagnum* on surface with conif/deciduous litter. Rapid transition to B horizon.

**B Horizon:** Inorganic layer is gray fine, sandy; well sorted and uniform. Semi-dry.

**Soil A Sampled:** Top 2-3cm

**Soil B Sampled:** (ID: P2 INORGANIC)

### **Vegetation**

Mature white spruce old growth forest with sparse, low undergrowth of shrub.

Understory - abundant coverage of sarsaparilla with some wild rose, snow berry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P3

**Zone:** 10 V

**UTM N:** 6200621

**UTM E:** 567261

**Date:** 11-Jul-10

**Time:** 1015

**Cover Type:** Fm02

Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thin, coniferous dominated, fibrous, organic layer.

**B Horizon:** Fine-medium grey sand; uniform profile and consistency.

**Soil A Sampled:** Top 1-2cm

**Soil B Sampled:** No

### **Vegetation**

Black cottonwood, balsam, white spruce trees/shrubs, grass, wolf willow, snowberry.

Situated on elevated bench near the river, occasionally flooded; gravelly sandy soil; sparse understory of wolf willow and grass.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P4

**Zone:** 10 V

**UTM N:** 6211614

**UTM E:** 569756

**Date:** 11-Jul-10

**Time:** 1050

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** 2-3 cm thick coniferous litter and humus with few roots; dry, brown.

**B Horizon:** Deep grey colored sand.

**Soil A Sampled:** Top 2-3cm

**Soil B Sampled:** No

### **Vegetation**

Immature old growth white spruce; old & fallen cottonwood (balsam, maple). Juniper bunches, sarsaparilla, grass, northern bedstraw.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Zone:** 10 V

**Date:** 11-Jul-10

**Station ID:** P5

**UTM N:** 6212143

**Time:** 1140

**UTM E:** 570815

**Cover Type:** WH

Willow-Horsetail-Sedge-Riparian Wetland

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Very thin, patchy surface soil with sparse organic content, dry with gravel beneath. Lots of ungulate feces.

**B Horizon:** Sand and gravel on sand bar.

**Soil A Sampled:** Top > 1cm

**Soil B Sampled:** No

### **Vegetation**

Sparse cottonwood, wolf willow; some spruce, small mountain aven. Open gravel bar and good ungulate habitat; sparse vegetation, very thin sparse organic layer.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P6

**Zone:** 10 V  
**UTM N:** 6212670  
**UTM E:** 571493

**Date:** 11-Jul-10  
**Time:** 1225

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### *Soil*

**A Horizon:** 2-3 cm thick, coniferous soil, fibrous, loose, brown and dry.

**B Horizon:** Grey, silty clay; very fine and dry.

**Soil A Sampled:** Top 2-5cm

**Soil B Sampled:** No

### *Vegetation*

Mature mixed cottonwood and white spruce forest.

Understory; abundant dead leaf litter - wild prickly rose, sarsaparilla, aster, red-osier dogwood, goldenrod.

**Vegetation Sampled:** No

## Photographs

### *Soil*



### *Vegetation*



## Site Notes

**Location:** Peace River

**Station ID:** P8

**Zone:** 10 V

**UTM N:** 6219141

**UTM E:** 577329

**Date:** 11-Jul-10

**Time:** 1435

**Cover Type:** Fm02

Red-osier Dogwood

**QA Sample?:** Soil Duplicate ID: PDUP-2

## Field Notes

### **Soil**

**A Horizon:** 5-7 cm thick organic, brown humic layer; mesic, coniferous matter.

**B Horizon:** Silty, grey clay.

**Soil A Sampled:** Top 2-6cm

**Soil B Sampled:** No

### **Vegetation**

Beautiful white spruce old growth forest.

Understory - sarsaparilla, wild rose, *Sphagnum*, solomon seal, aster, juv. spruce.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P9

**Zone:** 10 V  
**UTM N:** 6219694  
**UTM E:** 578625

**Date:** 11-Jul-10  
**Time:** 1525

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Humus, coniferous/deciduous mix; brown, loose and dry.

**B Horizon:** Silt, sand, grey.

**Soil A Sampled:** Top 2-5cm

**Soil B Sampled:** No

### **Vegetation**

Mature white spruce and balsam forest; open, sparse understory cover.

Understory - some dogwood, rose, sarsaparilla, *Sphagnum*, solomon seal, grass.

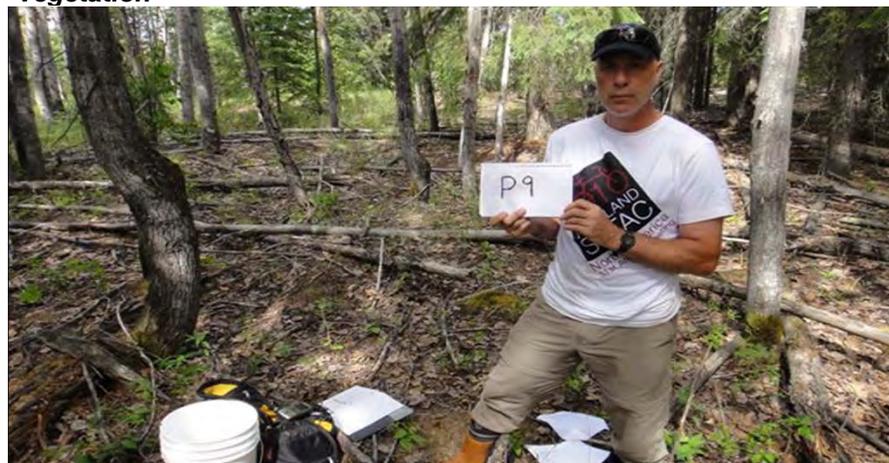
**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P11-A

**Zone:** 10 V  
**UTM N:** 6219569  
**UTM E:** 578762

**Date:** 11-Jul-10  
**Time:** 1550

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Conif/deciduous litter; brown, semi-moist.

**B Horizon:** Silty, grey, uniform clay.

**Soil A Sampled:** Top 5-9cm

**Soil B Sampled:** No

### **Vegetation**

Mature old growth cottonwood/white spruce forest.

Understory - lots of sarsaparilla, rose, raspberry, strawberry, horsetail, *Sphagnum*.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P11-B

**Zone:** 10 V  
**UTM N:** 6219599  
**UTM E:** 578900

**Date:** 11-Jul-10  
**Time:** 1615

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thick (6-8 cm) well developed, semi-dry, conif/deciduous mix; fibrous, rooty and brown.

**B Horizon:** Silty, grey, dry clay.

**Soil A Sampled:** Top 6-8cm

**Soil B Sampled:** No

### **Vegetation**

Old growth cottonwood/white spruce/paper birch forest.

Understory - sarsaparilla, high-bush cranberry, strawberry, raspberry, rose, horsetail, snowberry, alder.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P12-A

**Zone:** 10 V  
**UTM N:** 6220100  
**UTM E:** 581700

**Date:** 11-Jul-10  
**Time:** 1700

**Cover Type:** CF  
Cultivated Field

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** <1cm of litter/humus; grassy roots.

**B Horizon:** Grey, silty/sand hard inorganic soil; mixed; shallow root penetration.

**Soil A Sampled:** Top 5cm; integrated A and B layers

**Soil B Sampled:** No

### **Vegetation**

Cultivated hay field with dandelions; hard inorganic soil.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



### Site Notes

**Location:** Peace River  
**Station ID:** P12-B

**Zone:** 10 V  
**UTM N:** 6220164  
**UTM E:** 581800

**Date:** 11-Jul-10  
**Time:** 1715

**Cover Type:** CF  
Cultivated Field

**QA Sample?:** No

### Field Notes

#### **Soil**

**A Horizon:** Hard-packed till.

**B Horizon:** No distinction from A horizon; integrated soil sample from top 5 cm taken.

**Soil A Sampled:** Top 5cm  
**Soil B Sampled:** No

#### **Vegetation**

Cultivated field. Grass.

