BC hydro

FOR GENERATIONS

Report Title: *Baseline Data Collection of Water Quality, River Sediment, Soil and Vegetation Samples from the Peace River Watershed (2007)*
Project: Peace River Site C Hydro Project
Prepared By: Golder Associates Ltd.
Prepared for: BC Hydro

NOTE TO READER:

This is a report on a study commissioned toward the development of engineering, environmental and technical work conducted to further define the potential Site C project.

For environmental studies, the focus is on the development of an environmental and socio-economic baseline around the area of the potential Site C Project. Baseline studies are generally a survey of existing conditions within a project study area.

This report and other information may be used for future planning work or an environmental assessment or regulatory applications related to the potential Site C Project.

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BASELINE DATA COLLECTION

Water Quality, River Sediment, Soil, and Vegetation Samples from the Peace River Watershed - 2007

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REPORT

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Executive Summary

In July of 2006, Golder Associates Ltd. (Golder Associates) was awarded a contract from the British Columbia Hydro and Power Authority (BC Hydro) to complete sampling of water, river sediment, soil, and vegetation from the Peace River watershed. The purpose of this work was to provide baseline data from the Peace River related to the proposed development of Site C. This baseline study represents a survey of existing conditions within the project study area and is not intended as an environmental effects assessment study of the proposed Site C project. Field work began in November of 2006 and continued through to November of 2007.

Twenty-four sample sites were established along the Peace River and its tributaries, extending from the Peace Canyon (PCN) Dam near Hudson's Hope, BC, downstream to the BC-Alberta border at Clayhurst. Mainstem sampling in the Peace River occurred at six locations, including approximately 4 km downstream of the PCN Dam, upstream of the Halfway River, upstream of the proposed Site C dam site (upstream of the Moberly River), downstream of the proposed dam site, between Taylor and the Beatton River, and at Clayhurst. Tributaries sampled included Lynx, Farrell, Boudreau, and Cache creeks, as well as the Halfway, Moberly, Pine, Beatton, and Kiskatinaw rivers. The 2006-2007 sampling program included the following:

- continuous water temperature monitoring at 11 Peace River and tributary sites;
- turbidity monitoring at six mainstem sites using YSI 600 OMS series data logging sondes fitted with an optical turbidity sensor;
- water samples for laboratory analysis at 13 Peace River and tributary sites;
- in situ measurements of conductivity, pH, dissolved oxygen, temperature, conductivity, and turbidity by calibrated meters at the 13 water sample sites;
- soil samples for laboratory analysis from six locations adjacent the Peace River and its tributaries;
- vegetation samples for laboratory analysis from seven sites (five of which were consistent with soil samples sites);
- streambed sediment samples from five mainstem and two tributary sites; and
- stream discharge measurements from four ungauged (by the Water Survey of Canada (WSC)) tributaries upstream of the proposed Site C dam.

Mean water temperatures in the mainstem Peace River were cooler than those observed in its tributaries during the summer, but warmer during the winter. The duration of 0 °C and near 0 °C water temperatures was much longer in tributaries than in the Peace River, and tributaries also achieved much higher temperatures during the summer months. Mean monthly water temperatures at downstream Peace River sites were also warmer in the summer but cooler in the winter when compared with upstream sample sites.

In situ measurements of specific water quality parameters tracked well with results from laboratory analyses. Water sample analysis results were compared against British Columbia Water Quality Guidelines (BCWG) and Council of Canadian Ministers of Environment (CCME) guidelines for the protection of freshwater aquatic life. This analysis indicated most water samples that exceeded established criteria were in the category of total metals, whereas most dissolved metal concentrations, with some exceptions, were below method detection limits (MDL). In the category of total metals, aluminum, antimony, arsenic, cadmium, copper, iron, manganese, selenium, silver, thallium, vanadium, and zinc exceeded guidelines. Exceedences of aluminum, cadmium,

copper, iron, and zinc were most pervasive amongst sample sites and exceedences of these total metals were also observed more frequently over the course of the sample season.

Dissolved metals, aluminum, cadmium, copper, iron, manganese, selenium, and zinc were all observed to exceed guidelines, but only aluminum exceedences ranged across a number of sample sites and all but selenium only exceeded guidelines occasionally at specific sample sites. Exceedences of dissolved selenium levels were restricted to one sample from Farrell Creek and all but one sample from the Halfway River. Total and dissolved levels of mercury were below the MDL for every sample from all sample sites.

Virtually all exceedences of total metals in water samples were associated with total suspended solids (TSS) being carried by tributary water, particularly during spring freshet. By way of comparison, Peace River water samples were relatively benign, except during periods when tributaries were in freshet. The upstream-most sample location near the tailrace of the PCN Dam (Peace 1) had no observed exceedences of metals during any sample period, whereas the incidence and frequency of exceedence of total metals, particularly aluminum, cadmium, copper, and iron at downstream Peace River sites increased with distance downstream reflecting inputs from tributaries.

Turbidity data collected by the YSI data logging sondes was discontinuous and intermittent. Only data from the Peace 4 sonde are considered reliable. These data suggest two distinct major peaks in turbidity occurred during the 2007 monitoring period. The first turbidity peak in the Peace River occurred in April and appeared to be associated with inputs from small tributaries and overland flow during initial spring melt from low lying areas. The second peak was from inputs of large tributaries where measurements of peak turbidity were almost two months later than those observed in the small tributaries. Continuous turbidity data were used to estimate instantaneous daily TSS at Peace 4 from a log-linear relationship developed between measured turbidity and TSS of water samples.

Arsenic and nickel in sediment samples exceeded either Council of Canadian Ministers of Environment (CCME) and/or BC Sediment Quality Guidelines (BCSQG) at most sediment sample sites. Cadmium, copper, and iron also exceeded guidelines but for fewer sites. Similar to water samples, mercury was below MDL for most samples taken, except in July where it was detected in one of two samples at Peace 1 and Moberly 6 and again in August where it was detected in one of two samples at Peace 1 and proximate to Peace 2.

Soil samples were from soils primarily of fluvial and alluvial origin. Barium was the only metal that exceeded BC Contaminated Site Regulations (CSR) for park land use at more than one sample site. There are no suitable standards or guidelines available to compare levels of trace elements in vegetative tissue. Mercury was present above detectable limits in two of six soil sample sites (but well below CSR) and in all but one vegetation sample.

In conclusion, the influence of tributary inflows on Peace River water temperatures was not evident from temperature data, whereas the influence of tributary inflows on Peace River turbidity and total metal content were more easily identified. The spatial and temporal distribution of observed exceedences of total metals within water samples of the Peace River were linked with the timing and distribution of elevated levels of TSS originating from its tributaries. This is not an unusual observation for a watershed such as the Peace River, particularly where surrounding soils are comprised of highly erodible materials.

Disclaimer

This report was prepared for the exclusive use of BC Hydro, its assignees and representatives, and is intended to provide results of baseline data collection from the Peace River watershed. This report is not intended to identify or evaluate potential effects of contaminants that may occur at or near the Project area as a result of natural and/or anthropogenic activities, nor as a result of completion of the proposed project. The findings and conclusions documented in this baseline data report have been prepared for the specific application to this Project and have been developed in a manner consistent with the level of care normally exercised by environmental professionals currently practicing under similar conditions in the jurisdiction. Golder makes no other warranty, expressed or implied. Any use which a third party makes of this report or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Golder accepts no responsibility for damages, if any suffered by any third party as a result of decisions made or actions based on this report.

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APPENDICES

1.0 INTRODUCTION

British Columbia Hydro and Power Authority (BC Hydro) is presently considering the Peace River Site C Project (Site C) in north-eastern British Columbia (BC) as one of several possible resource options being contemplated to help meet BC's future energy needs. In July 2006, Golder Associates was awarded a contract from BC Hydro to complete sampling of water, river sediment, soil, and vegetation from the Peace River watershed. The purpose of this work was to collect baseline data from the potential Site C project area. This baseline study represents a survey of existing conditions within the project study area and is not intended as an environmental effects assessment study of the proposed Site C project. Field work commenced on November 2006 and continued through to November 2007.

2.0 STUDY AREA

Twenty-four sample sites were established along the Peace River and its tributaries, extending from the Peace Canyon Dam (PCN) near Hudson's Hope, BC downstream to the BC-Alberta Border at Clayhurst (Figure 1). Mainstem sampling in the Peace River occurred at six locations, including approximately 4 km downstream of the Peace Canyon Dam, upstream of the Halfway River, upstream of the proposed Site C dam site (upstream of the Moberly River), downstream of the proposed dam site, between Taylor and the Beatton River and at Clayhurst. Tributaries sampled included Lynx, Farrell, Boudreau, and Cache creeks, as well as the Halfway, Moberly, Pine, Beatton, and Kiskatinaw rivers.

3.0 SCOPE OF WORK

This baseline study program involved sampling four types of matrices including the following:

- water;
- river sediment;
- soil; and
- terrestrial vegetation.

3.1 Water Quality

Water quality data provide a baseline of current conditions, which can be used for comparison to future monitoring as well as predictive modeling of reservoir conditions if Site C is pursued. Understanding the movement of total suspended solids (TSS) is important, since elevated levels of metals are often associated with TSS (EPA 1997). The thermal regime of a regulated river, such as the Peace River, is important in understanding existing biological processes, including the distribution of fish but also productivity. Temperature data will also be useful in modeling ice conditions and thermal dynamics of the Site C reservoir and downstream releases of water upon the Peace River if this project is pursued. In addition to identifying longer term issues as described above, collecting baseline data will aid in monitoring potential shorter term effects upon temperature, sediment load, and general water quality during both the construction and reservoir filling stages should Site C be built (Triton 2005).

Baseline water quality (including water temperature and turbidity) was sampled at 17 sample sites (Table 1). Eighteen sites were originally proposed, but Peace 1 and Peace 15 were combined to form one site. Sampling within these 17 sites including the following:

- water samples for laboratory analysis (13 sites);
- in-situ dissolved oxygen (DO), conductivity, pH, and temperature at the 13 water sample sites by calibrated meters;

- continuous water temperature measurements (11 sites); and
- continuous monitoring of turbidity (6 sites).

Laboratory analysis of water samples from the 13 sites included the following parameters:

- nutrients;
- absorbable organic halogens (AOX);
- dissolved organic carbon;
- total nitrogen;
- total metals;
- dissolved metals;
- sulphides; and
- general water quality (pH, TSS, TDS, turbidity, etc.).

Sampling for pathogens, although originally identified in the request for proposal was not included as a sample parameter based upon discussions with BC Hydro. Pathogens were dropped primarily because of the logistical difficulty in completing such sampling in the field, which requires the filtration of large volumes of water.

Water sampling was conducted during seven different sample periods through the program:

- fall - early November 2006;
- winter - early March 2007;
- post-winter (ice off) - early April 2007 (this field survey was added to service and maintain YSI turbidity sondes based upon concerns identified during the winter sample survey);
- pre-freshet - early May 2007;
- mid-freshet - mid June 2007;
- end of freshet - early July 2007; and
- late summer - mid August 2007.

A duplicate (replicate) sample was taken during each sample period, randomly selected from one of the 13 surface water grab sample sites.

3.2 River Sediment

Analysis of river sediment (sediment) provides an indication of existing baseline sediment quality within the area of the project. Understanding sediment quality is relevant for future monitoring (comparative purposes) but also because sediment may be mobilized into the water column through natural and/or anthropogenic disturbances from construction should Site C be built. Sediment sampling was completed in June and August 2007 at seven sites (Table 1) and included analysis for the following parameters:

- physical test (particulate size, moisture content and redox potential);
- nutrients;
- metals; and
- polycyclic aromatic hydrocarbons (PAHs).

3.3 Soil

Soil was sampled from six sites (Table 1) in July 2007 and included analysis for the following parameters:

- physical parameters (particle class, moisture, pH, cation exchange);
- nutrients; and
- total metals.

3.4 Terrestrial Vegetation

Terrestrial vegetation was sampled from five sites in August 2007 (Table 1) and included analysis for moisture content and total metals.

3.5 Sample Site Locations and Access Considerations

Sample sites were established at Peace 3, 4, and 5 and Pine 16, Beatton 17 and Kiskatinaw 18 prior to the onset of a major snow storm in November of 2006 (Photo 1 - Appendix L). Deteriorating weather and deep snow curtailed establishment of most of the remaining sample stations until the winter sampling period (March 2007). Some sample sites were established in temporary locations, as secondary roads and trails remained closed or inaccessible due to winter conditions. With the onset of spring, and associated sampling during pre-freshet conditions, it became apparent that terrain, private property, and other logistical issues would prevent the establishment of all sample sites in the originally proposed locations. Specifically, Lynx 10, Farrell 11, and Cache 12 were established downstream of originally proposed locations. Peace 1 (turbidity monitoring and water sampling) was combined with Peace 15 (temperature monitoring) to ease boat access given the proximity of the two sites to one another (within 2 km). Given the proximity of the two sites to each other, the implication upon differences in temperature monitoring data are considered minor. Moberly 6 became the temperature monitoring station since terrain and available access at the downstream site (Moberly 7) made it inaccessible in the winter (Photo 2 - Appendix L). Halfway 8 was located upstream of the proposed location and Halfway 9 was located downstream of the proposed location, again determined by available access routes.

The water sampling segment of the project required sampling over various seasons; however, some of the identified permanent sample sites will not be accessible during winter conditions unless special access measures are considered in future monitoring work. For example, boat access to the Peace River is problematic because of snow and ice preventing access to boat launches (Photos 3 and 4 - Appendix L). Some sample sites, including Beatton 17, Kiskatinaw 18, and Pine 16, were inaccessible in the winter, but because only water temperature was monitored by in situ temperature loggers, winter access was not required (Table 2).

4.0 METHODS

Sample methods varied with the matrix being analyzed, the parameters sampled, and site access. Laboratory analysis of field samples was completed by ALS Environmental following analytical methods identified in Appendix A.

4.1 Water Sampling

4.1.1 In Situ Sampling by Calibrated Meters

A Horiba model No. U-22xd was used to take in situ readings of pH, DO, turbidity, temperature, and conductivity at each of the 13 water sampling sites (Figure 1). The Horiba meter was replaced in April with a YSI 650 and attached 600 series probe with pH, temperature, conductivity, and DO measuring capabilities. A Hanna HI 93703-11 turbidity meter was used for field measurements of turbidity. In the summer, sampling was completed in the Peace River from a jet boat near the middle of the stream. Tributary sampling was completed by wading into the stream and placing probes in the current.

4.1.2 In Situ Sampling by Automated Devices

Two HOBO® Water Temp Pro v2 (± 0.2 °C) temperature data loggers (TDLs) were deployed at each of the 11 water temperature monitoring sites (Figure 1). Each TDL was placed proximate to the other, but anchored to individual weights and attached by cable to individual shore locations. Two TDLs provided redundancy should one fail, be lost, be damaged, or experience any other unforeseen event (Photo 5 - Appendix L).

A single YSI 600 OMS multi-parameter data logging sonde (sonde) configured to record turbidity with a model 6136 turbidity sensor at 15 minute intervals was deployed at the six Peace River sites. Each sonde also measured conductivity and water temperature. Sondes were suspended approximately 1 m above the river bed with a single scotch buoy float in water greater than 2 m deep. Sondes were anchored with concrete weights, which were attached to shore by steel cables. The system for suspending and anchoring sondes and floats was changed in the spring to include more weight in the anchor, a swivel between the anchor and the probe to allow the sonde to spin freely, and a partially deflated float with a short leash so that the float could be submerged under the water surface, out of view from the general public (Photos 6 and 7- Appendix L). A second steel cable was also affixed to each sonde's anchor and attached to shore for redundancy should a cable break.

4.1.3 Surface Water Grab Samples

Water samples collected over the course of this project, with the exception of samples for AOX, were analyzed by ALS Environmental following approved standard sampling procedures for the individual parameters (Appendix A). Analysis of AOX was completed by Econotech Laboratories of New Westminster under contract to ALS Environmental. Analytical results were entered into Microsoft Access® to facilitate reporting and querying of data.

Sampling was completed at Peace River sites from a boat positioned near the middle of the river during spring and fall, whereas tributary sampling was completed by wading into the stream to retrieve water samples and place probes (Photo 8 - Appendix L). Winter water sampling at Peace River sites (where possible) was completed from shore using an extendable pole holding a water sampling container (Photo 9 - Appendix L). In tributaries, a combination of axe and ice auger was used to create a hole in the ice to access flowing water (Photos 10, 11, 12 - Appendix L). Pre-cleaned and sterilized sample jars provided by ALS Environmental were rinsed three times prior to taking the sample. Samples were brought back to the vehicle where appropriate preservatives were added, unless sample sites were accessed by boat in which case preservatives were added at the time of sampling. Water samples were either put on ice in a cooler to keep them cool during the summer or in the truck to avoid freezing in the winter. Samples were dropped off at the Fort St. John office of ALS Environmental the following morning, where they were processed and shipped to ALS Environmental in Burnaby for analysis.

4.1.3.1 Quality Control and Quality Assurance of Surface Water Grab Samples

Both duplicate sampling and the inclusion of travel blanks occurred during each of the sample sessions. Duplicate sampling involved taking a second sample of surface water from one of the 13 sites sampled during every field survey. Duplicate samples were rotated between sites, and the sample bottles were not labelled other than for the name “duplicate.” Travel blanks consisted of laboratory grade water and were handled as all other water samples before being shipped to ALS and analyzed.

Results from duplicate and travel blank samples were examined for anomalous data. Duplicate sample results were compared with those of the original sample for large variations between individual parameters. For travel blanks, the frequency that method detection limits (MDLs) were exceeded was summarized for individual sample sessions and individual sample parameters over the course of the sample period.

4.2 River Sediment Samples

Sediment samples were taken from two tributary and five Peace River locations (Figure 1). Samples were taken by wading into the water and scooping up river sediment with a stainless steel shovel. This method was employed after repeated attempts to gather samples at mainstem sites using a ponar dredge were unsuccessful. Samples were placed into pre-cleaned and sterilized glass jars fitted with Teflon sealed lids. Three samples were taken from seven sites in July and again in August 2007. Misinterpretation of instructions to the lab resulted in only two of three sediment samples from each of the seven sample sites being analyzed for each survey period. Samples were kept on ice in a cooler until dropped off at the Fort St. John office of ALS Environmental the following morning where they were processed and shipped to ALS Environmental in Burnaby for final analysis.

4.3 Soil Samples

In July 2007, soil samples were taken from six locations adjacent to the Peace River and its tributaries (Figure 1). Site 22 (Peace River 2.5 km downstream of the confluence with the Halfway River) was not sampled for soil; rather, an area within the Halfway River adjacent to Site 9 was sampled (Site 25; Table 1). Both sites are within depositional areas of the Bear Flats landform (SWCG), a flood plain of the Peace River, so soil conditions are similar between these sites. At each soil sampling site, three sample pits were dug and approximately equal portions of both the surface LFH (organic) layer and the underlying mineral soil were combined from each of the three pits into two plastic sample bags. Samples were delivered to the Fort St. John office of ALS Environmental the following morning, where they were processed and shipped to ALS Environmental in Burnaby for analysis.

4.4 Terrestrial Vegetation

Samples of vegetation were taken from each sample site during the August sample period (Figure 1). The intent was to maximize the amount of time vegetation had to metabolize various trace elements within their foliage prior to sampling. With the exception of sites Peace 1 and 25, the latter of which was replaced with the originally identified Site 22, vegetation samples were collected from the same sites as soil samples.

Dominant vegetation was sampled, but there was also an attempt to sample the same species from each site. Sampled species included spruce, rose, cottonwood, poplar, and birch. Spruce and rose were common between all sites, but cottonwood, poplar, and birch were interchanged amongst sites depending upon which species was present. Samples were placed in a plastic bag and stored on ice in a cooler until dropped off at the Fort St. John office of ALS Environmental.

4.5 Stream Discharge

Discharge measurements were completed at Cache, Lynx, Farrell, and Boudreau creeks at various stages of flow through the survey period (Photo 13 - Appendix L). In addition to discharge measurements, water level measurements were taken from a pin placed in a tree at Lynx Creek and the highway bridge at Cache Creek. A staff gauge was positioned at Farrell Creek (Photo 14 - Appendix L). Water level measurements were not taken at Boudreau Creek due to flows being too low to obtain an accurate reading.

Discharge was measured four times over the duration of the study except at Boudreau Creek where flows were too low to measure after the May sample period and at Cache Creek, which had stopped flowing by August. A Swoffer Model 2100 propeller type flow meter was used for the first set of measurements but was later replaced with a Marsh McBirney Flo-Mate Model 2000. Calibration of the Marsh McBirney was factory certified and was considered a more reliable and accurate meter for measuring water velocity, particularly for low flow situations. Transects were established by placing pins on the left and right bank to ensure that discharge was measured at the same location for every visit. Transect locations correspond with water sample locations at Cache, Lynx, and Boudreau creeks and at the TDL location on Farrell Creek (Table 2, Figure 1). Flow measurements followed standard methods (RISC 1998a; Nielsen and Johnson 1983) ensuring no less than 10 water velocity and depth measurements were taken across the width of the transect. Widths of the cells were adjusted relevant to flow conditions, trying to ensure no more than 10% of the discharge flowed through any one cell. Velocity measurements were taken at 60% the total depth of the cell from the water surface when water depth was less than 0.76 m. For water depths equal to or greater than 0.76 m, water velocity for each cell was based upon the mean of measured velocities at 20% and 80% of the water depth.

In addition to the discharge measurements at small tributaries, there are a number of active and inactive Water Survey of Canada (WSC) gauging stations within the study area, which were reviewed for relevant discharge data for the Moberly, Halfway, Beatton, Kiskatinaw, and Peace rivers.

4.6 Data Organization and Analysis

4.6.1 Water Temperature Data Loggers

Temperatures recorded by TDLs were reviewed to identify and remove anomalous data, typically associated with dewatering. Dewatering events were caused by the following:

- sudden drops in the Peace River mainstem flows associated with operation of upstream dams;
- dewatering during movement of ice during spring break up; and
- dislodgement of TDLs by debris entangling with attached cables and/or high flow events.

Where redundant data were available for a site (two TDLs functioned for the course of the project), a visual comparison between plots of mean daily temperatures enabled selecting the most representative data set (Figure 3). In some cases, the most representative data set was achieved by combining temperature data from the two TDLs (if possible). Once data sets were viewed and corrected for unrepresentative data, final daily mean, maximum, and minimum temperatures were calculated.

During November 2007, redundant TDLs were re-established at all sites where only one remained in anticipation of an extension of the Peace River Water Quality Program into 2008. This included placement of two new TDLs at Peace 3.

4.6.2 Turbidity Data Loggers

Instances of stranding and/or exposure of sondes was not as common as with TDLs, although such exposure was easily identified by supplemental conductivity measurements also collected by the sondes dropping to zero or near zero values. The accuracy of turbidity data was reviewed by comparing data recorded by sondes to in situ measurements by the turbidity meter and laboratory results from water samples. The chronology of peaks in turbidity between individual sondes was compared against one another, as was the pattern of data recorded during peak turbidity events by each sonde.

Turbidity vs TSS

Turbidity (NTU) and TSS (mg/L) data are commonly log-normally distributed (Gippel 1995; Packman et. al. 1999). In this study, the measured TSS and turbidity data from water samples taken in the Peace River

mainstem and six tributary sites were assessed to determine the best-fit regression result. Regression models for the two sets of measured data (TSS and turbidity) were developed from lab analysis results of water samples from the Peace River and tributary sites combined and from the Peace River only. A log-linear model showed strong positive correlation between TSS and turbidity for both cases, described by Equations 1 and 2.

$$\ln(TSS) = 0.9330 \ln(NTU) + 0.4334 \quad (r^2 = 0.94; \text{ combined}) \quad \text{Eq (1)}$$

$$\ln(TSS) = 0.9625 \ln(NTU) + 0.4188 \quad (r^2 = 0.96; \text{ Peace River only}) \quad \text{Eq (2)}$$

Where: TSS = total suspended solids (mg/L)

NTU = turbidity in NTUs

4.6.3 Stream Discharge

The Peace River has been regulated since 1968; consequently, the annual flow regime downstream from PCN now has peak flow in the fall and winter months and minimum flows during the summer when Williston Reservoir is typically recharged (Triton 2005). It is expected that the proposed Site C project will be operated in hydraulic balance with the upstream plants at the GMS and PCN generation stations. As such, the flow regime of the Peace River downstream of the Site C project would not be changed appreciably (BC Hydro 2007).

4.6.3.1 Water Survey of Canada (WSC) Stations

Within the study area of the Peace River watershed, there are four WSC hydrometric stations on the Peace River and 17 WSC stations on five of its tributaries (Table 3). The WSC station on the Peace River near Taylor (No. 07FD002) was discontinued before 1968, the year when the Peace River flow regime became regulated.

The proposed Site C dam would be located approximately 6 km upstream of the active WSC station “Peace River above Pine River,” which is less than 1 km upstream of Peace 4. No major tributaries or creeks enter the Peace River between the WSC station and Peace 4. The drainage area for Site C and the WSC station are approximately the same; consequently, the discharge characteristics (mean annual discharge (MAD), flow duration curve, low/high flow estimates) at Site C are essentially the same as those at the WSC station Peace River above Pine River.

4.6.3.2 Measured Discharge for Non Gauged Tributaries

Discharge was calculated following methodology outlined by Resource Inventory Standard Committee (RISC) (1998a). Discharge was calculated by multiplying water velocity measured in a cell of water by the area (width and depth) of the cell, providing the discharge for the cell. The cumulative total discharges of all cells of the transect across the stream being measured provide an instantaneous discharge. These calculations are represented by the following equations:

$$q_i = (v_i + v_{i-1}) / 2 \times (b_i - b_{i-1}) \times (d_i + d_{i-1}) / 2 \quad \textit{Eq (3)}$$

Where:
- q = discharge
- v = velocity
- d = depth
- b = measured distances from shore
- i = section (cell)

Total discharge (Q) for the stream at the identified cross section is as follows:

$$Q = \sum_{i=1}^{n} q_i \quad \textit{Eq (4)}$$

5.0 RESULTS

5.1 Water Quality

Results of in situ water sampling by calibrated meters, compared to lab results of water samples of the same parameters are summarized in both tabular and graphical form in Appendix B. In situ measurements of turbidity are incorporated, where appropriate, into results that follow.

5.1.1 Temperature

TDLs were placed at seven of the identified stations for temperature monitoring in early November 2006 and the four remaining stations were established during the winter survey in early March 2007. Summaries of daily, monthly mean maximum (where available), and minimum water temperatures of sample sites are provided in Appendix C and Appendix D. An electronic copy of this data is provided separate from this document.

The most complete water temperature data sets were recorded by the Peace 4 and Peace 5 TDLs (Figure 4). Peace River water temperatures fluctuated less than those in tributaries, representing the influence of stored water released from the upstream reservoirs.

Monthly temperatures from sample sites are summarized in Table 4. Not all the monthly data represent monthly means since data gaps exist in the data sets (Figures 4 and 5); however, available data identifies general differences in temperature trends observed between tributary and Peace River sites (Appendix D). For example, water temperatures in the Peace River were cooler in the summer months than in tributaries, but warmer in the winter months. Unlike the Peace River where water temperatures dipped to 0°C for only the month of February, the tributaries had temperatures at 0°C for several months. This is most obvious from the Kiskatinaw River and the Pine River temperature data when compared with data from Peace River locations (Figure 6).

As might be expected, monthly water temperatures nearest the PCN Dam (Peace 1) were cooler in the summer months than those recorded at Peace River sites farther downstream of the dam. This reflects the influence of cooler hypolimnetic water released into the Peace River from the reservoir upstream of Peace 1. Downstream temperature monitoring sites experience the combined effect of solar heating and ambient air temperature upon the Peace River with inflows of adjoining tributaries. The mean monthly water temperature at Peace 5 was 4.7°C warmer in July 2007 than that recorded at Peace 1 (Table 4).

Mean monthly tributary temperatures were substantially warmer than those in the Peace River through late spring, summer, and early fall; with the highest temperatures corresponding to periods of rapidly decreasing flows observed in WSC gauged streams during July. The only exception was the Pine River, where the warmest water temperature was observed in August. Additionally, mean monthly temperatures for larger streams, the watersheds of which contain high elevation relief (Pine and Halfway rivers), had cooler summer temperatures than smaller streams that drain lower elevation prairie type relief. Even so, mean monthly temperatures in the Pine and Halfway rivers were 2.2°C and 2.1°C warmer than the warmest monthly temperature observed at any of the Peace River monitoring sites. Some of the warmest tributary temperatures were observed in the Beatton and Kiskatinaw rivers, where mean monthly temperatures in July exceeded 20°C (Table 4) and daily maximums exceeded 28°C.

Temperature records are not available for direct comparisons at all Peace River sites for the winter period, but available daily data depict a variation in water temperatures (Table 4). Specifically, warmer water conditions were measured in upstream locations compared with downstream locations (Figure 6). This was true for all but the coldest periods of the year; however, shore ice and floating ice were also much more apparent at Peace 5 than at Peace 1 during March 2007 (Photo 16 and 17 - Appendix L).

Mainstem temperatures did not appear to vary substantially with changes in daily release of water from the PCN Dam (Figure 7).

5.1.2 Turbidity and TSS

Appendix E summarizes data collected from the turbidity sondes. Available data are discontinuous and intermittent and the most complete data record is from the Peace 4 sonde. The next most complete data sets are represented by the Peace 1 and Peace 3 sondes; however, these data records do not facilitate comparison of the chronology of individual peaks in turbidity between sonde locations. While there is some visual correspondence between the general timing of large peaks in mean daily turbidity between sonde locations, such visual comparisons also highlighted anomalies in the data, which could not be verified with in situ turbidity measurements. Variations in daily means of turbidity during peak events between sonde locations could not be explained by potential point source inputs (run off from upstream tributaries, etc.) or periods of heavy precipitation. Review of incremental measurements of data recorded at half-hour intervals during periods of peak turbidity at Peace 1 and Peace 3 suggest sondes located at these sites malfunctioned (Figure 8). Large fluctuations between zero and 1000 NTU and “clipped” peaks are apparent in the incremental measurements of turbidity for individual days for both the Peace 1 and Peace 3 sondes’ data records; however, a similar pattern is not apparent in the Peace 4 sonde data record. The Peace 4 sonde data demonstrated a gradual rise and fall of turbidity for all peak turbidity events it recorded. Although some peaks in turbidity recorded by the Peace 1 and 3 sondes may represent real events, the magnitude and duration of these events is deemed unreliable. Consequently, turbidity data recorded by the Peace 1 and 3 sondes are also considered unrepresentative and were not used in further analyses.

Eight months of continuous turbidity data recorded at Peace 4 shows distinct peaks in turbidity on May 5, June 7, September 1, and October 3 (Figure 9). The variation in timing of peak turbidity in large and small streams entering the Peace River may explain the peaks in turbidity observed at Peace 4. Initial surges in turbidity in the Peace River at Peace 4 through late April and early May (May 5 peak) are likely associated with low elevation snowmelt and discharge from small tributaries. The TSS contribution of larger streams is reflected by the June 7 peak turbidity recorded by the Peace 4 sonde. There is no water sample data to confirm the September 1 peak at Peace 4; however, available WSC data indicate a brief rise in water levels in all tributaries entering the Peace River near the end of August. Variations in timing between peaks in turbidity recorded by the Peace 4 sonde and those from in situ measurements reflect the potential inaccuracy in assessing peak turbidity with once per month in situ sampling by meter and water sampling as opposed to a continuous sampling record of a turbidity sonde.

Variation of turbidity and TSS within individual tributaries entering the Peace River may be explained in part by the processes associated with ice-off and run-off observed by the field crew during the project. Small tributaries appeared to become ice free much earlier than larger tributaries. These small tributaries reacted quickly to spring run-off from local roads and highways and snow melt from the relatively low lying plateau adjacent to the Peace River valley. Differences in timing of ice-off and related stream flows between small and large tributaries entering the Peace River were visually apparent, as were differences in ice-off between tributaries entering from the north side (south facing slopes) and south side (north facing slopes) of the Peace River. Small streams entering the north side of the Peace River experienced freshet very early relative to the larger streams. Freshet conditions expected to occur in late May and early June based upon WSC data for large tributaries were apparent in small streams during the April field survey. Cache Creek was not safe to wade during the mid-April survey, when in situ measurements and lab results indicated turbidity in excess of 3000 NTU. Relative to total discharge within the Peace River, discharge from these small tributaries is minor, yet the influence of this initial melt on turbidity was visually apparent within the Peace River well in advance of the freshet contributions from larger streams.

Peak turbidity and TSS within the smaller streams entering the Peace River upstream of the proposed Site C location (Farrell, Cache, and Lynx creeks) were observed during the April field surveys (Figure 10). Peak turbidity and TSS in Boudreau Creek were difficult to confirm because this sample site was not established until May, which also corresponds with the highest turbidity reading. Peak turbidity occurred during the June field survey for the larger tributaries (Halfway and Moberly rivers). The highest turbidity levels were observed in Cache Creek, which exceeded 3500 NTU during the April field survey. This high turbidity was an order of magnitude greater than the highest levels observed in the larger tributaries later in June and 3.5 times those

observed in Lynx Creek during the April field survey. The duration of such high turbidity levels in Cache Creek is unknown, but peaks in turbidity did not always correspond with peaks in discharge. In the case of Farrell and Cache creeks, this is because peak discharge could not be measured during periods of peak turbidity and TSS; however, measured discharge in Lynx Creek does not follow trends in turbidity and TSS.

Unlike the small south facing tributaries entering the north side of the Peace River, larger tributaries entering the south side of the Peace River (i.e., Moberly, Pine, and Kiskatinaw rivers) were still fully covered with ice during the April survey. Turbidity in these streams, although not measured, was also visually low. Large northside tributaries (Beatton and Halfway rivers), although still covered with ice, were showing signs of break-up but they had visibly low turbidity. Water quality measurements and water samples were not taken from the Halfway and Moberly rivers in April because ice conditions made access to these systems unsafe. However, results from water samples taken later in the year indicated high turbidity occurred in June in these streams, corresponding with the WSC discharge record (Figure 11).

5.1.3 Total Suspended Solids Compared with Turbidity

A log-linear relationship was developed to predict TSS from turbidity, based upon laboratory results from water samples (Figure 12).

This relationship was applied to continuous turbidity monitoring data collected by the Peace 4 turbidity sonde and provides an indication of estimated mean daily TSS (Figure 13). As indicated earlier, identified anomalies in continuous turbidity recordings at Peace 1 and Peace 3 preclude using these data to develop estimates of mean daily TSS. Of the four sample locations in the Peace River, Peace 4 provides the most complete and accurate representation of turbidity and was used to estimate daily TSS. The timing of elevated TSS samples from the Federal-Provincial water quality monitoring station on the Peace River at Alces correspond to those observed at Peace 4. Historical records of TSS are available from the WSC for four tributaries and one Peace River sample station (Table 3 of Section 4.6.3).

5.1.4 Water Quality of Surface Water Grab Samples

Appendix F summarizes results of water quality analysis, and an electronic Microsoft Access® database of this information is provided separate of this text. The most complete data sets of water sample analyses are from Peace 4 and Peace 5 (Table 5).

Ranges (maximum and minimum) of water quality parameters analyzed for the period of sampling are provided in Table 6 and Table 7. These ranges are presented without a mean, reflecting the complexity of addressing data sets in which one or more of the individual data points may be under the MDL. Calculating simple means of metal concentrations or other parameters can be problematic depending upon the number of results that are below MDL. Substitution of MDL in such data sets with values representing the MDL or half the MDL, a common past practice is now considered unrepresentative and inappropriate (Huston and Juarex-Colunga 2009; EPA 2000). Censoring MDL data may be an option; however, such manipulation of data should consider both the size of the data set and also the MDL and the quantitation limit (QL) for a specific parameter (Huston and Juarex-Colunga 2009). Effective comparison of mean values for various parameters that include values below MDL requires assessing the total number of MDL values relevant to QL and the size of the data set to determine an appropriate statistical estimation method when calculating mean values. This procedure is beyond the scope of the present baseline data report and has not been applied to the available data.

5.1.4.1 Metals

Results of water quality analysis primarily concern total metals since dissolved metals were more often below MDLs than above for all but a few individual parameters at a few sample sites over the study period. Results were compared to CCME guidelines and BCWQ for freshwater aquatic life (Appendix G). Interim working guidelines exist for only a small number (24) of the metals analyzed for these water samples, eight of which are dependent upon other water parameters (typically pH or hardness ($CaCO_3$). While exceedences in both total and dissolved metals did exist, most were restricted to the following parameters:

- fluoride;
- aluminum;
- arsenic;
- iron;
- cadmium;
- copper;
- silver;
- selenium;
- vanadium; and
- zinc.

Within the category of total metals, exceedences of aluminum, copper, cadmium, iron, vanadium, and zinc were most common amongst sample sites, but few of the exceedences observed in total metals were observed in dissolved metals (Table 8). Mercury did not exceed MDLs for total or dissolved metals in any of the water samples from any of the sample sites.

Most observed exceedences of BCWQ and CCME water quality guidelines occurred at tributary sites. This held true for both the number of metals found to exceed these guidelines, as well as the number of times these metals exceeded guidelines (frequency) over the course of the sampling program. The frequency of exceedences of total metals at tributary sites, expressed as an average number per sample, was 70% (3.98 exceedences per sample) greater than that observed at the Peace River sites (2.29 exceedences per sample) (Table 9). Similarly, the frequency of exceedences of dissolved metals was six times greater in tributary samples than that observed in the Peace River. The number of individual types of both total and dissolved metals exceeding guidelines was almost six times higher, on average, at tributaries sites than at the Peace River sites.

There was a general trend towards an increase in the mean frequency of observed exceedences per sample of total metals in the Peace River with the downstream progression of sample sites (Figure 14). None of the parameters from water samples taken at Peace 1 exceeded BCWQ or CCME guidelines, whereas the frequency of exceedences of total metals at Peace 5 was the highest of all Peace River sites.

The observed increase in both the number of metals exceeding guidelines and the frequency at which these metals exceeded guidelines in downstream Peace River sites is likely explained by the cumulative influence of tributary inflows into the Peace River. These inflows were consistently observed with increased sediment load transported by tributaries during freshet (Figure 15). Appendix H graphically summarizes this trend for selected parameters from all sample sites. Spikes in total metals mimicking spikes in TSS were repeatedly observed through all sample sites, which is consistent with the findings of Jang (1996).

Jang (1996) suggested long term records of water sample analysis from the Clayhurst sampling station on the Peace River (upstream of the Alces River) indicated that in cases where total metal exceedences are linked to TSS, dissolved metal components are likely more reflective of natural background levels and should be used for direct comparisons to available water quality guidelines.

Guideline exceedences of dissolved metals were mostly confined to selenium and aluminum. Concentrations of dissolved selenium consistently exceeded CCME guidelines in the Halfway River sample sites, whereas exceedences of dissolved aluminum were observed at more sample sites but less frequently. Dissolved aluminum was observed to exceed guidelines for Cache, Farrell, and Boudreau creeks and also the Peace River

at Peace 5. Similar to total metals, high concentrations of dissolved aluminum observed at Peace 5 likely reflect the cumulative influence of inputs from upstream tributaries. Unlike other Peace River sample sites, Peace 5 includes contributions from the Pine, Beatton, and Kiskatinaw rivers. Although not sampled, these three tributaries have visibly high turbidity and likely correspondingly high TSS loads during the spring. Therefore, they are also likely contributors of high levels of total and possibly dissolved metals, influencing water quality at Peace 5. When represented as an average per sample trip, both the number of individual dissolved metals and the frequency at which these dissolved metals exceeded CCME guidelines were highest in Boudreau Creek when compared with all other sample locations (Figure 16).

5.1.4.2 Anions

Of the anions sampled, only fluoride and sulphate levels were observed to exceed BCWQ guidelines. Sulphate and particularly fluoride levels were consistently high in Cache Creek, although Lynx, Farrell, and Boudreau creeks also had levels exceeding BCWQ guidelines over the course of sampling (Appendix H). Unlike total metals, exceedences in fluoride and sulphate concentrations were associated with low flow periods, not peaks in suspended sediment load (Figure 17). Fluoride enrichment of tributary water is often related to leaching and mineralization from underlying sedimentary rocks (Senior and Sloto 2006) and volcanic rocks (Appelo and Postma 1996), both of which are common rock formations in the Peace River watershed. Appelo and Postma also indicate that evaporation in arid areas can further increase fluoride ions in ground water. Consequently, the concentration of fluoride may be more dependent upon the amount of water in the stream (i.e., concentration) during low flow periods as opposed to a source from run-off (i.e., associated with TSS levels) during high flow situations.

5.1.4.3 Adsorbable Organic Halogens (AOX)

There are no criteria within the CCME and/or BCWQ guidelines regarding levels of AOX, although concentrations of specific molecules within this category do have CCME and BCWQ guidelines (e.g., polychlorinated biphenyls – PCBs, chlorophenols, etc.). Organohalides include a wide variety of individual molecules associated with halogens, such as bromine, fluorine, chlorine, and iodine, representing a number of industrial chemicals in which one or more carbon atoms are linked by covalent bonds with one or more halogen atoms. These molecules are most commonly associated with chemicals such as plastics, pesticides, refrigerants, and PCBs. Anthropogenic sources include industrial outfalls (pulp mills) but also pesticides and associated agricultural activities (BCMoE 2008). Data collected during the course of the 2006-2007 study indicate little variation in this parameter at most sites, although there was a general trend towards higher levels in the summer months, particularly at tributary sites (specifically Cache and Farrell creeks), which had the highest concentrations of AOX (Figure 18). This may reflect pesticide and fertilizer loading related to agriculture becoming more evident as flows in these creeks diminish through the summer.

5.1.4.4 Chlorophyll a

Chlorophyll *a* is an index of primary productivity (RISC 1998b). As such, analysis for chlorophyll *a* was completed at sample sites on the Peace River and its tributaries.

The magnitudes of peaks in chlorophyll *a* were lowest in the Peace River mainstem and highest in the small tributaries. Peak chlorophyll *a* levels were between two and four times greater in Cache and Boudreau creeks than at any of the Peace River sites.

The timing of peak chlorophyll *a* production is likely linked to both a combination of available light and nutrient levels. The highest chlorophyll *a* production was observed in November in the Peace River. Although water temperature is considerably lower in November than through the summer months, the Peace River typically is relatively clear in November. Chlorophyll *a* levels would likely be even higher earlier in the fall, when water temperatures are warmer and water clarity is increasing. A general drop in production of chlorophyll *a* can be seen during the months of June in both the Peace River and the larger tributaries, when turbidity was generally highest. Smaller tributaries, which tended to enter freshet earlier in the season than large tributaries, had peaks in chlorophyll *a* through June and July.

5.1.4.5 Nutrients

Total phosphate is a measure of the amount of inorganic and organic phosphate in a sample, which includes dissolved phosphate. Orthophosphate is an inorganic form of phosphorous, usually available in the form of an acid and is the simplest form in a series of phosphates. Orthophosphate is often simply referred to as phosphate and is the most chemically reactive form of inorganic phosphorous that is available for uptake by plants, so it is often a contributory to algae blooms (RISC 1998b). As such, orthophosphate is the most indicative measure of "free phosphate" since organic forms of phosphate are not available for uptake by plants (Robertson et al. 1998). As a rudimentary average (that does not account for results below MDL), orthophosphates comprised approximately 3.9% of the mean total phosphate concentration for all sample sites. For comparative purposes, results identifying orthophosphate concentration have been presented in Figures 19-21.

In some cases, increases in orthophosphate concentrations at individual sample sites preceded increases in chlorophyll *a.* This is shown in Figure 19 for the Peace River where elevated levels of orthophosphate at Peace 5 in March, April, and July were followed by increases in chlorophyll *a* in April, May and August. This observation was particularly apparent at the Moberly River (Sites 6 and 7) where increases in orthophosphate in June were followed by increases in chlorophyll *a* in July (Figure 20). While not apparent for every sample site, these increases may represent the lag in production of phytoplankton in response to nutrient loading. A surge in orthophosphate concentrations in the smaller tributaries in April did not result in a corresponding surge in photosynthetic activity in May, but again, this may be linked to high turbidity experienced in the small tributaries through April and May. April surges in orthophosphate were consistent in both small tributaries and the Peace River. There are no available data in April for larger tributaries, as these systems could not be safely sampled due to ice conditions during the April survey. The observed April peak in orthophosphate likely represents inputs from overland run-off, particularly related to agricultural activities, urban developments, and sewage treatment (RISC 1998b). Such conditions are consistent with activities within both the upland plateau regions surrounding the Peace River watershed and within the Peace River valley itself. Both the Peace River mainstem (proximate to Peace 4) and the Beatton River are receiving waters for sewage outfall from Fort St. John (Butcher 1988).

Summaries of other nutrients, such as dissolved organic carbon (DOC) and total nitrogen, are provided in Tables 6 and 7, with individual results presented in Appendix F.

5.1.4.6 Surface Water Grab Sample Quality Control/Quality Assurance

Results from travel blanks and duplicate samples associated with each sample session are presented along with results from specific sample sites in Appendix F. Observations of the frequency and magnitude of variations in parameters for both duplicate and travel blank samples validates the integrity of the water sampling process.

Visual comparisons of duplicate samples indicated little variance between the two sets of samples for all parameters. There were few examples where results between individual sample parameters within a set of original and duplicate samples were, for example, an order of magnitude different from each other. The observation of large variations, such as a 100% (approximate) difference, in concentrations between original and duplicate samples occurred more frequently but was still not a common occurrence. The frequency of such large variations was greater in sample sets where large variations were observed in the TSS between original and duplicate samples (Table 10). TSS can differ between original and duplicate samples based upon variability of this parameter in the water column. Generally, samples with the higher TSS load had the higher concentration of a specific parameter when such variation was observed between original and duplicate samples, although this observation was not consistent. Therefore, these differences likely represent variability in samples rather than error in the sampling method.

For most instances, results from blanks are expected to be below MDLs about 95% of the time, assuming they are returned unopened and no contamination occurred during transport of the blanks. It is not uncommon for blanks to frequently have "slight hits" near the MDL for some parameters such as alkalinity and acidity since dissolved gases picked up from exposure to air will affect these values (A. Springer, Manager, ALS Laboratory Group – Burnaby, B.C., pers. comm.). Similarly, unbuffered water samples typically vary widely in pH,

particularly if there have been small variations in dissolved gas content due to exposure to air. Consequently, utilizing pH as an indicator of variation between blanks and field samples is of little value.

Six of eight sets of travel blanks exceeded MDL for less than 5% of the total number of parameters sampled, with the exceptions being for March and for the second set of June samples (Table 11). These exceptions may be linked to sample size (only 39 parameters were sampled in June) and many of the observed exceedences noted in these months were for "slight hits" related to acidity (Table 12). Observation of acidity above the MDL was common in blanks for most sample periods. Similarly, orthophosphate and total dissolved phosphate were barely above MDLs in the blank from March, as was dissolved organic carbon in June. Exclusion of any one of these parameters from the analysis would lower the proportion of parameters exceeding MDLs in blanks for these months to below 5% of the total (Table 11).

The only parameters that constantly exceeded MDLs were absorbable oragno halogens (AOX) and to a lesser extent chlorophyll *a*.

All AOX travel blanks exceeded the MDL, ranging from two to three times higher than the 4.0 µg/L MDL for this parameter. AOX measurements between 4 and 20 µg/L are extremely low readings and Econotech considers results in travel blanks up to 20 µg/L acceptable before restarting an analysis and investigating for potential sources of contaminants. Even distilled water used by ALS Laboratories in travel blanks may not be appropriate for a travel blank when analyzing for such low levels of AOX.

There are two possible explanations of exceedences of MDLs in travel blanks for chlorophyll *a*:

- half of the observed exceedences could be considered "slight hits" as they are barely above the MDL; and
- slight hits of chlorophyll *a* in travel blanks may be attributed to blanks being prepared weeks or even months prior to analysis depending upon when sample bottles are requested from the lab. Such blanks may be unrepresentative for chlorophyll *a* since they are unpreserved, not refrigerated, and may be exposed to light, all of which increase the potential for algal growth (A. Springer, pers. comm.).

5.2 River Sediment Samples

Sediment sampling occurred twice, at the start of July and again near the end of August (Appendix I). Analytical results were compared with interim sediment quality guidelines identified by the British Columbia Interim Sediment Quality Guidelines for Aquatic Life (BCISQG) and the CCME Interim Sediment Quality Guidelines for Freshwater Aquatic Life (ISQGFA) (Appendix G). Results of this analysis show some consistent results at all sample sites (Figure 22).

Levels of arsenic exceeded both guidelines for all samples sites except at Peace 2 during the August sample period and for most sites during the July sample period. Cadmium and nickel followed a similar pattern as arsenic, except there are no CCME guidelines for nickel. Iron also exceeded guidelines, but for a reduced number of sites. Mercury was observed at Peace 1 in one of two sediment samples taken in both July and August, but did not exceed either set of guidelines. Similarly, mercury was detected in one sample at Moberly 6 in July and another single sample of sediment at Peace 2 in August, but neither occurrence exceeded guidelines. Other than the noted exceptions, mercury was below MDL in all other sediment samples.

Within the category of polycyclic aromatic hydrocarbons (PAHs), 2 methylnaphthalene, naphthalene, and phenanthrene exceeded guidelines at a number of sites for either one or both sampling occasions. However, it must be noted that the MDLs of naphthalene and phenanthrene are above the CCME ISQGFA, and BCISQG. Analyses for these PAHs meet the MDLs identified in the proposal for this sample matrix; however, there are some parameters (including naphthalene and phenanthrene) where lower MDLs must be specifically requested from the laboratory conducting the analysis in order to ascertain exceedences of some specific PAHs identified by the CCME ISQGFA. Other than for these special exceptions, MDLs for the common analysis package for the PAH group of sample parameters are appropriate for most BCISQG and CCME ISQGFA (A. Springer, pers. comm.).

5.3 Soil Samples

5.3.1 Soils and Sampling Areas

The study area includes steep sided slopes as well as low lying floodplains, many of which have been modified by erosion, slumping, and other failing processes. The sites sampled for soils were in the low-lying areas of the valley and represent only a small portion of the project area terrain. Soils in sample areas are primarily fluvial deposits adjacent to the Peace River.

Three soil pits were dug within each of the six sample sites varying in depths from 0.35 to 0.55 m depending upon site conditions. Results of soil sample analysis are presented in Appendix J, and Appendix N provides photo documentation of soil pits at each sample site. General descriptions of the soil geology for the area of soil sample sites but also specifics of soil conditions at each sample site are as follows:

Site 19: Peace River North Bank, Along Lynx Creek Downstream of Hwy. 23 Bridge

This sample site occurs on an alluvial landform, which is described as being composed of primarily sandy, loamy, and often gravely material (SCWG 1998). This alluvial landform occurs on low floodplains subject to flooding. Soil drainage varies greatly, from well to poorly drained, and permeability ranges from rapidly to slowly pervious. The sample area site exhibited sandy - loam type soil combined with small amounts of clay, as well as gravel and cobble (Table 13).

Site 20: Peace River Opposite the Confluence with Farrell Creek – South Bank

This sample site occurs on the Septimus Creek landform, which is highly variable, containing undifferentiated materials that include colluvial, morainal, fluvial, lacustrine, and aeolian deposits. Steep inclines are common in this area, which are frequently modified by erosion and failure. This sample site was on a steep bank, likely above normal historic flood levels of the Peace River and contained a mixture of gravel, sand, silt, and clay, including small amounts of cobble. The average depth of the organic layer was greatest at this site amongst all those sampled.

Site 21: Peace River – 500 m Upstream of the Halfway River Proximate to Peace 2 – South Bank

This sample site occurs on the Bear Flats landform (SCWG 1998), which is primarily sandy and loamy fluvial material in nature. The soils in this landform are weakly calcareous and are approximately one to three metres thick over gravel material occupying both terraces and level floodplains. This landform occurs in the floodplain of the Peace River between PCN Dam and the Alberta border. Stands of black poplar, white spruce, and shrubs are common on the deep sandy soils, which are well to moderately well drained. The sample site was within a deciduous forest on the floodplain of the Halfway River where the soil composition was primarily silt and clay (Table 13).

Site 23: Peace River – 2 km Downstream of Cache Creek – South Bank

This sample site occurs on an alluvial landform, which is primarily sandy, loamy, and often gravely. This landform occurs on low floodplains subject to flooding. The soils in this landform are generally composed of sand to silt-loam type soils and are well to poorly drained and rapidly to slowly pervious. The soil sampled from this area was primarily silt, with a very thin organic layer (Table 13).

Site 24: Peace Mainstem – 3 km Downstream of Tea Creek – North Bank

This sample area occurs on the Attachie landform, which is variable in nature and consists of undifferentiated material that may include colluvial, morrainal, fluvial, lacustrine, aeolian deposits, and bedrock out-crops (SCWG 1998). The area is typified by steep inclined areas modified by erosion, avalanche, and failing processes. The sample site was comprised primarily of sand and silt, although clay was also present in the analytical results of one of the two samples taken from this site.

Site 25: Halfway River 1.5 km Upstream of Confluence with the Peace River – West Bank

This sample area occurs on the Bear Flats landform (SCWG 1998), which is primarily sandy and loamy fluvial material in nature, weakly calcareous, and approximately one to three metres thick over gravel material occupying both terraces and level floodplains. This landform occurs in the floodplain of the Peace River between the PCN Dam and the Alberta border. Stands of black poplar, white spruce, and shrubs are common on the deep sandy soils, which are well to moderately well drained. The sample site was comprised primarily of sand and no organic layer was in evidence.

5.3.2 Soil Analytical Results

Soil analytical results are summarized in Appendix J. The analytical results were compared with BC Contaminated Site Regulations (CSR) for park and agricultural land uses (EMA 1996) (Table 14).

Barium, cadmium, and zinc were found to exceed one or more standards identified by the BC CSR (Figure 23).

In the case of arsenic, only an agricultural standard is available and this level was approached but not exceeded at Site 21. Barium exceeded CSR for parkland use at Sites 20 and 21 but not for agricultural land use. While zinc and cadmium were both above the lower limit of CSR for both land uses at Site 23 and for zinc at Site 21, because standards for these metals are pH dependent, there is no exceedence of the CSR. Common metals such as aluminum and iron have no standards within the CSR but there are interim working guidelines for iron within the BCSQ for Aquatic Life. Similarly, there are also guidelines for both aluminum and iron within the BCWQG and CCME WQ for aquatic life. Consequently, while these two metals are common elements within soils, their concentrations do have implications in terms of guidelines for other matrices that may be influenced by inputs of soil, particularly when erosion processes are shown to mobilize soils into run-off collected by tributaries. Both aluminum and iron were particularly high at Site 21 (located on the bank across the river from Peace 2 upstream of the Halfway River) relative to other sample sites. Similar to iron and aluminum, calcium levels were particularly high at Sites 20 and 23 when compared with other sites.

At some sites, variance between replicate samples was observed. For example, barium only exceeded guidelines in one of two replicate samples provided to the laboratory for Site 20.

Mercury was detected, but did not exceed CSR, in 3 of 12 samples, including both soil samples taken at Site 20 and one of two samples taken at Site 21.

The particle composition of the soil samples was dominantly sand and silt, reflecting the location from which soil samples were taken (i.e., a valley bottom which was the flood plain of the Peace River prior to regulation of flows). The sand and silt materials are not only susceptible to erosion, but more importantly, likely represent material deposited by the Peace River and its tributaries from upstream areas prior to regulation of the Peace River.

The organic horizon, or the layer of material that could quickly be metabolized into the water column via decay and/or ingestion related to decomposition by lower trophic organisms such as bacteria and/or invertebrates, ranged from 0 to 21 cm thick and averaged 6.4 cm in depth. The thickest organic layers were observed within higher elevation sample sites (Sites 19 and 20) as opposed to thin or non-existent layers observed within valley bottom areas representing either past (pre-regulated areas of the Peace River) or present flood plains (e.g., Halfway 9).

5.4 Terrestrial Vegetation

There are no specific guidelines or standards regarding acceptable levels of metals or other parameters that apply to vegetative tissue related to fresh water aquatic life. As a matter of interest, the CCME has recently produced guidelines that address compost quality, which identifies levels of specific trace elements that must not be exceeded relative to the proposed use of the compost material (CCME 2005) (Table 15). These guidelines point out that certain trace elements, specifically arsenic, cobalt, chromium, copper, molybdenum, nickel, selenium, and zinc are essential and/or beneficial to plants and animals although overexposure can be an issue. Other elements, such as cadmium, mercury, and lead, are generally of no known value to plants or animals.

Of interest is the comparison of selected metal results from soil analysis with those found in terrestrial vegetation samples (Figure 24). While some of the identified metals show similar trends when compared amongst individual sites, this observation is rare. For example, high levels of barium found in vegetation at Site 20 corresponded to high levels in soils, which exceeded the CSR at this site; however, a soil sample that exceeded CSR at Site 21 had the lowest concentration of barium of all vegetation samples. There was also little correspondence in the concentration of cadmium in soils compared with vegetation. The highest concentrations of mercury in both soil and vegetation samples were observed at Site 21. Mercury was below MDLs at all other soil sample sites, but showed distinct peaks in vegetation samples at Sites 20 and 21. These observed variations may be linked to the type of vegetation sampled, which may have variable rates of uptake of certain elements (Jung 2008; Mathe-Gaspar and Anton 2005). It may also reflect high spatial variability of metals within soil and vegetation samples within the general location of the sample site.

5.5 Stream Discharge

Discharge measurements were taken at Lynx, Farrell, Cache, and Boudreau creeks (Appendix K). Measurements could not be taken during winter conditions (ice cover), during high flows in the spring (April), or when flows were so low that water velocity could not be measured. Discharge for all streams dropped as the summer progressed. Discharge could not be measured at Cache Creek in August and for every measuring period except May at Boudreau Creek, since water velocity was so low that it was not discernable by the flow meter.

Farrell Creek had the largest peak and mean discharge of the four creeks measured over the period of monitoring (Table 16). The timing of peak discharge measurements varied between streams, although the frequency of the measuring period likely affects interpretation of periods of peak discharge. Peak discharge measurements occurred in May at Cache and Farrell creeks and dropped continuously as the summer progressed (Figure 25). The peak in discharge at Farrell Creek corresponded with the peak in water level suggesting peak discharge likely occurred close to the measured peak, although measurements of peak turbidity and TSS (Section 5.1.1.2) do not correspond with water level data. Peak water level in Cache Creek was measured on April 16, suggesting peak discharge in this stream was earlier than the implied peak discharge from measurement data, which is supported by observed measurements of peak turbidity and TSS.

Water level readings appear to provide a good indicator of the period of peak discharge measurements for Lynx Creek. The measured peak discharge in Lynx Creek corresponded with a peak in water level data on July 8, possibly reflecting run-off from a localized rainfall event since similar peaks were not evident in the more easterly Farrell and Cache creeks. The trend in measured discharge at Lynx Creek diverged from the water level measurements on May 17. Since there was no change in the method for reading water level at this site, the observed divergence between discharge and water level may be related to changing from the Swoffer meter used for the first discharge measurement (May 17) to the Marsh-McBirney meter used for all subsequent measurements. Changes in water level at Lynx Creek were minimal over the period of measurement. The second highest level was observed on May 17, which may suggest spring freshet preceded establishment of water level measurements at this site, consistent with observations of TSS and turbidity, which peaked in April (Section 5.1.1.2).

6.0 DISCUSSION

Parameters measured in riverbed sediment, soil, and vegetation are not expected to change dramatically between years, although annual variations in weather conditions (precipitation and seasonal temperatures) can create substantial variability in stream flow. This in turn will influence parameters related to the timing and magnitude of turbidity and water temperature variations even in a regulated river such as the Peace River but more so in its tributaries. Some of this variability is being addressed through a second year of sampling, which is presently being completed as this report on the results of the 2007 sampling program is being written. As such, observations provided in this discussion may change upon summarization of results from the second year of sampling.

The mean annual discharge of the Peace River at PCN ranges from 5 (Pine River) to 100 (Kiskatinaw River) times that of WSC gauged tributaries entering the Peace River between the PCN Dam and the Alberta border for most of the year. The combined MADs of all major tributaries downstream of the PCN Dam are estimated to provide 24% of the Peace River MAD measured at the BC Alberta border (Butcher 1988) consistent with observations for 2007. In 2007, the combined MAD of the same tributaries was 30% of the Peace River MAD at Site C as referenced to the WSC Station Peace above Pine River. On average, the Halfway and Moberly rivers account for approximately 8% of the MAD for the Peace River measured at Hudson's Hope (Butcher 1988). Relative to 2007, these same rivers accounted for 7.7% of the MAD for the Peace River at Hudson's Hope and 7.2% of the MAD for the Peace River at Site C. Consequently, as a function of volume of flow, water quality effects pertaining to thermal dynamics and specific background metal concentrations and/or contaminants entering the Peace River via its tributaries are negligible for most of the year (Butcher 1988).

Increases in tributary flow during the spring can substantially influence Peace River water quality, particularly if discharge from the Gordon M. Shrum Generation Station (GMS) is reduced in response to electrical demand and storage requirements. For example, Butcher (1988) indicates that mean winter flow in the Peace River is generally two to five times higher as a result of flow regulation. Consequently, reduced Peace River flow during spring and summer due to storage requirements in Williston Lake coincided with the period of peak discharge from tributaries entering the Peace River downstream of the PCN Dam. This relationship is further influenced by operational load requirements within the generating system of the Peace River, which can reduce discharge at the PCN Dam to levels close to the minimum flow requirement of 283 m^3/s during some periods of the year (Butcher 1998); however, this minimum flow seldom occurs. During such conditions, Peace River water quality can be substantially influenced by contributions of tributary water. For example, in 2007, mean monthly discharge (MMD) from the Halfway River in June was 45% of the MMD of the Peace River at Hudson's Hope (WSC 2007). Together, daily peak discharges from the Halfway and Moberly rivers on June 6, 2007 were almost twice that of the Peace River daily flow at Hudson's Hope and the Pine River daily discharge was five times that released at Hudson's Hope for the same date.

The relative influence of tributary inflows on Peace River water temperatures during periods of low discharge from the GMS and PCN generation stations is somewhat reduced, since summer water temperatures in tributaries have yet to peak when tributary inflows are greatest. Peak tributary temperatures typically do not occur until tributary flows subside to a fraction of the discharge observed in the Peace River through mid to late summer as determined by the GMS and PCN generation stations. This is reflected by the 2007 data that show there was a general trend observed for increased water temperature in the lower river during the summer months and decreased temperatures in the winter. The influence of tributary water upon Peace River water temperature is lessened as the summer progresses, since discharge from these tributaries rapidly declines as they approach their peak water temperatures.

The influence of tributary inflow upon general water quality parameters within the Peace River is more easily distinguished than those related to temperature. As identified by Jang (1996), highly erodible soils appear to be the main source of elevated total metals observed within the Peace River mainstem. This is not an unusual observation for a watershed such as the Peace River, particularly where surrounding soils are comprised of highly erodible materials (EPA 1997). Water sample results gathered by Golder Associates in the current study

confirm Jang's finding in that exceedences of available CCME and BCWQ guidelines for freshwater aquatic life relative to total metals were far more prevalent in the tributary samples than in the Peace River mainstem, and these exceedences were closely associated with elevated TSS.

During the present study, aluminum, antimony, arsenic, cadmium, copper, iron, manganese, selenium, silver, thallium, vanadium, and zinc were all found to exceed available guidelines for total metal concentrations at some point during the water sampling program, although the dissolved fractions of these metals seldom exceeded guidelines. Observed exceedences of aluminum, cadmium, copper, iron, silver, vanadium, and zinc were most pervasive throughout water sample sites; however, the frequency of exceedences was greatest for aluminum and iron and to a lesser extent, copper, vanadium, and zinc. Exceedences of arsenic, antimony, manganese, selenium, and thallium were limited to a few sample locations and occurred infrequently. An exception was for both the dissolved and total metal component of selenium, which exceeded guidelines in almost every sample taken from both Halfway River sites. Mercury was never above detectable limits in water samples.

There were no observed exceedences of any parameter in the water samples taken at Peace 1, located immediately downstream of the PCN Dam. Unlike Peace 1, the number of individual metals that exceeded guidelines as well as the frequency at which these metals exceeded guidelines increased with downstream distance of the remaining Peace River sites from the PCN Dam. This reflects the input from tributaries to the Peace River since exceedences closely followed periods of maximum flow and sediment load contributed by tributaries. Exceedences observed at sites Peace 2 through Peace 4 occurred in June, coinciding with increased flows from the Moberly and Halfway river systems; at Peace 5, observed exceedences were primarily in April and July. The difference in timing of exceedences observed at Peace 5 compared with more upstream Peace River sites is likely associated with differences in freshet conditions between the tributaries entering the Peace River upstream of Taylor compared with those entering downstream of Taylor. The Halfway, Moberly, and Pine rivers drain high elevation mountains and entered freshet later in 2007 (June) than downstream tributaries, such as the Beatton and Kiskatinaw rivers, where peak freshet was in late April and early May (WSC 2007).

Few dissolved metals exceeded MDLs. Only aluminum, cadmium, copper, iron, manganese, selenium, and zinc were found to exceed either BCWQ and/or CCME guidelines. Of these, only aluminum and iron were found to exceed water quality guidelines in the Peace River, but only infrequently at Peace 5 (April and June). The Halfway River was the only stream to consistently exceed guidelines, but only for dissolved selenium. Exceedences of other dissolved metals were infrequent and scattered amongst tributary sample sites. The exception was Boudreau Creek, which, when compared with other sample sites, had the highest number of exceedences of individual dissolved metals and the highest frequency at which these metals exceeded CCME guidelines.

In general, metals are more readily absorbed by aquatic biota in dissolved form as opposed to particulate form (represented by total metals); however, particulate metals deposited in surface sediments from suspension may, over time, become available to aquatic organisms through release from sediments into the water column (Triton 2005). Metals in sediment may also eventually become accessible to the aquatic food chain through ingestion by lower trophic levels feeding on detritus and/or through ingestion of particulate matter and uptake from solution (Triton 2005).

River sediment had few exceedences of identified CCME and BCSQ guidelines. Arsenic, nickel, and cadmium most frequently exceeded guidelines, with arsenic being pervasive amongst all sediment sample sites. There were fewer exceedences of copper and iron. Three PAHs (2 methylnaphthalene, naphthalene, and phenanthrene) exceeded guidelines at a number of sites on either one or both sampling occasions. Surface water run-off into streams is likely the most common mechanism for introduction of PAHs into water bodies, although direct contamination such as a spill of diesel fuel provides another possible source of contamination. There are three primary sources of PAHs that may cause exceedences of this group of compounds in surface water, including diesel fuel, incomplete burning and decay of vegetation.

Only three metals were found to exceed identified CSR guidelines in soil samples, including barium (relative to parkland use) and cadmium and zinc (relative to parkland and agricultural land uses). Barium exceedences were

noted at Sites 20 and 21, whereas cadmium and zinc exceeded guidelines at Site 24. The organic horizon, or that layer of material that could quickly be metabolized into the hypolimnion of a lake by lower trophic organisms such as bacteria and/or invertebrates, ranged from 0 to 21 cm thick, averaging 6.4 cm in depth across all soil sample sites. The thickest organic layers were observed within slightly higher elevation sample sites as opposed to areas that represent past flood plains.

There are no identified guidelines regarding maximum allowable levels of metals for vegetation inundated by a reservoir but there is no indication that metal content within vegetation samples taken this year are excessive. By way of comparison, all of this year's results of metal concentrations in vegetation samples are well below existing guidelines outlined by the CCME regarding compost product. Still, vegetation was the only matrix sampled in which mercury levels were more often above, rather than below, detection limits when compared with other matrices. In sediment, soil, and water samples, mercury levels were mostly below detectable limits. Sinnett et al. (2006) notes that trace metals could become bio-available to aquatic organisms that facilitate the decay of organic matter or via ingestion and decomposition of vegetation; however, he also cautions that it is notoriously difficult to predict the toxicological effects of a metal upon vegetation, let alone the rate of uptake and concentration of such metals into plant biomass from indices such as total metal concentration in surrounding soils.

6.1 Lessons Learned

A number of lessons were learned through the course of this project, primarily related to issues of access, anchoring systems used to secure equipment, and the placement of remote equipment. These are as follows:

- Boat access to the Peace River from early November through to late March is problematic because of variable degrees of shore ice and/or snow cover at boat launches. This lack of access prevents reliable servicing or maintenance of remotely deployed equipment, particularly turbidity sondes, to ensure they are secure and functioning properly.

- Winter weather conditions can greatly hamper otherwise easily accessed terrestrial sample sites during other times of the year. Because of varying degrees of snow clearing along access roads and steep terrain, snowmobiles do not always ensure access to a site. Consequently, winter servicing of equipment must either be foregone, or if required, use of a helicopter may be the most cost efficient means to access more remote sample areas and should be considered when winter access is necessary.

- Cable attachments between deployed equipment and shore anchor points are prone to becoming frozen into shore ice, creating severe stress on the cable and attachment points of the equipment by shore ice during spring break-up. Such cables are also prone to becoming entangled in debris as water levels rise during spring freshet, which can also cause severe stress on the cable and attachment points. As such, cables should not only be thoroughly examined each time equipment is serviced, they should be replaced annually for projects that continue from one year to the next.

- Floats situated at the water's surface are highly visible to the curious (and thus subject to vandalism), but can also facilitate adherence of frazil ice creating stress on attachment cables particularly for turbidity sondes.

- The risk of vandalism and/or tampering cannot be overstated, even in areas considered remote. In general, as little identification flagging and/or buoys as possible should be utilized for deployed equipment. Because the Peace River is such a popular corridor for recreational boaters, keeping equipment away from terrestrial access points is not always enough to avoid tampering. Areas with evidence of fire pits, trails, or other recreational activities should be avoided when considering a proposed location for deployment of equipment. Such signs may not always be obvious, particularly if deployment of equipment is occurring after a snow fall. Golder Associates experienced the most success in avoiding tampering when attachment

cables were concealed either in vegetation or buried under sediment and/or rocks and when flotation buoys were partially submerged.

7.0 CLOSURE

We trust the information presented in this report meets your current requirements. Should you have any questions or concerns, please do not hesitate to contact Golder.

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Table 1: Sample site locations and sample parameters.

Site Name	Location	Mainstem	Tributary	Sample Parameter					
				Water	Temperature	Turbidity	Sediment	Soil	Vegetation
Peace 1 *	~ 4 km downstream of PCN (**Sites 1 & 15 combined)**	x		x	x	x	x		x
Peace 2	500 m upstream of Halfway River	x		x	x	x	x		
Peace 3	~ 2 km downstream of proposed Site C damsite	x		x	x	x	x		
Peace 4	Proximate to WSC Stn 07FA004 upstream of the Pine R. but downstream of the Moberly R. and the proposed Site C damsite	x		x	x	x	x		
Peace 5	Upstream of Alces River ~ at WSC stn.	x		x	x	x	x		
Moberly 6	Upper Moberly River ~ at WSC Stn 07FB008		x	x	x		x		
Moberly 7	Lower Moberly River upstream of reservoir high-water mark		x	x					
Halfway 8	Halfway R. ~ 26 km upstream of confluence with the Peace R.		x	x					
Halfway 9	Halfway R. ~ 1.5 km upstream of confluence with the Peace R.		x	x	x		x		
Lynx 10	Lynx Ck. @ Ree Simpson (~2.5 km upstream)		x	x					
Farrell 11	Farrell Ck. 2.5 km upstream - Ardell property		x	x					
Farrell 11a	Farrell Ck. - at highway bridge				x				
Cache 12	Cache Ck. @ Hwy 29 Bridge (~ 1 km upstream)		x	x					
Boudreau 13	Boudreau Ck downstream of lakes ~ 4 km upstream of confluence with Peace R.		x	x					
Peace 14	~ 10 km downstream of Taylor between Pine & Beatton rivers	x				x			
Peace 15 *	PCN Tailrace **(not established)**								
Pine 16	Pine R. ~ 400 m upstream of confluence with Peace R.		x		x				
Beatton 17	Beatton R. ~ 500 m upstream of confluence with Peace R.		x		x				
Kiskatinaw 18	Kiskatinaw R. ~ 400 m upstream of confluence with Peace R.		x		x				
Site 19	Peace River north bank, along Lynx Ck downstream of Hwy. 23 bridge		x					x	x
Site 20	Peace River opposite confluence with Farrell Ck - south bank	x						x	x
Site 21	Peace River ~500 m upstream of the Halfway R. Proximate to Peace 2 -south bank	x						x	x
Site 22	~ 1.25 km downstream of the Halfway R. - north bank	x							x
Site 23	Peace River ~ 2 km downstream of Cache Ck. - south bank	x						x	x
Site 24	Peace River ~ 3 km downstream Tea Ck. - north bank	x						x	x
Site 25	Halfway R. ~ 1.5 km upstream of confluence with the Peace R - west bank							x	
Site 26	Designation for a duplicate at a sample site			x					

* Peace 1 and Peace 15 combined as one site.

Table 2: Summer and winter sample site locations in the Peace River watershed.

Site	UTM Co-ordinates (NAD 83)		Comments/ Winter Access Considerations
	Summer (permanent)	Winter (temporary)	
Peace 1	10 V 566116 6207817	10 V 568043 6209727	Winter location at Hudson Hope Boat Launch.
Peace 2	10 V 595751 6230589	Same	Steep bank may prevent winter access (snowshoes required). Sample via sampling pole.
Peace 3	10 V 627026 6232489	Not accessible	Inaccessible in winter unless boat launch is open.
Peace 4	10 V 636567 6230311	same	By snowshoe via shoreline via Old Fort Road in Fort St. John. Sample via sampling pole.
Peace 5	10 V 682612 6224002	Same	By snowshoe off of Peace Bridge crossing at confluence with Alces. Sample via sampling pole.
Moberly 6	10 V 603451 6217878	Same	By snowshoe and through ice.
Moberly 7	10 V 622802 6228018	Not accessible	Not accessible in winter except possibly via helicopter.
Halfway 8	10 V 584737 6245558	10 V 558903 6260445	Winter sampling off bridge crossing upstream of confluence with Cameron River. By snowshoe and through ice. Permanent site could be accessed by helicopter in winter, possibly snowmobile.
Halfway 9	10 V 596340 6231876	Same	By snowshoe and through ice.
Lynx 10	10 V 569463 6214794	Same	Winter sample in 2007 upstream of Hwy 29 bridge crossing but access via Ree Simpson property after first sample session. Winter sampling by snowshoe and through ice.
Farrell 11	10 V 579378 6222295	10 V 578754 6220358	Winter sample location upstream of Hwy. 29 bridge crossing. Winter sampling through ice.
Cache 12	10 V 609153 6237617	Same	Through ice.
Boudreau 13	10 V 604043 6230478	Not accessible	Not sampled in winter. Possible to access top of bank via snowmobile but access down bank tentative. Unlikely enough water in stream in winter to sample.
Peace 14	10 V 656193 6222020	Not accessible	YSI Sonde (TSS/Turbidity) location – sonde lost after first winter and never replaced – therefore never sampled again.
Pine 16	10 V 642224 6223870	Not accessible	Temperature data logger station – no other water sampling required here.
Beatton 17	10 V 663139 6221104	Not accessible	Temperature data logger station – no other water sampling required here.
Kiskatinaw 18	10 V 676546 6219352	Not Accessible	Temperature data logger station – no other water sampling required here.
Site 19	10 V 572172 6214332	Same	Soil and vegetation site - only summer sampling required.
Site 20	10 V 576176 6218740	Same	Soil and vegetation site - only summer sampling required.
Site 21	10 V 597865 6231579	Same	Soil and vegetation site - only summer sampling required.
Site 22	10 V 597865 6231579	Same	Vegetation site - only summer sampling required.
Site 23	10 V 611278 6237047	Same	Soil and vegetation site - only summer sampling required.
Site 24	10 V 633151 6229782	Same	Soil and vegetation site - only summer sampling required.
Site 25	10 V 596340 6231876	Same	Soil site - only summer sampling required.

Table 3: Water Survey of Canada (WSC) hydrometric stations in the study area.

River	Station #	Period of Record	Mainstem /Tributaries	Drainage Area (km^2)	*MAD (m^3/s)
Peace R. at Hudson Hope	07EF001	1917 to 1922; 1949-present	Mainstem	69,900	1,160
Peace R. above Pine River	**07FA004**	1979 to present	Mainstem	83,900	1,290
Peace R. near Taylor	07FD002	1944 to 1959	Mainstem	97,100	1,440
Peace R. above Alces River	**07FD010**	1974 to present	Mainstem	118,000	1620
Cypress Ck. near mouth	**07FA007**	1988 to present	Halfway R.	N/A	N/A
Graham R. above Colt Creek	**07FA005**	1981 to present	Halfway R.	2,200	25.1
Halfway R. above Graham R.	07FA003	1977 to 1996	Halfway R.	3,780	35.5
Halfway R. near Farrell (upper)	**07FA006**	1981 to present	Halfway R.	9,350	78.3
Halfway R. near Farrell (lower)	07FA001	1917 to 1983	Halfway R.	9,400	80.6
Moberly R. near Fort St. John	**07FB008**	1980 to present	Moberly R.	1,520	12.0
Quality Ck near the mouth	**07FB005**	1978 to present	Pine R.	29.5	0.195
Dickebusch Ck. near the mouth	**07FB004**	1978 to present	Pine R.	85.5	0.597
Pine R. above Mountain Creek	**07FB010**	1985 to 1989	Pine R.	677	29.7
Flatbed Ck at Km110 Heritage Hwy.	**07FB009**	1982 to present	Pine R.	697	4.3
Sukunka R. above Chamberlain	**07FB007**	1977 to present	Pine R.	927	23.7
Murray R. above Wolverine R.	**07FB006**	1977 to present	Pine R.	2,410	56.1
Sukunka R. near the mouth	**07FB003**	1977 to present	Pine R.	2,510	54.1
Murray R. near the mouth	**07FN002**	1977 to present	Pine R.	5,620	83.6
Pine R. at East Pine	**07FB001**	1961 to present	Pine R.	12,100	199.0
Beatton R. near Fort St. John	**07FC001**	1917 to present	Beatton R.	15,600	58.4
Kiskatinaw R. near Farmington	**07FD001**	1971 to present	Kiskatinaw R.	3,570	9.95

*MAD=Mean Annual Discharge

Station names in **shaded white text** indicate instantaneous sediment concentration or residue concentration data available

(Source: http://scitech.pyr.ec.gc.ca/climhydro/mainContent/main_e.asp?province=bc)

Table 4: Mean monthly water temperatures from the Peace River and tributary sites between November 2006 and October 2007.

Year	Month	Peace 1		Peace 2		Peace 3		Peace 4		Peace 5		Moberly 6		Halfway 9		Farrell 11		Pine 16		Beaton 17		Kisk. 18	
		Temp.	n	Temp.	n	Temp.	n	Temp.	n	Temp.	n	Temp.	n	Temp.	n	Temp.	n	Temp.	n	Temp.	n	Temp.	n
2006	Nov					**3.3**	***27.4***	**3.3**	***27.5***	**1.9**	***26.0***							**-0.1**	***27.5***			**-0.1**	***26.4***
	Dec					1.8	*31.0*	1.8	*31.0*	1.1	*31.0*							-0.1	*31.0*			-0.1	*31.0*
2007	Jan					0.4	*31.0*	0.4	*31.0*	0.1	*31.0*							-0.1	*31.0*			-0.1	*31.0*
	Feb					**0.0**	***28.0***	0.0	*28.0*	-0.1	*28.0*							-0.2	*28.0*			**-0.1**	***28.0***
	Mar	**0.6**	***23.1***	**0.6**	***21.9***	0.5	*30.6*	0.5	*31.0*	0.0	*30.8*	**-0.1**	***28.4***	**-0.1**	***26.5***	**-0.1**	***27.4***	-0.2	*31.0*			-0.1	*31.0*
	Apr	**1.4**	***29.2***	**2.0**	***22.7***	**1.7**	***24.4***	**1.7**	***28.6***	3.1	*30.0*	**0.0**	***9.0***	1.8	*29.5*	**2.3**	***25.4***	1.4	*30.0*			-0.1	*29.5*
	May	2.8	*31.0*	3.8	*31.0*	5.2	*31.0*	**4.9**	***29.0***	6.9	*31.0*	**8.8**	***29.1***	8.8	*31.0*	**9.6**	***23.4***	7.1	*31.0*	**11.3**	***15.4***	8.6	*31.0*
	Jun	5.7	*30.0*	7.2	*30.0*	8.8	*30.0*	**9.3**	***26.8***	11.1	*30.0*	13.5	*29.9*	10.9	*30.0*	**17.7**	***24.2***	9.3	*30.0*	17.8	*30.0*	18.5	*30.0*
	Jul	9.3	*31.0*	**10.5**	***26.0***	10.8	*31.0*	11.6	*31.0*	14.0	*31.0*	18.2	*31.0*	16.1	*31.0*	20.0	*31.0*	15.2	*31.0*	**20.2**	***24.4***	20.8	*31.0*
	Aug	9.3	*31.0*	**10.3**	***29.3***	**10.7**	***14.4***	10.7	*31.0*	**12.1**	***25.2***	16.1	*31.0*	15.0	*31.0*	16.3	*31.0*	**16.2**	***20.6***	**17.0**	***16.5***	16.7	*31.0*
	Sep	11.3	*30.0*	11.4	*30.0*			11.4	*30.0*	11.6	*30.0*	11.9	*30.0*	10.0	*30.0*	10.9	*30.0*	**11.0**	***19.0***	11.1	*30.0*	11.2	*30.0*
	Oct	9.8	*31.0*	9.5	*31.0*			9.1	*31.0*	8.4	*31.0*	5.4	*31.0*	3.7	*31.0*	3.8	*31.0*	5.3	*31.0*	4.9	*31.0*	4.1	*31.0*

n = days for which temperature data are available

Bold = months for which a full set of temperature data is unavailable, hence presented monthly temperature data are not a true mean. Months where less than 0.5 days of data are missing are considered representative of mean monthly temperatures, as less than 12 single hour measurements are missing from the data set.

Table 5: Water sampling completed at sample sites over the course of the 2006-2007 field season.

Site Name	Nov-06	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Duplicate
Peace 1		x	x	x	x	x	x	August
Peace 2			x	x	x	x	x	April
Peace 3	x	x	x	x	x	x	x	May and June
Peace 4	x	x	x	x	x	x	x	Nov. and Mar.
Peace 5	x	x	x	x	x	x	x	July
Moberly 6		x		x	x	x	x	
Moberly 7				x	x	x	x	
Halfway 8		x		x	x	x	x	
Halfway 9		x		x	x	x	x	
Lynx 10		x	x	x	x	x	x	
Farrell 11		x	x	x	x	x	x	
Cache 12		x	x	x	x	x	x	
Boudreau 13				x	x	x	x	
Duplicate	x	x	x	x	x	x	x	
Blank	x	x	x	x	x	x	x	

Table 6: **Water quality analysis results summary showing maximum and minimum values above the method detection limits (MDL) and the number samples within the data set below MDLs from sample sites in the Peace River. Blanks represent results that are below MDLs.**

Parameter	Peace 1				Peace 2				Peace 3				Peace 4				Peace 5				MDL
	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	
Physical Tests (mg/L except as noted)																					
Colour (CU)	7.3	5.8	3	7	7.4	5.8	2	6	18.2	6.2	0	8	18.2	5.8	0	11	51.5	7.0	1	8	5.0
Conductivity (µS/cm)	188.0	171.0	0	7	193.0	179.0	0	6	231.0	181.0	0	8	226.0	181.0	0	11	239.0	176.0	0	8	2.0
Hardness	105.0	91.0	0	7	106.0	91.9	0	6	130.0	91.1	0	8	131.0	88.8	0	11	117.0	89.5	0	8	0.5
pH (pH units)	8.22	7.88	0	7	8.20	8.07	0	6	8.24	8.03	0	8	8.23	7.47	0	11	8.20	7.86	0	8	0.01
Salinity (g/L)			7	7			6	6			8	8			11	11			8	8	1.0
TDS	111	98	0	7	109	104	0	6	165	102	0	8	162	98	0	11	280	103	0	8	10
TSS	14.8	3.5	3	7	19.2	7	2	6	1020.0	3	0	8	1010.0	3.5	0	11	1570.0	4.5	0	8	3.0
Turbidity (NTU)	22.8	1.1	0	7	18.6	2.3	6	6	759.0	3.1	0	8	770.0	0.9	0	11	2030.0	3.0	0	8	0.1
Anions and Nutrients (mg/L except as noted)																					
AOX (µg/L)	12.0	8.5	2	7	13.0	4.3	1	6	11.0	9.0	3	8	10.0	5.5	7	11	15.0	5.7	3	8	4.0
Alkalinity	91.1	72.0	0	7	85.1	67.8	1	6	117.0	77.5	0	8	116.0	77.4	0	11	97.1	68.7	0	8	2.0
Ammonia	0.031	0.024	5	7	0.021	0.021	6	6	0.093	0.043	6	8	0.050	0.023	4	11	0.172	0.021	4	8	0.02
Acidity	5.9	1	2	7	3	1.2	2	6	2.5	1.3	1	8	7.8	1.6	2	11	5.2	1.3	0	8	1.0
Bromide			7	7			6	6			8	8			11	11			8	8	0.05
Chloride			7	7			6	6			8	8			11	11	1.75	1.75	7	8	0.5
Fluoride	0.041	0.027	1	7	0.040	0.035	1	6	0.060	0.021	0	8	0.047	0.021	0	11	0.097	0.030	0	8	0.02
Sulphate	15.5	12.1	0	7	15.2	12.2	0	6	18.6	12.3	0	8	17.8	12.4	0	11	35.4	9.04	0	8	0.5
Sulphide			7	7			6	6	0.023	0.023	7	8			11	11			8	8	0.02
Nitrate & Nitrite (as N)	0.1380	0.0520	0	7	0.0535	0.0450	1	6	0.0555	0.0388	2	8	0.0604	0.0412	1	11	0.4280	0.0333	1	8	0.005
Nitrate (as N)	0.1380	0.0520	2	7	0.0602	0.0450	2	6	0.0523	0.0386	1	8	0.0570	0.0412	3	11	0.0574	0.0333	2	8	0.005
Nitrite (as N)	0.001	0.001	6	7			6	6			8	8			11	11			8	8	0.001
Tot. Kjeldahl Nitrogen	0.227	0.075	0	7	0.215	0.083	0	6	1.630	0.123	0	8	1.500	0.064	0	11	2.420	0.107	0	8	0.05
Total Nitrogen	0.365	0.120	0	7	0.275	0.120	0	6	1.680	0.100	0	8	1.550	0.090	0	11	2.850	0.130	0	8	0.05
Ortho Phosphate	0.0011	0.0011	6	7	0.0015	0.0015	5	6	0.0110	0.0013	4	8	0.0107	0.0010	8	11	0.0209	0.0024	2	8	0.001
Tot. Diss.Phos.	0.0026	0.0023	5	7	0.0034	0.0022	2	6	0.0099	0.0029	3	8	0.0100	0.0030	4	11	0.0530	0.0023	0	8	0.002
Total Phosphate	0.0232	0.0037	0	7	0.0198	0.0054	0	6	0.9840	0.0077	0	8	1.1700	0.0047	0	11	1.2000	0.0106	0	8	0.002
Metals (mg/L except as noted)																					
Aluminum-D	0.0242	0.0023	0	7	0.0172	0.0033	0	6	0.0518	0.0057	1	8	0.0454	0.0023	4	11	0.4470	0.0028	1	8	0.001
Aluminum-T	0.0650	0.0236	0	7	0.4200	0.0254	0	6	10.0000	0.0400	0	8	8.5500	0.0244	0	11	19.5000	0.0410	0	8	0.001
Antimony-D	0.00074	0.00074	6	7			6	6	0.00074	0.00068	6	8	0.00068	0.00068	10	11	0.00070	0.00025	6	8	0.0001
Antimony-T			7	7	0.00035	0.00035	5	6	0.00079	0.00011	4	8	0.00074	0.00013	8	11	0.00070	0.00013	2	8	0.0001
Arsenic-D	0.00018	0.00016	1	7	0.00022	0.00017	0	6	0.00028	0.00016	0	8	0.00026	0.00015	0	11	0.00079	0.00017	0	8	0.0001
Arsenic-T	0.00022	0.00018	0	7	0.00049	0.00020	0	6	0.00768	0.00019	0	8	0.00617	0.00017	0	11	0.01550	0.00020	0	8	0.0001
Barium-D	0.0358	0.0289	0	7	0.0349	0.0299	0	6	0.0553	0.0306	0	8	0.0527	0.0300	0	11	0.0636	0.0317	0	8	0.00005
Barium-T	0.0440	0.0295	0	7	0.0439	0.0306	0	6	0.5060	0.0317	0	8	0.4290	0.0307	0	11	0.6270	0.0345	0	8	0.00005
Beryllium-D			7	7			6	6			8	8			11	11	0.0014	0.0014	7	8	0.0005
Beryllium-T			7	7			6	6			8	8			11	11			8	8	0.0005
Bismuth-T			7	7			6	6			8	8			11	11			8	8	0.0005
Bismuth-T			7	7			6	6			8	8			11	11			8	8	0.0005
Boron-D			7	7			6	6			8	8			11	11			8	8	0.01
Boron-T			7	7			6	6	0.030	0.025	6	8	0.027	0.027	10	11	0.043	0.011	5	8	0.01
Cadmium-D			7	7			6	6			8	8			11	11			8	8	0.00005
Cadmium-T			7	7	0.000070	0.000054	4	6	0.001650	0.000060	4	8	0.001690	0.000052	7	11	0.001110	0.000083	2	8	0.00005
Calcium-D	31.0	26.4	0	7	31.4	26.7	0	6	37.4	26.6	8	8	37.7	26.0	0	11	32.5	26.1	0	8	0.05
Calcium-T	30.4	26.1	0	7	31.5	25.9	0	6	83.0	27.1	8	8	83.2	26.5	0	11	58.3	26.9	0	8	0.05
Chromium-D			7	7			6	6			8	8			11	11			8	8	0.0005
Chromium-T			7	7	0.00096	0.00059	4	6	0.02180	0.00054	2	8	0.01780	0.00069	7	11	0.03500	0.00271	2	8	0.0005
Cobalt-D			7	7			6	6	0.00012	0.00010	6	8			11	11	0.00054	0.00015	6	8	0.0001
Cobalt-T	0.00012	0.00012	6	7	0.00029	0.00016	3	6	0.00752	0.00021	2	8	0.00677	0.00023	7	11	0.01780	0.00078	2	8	0.0001
Copper-D	0.00198	0.00042	0	7	0.00090	0.00053	0	6	0.00109	0.00055	1	8	0.00082	0.00044	4	11	0.00257	0.00061	1	8	0.0001
Copper-T	0.00090	0.00057	0	7	0.00173	0.00067	0	6	0.02000	0.00064	0	8	0.01760	0.00055	0	11	0.04760	0.00070	0	8	0.0001
Iron-D			7	7			6	6	0.127	0.037	4	8	0.044	0.030	8	11	0.588	0.051	3	8	0.03
Iron-T	0.132	0.038	1	7	0.512	0.043	0	6	21.100	0.065	0	8	16.600	0.033	1	11	39.200	0.111	0	8	0.03
Lead-D			7	7			6	6	0.000165	0.000165	7	8			11	11	0.000550	0.000069	5	8	0.00005
Lead-T	0.000222	0.000052	2	7	0.000355	0.000054	1	6	0.011700	0.000056	0	8	0.009900	0.000065	2	11	0.021300	0.000085	0	8	0.00005
Lithium-D			7	7			6	6			8	8			11	11			8	8	0.005
Lithium-T			7	7			6	6	0.0170	0.0130	6	8	0.0140	0.0140	10	11	0.0310	0.0054	4	8	0.005
Magnesium-D	6.85	6.05	0	7	6.97	6.15	0	6	8.99	5.97	0	8	8.85	5.73	0	11	8.84	5.82	0	8	0.1

Table 6: **Water quality analysis results summary showing maximum and minimum values above the method detection limits (MDL) and the number samples within the data set below MDLs from sample sites in the Peace River. Blanks represent results that are below MDLs.**

Parameter	Peace 1				Peace 2				Peace 3				Peace 4				Peace 5				MDL
	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	
Magnesium-T	6.81	5.95	0	7	7.18	5.91	0	6	20.10	6.09	0	8	19.10	5.77	0	11	15.70	5.71	0	8	0.1
Manganese-D	0.002150	0.000252	0	7	0.008560	0.000196	0	6	0.009260	0.000457	1	8	0.007360	0.000449	4	11	0.048500	0.000917	1	8	0.00005
Manganese-T	0.008430	0.001930	0	7	0.020000	0.002440	0	6	0.246000	0.003190	0	8	0.240000	0.001940	0	11	0.497000	0.005450	0	8	0.00005
Mercury-T			7	7			6	6			8	8			11	11			8	8	0.00005
Mercury-D			7	7			6	6			8	8			11	11			8	8	0.00005
Molybdenum-D	0.000784	0.000709	0	7	0.000975	0.000685	0	6	0.002240	0.000762	0	8	0.002260	0.000740	0	11	0.001050	0.000651	0	8	0.00005
Molybdenum-T	0.000905	0.000618	0	7	0.001290	0.000663	0	6	0.004180	0.000721	0	8	0.003540	0.000722	0	11	0.002040	0.000694	0	8	0.00005
Nickel-D	0.00170	0.00058	2	7	0.00070	0.00060	1	6	0.00120	0.00053	1	8	0.00120	0.00056	3	11	0.00300	0.00055	0	8	0.0005
Nickel-T	0.00089	0.00059	2	7	0.00166	0.00065	1	6	0.03010	0.00060	1	8	0.02600	0.00050	2	11	0.05590	0.00070	0	8	0.0005
Phosphorus-T			7	7			6	6	1.26	1.07	6	8	1.19	1.19	10	11	1.18	0.82	6	8	0.3
Phosphorus-D			7	7			6	6			8	8			11	11			8	8	0.3
Potassium-D			7	7			6	6			8	8			11	11	2.9	2.9	7	8	2.0
Potassium-T			7	7			6	6	5.0	4.1	6	8	4.3	4.3	10	11	6.1	3.8	6	8	2.0
Selenium-D			7	7			6	6			8	8			11	11			8	8	0.001
Selenium-T			7	7			6	6			8	8			11	11			8	8	0.001
Silicon-D	2.01	1.88	0	7	1.94	1.81	0	6	1.92	1.67	0	8	2.00	1.60	0	11	2.55	1.50	0	8	0.05
Silicon-T	2.07	1.89	7	7	2.58	1.85	0	6	24.30	1.72	0	8	20.60	1.71	0	11	25.60	1.73	0	8	0.05
Silver-D			7	7			6	6			8	8			11	11			8	8	0.00001
Silver-T			7	7			6	6	0.000278	0.000017	4	8	0.000202	0.000016	8	11	0.000374	0.000043	3	8	0.00001
Sodium-D			7	7			6	6	2.3	2.3	7	8			11	11	6.5	6.5	7	8	2.0
Sodium-T			7	7			6	6	2.3	2.3	7	8			11	11	6.4	6.4	7	8	2.0
Strontium-D	0.1070	0.0888	0	7	0.1050	0.0917	0	6	0.1330	0.0970	0	8	0.1310	0.0955	0	11	0.1090	0.0853	0	8	0.0001
Strontium-T	0.1080	0.0887	0	7	0.1090	0.0918	0	6	0.2180	0.0955	0	8	0.2150	0.0956	0	11	0.1800	0.0958	0	8	0.0001
Thallium-T			7	7			6	6	0.00053	0.00036	6	8	0.00043	0.00043	10	11	0.00045	0.00029	6	8	0.0001
Thallium-D			7	7			6	6			8	8			11	11			8	8	0.0001
Tin-D			7	7			6	6			8	8			11	11			8	8	0.0001
Tin-T			7	7			6	6			8	8			11	11	0.00025	0.00011	5	8	0.0001
Titanium-D			7	7			6	6			8	8			11	11	0.029	0.029	7	8	0.01
Titanium-T			7	7	0.011	0.010	4	6	0.203	0.011	4	8	0.182	0.011	7	11	0.167	0.032	2	8	0.01
Uranium-D	0.000508	0.000425	0	7	0.000506	0.000427	0	6	0.000630	0.000443	0	8	0.000603	0.000442	0	11	0.000676	0.000363	0	8	0.00001
Uranium-T	0.000476	0.000430	0	7	0.000520	0.000445	0	6	0.001720	0.000447	0	8	0.001670	0.000437	0	11	0.002580	0.000464	0	8	0.00001
Vanadium-D			7	7			6	6			8	8			11	11	0.002	0.002	7	8	0.001
Vanadium-T			7	7	0.002	0.0012	3	6	0.0583	0.0014	2	8	0.0512	0.0018	7	11	0.0686	0.0063	2	8	0.001
Zinc-D	0.0060	0.0012	2	7	0.0022	0.0015	4	6	0.0021	0.0012	5	8			11	11	0.0027	0.0025	6	8	0.001
Zinc-T	0.0035	0.0012	3	7	0.0034	0.0011	4	6	0.118	0.0012	1	8	0.101	0.0014	6	11	0.1810	0.0010	0	8	0.001
Organic Parameters (mg/L except as noted)																					
Chlorophyll *a* (µg/L)	0.834	0.424	0	7	0.813	0.340	0	6	0.980	0.237	0	8	1.190	0.569	11	11	1.360	0.164	0	8	0.0006
Diss. Organic Carbon	2.75	2.04	0	7	2.86	2.29	0	6	3.71	2.29	0	8	3.56	2.11	11	11	8.00	2.21	0	8	0.5
Tot. Inorg. Carbon	16.5	11.3	0	7	16.8	11.8	0	6	34.2	14.1	0	8	33.9	15.3	11	11	28.8	12.6	0	8	0.5
Total Organic Carbon	3.2	2.1	0	7	3.6	2.4	0	6	5.9	2.5	0	8	4.8	2.3	11	11	13.4	2.6	0	8	0.5

Notes:
Min. > MDL = Minimum value within sample set for site equal to or above the method detection limit (MDL).
No.< MDL=No. of samples in a sample set for a site below the MDL (if No.< MDL=6 when n=8, 6 of 8 samples were below the MDL and presented data are from two samples).

Table 7: **Water quality analysis results summary showing maximum and minimum values above method detection limits (MDL) and the number samples within the data set below MDLs from sample sites in Peace River tributaries. Blanks represent results that are below MDLs.**

Parameter	Moberly 6				Moberly 7				Halfway 8				Halfway 9				Lynx 10				Farrell 11				Cache 12				Boudreau 13				MDL
	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	
Physical Tests (mg/L except as noted)																																	
Colour (CU)	29.7	8.2	0	5	33.7	12.2	0	4	40.2	9.7	2	5	38.5	14.7	2	5	41.5	6.2	1	6	63.9	14	1	6	77.9	8.7	0	6	118.0	13.4	0	4	5.0
Conductivity (µS/cm)	256.0	171.0	0	5	222.0	182.0	0	4	463.0	290.0	0	5	482.0	298.0	0	5	824.0	388.0	0	6	881.0	237.0	0	6	1420.0	345.0	0	6	1190.0	342.0	0	4	2.0
Hardness	127.0	92.5	0	5	123.0	96.5	0	4	252.0	173.0	0	5	260.0	166.0	0	5	471.0	207.0	0	6	428.0	124.0	0	6	652.0	140.0	0	6	775.0	189.0	0	4	0.5
pH (pH units)	8.25	8.06	0	5	8.28	8.10	0	4	8.42	8.18	0	5	8.47	8.19	0	5	8.40	8.16	0	6	8.48	8.10	0	6	8.32	7.91	0	6	8.12	8.00	0	4	0.01
Salinity (g/L)			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	1.0
TDS	149	107	0	5	142	114	0	4	285	193	0	5	299	202	0	5	457	251	0	6	582	179	0	6	1030	335	0	6	964	310	0	4	10
TSS	250.0	5.2	1	5	651.0	7.5	0	4	254.0	18.3	1	5	686.0	28.8	1	5	1960.0	8.5	0	6	178.0	6.7	0	6	2760.0	4.5	0	6	23.6	8	1	4	3.0
Turbidity (NTU)	153.0	2.4	0	5	508.0	6.9	0	4	284.0	0.6	0	5	457.0	2.1	0	5	1070.0	9.2	0	6	186.0	1.8	0	6	3520.0	4.9	0	6	110.0	3.1	0	4	0.1
Anions and Nutrients (mg/L except as noted)																																	
AOX (µg/L)	12.0	8.9	1	5	13.0	7.5	0	4	12.0	6.6	2	5	10.0	5.5	1	5	58.0	5.0	1	6	79.0	10.0	2	6	81.0	8.8	1	6	19.0	6.6	0	4	4.0
Alkalinity	136.0	71.9	0	5	108.0	75.9	0	4	218.0	131.0	0	5	232.0	130.0	0	5	466.0	163.0	0	6	293.0	100.0	0	6	355.0	96.4	0	6	286.0	123.0	0	4	2.0
Ammonia	0.023	0.021	2	5	0.020	0.020	3	4	0.028	0.028	4	5	0.024	0.024	4	5	0.126	0.025	3	6	0.058	0.038	4	6	0.214	0.022	2	6	0.110	0.032	0	4	0.02
Acidity	3.7	1	1	5	2.9	1.3	1	4	1.6	1.3	3	5	2.8	1	2	5	1.7	1.5	4	6	4.1	1.4	3	6	11.1	2.1	3	6	6.8	2.9	0	4	1.0
Bromide			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	0.05
Chloride			5	5			4	4	0.89	0.89	4	5	0.93	0.93	4	5	1.44	0.69	2	6	4.32	0.53	0	6	20.9	2.06	0	6	0.53	0.53	3	4	0.5
Fluoride	0.078	0.031	0	5	0.070	0.041	0	4	0.103	0.055	0	5	0.100	0.059	0	5	0.273	0.150	0	6	0.317	0.103	0	6	0.491	0.158	0	6	0.320	0.116	4	4	0.02
Sulphate	9.56	5.61	0	5	9.51	6.50	0	4	50.50	24.00	0	5	56.40	24.90	0	5	92.90	27.80	0	6	216.00	23.10	0	6	502.00	75.20	0	6	452.00	59.70	4	4	0.5
Sulphide			5	5			4	4			5	5	0.022	0.022	4	5	0.040	0.040	5	6	0.038	0.038	5	6			6	6	0.021	0.021	3	4	0.02
Nitrate & Nitrite (as N)	0.038	0.016	3	5	0.013	0.013	3	4	0.099	0.007	2	5	0.083	0.021	2	5	0.140	0.011	0	6	0.116	0.086	3	6	0.125	0.017	3	6	0.029	0.009	1	4	0.005
Nitrate (as N)	0.0221	0.0152	3	5	0.0206	0.0125	2	4	0.0529	0.0065	3	5	0.0554	0.0208	3	5	0.0546	0.0105	2	6	0.0976	0.0976	5	6	0.0175	0.0175	5	6	0.0276	0.0094	0	4	0.005
Nitrite (as N)	0.001	0.001	4	5			4	4			5	5			5	5			6	6			6	6	0.0034	0.0034	5	6	0.0039	0.0013	2	4	0.001
Tot. Kjeldahl Nitrogen	0.81	0.194	0	5	1.680	0.269	0	4	0.670	0.138	1	5	0.980	0.156	1	5	2.280	0.138	0	6	1.170	0.126	0	6	4.340	0.312	0	6	1.420	0.526	0	4	0.05
Total Nitrogen	0.83	0.20	0	5	1.69	0.25	0	4	0.57	0.10	0	5	0.35	0.08	0	5	2.38	0.20	0	6	0.79	0.21	0	6	4.47	0.33	0	6	1.45	0.64	0	4	0.05
Ortho Phosphate	0.004	0.001	2	5	0.008	0.002	1	4	0.007	0.002	1	5	0.008	0.001	0	5	0.050	0.004	0	6	0.018	0.006	2	6	0.039	0.001	2	6	0.010	0.010	3	4	0.001
Tot. Diss.Phos.	0.010	0.003	0	5	0.014	0.003	0	4	0.008	0.002	0	5	0.009	0.002	0	5	0.070	0.005	0	6	0.029	0.004	0	6	0.120	0.005	0	6	0.037	0.004	1	4	0.002
Total Phosphate	0.3030	0.0081	0	5	0.8000	0.0143	0	4	0.3330	0.0032	0	5	0.7700	0.0057	0	5	1.3700	0.0145	0	6	0.2460	0.0133	0	6	2.2500	0.0116	0	6	0.1290	0.0039	0	4	0.002
Metals (mg/L except as noted)																5				6													
Aluminum-D	0.0597	0.0028	0	5	0.1090	0.0078	0	4	0.0698	0.0039	1	5	0.0781	0.0018	0	5	0.1150	0.0014	0	6	0.0924	0.0044	0	6	0.1140	0.0047	0	6	0.1560	0.0465	2	4	0.001
Aluminum-T	2.5800	0.0389	0	5	6.5900	0.0537	0	4	5.6000	0.0082	0	5	5.6200	0.0316	0	5	13.0000	0.0493	0	6	5.4400	0.0658	0	6	22.2000	0.0445	0	6	1.4700	0.0380	0	4	0.001
Antimony-D	0.00011	0.00011	4	5	0.00013	0.00013	3	4	0.00076	0.00014	0	5	0.00122	0.00013	0	5	0.00022	0.00019	3	6	0.00018	0.00012	1	6	0.00029	0.00026	4	6	0.00027	0.00021	2	4	0.0001
Antimony-T	0.00031	0.00011	2	5	0.00041	0.00014	1	4	0.00060	0.00012	0	5	0.00061	0.00013	0	5	0.00101	0.00011	1	6	0.00040	0.00017	1	6	0.00072	0.00031	3	6	0.00034	0.00027	2	4	0.0001
Arsenic-D	0.00030	0.00012	0	5	0.00038	0.00021	0	4	0.00031	0.00019	1	5	0.00029	0.00011	0	5	0.00116	0.00065	0	6	0.00064	0.00037	0	6	0.00061	0.00052	0	6	0.00094	0.00055	0	4	0.0001
Arsenic-T	0.00173	0.00014	0	5	0.00406	0.00030	0	4	0.00243	0.00011	0	5	0.00325	0.00013	0	5	0.01450	0.00108	0	6	0.00299	0.00043	0	6	0.01790	0.00063	0	6	0.00153	0.00079	0	4	0.0001
Barium-D	0.15200	0.10900	0	5	0.13400	0.09660	0	4	0.10600	0.06600	0	5	0.09810	0.06440	0	5	0.11600	0.05920	0	6	0.10900	0.06320	0	6	0.07680	0.03290	0	6	0.08930	0.05850	0	4	0.00005
Barium-T	0.23700	0.11900	0	5	0.40400	0.13500	0	4	0.21300	0.09870	0	5	0.31400	0.10100	0	5	0.78200	0.11300	0	6	0.15800	0.08950	0	6	0.67900	0.04860	0	6	0.09880	0.06040	0	4	0.00005
Beryllium-T			5	5	0.00050	0.00050	3	4			5	5			5	5			6	6			6	6	0.0015	0.0015	5	6			4	4	0.0005
Beryllium-D			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	0.0005
Bismuth D			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	0.0005
Bismuth T			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	0.0005
Boron-D			5	5			4	4	0.012	0.011	3	5	0.012	0.011	2	5	0.046	0.021	1	6	0.036	0.016	0	6	0.105	0.026	0	6	0.036	0.018	0	4	0.01
Boron-T	0.011	0.011	4	5	0.019	0.012	2	4	0.022	0.010	0	5	0.023	0.012	0	5	0.045	0.026	0	6	0.036	0.020	0	6	0.103	0.046	0	6	0.037	0.021	0	4	0.01
Cadmium-D	0.000071	0.000071	4	5			4	4			5	5			5	5			6	6	0.000230	0.000230	5	6			6	6	0.000260	0.000259	2	4	0.00005
Cadmium-T	0.000239	0.000061	1	5	0.000555	0.000063	1	4	0.000790	0.000058	0	5	0.001060	0.000070	1	5	0.002170	0.000065	2	6	0.000392	0.000150	2	6	0.002320	0.000376	4	6	0.000442	0.000110	1	4	0.00005
Calcium-D	35.1	24.9	0	5	34.2	26.2	0	4	72.3	47.9	0	5	74.5	46.6	0	5	91.9	48.3	0	6	111.0	34.1	0	6	175.0	37.0	0	6	220.0	51.2	0	4	0.05
Calcium-T	35.7	24.4	0	5	38.4	28.1	0	4	73.1	48.5	0	5	80.9	48.6	0	5	154.0	67.4	0	6	110.0	37.0	0	6	172.0	53.1	0	6	209.0	52.0	0	4	0.05
Chromium-D			5	5			4	4			5	5			5	5			6	6			6	6	0.00198	0.00198	5	6			4	4	0.0005
Chromium-T	0.00551	0.00106	2	5	0.01220	0.00248	1	4	0.01260	0.00076	1	5	0.01180	0.00148	1	5	0.0255	0.0013	2	6	0.00967	0.00219	3	6	0.03900	0.00120	3	6	0.0026	0.0026	3	4	0.0005
Cobalt-D			5	5			4	4	0.00012	0.00012	4	5	0.00016	0.00010	2	5	0.00061	0.00014	1	6	0.00067	0.0002	3	6	0.00388	0.00033	0	6	0.00423	0.0012	0	4	0.0001
Cobalt-T	0.00200	0.00030	2	5	0.00550	0.00069	1	4	0.00249	0.00021	1	5	0.00411	0.00037	1	5	0.01370	0.0002	0	6	0.00386	0.00011	0	6	0.02530	0.00067	0	6	0.00474	0.00139	0	4	0.0001
Copper-D	0.00129	0.00061	0	5	0.00147	0.00077	0	4	0.00129	0.00017	0	5	0.00191	0.00050	0	5	0.00360	0.00049	0	6	0.00319	0.00099	0	6	0.00422	0.00066	0	6	0.00654	0.00072	0	4	0.0001
Copper-T	0.00618	0.00068	0	5	0.01490	0.00102	0	4	0.12000	0.00019	1	5	0.01070	0.00036	0	5	0.04220	0.00129	0	6	0.01240	0.00151	0	6	0.06560	0.00103	0	6	0.00958	0.00090	0	4	0.0001
Iron-D	0.106	0.055	1	5	0.153	0.032	0	4	0.119	0.038	3	5	0.132	0.034	1	5	0.082	0.032	3	6	0.187	0.120	4	6	0.263	0.204	4	6	0.635	0.635	3	4	0.03
Iron-T	4.720	0.099	0	5	14.500	0.181	0	4	6.400	0.465	1	5	10.400	0.049	0	5	27.000	0.117	0	6	6.150	0.095	0	6	48.300	0.292	0	6	3.240	0.555	0	4	0.03