**Vegetation Sampled:** No

### Photographs

#### **Soil**



#### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P13-A

**Zone:** 10 V  
**UTM N:** 6220566  
**UTM E:** 582973

**Date:** 11-Jul-10  
**Time:** 1745

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Dark brown, coniferous, fibrous and dry woody debris.

**B Horizon:** Grey, silty clay; deep.

**Soil A Sampled:** Top 5-6cm

**Soil B Sampled:** No

### **Vegetation**

90% dense white spruce forest. Small tree diameter.

Understory - sparse; moss, sarsaparilla, snowberry shrub. 80% bare litter, bark, wood moss, grass.

**Vegetation Sampled:** No

Note: 13 appeared different from other SH habitats with greater proportion of white spruce, dense forest with little light penetration, small trees; few poplars

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P13-B

**Zone:** 10 V  
**UTM N:** 6220600  
**UTM E:** 583097

**Date:** 11-Jul-10  
**Time:** 1800

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Humic layer very similar to P13-A.

**B Horizon:** No notes.

**Soil A Sampled:** Top 4-6cm  
**Soil B Sampled:** No

### **Vegetation**

Very similar to P13-A; dense white spruce forest, few birch and poplar.

Understory - sparse understory of wild sarsaparilla, moss, raspberry, rose.

**Vegetation Sampled:** Wild sarsaparilla

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P15

**Zone:** 10 V  
**UTM N:** 6223987  
**UTM E:** 566812

**Date:** 15-Jul-10  
**Time:** 0915

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### *Soil*

**A Horizon:** Coniferous humus litter.

**B Horizon:** Light brown clay/silt.

**Soil A Sampled:** Top 4-6cm  
**Soil B Sampled:** No

### *Vegetation*

Very dense forest of white spruce (med. diameter) with scattered birch.

Understory - moss or bare; very sparse wild sarsaparilla, rose, bunchberry.

**Vegetation Sampled:** No

## Photographs

### *Soil*



### *Vegetation*



## Site Notes

**Location:** Peace River  
**Station ID:** P17-A

**Zone:** 10 V  
**UTM N:** 6225856  
**UTM E:** 589245

**Date:** 15-Jul-10  
**Time:** 0950

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Rich, brown, primarily deciduous litter.

**B Horizon:** Silty clay.

**Soil A Sampled:** Top 7-8cm

**Soil B Sampled:** No

### **Vegetation**

Mixed birch, poplar, pine, small alder forest.

Understory - prickly rose, abundant sarsaparilla, raspberry, strawberry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P17-B

**Zone:** 10 V  
**UTM N:** 6226038  
**UTM E:** 589498

**Date:** 15-Jul-10  
**Time:** 1015

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thin, not well-developed, very little humus. Primarily deciduous.

**B Horizon:** Clay - glacial till, very fine, dense, caked.

**Soil A Sampled:** Top 1-3cm

**Soil B Sampled:** (ID: P17-B INORGANIC)

### **Vegetation**

Mature, well-developed balsam forest; some pine, few birch.

Understory - rose, sarsaparilla, horsetail, alder, dogwood, strawberry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P17-C

**Zone:** 10 V  
**UTM N:** 6226440  
**UTM E:** 590113

**Date:** 15-Jul-10  
**Time:** 1105

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thick brown, peaty humus; grain size decreases with increasing depth through profile.

**B Horizon:** Silty, grey clay.

**Soil A Sampled:** Top 10-12cm

**Soil B Sampled:** No

### **Vegetation**

Mixed spruce, cottonwood and balsam forest; mature old growth.

Understory - rose, sarsaparilla (low); gooseberry, horsetail, alder, dogwood, bunchberry, snowberry, thimbleberry (high).

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P17-D

**Zone:** 10 V  
**UTM N:** 6226420  
**UTM E:** 590288

**Date:** 15-Jul-10  
**Time:** 1130

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Moderately thick, rich brown, coniferous/deciduous litter/soil mixture.

**B Horizon:** Sharp transition to hard flaky clay (similar to P17-A).

**Soil A Sampled:** Top 5-9cm

**Soil B Sampled:** No

### **Vegetation**

Mixed pine, balsam forest; various stages, few birch.

Understory - relatively sparse; sarsaparilla, strawberry, bunchberry, rose. Also alder bush and thimbleberry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P17-E

**Zone:** 10 V  
**UTM N:** 6226746  
**UTM E:** 590718

**Date:** 15-Jul-10  
**Time:** 1205

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Moderately thick humic layer consisting of coniferous /deciduous mix.

**B Horizon:** Flaky, loose clay, immediately below humus.

**Soil A Sampled:** Top 8-10cm

**Soil B Sampled:** No

### **Vegetation**

Old balsam/white spruce forest. More alder.

Understory - prickly rose, gooseberry, horsetail, dogwood, goldenrod.

**Vegetation Sampled:** Prickly rose; horsetail

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P19

**Zone:** 10 V

**UTM N:** 6229515

**UTM E:** 594627

**Date:** 15-Jul-10

**Time:** 1245

**Cover Type:** SH

Currant-Horsetail

**QA Sample?:** No

## Field Notes

### ***Soil***

**A Horizon:** Coniferous, loose, brown and loamy.

**B Horizon:** Silty, powdery, dry clay.

**Soil A Sampled:** Top 5-7cm

**Soil B Sampled:** No

### ***Vegetation***

Beautiful old white pine forest with occasional old large cottonwood.

Understory - sparse and low; rose, dogwood, grass, solomon seal, moss.

**Vegetation Sampled:** No

## Photographs

### ***Soil***



### ***Vegetation***



## Site Notes

**Location:** Peace River  
**Station ID:** P20-A

**Zone:** 10 V  
**UTM N:** 6230796  
**UTM E:** 595393

**Date:** 9-Jul-10  
**Time:** 1730

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### ***Soil***

**A Horizon:** Dark brown humus.

**B Horizon:** Grey, dry, silty clay.

**Soil A Sampled:** Top 3-5cm

**Soil B Sampled:** No

### ***Vegetation***

Young aspen forest.

Understory - horsetail, prickly rose, wolf willow.

**Vegetation Sampled:** No

## Photographs

### ***Soil***



### ***Vegetation***



## Site Notes

**Location:** Peace River  
**Station ID:** P20-B

**Zone:** 10 V  
**UTM N:** 6230352  
**UTM E:** 595460

**Date:** 9-Jul-10  
**Time:** 1750

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Brown organic layer with lots of roots, dry, crumbly, friable soil.

**B Horizon:** Grey, dry, silty clay.

**Soil A Sampled:** Top 2-5cm  
**Soil B Sampled:** No

### **Vegetation**

Aspen forest.

Understory - horsetail, prickly rose, wolf willow.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P21-A

**Zone:** 10 V

**UTM N:** 6231198

**UTM E:** 597457

**Date:** 14-Jul-10

**Time:** NA

**Cover Type:** SH: ac

Currant-Horsetail with Cow Parsnip

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thick, peaty, dark brown and rich humus.

**B Horizon:** Light brown, sandy silt.

**Soil A Sampled:** Top 12-15cm

**Soil B Sampled:** No

### **Vegetation**

Very mature forest of large cottonwood/white spruce, with scattered birch, poplar and alder.