Table 7: **Water quality analysis results summary showing maximum and minimum values above method detection limits (MDL) and the number samples within the data set below MDLs from sample sites in Peace River tributaries. Blanks represent results that are below MDLs.**

Parameter	Moberly 6				Moberly 7				Halfway 8				Halfway 9				Lynx 10				Farrell 11				Cache 12				Boudreau 13				MDL
	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	Max.	Min. > MDL	No. < MDL	n	
Lead-D	0.000138	0.000056	2	5	0.000168	0.000168	3	4	0.000064	0.000064	4	5	0.000147	0.000072	2	5	0.000053	0.000053	5	6	0.000147	0.000127	4	6	0.000141	0.000130	4	6	0.000130	0.000130	3	4	0.00005
Lead-T	0.009390	0.000102	0	5	0.008560	0.000121	0	4	0.003970	0.000234	1	5	0.006340	0.000437	1	5	0.015600	0.000335	1	6	0.002950	0.000077	1	6	0.024000	0.000240	2	6	0.001160	0.000360	2	4	0.00005
Lithium-D			5	5			4	4	0.0076	0.0051	1	5	0.0086	0.0057	2	5	0.0290	0.0120	1	6	0.0380	0.0064	0	6	0.0410	0.0078	1	6	0.0250	0.0140	1	4	0.005
Lithium-T	0.0056	0.0056	4	5	0.0126	0.0055	2	4	0.0071	0.0059	1	5	0.0114	0.0074	0	5	0.0290	0.0150	0	6	0.0390	0.0081	0	6	0.0410	0.0139	0	6	0.0250	0.0062	0	4	0.005
Magnesium-D	9.46	7.38	0	5	9.16	7.54	4	4	17.40	12.60	0	5	18.00	12.10	0	5	58.70	21.00	0	6	36.70	9.50	0	6	53.60	11.60	0	6	54.90	14.80	0	4	0.1
Magnesium-T	9.55	7.29	0	5	12.40	8.14	4	4	17.30	13.40	0	5	19.90	13.40	0	5	58.00	24.10	0	6	36.40	10.70	0	6	52.20	19.10	0	6	51.30	14.80	0	4	0.1
Manganese-D	0.00555	0.00178	0	5	0.00824	0.00204	4	4	0.00693	0.00101	0	5	0.00632	0.00141	0	5	0.02630	0.00352	0	6	0.03100	0.00091	0	6	0.86500	0.12500	0	6	1.37000	0.04860	0	4	0.00005
Manganese-T	0.09780	0.00317	0	5	0.21700	0.01460	4	4	0.08790	0.00140	0	5	0.15800	0.00457	0	5	0.60200	0.01420	0	6	0.15000	0.01740	0	6	1.21000	0.13500	0	6	1.38000	0.08710	0	4	0.00005
Mercury-T			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	0.00005
Mercury-D			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	0.00005
Molybdenum-D	0.00040	0.00028	0	5	0.000489	0.000344	0	4	0.00396	0.00242	0	5	0.00393	0.00246	0	5	0.00556	0.00195	0	6	0.0018	0.00067	0	6	0.00267	0.00125	0	6	0.00303	0.00149	0	4	0.00005
Molybdenum-T	0.000534	0.000329	1	5	0.000859	0.000478	1	4	0.00436	0.00258	0	5	0.0043	0.00273	0	5	0.00531	0.00242	0	6	0.00229	0.00101	0	6	0.00504	0.00175	0	6	0.00282	0.00155	0	4	0.00005
Nickel-D	0.00149	0.00072	0	5	0.00166	0.00099	0	4	0.00198	0.00052	0	5	0.00242	0.00087	0	5	0.0062	0.00130	0	6	0.0082	0.00209	0	6	0.0188	0.0044	0	6	0.0224	0.0056	0	4	0.0005
Nickel-T	0.00782	0.00087	0	5	0.01850	0.00123	0	4	0.01330	0.00051	0	5	0.01650	0.00075	0	5	0.04490	0.00201	0	6	0.01430	0.00196	0	6	0.07590	0.00450	0	6	0.02440	0.00580	0	4	0.0005
Phosphorus-T			5	5	0.62	0.62	3	4	0.37	0.37	4	5	0.83	0.83	4	5	1.64	0.31	4	6			6	6	1.75	1.75	5	6			4	4	0.3
Phosphorus-D			5	5			0	4			5	5			5	5			6	6			6	6			6	6			4	4	0.3
Potassium-D			5	5			0	4			5	5			5	5	6	2.4	1	6	3.5	2.1	3	6	7.4	3	0	6	7.2	4	0	4	2.0
Potassium-T			5	5	3.9	3.9	3	4	3	3	4	5	3.3	3.3	4	5	9.5	2.5	0	6	4.4	2.2	1	6	11.4	4.6	0	6	7	4	0	4	2.0
Selenium-D			5	5			4	4	0.0016	0.0011	1	5	0.0016	0.0012	0	5			6	6	0.0013	0.0013	5	6			6	6			4	4	0.001
Selenium-T			5	5			4	4	0.0015	0.0011	1	5	0.0016	0.0011	0	5	0.0028	0.0028	5	6	0.0015	0.0015	5	6	0.0032	0.0011	4	6			4	4	0.001
Silicon-D	1.69	1.06	0	5	1.73	1.20	0	4	1.99	1.63	0	5	1.97	1.59	0	5	6.60	2.66	0	6	2.64	1.39	0	6	3.09	1.06	0	6	5.65	2.23	0	4	0.05
Silicon-T	8.13	1.14	0	5	19.00	1.42	0	4	18.90	2.02	0	5	16.20	1.99	0	5	23.70	5.70	0	6	9.98	1.54	0	6	36.20	1.20	0	6	5.57	4.51	0	4	0.05
Silver-D			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	0.00001
Silver-T	0.000060	0.000013	2	5	0.000173	0.000034	1	4	0.000105	0.000018	2	5	0.000135	0.000033	2	5	0.000397	0.000078	3	6	0.000071	0.000016	3	6	0.000410	0.000090	4	6	0.000026	0.000026	3	4	0.00001
Sodium-D	2.7	2.7	4	5			4	4	3.0	2.2	2	5	4.7	2.5	2	5	20.7	5.1	0	6	34.2	4.5	0	6	91.4	17.5	0	6	8.2	2.5	0	4	2.0
Sodium-T	3.0	3.0	4	5	2.1	2.1	3	4	3.4	2.0	1	5	4.7	2.8	2	5	20.4	5.2	0	6	34	4.6	0	6	87.7	17.1	0	6	8	2.4	0	4	2.0
Strontium-D	0.0767	0.0558	0	5	0.0731	0.0603	0	4	0.329	0.194	0	5	0.318	0.188	0	5	0.562	0.173	0	6	0.352	0.0798	0	6	0.543	0.113	0	6	0.464	0.125	0	4	0.0001
Strontium-T	0.0766	0.0568	0	5	0.0808	0.0711	0	4	0.3250	0.1990	0	5	0.3370	0.1950	0	5	0.5630	0.2200	0	6	0.3590	0.0990	0	6	0.5650	0.2320	0	6	0.4590	0.1370	0	4	0.0001
Thallium-T			5	5	0.00021	0.00021	3	4	0.00025	0.00025	4	5	0.00026	0.00010	3	5	0.00039	0.00013	4	6	0.00011	0.00011	5	6	0.00052	0.00012	4	6			4	4	0.0001
Thallium-D			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	0.0001
Tin-D			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	0.0001
Tin-T			5	5			4	4	0.00807	0.00807	4	5	0.00010	0.00010	4	5			6	6	0.00011	0.00011	5	6			6	6			4	4	0.0001
Titanium-D			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	0.01
Titanium-T	0.091	0.012	2	5	0.222	0.033	1	4	0.452	0.017	2	5	0.153	0.019	1	5	0.216	0.023	2	6	0.125	0.036	3	6	0.271	0.019	3	6	0.035	0.014	2	4	0.01
Uranium-D	0.000197	0.000120	0	5	0.000272	0.000153	0	4	0.000833	0.000528	0	5	0.000862	0.000546	0	5	0.003820	0.001170	0	6	0.002090	0.000440	0	6	0.002910	0.001000	0	6	0.004000	0.001320	0	4	0.00001
Uranium-T	0.000339	0.000139	0	5	0.000702	0.000211	0	4	0.001120	0.000629	0	5	0.001380	0.000658	0	5	0.003920	0.001530	0	6	0.002110	0.000501	0	6	0.003730	0.001830	0	6	0.004020	0.001470	0	4	0.00001
Vanadium-D			5	5			4	4			5	5			5	5			6	6			6	6			6	6			4	4	0.001
Vanadium-T	0.0109	0.0021	2	5	0.0259	0.0054	1	4	0.0304	0.002	1	5	0.0341	0.0038	1	5	0.062	0.0028	2	6	0.0206	0.0055	3	6	0.0794	0.0026	3	6	0.006	0.006	3	4	0.001
Zinc-D	0.0025	0.002	3	5	0.0041	0.0041	3	4	0.0085	0.001	3	5	0.0021	0.0016	1	5	0.0026	0.0026	5	6	0.0124	0.001	2	6	0.006	0.0018	4	6	0.0202	0.0049	0	4	0.001
Zinc-T	0.0269	0.0013	0	5	0.0571	0.0018	0	4	0.0536	0.0036	1	5	0.0608	0.0011	0	5	0.166	0.0012	0	6	0.044	0.001	0	6	0.227	0.008	2	6	0.0504	0.0066	0	4	0.001
Organic Parameters (mg/L except as noted)																																	
Chlorophyll *a* (µg/L)	1.720	0.364	0	5	1.670	0.334	0	4	0.872	0.105	0	5	0.737	0.080	0	5	1.010	0.364	0	6	1.530	0.423	0	6	3.660	0.279	0	6	6.530	0.354	0	4	0.0006
Diss. Organic Carbon	7.32	4.9	0	5	7.06	4.72	0	4	8.93	1.17	0	5	4.13	1.3	0	5	12.6	1.93	0	6	15.3	3.87	0	6	22.5	6.78	0	6	29.2	11.1	0	4	0.5
Tot. Inorg. Carbon	18.6	12.0	0	5	20.5	13.3	0	4	49.6	26.6	0	5	42.0	27.8	0	5	104.0	25.2	0	6	65.9	9.6	0	6	66.3	29.7	0	6	53.7	23.1	0	4	0.5
Total Organic Carbon	8.6	5.5	0	5	11.0	4.8	0	4	12.2	1.3	0	5	9.6	1.5	0	5	57.0	2.6	0	6	46.1	4.2	0	6	29.5	8.2	0	6	30.4	11.8	0	4	0.5

Notes:

Min. > MDl Min. > MDL = Minimum value within sample set for site equal to or above the method detection limit (MDL).

No.< MDL=No. of samples in a sample set for a site below the MDL (if No.< MDL=6 when n=8, 6 of 8 samples were below the MDL and presented data are from two samples).

Table 8: The number of instances specific parameters for either CCME and/or BCWQ guidelines were exceeded in water samples between November 2006 and August 2007.

Total No. Samples Taken	6		5		6		7		7		5		4		5		5		6		6		6		4	
Parameter (units in mg/L except as noted)	Peace 1		Peace 2		Peace 3		Peace 4		Peace 5		Moberly 6		Moberly 7		Halfway 8		Halfway 9		Lynx 10		Farrell 11		Cache 12		Beaudreau 13	
Anions and Nutrients																										
Absorbable Organic Halogen (µg/L)																										
Ammonia as N																										
Acidity (as CaCO3)																										
Alkalinity, Total (as CaCO3)																										
Bromide (Br)																										
Chloride (Cl)																										
Fluoride (F)																			3		1		4		3	
Sulphate (SO4)																					1		5		3	
Sulphide as S																										
Nitrate and Nitrite as N																										
Nitrate (as N)																										
Nitrite (as N)																										
Total Kjeldahl Nitrogen																										
Total Nitrogen																										
Ortho Phosphate as P																										
Total Dissolved Phosphate As P																										
Total Phosphate as P																										
Metals - Total (T) or Dissolved (D)	**T**	**D**	**T**	**D**	**T**	**D**	**T**	**D**	**T**	**D**	**T**	**D**	**T**	**D**	**T**	**D**	**T**	**D**	**T**	**D**	**T**	**D**	**T**	**D**	**T**	**D**
Aluminum (Al)			3		4		4		5	2	3		3	1	4		4		5	1	4		4	2	2	1
Antimony (Sb)							1																			
Arsenic (As)									1										1				1			
Barium (Ba)																										
Beryllium (Be)																										
Bismuth (Bi)																										
Boron (B)																										
Cadmium (Cd)			2		2		2		5		4		3		5		4		4		4	1	2		2	2
Calcium (Ca)																										
Chromium (Cr)																										
Cobalt (Co)																										
Copper (Cu)					2		1		4		1		2		1		2		3		3		3	1	2	2
Iron (Fe)			2		4		4		5	1	3		3		4		4		5		3		5		4	1
Lead (Pb)																										
Lithium (Li)																										
Magnesium (Mg)																										
Manganese (Mn)																			1				2		3	2
Mercury (Hg)																										
Molybdenum (Mo)																										
Nickel (Ni)																										
Phosphorus (P)																										
Potassium (K)																										
Selenium (Se)															4	4	5	5	1		1	1	2			
Silicon (Si)																										
Silver (Ag)					1		1		2				1		1		1		1				1			
Sodium (Na)																										
Strontium (Sr)																										
Thallium (Tl)					1		1																1			
Tin (Sn)																										
Titanium (Ti)																										
Uranium (U)																										
Vanadium (V)					1		2		5		1		2		2		3		3		2		2			
Zinc (Zn)					1		1		4		1		2		1		3		3		2		2		2	2

Table 9: A summary of water quality guideline exceedences of metal parameters at individual water quality sites and mean number of exceedences based upon total water samples taken over the course of surface water grab sampling between November 2006 and August 2007.

Sample Site	Samples Taken per Site	Total Metal Exceedences	Dissolved Metal Exceedences	Count of Individual Total Metals Exceeded	Count of Individual Dissolved Metals Exceeded	Mean Total Metal Exceedences	Mean of Dissolved Metal Exceedences	Mean Individual Total Metals Exceeded	Mean Individual Dissolved Metals Exceeded
Peace 1	6	0	0	0	0	0.0	0.0	0.0	0.0
Peace 2	5	7	0	3	0	1.4	0.0	0.6	0.0
Peace 3	6	16	0	8	0	2.7	0.0	1.3	0.0
Peace 4	7	17	0	9	0	2.4	0.0	1.3	0.0
Peace 5	7	31	3	8	2	4.4	0.4	1.1	0.3
Moberly 6	5	13	0	6	0	2.6	0.0	1.2	0.0
Moberly 7	4	16	1	7	1	4.0	0.3	1.8	0.3
Halfway 8	5	22	4	8	1	4.4	0.8	1.6	0.2
Halfway 9	5	26	5	8	1	5.2	1.0	1.6	0.2
Lynx 10	6	27	1	10	1	4.5	0.2	1.7	0.2
Farrell 11	6	19	2	7	2	3.2	0.3	1.2	0.3
Cache 12	6	25	3	11	2	4.2	0.5	1.8	0.3
Boudreau 13	4	15	10	6	6	3.8	2.5	1.5	1.5
Sum/Mean-All Sites	72	234	29	91	16	3.25	0.40	1.26	0.22
Sum/Mean-Peace R.	31	71	3	28	2	2.29	0.10	0.90	0.06
Sum/Mean-Tributaries	41	163	26	63	14	3.98	0.63	1.54	0.34

Table 10: **Examples of observed large variations in analysis results of sampled parameters between original and duplicate samples taken from the Peace River between November 2006 and July 2007.**

Site	PEACE 1		PEACE 2		PEACE 3		PEACE 3		PEACE 4		PEACE 4		PEACE 5	
Sample Period	14-Aug-07		15-Apr-07		16-May-07		08-Jun-07		03-Nov-06		04-Mar-07		05-Jul-07	
Physical Tests (mg/L except as noted)														
TSS	<3.0	3.5	8.2	19.2	14	24.2	1020	954	4.5	3.5	98	114	271	154
Anions and Nutrients (mg/L except as noted)														
Nitrite (as N)													0.107	0.353
Total Phosphate													0.229	0.125
Metals (mg/L except as noted)														
Aluminum-D					0.0392	0.0173							0.0614	0.0377
Iron-D			0.225	0.512	0.127	<.03							0.12	0.051
Iron-T					0.000165	<.00005								
Magnesium-D			0.00794	0.02										
Organic Parameters (mg/L except as noted)														
Chlorophyll *a* (µg/L)							0.676	0.237					0.326	0.716
Total No. of Large Variations (1)			3	3	4	4	2	2					2	2

(1) "large variations" are interpreted as near double or more between parameters

Table 11: **A summary of the total number of observed exceedences of detections limits within travel blanks for each sample period between November 2006 and August 2007.**

Date Issued	13-Oct-06	06-Mar-07	18-Apr-07	17-May-07	28-May-07	08-Jun-07	09-JUL-07	13-AUG-07
Sample Period	Nov-O6	March - 07	Apr - 07	May - 07	Jun - 07	June -07	July - 07	Aug - 07
ALS Sample ID	n/a	L483753-11	L496604-12	L507216-6	L515422-9	L515422-8	L527080-12	L543666-10
No. >MDL.	1	4	1	1	1	3	3	0
Total Parameters Tested	59	57	21	22	39	39	62	62
% > MDL.	1.7%	7.0%	4.8%	4.5%	2.6%	7.7%	4.8%	0.0%

Table 12: Individual sample parameters that exceeded method detection limits within travel blanks between November 2006 and August 2007.

Date Issued	13-Oct-06	06-Mar-07	18-Apr-07	17-May-07	28-May-07	08-Jun-07	09-JUL-07	13-AUG-07	No > MDL	n	%	Comment
Sample Period	Nov-O6	March - 07	Apr - 07	May - 07	Jun - 07	June -07	July - 07	Aug - 07				
ALS Sample ID	n/a	L483753-11	L496604-12	L507216-6	L515422-9	L515422-8	L527080-12	L543666-10				
Parameter Type												
AOX					x	x	x	x	4	4	100%	
Ammonia as N		x							1	5	20%	barely above D.L.
Acidity (to pH 8.3)	x	x	x	x				x	5	6	83%	most barely above D.L.
Nitrite as N							x		1	5	20%	barely above D.L.
Total Dissolved Phosphate		x							1	6	17%	barely above D.L.
Total Phosphate	x								1	6	17%	barely above D.L.
Total Copper		x							1	6	17%	4 x D.L.
Chlorophyll *a*		x	x			x	x		4	6	67%	Variable D.L.s
Dissolved Organic Carbon						x			1	4	25%	barely above D.L.

Table 13: Summary of soil properties for the areas sampled in the Peace River watershed during July 2007.

Site	Pit No.	Soil Horizon Depth	Soil Texture	Soil Colour	Comments
Site 19 - Peace R. north bank, along Lynx Ck downstream of Hwy. 23 bridge.	Soil Pit 1A	LFH 0- 10 cm	Organic	Brown	Willow, immature poplar, clover and vetch.
		Bm 10-55+ cm	Sandy loam	Grey	15% cobble and gravel.
	Soil Pit 1B	LFH 0-7 cm	Organic	Brown	Willow, immature poplar, clover and vetch.
		Bm 7-50+ cm	Sandy Loam	Brown	5% gravel and cobble.
	Soil Pit 1C	LFH 0-6 cm	Organic	Brown	Willow, immature poplar, clover and vetch.
		Bm 6-52+ cm	Sandy loam	Grey	10% gravel and cobble.
Site 20 -Peace R. opposite confluence with Farrell Ck - south bank	Soil Pit 2A	LFH 0- 19 cm	Organic	Dark brown	White spruce, poplar, paper birch, kinnicknick and vetch, various mosses.
		Bt 19-42 cm	Loam	Brown	1% cobble and gravel.
	Soil Pit 2B	LFH 0- 21 cm	Organic	Dark brown	White spruce, poplar, paper birch, kinnicknick and vetch, various mosses.
		Bt 21-45+ cm	Sandy Loam	Brown	15% gravel and cobble.
	Soil Pit 2C	LFH 0- 18 cm	Organic	Dark brown	White spruce, poplar, paper birch, kinnicknick and vetch, various mosses.
		Bt 18-35+ cm	Loam	Brown	10% gravel and cobble.
Site 21 - Peace R. ~ 500 m upstream of the Halfway R. Proximate to Peace 2 - south bank	Soil Pit 4A	LFH 0- 2 cm	Organic	Dark brown	Black poplar, willow, some white spruce.
		Ah 2-17 cm	Silt loam	Dark brown	
		Bt 17-40+	Silt loam	Grey brown	
	Soil Pit 4B	LFH 0- 2 cm	Organic	Dark brown	Black poplar, willow, some white spruce.
		Ah 2-9 cm	Silt loam	Brown	
		Bm 9-35+	Silt loam	Grey brown	
	Soil Pit 4C	LFH 0- 3 cm	Organic	Dark brown	Black poplar, willow, some white spruce.
		Ah 3-13 cm	Silt loam	Grey brown	
		Bt 13-35+	Clay loam	Brown	
Site 23 - Peace R. ~ 2 km downstream of Cache Ck. - south bank	Soil Pit 5A	LFH 0-2 cm	Organic	Brown	White spruce, black poplar, with a willow and alder understory.
		Ah 2-13 cm	Silt Loam	Dark brown	
		Bm 13-40+	Sand	Grey	
	Soil Pit 5B	LFH 0-2 cm	Organic	Brown	White spruce, black poplar, with a willow and alder understory.
		Ah 2-6 cm	Silt Loam	Brown	
		Bm 6-39 cm	Sand	Grey	
		Ahb 39-42	Silt Loam	Brown	
		Bm 42-60+	Sand	Grey	
	Soil Pit 5C	LFH 0-3 cm	Organic	Brown	White spruce, black poplar, with a willow and alder understory.
		Ah 3-8 cm	Silt Loam	Brown	
		Bm 8-40+	Sand	Grey	
Site 24 - Peace R. ~ 3 km downstream of Tea Ck. - north bank	Soil Pit 6A	LFH 0-8 cm	Organic	Brown	Willow, black poplar, alder, with various grasses in the understory.
		Bm 8-40+	Sand	Grey	
	Soil Pit 6B	LFH 0-7 cm	Organic	Brown	Willow, black poplar, alder, with various grasses in the understory.
		Bm 7-50 cm	Sand	Grey	
	Soil Pit 6C	LFH 0-6 cm	Organic	Brown	Willow, black poplar, alder, with various grasses in the understory.
		Bm 6-45+	Sand	Grey	
Site 25-Halfway R. 1.5 km upstream of confluence with the Peace R. - west bank	Soil Pit 3A	Ae 0-15 cm	Sand	Brown	Black poplar, paper birch, willow and alder.
		Bm 15-45+ cm	Sand	Brown	
	Soil Pit 3B	Ae 0- 16 cm	Sand	Brown	Black poplar, paper birch, willow and alder.
		Bm 16-40+cm	Sand	Brown	
	Soil Pit 3C	Ae 0- 14 cm	Sand	Brown	Black poplar, paper birch, willow and alder.
		Bm 14-45+cm	Sand	Brown	

Note: The LFH is the surface layer consisting of one or more of undecomposed, partially decomposed and decomposed leaf and needle organic material.

Table 14: Results of analysis of soil samples for selected parameters taken from Peace River watershed sample sites during July 2007.

Site Number	Site 20		Site 21		Site 19		Site 23		Site 24		Site 25		CSR Standards (AL)	MCS	CSR Standards (PL)	MCS
Physical Tests																
pH	4.13	7.68	7.89	8.20	7.97	8.15	7.47	8.17	7.48	8.17	8.17	8.15				
Metals																
Aluminum (Al)	4670	6390	21800	25100	4640	4690	9680	8150	3120	6250	4350	4310				
Arsenic (As)	<5.0	5.6	9.4	12.6	5.9	6.3	6.9	5.2	<5.0	5.5	8.0	7.0	**20**	F	**20**	F
Barium (Ba)	640	268	528	625	243	310	225	240	131	113	318	375	**750**	G	**500**	G
Beryllium (Be)	<0.50	<0.50	0.61	0.67	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**4**	G	**4**	G
Cadmium (Cd)	1.85	0.81	0.67	0.74	0.57	0.59	0.62	<0.50	2.43	<0.50	0.51	<0.50	**2 - 35**	F/I/P	**2 - 35**	F/I/P
Calcium (Ca)	9620	38100	44900	44600	45100	44400	35700	34300	36800	22000	31100	31200				
Chromium (Cr)	7.2	12.6	46.1	52.8	11.7	12.1	20.8	18.1	6.7	12.5	8.8	8.8	**60 ^{VI} / 65 ^{III}**	F	**60 ^{VI} / 65 ^{III}**	F
Cobalt (Co)	2.4	4.9	15.9	18.7	4.1	4.1	8.5	7.5	3.3	5.1	5.1	4.9	**40**	G	**50**	G
Copper (Cu)	11.2	14.7	56.8	64.4	9.2	9.8	21.0	17.4	14.1	12.4	10.4	9.7	**90 - 150**	F/T/P	**90 - 150**	F/T/P
Iron (Fe)	8060	13200	34500	39400	10900	10900	20700	18000	8380	15800	17700	16500				
Lead (Pb)	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	**150 - 500**	F/I/P	**150 - 500**	F/I/P
Lithium (Li)	<2.0	7.0	25.1	27.8	5.5	5.6	14.4	11.7	3.2	7.1	5.9	5.2	**1,600**	S	**1,600**	S
Manganese (Mn)	20	247	677	763	186	176	404	321	193	275	192	160	**1,800**	S	**1,800**	S
Mercury (Hg)	0.148	<0.050	0.066	0.075	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	**15**	I	**15**	I
Molybdenum (Mo)	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	**5**	G	**10**	G
Nickel (Ni)	7.7	17.2	56.5	65.4	13.2	12.9	25.1	22.1	10	16.6	17.3	15.5	**150**	G	**100**	G
Selenium (Se)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**2**	G	**3**	G
Silver (Ag)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**20**	G	**20**	G
Sodium (Na)	<200	<200	340	500	<200	<200	<200	<200	<200	<200	<200	<200	**NS (PQL)**	S	**NS (PQL)**	S
Strontium (Sr)	44.3	66.2	110.0	114.0	78.4	77.9	82.6	82.9	80.3	53.8	68.4	67.4	**47,000**	S	**47,000**	S
Thallium (Tl)	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	**2**	G		
Tin (Sn)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**5**	S	**50**	S
Vanadium (V)	18.6	36.6	75.0	84.8	29.1	30.0	36.9	34.6	15.3	30.2	26.0	26.3	**200**	G	**200**	G
Zinc (Zn)	45.7	63.6	138	155	45.8	44.0	75.2	62.1	234	47.9	70.6	67.7	**150 - 450**	F/T/P	**150 - 450**	F/T/P
Particle Size																
% Gravel (>2mm)	6	45	<1	<1	1	<1	1	<1	3	<1	<1	<1				
% Sand (2.0mm – 0.063mm)	8	34	4	1	77	65	37	79	15	96	84	85				
% Silt (0.063mm – 4um)	73	18	36	59	20	30	50	15	73	4	12	12				
% Clay (<4um)	13	4	60	40	3	4	11	6	10	<1	3	3				

Notes:

All units in mg/kg except where noted in table

Standards shown are from the BC Contaminated Sites Regulation (CSR), enacted in 1997 (updated 2008)

Land Use abbreviations: AL (Agricultural); PL (Park Land)

MCS = Most Conservative Standard

Referenced site-specific factors include: G = Generic; I = Intake of Contaminated Soil; T = Toxicity to Invertebrates and Plants; S = Schedule 10

F = Fresh Water Aquatic Life; P = pH Dependent Standards

BOLD = exceedence in Agricultural Land Use

= exceedence in Park Land Use

= within of the indicated guideline range for the parameter but not an exceedance of guidelines because of sample pH.

Table 15: Results of analysis of vegetation samples taken from sites within the Peace River watershed on August 14, 2007.

Relabelled Sample ID	Peace 1	Site 19	Site 20	Site 21	Site 22	Site 23	Site 24	CCME "Category A" Max. Conc. within Compost Product
Plant Material	Spruce, Birch, Rose	Spruce, Birch, Rose	Spruce, Birch, Rose	Spruce, Poplar, Rose	Spr., Poplar, Rose	Spruce, Birch, Rose	Spruce, Cottonwood, Rose	
Physical Tests								
% Moisture	58.1	58.2	63.2	59.3	63.2	59.1	55.3	
Total Metals (mg/kg)								
Aluminum (Al)	56.0	56.0	243	66.0	64.0	56.0	35.0	
Antimony (Sb)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Arsenic (As)	<0.050	0.059	0.095	<0.050	<0.050	<0.050	<0.050	13.0
Barium (Ba)	50.9	48.4	117	76.3	31.9	40.9	31.3	
Beryllium (Be)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	
Bismuth (Bi)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	
Boron (B)	-	-	-	-	-	-	-	
Cadmium (Cd)	0.079	0.326	0.110	0.221	0.097	0.687	0.404	3.0
Calcium (Ca)	8940	10000	9570	13700	14400	15400	9380	
Chromium (Cr)	0.56	0.67	1.10	0.55	<0.50	<0.50	<0.50	210.0
Cobalt (Co)	<0.10	0.25	0.14	0.18	<0.10	<0.10	<0.10	34.0
Copper (Cu)	3.20	3.61	3.39	3.82	3.16	5.77	3.97	400.0
Iron (Fe)	62.9	58.3	214	62.0	62.5	46.2	39.7	
Lead (Pb)	0.12	0.12	0.24	<0.10	<0.10	<0.10	<0.10	150.0
Lithium (Li)	1.31	0.68	0.56	<0.50	1.02	<0.50	<0.50	
Magnesium (Mg)	1610	1720	1830	3350	1720	2270	1710	
Manganese (Mn)	43.6	9.25	36.8	230	11.6	19.4	13.0	
Mercury (Hg)	0.0056	0.0114	0.0191	0.0087	0.0128	0.0157	<0.0050	8.0
Molybdenum (Mo)	0.286	0.131	0.179	0.138	0.103	0.334	0.169	5.0
Nickel (Ni)	0.59	0.67	1.48	1.28	<0.50	0.62	<0.50	62.0
Phosphorus (P)	1670	1390	1270	1210	1650	1320	1240	
Potassium (K)	6300	7670	5730	5760	6170	8180	5560	
Selenium (Se)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.0
Silicon (Si)	-	-	-	-	-	-	-	
Silver (Ag)	-	-	-	-	-	-	-	
Sodium (Na)	<100	<100	<100	<100	<100	<100	<100	
Strontium (Sr)	54.3	26.3	22.6	90.1	33.4	39.7	24.8	
Thallium (Tl)	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	
Tin (Sn)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Titanium (Ti)	1.28	1.06	2.39	1.14	1.10	0.78	0.75	
Uranium (U)	<0.010	<0.010	0.018	<0.010	<0.010	<0.010	<0.010	
Vanadium (V)	<0.50	<0.50	0.85	<0.50	<0.50	<0.50	<0.50	
Zinc (Zn)	82.2	87.1	84.3	112	64.4	98.4	84.6	7.0

Table 16: Discharge measurements (m^3/s) from Lynx, Farrell, Cache and Boudreau Creeks in 2007.

Sample Site	April 16, 2008	May 17, 2007	June 6, 2007	July 8, 2007	August 16, 2007	Mean
Lynx 10	n/a [1]	1.324	0.929	2.020	0.152	1.106
Farrell 11	n/a [1]	4.102	2.750	0.310	0.210	1.843
Cache 12	n/a [1]	0.885	0.152	0.480	0.000 [3]	>0.506
Boudreau 13 [4]	n/a [2]	0.004	0.000 [3]	0.000 [3]	0.000 [3]	>0.004

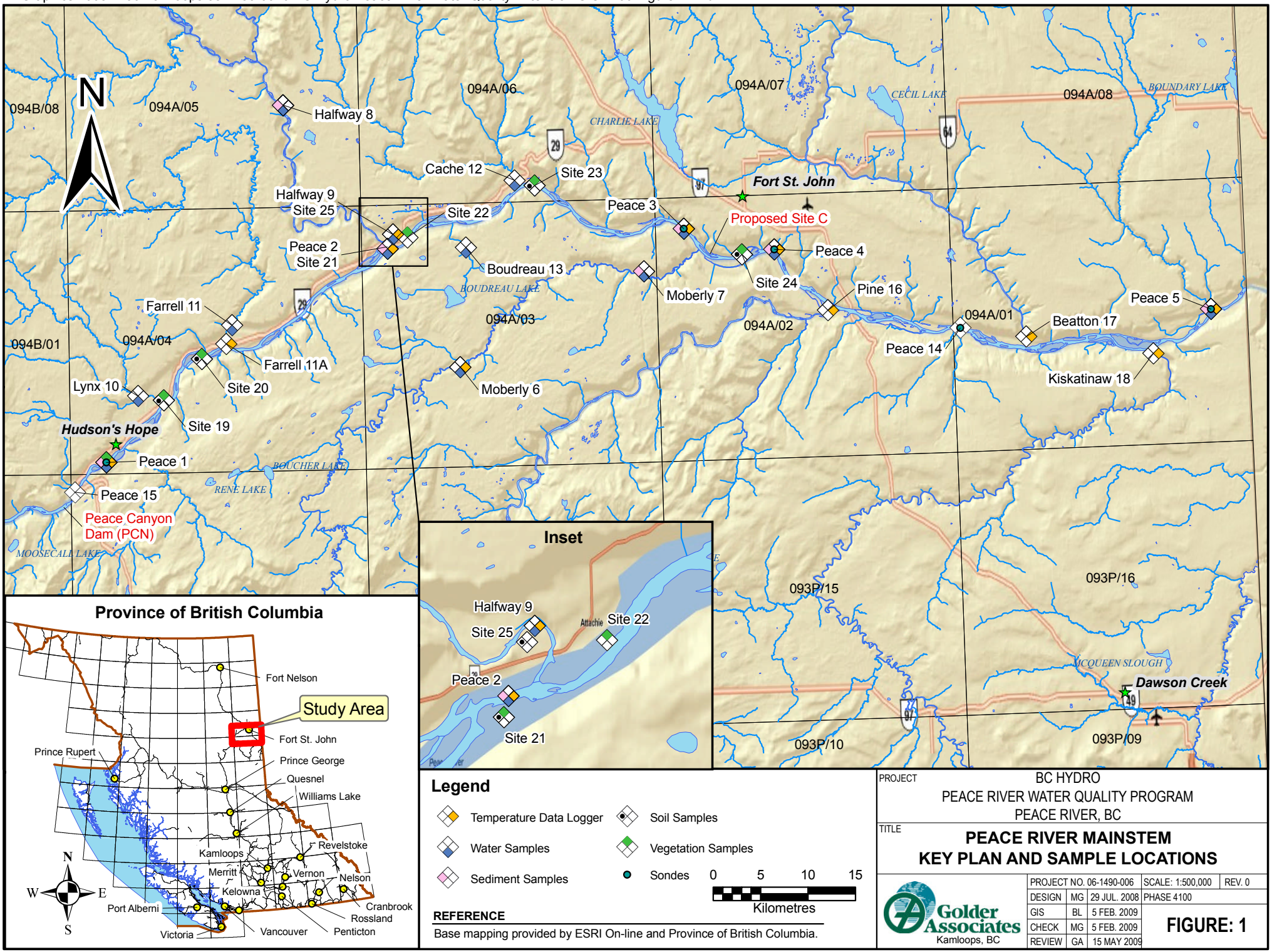
(1) Streams too high to wade.

(2) Site not established yet.

(3) No discernable water velocity by flow meter.

(4) Boudreau measuring dates within 1 day of those of other tributaries.

N:\Graphics\2008\1430 Kamloops\08-1430-0016 BC Hydro Peace River Water Quality Extension\GIS\4100 Figure 1.mxd



Legend

- Temperature Data Logger
- Water Samples
- Sediment Samples
- Soil Samples
- Vegetation Samples
- Sondes

0 5 10 15 Kilometres

REFERENCE

Base mapping provided by ESRI On-line and Province of British Columbia.

PROJECT

BC HYDRO
PEACE RIVER WATER QUALITY PROGRAM
PEACE RIVER, BC

TITLE

PEACE RIVER MAINSTEM KEY PLAN AND SAMPLE LOCATIONS

Golder Associates
Kamloops, BC

PROJECT NO. 06-1490-006			SCALE: 1:500,000	REV. 0
DESIGN	MG	29 JUL. 2008	PHASE 4100	
GIS	BL	5 FEB. 2009		
CHECK	MG	5 FEB. 2009		
REVIEW	GA	15 MAY 2009		

FIGURE: 1

Figure 2: Unaltered water temperature data from the Peace 5 upstream temperature data logger. Periods of obvious exposure to air (dewatering) were removed from temperature data sets collected by all data loggers to develop a corrected set of temperature data.

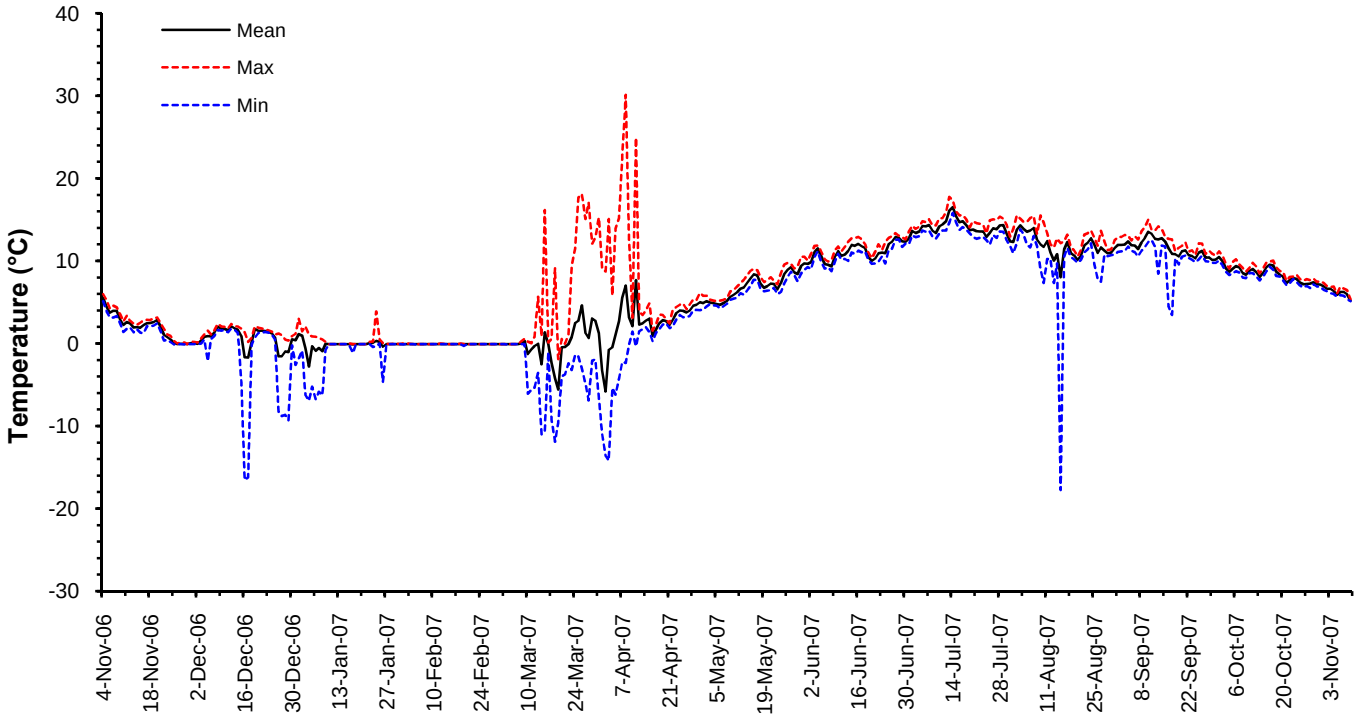


Figure 3: An example of corrected water temperature data from the upstream and downstream temperature data loggers from Peace 5 compared against each other and used to create one data set.

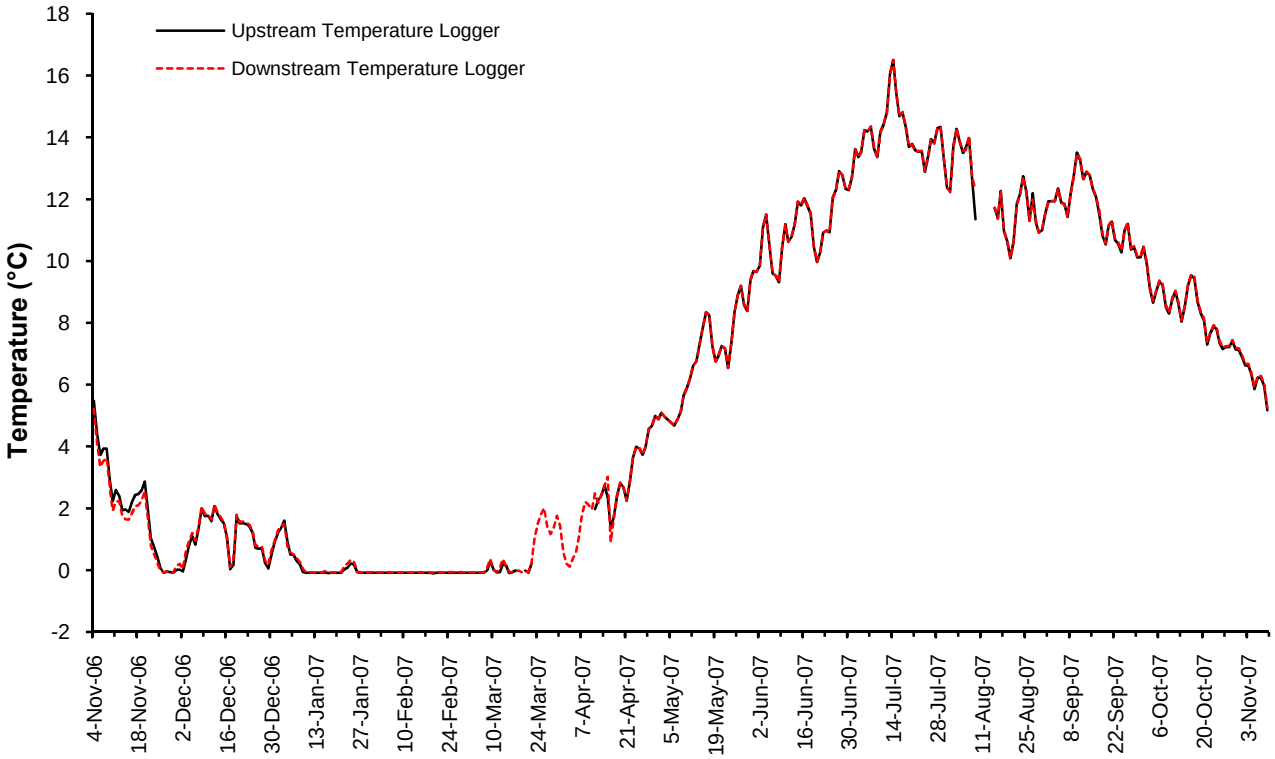


Figure 4: **Daily mean, maximum, and minimum water temperatures recorded by temperature data loggers in the Peace River from November 2006 to November 2007.**

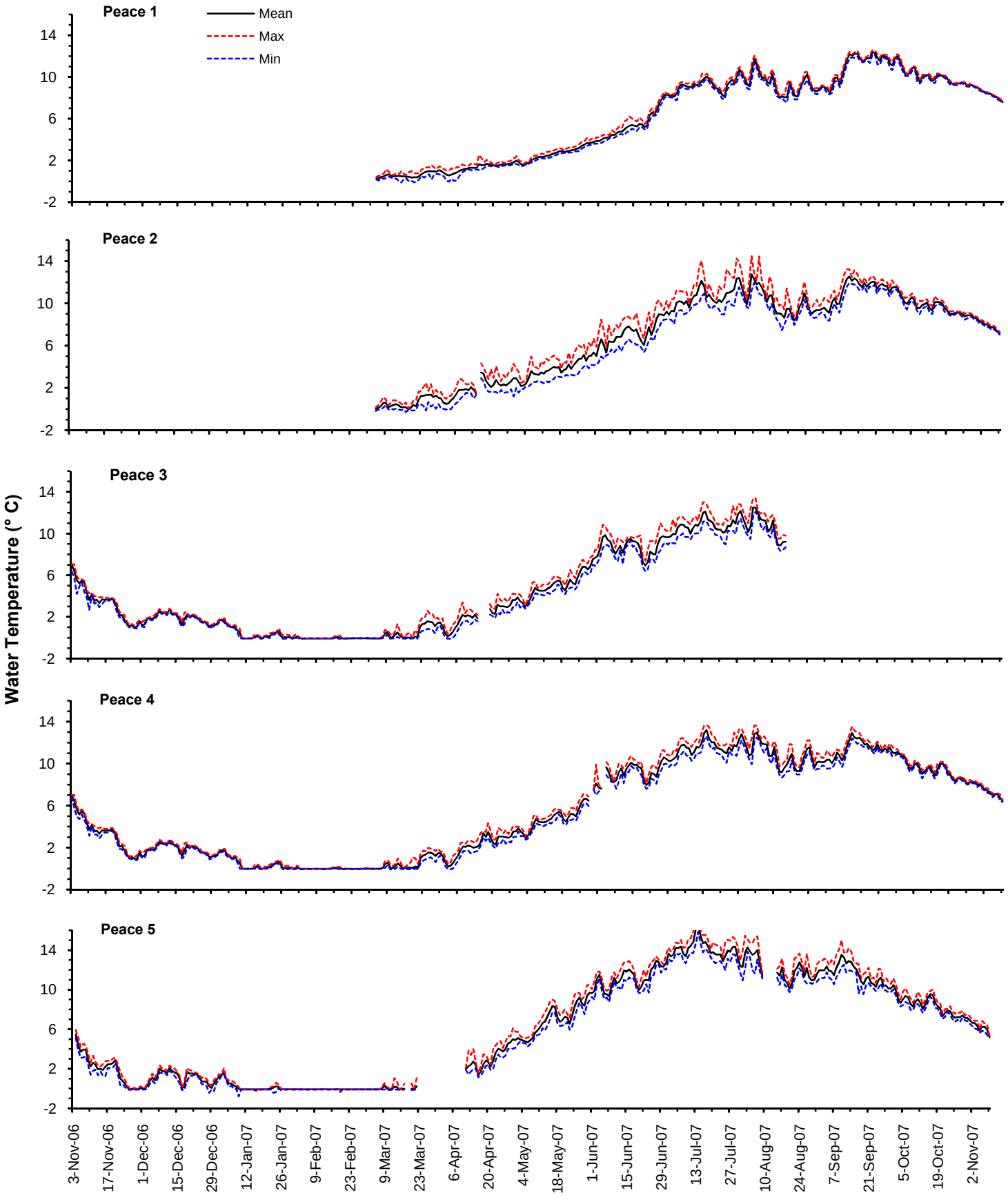


Figure 5: **Daily mean, maximum, and minimum water temperatures recorded by temperature data loggers in Peace River tributaries from November 2006 to November 2007.**

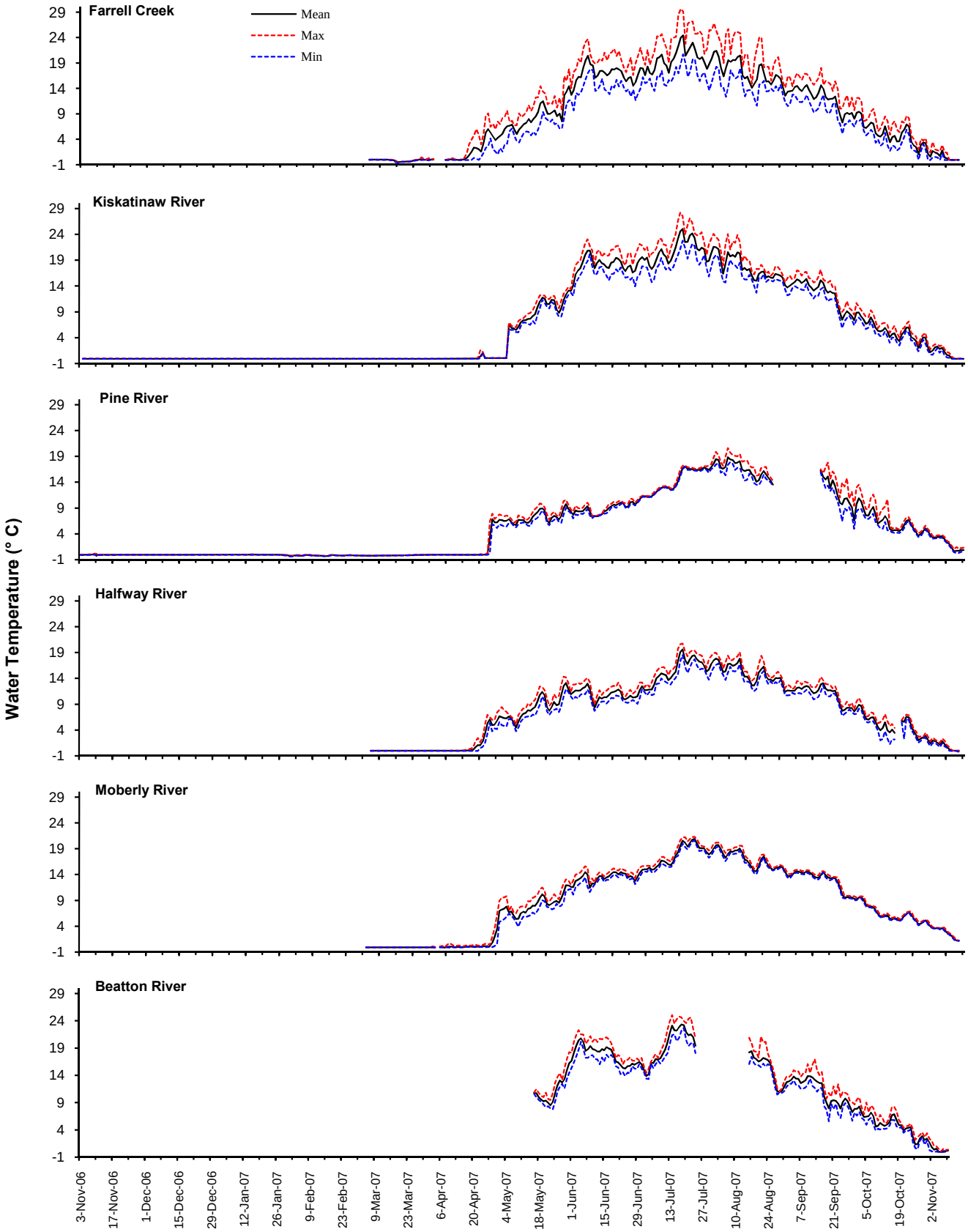


Figure 6: **Comparisons between daily mean water temperature data from temperature data loggers situated at Peace River and tributary sites, November 2006 to November 2007.**

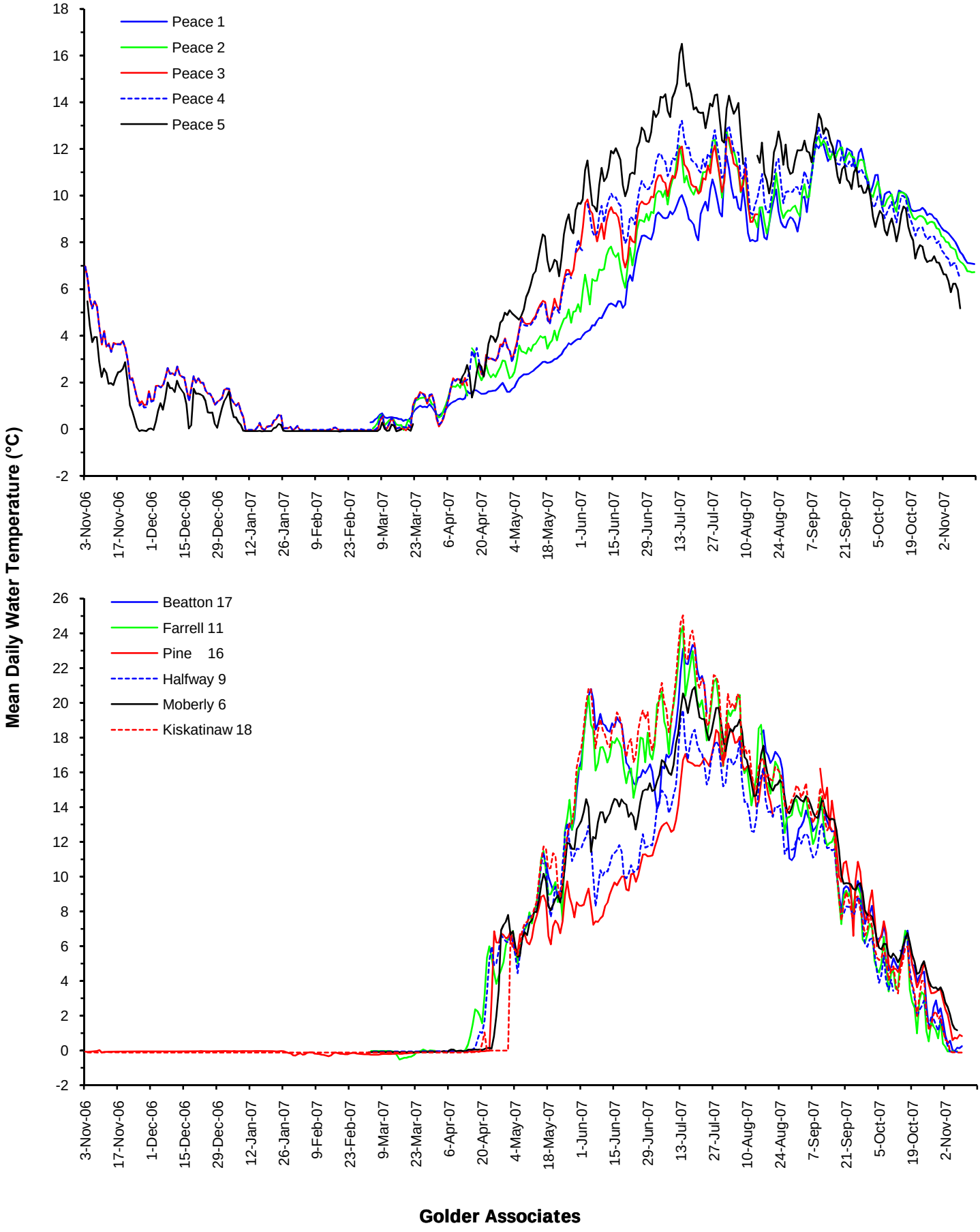


Figure 7: PCN tail water elevations compared to corrected daily mean water temperatures observed at sites Peace 4 and Peace 5 from November 2006 to November 2007.

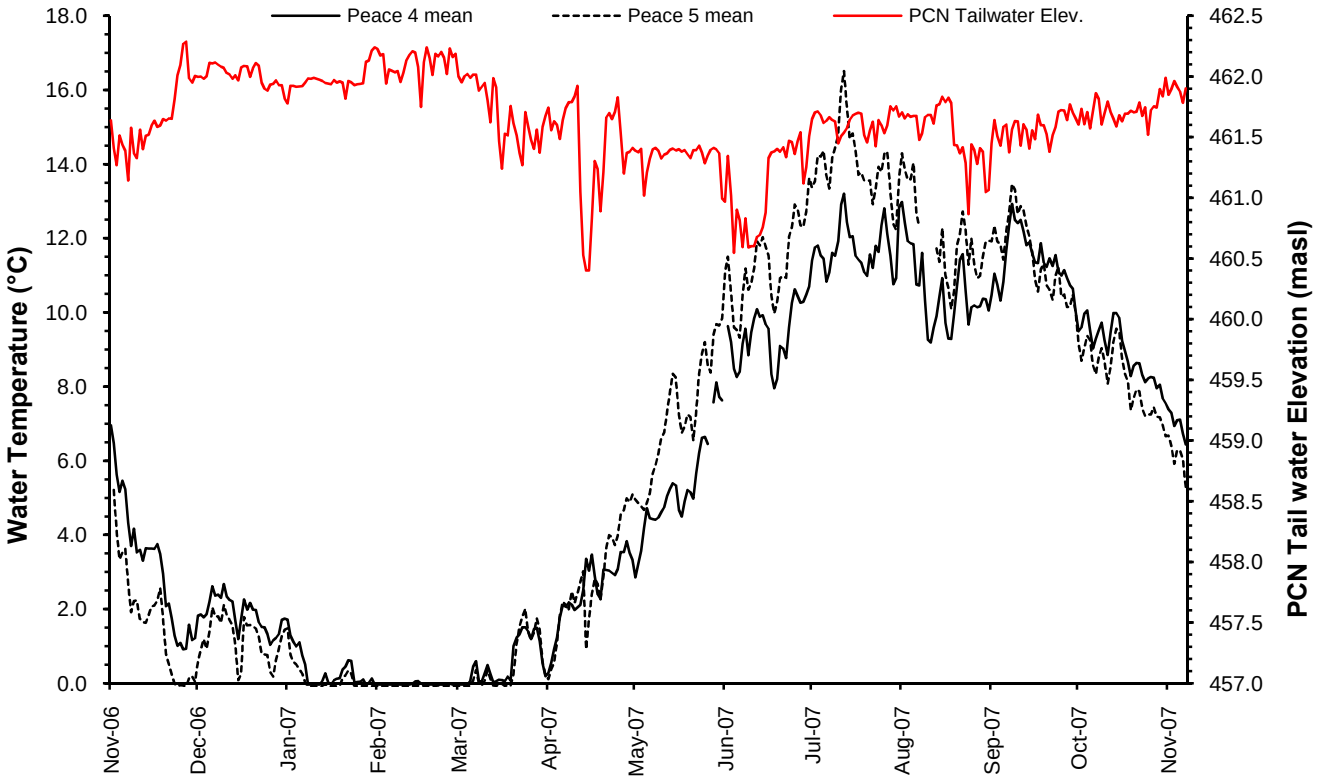


Figure 8: **Plots of turbidity in half-hour increments from three sonde locations in the Peace River corresponding to observed daily periods of peak turbidity in 2007.**

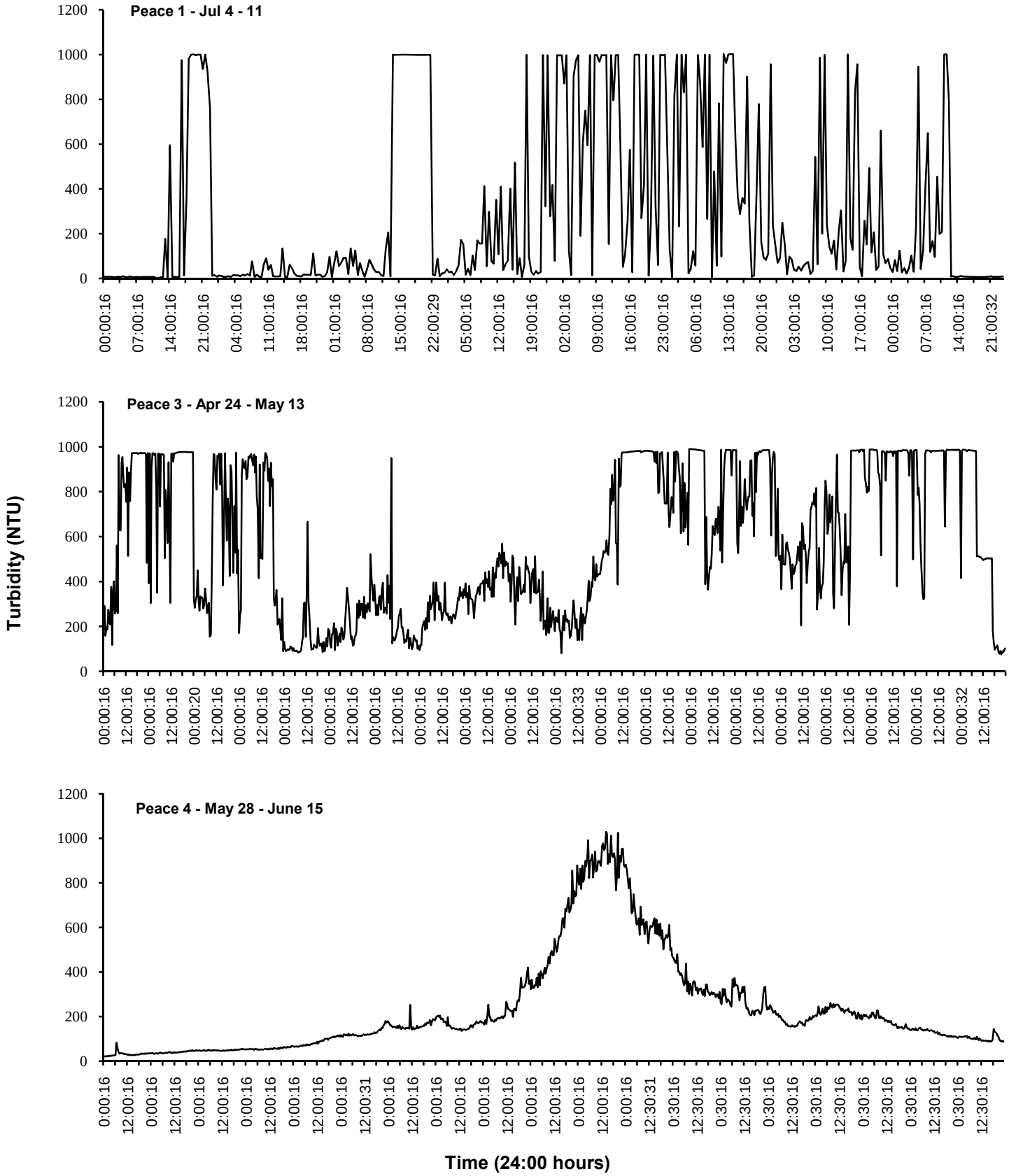


Figure 9: Record of turbidity readings at Peace 4 from March to November, 2007.

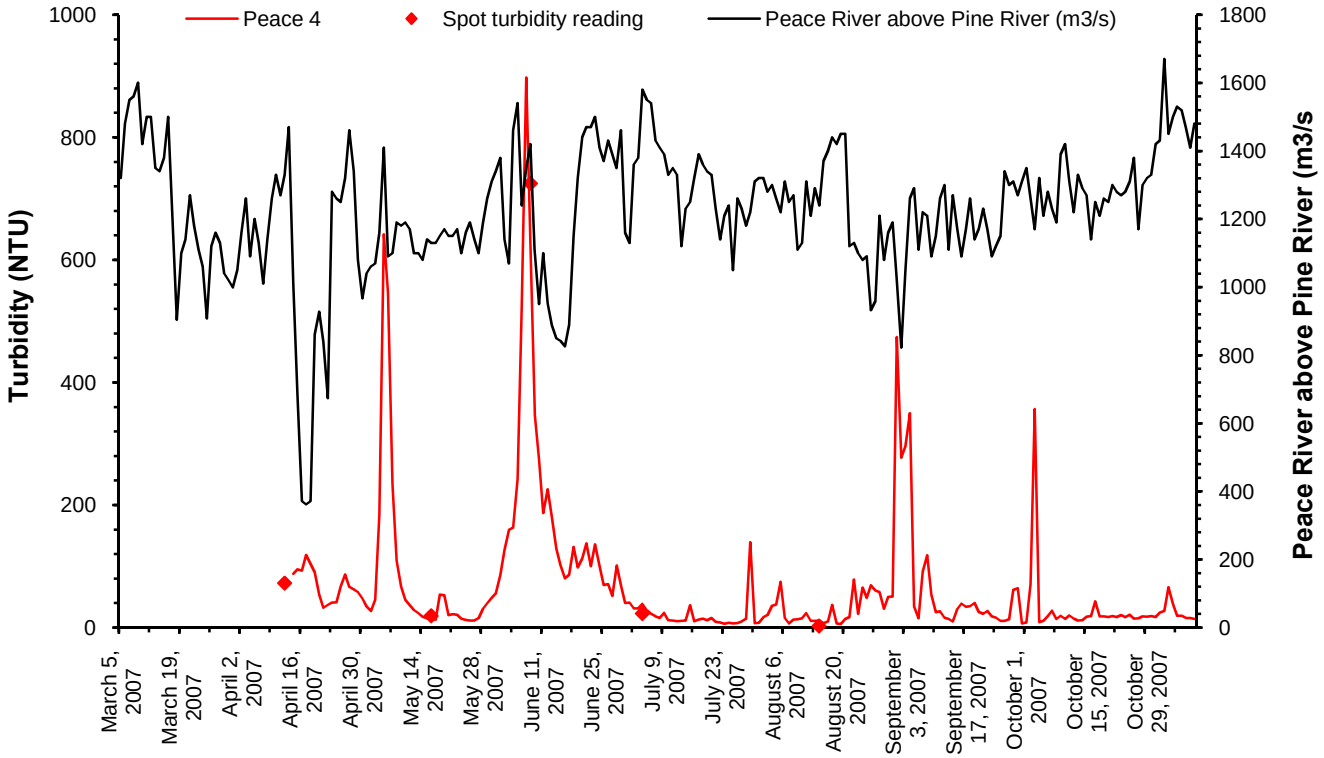


Figure 10: **Turbidity and TSS from water sample results plotted against measured discharge for Cache, Lynx, Farrell, and Boudreau creeks in 2007**

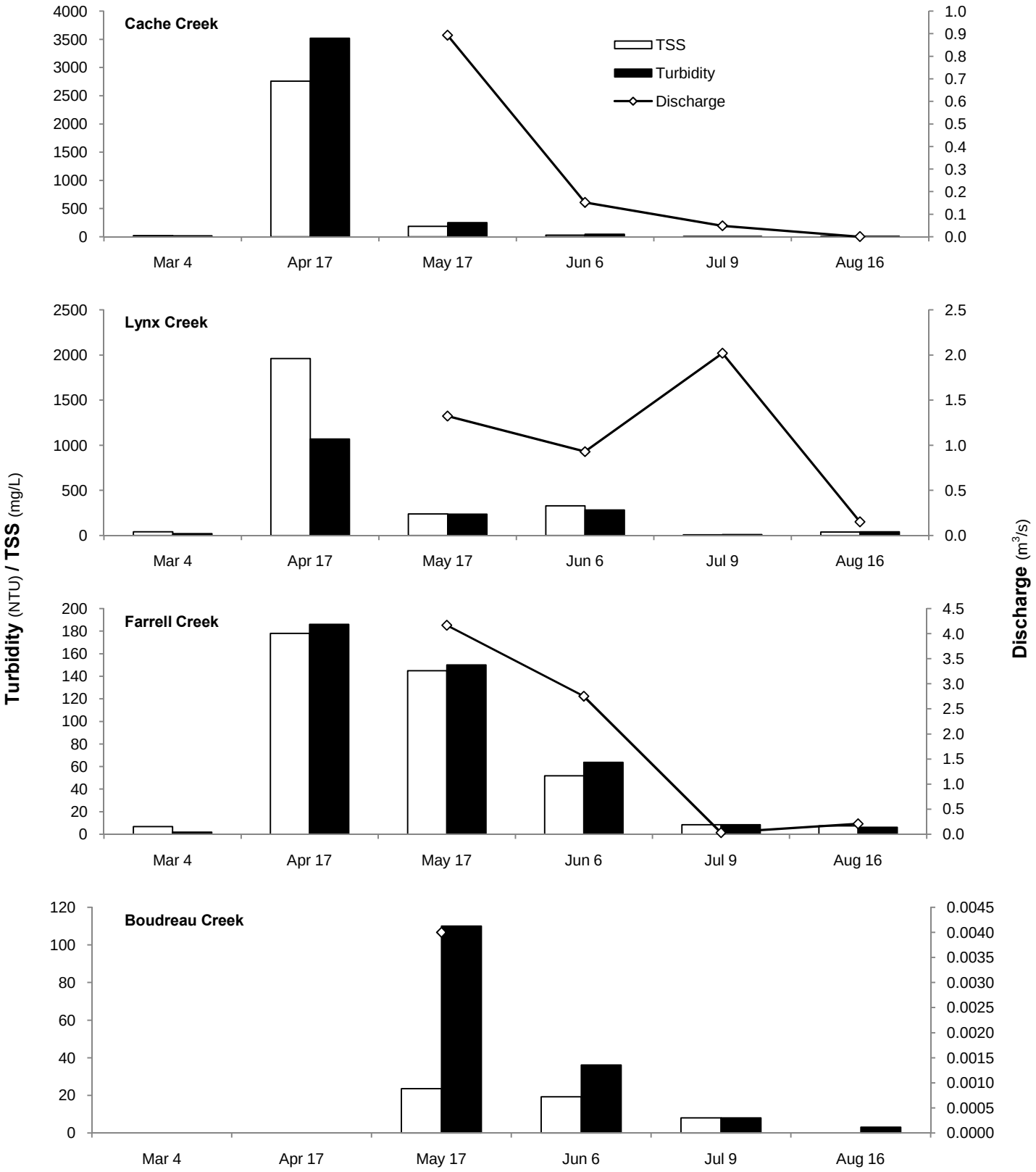


Figure 11: **Turbidity and TSS from water sample results plotted against WSC discharge records for the Halfway and Moberly rivers in 2007.**

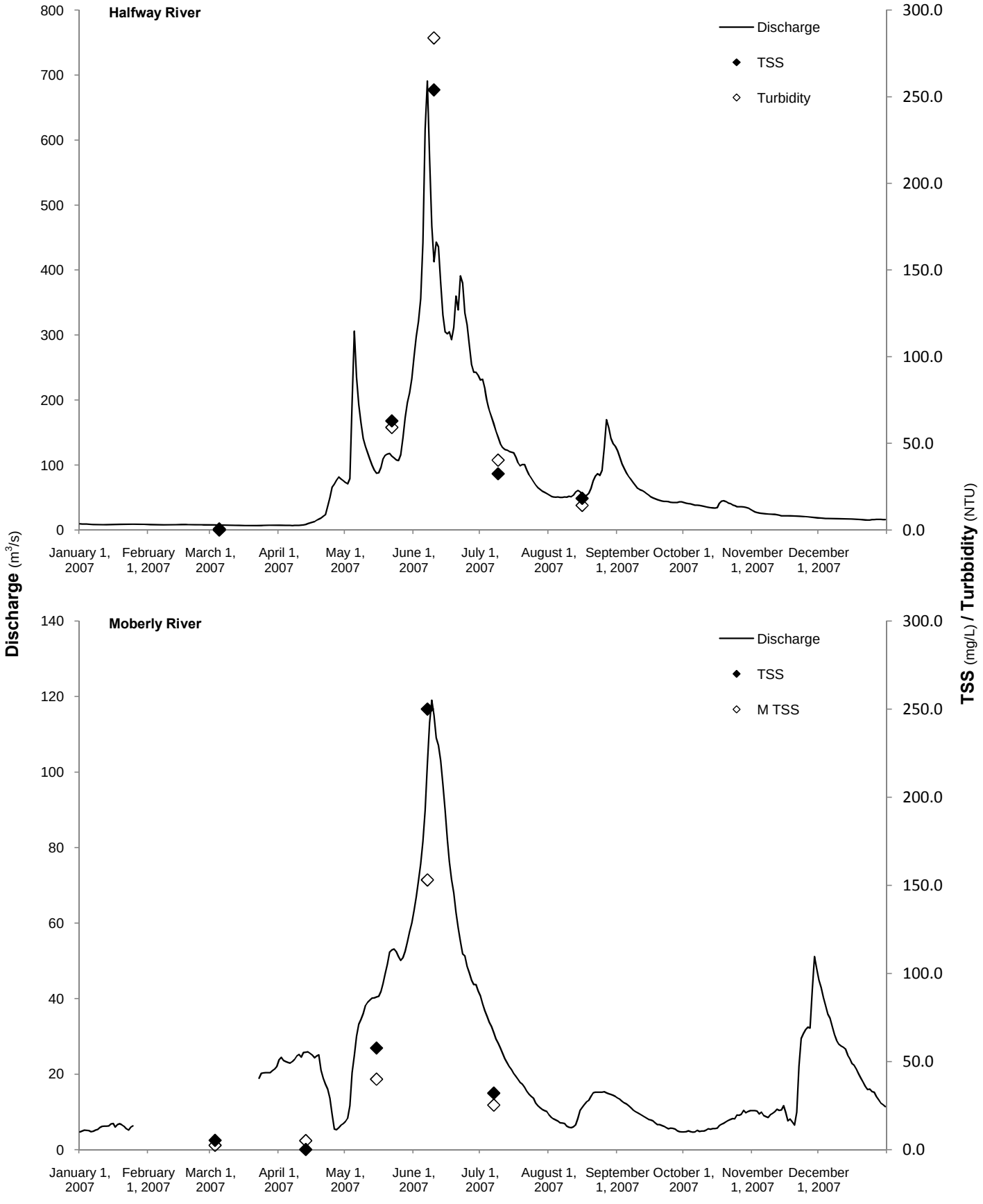


Figure 12: The log-linear relationship between TSS and Turbidity derived from 2006-2007 surface water grab samples taken from the Peace River and selected tributaries.

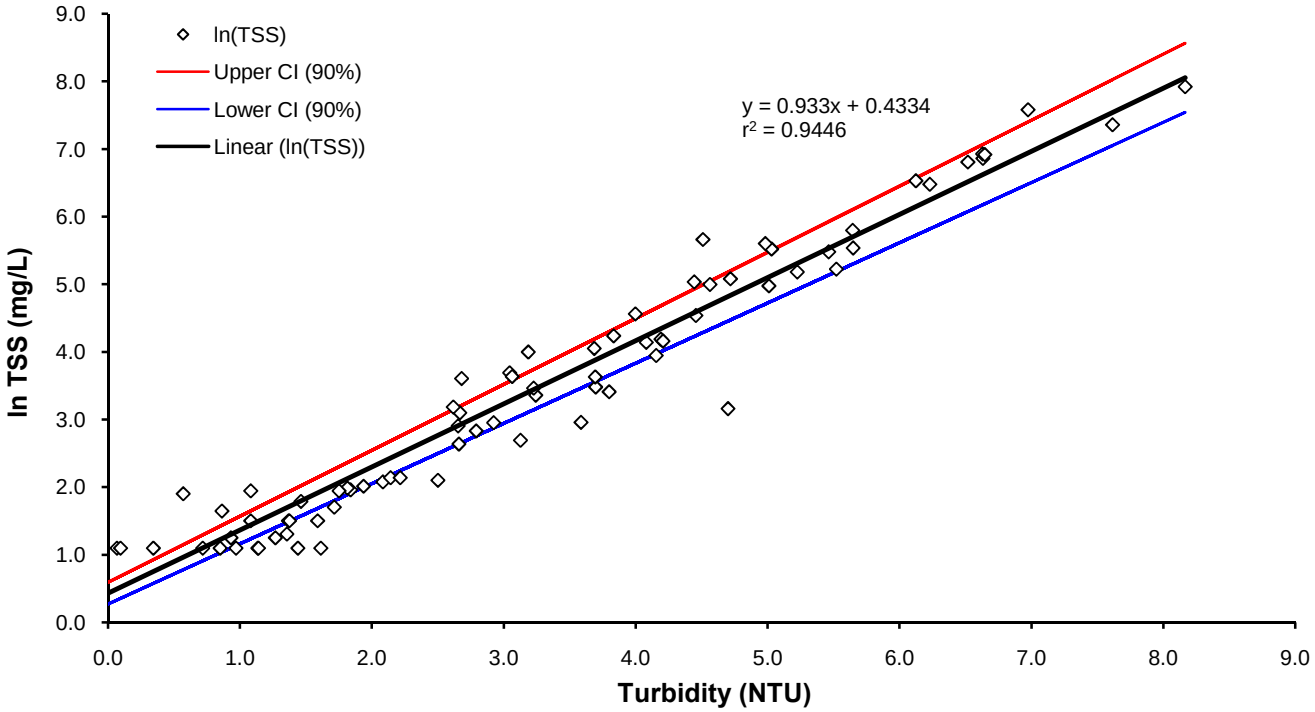


Figure 13: **Plots of ranges in instantaneous TSS derived from the relationship in Figure 12 and applied to continuous turbidity data from the Peace 4 sonde. TSS data from the Federal-Provincial water quality are also shown as a means of comparing peaks in data between the 2 sites.**

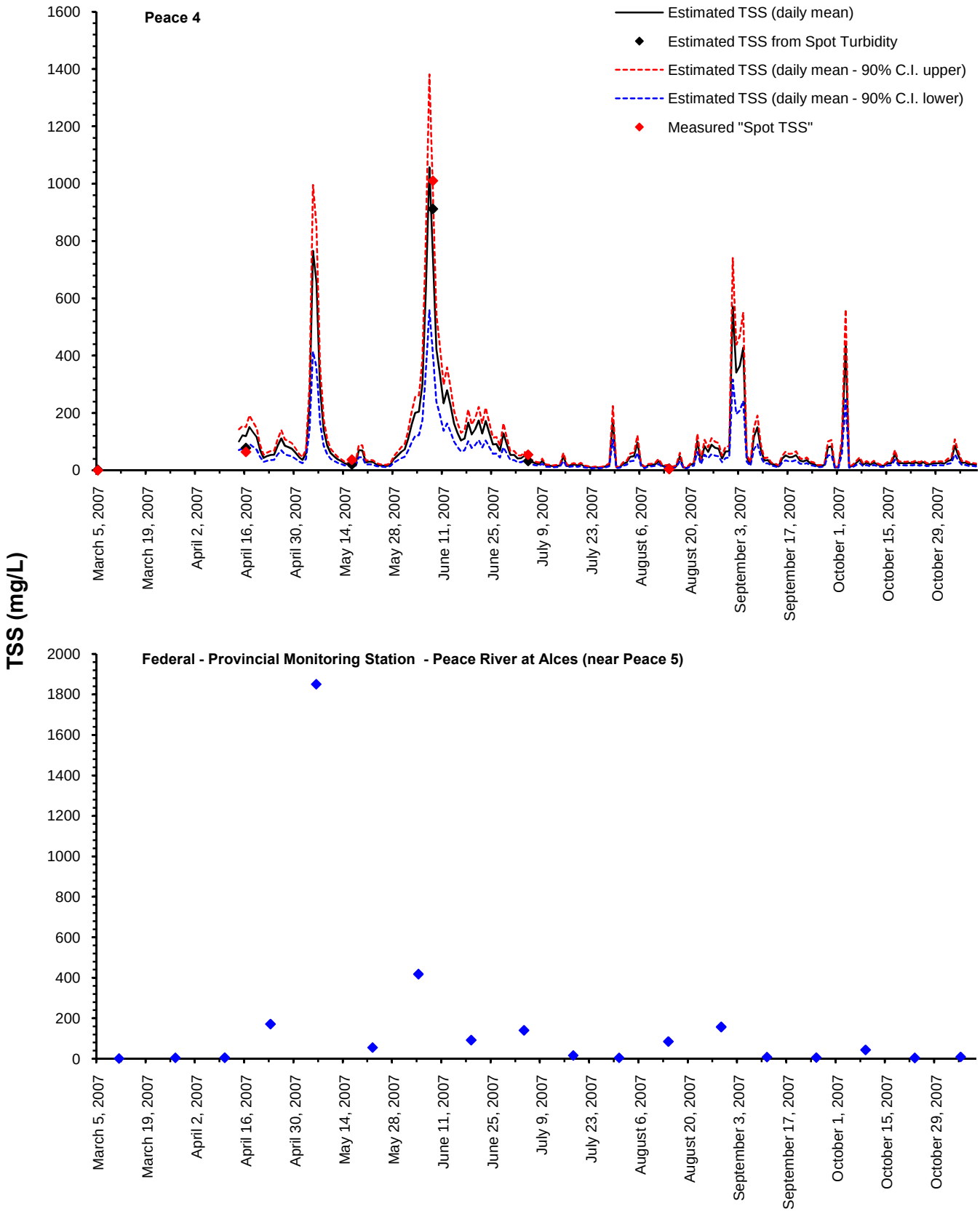


Figure 14: The number of individual total metals exceeding BCWQ and/or CCME water quality guidelines for aquatic life per water sample compared to the frequency of exceedences per water sample observed at Peace River sample sites.

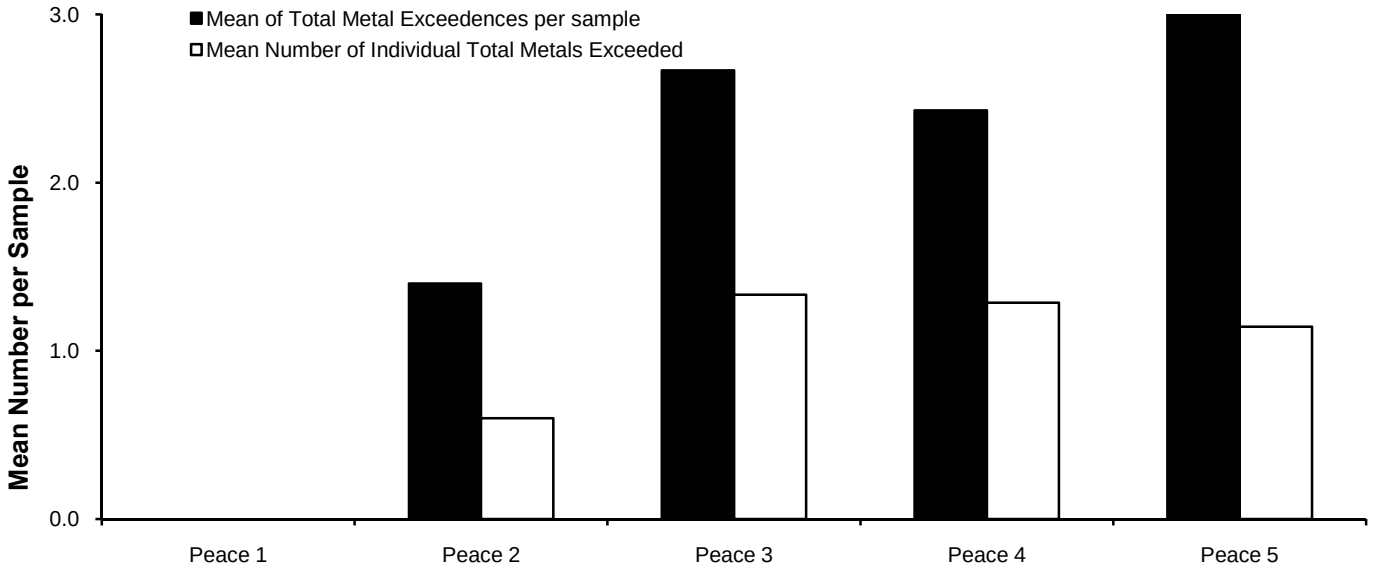


Figure 15: **Plots of selected total metals commonly exceeding BCWQ and/or CCME guidelines for aquatic life in Cache Creek over the course of the 2006-2007 sample period. Exceedences are indicated by: Open red symbol = BCWQ, solid blue = CCME; solid red = both. Plots for other sample sites are in Appendix 8.**

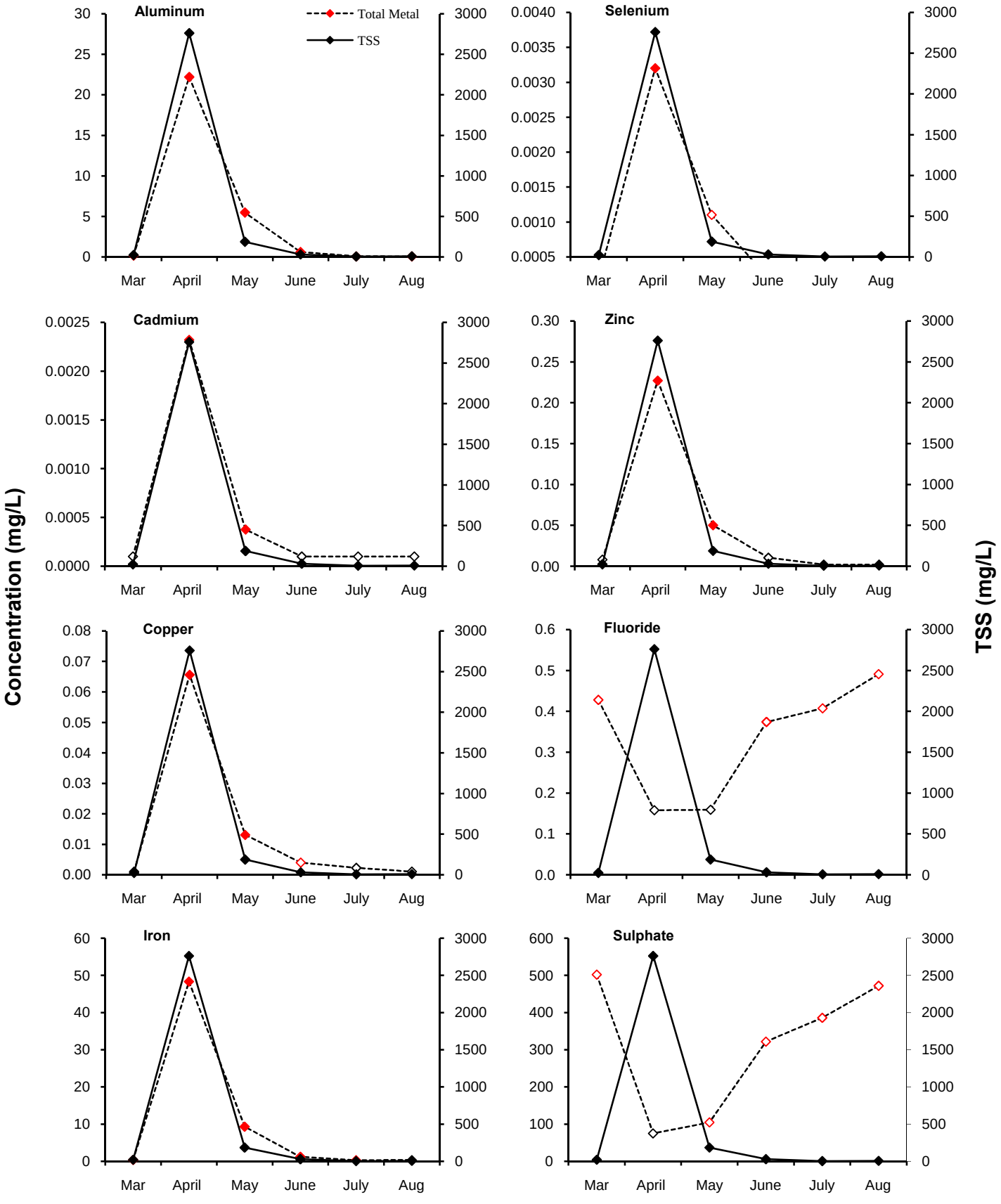


Figure 16: The number of individual dissolved metals exceeding CCME water quality guidelines per sample compare to the frequency of exceedences per sample observed at tributary sample sites.

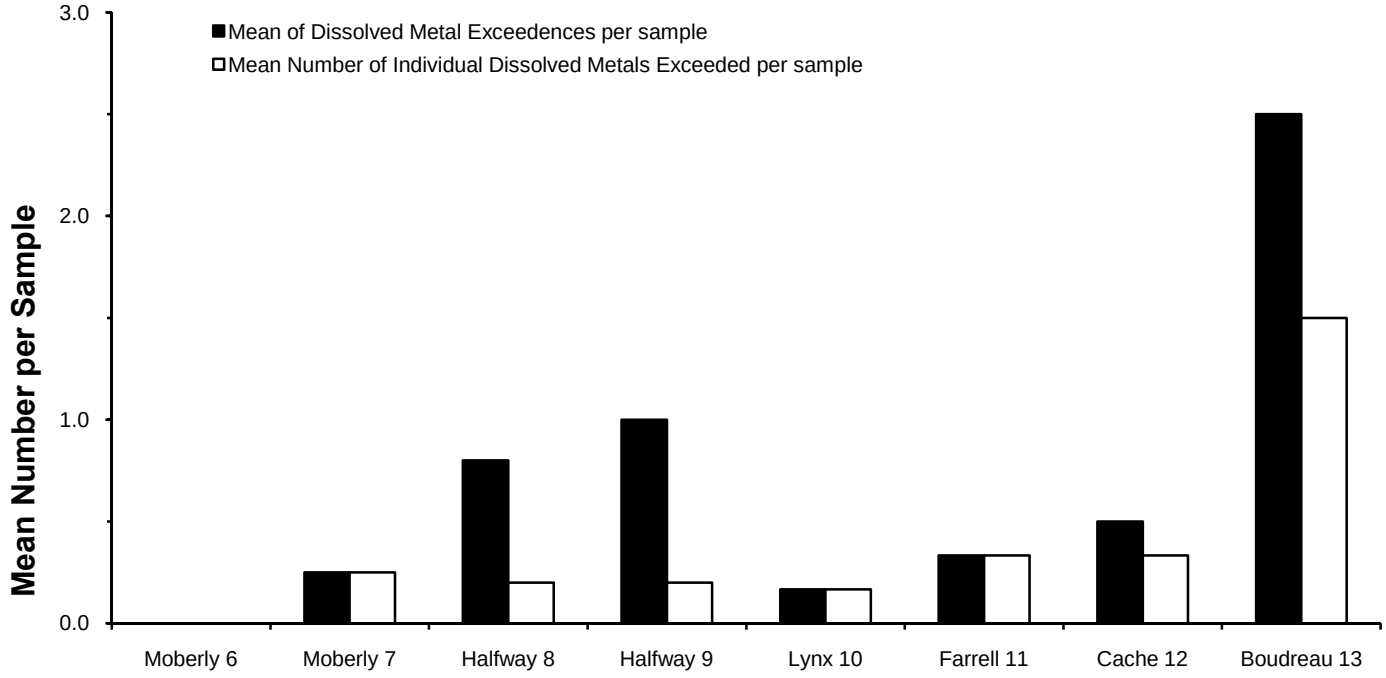


Figure 17: Fluoride and sulphate levels in Cache Creek. Open red symbols indicate exceedence of BCWG guidelines for the protection of aquatic life.

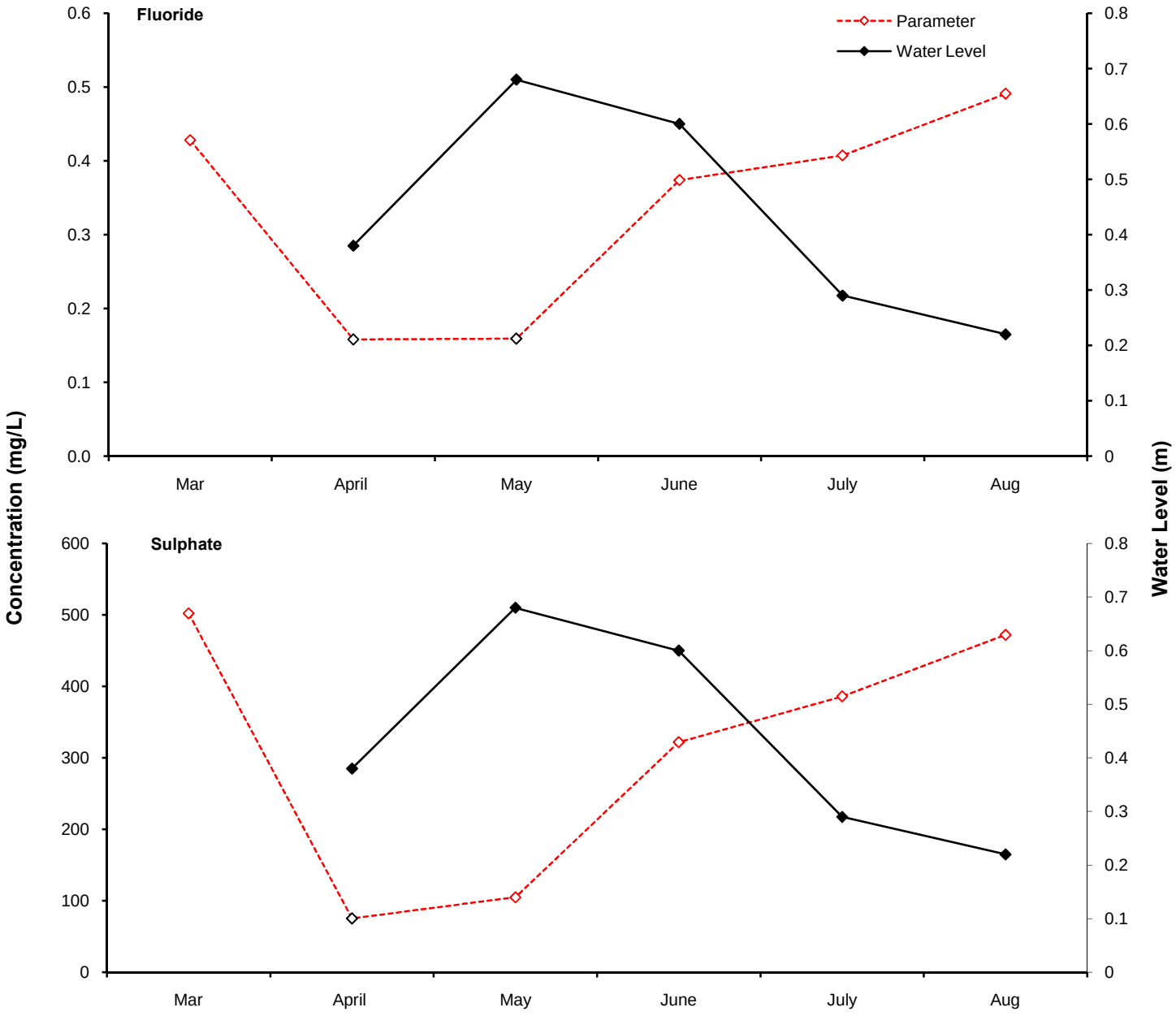


Figure 18: Total Adsorbable Organic Halogens concentrations from water sample analysis results of Peace River and tributary sites between November 2006 and August 2007.

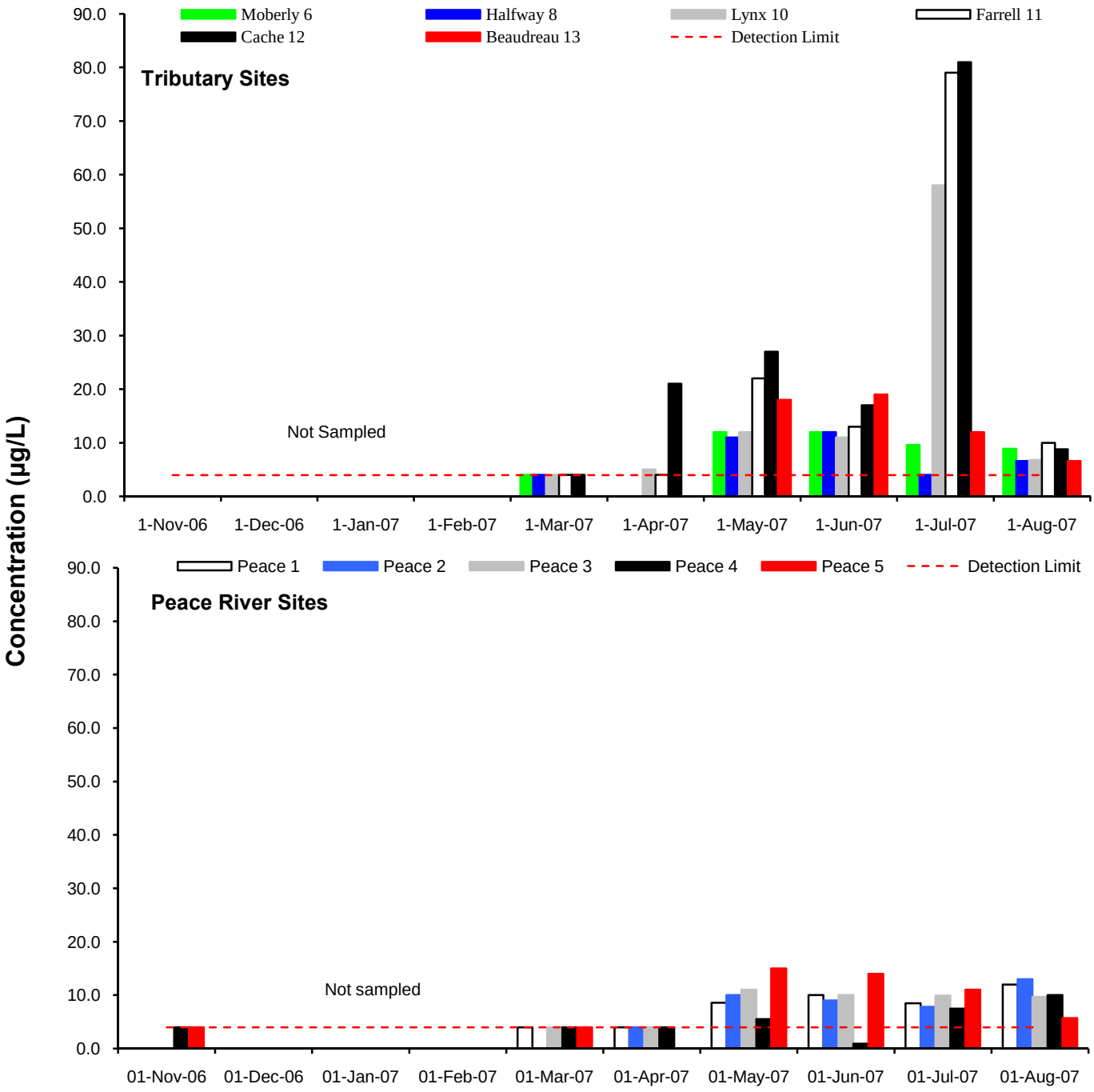


Figure 19: Chlorophyll *a* and orthophosphate concentrations at Peace River sites in 2006-07.

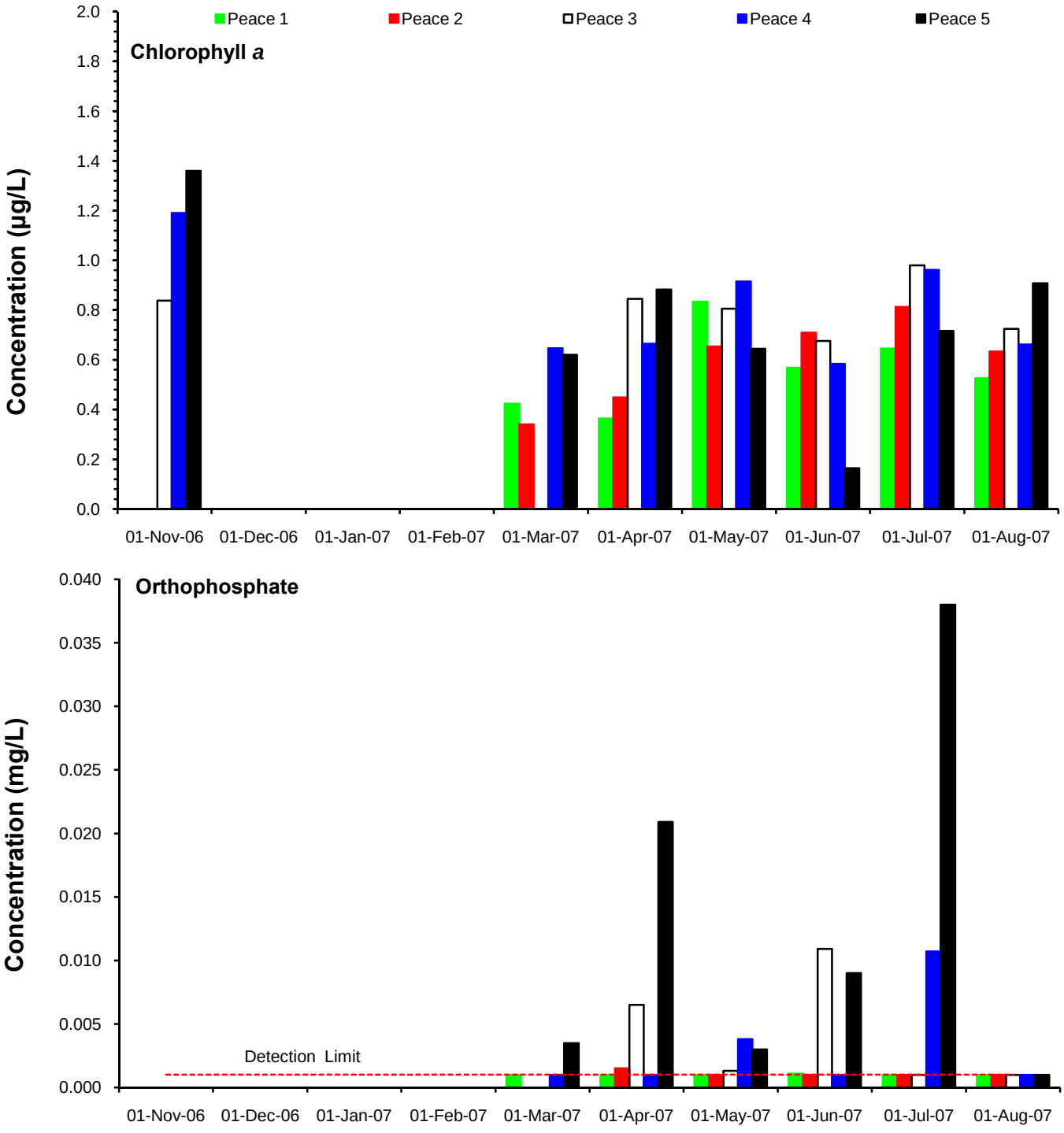
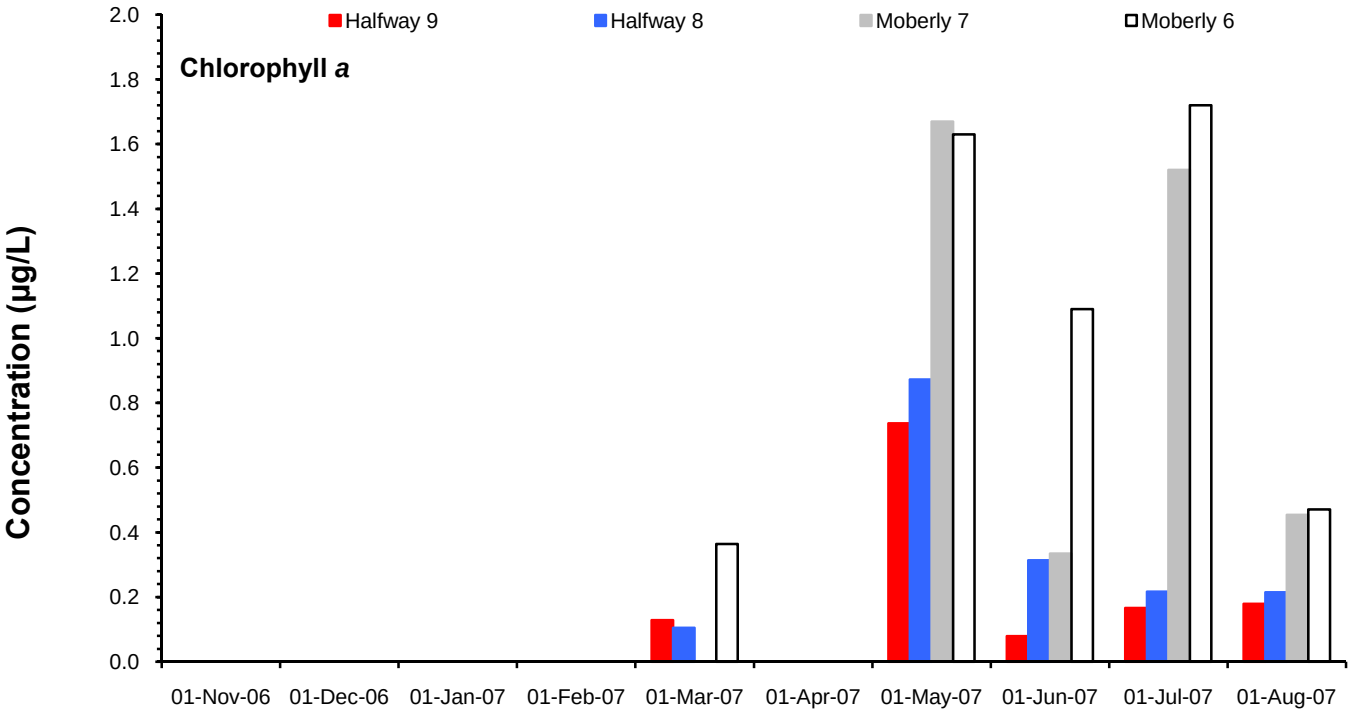


Figure 20: Chlorophyll *a* and orthophosphate concentrations at large tributary sites in 2007.