Very abundant horsetail, large raspberry, ferns, prickly rose, gooseberry, sarsaparilla.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P21-B

**Zone:** 10 V  
**UTM N:** 6231232  
**UTM E:** 597327

**Date:** 14-Jul-10  
**Time:** 1700

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** Soil Duplicate ID: PDUP-4; 9-15 cm thick humic organic layer similar to original; some coniferous matter.

## Field Notes

### **Soil**

**A Horizon:** Thick, peaty soil with rich, dark brown humic layer. Lots of buried wood.

**B Horizon:** Beneath the inorganic layer is uniform grey, undisturbed clay/silt.

**Soil A Sampled:** Top 7-14cm

**Soil B Sampled:** No

### **Vegetation**

Old mature white spruce, balsam, cottonwood and birch mixed forest.

Understory - raspberry, horsetail, fern, alder, sarsaparilla, grass, gooseberry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Zone:** 10 V

**Date:** 15-Jul-10

**Station ID:** P23

**UTM N:** 6232961

**Time:** 1400

**UTM E:** 599547

**Cover Type:** ~~WH~~ - Fm02 (Note: moved from WH to Fm02 habitat. Original location was 100% sandy soil with no organics)  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### *Soil*

**A Horizon:** 2-5 cm thick brown humic layer comprised mostly of deciduous material.

**B Horizon:** Silty sand.

**Soil A Sampled:** Top 2-5cm

**Soil B Sampled:** No

### *Vegetation*

Balsam forest with some alder and a few spruce.

Understory - grass and some goldenrod.

**Vegetation Sampled:** No

## Photographs

### *Soil*



### *Vegetation*



## Site Notes

**Location:** Peace River  
**Station ID:** P24

**Zone:** 10 V  
**UTM N:** 6233263  
**UTM E:** 600831

**Date:** 15-Jul-10  
**Time:** 1435

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Predominantly spruce litter; fermented.

**B Horizon:** Grey silt/clay inorganic; evidence of old flood horizon showing deeper in soil.

**Soil A Sampled:** Top 4-6cm

**Soil B Sampled:** No

### **Vegetation**

Old mature white spruce forest with 30% large cottonwood and balsam. Lots of fallen (blowdown) timber (tough hiking).

Understory - juv.spruce, rose, strawberry, dogwood.

**Vegetation Sampled:** Spruce needles

## Photographs

### **Soil**



### **Vegetation**



### Site Notes

**Location:** Peace River  
**Station ID:** P25-A

**Zone:** 10 V  
**UTM N:** 6233564  
**UTM E:** 600832

**Date:** 15-Jul-10  
**Time:** 1500

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

### Field Notes

#### **Soil**

**A Horizon:** Conif/deciduous mix.

**B Horizon:** Silty clay.

**Soil A Sampled:** Top 4-6cm

**Soil B Sampled:** No

#### **Vegetation**

Old mature white spruce forest with some large balsam.

Understory - dark (good cover); rose, sarsaparilla, moss, thimbleberry, strawberry, moss. Few juv. trees.

**Vegetation Sampled:** No

### Photographs

#### **Soil**



#### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P25-B

**Zone:** 10 V

**UTM N:** 6233488

**UTM E:** 601087

**Date:** 15-Jul-10

**Time:** 1518

**Cover Type:** Fm02

Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Predominantly coniferous.

**B Horizon:** Uniform grey silt/clay beneath; uniform consistency.

**Soil A Sampled:** Top 3-5cm

**Soil B Sampled:** (ID: P25-B INORGANIC)

### **Vegetation**

Large old primarily primarily spruce forest with large cottonwood & balsam (15%).

Understory - Prickly rose, solomon seal, thimbleberry, moss.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P25-C

**Zone:** 10 V

**UTM N:** 6233343

**UTM E:** 601274

**Date:** 15-Jul-10

**Time:** NA

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Primarily coniferous matter, rich, with *Sphagnum* moss on surface.

**B Horizon:** Grey, silty clay.

**Soil A Sampled:** Top 5-7cm

**Soil B Sampled:** No

### **Vegetation**

Old white spruce forest with 5% cottonwood/balsam.

Understory - moss, juniper, rose, alder, bunchberry, thimbleberry, solomon seal, grass.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P28

**Zone:** 10 V  
**UTM N:** 6234891  
**UTM E:** 605584

**Date:** 10-Jul-10  
**Time:** 1610

**Cover Type:** BT  
Labrador tea-*Sphagnum*

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Fibrous, moist, black and rich with fine roots. Very deep (>20-30cm).

**B Horizon:** The organic layer persisted deeper than our sampling of 30 cm.

**Soil A Sampled:** NA

**Soil B Sampled:** No

### **Vegetation**

White spruce, tamarack, sedge, bog willow.

Sampled on the edge of Watson Slough bordering a wetland very boggy ground.

**Vegetation Sampled:** WILLOW for metals and Hg

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P29

**Zone:** 10 V

**UTM N:** 6235008

**UTM E:** 605608

**Date:** 10-Jul-10

**Time:** 1640

**Cover Type:** BT

Labrador tea-*Sphagnum*

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thick, black, matted, fairly wet.

**B Horizon:** Organic layer persisted deeper than 30 cm.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

### **Vegetation**

Black spruce, white spruce, tamarack with *Sphagnum* layer on top.

Understory - Labrador tea, false solomon seal.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P30

**Zone:** 10 V

**UTM N:** 6235315

**UTM E:** 606156

**Date:** 10-Jul-10

**Time:** 1530

**Cover Type:** BT

Labrador tea-*Sphagnum*

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Deep, fibrous, moist, dark brown/black.

**B Horizon:** Very deep (20-30cm) organic layer; inorganic layer was deeper than our sampling.

**Soil A Sampled:** Took top 5 cm only

**Soil B Sampled:** No

### **Vegetation**

Black spruce, paper birch, poplar, dogwood, white spruce.

Understory - grass, horsetail, some labrador tea/*Sphagnum* at start near road.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



### Site Notes

**Location:** Peace River  
**Station ID:** P31  
Watson Slough

**Zone:** 10 V  
**UTM N:** 6235555  
**UTM E:** 606636

**Date:** 10-Jul-10  
**Time:** 1450

**Cover Type:** SE  
Sedge Wetland

**QA Sample?:** No

### Field Notes

#### **Soil**

**A Horizon:** Deep substrated rooted soil.

**B Horizon:** Organic layer persisted deeper than our sampling (30 cm).

**Soil A Sampled:** Took top 5 cm; also sampled for MeHg

**Soil B Sampled:** No

#### **Vegetation**

Sedge and cattail field; about 1km long, 400m wide.

**Vegetation Sampled:** SEDGE

### Photographs

#### **Soil**



#### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P32  
Watson Slough

**Zone:** 10 V  
**UTM N:** 6235836  
**UTM E:** 607187

**Date:** 10-Jul-10  
**Time:** 1400

**Cover Type:** SE  
Sedge Wetland

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Very deep, rich, black, fibrous, wet.

**B Horizon:** Organic layer persisted deeper than our sampling.

**Soil A Sampled:** Took top 5 cm only

**Soil B Sampled:** No

### **Vegetation**

Sedge (grass), tubular sedge/rush cattail.

**Vegetation Sampled:** REEDS, SEDGE, CATTAILS for metals and Hg

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P33

**Zone:** 10 V

**UTM N:** 6236008

**UTM E:** 607166

**Date:** 10-Jul-10

**Time:** 1335

**Cover Type:** SH

Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Mostly mineral; dark brown, dry & powdery, loose roots with a woody appearance.

**B Horizon:** Rapid transition to B horizon. Silty clay.

**Soil A Sampled:** Top 2cm

**Soil B Sampled:** No

### **Vegetation**

Aspen grove at higher elevation just above Watson Slough.

Aspen shrub, some prickly rose, peavine, some grass.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P34  
Watson Slough

**Zone:** 10 V  
**UTM N:** 6236006  
**UTM E:** 607305

**Date:** 10-Jul-10  
**Time:** 1315

**Cover Type:** ~~BL~~ SE (Note: original classification was BL; we re-classified)  
Sedge Wetland

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Dark brown, silty, wet humus with few roots.

**B Horizon:** Begins 30-40cm down; grey sand.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

### **Vegetation**

Cattail marsh with stinging nettle, *Typha*, Canadian thistle, black spruce at margins.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Zone:** 10 V

**Date:** 16-Jul-10

**Station ID:** P35-A

**UTM N:** 6235721

**Time:** 1015

**UTM E:** 607649

**Cover Type:** WH

Willow-Horsetail-Sedge-Riparian Wetland

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** 3-5 cm deep, but burn has charred from surface to 1cm deep.

**B Horizon:** Grey silty sand.

**Soil A Sampled:** Top 3-5cm

**Soil B Sampled:** No

### **Vegetation**

The western end of the polygon has been severely burned and most trees dead; large stand of dead spruce, few poplar.

New shrubs developing with invasive weeds. Yellow and white sweet clover, prickly rose, dogwood, wolf willow, grass, dandelion, goldenrod, raspberry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



### Site Notes

**Location:** Peace River  
**Station ID:** P35-B

**Zone:** 10 V  
**UTM N:** 6236062  
**UTM E:** 608161

**Date:** 16-Jul-10  
**Time:** 1050

**Cover Type:** WH  
Willow-Horsetail-Sedge-Riparian Wetland

**QA Sample?:** No

### Field Notes

#### **Soil**

**A Horizon:** Partially burned; Primarily deciduous humic layer with some charcoal on surface.

**B Horizon:** Light brown, sandy clay/silt.

**Soil A Sampled:** Top 3-6cm

**Soil B Sampled:** No

#### **Vegetation**

Large older burn area - thick yellow sweet clover, dogwood, scouring rush, dead juv. balsam and reasonable abundance of living medium size balsam.

**Vegetation Sampled:** No

### Photographs

#### **Soil**



#### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P35-C

**Zone:** 10 V

**UTM N:** 6236678

**UTM E:** 608738

**Date:** 16-Jul-10

**Time:** 1205

**Cover Type:** WH

Willow-Horsetail-Sedge-Riparian Wetland

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** 2-3 cm thick, deciduous organic layer, rich brown.

**B Horizon:** Well sorted, medium sand situated on river floodplain

**Soil A Sampled:** Top 2-3cm

**Soil B Sampled:** No

### **Vegetation**

Unburned area of polygon (unlike -A and -B); mixed age balsam forest on floodplain (furthest east).

Understory consists of wolf willow, solomon seal, raspberry, alder, rose, scouring rush, grass, goldenrod, dandelion. 30% bare litter cover.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P37

**Zone:** 10 V  
**UTM N:** 6236254  
**UTM E:** 608484

**Date:** 16-Jul-10  
**Time:** 1105

**Cover Type:** WH  
Willow-Horsetail-Sedge-Riparian Wetland

**QA Sample?:** No

## Field Notes

### *Soil*

**A Horizon:** No humic layer; uniform brown sand. Nutrient samples not collected.

**B Horizon:** No notes.

**Soil A Sampled:** No organic layer; sand only

**Soil B Sampled:** No

### *Vegetation*

Scrubby short balsam.

Understory - juv. balsam, snowberry, mountain sagewort.

**Vegetation Sampled:** No

## Photographs

### *Soil*



### *Vegetation*



## Site Notes

**Location:** Peace River  
**Station ID:** P38-A

**Zone:** 10 V  
**UTM N:** 6236880  
**UTM E:** 608523

**Date:** 10-Jul-10  
**Time:** 1055

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** 6 cm Mixed fibrous organic layer; organic at surface & buried 5 cm down; dry roots with brown loose soil; grading into fine sandy/silt.

**B Horizon:** 7cm down; light brown sandy silt - no gravel.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

### **Vegetation**

Balsam forest

Shrubs - prickly rose, sunflower, red-osier dogwood, creamy peavine, wild sarsaparilla.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P38-B

**Zone:** 10 V

**UTM N:** 6236798

**UTM E:** 608424

**Date:** 10-Jul-10

**Time:** 1120

**Cover Type:** Fm02

Red-osier Dogwood

**QA Sample?:** Soil Duplicate ID: PDUP-1

## Field Notes

### **Soil**

**A Horizon:** 6 cm thick organic layer of dry, brown, loose, disturbed humus with roots. Second A layer 2cm beneath.

**B Horizon:** Fine, dry & crumbly, light grey clay/silt with some roots.

**Soil A Sampled:** Top 2cm

**Soil B Sampled:** Yes! ID: P38-B INORGANIC

### **Vegetation**

Balsam, poplar, prickly rose, peavine, red-osier dogwood, juv. white spruce.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



**Site Notes**

**Location:** Peace River

**Zone:** 10 V

**Date:** 16-Jul-10

**Station ID:** P39

**UTM N:** 6236528

**Time:** 1150

**UTM E:** 609059

**Cover Type:** WH

Willow-Horsetail-Sedge-Riparian Wetland

**QA Sample?:** No

**Field Notes**

***Soil***

**A Horizon:** Thin, 0-5 cm thick, variable turf layer, no humus. Very sparse organics.

**B Horizon:** Fine sand, silt and clay; well sorted

**Soil A Sampled:** Took top 5 cm

**Soil B Sampled:** No

***Vegetation***

Situated on floodplain with juvenile balsam, abundant grass, with sparse willow, mountain sagewort.

**Vegetation Sampled:** No

**Photographs**

***Soil***



***Vegetation***



## Site Notes

**Location:** Peace River

**Station ID:** P41

**Zone:** 10 V

**UTM N:** 6237450

**UTM E:** 611364

**Date:** 16-Jul-10

**Time:** 1330

**Cover Type:** AM

Step moss-Peavine

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** 4-5cm thick, mostly deciduous humus with charcoal. Burned polygon but good soil (+ buried ash layer > 5cm).

**B Horizon:** Clay/silt; buried organic soil horizon below clay lens; charred wood at depth.

**Soil A Sampled:** Top 4-5cm; also sampled for **methyl Hg**

**Soil B Sampled:** No

### **Vegetation**

Burned - young trembling aspen forest/saplings with grass and alder.

Understory - rose with some northern bedstraw, few strawberry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Zone:** 10 V

**Date:** 16-Jul-10

**Station ID:** P42

**UTM N:** 6236510

**Time:** 1405

**UTM E:** 612085

**Cover Type:** SW

Wildrye-Peavine

**QA Sample?:** Soil Duplicate ID: PDUP-5; 5-6 cm sorted brown dry organic layer.

## Field Notes

### **Soil**

**A Horizon:** Sorted, brown, dry. Good litter layer (pine needles).

**B Horizon:** Yellowish silty clay beneath.

**Soil A Sampled:** Top 3-6cm

**Soil B Sampled:** No

### **Vegetation**

Old mature trembling aspen and white spruce forest.

Understory - rose, alder, strawberry, chokecherry, bunchberry; some peavine and sarsaparilla.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**





## Site Notes

**Location:** Peace River

**Zone:** 10 V

**Date:** 16-Jul-10

**Station ID:** P44

**UTM N:** 6235555

**Time:** 1530

**UTM E:** 613888

**Cover Type:** Fm02 (possibly erroneous classification)  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### *Soil*

**A Horizon:** Very thin (1 cm) turf layer and litter above medium brown sand; well-sorted.

**B Horizon:** Grey/brown silt clay, uniform consistency.

**Soil A Sampled:** Took top 5 cm

**Soil B Sampled:** No

### *Vegetation*

Loose balsam open forest of mixed maturity with alder, grass, goldenrod, mountain sagewort, scouring rush, silverweed.