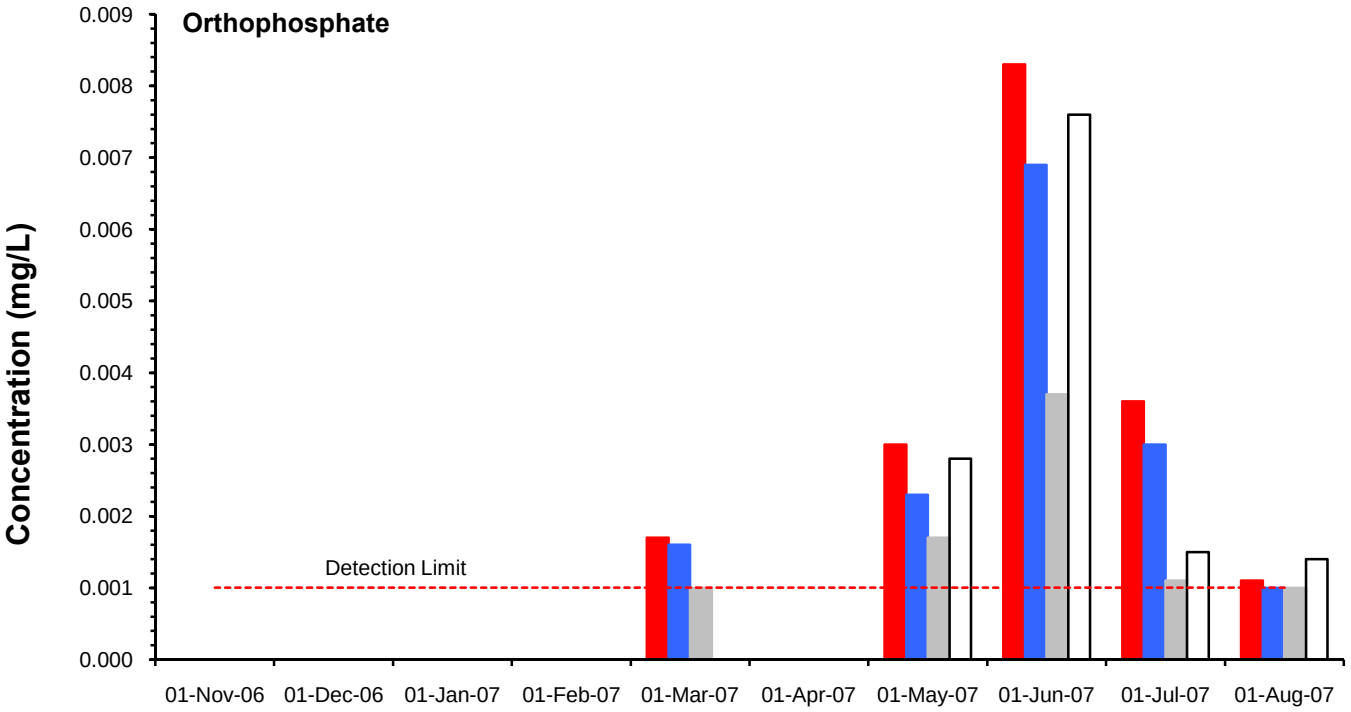


Figure 21: Chlorophyll *a* and orthophosphate concentrations at small tributary sites in 2007.

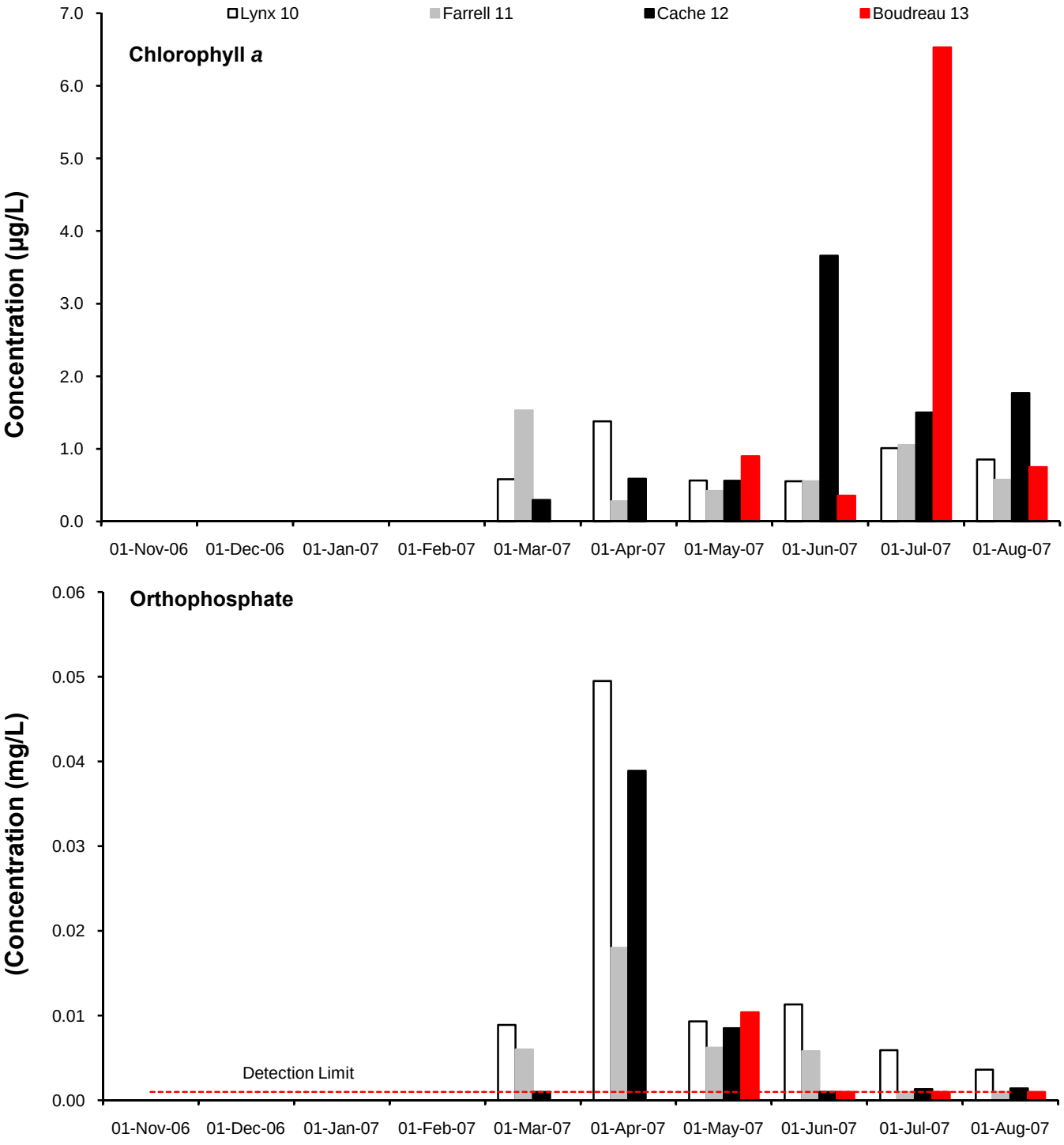


Figure 22: **Metals and polycyclic aromatic hydrocarbons in sediment samples from the Peace River and selected tributaries that have exceeded one or more set of guidelines pertaining to BC ISQQ for freshwater aquatic life and/or CCME sediment quality for freshwater aquatic life. Absence of a Detection Limit (DL) indicates results for a specific parameter were below DL.**

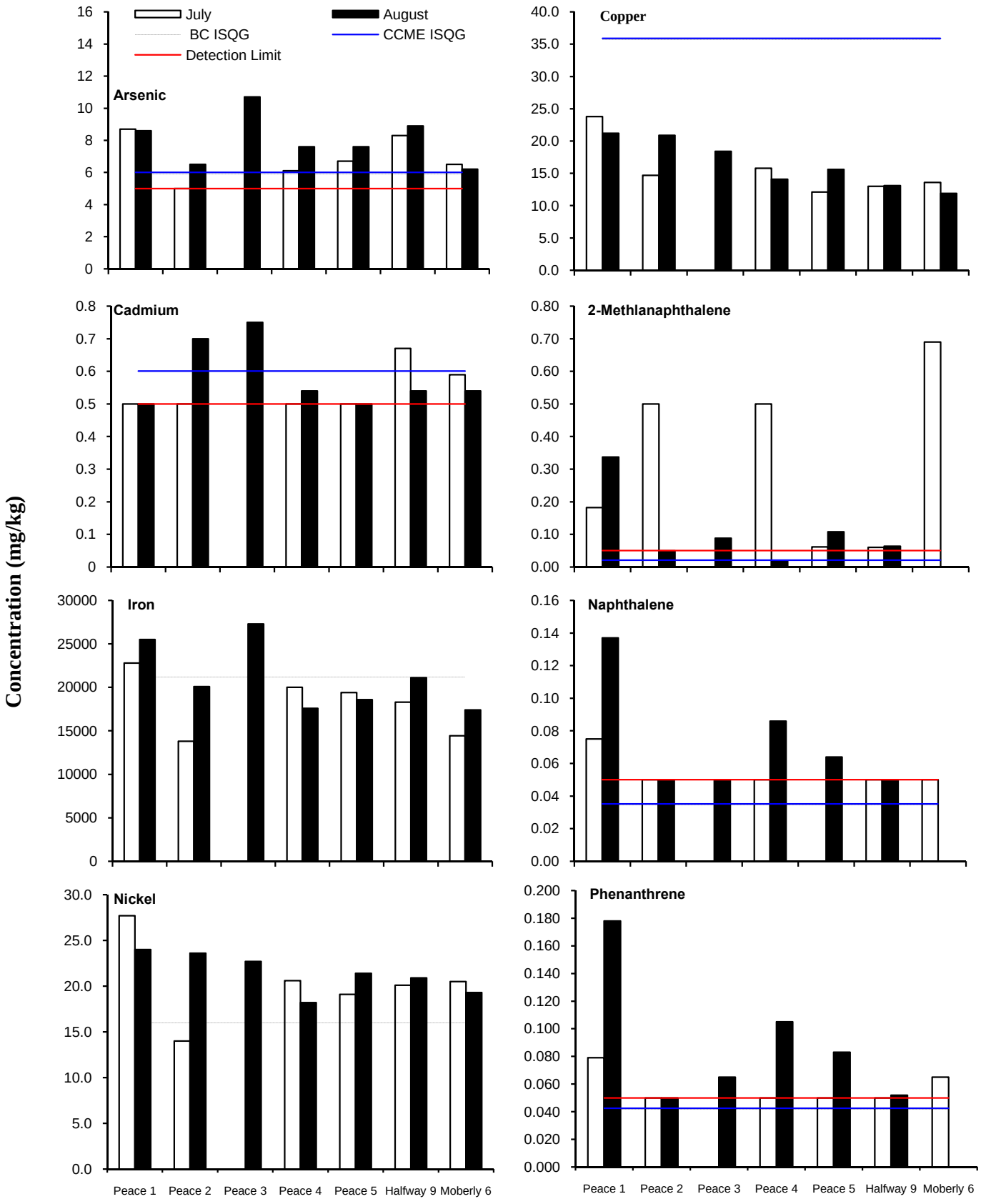


Figure 23: **Selected metals in soil samples taken from the Peace River watershed in excess of established CSR relative to parkland or agricultural use. Absence of a detection limit (DL) indicates results for a specific parameter were below DLs. Plots show highest observed results from a set of two samples. Aluminum and iron are shown to depict variations between sample sites.**

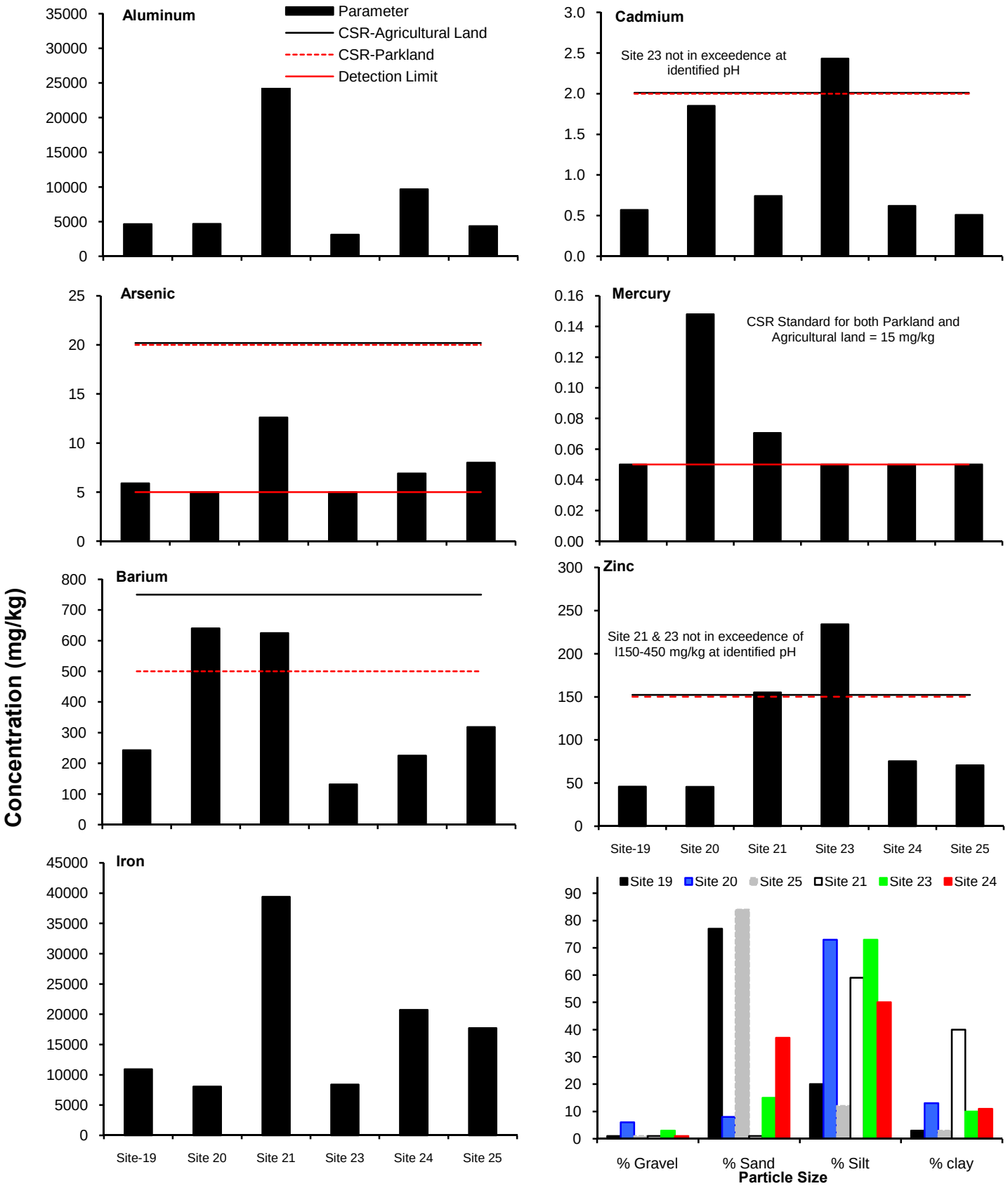


Figure 24: Comparisons between concentrations of selected metals in soils to those in terrestrial vegetation samples taken from sample sites in the Peace River watershed.

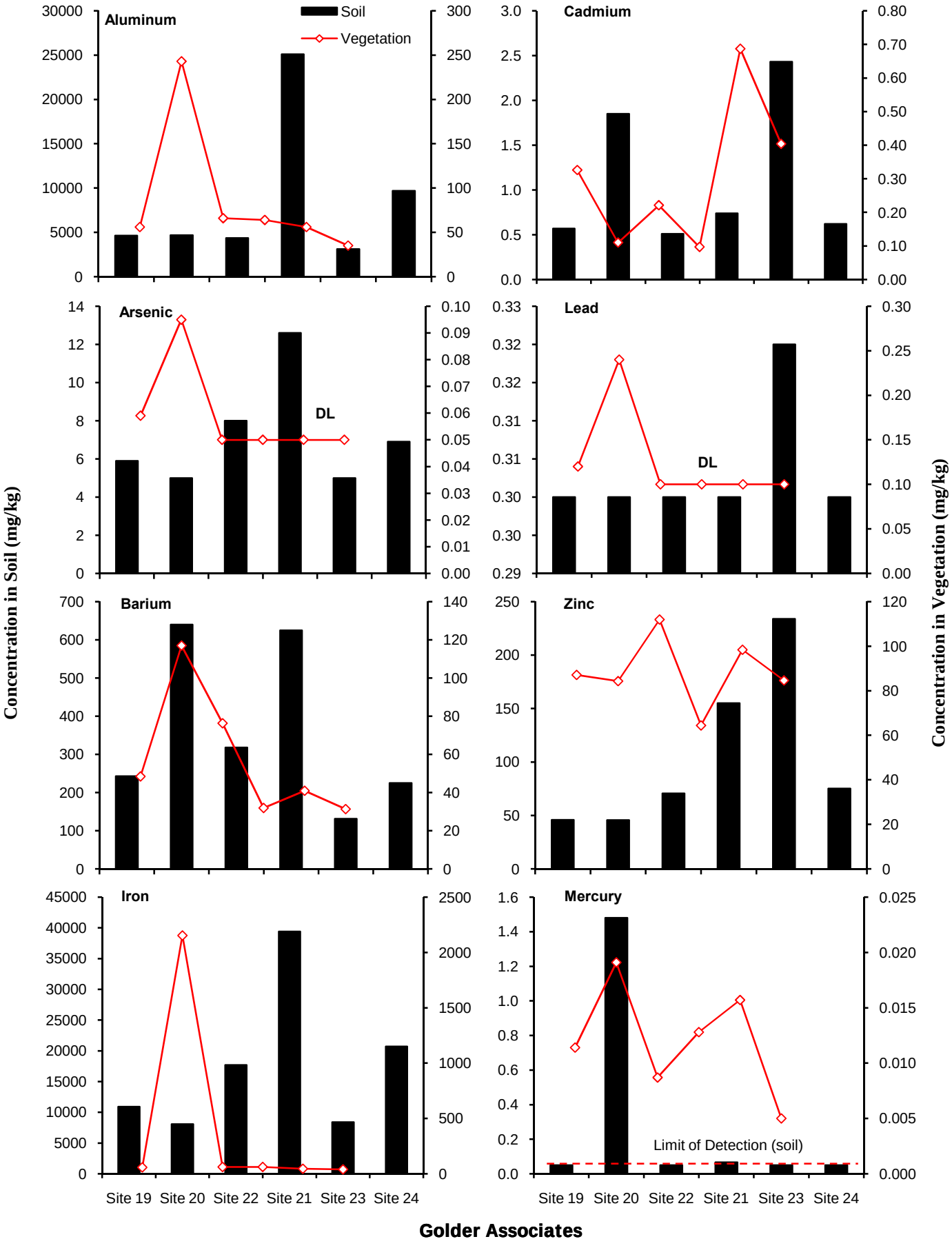
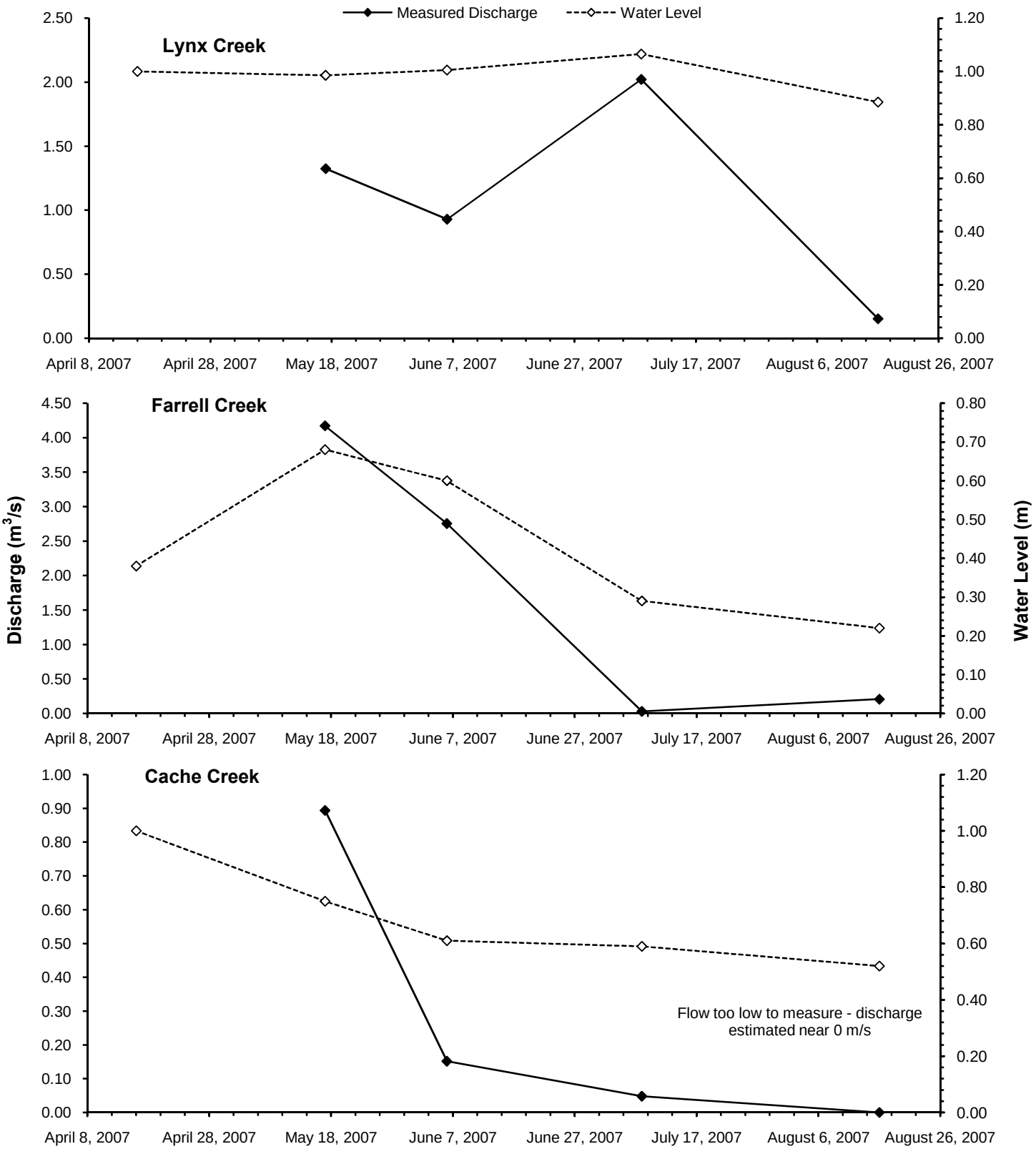


Figure 25: Water level and discharge measurements for Lynx, Farrell, and Cache creeks in 2007.



APPENDIX A

Laboratory Analysis

Appendix A: ALS Lab Analysis Procedures

1a Sediment and Soil Sampling Lab Analysis Methodology

Particle Size Analysis (PSA-PIPET+GRAVEL-SK)

Particle size analysis involves the measurement of the proportions of the various primary soil particle sizes (i.e. Clay < 0.004 mm, Silt 0.004-0.063 mm, Sand 0.063-2.0 mm and Gravel > 2.0 mm). In this method, the gravel and sand portions are determined by sieving, while the clay portion is determined by sedimentation using Stokes Law, which relates the radius of the particles to the velocity of the sedimentation in water. Silt is calculated as 100% - (sand% + clay %). Pretreatment of the soil with Calgon (sodium hexametaphosphate) is used to ensure the complete dispersion of the primary soil particles. Additional pretreatment may be necessary to remove cementing materials such as $CaCO_3$ and organic matter.

Method Reference: Y.P. Kalra, and D.G. Maynard, 1991. Methods Manual For Forest Soil and Plant Analysis, Northwest Region. Forestry Canada (modified sand, silt and clay size ranges)

Note: Unless otherwise indicated, all laboratory analysis were completed by ALS in Vancouver.

Total Carbon using Carlo Erba NC 2100 Soil Analyzer (C-TOT-ORG-SK PACKAGE)

The sample is introduced into a quartz tube where it undergoes combustion at 900°C in the presence of oxygen. Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen. This mixture of N_2, CO_2, and H_2O is then passed through an absorber column containing magnesium perchlorate to remove water. N_2 and CO_2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Method Reference: Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 961-1010 *In:* J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

Total Inorganic Carbon (C-TOT-ORG-SK PACKAGE)

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO_2 loss is proportional to the carbonate content of the soil.

Method Reference: Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 *In:* J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

Total Organic Carbon (C-TOT-ORG-SK PACKAGE)

Total Carbon and Total Inorganic Carbon are determined on separate samples. The Total Carbon is determined by combustion and thermal conductivity detection, while Total Inorganic Carbon is determined by distillation with hydrochloric acid and titration of the captured carbon dioxide. Total Organic Carbon is calculated by the difference between these two determinations.

Total Nitrogen using Carlo Erba NC 2100 Soil Analyzer (N-TOT-LECO-SK)

The sample is introduced into a quartz tube where it undergoes combustion at 900°C in the presence of oxygen. Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen. This mixture of N_2, CO_2, and H_2O is then passed through an absorber column containing magnesium perchlorate to remove water. N_2 and CO_2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Method Reference: Bremner, J.M. 1996. Nitrogen – Total (Dumas Methods). P. 1088 *In:* J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

Total Phosphorous (P-TOT-SK)

Phosphorous in soil is converted to soluble form by wet oxidation using a combination of nitric and perchloric acids. Perchloric acid oxidizes organic matter that interferes with analysis. Phosphorous in the extract is determined using ICP-AES.

Method Reference: Kuo, S. 1996. Total Phosphorous, Digestion with Perchloric Acid p. 870-872 *In:* J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

Cation Exchange Capacity (CEC) - Ammonium Acetate Method – CEC SK

This method involves saturation of the soil cation exchange sites with ammonium. Excess ammonium is removed from the soil with alcohol. Ammonium on the cation exchange site is then removed by leaching with NaCl and determined by auto analyzer. This value is used to estimate CEC.

Method Reference: McKeague, J.A. Soil Sampling and Methods of Analysis. Can. Soc. Soil Sci.(1978)p. 78-80

Moisture in Sediment/Soil

This analysis is adapted from ASTM method D2794-00 "Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils". A sub-sample is dried at 105 Celsius for a minimum of six hours.

Recommended Holding Time:

- Sample: not specified for refrigerated samples

Reference: Puget, BCELM

pH in Soil

This analysis is carried out in accordance with procedures described in “Soil Sampling and Methods of Analysis" (CSSS). The procedure involves mixing the air-dried sample with deionized/distilled water. The pH of the solution is then measured using a standard pH probe. A one to two ratio of sediment to water is used for mineral soils and a one to ten ratio is used for highly organic soils.

Metals in Sediment/Soil

This analysis is carried out using procedures from CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001, and procedures adapted from "Test Methods for Evaluating Solid Waste", SW-846 Method 3050B or Method 3051, United States Environmental Protection Agency (EPA). The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve, and a representative subsample of the dry material is weighed. The sample is then digested at 90 degrees Celsius for 2 hours by either hotplate or block digester using a 1:1 ratio of concentrated nitric and hydrochloric acids. Instrumental analysis is by atomic absorption/fluorescence spectrophotometry (EPA Method 7000 series), inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B), and/or inductively coupled plasma - mass spectrometry (EPA Method 6020)

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Recommended Holding Time:

- Sample: 6 months (Hg = 28 days)
- Extract: 6 months (Hg = 28 days, Sb & Sn = 7 days)

Reference: BCMELP

Polycyclic Aromatic Hydrocarbons in Sediment/Soil

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Methods 3545 & 8270, published by the United States Environmental Protection Agency (EPA). The procedure uses an automated system (Accelerated Solvent Extractor - ASE) to extract a subsample of the sediment/soil with a 1:1 mixture of hexane and acetone. The extract is then solvent exchanged to toluene. The final extract is analyzed by capillary column gas chromatography with mass spectrometric detection (GC/MS).

Recommended Holding Time:

- Sample: 14 days Extract: 40 days

Reference: EPA

1 b Water Sample Lab Analysis Methodology

Colour in Water

This analysis is carried out using procedures adapted from APHA Method 2120 "Color". Colour (True Colour) is determined by filtering a sample through a 0.45 micron membrane filter followed by analysis of the filtrate using the platinum-cobalt colourimetric method. Apparent Colour is determined without prior sample filtration. Colour is pH dependent. Unless otherwise indicated, reported colour results pertain to the pH of the sample as received, to within +/- 1 pH unit.

Recommended Holding Time:

- Sample: 2 days

Reference: APHA

Conductivity in Water

This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.

Recommended Holding Time:

- Sample: 28 days

Reference: APHA

Solids in Water

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total dissolved solids (TDS) and total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TDS is determined by evaporating the filtrate to dryness at 180 degrees Celsius, TSS is determined by drying the filter at 104 degrees Celsius. Total solids are determined by evaporating a sample to dryness at 104 degrees Celsius. Fixed and volatile solids are determined by igniting a dried sample residue at 550 degrees Celsius.

Recommended Holding Time:

- Sample: 7 days

Reference: APHA

pH in Water

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.

Recommended Holding Time:

- Sample: 2 hours

Reference: APHA

Conventional Parameters in Water

These analyses are carried out in accordance with procedures described in "Methods for Chemical Analysis of Water and Wastes" (USEPA), "Manual for the Chemical Analysis of Water, Wastewaters, Sediments and Biological Tissues" (BCMOE), and/or "Standard Methods for the Examination of Water and Wastewater" (APHA). Further details are available on request.

Turbidity of Water

This analysis is carried out using procedures adapted from APHA Method 2130 "Turbidity". Turbidity is determined by the nephelometric method.

Recommended Holding Time:

- Sample: 2 days

Reference: APHA

Acidity in Water

This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.

Recommended Holding Time:

Sample: 14 days

Reference: APHA

Laboratory Location: ALS Environmental, Vancouver

Alkalinity in Water by Colourimetry

This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.

Recommended Holding Time:

- Sample: 14 days

Reference: APHA

Dissolved Anions in Water by Ion Chromatography

This analysis is carried out using procedures adapted from APHA Method 4110"Determination of Anions by Ion Chromatography" and EPA Method 300.0"Determination of Inorganic Anions by Ion Chromatography". Anions aredetermined by filtering the sample through a 0.45 micron membrane filter and

injecting the filtrate onto a Dionex Ion Pac AG17 anion exchange column with a hydroxide effluent stream. Anions routinely determined by this method include: bromide, chloride, fluoride, nitrate, nitrite and sulphate.

Recommended Holding Time:

- Sample: 28 days (bromide, chloride, fluoride, sulphate)
- Sample: 2 days (nitrate, nitrite)

Reference: APHA and EPA

Ammonia in Water by Selective Ion Electrode

This analysis is carried out, on sulphuric acid preserved samples, using procedures adapted from APHA Method 4500-NH3 "Nitrogen (Ammonia)". Ammonia is determined using an ammonia selective electrode.

Recommended Holding Time:

- Sample: 28 days

Reference: APHA

Total Kjeldahl Nitrogen in Water

This analysis is carried out using procedures adapted from APHA Method4500Norg "Nitrogen (Organic)". Total kjeldahl nitrogen is determined by sample digestion at 367 Celsius with analysis using an ammonia selective electrode.

Recommended Holding Time:

- Sample: 28 days

Reference: APHA

Total Kjeldahl Nitrogen and Total Nitrogen in Water

This analysis is carried out using procedures adapted from ASTM Method D 5176-91 "Standard Test Method for Total Chemically Bound Nitrogen in Water by Pyrolysis and Chemiluminescence detection." Total Nitrogen is determined directly by pyrolysis with chemiluminescence detection using automated instrumentation. Total Kjedahl Nitrogen is determined by calculation.

Recommended Holding Time:

- Sample: 28 days

Reference: APHA

Phosphate in Water

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". All forms of phosphate are determined by the ascorbic acid colourimetric method. Dissolved ortho-phosphate (dissolved reactive phosphorous) is determined by direct measurement. Total phosphate (total phosphorous) is determined after persulphate digestion of a sample. Total

dissolved phosphate (total dissolved phosphorous) is determined by filtering a sample through a 0.45 micron membrane filter followed by persulfate digestion of the filtrate.

Recommended Holding Time:

- Sample: 2 days

Reference: EPA

Metals in Water

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" 21st Edition 2005 published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotplate or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by atomic absorption/emission spectrophotometry (EPA Method 7000 series), inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B), and/or inductively coupled plasma mass spectrometry (EPA Method 6020).

Recommended Holding Time:

- Sample: 6 months

Reference: EPA

Sulphide in Water

This analysis is carried out using procedures adapted from APHA Method 4500-S2 "Sulphide". Sulphide is determined using the methlyene blue colourimetric method.

Recommended Holding Time:

- Sample: 7 days

Reference: APHA

Chlorophyll and Pheopigments by Fluorometry

This analysis is carried out using procedures adapted from APHA Method 0200 H. "Chlorophyll" and USEPA Method 445. The sample is filtered using Either a glass fiber filter or a 0.45 micron Membrane filter. The pigments Are extracted from the filter with 90% aqueous acetone. For chlorophyll a analysis the extract is read using a fluorometer. For pheopigments the extract is first acidified then read. This method not subject to interferences from chlorophyll b.

Recommended Holding Time:

- Sample: 1-2 days before filtering
- Filter: 28 days

Reference: APHA

Carbon in Water

This analysis is carried out using procedures adapted from APHA Method 5310 "Total Organic Carbon (TOC)". All fractions of carbon are determined by the combustion-infrared method.

Total carbon includes organic carbon (covalently bonded in organic molecules) and inorganic carbon (carbonate, bicarbonate and dissolved carbon dioxide). Total organic carbon is the calculated difference between the total carbon and the inorganic carbon determination. Dissolved carbon fractions are determined by filtering the sample through a 0.45 micron membrane filter prior to analysis.

Recommended Holding Time:

- Sample: 28 days

Reference: APHA

1c Vegetation Sample Lab Analysis Methodology

Moisture in Tissue

This analysis is adapted from ASTM method D2794-00 "Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils". A sub-sample is dried at 105 Celsius for a minimum of six hours.

Recommended Holding Time:

- Sample: not specified

Reference: Puget, BCELM

Metals in Vegetation and Animal Tissue

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. Tissue samples are homogenized either mechanically or manually prior to digestion. The hotplate or block digestion involves the use of nitric acid followed by repeated additions of hydrogen peroxide. Instrumental analysis is by atomic absorption/emission/fluorescence spectrophotometry (EPA Method 7000 series), inductively coupled plasma - mass spectrometry (EPA Method 6020) and/or inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

Recommended Holding Time:

Sample/Extract: 2 years (Mercury = 28 days)

Reference: Puget

APPENDIX B

Peace River Water Quality Project - In Situ Sampling - 2007

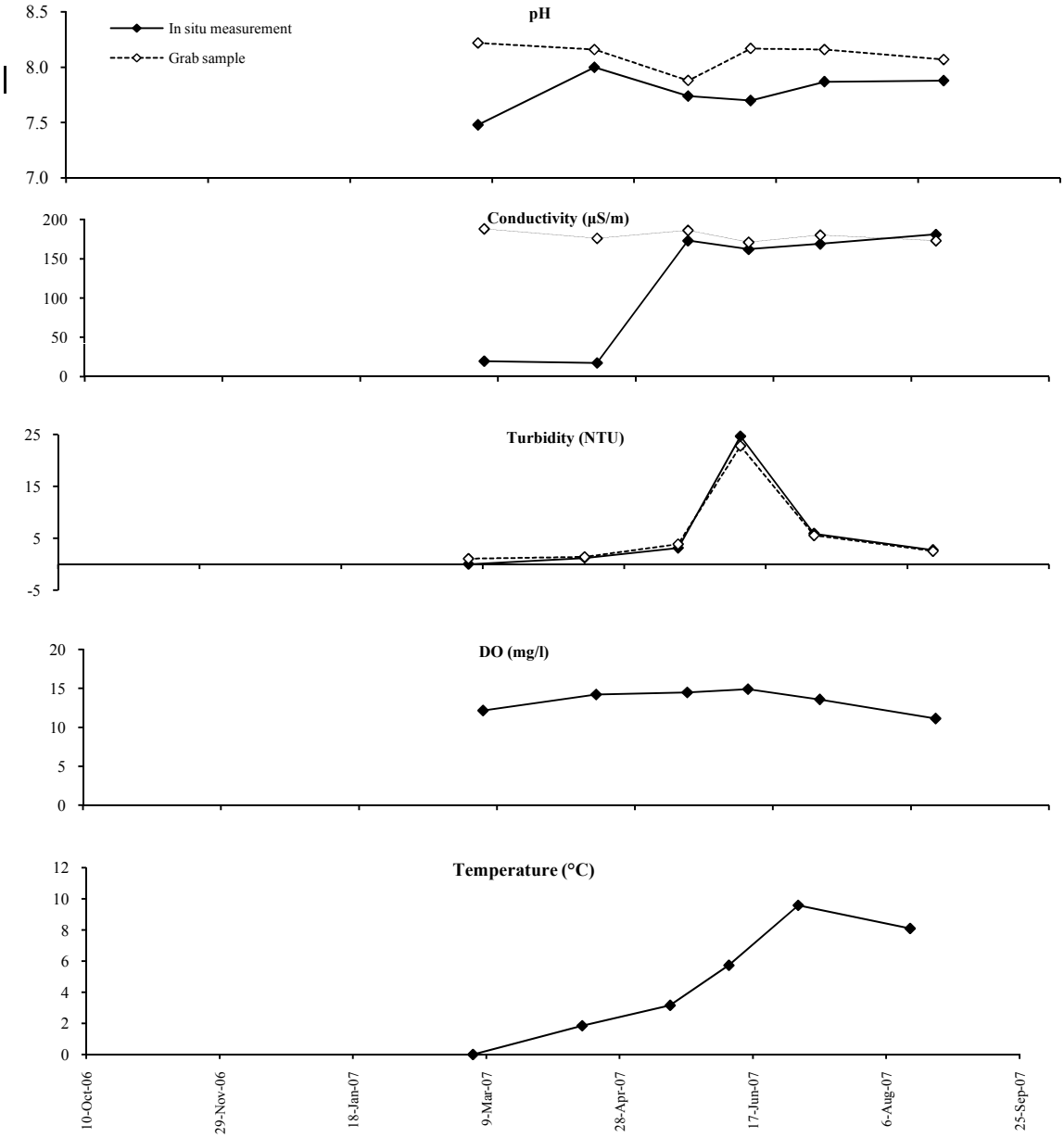
May 15, 2009
Report No. 06-1490-006

Golder Associates

Appendix B1: **Peace River Water Quality Project - In Situ Sampling - 2007**

Site Number: Peace 1 **Meter:** Horriba (Nov 06 - March) YSI April onwards

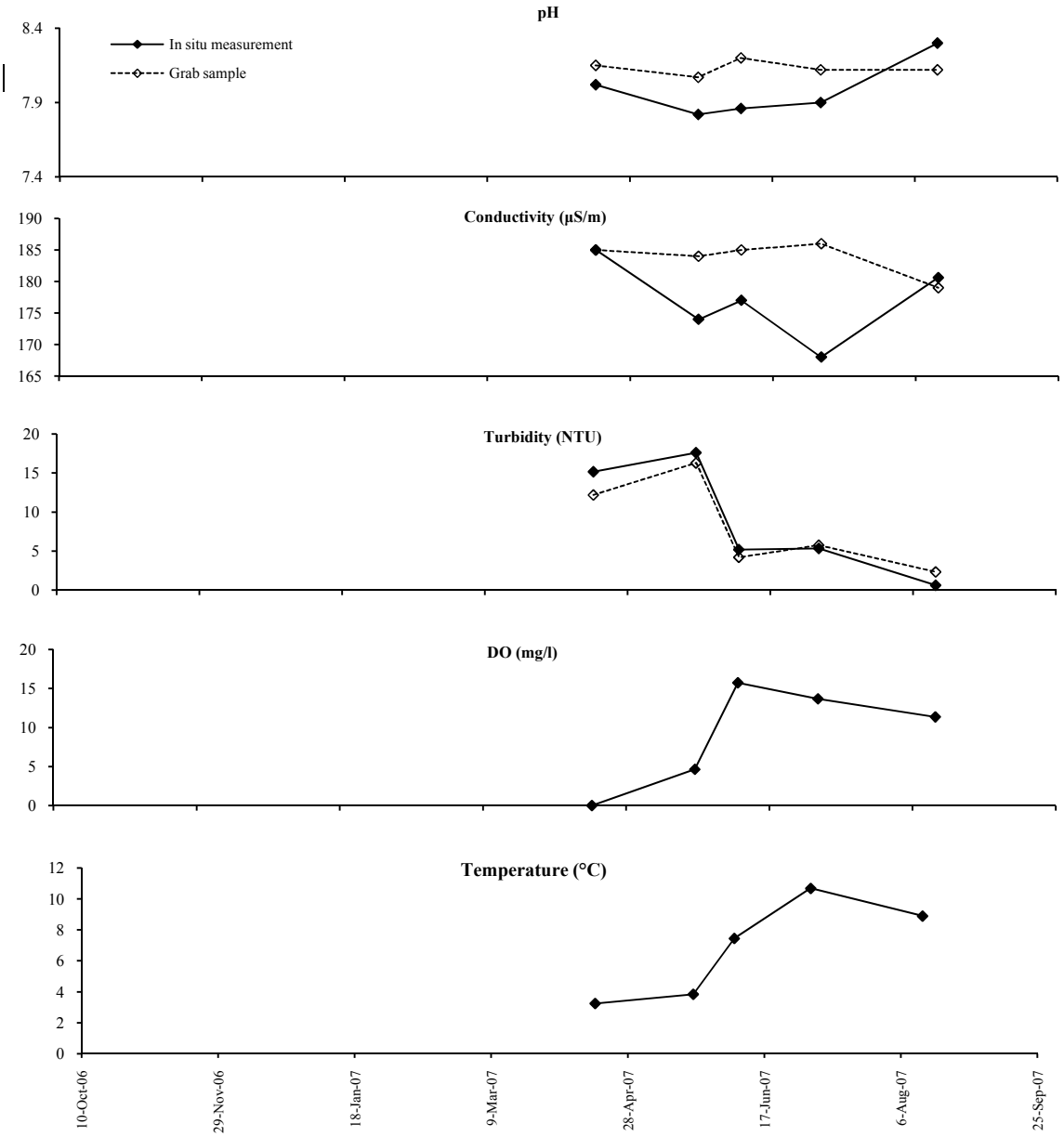
	In Situ					Grab Samples				
Date	**pH**	**Conductivity** (µS/cm)	**Turbidity** (NTU)	**DO** (mg/L)	**Temperature** (°C)	**pH**	**Conductivity** (µSc/m)	**Turbidity** (NTU)	**DO** (mg/L)	**Comments**
3-Nov-06										Site not established due to blizzard conditons
4-Mar-07	7.5	19.7	8.3-10.1	12.2	0.0	8.2	188.0	1.1		site 1 and 15 combined
14-Apr-07	8.0	17.4	1.2	14.2	1.9	8.2	176.0	1.4		DO membrane malfunctioning - requires replacement
17-May-07	7.7	173.0	3.1	14.5	3.2	7.9	186.0	3.9		
8-Jun-07	7.7	162.0	24.7	14.9	5.7	8.2	171.0	22.8		
4-Jul-07	7.9	169.0	5.9	13.6	9.6	8.2	180.0	5.6		DO converted from percentage of 102%
15-Aug-07	7.9	181.0	2.7	11.1	8.1	8.1	173.0	2.5		



Appendix B2: **Peace River Water Quality Project - In Situ Sampling - 2007**

Site Number: Peace 2 **Meter:** Horriba (Nov 06 - March) YSI April onwards

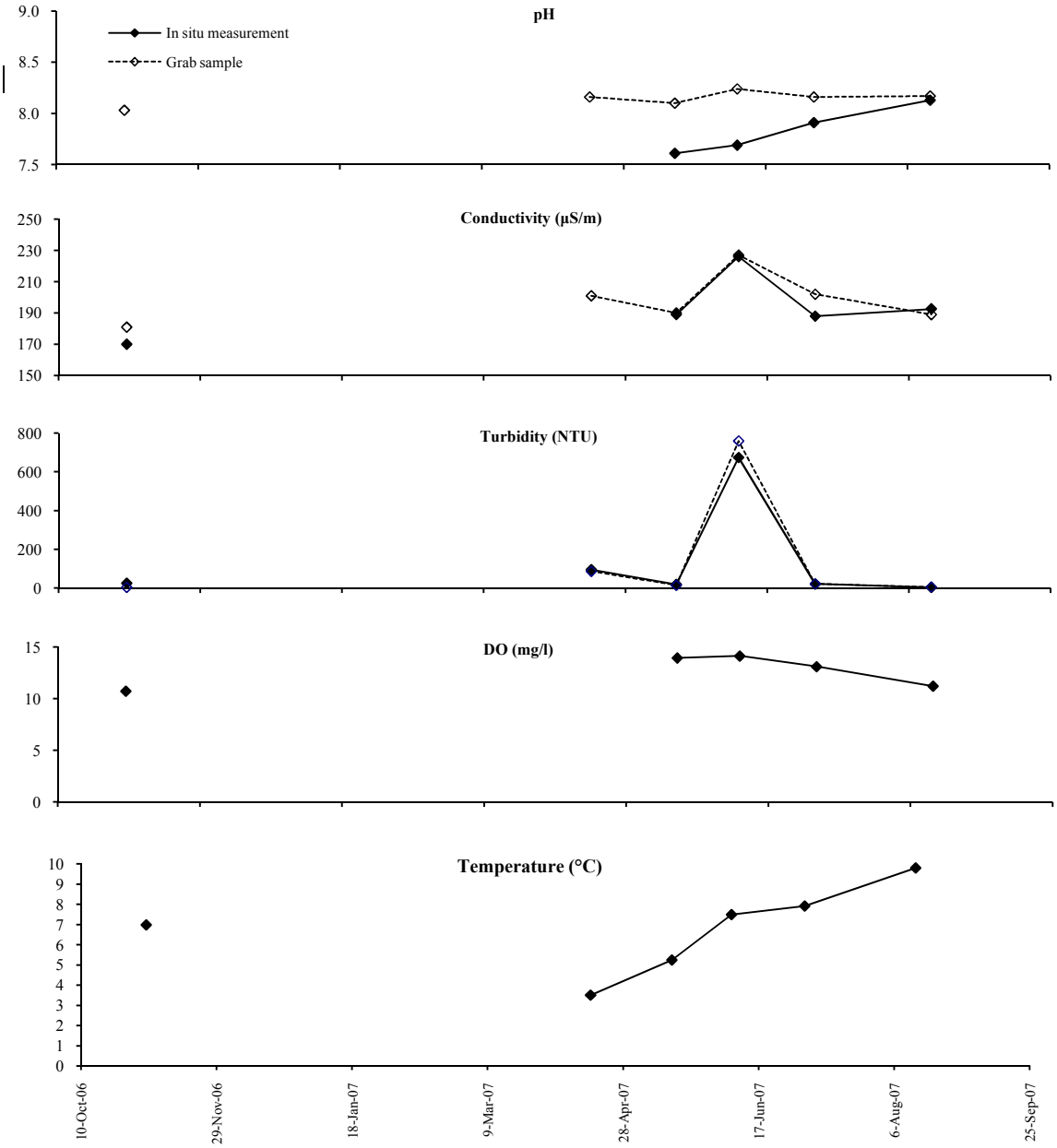
	In Situ					Grab Samples				
Date	**pH**	**Conductivity** (µS/cm)	**Turbidity** (NTU)	**DO** (mg/L)	**Temperature** (°C)	**pH**	**Conductivity** (µSc/m)	**Turbidity** (NTU)	**DO** (mg/L)	**Comments**
3-Nov-06										Site not established yet
5-Mar-07										Bank too steep to negotiate in winter conditions
16-Apr-07	8.0	185.0	15.2	0.0	3.2	8.2	185.0	12.2		
22-May-07	7.8	174.0	17.6	4.6	3.8	8.1	184.0	16.3		
6-Jun-07	7.9	177.0	5.2	15.8	7.5	8.2	185.0	4.2		Data mislabeled as Halfway 8
4-Jul-07	7.9	168.0	5.3	13.7	10.7	8.1	186.0	5.8		
14-Aug-07	8.3	180.6	0.6	11.4	8.9	8.1	179.0	2.3		DO converted from percentage of 107.3%



Appendix B3: **Peace River Water Quality Project - In Situ Sampling - 2007**

Site Number: Peace 3 3 **Meter:** Horriba (Nov 06 - March) YSI April onwards

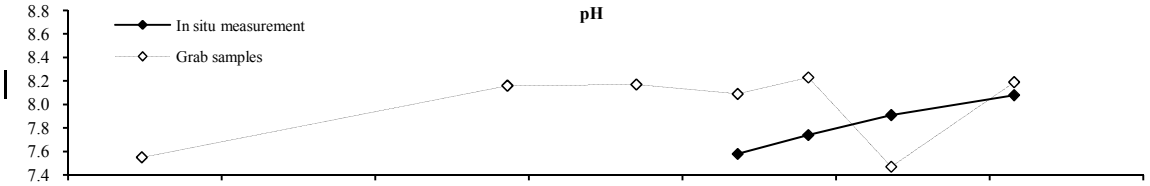
	In Situ					Grab Samples				
Date	pH	Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	pH	Conductivity (µSc/m)	Turbidity (NTU)	DO (mg/L)	Comments
3-Nov-06	8.7	170.0	24.6	10.7	7.0	8.0	181.0	3.1		
3-Mar-07										Site inaccessible due to ice cover
16-Apr-07			95.0		3.5	8.2	201.0	86.2		YSI probe failed - dead batteries
16-May-07	7.6	189.0	18.6	13.9	5.2	8.1	190.0	13.7		
7-Jun-07	7.7	226.0	674.0	14.1	7.5	8.2	227.0	759.0		
4-Jul-07	7.9	188.0	20.5	13.1	7.9	8.2	202.0	21.4		
14-Aug-07	8.1	192.6	2.9	11.2	9.8	8.2	189.0	4.3		DO converted from percentage of 107.8%

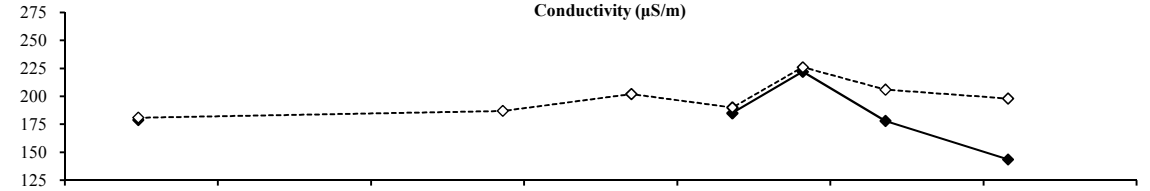


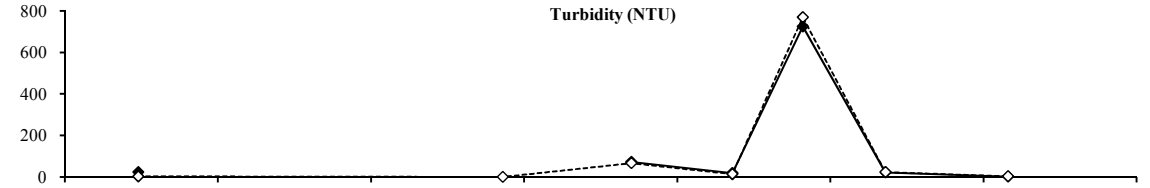
Appendix B4: **Peace River Water Quality Project - In Situ Sampling - 2007**

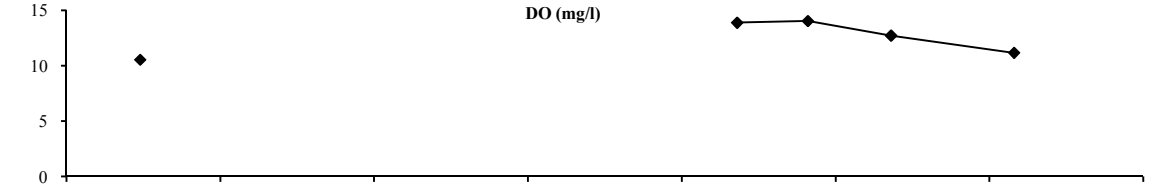
Site Number: Peace 4 **Meter:** Horriba (Nov 06 - March) YSI April onwards

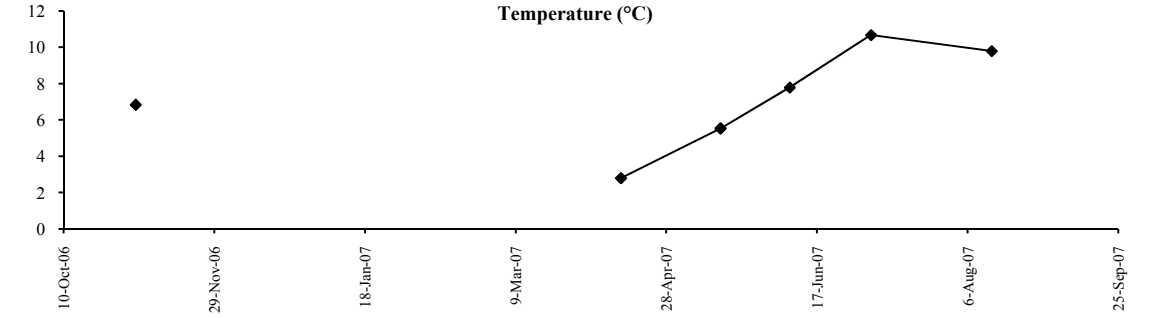
	In Situ					Grab Samples				
Date	**pH**	**Conductivity** (µS/cm)	**Turbidity** (NTU)	**DO** (mg/L)	**Temperature** (°C)	**pH**	**Conductivity** (µSc/m)	**Turbidity** (NTU)	**DO** (mg/L)	**Comments**
3-Nov-06	8.7	179.0	24.5	10.5	6.8	7.6	181.0	3.6		changes 17.9 to 179 for conductivity to reflect units
2-Mar-07						8.2	187.0	1.1		
13-Apr-07			73.0		2.8	8.2	202.0	67.2		YSI probe failed - dead batteries
16-May-07	7.6	185.0	19.5	13.9	5.5	8.1	190.0	14.6		
8-Jun-07	7.7	222.0	725.0	14.0	7.8	8.2	226.0	770.0		
5-Jul-07	7.9	178.0	23.2	12.7	10.7	7.5	206.0	24.2		
14-Aug-07	8.1	143.6	2.9	11.2	9.8	8.2	198.0	3.9		DO converted from percentage of 107.4%











Appendix B5: **Peace River Water Quality Project - In Situ Sampling - 2007**

Site Number: Peace 5 **Meter:** Horriba (Nov 06 - March) YSI April onwards

	In Situ				Grab Samples				
Date	pH	Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	pH	Conductivity (µSc/m)	Turbidity (NTU)	DO (mg/L)
4-Nov-06	8.8	174.0	25.0	10.7	6.0	8.1	185.0	4.0	
2-Mar-07	8.9	181.0	8.1	11.2	0.0	8.2	191.0	3.0	
19-Apr-07	7.6	221.0	1000.0	12.7	2.6	8.0	239.0	2030.0	
16-May-07	7.6	188.0	73.0	13.1	7.5	7.9	176.0	91.0	
8-Jun-07	7.8	178.0	7.1	13.7	8.9	8.2	182.0	678.0	
5-Jul-07	7.8	180.0	106.0	12.1	13.0	8.0	195.0	85.1	
15-Aug-07	8.2	192.7	50.1	9.3	8.2	8.2	202.0	46.2	

Comments

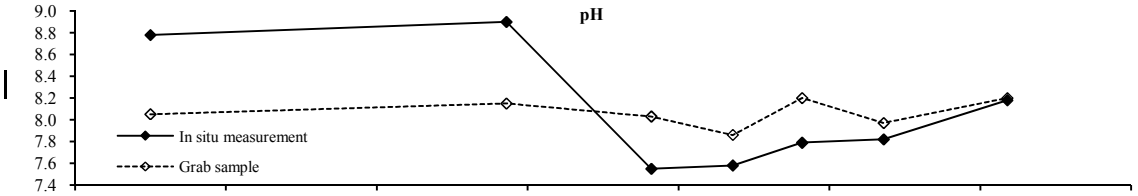
changes 17.4 to 174 for conductivity to reflect units

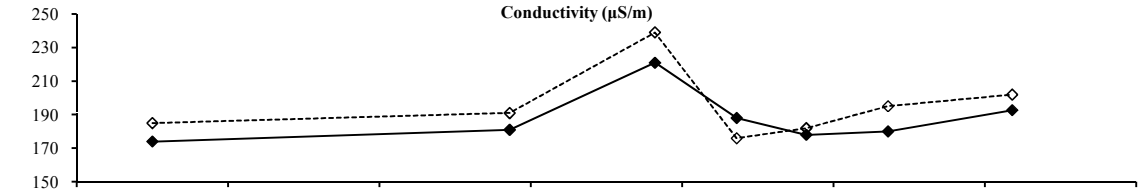
changes 18.1 to 181 for conductivity to reflect units

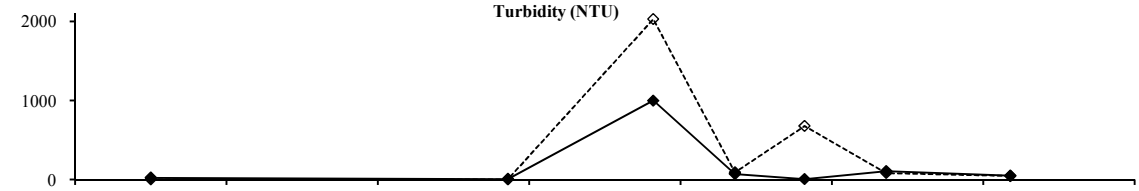
checked. Turbidity off scale of meter, therefor > 1000.