**Vegetation Sampled:** No

## Photographs

### *Soil*



### *Vegetation*



## Site Notes

**Location:** Peace River  
**Station ID:** P46-A

**Zone:** 10 V  
**UTM N:** 6233738  
**UTM E:** 615484

**Date:** 13-Jul-10  
**Time:** 1650

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Mostly coniferous, brown, loose and fibrous.

**B Horizon:** Silty clay.

**Soil A Sampled:** Top 3-4cm

**Soil B Sampled:** No

### **Vegetation**

Mature old white spruce, some old large cottonwood.

Understory - dense shrub layer of prickly rose, red-osier dogwood, young spruce, cranberry, sarsaparilla, alder, moss

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P46-B

**Zone:** 10 V  
**UTM N:** 6233603  
**UTM E:** 615221

**Date:** 13-Jul-10  
**Time:** 1715

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** 4-5 cm thick, fibrous woody and brown coniferous soil.

**B Horizon:** Silty grey clay.

**Soil A Sampled:** Top 4-5cm

**Soil B Sampled:** No

### **Vegetation**

90% white spruce, some older cottonwood. Many trees down and access extremely difficult

Understory - beneath is a thick blanket of bunchberry; above is abundant prickly; rose, some alder, dogwood and juv.spruce.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P46-C

**Zone:** 10 V

**UTM N:** 6235761

**UTM E:** 615514

**Date:** 13-Jul-10

**Time:** 1800

**Cover Type:** SH

Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Moderately thick, brown, dry & crumbly, woody, and coniferous with roots.

**B Horizon:** Silty grey clay.

**Soil A Sampled:** Top 5-8cm

**Soil B Sampled:** No

### **Vegetation**

90% white spruce and some large cottonwood. Many trees down in this polygon, making access very difficult

Shrub - abundant prickly rose, sarsaparilla, cranberry, juvenile spruce, alder.

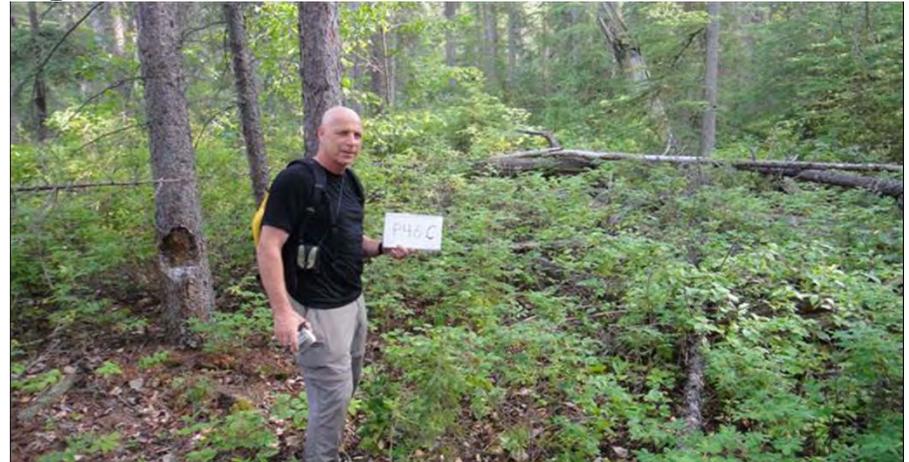
**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Zone:** 10 V

**Date:** 13-Jul-10

**Station ID:** P47-A

**UTM N:** 6232923

**Time:** 1500

**UTM E:** 616219

**Cover Type:** SH

Currant-Horsetail

**QA Sample?:** A horizon collected for MeHg analysis

## Field Notes

### **Soil**

**A Horizon:** Thick (6 - 10 cm) brown, dry, deciduous humus litter; rooty and fibrous. Sampled soil for methyl Hg.

**B Horizon:** Gray silt clay; uniform consistency.

**Soil A Sampled:** Composite of top 6-10cm

**Soil B Sampled:** No

### **Vegetation**

Juvenile balsam & poplar/ mature poplar; 1 large white spruce.

Understory - large prickly rose, dogwood, goldenrod, sarsaparilla.

**Vegetation Sampled:** BALSAM leaves

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P47-B

**Zone:** 10 V

**UTM N:** 6232939

**UTM E:** 616304

**Date:** 13-Jul-10

**Time:** 1525

**Cover Type:** SH

Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thick, very rooty and disturbed humus; well processed, woody debris. Thick leaf litter.

**B Horizon:** Admixed with humic layer, clay silt

**Soil A Sampled:** Top 7-9cm

**Soil B Sampled:** No

### **Vegetation**

Mature balsam forest - multi-age/size.

Understory - very dense and thick understory of prickly rose, dogwood, cranberry, some sarsaparilla beneath.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P48

**Zone:** 10 V  
**UTM N:** 6233261  
**UTM E:** 616666

**Date:** 13-Jul-10  
**Time:** 1600

**Cover Type:** Fm02  
Red-osier Dogwood (possibly mis-classified)

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thin (<1 cm) humus, very sandy; primarily inorganic, poorly developed young soil on floodplain.

**B Horizon:** Uniform consistency beneath A horizon; silty clay, light brown.

**Soil A Sampled:** Took top 5cm

**Soil B Sampled:** No

### **Vegetation**

Open mixed balsam forest.

Understory - grass, stinkweed, clover, goldenrod.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P49-A

**Zone:** 10 V  
**UTM N:** 6232107  
**UTM E:** 618220

**Date:** 13-Jul-10  
**Time:** 1200

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Brown, woody, loose and mostly coniferous humus with *Sphagnum* at surface.

**B Horizon:** Sandy/silty clay.

**Soil A Sampled:** Top 5-7cm

**Soil B Sampled:** No

### **Vegetation**

Relatively old white spruce forest (some mature birch) and alder at edges or forest.

Understory - sparse; sarsaparilla, solomon seal, rose, raspberry. Station was accessed by crossing an old channel and beaver lodge

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P49-B

**Zone:** 10 V  
**UTM N:** 6232169  
**UTM E:** 618019

**Date:** 13-Jul-10  
**Time:** 1220

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Loose, peaty and dry deciduous litter.

**B Horizon:** Fine, light brown and powdery clay/silt.

**Soil A Sampled:** Top 4-8cm

**Soil B Sampled:** No

### **Vegetation**

Nice birch stand with old cottonwood, few juvenile spruce. The forest runs parallel along a ridge adjacent to the river

Understory - 100% wild sarsaparilla cover with higher rose, alder, northern gooseberry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P49-C

**Zone:** 10 V  
**UTM N:** 6232798  
**UTM E:** 617175

**Date:** 13-Jul-10  
**Time:** 1340

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Conif/deciduous mix with loose leaf litter on surface; brown, rooty.

**B Horizon:** Clay/silt on top of sandy lens.

**Soil A Sampled:** Top 3-6cm

**Soil B Sampled:** No

### **Vegetation**

Mature white pine forest with patches of balsam & poplar.

Understory - sparse moss cover; prickly rose, cranberry, pea, bunchberry.  
Open areas - alder, goldenrod, sarsaparilla, dogwood, solomon seal.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P49-D

**Zone:** 10 V  
**UTM N:** 6232204  
**UTM E:** 617475

**Date:** 13-Jul-10  
**Time:** 1610

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thick (to 12 cm) well developed, rich brown/black humic layer. Thick leaf litter layer above.

**B Horizon:** Silty grey clay.

**Soil A Sampled:** Top 10-11cm

**Soil B Sampled:** No

### **Vegetation**

Very large, old cottonwood/white spruce mixed stand, with some smaller balsam.

Understory - juvenile alder, abundant prickly rose.

**Vegetation Sampled:** ROSE, DOGWOOD, ALDER for Hg analysis

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Zone:** 10 V

**Date:** 13-Jul-10

**Station ID:** P50

**UTM N:** 6232500

**Time:** 1100

**UTM E:** 620577

**Cover Type:** Fm02 (possibly misclassified)  
Red-osier Dogwood

**QA Sample?:** Homogenization Duplicate ID; PDUP-3

## Field Notes

### **Soil**

**A Horizon:** Thin, rooty and fibrous deciduous litter.

**B Horizon:** Light brown wilt/clay

**Soil A Sampled:** Top 2-5cm

**Soil B Sampled:** No

### **Vegetation**

Old cottonwood, alder, poplar forest.

Understory - dense understory of prickly rose, alder, dogwood, creamy peavine. Ground - solomon seal, dandelion, rose.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P51

**Zone:** 10 V

**UTM N:** 6231338

**UTM E:** 628555

**Date:** 12-Jul-10

**Time:** 1320

**Cover Type:** SW

Wildrye-Peavine

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thick organic layer of deciduous material, dark brown, fibrous, fairly rich and semi-dry; analysed for MeHg

**B Horizon:** Grey, clay/silt.

**Soil A Sampled:** Top 5-20cm

**Soil B Sampled:** No

### **Vegetation**

Balsam & poplar forest

Understory - very dense understory of alder, peavine, sarsaparilla, saskatoon berry, twisted stalk, dogwood, rose, highbush cranberry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P52-A

**Zone:** 10 V  
**UTM N:** 6232055  
**UTM E:** 627311

**Date:** 12-Jul-10  
**Time:** 1400

**Cover Type:** AM  
Step moss-Peavine

**QA Sample?:** No

## Field Notes

### *Soil*

**A Horizon:** Semi-dry, brown fine textured, well-developed, alluviated zone.

**B Horizon:** Dry, brown/grey, silty clay.

**Soil A Sampled:** Top 5-7cm

**Soil B Sampled:** No

### *Vegetation*

Young poplar forest, some birch, large cottonwood.

Understory - very well developed, diverse and abundant; lots of large prickly rose, wild sarsaparilla, bedstraw, cranberry, peavine.

**Vegetation Sampled:** No

## Photographs

### *Soil*



### *Vegetation*



## Site Notes

**Location:** Peace River

**Station ID:** P52-B

**Zone:** 10 V

**UTM N:** 6232574

**UTM E:** 626604

**Date:** 12-Jul-10

**Time:** 1545

**Cover Type:** AM

Step moss-Peavine

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Dark brown, loose & spongy, friable, semi-moist, deciduous semi-compact to loose litter layer.

**B Horizon:** Light brown, loamy clay/silt with charcoal fragments.

**Soil A Sampled:** Top 7-9cm

**Soil B Sampled:** ID: P52-B INORGANIC collected for analysis

### **Vegetation**

Aspen forest, some older cottonwood.

Understory is well developed with dense cover by prickly rose, wild sarsaparilla underneath, strawberry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



**Site Notes**

**Location:** Peace River  
**Station ID:** P52-C

**Zone:** 10 V  
**UTM N:** 6232171  
**UTM E:** 627204

**Date:** 12-Jul-10  
**Time:** 1445

**Cover Type:** AM  
Step moss-Peavine

**QA Sample?:** No

**Field Notes**

***Soil***

**A Horizon:** Light brown, deciduous organice layer, fine and dry with loose leaf litter layer

**B Horizon:** Light brown, fine-textured silty clay mineral layer

**Soil A Sampled:** Top 5-6cm

**Soil B Sampled:** No

***Vegetation***

Young poplar forest.

Understory - well-developed; rose, sarsaparilla, bedstraw, peavine, horsetail, goldenrod, soopolallie (soapberry).

**Vegetation Sampled:** No

**Photographs**

***Soil***



***Vegetation***



## Site Notes

**Location:** Peace River  
**Station ID:** P52-D

**Zone:** 10 V  
**UTM N:** 6232717  
**UTM E:** 646604

**Date:** 12-Jul-10  
**Time:** 1610

**Cover Type:** AM  
Step moss-Peavine

**QA Sample?:** No

## Field Notes

### *Soil*

**A Horizon:** Deciduous organic soil, dark brown in color, peaty, loose and dry mixed soil.

**B Horizon:** Light brown/grey silt/clay.

**Soil A Sampled:** Top 5-10cm

**Soil B Sampled:** No

### *Vegetation*

Mature aspen forest with juv.aspen understory.

Understory - aspen, prickly rose, soopolallie, wild sarsaparilla, snowberry, goldenrod.

**Vegetation Sampled:** No

## Photographs

### *Soil*



### *Vegetation*



## Site Notes

**Location:** Peace River  
**Station ID:** P53

**Zone:** 10 V  
**UTM N:** 6232588  
**UTM E:** 626639

**Date:** 12-Jul-10  
**Time:** 1525

**Cover Type:** SW  
Wildrye-Peavine

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Dark brown, deciduous, fibrous and semi-dry.

**B Horizon:** Very fine light brown clay.

**Soil A Sampled:** Top 5-8cm

**Soil B Sampled:** No

### **Vegetation**

Aspen forest; young through mature.

Understory - dense sarsaparilla, tall mature rose, dogwood, horsetail, grass.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



**Site Notes**

**Location:** Peace River  
**Station ID:** P54

**Zone:** 10 V  
**UTM N:** 6233292  
**UTM E:** 624392

**Date:** 12-Jul-10  
**Time:** 1700

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

**Field Notes**

***Soil***

**A Horizon:** Dark brown, mostly coniferous, dry and loamy humus.

**B Horizon:** Grey sandy clay/silt.

**Soil A Sampled:** Top 3-5cm

**Soil B Sampled:** No

***Vegetation***

Predominantly white spruce mature forest with some large old cottonwood.

Understory - sparse cover or prickly rose, sarsaparilla, snowberry, solomon seal, moss.

**Vegetation Sampled:** No

**Photographs**

***Soil***



***Vegetation***



## Site Notes

**Location:** Peace River  
**Station ID:** P55

**Zone:** 10 V  
**UTM N:** 6232817  
**UTM E:** 622919

**Date:** 12-Jul-10  
**Time:** 1730

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Brown, dry, woody, mostly coniferous soil. Sampled for MeHg

**B Horizon:** Grey silty clay mineral.

**Soil A Sampled:** Top 6cm

**Soil B Sampled:** No

### **Vegetation**

Predominantly mature old growth white spruce with some cottonwood, birch and alder.

Understory - soopolallie, rose, low and high bush cranberry, solomon seal, dogwood, sarsaparilla, northern blackcurrant, black gooseberry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River  
**Station ID:** P56

**Zone:** 10 V  
**UTM N:** 6232493  
**UTM E:** 621627

**Date:** 13-Jul-10  
**Time:** 1000

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Brown, spongy, coniferous, dry and loose humus.

**B Horizon:** Grey/brown sandy/silty clay.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

### **Vegetation**

Beautiful mature old growth white spruce forest with cottonwood and poplar.

Understory - prickly rose, stinging nettle, strawberry, horsetail, solomon seal, raspberry, clover, wild sarsaparilla.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Peace River

**Station ID:** P99

**Zone:** 10 V

**UTM N:** 6234880

**UTM E:** 614297

**Date:** 16-Jul-10

**Time:** 1603

**Cover Type:** Fm02  
Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Conif/deciduous mixed humus. Soil sampled for MeHg

**B Horizon:** Silty sand.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

### **Vegetation**

Old growth and undisturbed white spruce and cottonwood.