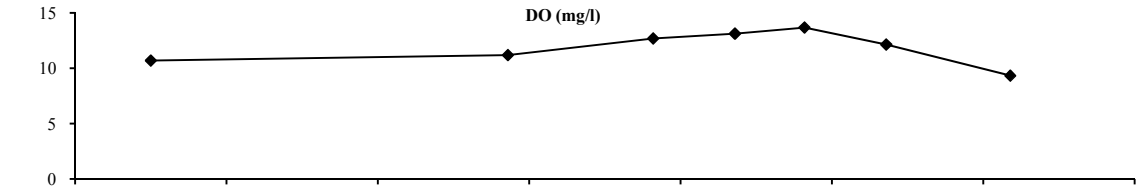
changes 17.8 to 178 for conductivity to reflect units

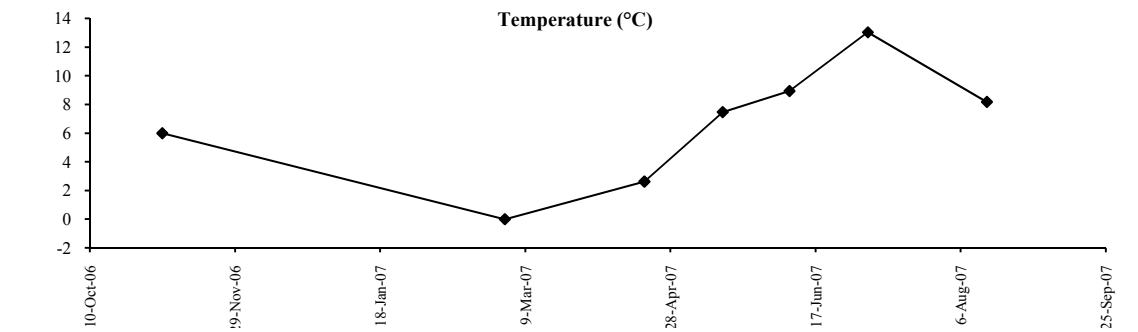
DO converted from p[ercentage of 92.5%







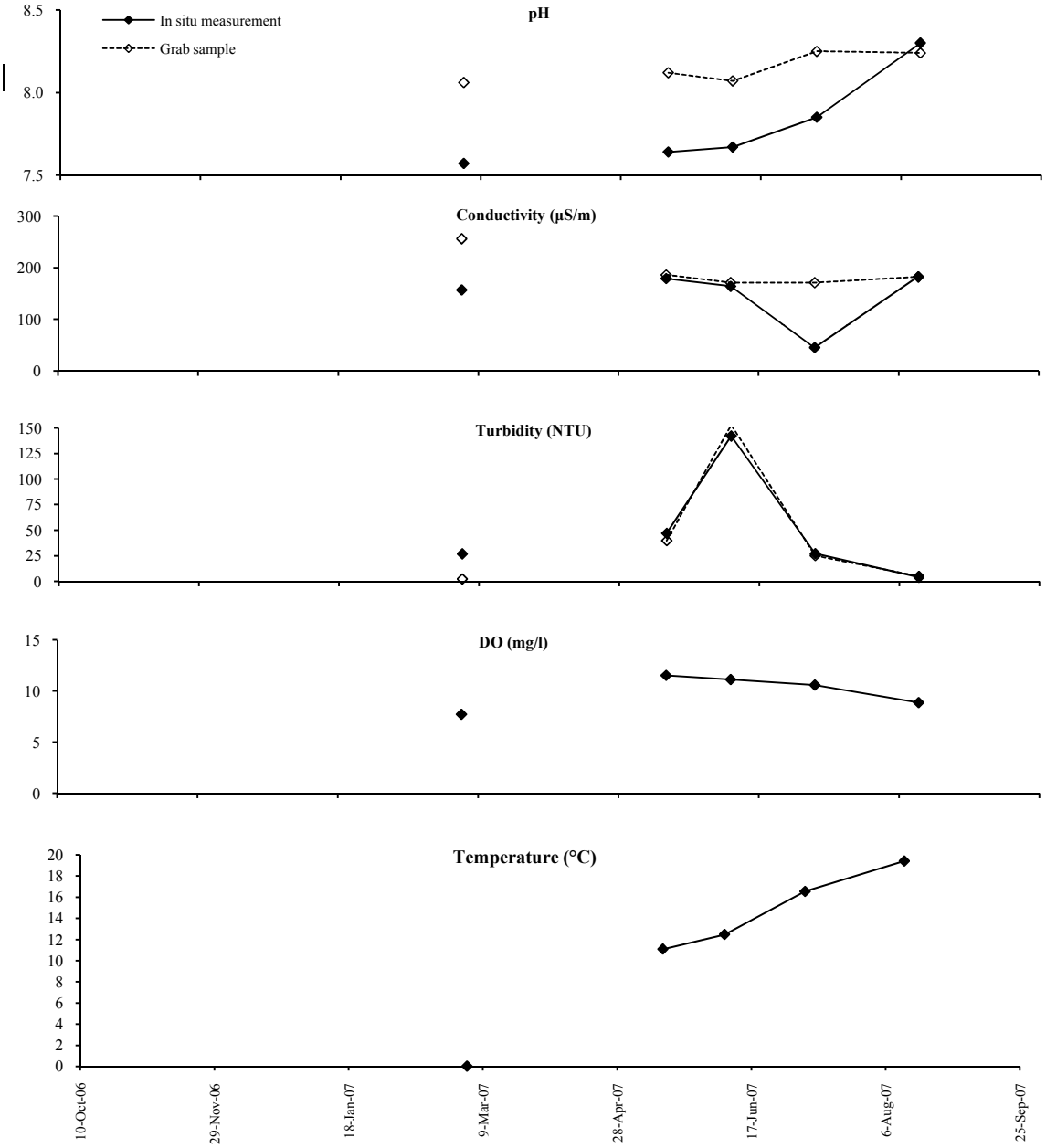




Appendix B6: **Peace River Water Quality Project - In Situ Sampling - 2007**

Site Number: Moberly 6 **Meter:** Horriba (Nov 06 - March) YSI April onwards

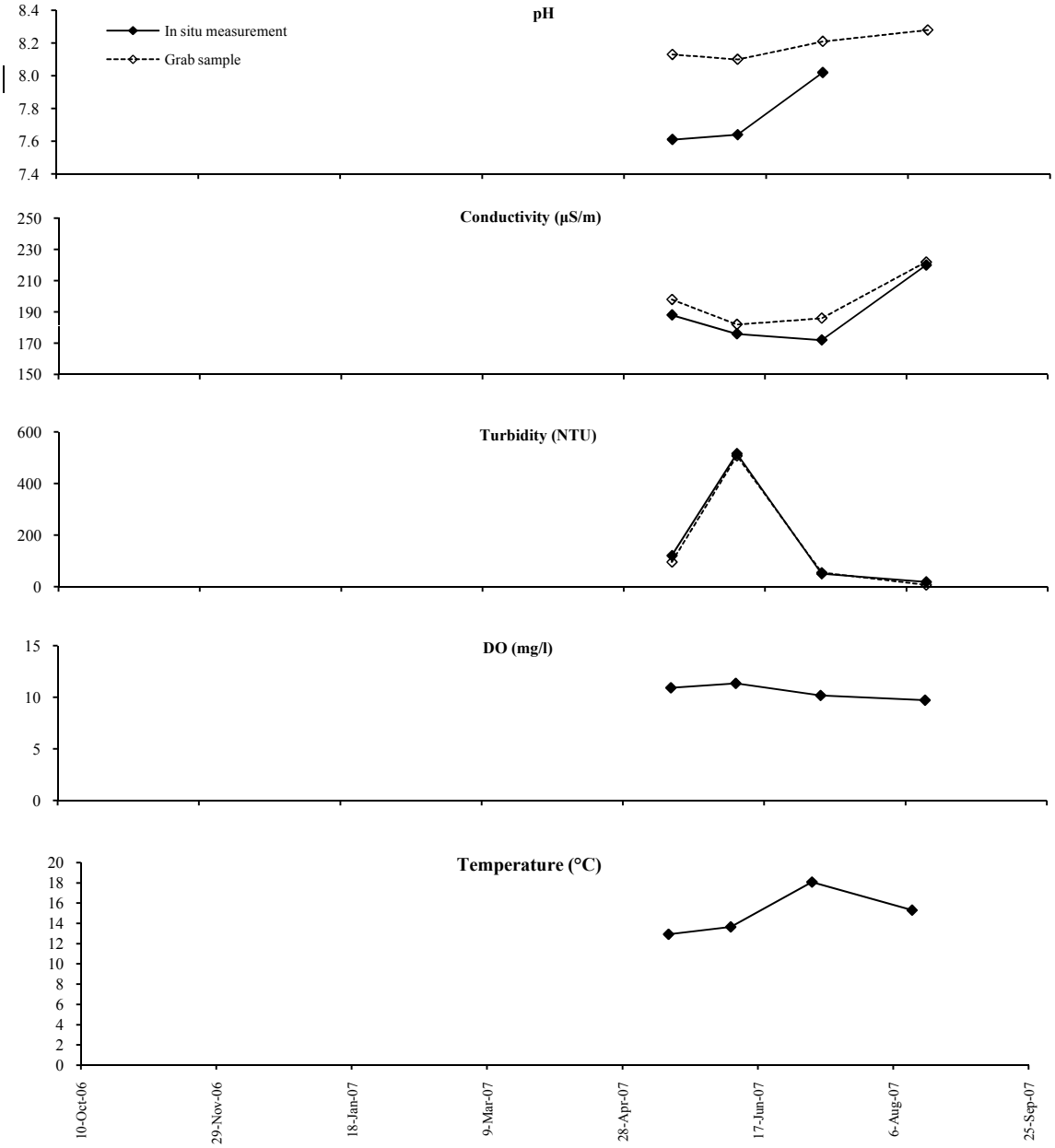
	In Situ					Grab Samples				
Date	**pH**	**Conductivity** (µS/cm)	**Turbidity** (NTU)	**DO** (mg/L)	**Temperature** (°C)	**pH**	**Conductivity** (µSc/m)	**Turbidity** (NTU)	**DO** (mg/L)	**Comments**
4-Nov-06										Site not established yet
3-Mar-07	7.6	157.0	27.0	7.7	0.0	8.1	256.0	2.4		changes 15.7 to 157 for conductivity to reflect units access thru 50 cm ice
19-Apr-07										Site not sampled - no als record
15-May-07	7.6	179.0	47.1	11.5	11.1	8.1	186.0	39.9		
7-Jun-07	7.7	164.0	142.0	11.1	12.5	8.1	171.0	153.0		
7-Jul-07	7.9	45.0	27.1	10.6	16.5	8.3	171.0	25.2		
13-Aug-07	8.3	182.7	4.1	8.9	19.4	8.2	182.0	5.0		DO converted from reading percentage 103%



Appendix B7: **Peace River Water Quality Project - In Situ Sampling - 2007**

Site Number: Moberly 7 **Meter:** Horriba (Nov 06 - March) YSI April onwards

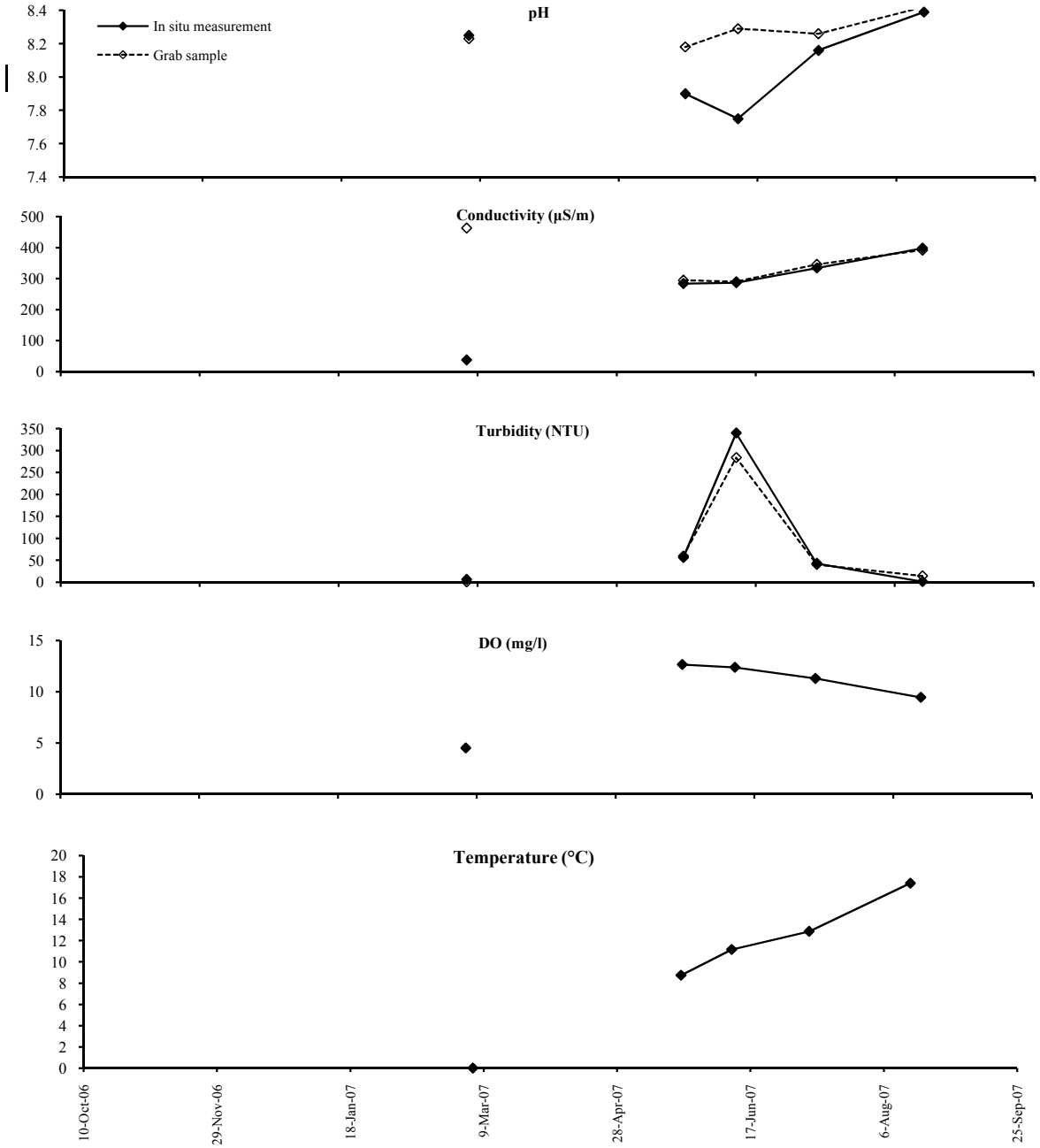
	In Situ					Grab Samples				
Date	pH	Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	pH	Conductivity (µSc/m)	Turbidity (NTU)	DO (mg/L)	Comments
4-Nov-06										Site not established due to blizzard conditions
3-Mar-07										Could not access area due to winter conditions
19-Apr-07										Site not sampled - no als record
15-May-07	7.6	188.0	121.0	10.9	12.9	8.1	198.0	95.9		Site established after extensive road search
7-Jun-07	7.6	176.0	516.0	11.3	13.7	8.1	182.0	508.0		
7-Jul-07	8.0	172.0	51.0	10.2	18.1	8.2	186.0	54.5		
13-Aug-07		220.0	18.8	9.7	15.3	8.3	222.0	6.9		DO converted from percentage of 103.2%



Appendix B8: **Peace River Water Quality Project - In Situ Sampling - 2007**

Site Number: Halfway 8 **Meter:** Horriba (Nov 06 - March) YSI April onwards

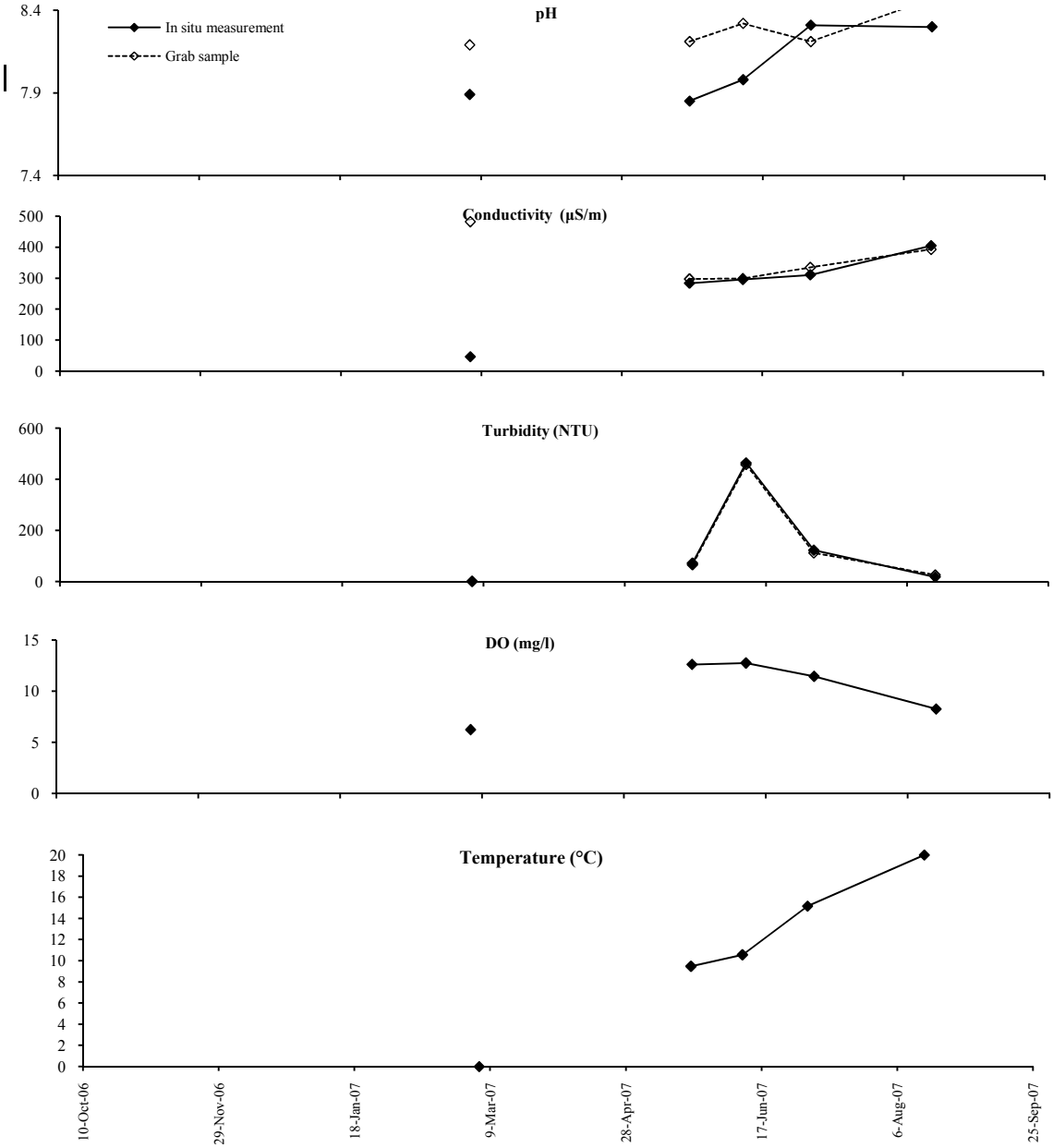
	In Situ					Grab Samples				
Date	pH	Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	pH	Conductivity (µSc/m)	Turbidity (NTU)	DO (mg/L)	Comments
4-Nov-06										Site not established yet
5-Mar-07	8.3	37.9	6.2	4.5	0.0	8.2	463.0	0.6		Winter sampling site at Upper bridge crossing thru 50 cm of ice
13-Apr-07										Breakup in progress no water sample
22-May-07	7.9	284.0	56.0	12.7	8.7	8.2	295.0	59.2		
10-Jun-07	7.8	287.0	340.0	12.4	11.2	8.3	290.0	284.0		
9-Jul-07	8.2	334.0	42.8	11.3	12.9	8.3	346.0	40.3		
16-Aug-07	8.4	398.0	1.3	9.5	17.4	8.4	392.0	14.2		



Appendix B9: **Peace River Water Quality Project - In Situ Sampling - 2007**

Site Number: Halfway 9 **Meter:** Horriba (Nov 06 - March) YSI April onwards

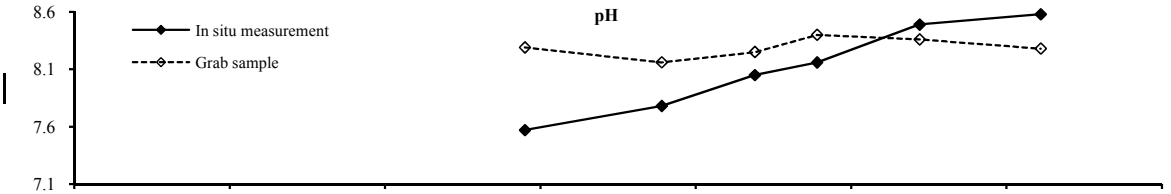
	In Situ					Grab Samples				
Date	**pH**	**Conductivity** (µS/cm)	**Turbidity** (NTU)	**DO** (mg/L)	**Temperature** (°C)	**pH**	**Conductivity** (µSc/m)	**Turbidity** (NTU)	**DO** (mg/L)	**Comments**
4-Nov-06										Site not established yet
5-Mar-07	7.9	46.7	19.1-20.5	6.3	0.0	8.2	482.0	2.1		No field notes - must check with SH
13-Apr-07										Breakup in progress no water sample
22-May-07	7.9	284.0	72.0	12.6	9.5	8.2	298.0	66.1		No field notes - must check with SH
10-Jun-07	8.0	296.0	465.0	12.8	10.6	8.3	299.0	457.0		
4-Jul-07	8.3	311.0	123.0	11.5	15.2	8.2	335.0	112.0		Site label corrected in field notes
16-Aug-07	8.3	405.0	18.2	8.3	20.0	8.5	393.0	25.6		

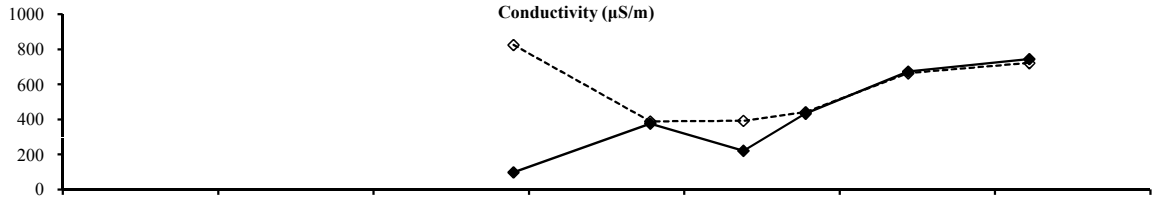


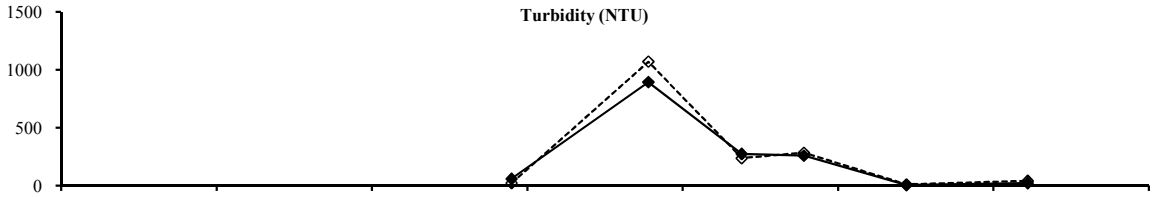
Appendix B10: **Peace River Water Quality Project - In Situ Sampling - 2007**

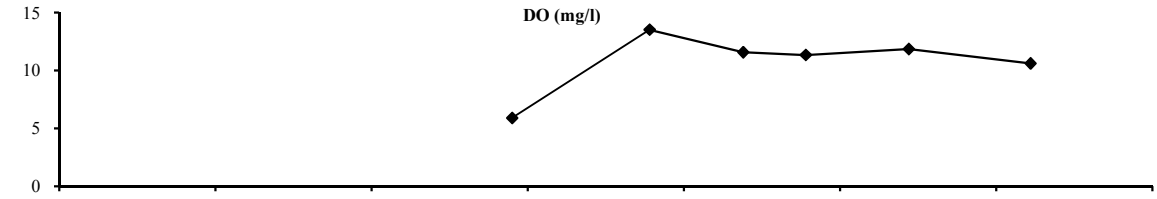
Site Number: Lynx 10 **Meter:** Horriba (Nov 06 - March) YSI April onwards

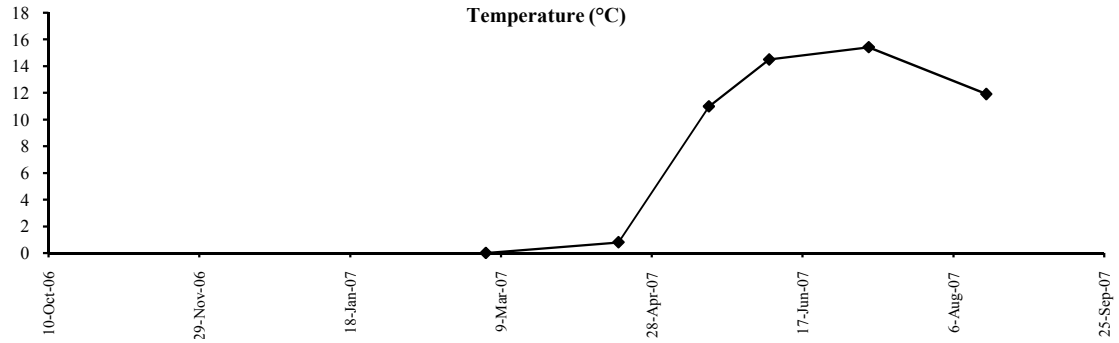
	In Situ					Grab Samples				
Date	**pH**	**Conductivity** (µS/cm)	**Turbidity** (NTU)	**DO** (mg/L)	**Temperature** (°C)	**pH**	**Conductivity** (µSc/m)	**Turbidity** (NTU)	**DO** (mg/L)	**Comments**
4-Nov-06										Site not established due to blizzard conditions
4-Mar-07	7.6	98.0	59.0	5.9	0.0	8.3	824.0	21.0		Winter sampling site at bridge crossing thru ice, conductivity
17-Apr-07	7.8	376.0	893.0	13.5	0.8	8.2	388.0	1070.0		Permanent site established at Rea Simpson
17-May-07	8.1	221.0	274.0	11.6	11.0	8.3	392.0	236.0		
6-Jun-07	8.2	433.0	259.0	11.3	14.5	8.4	441.0	283.0		
9-Jul-07	8.5	673.0	4.7	11.9	15.4	8.4	663.0	9.2		
17-Aug-07	8.6	744.0	22.4	10.6	11.9	8.3	721.0	40.2		







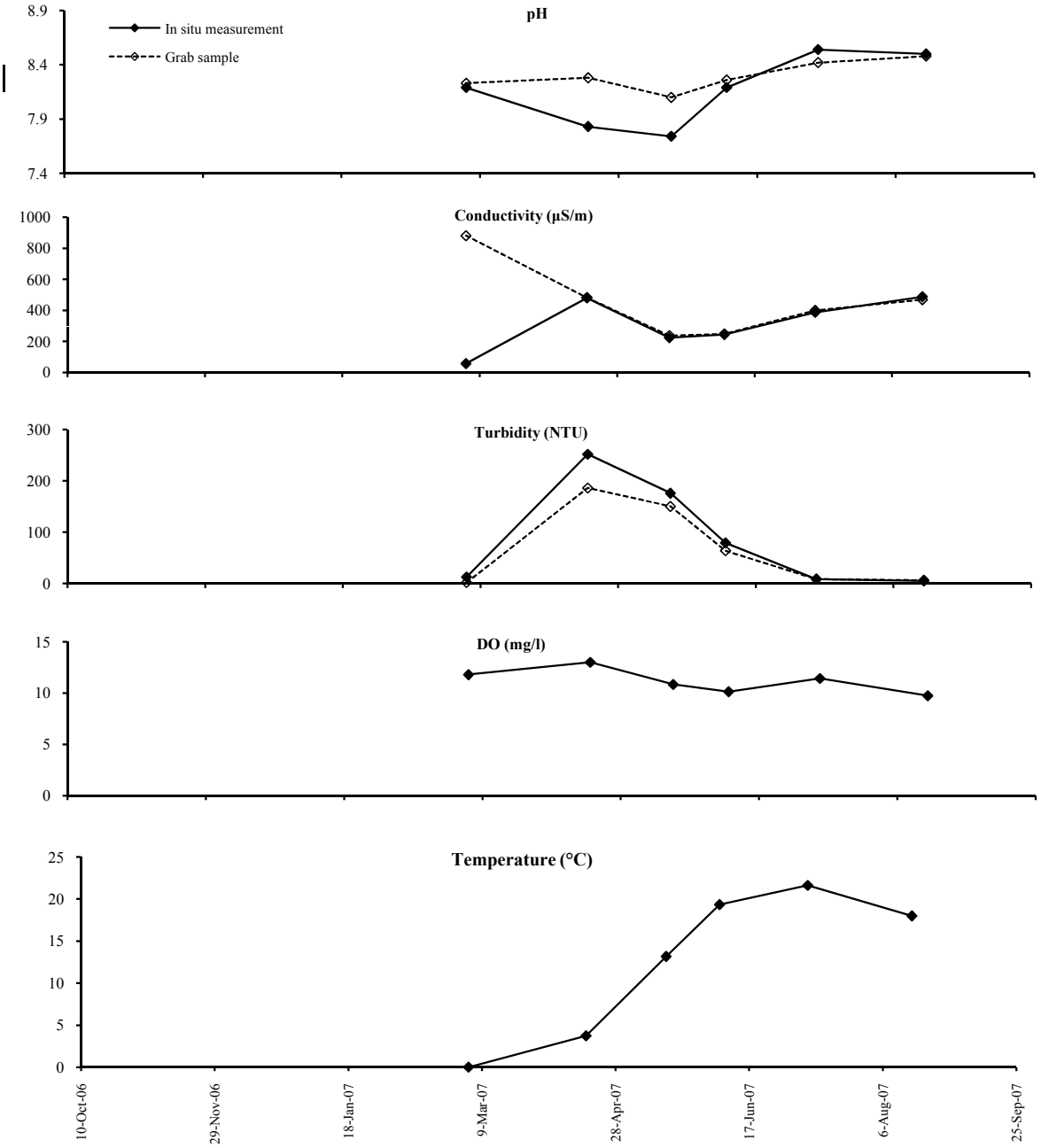




Appendix B11: **Peace River Water Quality Project - In Situ Sampling - 2007**

Site Number: Farrell 11 **Meter:** Horriba (Nov 06 - March) YSI April onwards

	In Situ					Grab Samples				
Date	**pH**	**Conductivity** (µS/cm)	**Turbidity** (NTU)	**DO** (mg/L)	**Temperature** (°C)	**pH**	**Conductivity** (µSc/m)	**Turbidity** (NTU)	**DO** (mg/L)	**Comments**
4-Nov-06										Site not established due to blizzard conditions
4-Mar-07	8.2	57.4	12.5	11.8	0.0	8.2	881.0	1.8		Winter sampling site at bridge crossing thru ice
17-Apr-07	7.8	480.0	252.0	13.0	3.7	8.3	482.0	186.0		Permanent site established via access through Ardell Ranch
17-May-07	7.7	224.0	176.0	10.9	13.2	8.1	237.0	150.0		
6-Jun-07	8.2	244.0	79.0	10.1	19.4	8.3	248.0	63.8		
9-Jul-07	8.5	387.0	8.2	11.4	21.6	8.4	399.0	8.5		
17-Aug-07	8.5	487.0	4.7	9.7	18.0	8.5	468.0	6.1		

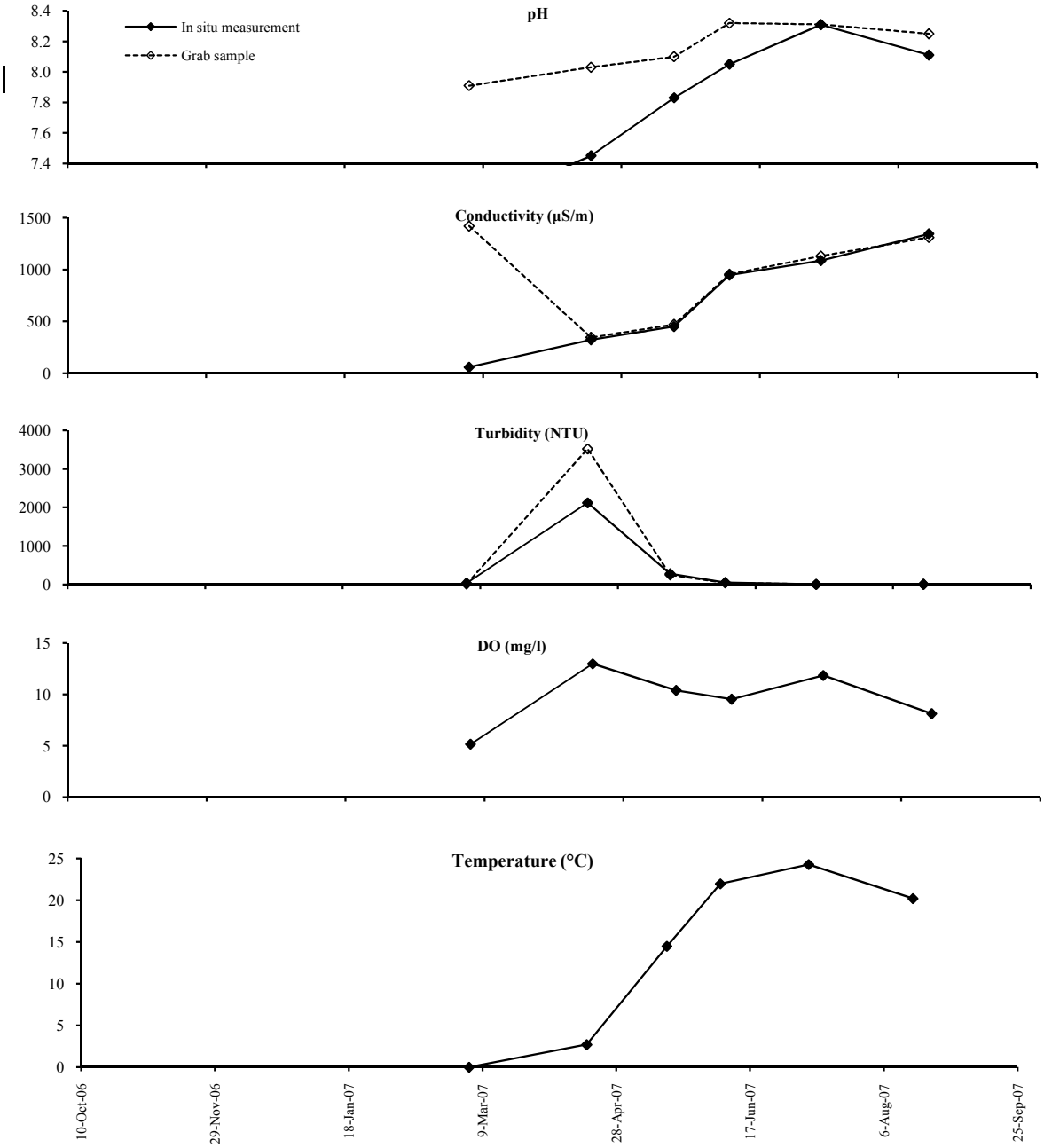


Appendix B12: **Peace River Water Quality Project - In Situ Sampling - 2007**

Site Number: Cache 12 **Meter:** Horriba (Nov 06 - March) YSI April onwards

12

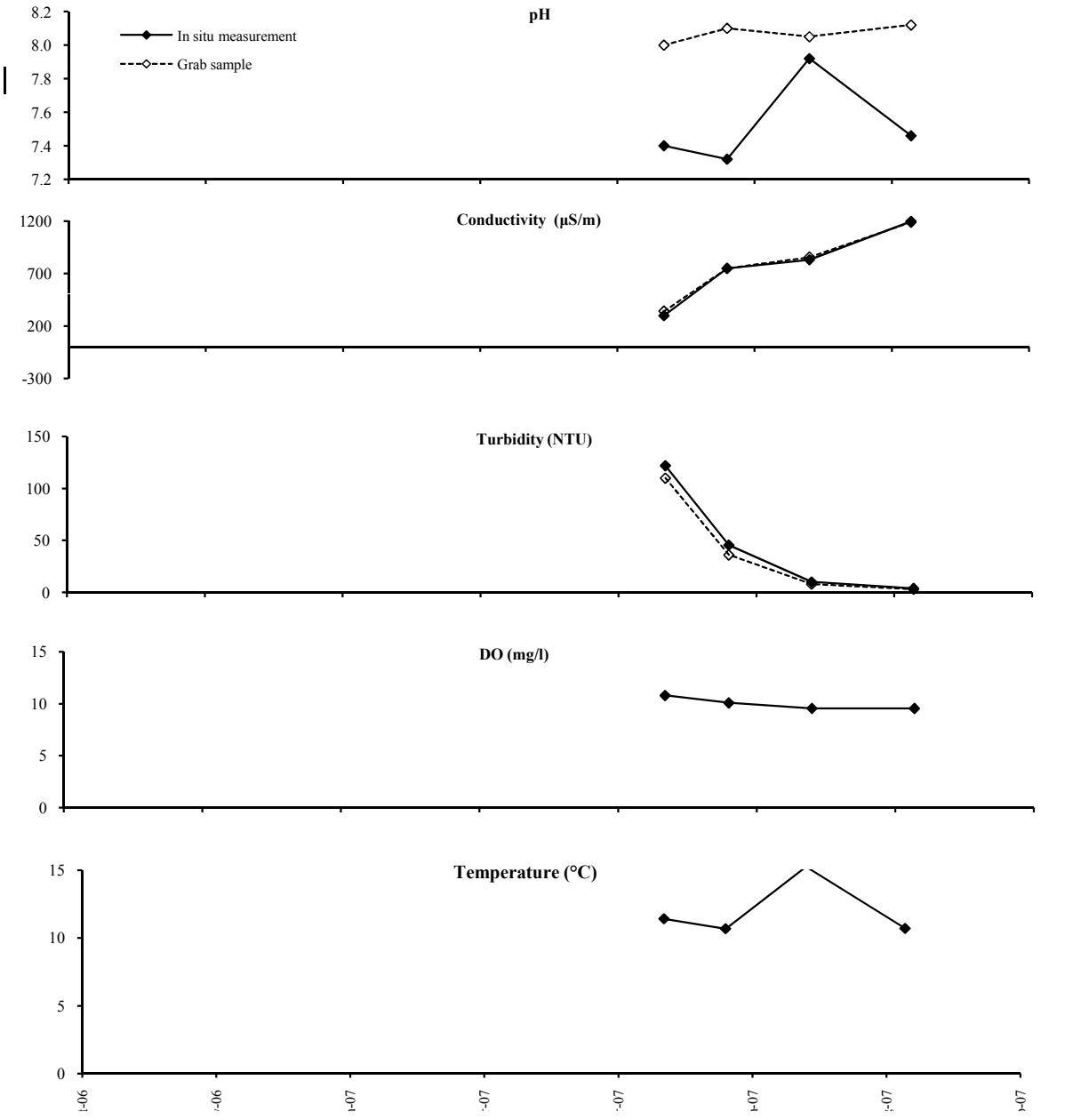
	In Situ					Grab Samples				
Date	**pH**	**Conductivity** (µS/cm)	**Turbidity** (NTU)	**DO** (mg/L)	**Temperature** (°C)	**pH**	**Conductivity** (µSc/m)	**Turbidity** (NTU)	**DO** (mg/L)	**Comments**
4-Nov-06										Site not established due to blizzard conditions
4-Mar-07	7.1	58.6	36.0	5.1	0.0	7.9	1420.0	14.4		at bridge through 65 cm of ice
17-Apr-07	7.5	323.0	2120.0	13.0	2.7	8.0	345.0	3520.0		
17-May-07	7.8	450.0	278.0	10.4	14.5	8.1	470.0	250.0		Hwy bridge crossing made permanent site
6-Jun-07	8.1	946.0	51.0	9.5	22.0	8.3	955.0	44.7		
9-Jul-07	8.3	1086.0	3.4	11.8	24.3	8.3	1130.0	4.9		
17-Aug-07	8.1	1345.0	5.2	8.1	20.2	8.3	1310.0	6.3		



Appendix B13: **Peace River Water Quality Project - In Situ Sampling - 2007**

Site Number: Boudreau 13 **Meter:** Horriba (Nov 06 - March) YSI April onwards

	In Situ					Grab Samples				
Date	**pH**	**Conductivity** (µS/cm)	**Turbidity** (NTU)	**DO** (mg/L)	**Temperature** (°C)	**pH**	**Conductivity** (µSc/m)	**Turbidity** (NTU)	**DO** (mg/L)	**Comments**
4-Nov-06										Site not established due to blizzard conditions
4-Mar-07										Site not accessible due winter conditions
17-Apr-07										Site not accessible due to break up
15-May-07	7.40	299.0	122.0	10.8	11.4	8.0	342.0	110.0		
7-Jun-07	7.32	749.0	45.5	10.1	10.7	8.1	750.0	36.1		
7-Jul-07	7.92	832.0	10.0	9.6	15.2	8.1	858.0	8.0		
13-Aug-07	7.46	1198.0	3.9	9.6	10.7	8.1	1190.0	3.1		DO converted from reading of 81%



APPENDIX C

Daily Water Temperature Data from the 2006-2007 Peace River Water Quality Project

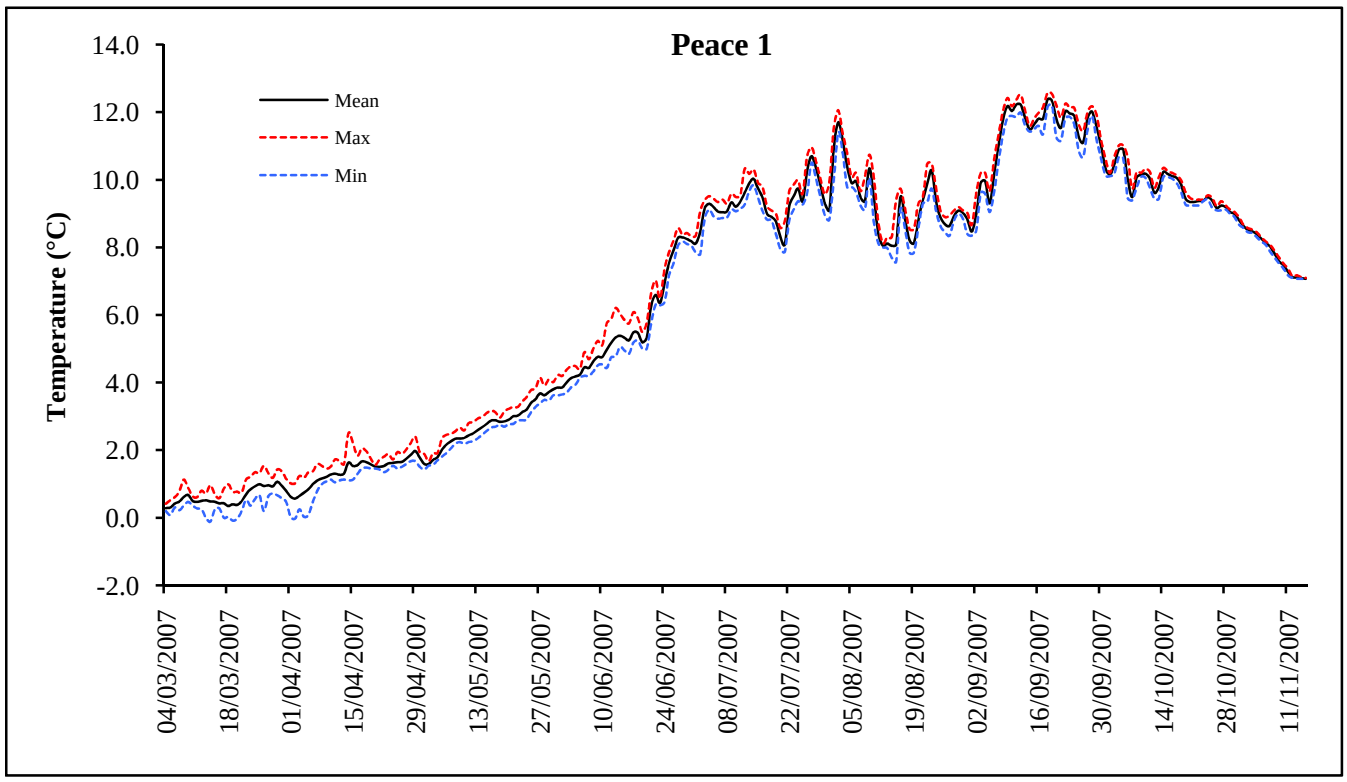
Appendix C1: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025763
Location Peace 1

Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
4-Mar-07	0.3	0.4	0.2	22-Apr-07	1.5	1.8	1.3	10-Jun-07	4.8	5.1	4.5
5-Mar-07	0.3	0.5	0.1	23-Apr-07	1.6	1.9	1.4	11-Jun-07	5.0	5.7	4.4
6-Mar-07	0.4	0.6	0.3	24-Apr-07	1.6	1.7	1.5	12-Jun-07	5.2	5.9	4.7
7-Mar-07	0.5	0.8	0.2	25-Apr-07	1.6	1.9	1.5	13-Jun-07	5.3	6.2	4.8
8-Mar-07	0.6	1.1	0.4	26-Apr-07	1.7	1.9	1.5	14-Jun-07	5.4	6.0	5.1
9-Mar-07	0.7	0.9	0.5	27-Apr-07	1.7	2.0	1.6	15-Jun-07	5.3	5.8	4.9
10-Mar-07	0.5	0.6	0.4	28-Apr-07	1.9	2.2	1.7	16-Jun-07	5.2	5.7	4.8
11-Mar-07	0.5	0.6	0.3	29-Apr-07	2.0	2.4	1.7	17-Jun-07	5.5	6.1	5.2
12-Mar-07	0.5	0.8	0.2	30-Apr-07	1.8	1.9	1.5	18-Jun-07	5.5	5.9	5.2
13-Mar-07	0.5	0.7	0.0	1-May-07	1.6	1.9	1.4	19-Jun-07	5.2	5.5	5.0
14-Mar-07	0.5	1.0	-0.1	2-May-07	1.6	1.7	1.5	20-Jun-07	5.3	5.8	5.0
15-Mar-07	0.5	0.7	0.2	3-May-07	1.7	1.9	1.6	21-Jun-07	6.3	6.7	5.8
16-Mar-07	0.4	0.6	0.3	4-May-07	1.8	1.9	1.7	22-Jun-07	6.6	7.0	6.3
17-Mar-07	0.4	0.9	0.0	5-May-07	2.0	2.3	1.8	23-Jun-07	6.4	6.5	6.3
18-Mar-07	0.3	1.0	0.0	6-May-07	2.2	2.5	1.9	24-Jun-07	6.9	7.4	6.4
19-Mar-07	0.4	0.8	-0.1	7-May-07	2.3	2.5	2.0	25-Jun-07	7.5	7.8	7.2
20-Mar-07	0.4	0.8	0.0	8-May-07	2.3	2.6	2.2	26-Jun-07	7.9	8.2	7.5
21-Mar-07	0.5	0.7	0.2	9-May-07	2.3	2.7	2.2	27-Jun-07	8.3	8.6	8.0
22-Mar-07	0.7	1.1	0.5	10-May-07	2.4	2.6	2.2	28-Jun-07	8.3	8.4	8.2
23-Mar-07	0.8	1.2	0.4	11-May-07	2.4	2.8	2.2	29-Jun-07	8.2	8.4	8.1
24-Mar-07	0.9	1.3	0.6	12-May-07	2.5	2.8	2.3	30-Jun-07	8.2	8.3	8.0
25-Mar-07	1.0	1.3	0.7	13-May-07	2.6	2.9	2.3	1-Jul-07	8.1	8.3	7.8
26-Mar-07	0.9	1.5	0.2	14-May-07	2.7	3.0	2.5	2-Jul-07	8.5	9.1	7.8
27-Mar-07	1.0	1.3	0.6	15-May-07	2.8	3.1	2.6	3-Jul-07	9.2	9.4	8.8
28-Mar-07	0.9	1.2	0.7	16-May-07	2.9	3.2	2.7	4-Jul-07	9.3	9.5	9.1
29-Mar-07	1.1	1.4	0.7	17-May-07	2.9	3.1	2.7	5-Jul-07	9.2	9.4	8.9
30-Mar-07	0.9	1.4	0.6	18-May-07	2.8	3.0	2.7	6-Jul-07	9.1	9.3	8.8
31-Mar-07	0.8	1.2	0.5	19-May-07	2.9	3.1	2.7	7-Jul-07	9.0	9.4	8.9
1-Apr-07	0.6	1.0	0.0	20-May-07	2.9	3.2	2.8	8-Jul-07	9.1	9.3	8.9
2-Apr-07	0.6	1.0	0.0	21-May-07	3.0	3.3	2.8	9-Jul-07	9.3	9.6	9.1
3-Apr-07	0.6	1.2	0.2	22-May-07	3.0	3.3	2.9	10-Jul-07	9.2	9.5	9.1
4-Apr-07	0.7	1.2	0.0	23-May-07	3.1	3.4	2.9	11-Jul-07	9.4	9.5	9.1
5-Apr-07	0.8	1.3	0.1	24-May-07	3.2	3.6	2.9	12-Jul-07	9.6	10.3	9.3
6-Apr-07	1.0	1.4	0.5	25-May-07	3.4	3.8	3.1	13-Jul-07	9.9	10.2	9.7
7-Apr-07	1.1	1.6	0.8	26-May-07	3.5	3.8	3.3	14-Jul-07	10.0	10.3	9.8
8-Apr-07	1.2	1.5	1.0	27-May-07	3.7	4.1	3.4	15-Jul-07	9.7	9.9	9.5
9-Apr-07	1.2	1.5	1.1	28-May-07	3.6	3.9	3.5	16-Jul-07	9.5	9.8	9.1
10-Apr-07	1.3	1.5	1.1	29-May-07	3.7	4.1	3.5	17-Jul-07	9.0	9.2	8.8
11-Apr-07	1.3	1.7	1.0	30-May-07	3.8	4.0	3.6	18-Jul-07	8.9	9.1	8.8
12-Apr-07	1.3	1.7	1.1	31-May-07	3.9	4.2	3.6	19-Jul-07	8.8	9.0	8.4
13-Apr-07	1.3	1.6	1.1	1-Jun-07	3.9	4.2	3.6	20-Jul-07	8.3	8.6	7.9
14-Apr-07	1.6	2.5	1.1	2-Jun-07	4.0	4.4	3.7	21-Jul-07	8.1	8.8	7.9
15-Apr-07	1.5	2.2	1.1	3-Jun-07	4.1	4.5	3.9	22-Jul-07	9.2	9.7	8.8
16-Apr-07	1.6	1.8	1.3	4-Jun-07	4.2	4.5	3.9	23-Jul-07	9.5	9.9	9.1
17-Apr-07	1.7	2.0	1.5	5-Jun-07	4.2	4.4	4.1	24-Jul-07	9.7	10.0	9.4
18-Apr-07	1.6	2.0	1.5	6-Jun-07	4.4	4.9	4.2	25-Jul-07	9.4	9.6	9.3
19-Apr-07	1.6	1.8	1.5	7-Jun-07	4.4	4.7	4.2	26-Jul-07	10.2	10.7	9.6
20-Apr-07	1.5	1.6	1.5	8-Jun-07	4.6	5.0	4.3	27-Jul-07	10.7	11.0	10.5
21-Apr-07	1.5	1.7	1.4	9-Jun-07	4.8	5.2	4.5	28-Jul-07	10.3	10.5	10.0

Appendix C1: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025763
Location Peace 1

Date	Mean	Max	Min
29-Jul-07	9.8	10.0	9.5
30-Jul-07	9.3	9.6	8.9
31-Jul-07	9.1	9.9	8.8
1-Aug-07	10.9	11.5	10.0
2-Aug-07	11.7	12.1	11.4
3-Aug-07	11.2	11.4	10.8
4-Aug-07	10.4	10.8	9.8
5-Aug-07	9.9	10.1	9.8
6-Aug-07	10.0	10.2	9.6
7-Aug-07	9.5	9.7	9.2
8-Aug-07	9.4	10.1	9.1
9-Aug-07	10.3	10.7	10.1
10-Aug-07	9.5	10.1	8.7
11-Aug-07	8.4	8.7	8.1
12-Aug-07	8.1	8.1	8.0
13-Aug-07	8.1	8.3	8.0
14-Aug-07	8.0	8.3	7.7
15-Aug-07	8.1	9.4	7.6
16-Aug-07	9.5	9.7	9.1
17-Aug-07	8.8	9.1	8.5
18-Aug-07	8.2	8.5	7.8
19-Aug-07	8.1	8.5	7.8
20-Aug-07	8.8	9.3	8.6
21-Aug-07	9.4	9.5	9.3
22-Aug-07	9.9	10.5	9.3
23-Aug-07	10.3	10.5	9.7
24-Aug-07	9.3	9.7	9.1
25-Aug-07	8.9	9.1	8.6
26-Aug-07	8.7	8.9	8.4
27-Aug-07	8.6	8.9	8.3
28-Aug-07	8.9	9.1	8.8
29-Aug-07	9.1	9.2	9.0
30-Aug-07	9.0	9.1	8.8
31-Aug-07	8.8	9.0	8.4
1-Sep-07	8.5	8.7	8.3
2-Sep-07	9.0	9.6	8.5
3-Sep-07	9.9	10.2	9.6
4-Sep-07	10.0	10.2	9.6
5-Sep-07	9.3	9.7	9.0
6-Sep-07	10.1	10.6	9.6
7-Sep-07	11.0	11.3	10.5
8-Sep-07	11.8	12.0	11.3
9-Sep-07	12.2	12.4	11.8
10-Sep-07	12.0	12.2	11.9
11-Sep-07	12.2	12.4	11.9
12-Sep-07	12.2	12.5	12.0
13-Sep-07	11.8	12.0	11.6
14-Sep-07	11.5	11.6	11.4
15-Sep-07	11.6	11.8	11.5
16-Sep-07	11.8	12.0	11.6
17-Sep-07	11.8	12.1	11.3
18-Sep-07	12.4	12.6	12.1
19-Sep-07	12.3	12.5	12.2
20-Sep-07	11.8	12.2	11.2
21-Sep-07	11.5	11.8	11.2
22-Sep-07	12.0	12.2	11.8
23-Sep-07	12.0	12.1	11.9
24-Sep-07	11.9	12.1	11.6
25-Sep-07	11.3	11.6	10.9
26-Sep-07	11.1	11.4	10.7
27-Sep-07	11.8	12.0	11.5
28-Sep-07	12.0	12.2	11.9
29-Sep-07	11.6	11.9	11.2
30-Sep-07	11.0	11.2	10.6
1-Oct-07	10.3	10.6	10.1
2-Oct-07	10.1	10.2	10.1
3-Oct-07	10.4	10.7	10.2
4-Oct-07	10.9	11.0	10.7
5-Oct-07	10.9	11.0	10.6
6-Oct-07	10.0	10.7	9.5
7-Oct-07	9.5	9.7	9.4
8-Oct-07	10.1	10.2	9.8
9-Oct-07	10.1	10.2	10.1
10-Oct-07	10.2	10.3	10.1
11-Oct-07	10.0	10.2	9.8
12-Oct-07	9.6	9.8	9.4
13-Oct-07	9.8	10.1	9.4
14-Oct-07	10.2	10.3	10.1
15-Oct-07	10.2	10.2	10.1
16-Oct-07	10.1	10.2	10.0
17-Oct-07	10.0	10.1	9.9
18-Oct-07	9.9	10.0	9.6
19-Oct-07	9.4	9.6	9.3
20-Oct-07	9.3	9.5	9.2
21-Oct-07	9.3	9.4	9.2
22-Oct-07	9.4	9.4	9.2
23-Oct-07	9.4	9.4	9.4
24-Oct-07	9.5	9.5	9.4
25-Oct-07	9.4	9.5	9.2
26-Oct-07	9.2	9.2	9.1
27-Oct-07	9.2	9.4	9.1
28-Oct-07	9.2	9.2	9.1
29-Oct-07	9.0	9.1	9.0
30-Oct-07	9.0	9.0	8.9
31-Oct-07	8.8	8.9	8.7
1-Nov-07	8.6	8.7	8.6
2-Nov-07	8.5	8.6	8.4
3-Nov-07	8.5	8.5	8.4
4-Nov-07	8.4	8.4	8.3
5-Nov-07	8.3	8.3	8.2
6-Nov-07	8.1	8.2	8.1
7-Nov-07	8.0	8.1	7.9
8-Nov-07	7.8	7.9	7.7
9-Nov-07	7.6	7.7	7.5
10-Nov-07	7.5	7.5	7.4
11-Nov-07	7.3	7.4	7.2
12-Nov-07	7.1	7.1	7.1
13-Nov-07	7.1	7.2	7.1
14-Nov-07	7.1	7.1	7.1
15-Nov-07	7.1	7.1	7.0
Mean	**6.4**	**6.7**	**6.2**
Max	**12.4**	**12.6**	**12.2**
Min	**0.3**	**0.4**	**-0.1**

Appendix C1: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025763
Location Peace 1



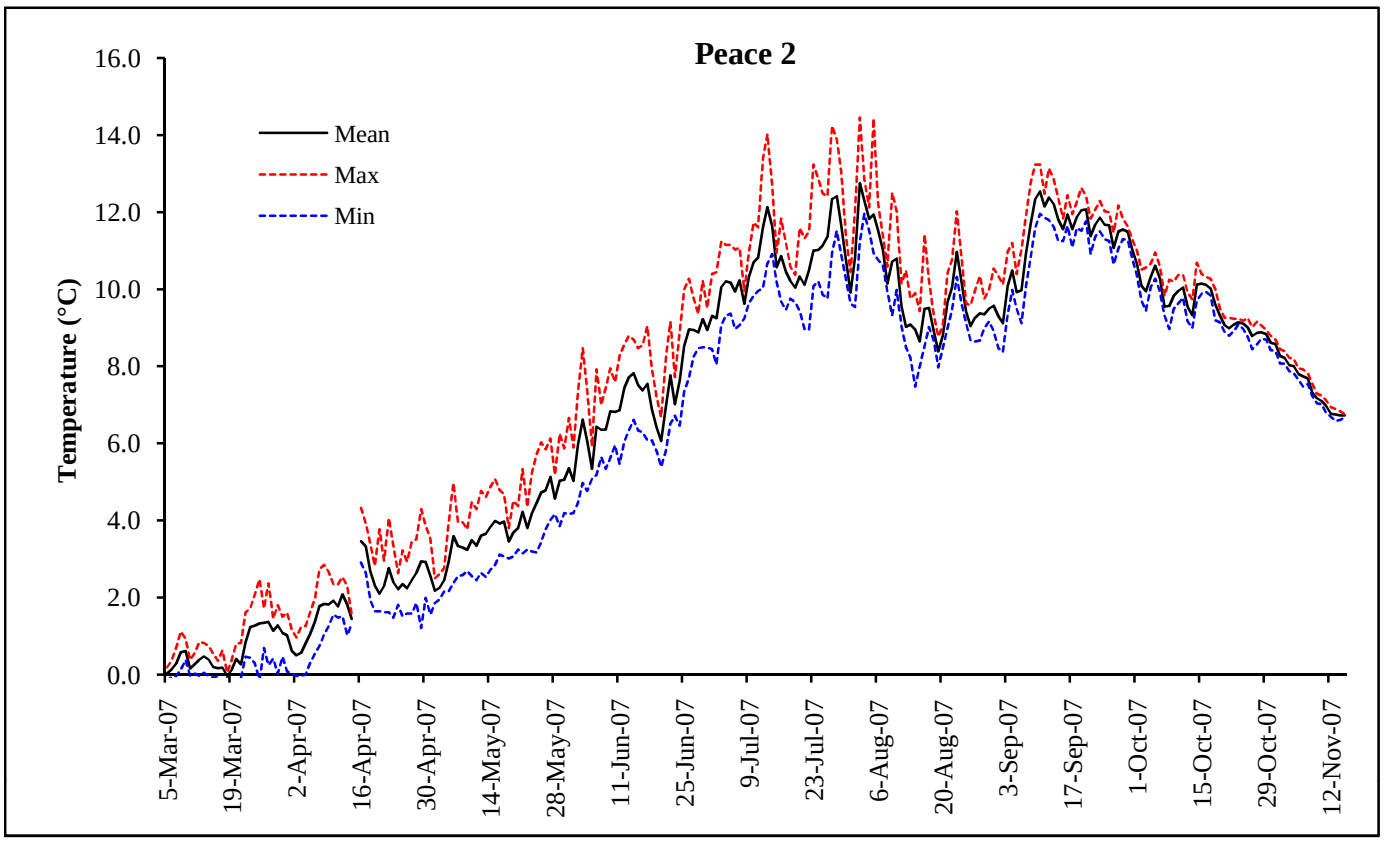
Appendix C2: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025751
Location Peace 2

Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
5-Mar-07	0.0	0.2	-0.2	23-Apr-07	2.4	3.4	1.5	11-Jun-07	6.9	8.3	5.5
6-Mar-07	0.1	0.4	-0.1	24-Apr-07	2.2	2.6	1.8	12-Jun-07	7.4	8.6	6.1
7-Mar-07	0.3	0.7	0.0	25-Apr-07	2.4	3.2	1.5	13-Jun-07	7.7	8.8	6.3
8-Mar-07	0.6	1.1	0.1	26-Apr-07	2.2	2.9	1.6	14-Jun-07	7.8	8.7	6.6
9-Mar-07	0.6	0.9	0.4	27-Apr-07	2.5	3.5	1.6	15-Jun-07	7.5	8.5	6.3
10-Mar-07	0.2	0.4	0.0	28-Apr-07	2.6	3.5	1.9	16-Jun-07	7.4	8.5	6.3
11-Mar-07	0.3	0.6	0.0	29-Apr-07	2.9	4.3	1.2	17-Jun-07	7.5	9.0	6.1
12-Mar-07	0.4	0.9	0.0	30-Apr-07	2.9	3.9	2.0	18-Jun-07	6.9	7.9	6.1
13-Mar-07	0.5	0.8	0.1	1-May-07	2.6	3.5	1.6	19-Jun-07	6.4	7.2	5.8
14-Mar-07	0.4	0.7	0.0	2-May-07	2.2	2.5	1.9	20-Jun-07	6.1	6.7	5.4
15-Mar-07	0.2	0.6	-0.1	3-May-07	2.2	2.6	1.9	21-Jun-07	7.0	8.2	5.8
16-Mar-07	0.2	0.4	0.0	4-May-07	2.4	2.8	2.2	22-Jun-07	7.8	9.2	6.5
17-Mar-07	0.2	0.6	-0.3	5-May-07	2.9	4.0	2.2	23-Jun-07	7.0	7.7	6.7
18-Mar-07	0.0	0.1	-0.1	6-May-07	3.6	5.0	2.4	24-Jun-07	7.6	8.9	6.5
19-Mar-07	0.1	0.4	-0.1	7-May-07	3.3	4.0	2.6	25-Jun-07	8.5	10.0	7.3
20-Mar-07	0.4	0.8	-0.1	8-May-07	3.3	4.0	2.6	26-Jun-07	9.0	10.3	7.7
21-Mar-07	0.3	0.8	-0.1	9-May-07	3.2	3.8	2.7	27-Jun-07	8.9	9.8	8.2
22-Mar-07	0.8	1.6	0.5	10-May-07	3.5	4.5	2.6	28-Jun-07	8.9	9.4	8.5
23-Mar-07	1.2	1.7	0.4	11-May-07	3.3	4.3	2.5	29-Jun-07	9.2	10.2	8.5
24-Mar-07	1.3	2.1	0.3	12-May-07	3.6	4.8	2.6	30-Jun-07	8.9	9.5	8.5
25-Mar-07	1.3	2.5	-0.1	13-May-07	3.7	4.6	2.5	1-Jul-07	9.3	10.4	8.4
26-Mar-07	1.3	1.7	0.7	14-May-07	3.8	4.9	2.7	2-Jul-07	9.2	10.4	8.0
27-Mar-07	1.4	2.4	0.2	15-May-07	4.0	5.1	2.9	3-Jul-07	10.1	11.2	9.1
28-Mar-07	1.1	1.5	0.4	16-May-07	3.9	4.8	3.1	4-Jul-07	10.2	11.2	9.3
29-Mar-07	1.3	1.8	0.0	17-May-07	4.0	4.7	3.1	5-Jul-07	10.2	11.2	9.4
30-Mar-07	1.1	1.5	0.5	18-May-07	3.5	3.8	3.0	6-Jul-07	9.9	11.0	9.0
31-Mar-07	1.0	1.6	0.1	19-May-07	3.7	4.5	3.1	7-Jul-07	10.2	11.1	9.1
1-Apr-07	0.6	1.2	0.0	20-May-07	3.8	4.4	3.2	8-Jul-07	9.6	10.0	9.2
2-Apr-07	0.5	1.0	0.0	21-May-07	4.2	5.3	3.1	9-Jul-07	10.3	11.0	9.6
3-Apr-07	0.6	1.2	0.0	22-May-07	3.8	4.4	3.2	10-Jul-07	10.7	11.7	9.8
4-Apr-07	0.8	1.3	0.0	23-May-07	4.2	5.2	3.2	11-Jul-07	10.8	11.6	10.0
5-Apr-07	1.0	1.6	0.3	24-May-07	4.5	5.7	3.2	12-Jul-07	11.6	13.4	10.0
6-Apr-07	1.4	2.0	0.6	25-May-07	4.7	6.0	3.4	13-Jul-07	12.1	14.0	10.7
7-Apr-07	1.8	2.7	0.7	26-May-07	4.8	5.8	3.8	14-Jul-07	11.6	12.7	10.9
8-Apr-07	1.8	2.9	1.0	27-May-07	5.1	6.1	4.0	15-Jul-07	10.6	11.0	10.2
9-Apr-07	1.8	2.7	1.3	28-May-07	4.6	5.2	4.2	16-Jul-07	10.9	11.8	9.7
10-Apr-07	1.9	2.3	1.6	29-May-07	5.0	6.3	3.9	17-Jul-07	10.5	11.2	9.5
11-Apr-07	1.8	2.3	1.5	30-May-07	5.1	5.9	4.2	18-Jul-07	10.2	10.6	9.8
12-Apr-07	2.1	2.5	1.5	31-May-07	5.4	6.7	4.2	19-Jul-07	10.0	10.4	9.7
13-Apr-07	1.8	2.3	1.0	1-Jun-07	5.0	5.9	4.2	20-Jul-07	10.3	11.6	9.4
14-Apr-07	1.4	1.6	1.3	2-Jun-07	6.0	7.3	4.5	21-Jul-07	10.1	11.3	9.0
15-Apr-07				3-Jun-07	6.6	8.5	5.0	22-Jul-07	10.5	11.5	8.9
16-Apr-07	3.5	4.3	2.9	4-Jun-07	6.0	7.4	4.8	23-Jul-07	11.0	13.2	10.1
17-Apr-07	3.3	3.9	2.6	5-Jun-07	5.3	5.9	5.1	24-Jul-07	11.0	12.9	10.2
18-Apr-07	2.7	3.4	1.9	6-Jun-07	6.4	7.9	5.2	25-Jul-07	11.1	12.5	9.9
19-Apr-07	2.3	2.8	1.6	7-Jun-07	6.4	7.0	5.6	26-Jul-07	11.4	12.4	9.8
20-Apr-07	2.1	3.8	1.6	8-Jun-07	6.4	7.4	5.3	27-Jul-07	12.3	14.2	10.9
21-Apr-07	2.3	3.0	1.6	9-Jun-07	6.8	7.9	5.6	28-Jul-07	12.4	13.9	11.5
22-Apr-07	2.8	4.1	1.6	10-Jun-07	6.8	7.6	5.9	29-Jul-07	11.6	13.0	10.9

Appendix C2: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025751
Location Peace 2

Date	Mean	Max	Min
30-Jul-07	10.8	11.4	10.3
31-Jul-07	9.9	10.4	9.6
1-Aug-07	10.8	12.1	9.5
2-Aug-07	12.8	14.5	11.2
3-Aug-07	12.3	12.8	12.0
4-Aug-07	11.8	12.1	11.5
5-Aug-07	11.9	14.4	10.9
6-Aug-07	11.5	12.2	10.8
7-Aug-07	11.0	11.4	10.6
8-Aug-07	10.1	10.6	9.9
9-Aug-07	10.7	12.5	9.3
10-Aug-07	10.8	12.0	10.0
11-Aug-07	9.6	10.1	9.0
12-Aug-07	9.0	10.5	8.5
13-Aug-07	9.1	9.8	8.2
14-Aug-07	8.9	9.9	7.5
15-Aug-07	8.6	9.4	8.0
16-Aug-07	9.5	11.4	8.5
17-Aug-07	9.5	10.2	9.0
18-Aug-07	8.9	9.3	8.7
19-Aug-07	8.4	8.8	8.0
20-Aug-07	8.8	9.1	8.5
21-Aug-07	9.7	10.4	9.0
22-Aug-07	10.0	10.8	9.5
23-Aug-07	11.0	12.0	10.3
24-Aug-07	10.2	10.9	9.7
25-Aug-07	9.4	9.6	9.1
26-Aug-07	9.0	9.6	8.7
27-Aug-07	9.3	10.0	8.6
28-Aug-07	9.4	10.3	8.7
29-Aug-07	9.3	9.8	9.0
30-Aug-07	9.5	10.0	9.2
31-Aug-07	9.6	10.5	8.9
1-Sep-07	9.3	10.3	8.5
2-Sep-07	9.1	10.1	8.4
3-Sep-07	10.1	11.0	9.3
4-Sep-07	10.5	11.2	10.0
5-Sep-07	9.9	10.4	9.5
6-Sep-07	10.0	11.0	9.1
7-Sep-07	10.9	11.9	10.1
8-Sep-07	11.7	12.8	10.8
9-Sep-07	12.3	13.2	11.6
10-Sep-07	12.5	13.2	12.0
11-Sep-07	12.1	12.5	11.9
12-Sep-07	12.4	13.1	11.8
13-Sep-07	12.2	12.8	11.6
14-Sep-07	11.8	12.4	11.2
15-Sep-07	11.6	11.8	11.2
16-Sep-07	11.9	12.4	11.6
17-Sep-07	11.6	12.0	11.1
18-Sep-07	11.9	12.3	11.6
19-Sep-07	12.0	12.6	11.5
20-Sep-07	12.1	12.4	11.8
21-Sep-07	11.4	11.8	10.9
22-Sep-07	11.7	12.1	11.4
23-Sep-07	11.9	12.3	11.5
24-Sep-07	11.7	12.0	11.3
25-Sep-07	11.7	12.0	11.2
26-Sep-07	11.1	11.5	10.6
27-Sep-07	11.5	12.2	11.1
28-Sep-07	11.5	11.8	11.3
29-Sep-07	11.5	11.6	11.3
30-Sep-07	11.0	11.3	10.8
1-Oct-07	10.6	11.0	10.3
2-Oct-07	10.1	10.5	9.7
3-Oct-07	9.9	10.6	9.4
4-Oct-07	10.3	10.7	10.1
5-Oct-07	10.6	11.0	10.3
6-Oct-07	10.3	10.6	9.9
7-Oct-07	9.5	9.8	9.3
8-Oct-07	9.6	10.2	9.0
9-Oct-07	9.8	10.2	9.5
10-Oct-07	10.0	10.4	9.6
11-Oct-07	10.0	10.4	9.8
12-Oct-07	9.6	9.9	9.2
13-Oct-07	9.3	9.7	9.0
14-Oct-07	10.1	10.7	9.7
15-Oct-07	10.1	10.4	9.9
16-Oct-07	10.1	10.3	9.9
17-Oct-07	10.0	10.3	9.8
18-Oct-07	9.6	10.0	9.2
19-Oct-07	9.3	9.5	9.1
20-Oct-07	9.1	9.3	8.9
21-Oct-07	9.0	9.3	8.8
22-Oct-07	9.1	9.2	8.9
23-Oct-07	9.1	9.2	9.1
24-Oct-07	9.1	9.2	9.0
25-Oct-07	9.0	9.3	8.8
26-Oct-07	8.8	9.0	8.4
27-Oct-07	8.9	9.2	8.6
28-Oct-07	8.9	9.1	8.7
29-Oct-07	8.8	8.9	8.7
30-Oct-07	8.6	8.8	8.4
31-Oct-07	8.6	8.7	8.4
1-Nov-07	8.3	8.4	8.1
2-Nov-07	8.2	8.4	8.1
3-Nov-07	8.0	8.2	7.9
4-Nov-07	8.0	8.2	7.8
5-Nov-07	7.8	7.9	7.6
6-Nov-07	7.7	7.9	7.5
7-Nov-07	7.7	7.8	7.5
8-Nov-07	7.3	7.5	7.2
9-Nov-07	7.2	7.3	7.0
10-Nov-07	7.1	7.2	7.0
11-Nov-07	7.0	7.1	6.8
12-Nov-07	6.8	6.9	6.7
13-Nov-07	6.8	6.9	6.6
14-Nov-07	6.7	6.8	6.6
15-Nov-07	6.7	6.8	6.7
Mean	**7.1**	**7.8**	**6.4**
Max	**12.8**	**14.5**	**12.0**
Min	**0.0**	**0.1**	**-0.3**

Appendix C2: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025751
Location Peace 2



Appendix C3: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1027508
Location Peace 3

Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
November 3, 2006	7.0	7.0	6.3	December 24, 2006	1.7	1.9	1.6	February 13, 2007	-0.1	-0.1	-0.1
November 4, 2006	6.4	7.0	5.8	December 25, 2006	1.5	1.6	1.5	February 14, 2007	-0.1	-0.1	-0.1
November 5, 2006	5.5	5.9	4.2	December 26, 2006	1.5	1.6	1.4	February 15, 2007	-0.1	-0.1	-0.1
November 6, 2006	5.2	5.6	4.9	December 27, 2006	1.3	1.5	1.2	February 16, 2007	0.0	0.2	-0.1
November 7, 2006	5.5	5.6	5.3	December 28, 2006	1.0	1.3	0.9	February 17, 2007	0.1	0.2	-0.1
November 8, 2006	5.2	5.5	4.4	December 29, 2006	1.2	1.3	1.1	February 18, 2007	0.0	0.2	-0.1
November 9, 2006	4.3	4.5	3.9	December 30, 2006	1.2	1.4	1.1	February 19, 2007	-0.1	0.0	-0.1
November 10, 2006	3.6	4.3	2.7	December 31, 2006	1.3	1.5	1.2	February 20, 2007	-0.1	0.0	-0.1
November 11, 2006	4.2	4.3	4.0	January 1, 2007	1.7	1.8	1.5	February 21, 2007	-0.1	0.0	-0.1
November 12, 2006	3.5	4.0	3.3	January 2, 2007	1.7	1.8	1.6	February 22, 2007	-0.1	-0.1	-0.1
November 13, 2006	3.7	4.0	3.4	January 3, 2007	1.7	1.9	1.4	February 23, 2007	-0.1	0.0	-0.1
November 14, 2006	3.3	3.9	2.9	January 4, 2007	1.3	1.4	1.1	February 24, 2007	-0.1	0.0	-0.1
November 15, 2006	3.7	3.9	3.2	January 5, 2007	1.1	1.2	1.1	February 25, 2007	-0.1	0.0	-0.1
November 16, 2006	3.6	3.7	3.5	January 6, 2007	1.0	1.2	0.9	February 26, 2007	-0.1	0.0	-0.1
November 17, 2006	3.7	3.9	3.5	January 7, 2007	1.1	1.2	1.0	February 27, 2007	-0.1	0.0	-0.1
November 18, 2006	3.7	3.8	3.6	January 8, 2007	0.7	1.1	0.6	February 28, 2007	0.0	0.0	-0.1
November 19, 2006	3.8	3.9	3.7	January 9, 2007	0.5	0.9	-0.1	March 1, 2007	-0.1	0.0	-0.1
November 20, 2006	3.5	3.7	3.3	January 10, 2007	-0.1	-0.1	-0.1	March 2, 2007	-0.1	0.0	-0.1
November 21, 2006	2.9	3.3	2.5	January 11, 2007	-0.1	-0.1	-0.1	March 3, 2007	-0.1	0.0	-0.1
November 22, 2006	2.1	2.5	1.9	January 12, 2007	-0.1	-0.1	-0.1	March 4, 2007	-0.1	0.0	-0.1
November 23, 2006	2.2	2.3	1.9	January 13, 2007	-0.1	0.0	-0.1	March 5, 2007	-0.1	-0.1	-0.1
November 24, 2006	1.8	2.2	1.6	January 14, 2007	-0.1	-0.1	-0.1	March 6, 2007	-0.1	0.0	-0.1
November 25, 2006	1.3	1.6	1.2	January 15, 2007	0.1	0.3	-0.1	March 7, 2007	0.0	0.2	-0.1
November 26, 2006	1.1	1.2	1.0	January 16, 2007	0.2	0.3	0.2	March 8, 2007	0.4	0.7	0.0
November 27, 2006	1.2	1.3	1.0	January 17, 2007	0.0	0.2	-0.1	March 9, 2007	0.6	0.7	0.3
November 28, 2006	1.0	1.2	0.9	January 18, 2007	-0.1	0.1	-0.1	March 10, 2007	0.0	0.4	-0.1
November 29, 2006	1.1	1.4	0.9	January 19, 2007	0.1	0.2	0.0	March 11, 2007	0.0	0.2	-0.1
November 30, 2006	1.6	1.7	1.5	January 20, 2007	0.1	0.2	0.0	March 12, 2007	0.2	0.6	-0.1
December 1, 2006	1.2	1.5	1.1	January 21, 2007	0.1	0.4	0.0	March 13, 2007	0.5	1.3	0.1
December 2, 2006	1.3	1.7	1.0	January 22, 2007	0.4	0.5	0.3	March 14, 2007	0.2	0.7	-0.1
December 3, 2006	1.8	1.9	1.7	January 23, 2007	0.4	0.6	0.3	March 15, 2007	0.0	0.1	-0.1
December 4, 2006	1.9	2.0	1.8	January 24, 2007	0.6	0.7	0.5	March 16, 2007	0.0	0.1	-0.1
December 5, 2006	1.8	2.0	1.7	January 25, 2007	0.6	0.8	0.2	March 17, 2007	0.0	0.4	-0.1
December 6, 2006	1.9	2.2	1.8	January 26, 2007	0.0	0.2	-0.1	March 18, 2007	0.0	0.5	-0.1
December 7, 2006	2.2	2.5	2.0	January 27, 2007	0.1	0.3	-0.1	March 19, 2007	-0.1	0.0	-0.1
December 8, 2006	2.6	2.8	2.5	January 28, 2007	0.0	0.3	-0.1	March 20, 2007	0.1	0.7	-0.1
December 9, 2006	2.4	2.5	2.3	January 29, 2007	0.1	0.2	0.0	March 21, 2007	0.1	0.4	-0.1
December 10, 2006	2.4	2.5	2.3	January 30, 2007	-0.1	0.0	-0.1	March 22, 2007	1.0	1.6	0.5
December 11, 2006	2.3	2.5	2.2	January 31, 2007	0.0	0.3	-0.1	March 23, 2007	1.3	1.9	0.7
December 12, 2006	2.7	2.8	2.5	February 1, 2007	0.1	0.3	0.0	March 24, 2007	1.4	1.9	0.7
December 13, 2006	2.3	2.6	2.2	February 2, 2007	0.0	0.0	-0.1	March 25, 2007	1.6	2.6	0.9
December 14, 2006	2.3	2.4	2.1	February 3, 2007	-0.1	-0.1	-0.1	March 26, 2007	1.5	2.3	0.8
December 15, 2006	2.2	2.3	2.1	February 4, 2007	-0.1	-0.1	-0.1	March 27, 2007	1.5	2.3	0.7
December 16, 2006	1.7	2.1	1.5	February 5, 2007	-0.1	-0.1	-0.1	March 28, 2007	1.1	1.8	0.4
December 17, 2006	1.2	1.5	1.0	February 6, 2007	-0.1	-0.1	-0.1	March 29, 2007	1.4	1.9	1.0
December 18, 2006	1.8	2.4	1.3	February 7, 2007	-0.1	-0.1	-0.1	March 30, 2007	1.5	1.7	1.2
December 19, 2006	2.2	2.5	2.1	February 8, 2007	-0.1	-0.1	-0.1	March 31, 2007	1.1	1.9	0.7
December 20, 2006	2.0	2.1	1.9	February 9, 2007	-0.1	-0.1	-0.1	April 1, 2007	0.4	0.9	0.0
December 21, 2006	2.2	2.2	2.1	February 10, 2007	-0.1	-0.1	-0.1	April 2, 2007	0.1	0.4	-0.1
December 22, 2006	2.0	2.2	1.9	February 11, 2007	-0.1	-0.1	-0.1	April 3, 2007	0.3	0.7	-0.1
December 23, 2006	2.0	2.0	1.9	February 12, 2007	-0.1	-0.1	-0.1	April 4, 2007	0.5	1.2	0.0

Appendix C3: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1027508
Location Peace 3

Date	Mean	Max	Min
April 5, 2007	0.9	1.5	0.2
April 6, 2007	1.3	1.8	0.7
April 7, 2007	1.7	2.7	1.1
April 8, 2007	2.2	3.4	1.5
April 9, 2007	2.1	2.3	1.6
April 10, 2007	2.2	2.7	1.6
April 11, 2007	2.1	2.7	1.2
April 12, 2007	1.9	2.5	1.4
April 13, 2007	2.2	2.4	1.8
April 14, 2007	1.9	2.2	1.6
April 15, 2007			
April 16, 2007			
April 17, 2007			
April 18, 2007			
April 19, 2007	2.7	3.2	2.2
April 20, 2007	2.4	2.7	2.1
April 21, 2007	2.3	2.8	1.9
April 22, 2007	3.2	4.2	2.4
April 23, 2007	3.0	3.6	2.2
April 24, 2007	3.0	3.5	2.7
April 25, 2007	3.0	3.7	2.3
April 26, 2007	2.9	3.4	2.5
April 27, 2007	3.1	3.8	2.4
April 28, 2007	3.6	4.2	2.9
April 29, 2007	3.6	4.2	3.0
April 30, 2007	3.9	4.2	3.4
May 1, 2007	3.5	4.1	2.9
May 2, 2007	3.3	3.8	3.1
May 3, 2007	2.9	3.1	2.8
May 4, 2007	3.3	3.7	3.1
May 5, 2007	3.7	4.3	3.4
May 6, 2007	4.3	5.3	3.6
May 7, 2007	4.8	5.3	4.3
May 8, 2007	4.6	4.8	4.2
May 9, 2007	4.5	4.8	4.2
May 10, 2007	4.5	5.1	4.1
May 11, 2007	4.5	5.1	4.1
May 12, 2007	4.7	5.1	4.3
May 13, 2007	4.8	5.3	4.2
May 14, 2007	5.1	5.7	4.5
May 15, 2007	5.3	5.9	4.6
May 16, 2007	5.5	5.8	5.1
May 17, 2007	5.4	5.7	4.9
May 18, 2007	4.8	5.5	4.4
May 19, 2007	4.6	5.0	4.2
May 20, 2007	5.1	5.7	4.6
May 21, 2007	5.6	6.5	4.8
May 22, 2007	5.3	6.0	4.8
May 23, 2007	5.1	5.7	4.6
May 24, 2007	5.8	6.6	5.0
May 25, 2007	6.4	7.1	5.6

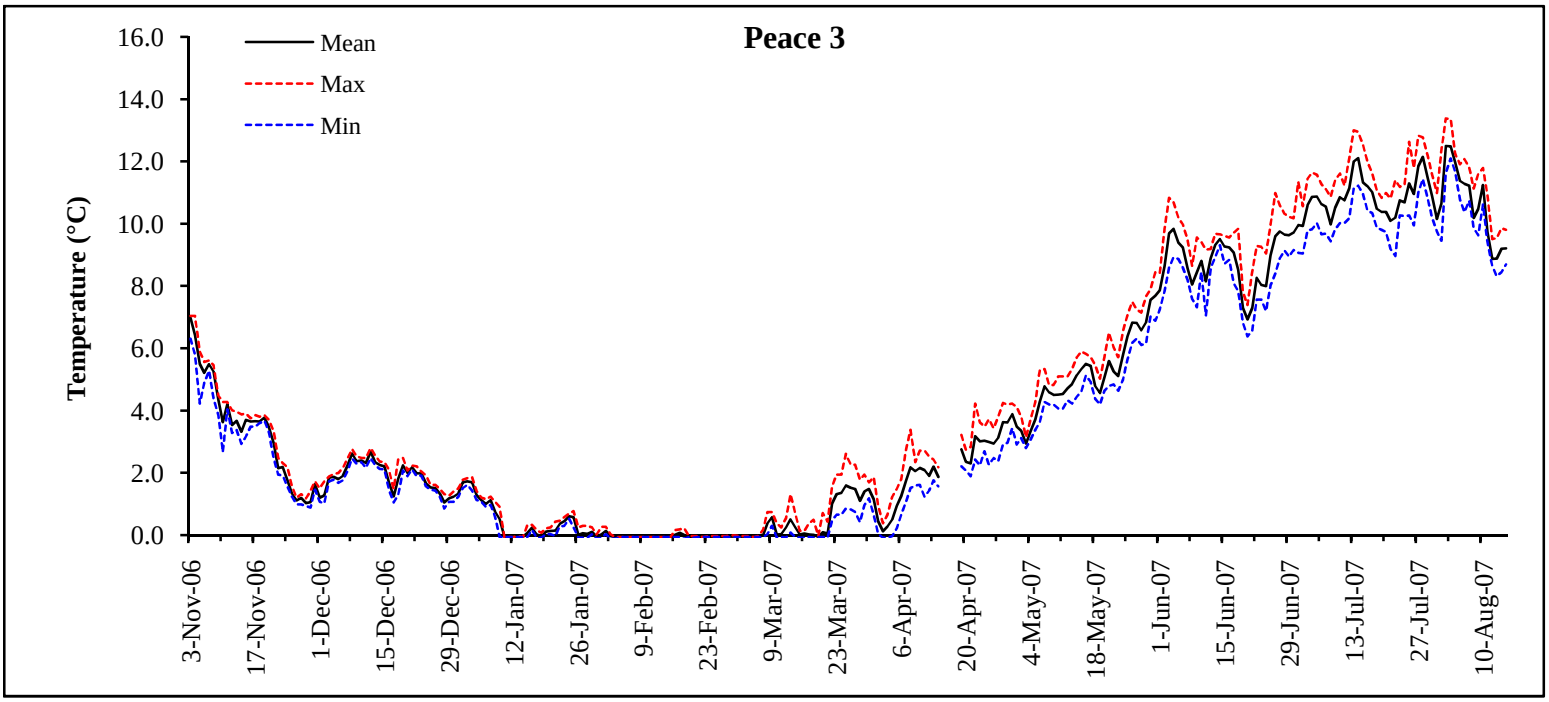
Date	Mean	Max	Min
May 25, 2007	6.4	7.1	5.6
May 26, 2007	6.8	7.5	6.2
May 27, 2007	6.8	7.2	6.3
May 28, 2007	6.6	7.1	6.1
May 29, 2007	6.8	7.7	6.2
May 30, 2007	7.6	7.9	7.0
May 31, 2007	7.7	8.4	6.9
June 1, 2007	7.9	8.4	7.2
June 2, 2007	8.6	9.9	7.8
June 3, 2007	9.7	10.8	8.6
June 4, 2007	9.8	10.7	8.9
June 5, 2007	9.4	10.2	8.9
June 6, 2007	9.2	10.0	8.6
June 7, 2007	8.6	9.5	8.2
June 8, 2007	8.0	8.6	7.6
June 9, 2007	8.4	9.6	7.3
June 10, 2007	8.8	9.4	8.4
June 11, 2007	8.1	9.2	7.0
June 12, 2007	8.9	9.2	8.6
June 13, 2007	9.3	9.7	8.9
June 14, 2007	9.5	9.7	9.3
June 15, 2007	9.3	9.6	8.7
June 16, 2007	9.2	9.6	8.8
June 17, 2007	9.1	9.7	8.1
June 18, 2007	8.5	9.8	7.8
June 19, 2007	7.3	7.8	6.8
June 20, 2007	6.9	7.4	6.4
June 21, 2007	7.3	8.5	6.6
June 22, 2007	8.3	9.3	7.6
June 23, 2007	8.0	9.3	7.6
June 24, 2007	8.0	9.0	7.2
June 25, 2007	9.0	10.0	8.0
June 26, 2007	9.6	11.0	8.4
June 27, 2007	9.8	10.6	8.9
June 28, 2007	9.7	10.3	9.1
June 29, 2007	9.6	10.2	8.9
June 30, 2007	9.7	10.2	9.2
July 1, 2007	10.0	11.3	9.1
July 2, 2007	9.9	10.6	9.0
July 3, 2007	10.6	11.4	9.8
July 4, 2007	10.9	11.6	9.8
July 5, 2007	10.9	11.6	10.0
July 6, 2007	10.6	11.3	9.7
July 7, 2007	10.5	11.1	9.7
July 8, 2007	10.0	10.9	9.4
July 9, 2007	10.5	11.4	9.8
July 10, 2007	10.9	11.6	10.0
July 11, 2007	10.8	11.2	10.0
July 12, 2007	11.1	12.1	10.2
July 13, 2007	12.0	13.0	11.1
July 14, 2007	12.1	12.9	11.2

Date	Mean	Max	Min
July 15, 2007	11.3	12.5	11.0
July 16, 2007	11.2	12.0	10.4
July 17, 2007	11.0	11.6	10.3
July 18, 2007	10.5	11.1	9.9
July 19, 2007	10.4	10.8	9.8
July 20, 2007	10.4	11.0	9.7
July 21, 2007	10.1	10.8	9.2
July 22, 2007	10.2	11.4	9.0
July 23, 2007	10.8	11.2	10.3
July 24, 2007	10.7	11.2	10.2
July 25, 2007	11.3	12.6	10.3
July 26, 2007	11.0	11.8	10.0
July 27, 2007	11.9	12.8	11.0
July 28, 2007	12.2	12.8	11.4
July 29, 2007	11.5	12.2	10.8
July 30, 2007	10.9	11.6	10.2
July 31, 2007	10.2	11.0	9.8
August 1, 2007	10.7	12.4	9.5
August 2, 2007	12.5	13.4	11.6
August 3, 2007	12.5	13.4	12.1
August 4, 2007	12.0	12.2	11.7
August 5, 2007	11.4	11.9	10.8
August 6, 2007	11.3	12.1	10.4
August 7, 2007	11.2	11.8	10.7
August 8, 2007	10.2	11.1	9.9
August 9, 2007	10.5	11.6	9.6
August 10, 2007	11.2	11.8	10.6
August 11, 2007	9.7	10.9	9.4
August 12, 2007	8.9	9.5	8.6
August 13, 2007	8.9	9.5	8.3
August 14, 2007	9.2	9.9	8.4
August 15, 2007	9.2	9.8	8.7
Mean	**4.1**	**4.5**	**3.7**
Max 12.5		**13.4**	**12.1**
Min	**-0.1**	**-0.1**	**-0.1**

Appendix C3: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.