Understory - rich understory of prickly rose, dogwood, moss, horsetail, cranberry, thimbleberry, snowberry, sarsaparilla, strawberry.

**Vegetation Sampled:** ALDER

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Halfway River

**Station ID:** HW1

**Zone:** 10 V

**UTM N:** 6231750

**UTM E:** 596397

**Date:** 14-Jul-10

**Time:** 1045

**Cover Type:** Fm02

Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Deciduous, mixed with sand.

**B Horizon:** Well sorted, med-fine brown sand.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

### **Vegetation**

Open forest of mixed balsam/poplar on old floodplain.

Understory - wolf willow, grass, goldenrod, snowberry, 3-leaf clover pea, northern sweetvetch.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Halfway River

**Station ID:** HW2

**Zone:** 10 V

**UTM N:** 6231752

**UTM E:** 595750

**Date:** 14-Jul-10

**Time:** 1130

**Cover Type:** CF

Cultivated Field

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thin (1cm) humus; transition to silty clumps.

**B Horizon:** Silty loam; buried humic layer 6-8cm deep.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

### **Vegetation**

90% open field of grass, wolf willow; rose, alder, scattered cottonwood, balsam.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Halfway River

**Station ID:** HW3-A

**Zone:** 10 V

**UTM N:** 6231918

**UTM E:** 595361

**Date:** 14-Jul-10

**Time:** 1200

**Cover Type:** SH

Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Clay silt with thin turf root layer; little organic material.

**B Horizon:** >10cm is true B horizon, silt clay.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

### **Vegetation**

Old part-cultivated field? Scattered large birch and balsam. 1% white spruce.

Alder bushes, dogwood, lots tall willow, blueberry, peavine, grass, clover

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Halfway River

**Station ID:** HW3-B

**Zone:** 10 V

**UTM N:** 6231968

**UTM E:** 595562

**Date:** 14-Jul-10

**Time:** 1225

**Cover Type:** SH

Currant-Horsetail

**QA Sample?:** No

## Field Notes

### *Soil*

**A Horizon:** Thin turf layer, primarily inorganic; avoided buried rooty layer at 5-6cm deep.

**B Horizon:** Silty clay.

**Soil A Sampled:** Top 4cm

**Soil B Sampled:** No

### *Vegetation*

Old birch, willow, blueberry, horsetail, goldenrod, alder, grass, clover, peavine.

**Vegetation Sampled:** No

## Photographs

### *Soil*



### *Vegetation*



### Site Notes

**Location:** Halfway River  
**Station ID:** HW3-C

**Zone:** 10 V  
**UTM N:** 6231842  
**UTM E:** 595739

**Date:** 14-Jul-10  
**Time:** 1245

**Cover Type:** CF  
Cultivate Field

**QA Sample?:** No

### Field Notes

#### **Soil**

**A Horizon:** Very thin, mixed, loamy silt with no humus; cultivated old hay field.

**B Horizon:** No notes.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

#### **Vegetation**

Grass with dandelions and patches of blueberry.

**Vegetation Sampled:** No

### Photographs

#### **Soil**



#### **Vegetation**



## Site Notes

**Location:** Halfway River

**Station ID:** HW4

**Zone:** 10 V

**UTM N:** 6231333

**UTM E:** 595242

**Date:** 14-Jul-10

**Time:** 1330

**Cover Type:** Fm02

Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Deciduous, no humus, only fermented.

**B Horizon:** Light brown, silty sand.

**Soil A Sampled:** Top 1-2cm

**Soil B Sampled:** No

### **Vegetation**

Open balsam forest with few small spruce.

Understory - wolf willow, grass, goldenrod, dandelion, northern bedstraw, some small peavine, solomon seal.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Halfway River

**Station ID:** HW5-A

**Zone:** 10 V

**UTM N:** 6232333

**UTM E:** 593591

**Date:** 14-Jul-10

**Time:** 1530

**Cover Type:** SH

Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thin (1cm) litter over medium brown sand; extends down to >20cm.

**B Horizon:** No notes.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

### **Vegetation**

Nearshore large old cottonwood stand.

Understory - alder, rose, cranberry, dogwood, horsetail, grass.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



**Site Notes**

**Location:** Halfway River  
**Station ID:** HW5-B

**Zone:** 10 V  
**UTM N:** 6232210  
**UTM E:** 593673

**Date:** 14-Jul-10  
**Time:** 1550

**Cover Type:** SH  
Currant-Horsetail

**QA Sample?:** No

**Field Notes**

***Soil***

**A Horizon:** Conif/deciduous mixed soil.

**B Horizon:** Brown clay silt.

**Soil A Sampled:** Top 2-3cm

**Soil B Sampled:** No

***Vegetation***

Mature mix of white spruce, cottonwood old growth with young alder understory.

Dogwood, peavine, rose, strawberry, bunchberry, cranberry, sarsaparilla.

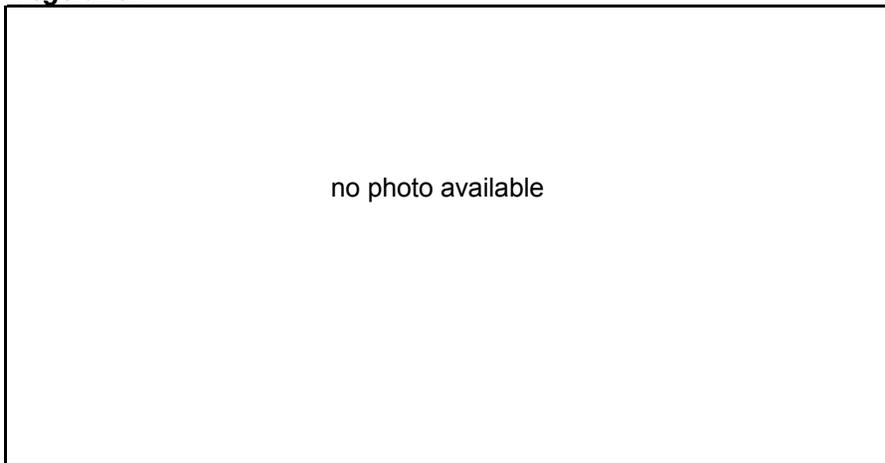
**Vegetation Sampled:** No

**Photographs**

***Soil***



***Vegetation***



## Site Notes

**Location:** Halfway River

**Station ID:** HW6-A

**Zone:** 10 V

**UTM N:** 6234330

**UTM E:** 591167

**Date:** 14-Jul-10

**Time:** 1420

**Cover Type:** WH

Willow-Horsetail-Sedge-Riparian Wetland

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Thin (1-2cm) and several buried organic layers.

**B Horizon:** No notes.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

### **Vegetation**

Tall willow (Pacific and Wolf) forest.

Undergrowth - dense; wolf willow, rose, snowberry, strawberry, solomon seal, small dogwood.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Halfway River

**Station ID:** HW6-B

**Zone:** 10 V

**UTM N:** 6234464

**UTM E:** 591048

**Date:** 14-Jul-10

**Time:** 1450

**Cover Type:** WH

Willow-Horsetail-Sedge-Riparian Wetland

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Deciduous humus. No buried organic layers.

**B Horizon:** Clay/silt.

**Soil A Sampled:** Top 4-5cm

**Soil B Sampled:** No

### **Vegetation**

Balsam, trembling aspen, Pacific willow.

Understory - wolf willow, goldenrod, grass, blueberry, young forest, elevated floodplain, flat.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



### Site Notes

**Location:** Moberly River

**Station ID:** M1

**Zone:** 10 V

**UTM N:** 6230272

**UTM E:** 628507

**Date:** 16-Jul-10

**Time:** 1705

**Cover Type:** Fm02

Red-osier Dogwood

**QA Sample?:** No

### Field Notes

#### *Soil*

**A Horizon:** Brown/uniform; about 1cm of litter/fermented matter.

**B Horizon:** Silty clay.

**Soil A Sampled:** Top 5cm

**Soil B Sampled:** No

#### *Vegetation*

Thick alder forest, some willow. Lots of stinging nettle, grass, rose, daisy.

**Vegetation Sampled:** No

### Photographs

#### *Soil*

no photo available

#### *Vegetation*



## Site Notes

**Location:** Moberly River

**Station ID:** M2

**Zone:** 10 V

**UTM N:** 6229796

**UTM E:** 628026

**Date:** 17-Jul-10

**Time:** 0905

**Cover Type:** SH

Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** ~ 10 cm thick rich surface soil consisting of deciduous / coniferous mixed humus.

**B Horizon:** Brown sandy silt clay.

**Soil A Sampled:** Top 9-10cm

**Soil B Sampled:** No

### **Vegetation**

Beautiful old growth forest of mature white pine. Huge cottonwood, juv.alder.

Undergrowth - thick; dogwood, rose, peavine, sarsaparilla, strawberry, horsetail, solomon seal, palmate coltsfoot.

**Vegetation Sampled:** SPRUCE, SARSAPARILLA, DOGWOOD for metals and Hg analysis

## Photographs

### **Soil**



### **Vegetation**



### Site Notes

**Location:** Moberly River

**Station ID:** M3

**Zone:** 10 V

**UTM N:** 6229602

**UTM E:** 627552

**Date:** 17-Jul-10

**Time:** 0950

**Cover Type:** Fm02

Red-osier Dogwood

**QA Sample?:** No

### Field Notes

#### **Soil**

**A Horizon:** Thick, dark, rich, primarily deciduous humus; good litter layer

**B Horizon:** Orange-brown silty sand.

**Soil A Sampled:** Top 9-10cm

**Soil B Sampled:** No

#### **Vegetation**

80% mature balsam old growth forest with some younger spruce.

Understory - dogwood, sarsaparilla, grass, horsetail, palmate coltsfoot, goldenrod, sage, rose, solomon seal, snowberry.

**Vegetation Sampled:** No

### Photographs

#### **Soil**



#### **Vegetation**



## Site Notes

**Location:** Moberly River

**Station ID:** M4

**Zone:** 10 V

**UTM N:** 6228248

**UTM E:** 626160

**Date:** 17-Jul-10

**Time:** 1030

**Cover Type:** SH

Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Rich, thick, dark brown, deciduous humus with abundant litter layer

**B Horizon:** Light brown, silty, fine sand.

**Soil A Sampled:** Top 9-12cm

**Soil B Sampled:** No

### **Vegetation**

Old mature forest of aspen and old cottonwood with juv.pine.

Understory - thick understory of dogwood, prickly rose, wild sarsaparilla, northern gooseberry, peavine, snowberry, cranberry.

**Vegetation Sampled:** No

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Moberly River

**Station ID:** M5

**Zone:** 10 V

**UTM N:** 6227673

**UTM E:** 625372

**Date:** 17-Jul-10

**Time:** 1119

**Cover Type:** Fm02

Red-osier Dogwood

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** 1-3cm thick litter/fermentation layer over fractured clay; poorly developed

**B Horizon:** Thick fractured layered clay.

**Soil A Sampled:** Top 1-3cm

**Soil B Sampled:** No

### **Vegetation**

Old, large, mature balsam forest with tall alder understory.

Understory - strawberry, rose, snowberry, goldenrod, horsetail.

**Vegetation Sampled:** ALDER for metals and Hg

## Photographs

### **Soil**



### **Vegetation**



## Site Notes

**Location:** Moberly River

**Station ID:** M6

**Zone:** 10 V

**UTM N:** 6227618

**UTM E:** 623701

**Date:** 17-Jul-10

**Time:** 1155

**Cover Type:** SH

Currant-Horsetail

**QA Sample?:** No

## Field Notes

### **Soil**

**A Horizon:** Well developed and thick (10 - 20 cm) brown, deep, dry and loamy.

**B Horizon:** Clay layer deeper

**Soil A Sampled:** Top 10-20cm

**Soil B Sampled:** No

### **Vegetation**

Old growth cottonwood giants with mixture of white spruce and few birch.

Understory - dogwood, prickly rose, horsetail, strawberry, raspberry, palmate coltsfoot, gooseberry.

**Vegetation Sampled:** BIRCH

## Photographs

### **Soil**



### **Vegetation**



## **APPENDIX F**

# **DOMINANT PLANT SPECIES PRESENT FROM TERRESTRIAL HABITAT POLYGONS**

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**Appendix F.** Dominant Plant Species Present from Terrestrial Habitat Polygons, BC Hydro 2010.

<b>Common Name</b>	<b>Genus and Species</b>
<b>Trees</b>	
Black spruce	<i>Picea mariana</i>
White spruce	<i>Picea glauca</i>
Tamarack	<i>Larix laricina</i>
Paper birch	<i>Betula papyrifera</i>
Trembling aspen	<i>Populus tremuloides</i>
Black cottonwood	<i>Populus balsamifera</i> spp. <i>Trichocarpa</i>
Balsam poplar	<i>Populus balsamifera</i> spp. <i>Balsamifera</i>
<b>Shrubs</b>	
Prickly rose	<i>Rosa acicularis</i>
Red raspberry	<i>Rubus idaeus</i>
Black gooseberry	<i>Ribes lacustris</i>
Northern gooseberry	<i>Ribes oxycanthoides</i>
High bush cranberry	<i>Viburnum edule</i>
Thimbleberry	<i>Rubus parviflorus</i>
Mountain alder	<i>Alnus incana</i>
Scrub birch	<i>Betula glandulosa</i>
Labrador tea	<i>Ledum groenlandicum</i>
Scrubby cinquefoil	<i>Potentilla fracticosa</i>
Pin cherry	<i>Prunus pensylvanica</i>
Red osier dogwood	<i>Cornus stolonifera</i>
Soopalallie	<i>Shepherdia canadensis</i>
Wolf willow	<i>Elaeagnus commutata</i>
Common juniper	<i>Juniperus communis</i>
Pacific willow	<i>Salix lucida</i>
Common dandelion	<i>Taraxacum officinale</i>
Daisy	<i>Chrysanthemum leucanthemum</i>
Canada thistle	<i>Cirsium sp.</i>
Yarrow	<i>Achillea millefolium</i>
Common goldenrod	<i>Solidago canadensis</i>
Palmate coltsfoot	<i>Petasites palmatus</i>
Aster	<i>Aster sp.</i>
Solomon seal	<i>Smilacina stellata</i>
Strawberry	<i>Fragaria virginiana</i>
Peavine	<i>Lathyrus sp.</i>
Red clover	<i>Trifolium pratense</i>
Stinging nettle	<i>Urtica dioica</i>
Western sarsaparilla	<i>Aralia nudicaulis</i>
Bunchberry	<i>Cornus canadensis</i>
Northern bedstraw	<i>Galium boreale</i>
Cattail	<i>Typha latifolia</i>
<b>Grasses</b>	
Blue wildrye	<i>Elymus glaucosa</i>
Blue joint	<i>Calamagrostis canadensis</i>
Fescue	<i>Festuca sp.</i>
Cottongrass	<i>Eriophorum chamissii</i>
Swamp horsetail	<i>Equisetum fluviatile</i>
Common horsetail	<i>Equisetum arvense</i>
Scouring rush	<i>Equisetum hyemale</i>