Unit No. 1027508

Location Peace 3



Appendix C4: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025760
Location Peace 4

Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
3-Nov-06	6.95	7.02	6.79	25-Dec-06	1.52	1.59	1.45	15-Feb-07	-0.01	0.14	-0.03
4-Nov-06	6.47	7.02	5.77	26-Dec-06	1.51	1.59	1.43	16-Feb-07	0.05	0.14	-0.03
5-Nov-06	5.63	5.95	4.95	27-Dec-06	1.33	1.51	1.24	17-Feb-07	0.06	0.16	-0.03
6-Nov-06	5.16	5.46	4.71	28-Dec-06	1.03	1.29	0.85	18-Feb-07	0.00	0.16	-0.09
7-Nov-06	5.46	5.64	5.15	29-Dec-06	1.15	1.24	1.04	19-Feb-07	-0.04	-0.03	-0.06
8-Nov-06	5.23	5.46	4.64	30-Dec-06	1.22	1.37	1.07	20-Feb-07	-0.03	-0.03	-0.03
9-Nov-06	4.33	4.61	4.06	31-Dec-06	1.33	1.48	1.24	21-Feb-07	-0.03	-0.03	-0.03
10-Nov-06	3.70	4.25	3.12	1-Jan-07	1.71	1.81	1.51	22-Feb-07	-0.03	-0.03	-0.03
11-Nov-06	4.16	4.25	4.01	2-Jan-07	1.74	1.86	1.64	23-Feb-07	-0.04	-0.03	-0.06
12-Nov-06	3.53	4.06	3.25	3-Jan-07	1.72	1.89	1.43	24-Feb-07	-0.03	0.00	-0.06
13-Nov-06	3.60	3.88	3.25	4-Jan-07	1.28	1.43	1.13	25-Feb-07	-0.03	-0.03	-0.03
14-Nov-06	3.31	3.85	2.85	5-Jan-07	1.12	1.24	1.04	26-Feb-07	-0.03	0.00	-0.06
15-Nov-06	3.64	3.96	3.17	6-Jan-07	0.99	1.15	0.88	27-Feb-07	-0.03	0.00	-0.06
16-Nov-06	3.63	3.78	3.43	7-Jan-07	1.11	1.24	0.96	28-Feb-07	-0.01	0.05	-0.03
17-Nov-06	3.63	3.80	3.43	8-Jan-07	0.76	1.07	0.58	1-Mar-07	-0.03	0.02	-0.06
18-Nov-06	3.62	3.80	3.49	9-Jan-07	0.51	0.91	-0.03	2-Mar-07	-0.03	-0.03	-0.03
19-Nov-06	3.76	3.91	3.59	10-Jan-07	-0.03	-0.03	-0.03	3-Mar-07	-0.03	-0.03	-0.03
20-Nov-06	3.49	3.70	3.30	11-Jan-07	-0.03	-0.03	-0.03	4-Mar-07	-0.03	-0.03	-0.03
21-Nov-06	2.95	3.30	2.45	12-Jan-07	-0.03	-0.03	-0.03	5-Mar-07	-0.03	-0.03	-0.03
22-Nov-06	2.08	2.45	1.86	13-Jan-07	-0.03	-0.03	-0.03	6-Mar-07	-0.03	-0.03	-0.03
23-Nov-06	2.15	2.34	1.86	14-Jan-07	-0.03	-0.03	-0.03	7-Mar-07	0.07	0.27	-0.03
24-Nov-06	1.75	2.18	1.56	15-Jan-07	0.07	0.41	-0.03	8-Mar-07	0.45	0.74	0.08
25-Nov-06	1.29	1.53	1.13	16-Jan-07	0.27	0.41	0.19	9-Mar-07	0.59	0.77	0.36
26-Nov-06	1.01	1.13	0.93	17-Jan-07	0.03	0.19	-0.06	10-Mar-07	0.05	0.41	-0.09
27-Nov-06	1.09	1.24	0.91	18-Jan-07	-0.03	-0.03	-0.06	11-Mar-07	0.05	0.22	-0.06
28-Nov-06	0.92	1.13	0.80	19-Jan-07	0.08	0.19	-0.03	12-Mar-07	0.27	0.49	-0.03
29-Nov-06	0.93	1.26	0.80	20-Jan-07	0.12	0.22	0.00	13-Mar-07	0.49	0.96	0.22
30-Nov-06	1.58	1.72	1.29	21-Jan-07	0.14	0.41	-0.03	14-Mar-07	0.25	0.60	-0.03
1-Dec-06	1.17	1.45	1.04	22-Jan-07	0.37	0.47	0.27	15-Mar-07	0.03	0.14	-0.06
2-Dec-06	1.22	1.67	0.99	23-Jan-07	0.45	0.60	0.33	16-Mar-07	0.05	0.16	-0.03
3-Dec-06	1.82	1.89	1.67	24-Jan-07	0.62	0.74	0.55	17-Mar-07	0.10	0.44	-0.06
4-Dec-06	1.86	1.97	1.81	25-Jan-07	0.60	0.83	0.27	18-Mar-07	0.09	0.58	-0.06
5-Dec-06	1.78	1.97	1.67	26-Jan-07	0.02	0.27	-0.06	19-Mar-07	0.06	1.07	-0.06
6-Dec-06	1.86	2.10	1.70	27-Jan-07	0.04	0.27	-0.06	20-Mar-07	0.18	0.99	-0.03
7-Dec-06	2.20	2.42	2.02	28-Jan-07	0.05	0.27	-0.06	21-Mar-07	0.07	0.47	-0.06
8-Dec-06	2.61	2.77	2.42	29-Jan-07	0.10	0.27	0.00	22-Mar-07	1.00	1.45	0.49
9-Dec-06	2.37	2.56	2.29	30-Jan-07	-0.04	0.00	-0.09	23-Mar-07	1.24	1.70	0.74
10-Dec-06	2.39	2.48	2.34	31-Jan-07	0.01	0.25	-0.06	24-Mar-07	1.32	1.64	0.85
11-Dec-06	2.30	2.45	2.16	1-Feb-07	0.13	0.27	0.02	25-Mar-07	1.51	1.99	0.96
12-Dec-06	2.67	2.77	2.48	2-Feb-07	-0.04	0.02	-0.09	26-Mar-07	1.51	1.91	1.07
13-Dec-06	2.34	2.58	2.24	3-Feb-07	-0.03	-0.03	-0.06	27-Mar-07	1.40	1.86	0.91
14-Dec-06	2.25	2.32	2.16	4-Feb-07	-0.03	-0.03	-0.03	28-Mar-07	1.19	1.67	0.60
15-Dec-06	2.20	2.32	2.07	5-Feb-07	-0.03	-0.03	-0.03	29-Mar-07	1.46	1.91	1.04
16-Dec-06	1.68	2.07	1.40	6-Feb-07	-0.03	-0.03	-0.06	30-Mar-07	1.49	1.62	1.26
17-Dec-06	1.19	1.43	0.96	7-Feb-07	-0.03	-0.03	-0.03	31-Mar-07	1.14	1.62	0.80
18-Dec-06	1.74	2.42	1.18	8-Feb-07	-0.03	-0.03	-0.03	1-Apr-07	0.53	0.91	0.19
19-Dec-06	2.26	2.48	2.07	9-Feb-07	-0.03	-0.03	-0.03	2-Apr-07	0.19	0.41	-0.06
20-Dec-06	1.99	2.07	1.91	10-Feb-07	-0.03	-0.03	-0.03	3-Apr-07	0.28	0.63	-0.06
21-Dec-06	2.17	2.24	2.05	11-Feb-07	-0.03	-0.03	-0.06	4-Apr-07	0.55	1.26	0.00
22-Dec-06	1.99	2.21	1.86	12-Feb-07	-0.03	-0.03	-0.06	5-Apr-07	0.92	1.43	0.41
23-Dec-06	1.98	2.05	1.89	13-Feb-07	-0.03	-0.03	-0.03	6-Apr-07	1.23	1.72	0.74
24-Dec-06	1.65	1.91	1.56	14-Feb-07	-0.03	-0.03	-0.03	7-Apr-07	1.78	2.42	1.15

Appendix C4: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025760
Location Peace 4

Date	Mean	Max	Min
8-Apr-07	2.11	2.53	1.67
9-Apr-07	2.06	2.37	1.67
10-Apr-07	2.18	2.66	1.72
11-Apr-07	2.13	2.66	1.45
12-Apr-07	1.97	2.53	1.56
13-Apr-07	2.04	2.45	1.62
14-Apr-07	2.12	2.93	1.70
15-Apr-07	2.51	3.41	2.21
16-Apr-07	3.36	3.59	2.96
17-Apr-07	3.04	3.51	2.64
18-Apr-07	3.47	4.35	2.93
19-Apr-07	2.89	3.54	2.40
20-Apr-07	2.40	2.77	2.13
21-Apr-07	2.27	2.80	1.91
22-Apr-07	3.06	3.88	2.48
23-Apr-07	3.06	3.72	2.40
24-Apr-07	3.03	3.35	2.80
25-Apr-07	2.98	3.70	2.37
26-Apr-07	2.92	3.30	2.58
27-Apr-07	3.08	3.62	2.48
28-Apr-07	3.54	4.09	3.01
29-Apr-07	3.54	3.99	3.01
30-Apr-07	3.83	4.01	3.54
1-May-07	3.51	3.91	3.06
2-May-07	3.33	3.62	3.12
3-May-07	2.86	3.06	2.74
4-May-07	3.22	3.49	2.90
5-May-07	3.58	4.04	3.35
6-May-07	4.19	5.02	3.67
7-May-07	4.72	5.13	4.30
8-May-07	4.46	4.69	4.19
9-May-07	4.42	4.66	4.17
10-May-07	4.41	4.77	4.04
11-May-07	4.47	4.82	4.17
12-May-07	4.62	4.97	4.38
13-May-07	4.75	5.15	4.30
14-May-07	5.05	5.57	4.51
15-May-07	5.24	5.75	4.64
16-May-07	5.39	5.62	5.15
17-May-07	5.33	5.57	4.95
18-May-07	4.67	5.31	4.30
19-May-07	4.50	4.95	4.17
20-May-07	4.91	5.26	4.66
21-May-07	5.21	5.77	4.58
22-May-07	5.15	5.77	4.74
23-May-07	4.98	5.51	4.56
24-May-07	5.66	6.38	5.05
25-May-07	6.20	6.74	5.67
26-May-07	6.62	7.14	6.15
27-May-07	6.64	7.04	6.23
28-May-07	6.46	6.86	5.95
29-May-07			

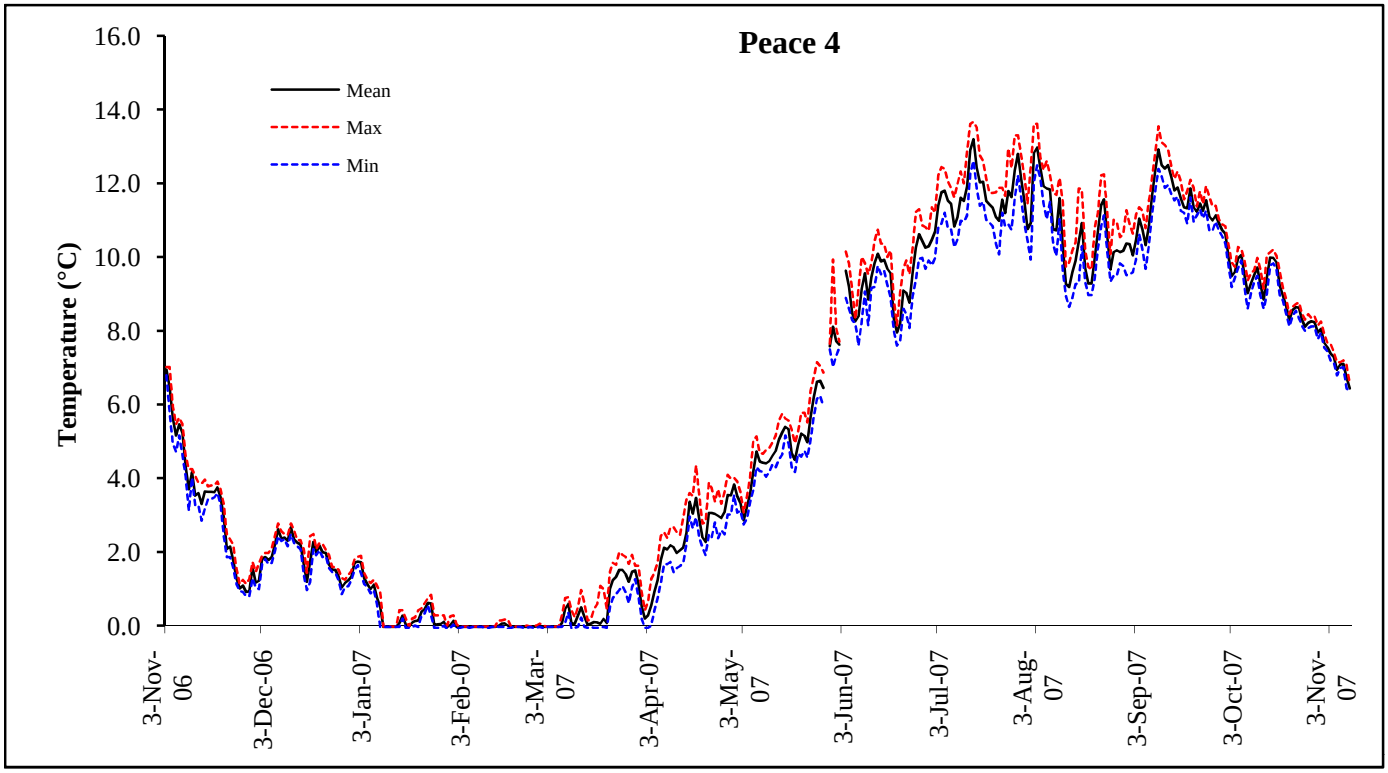
Date	Mean	Max	Min
30-Mar-07	1.49	1.62	1.26
31-Mar-07	1.14	1.62	0.80
1-Apr-07	0.53	0.91	0.19
2-Apr-07	0.19	0.41	-0.06
3-Apr-07	0.28	0.63	-0.06
4-Apr-07	0.55	1.26	0.00
5-Apr-07	0.92	1.43	0.41
6-Apr-07	1.23	1.72	0.74
7-Apr-07	1.78	2.42	1.15
8-Apr-07	2.11	2.53	1.67
9-Apr-07	2.06	2.37	1.67
10-Apr-07	2.18	2.66	1.72
11-Apr-07	2.13	2.66	1.45
12-Apr-07	1.97	2.53	1.56
13-Apr-07	2.04	2.45	1.62
14-Apr-07	2.12	2.93	1.70
15-Apr-07	2.51	3.41	2.21
16-Apr-07	3.36	3.59	2.96
17-Apr-07	3.04	3.51	2.64
18-Apr-07	3.47	4.35	2.93
19-Apr-07	2.89	3.54	2.40
20-Apr-07	2.40	2.77	2.13
21-Apr-07	2.27	2.80	1.91
22-Apr-07	3.06	3.88	2.48
23-Apr-07	3.06	3.72	2.40
24-Apr-07	3.03	3.35	2.80
25-Apr-07	2.98	3.70	2.37
26-Apr-07	2.92	3.30	2.58
27-Apr-07	3.08	3.62	2.48
28-Apr-07	3.54	4.09	3.01
29-Apr-07	3.54	3.99	3.01
30-Apr-07	3.83	4.01	3.54
1-May-07	3.51	3.91	3.06
2-May-07	3.33	3.62	3.12
3-May-07	2.86	3.06	2.74
4-May-07	3.22	3.49	2.90
5-May-07	3.58	4.04	3.35
6-May-07	4.19	5.02	3.67
7-May-07	4.72	5.13	4.30
8-May-07	4.46	4.69	4.19
9-May-07	4.42	4.66	4.17
10-May-07	4.41	4.77	4.04
11-May-07	4.47	4.82	4.17
12-May-07	4.62	4.97	4.38
13-May-07	4.75	5.15	4.30
14-May-07	5.05	5.57	4.51
15-May-07	5.24	5.75	4.64
16-May-07	5.39	5.62	5.15
17-May-07	5.33	5.57	4.95
18-May-07	4.67	5.31	4.30
19-May-07	4.50	4.95	4.17
20-May-07	4.91	5.26	4.66

Date	Mean	Max	Min
22-May-07	5.15	5.77	4.74
23-May-07	4.98	5.51	4.56
24-May-07	5.66	6.38	5.05
25-May-07	6.20	6.74	5.67
26-May-07	6.62	7.14	6.15
27-May-07	6.64	7.04	6.23
28-May-07	6.46	6.86	5.95
29-May-07			
30-May-07	7.58	7.65	7.49
31-May-07	8.11	9.93	7.02
1-Jun-07	7.72	8.07	7.32
2-Jun-07	7.63	7.70	7.54
3-Jun-07			
4-Jun-07	9.63	10.15	8.89
5-Jun-07	9.20	9.83	8.59
6-Jun-07	8.48	9.09	8.30
7-Jun-07	8.26	8.32	8.20
8-Jun-07	8.40	9.16	7.59
9-Jun-07	9.16	10.00	8.27
10-Jun-07	9.56	9.83	9.06
11-Jun-07	8.85	9.53	8.15
12-Jun-07	9.45	9.83	9.16
13-Jun-07	9.84	10.44	9.19
14-Jun-07	10.09	10.74	9.76
15-Jun-07	9.88	10.37	9.53
16-Jun-07	9.92	10.35	9.63
17-Jun-07	9.68	10.00	9.24
18-Jun-07	9.56	10.17	8.89
19-Jun-07	8.33	8.84	8.00
20-Jun-07	7.95	8.15	7.59
21-Jun-07	8.21	9.06	7.72
22-Jun-07	9.10	9.68	8.59
23-Jun-07	9.03	9.90	8.44
24-Jun-07	8.77	9.53	8.07
25-Jun-07	9.59	10.25	8.94
26-Jun-07	10.25	11.22	9.39
27-Jun-07	10.62	11.30	9.95
28-Jun-07	10.44	10.86	9.98
29-Jun-07	10.26	10.81	9.68
30-Jun-07	10.29	10.71	9.90
1-Jul-07	10.47	11.35	9.78
2-Jul-07	10.70	11.20	9.98
3-Jul-07	11.40	12.22	10.81
4-Jul-07	11.76	12.44	10.91
5-Jul-07	11.80	12.39	11.20
6-Jul-07	11.53	12.05	10.79
7-Jul-07	11.45	11.88	10.74
8-Jul-07	10.83	11.61	10.27
9-Jul-07	11.08	11.98	10.47
10-Jul-07	11.61	12.32	10.98
11-Jul-07	11.53	12.00	10.96
12-Jul-07	11.92	12.87	11.13

Appendix C4: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025760
Location Peace 4

Date	Mean	Max	Min
13-Jun-07	9.84	10.44	9.19
14-Jun-07	10.09	10.74	9.76
15-Jun-07	9.88	10.37	9.53
16-Jun-07	9.92	10.35	9.63
17-Jun-07	9.68	10.00	9.24
18-Jun-07	9.56	10.17	8.89
19-Jun-07	8.33	8.84	8.00
20-Jun-07	7.95	8.15	7.59
21-Jun-07	8.21	9.06	7.72
22-Jun-07	9.10	9.68	8.59
23-Jun-07	9.03	9.90	8.44
24-Jun-07	8.77	9.53	8.07
25-Jun-07	9.59	10.25	8.94
26-Jun-07	10.25	11.22	9.39
27-Jun-07	10.62	11.30	9.95
28-Jun-07	10.44	10.86	9.98
29-Jun-07	10.26	10.81	9.68
30-Jun-07	10.29	10.71	9.90
1-Jul-07	10.47	11.35	9.78
2-Jul-07	10.70	11.20	9.98
3-Jul-07	11.40	12.22	10.81
4-Jul-07	11.76	12.44	10.91
5-Jul-07	11.80	12.39	11.20
6-Jul-07	11.53	12.05	10.79
7-Jul-07	11.45	11.88	10.74
8-Jul-07	10.83	11.61	10.27
9-Jul-07	11.08	11.98	10.47
10-Jul-07	11.61	12.32	10.98
11-Jul-07	11.53	12.00	10.96
12-Jul-07	11.92	12.87	11.13
13-Jul-07	12.91	13.62	12.27
14-Jul-07	13.20	13.67	12.61
15-Jul-07	12.44	13.52	11.88
16-Jul-07	12.03	12.75	11.39
17-Jul-07	12.05	12.61	11.49
18-Jul-07	11.53	12.12	11.01
19-Jul-07	11.43	11.73	10.93
20-Jul-07	11.34	11.73	10.83
21-Jul-07	11.09	11.76	10.37
22-Jul-07	10.99	11.88	10.08
23-Jul-07	11.56	11.88	11.20
24-Jul-07	11.20	11.66	10.83
25-Jul-07	11.79	12.94	10.88
26-Jul-07	11.63	12.41	10.74
27-Jul-07	12.35	13.31	11.59
28-Jul-07	12.80	13.31	12.22
29-Jul-07	12.13	12.75	11.61
30-Jul-07	11.53	12.20	10.91
31-Jul-07	10.76	11.44	10.44
1-Aug-07	10.93	12.46	9.93
2-Aug-07	12.83	13.62	12.05
3-Aug-07	12.98	13.62	12.49
4-Aug-07	12.42	12.70	12.12
5-Aug-07	11.92	12.36	11.44
6-Aug-07	11.86	12.61	11.03
7-Aug-07	11.84	12.24	11.49
8-Aug-07	10.75	11.73	10.35
9-Aug-07	10.72	11.69	10.03
10-Aug-07	11.60	12.15	11.03
11-Aug-07	10.33	11.52	9.66
12-Aug-07	9.27	9.73	8.94
13-Aug-07	9.19	9.85	8.64
14-Aug-07	9.59	10.17	8.89
15-Aug-07	9.90	10.39	9.26
16-Aug-07	10.42	11.86	9.29
17-Aug-07	10.93	11.83	10.30
18-Aug-07	9.71	10.17	9.34
19-Aug-07	9.29	9.73	8.97
20-Aug-07	9.28	9.66	8.97
21-Aug-07	9.97	10.81	9.44
22-Aug-07	10.71	11.20	10.25
23-Aug-07	11.41	12.22	10.83
24-Aug-07	11.57	12.24	11.13
25-Aug-07	10.58	11.20	10.15
26-Aug-07	9.67	10.08	9.34
27-Aug-07	10.14	11.01	9.49
28-Aug-07	10.19	10.93	9.49
29-Aug-07	10.14	10.54	9.83
30-Aug-07	10.17	10.61	9.76
31-Aug-07	10.37	11.27	9.51
1-Sep-07	10.35	10.88	9.53
2-Sep-07	10.05	10.64	9.58
3-Sep-07	10.46	11.15	9.93
4-Sep-07	11.05	11.35	10.61
5-Sep-07	10.75	11.25	10.20
6-Sep-07	10.32	10.79	9.68
7-Sep-07	10.83	11.49	10.30
8-Sep-07	11.66	12.15	11.15
9-Sep-07	12.35	12.82	11.78
10-Sep-07	12.92	13.55	12.39
11-Sep-07	12.50	13.11	12.20
12-Sep-07	12.41	13.04	11.88
13-Sep-07	12.49	12.92	11.95
14-Sep-07	12.18	12.46	11.71
15-Sep-07	11.81	12.12	11.54
16-Sep-07	11.89	12.32	11.64
17-Sep-07	11.59	12.05	11.25
18-Sep-07	11.35	11.57	11.20
19-Sep-07	11.33	11.78	10.91
20-Sep-07	11.86	12.10	11.61
21-Sep-07	11.35	11.88	10.96
22-Sep-07	11.23	11.37	11.13
23-Sep-07	11.46	11.78	11.30
24-Sep-07	11.25	11.44	11.05
25-Sep-07	11.54	11.93	11.25
26-Sep-07	11.11	11.64	10.71
27-Sep-07	10.99	11.37	10.71
28-Sep-07	11.14	11.39	10.96
29-Sep-07	10.93	11.03	10.71
30-Sep-07	10.73	10.88	10.57
1-Oct-07	10.64	10.83	10.37
2-Oct-07	10.01	10.32	9.78
3-Oct-07	9.49	9.85	9.19
4-Oct-07	9.60	9.73	9.44
5-Oct-07	9.97	10.27	9.71
6-Oct-07	10.05	10.22	9.90
7-Oct-07	9.51	9.90	9.16
8-Oct-07	9.03	9.36	8.59
9-Oct-07	9.29	9.56	9.02
10-Oct-07	9.51	9.63	9.31
11-Oct-07	9.72	9.98	9.49
12-Oct-07	9.25	9.66	8.94
13-Oct-07	8.85	9.14	8.59
14-Oct-07	9.46	10.05	9.02
15-Oct-07	9.99	10.12	9.78
16-Oct-07	9.98	10.20	9.83
17-Oct-07	9.85	10.03	9.68
18-Oct-07	9.23	9.63	8.97
19-Oct-07	8.95	9.16	8.82
20-Oct-07	8.68	8.87	8.47
21-Oct-07	8.28	8.44	8.12
22-Oct-07	8.56	8.64	8.39
23-Oct-07	8.64	8.72	8.54
24-Oct-07	8.63	8.77	8.34
25-Oct-07	8.31	8.47	8.15
26-Oct-07	8.12	8.30	8.00
27-Oct-07	8.21	8.44	8.07
28-Oct-07	8.26	8.34	8.12
29-Oct-07	8.24	8.39	8.12
30-Oct-07	7.96	8.15	7.77
31-Oct-07	8.05	8.25	7.95
1-Nov-07	7.68	7.92	7.54
2-Nov-07	7.55	7.67	7.44
3-Nov-07	7.38	7.65	7.19
4-Nov-07	7.29	7.42	7.14
5-Nov-07	6.94	7.14	6.79
6-Nov-07	7.09	7.14	6.99
7-Nov-07	7.11	7.19	7.02
8-Nov-07	6.73	7.07	6.43
9-Nov-07	6.44	6.54	6.36
Mean	**5.5**	**5.9**	**5.2**
Max	**13.2**	**13.7**	**12.6**
Min	**0.0**	**0.0**	**-0.1**

Appendix C4: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025760
Location Peace 4



Appendix C5: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025754
Location Peace 5

Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
4-Nov-06	5.2	5.6	4.7	25-Dec-06	0.8	1.1	0.6	14-Feb-07	-0.1	-0.1	-0.1
5-Nov-06	4.1	5.2	3.5	26-Dec-06	0.8	1.2	0.6	15-Feb-07	-0.1	-0.1	-0.1
6-Nov-06	3.3	4.1	2.7	27-Dec-06	0.8	1.0	0.4	16-Feb-07	-0.1	-0.1	-0.1
7-Nov-06	3.5	4.4	2.5	28-Dec-06	0.3	0.6	-0.1	17-Feb-07	-0.1	-0.1	-0.1
8-Nov-06	3.6	4.2	3.0	29-Dec-06	0.2	0.4	-0.1	18-Feb-07	-0.1	-0.1	-0.1
9-Nov-06	2.7	3.1	2.2	30-Dec-06	0.6	0.9	0.4	19-Feb-07	-0.1	-0.1	-0.1
10-Nov-06	1.9	2.5	1.0	31-Dec-06	0.9	1.2	0.7	20-Feb-07	-0.1	-0.1	-0.1
11-Nov-06	2.2	3.2	1.5	1-Jan-07	1.3	1.5	0.9	21-Feb-07	-0.1	-0.1	-0.1
12-Nov-06	2.2	2.7	1.6	2-Jan-07	1.4	1.5	1.3	22-Feb-07	-0.1	-0.1	-0.1
13-Nov-06	1.7	2.4	1.0	3-Jan-07	1.5	1.8	1.0	23-Feb-07	-0.1	-0.1	-0.1
14-Nov-06	1.6	2.0	1.2	4-Jan-07	0.8	1.1	0.4	24-Feb-07	-0.1	-0.1	-0.1
15-Nov-06	1.6	2.1	0.9	5-Jan-07	0.6	0.8	0.4	25-Feb-07	-0.1	-0.1	-0.1
16-Nov-06	1.8	2.5	0.9	6-Jan-07	0.5	0.8	0.3	26-Feb-07	-0.1	-0.1	-0.1
17-Nov-06	2.1	2.5	1.7	7-Jan-07	0.4	0.7	0.1	27-Feb-07	-0.1	-0.1	-0.1
18-Nov-06	2.1	2.5	1.8	8-Jan-07	0.3	0.5	0.1	28-Feb-07	-0.1	0.0	-0.1
19-Nov-06	2.2	2.7	1.8	9-Jan-07	0.0	0.2	-0.1	1-Mar-07	-0.1	0.0	-0.1
20-Nov-06	2.6	2.9	2.2	10-Jan-07	-0.1	-0.1	-0.1	2-Mar-07	-0.1	-0.1	-0.1
21-Nov-06	1.7	2.2	1.3	11-Jan-07	-0.1	-0.1	-0.1	3-Mar-07	-0.1	-0.1	-0.1
22-Nov-06	0.8	1.3	0.2	12-Jan-07	-0.1	-0.1	-0.1	4-Mar-07	-0.1	-0.1	-0.1
23-Nov-06	0.5	0.8	0.2	13-Jan-07	-0.1	-0.1	-0.1	5-Mar-07	-0.1	0.0	-0.1
24-Nov-06	0.2	0.6	0.0	14-Jan-07	-0.1	-0.1	-0.1	6-Mar-07	-0.1	-0.1	-0.1
25-Nov-06	0.0	0.1	-0.1	15-Jan-07	-0.1	-0.1	-0.1	7-Mar-07	-0.1	0.0	-0.1
26-Nov-06	-0.1	0.0	-0.1	16-Jan-07	0.0	0.1	-0.1	8-Mar-07	0.1	0.3	-0.1
27-Nov-06	-0.1	0.0	-0.1	17-Jan-07	-0.1	0.0	-0.1	9-Mar-07	0.4	0.6	0.2
28-Nov-06	-0.1	0.0	-0.1	18-Jan-07	-0.1	-0.1	-0.1	10-Mar-07	0.0	0.3	-0.1
29-Nov-06	-0.1	-0.1	-0.1	19-Jan-07	-0.1	-0.1	-0.1	11-Mar-07	-0.1	0.0	-0.1
30-Nov-06	0.1	0.5	-0.1	20-Jan-07	-0.1	-0.1	-0.1	12-Mar-07	0.1	0.4	-0.1
1-Dec-06	0.2	0.6	0.0	21-Jan-07	-0.1	-0.1	-0.1	13-Mar-07	0.4	0.8	0.0
2-Dec-06	0.0	0.3	0.0	22-Jan-07	0.1	0.3	-0.1	14-Mar-07	0.1	0.4	-0.1
3-Dec-06	0.6	0.9	0.1	23-Jan-07	0.2	0.4	0.1	15-Mar-07	-0.1	0.1	-0.1
4-Dec-06	0.9	1.2	0.6	24-Jan-07	0.3	0.6	0.2	16-Mar-07	-0.1	0.0	-0.1
5-Dec-06	1.2	1.5	0.9	25-Jan-07	0.3	0.5	0.1	17-Mar-07	0.0	0.1	-0.1
6-Dec-06	0.9	1.1	0.8	26-Jan-07	-0.1	0.1	-0.1	18-Mar-07	0.0	0.2	-0.1
7-Dec-06	1.4	1.7	1.0	27-Jan-07	-0.1	0.0	-0.1	19-Mar-07	-0.1	-0.1	-0.1
8-Dec-06	2.0	2.4	1.7	28-Jan-07	-0.1	-0.1	-0.1	20-Mar-07	0.0	0.2	-0.1
9-Dec-06	1.8	2.1	1.6	29-Jan-07	-0.1	-0.1	-0.1	21-Mar-07	-0.1	0.0	-0.1
10-Dec-06	1.8	2.0	1.7	30-Jan-07	-0.1	0.0	-0.1	22-Mar-07	0.2	0.6	-0.1
11-Dec-06	1.6	1.9	1.4	31-Jan-07	-0.1	-0.1	-0.1	23-Mar-07	1.1	1.8	0.5
12-Dec-06	2.1	2.3	1.8	1-Feb-07	-0.1	-0.1	-0.1	24-Mar-07	1.5	2.2	0.9
13-Dec-06	1.8	2.0	1.7	2-Feb-07	-0.1	-0.1	-0.1	25-Mar-07	1.8	2.9	1.0
14-Dec-06	1.7	2.0	1.5	3-Feb-07	-0.1	-0.1	-0.1	26-Mar-07	2.0	3.4	0.9
15-Dec-06	1.6	1.8	1.2	4-Feb-07	-0.1	-0.1	-0.1	27-Mar-07	1.4	1.9	0.8
16-Dec-06	1.0	1.4	0.3	5-Feb-07	-0.1	-0.1	-0.1	28-Mar-07	1.2	1.8	0.6
17-Dec-06	0.1	0.4	-0.1	6-Feb-07	-0.1	-0.1	-0.1	29-Mar-07	1.4	2.0	0.7
18-Dec-06	0.3	0.8	0.0	7-Feb-07	-0.1	-0.1	-0.1	30-Mar-07	1.8	2.5	1.2
19-Dec-06	1.8	2.1	0.8	8-Feb-07	-0.1	-0.1	-0.1	31-Mar-07	1.4	2.3	0.7
20-Dec-06	1.6	1.9	1.3	9-Feb-07	-0.1	-0.1	-0.1	1-Apr-07	0.6	1.4	-0.1
21-Dec-06	1.6	1.8	1.3	10-Feb-07	-0.1	-0.1	-0.1	2-Apr-07	0.2	0.9	-0.1
22-Dec-06	1.5	1.7	1.5	11-Feb-07	-0.1	-0.1	-0.1	3-Apr-07	0.1	0.5	-0.1
23-Dec-06	1.5	1.6	1.4	12-Feb-07	-0.1	-0.1	-0.1	4-Apr-07	0.4	1.2	-0.1
24-Dec-06	1.3	1.5	1.1	13-Feb-07	-0.1	-0.1	-0.1	5-Apr-07	0.6	1.3	0.0

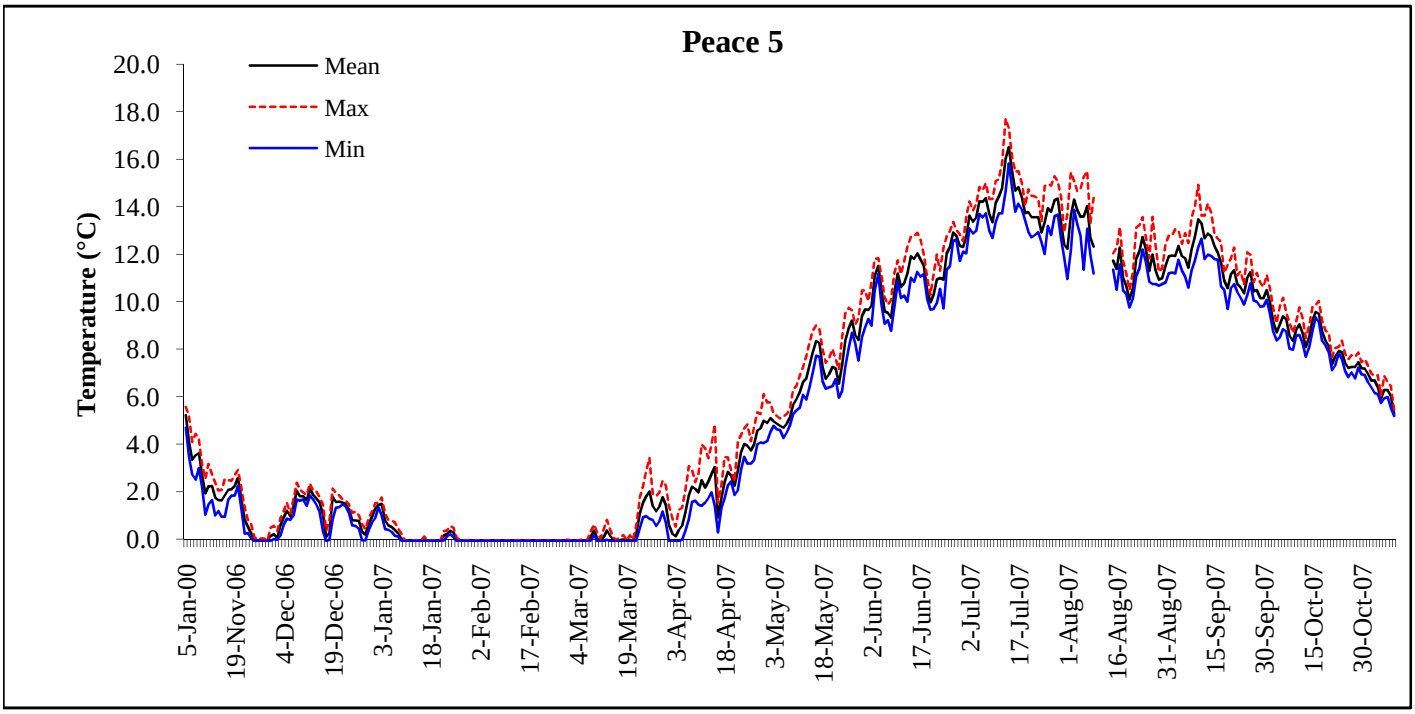
Appendix C5: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025754
Location Peace 5

Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
6-Apr-07	1.1	2.0	0.3	27-May-07	9.2	9.6	8.7	17-Jun-07	11.8	12.6	11.1
7-Apr-07	1.8	3.1	0.8	28-May-07	8.6	9.0	8.2	18-Jun-07	11.5	12.0	11.2
8-Apr-07	2.2	2.9	1.6	29-May-07	8.4	9.3	7.5	19-Jun-07	10.5	11.0	10.1
9-Apr-07	2.1	2.4	1.6	30-May-07	9.4	10.5	8.5	20-Jun-07	10.0	10.3	9.7
10-Apr-07	2.0	2.7	1.5	31-May-07	9.7	10.5	8.9	21-Jun-07	10.3	11.2	9.7
11-Apr-07	2.5	4.0	1.4	1-Jun-07	9.6	10.0	9.3	22-Jun-07	10.9	12.0	9.9
12-Apr-07	2.2	3.8	1.5	2-Jun-07	9.8	10.8	9.0	23-Jun-07	11.0	11.3	10.5
13-Apr-07	2.4	3.4	1.7	3-Jun-07	11.1	11.8	10.5	24-Jun-07	10.9	12.3	9.7
14-Apr-07	2.7	4.0	2.0	4-Jun-07	11.5	11.8	11.2	25-Jun-07	12.0	12.8	11.3
15-Apr-07	3.0	4.8	1.4	5-Jun-07	10.5	11.1	9.9	26-Jun-07	12.3	13.0	11.5
16-Apr-07	0.9	1.5	0.3	6-Jun-07	9.6	10.2	9.1	27-Jun-07	12.9	13.4	12.6
17-Apr-07	1.7	2.3	1.3	7-Jun-07	9.5	9.9	9.2	28-Jun-07	12.8	13.0	12.6
18-Apr-07	2.4	3.5	1.7	8-Jun-07	9.3	10.1	8.8	29-Jun-07	12.3	12.8	11.7
19-Apr-07	2.8	3.4	2.3	9-Jun-07	10.5	11.2	9.8	30-Jun-07	12.3	12.6	12.1
20-Apr-07	2.7	2.9	2.4	10-Jun-07	11.2	11.7	10.8	1-Jul-07	12.7	13.5	12.0
21-Apr-07	2.2	2.4	1.9	11-Jun-07	10.6	11.2	10.1	2-Jul-07	13.6	14.2	13.1
22-Apr-07	2.9	4.1	2.0	12-Jun-07	10.8	11.7	10.2	3-Jul-07	13.4	13.8	12.9
23-Apr-07	3.6	4.4	2.9	13-Jun-07	11.2	12.3	10.0	4-Jul-07	13.5	14.1	13.0
24-Apr-07	4.0	4.7	3.5	14-Jun-07	11.9	12.7	11.0	5-Jul-07	14.2	14.8	13.7
25-Apr-07	3.9	4.8	3.2	15-Jun-07	11.8	12.8	10.8	6-Jul-07	14.2	14.7	13.5
26-Apr-07	3.7	4.1	3.2	16-Jun-07	12.0	12.9	11.2	7-Jul-07	14.4	15.0	13.7
27-Apr-07	4.0	4.7	3.3	17-Jun-07	11.8	12.6	11.1	8-Jul-07	13.7	14.3	13.0
28-Apr-07	4.6	5.3	4.0	18-Jun-07	11.5	12.0	11.2	9-Jul-07	13.3	14.3	12.7
29-Apr-07	4.7	5.3	4.1	19-Jun-07	10.5	11.0	10.1	10-Jul-07	14.2	15.1	13.4
30-Apr-07	5.0	6.1	4.0	20-Jun-07	10.0	10.3	9.7	11-Jul-07	14.4	15.2	13.7
1-May-07	4.9	5.7	4.1	21-Jun-07	10.3	11.2	9.7	12-Jul-07	14.8	15.8	13.7
2-May-07	5.1	5.7	4.5	22-Jun-07	10.9	12.0	9.9	13-Jul-07	16.0	17.7	14.6
3-May-07	5.0	5.3	4.8	23-Jun-07	11.0	11.3	10.5	14-Jul-07	16.5	17.3	15.8
4-May-07	4.9	5.2	4.6	24-Jun-07	10.9	12.3	9.7	15-Jul-07	15.5	16.1	14.8
5-May-07	4.8	5.1	4.6	25-Jun-07	12.0	12.8	11.3	16-Jul-07	14.7	15.5	13.8
6-May-07	4.7	5.2	4.2	26-Jun-07	12.3	13.0	11.5	17-Jul-07	14.8	15.5	14.1
7-May-07	4.9	5.3	4.5	27-Jun-07	12.9	13.4	12.6	18-Jul-07	14.4	15.0	13.9
8-May-07	5.1	5.5	4.8	28-Jun-07	12.8	13.0	12.6	19-Jul-07	13.7	14.0	13.4
9-May-07	5.7	6.3	5.3	29-Jun-07	12.3	12.8	11.7	20-Jul-07	13.8	14.7	12.9
10-May-07	5.9	6.4	5.4	30-Jun-07	12.3	12.6	12.1	21-Jul-07	13.6	14.5	12.7
11-May-07	6.2	6.9	5.5	1-Jul-07	12.7	13.5	12.0	22-Jul-07	13.6	14.4	12.8
12-May-07	6.6	7.2	6.1	2-Jul-07	13.6	14.2	13.1	23-Jul-07	13.6	14.3	12.9
13-May-07	6.8	7.7	5.9	3-Jul-07	13.4	13.8	12.9	24-Jul-07	12.9	13.4	12.5
14-May-07	7.3	8.2	6.4	4-Jul-07	13.5	14.1	13.0	25-Jul-07	13.3	14.9	12.0
15-May-07	7.9	8.8	7.0	5-Jul-07	14.2	14.8	13.7	26-Jul-07	13.9	14.9	13.2
16-May-07	8.3	9.0	7.7	6-Jul-07	14.2	14.7	13.5	27-Jul-07	13.8	14.9	12.8
17-May-07	8.3	8.8	7.7	7-Jul-07	14.4	15.0	13.7	28-Jul-07	14.3	15.3	13.6
18-May-07	7.2	8.0	6.6	8-Jul-07	13.7	14.3	13.0	29-Jul-07	14.3	15.1	13.7
19-May-07	6.7	7.4	6.3	9-Jul-07	13.3	14.3	12.7	30-Jul-07	13.3	14.4	12.7
20-May-07	6.9	7.6	6.4	10-Jul-07	14.2	15.1	13.4	31-Jul-07	12.4	12.9	11.9
21-May-07	7.3	8.0	6.4	11-Jul-07	14.4	15.2	13.7	1-Aug-07	12.2	13.7	11.0
22-May-07	7.2	7.6	6.7	12-Jul-07	14.8	15.8	13.7	2-Aug-07	13.7	15.4	12.2
23-May-07	6.5	7.1	5.9	13-Jul-07	16.0	17.7	14.6	3-Aug-07	14.3	15.1	13.9
24-May-07	7.3	8.5	6.2	14-Jul-07	16.5	17.3	15.8	4-Aug-07	13.9	14.6	13.3
25-May-07	8.3	9.5	7.2	15-Jul-07	15.5	16.1	14.8	5-Aug-07	13.6	14.7	12.8
26-May-07	8.9	9.7	8.1	16-Jul-07	14.7	15.5	13.8	6-Aug-07	13.6	15.2	11.3

Appendix C5: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025754
Location Peace 5

Date	Mean	Max	Min	Date	Mean	Max	Min
7-Aug-07	14.0	15.5	13.1	27-Sep-07	10.4	10.8	10.1
8-Aug-07	12.7	13.3	12.0	28-Sep-07	10.5	11.2	10.0
9-Aug-07	12.3	14.4	11.2	29-Sep-07	10.1	10.8	9.8
10-Aug-07				30-Sep-07	10.2	10.6	9.8
11-Aug-07				1-Oct-07	10.5	11.1	10.1
12-Aug-07				2-Oct-07	10.0	10.6	9.5
13-Aug-07				3-Oct-07	9.2	9.7	8.7
14-Aug-07				4-Oct-07	8.7	9.1	8.4
15-Aug-07	11.7	12.0	11.3	5-Oct-07	9.0	9.8	8.5
16-Aug-07	11.4	12.3	10.5	6-Oct-07	9.4	10.1	8.8
17-Aug-07	12.3	13.1	11.6	7-Oct-07	9.2	9.5	8.7
18-Aug-07	11.0	11.7	10.5	8-Oct-07	8.6	9.1	8.0
19-Aug-07	10.7	11.2	10.3	9-Oct-07	8.3	8.7	8.0
20-Aug-07	10.1	10.5	9.8	10-Oct-07	8.8	9.2	8.6
21-Aug-07	10.6	11.2	10.1	11-Oct-07	9.0	9.8	8.6
22-Aug-07	11.8	13.1	11.1	12-Oct-07	8.7	9.3	8.2
23-Aug-07	12.1	13.2	11.4	13-Oct-07	8.1	8.5	7.7
24-Aug-07	12.7	13.5	12.2	14-Oct-07	8.5	9.0	8.1
25-Aug-07	12.2	12.7	11.7	15-Oct-07	9.2	9.8	8.8
26-Aug-07	11.3	11.8	10.8	16-Oct-07	9.6	9.9	9.3
27-Aug-07	12.0	13.6	10.7	17-Oct-07	9.5	10.0	9.1
28-Aug-07	11.3	12.3	10.7	18-Oct-07	8.7	9.2	8.3
29-Aug-07	10.9	11.2	10.7	19-Oct-07	8.3	8.8	8.1
30-Aug-07	11.0	11.4	10.7	20-Oct-07	8.1	8.7	7.9
31-Aug-07	11.5	12.4	10.8	21-Oct-07	7.4	7.7	7.1
1-Sep-07	11.9	12.8	11.2	22-Oct-07	7.7	8.0	7.3
2-Sep-07	11.9	12.8	11.2	23-Oct-07	7.9	8.1	7.8
3-Sep-07	11.9	13.0	11.2	24-Oct-07	7.9	8.3	7.6
4-Sep-07	12.3	13.0	11.8	25-Oct-07	7.4	7.8	7.1
5-Sep-07	11.9	12.4	11.3	26-Oct-07	7.2	7.6	6.8
6-Sep-07	11.8	12.9	11.1	27-Oct-07	7.2	7.7	7.0
7-Sep-07	11.4	12.5	10.6	28-Oct-07	7.3	7.7	6.8
8-Sep-07	12.2	13.5	11.3	29-Oct-07	7.4	7.8	7.2
9-Sep-07	12.7	14.0	11.7	30-Oct-07	7.2	7.4	6.9
10-Sep-07	13.5	14.9	12.3	31-Oct-07	7.2	7.6	6.9
11-Sep-07	13.3	13.6	12.7	1-Nov-07	7.0	7.3	6.6
12-Sep-07	12.7	13.6	11.8	2-Nov-07	6.7	7.0	6.4
13-Sep-07	12.9	14.1	12.0	3-Nov-07	6.7	6.9	6.2
14-Sep-07	12.8	13.8	11.9	4-Nov-07	6.4	6.9	6.1
15-Sep-07	12.3	12.8	11.8	5-Nov-07	5.9	6.1	5.7
16-Sep-07	12.1	12.7	11.8	6-Nov-07	6.3	6.9	5.9
17-Sep-07	11.6	12.5	10.6	7-Nov-07	6.3	6.6	6.0
18-Sep-07	10.9	11.2	10.5	8-Nov-07	6.0	6.4	5.5
19-Sep-07	10.6	11.5	9.7	9-Nov-07	5.3	5.4	5.2
20-Sep-07	11.2	11.8	10.6	**Mean**	**5.8**	**6.4**	**5.4**
21-Sep-07	11.3	12.3	10.7	**Max**	**16.5**	**17.7**	**15.8**
22-Sep-07	10.7	11.1	10.4	**Min**	**-0.1**	**-0.1**	**-0.1**
23-Sep-07	10.6	11.3	10.2				
24-Sep-07	10.3	10.7	9.9				
25-Sep-07	11.0	12.1	10.3				
26-Sep-07	11.2	12.0	10.8				

Appendix C5: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025754
Location Peace 5



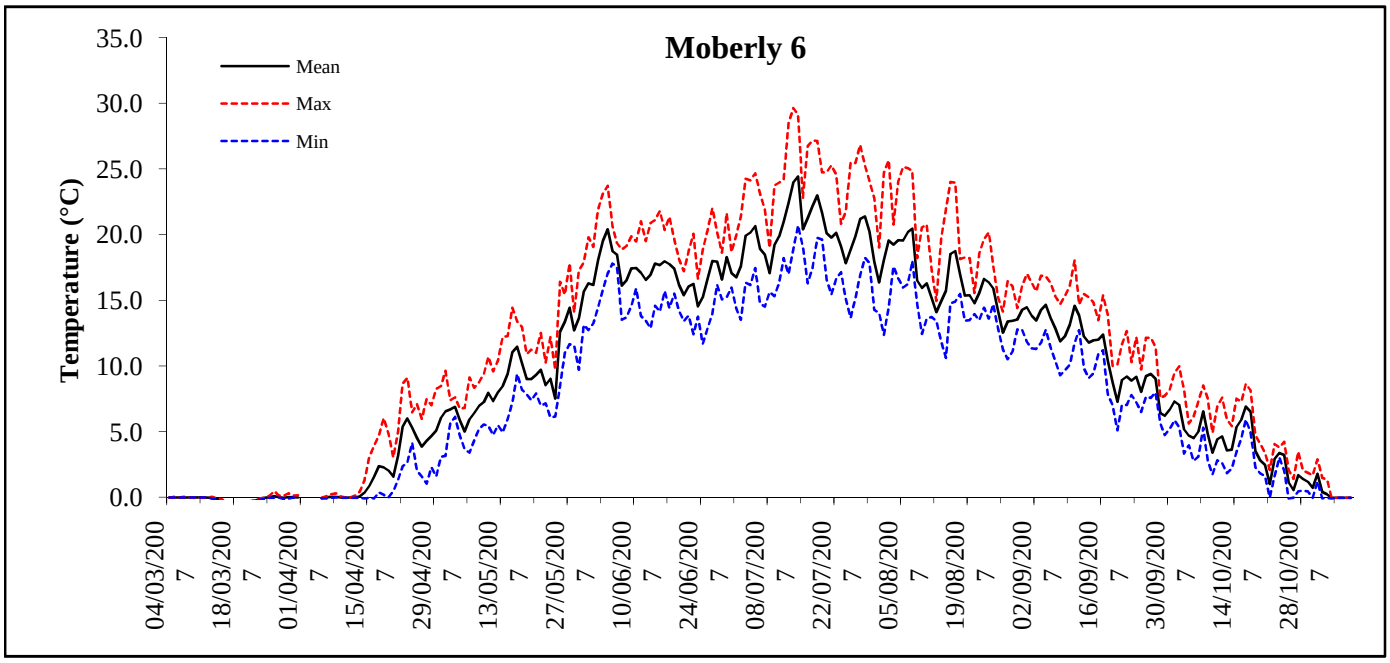
Appendix C6: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025758 and 1025756 combined
Location Moberly 6

Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
4-Mar-07	0.0	0.0	0.0	25-Apr-07	4.5	7.1	2.0	16-Jun-07	18.0	20.4	15.7
5-Mar-07	0.0	0.0	0.0	26-Apr-07	3.8	5.9	1.6	17-Jun-07	17.7	21.4	14.4
6-Mar-07	0.0	0.0	0.0	27-Apr-07	4.3	7.5	1.0	18-Jun-07	17.4	19.7	15.5
7-Mar-07	0.0	0.0	0.0	28-Apr-07	4.7	7.0	2.3	19-Jun-07	16.2	18.1	14.2
8-Mar-07	0.0	0.0	0.0	29-Apr-07	5.1	8.2	1.6	20-Jun-07	15.4	17.2	13.4
9-Mar-07	0.0	0.0	0.0	30-Apr-07	6.0	8.5	3.1	21-Jun-07	16.0	18.7	13.8
10-Mar-07	0.0	0.0	0.0	1-May-07	6.5	9.6	3.1	22-Jun-07	16.2	20.1	12.4
11-Mar-07	0.0	0.0	0.0	2-May-07	6.7	7.4	5.6	23-Jun-07	14.5	16.6	13.8
12-Mar-07	0.0	0.0	0.0	3-May-07	6.9	7.6	6.1	24-Jun-07	15.2	18.8	11.7
13-Mar-07	-0.1	0.0	-0.1	4-May-07	5.9	6.7	4.7	25-Jun-07	16.6	20.3	12.8
14-Mar-07	-0.1	-0.1	-0.1	5-May-07	5.0	6.8	3.7	26-Jun-07	18.0	22.0	14.0
15-Mar-07	-0.3	-0.1	-0.5	6-May-07	5.9	9.1	3.4	27-Jun-07	17.9	20.2	16.2
16-Mar-07	-0.5	-0.5	-0.5	7-May-07	6.4	8.3	4.4	28-Jun-07	16.6	18.6	15.1
17-Mar-07	-0.5	-0.4	-0.5	8-May-07	6.9	8.8	5.2	29-Jun-07	18.3	21.6	15.2
18-Mar-07	-0.4	-0.4	-0.4	9-May-07	7.2	9.4	5.5	30-Jun-07	17.1	18.7	16.0
19-Mar-07	-0.4	-0.4	-0.4	10-May-07	8.0	10.7	5.4	1-Jul-07	16.7	20.0	14.4
20-Mar-07	-0.4	-0.3	-0.4	11-May-07	7.3	9.6	4.7	2-Jul-07	17.6	21.4	13.5
21-Mar-07	-0.3	-0.3	-0.4	12-May-07	8.0	10.4	5.5	3-Jul-07	19.9	24.2	16.3
22-Mar-07	-0.3	-0.2	-0.3	13-May-07	8.5	12.2	4.9	4-Jul-07	20.2	24.1	16.2
23-Mar-07	-0.1	-0.1	-0.2	14-May-07	9.4	12.3	5.9	5-Jul-07	20.6	24.7	17.5
24-Mar-07	-0.1	0.0	-0.1	15-May-07	11.1	14.4	7.2	6-Jul-07	18.9	23.1	14.8
25-Mar-07	0.0	0.1	-0.1	16-May-07	11.5	13.4	9.4	7-Jul-07	18.5	21.9	14.5
26-Mar-07	0.1	0.5	-0.1	17-May-07	10.2	13.0	8.2	8-Jul-07	17.1	19.0	15.6
27-Mar-07	0.0	0.1	0.0	18-May-07	9.0	10.9	7.8	9-Jul-07	19.2	23.7	15.3
28-Mar-07	0.0	0.1	-0.1	19-May-07	9.0	11.2	7.4	10-Jul-07	19.9	24.0	16.3
29-Mar-07	0.0	0.3	-0.1	20-May-07	9.3	11.0	7.9	11-Jul-07	21.0	24.2	18.2
30-Mar-07	0.0	0.1	0.0	21-May-07	9.7	12.5	7.0	12-Jul-07	22.4	28.5	17.0
31-Mar-07	0.0	0.2	-0.1	22-May-07	8.5	10.2	7.1	13-Jul-07	24.0	29.6	18.9
1-Apr-07				23-May-07	9.0	12.2	6.1	14-Jul-07	24.4	29.1	20.7
2-Apr-07				24-May-07	7.5	9.7	6.2	15-Jul-07	20.4	22.8	19.0
3-Apr-07				25-May-07	12.6	16.4	8.5	16-Jul-07	21.3	26.7	16.3
4-Apr-07				26-May-07	13.4	15.4	11.0	17-Jul-07	22.2	27.2	17.5
5-Apr-07	-0.1	0.0	-0.1	27-May-07	14.4	17.8	11.7	18-Jul-07	23.0	27.1	19.7
6-Apr-07	0.0	0.1	-0.1	28-May-07	12.7	14.1	11.6	19-Jul-07	21.7	24.8	19.6
7-Apr-07	0.0	0.2	-0.1	29-May-07	13.6	17.3	9.7	20-Jul-07	20.1	24.8	16.6
8-Apr-07	0.0	0.3	0.0	30-May-07	15.6	17.9	13.1	21-Jul-07	19.8	25.3	15.4
9-Apr-07	0.0	0.1	-0.1	31-May-07	16.3	19.8	12.7	22-Jul-07	20.1	24.6	16.6
10-Apr-07	0.0	0.0	-0.1	1-Jun-07	16.2	19.1	13.2	23-Jul-07	19.1	20.8	17.1
11-Apr-07	0.0	0.0	-0.1	2-Jun-07	18.1	21.9	14.5	24-Jul-07	17.8	21.8	15.1
12-Apr-07	0.0	0.1	-0.1	3-Jun-07	19.5	23.1	15.8	25-Jul-07	18.8	25.5	13.6
13-Apr-07	0.1	0.4	-0.1	4-Jun-07	20.4	23.7	17.0	26-Jul-07	19.9	25.5	15.2
14-Apr-07	0.3	1.3	-0.1	5-Jun-07	18.7	20.6	17.8	27-Jul-07	21.2	26.8	16.9
15-Apr-07	0.8	3.1	-0.1	6-Jun-07	18.5	19.4	17.6	28-Jul-07	21.4	25.3	18.2
16-Apr-07	1.5	3.9	-0.1	7-Jun-07	16.1	18.9	13.5	29-Jul-07	20.2	24.1	17.8
17-Apr-07	2.4	4.7	0.4	8-Jun-07	16.5	19.1	13.7	30-Jul-07	18.0	22.8	14.3
18-Apr-07	2.3	6.0	0.2	9-Jun-07	17.4	19.9	14.6	31-Jul-07	16.4	19.0	14.1
19-Apr-07	2.0	4.8	0.0	10-Jun-07	17.5	19.5	15.9	1-Aug-07	18.1	24.7	12.4
20-Apr-07	1.6	3.0	0.5	11-Jun-07	17.1	21.0	13.8	2-Aug-07	19.6	25.7	14.5
21-Apr-07	3.2	5.0	1.3	12-Jun-07	16.6	19.5	13.4	3-Aug-07	19.2	20.8	17.6
22-Apr-07	5.3	8.6	2.3	13-Jun-07	16.9	20.9	12.9	4-Aug-07	19.6	24.1	16.7
23-Apr-07	6.0	9.1	2.6	14-Jun-07	17.8	21.1	14.6	5-Aug-07	19.6	25.2	16.0
24-Apr-07	5.3	6.5	4.1	15-Jun-07	17.7	21.8	14.1	6-Aug-07	20.2	25.1	16.2

Appendix C6: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025758 and 1025756 combined
Location Moberly 6

Date	Mean	Max	Min
7-Aug-07	20.5	24.9	18.0
8-Aug-07	16.5	18.2	14.7
9-Aug-07	15.9	20.6	12.4
10-Aug-07	16.3	20.8	13.6
11-Aug-07	15.2	17.4	13.7
12-Aug-07	14.1	14.9	13.4
13-Aug-07	14.9	19.7	11.9
14-Aug-07	15.7	21.9	10.6
15-Aug-07	18.5	24.0	14.7
16-Aug-07	18.7	24.0	14.9
17-Aug-07	17.0	18.1	15.5
18-Aug-07	15.4	18.3	13.4
19-Aug-07	15.4	18.2	13.5
20-Aug-07	14.8	15.6	14.0
21-Aug-07	15.5	18.6	13.5
22-Aug-07	16.6	19.7	14.4
23-Aug-07	16.4	20.2	13.6
24-Aug-07	15.9	17.6	14.7
25-Aug-07	14.2	15.2	12.8
26-Aug-07	12.5	14.1	11.3
27-Aug-07	13.4	16.5	10.5
28-Aug-07	13.4	16.1	11.1
29-Aug-07	13.5	14.4	12.8
30-Aug-07	14.3	16.1	12.8
31-Aug-07	14.4	17.0	11.8
1-Sep-07	13.8	16.3	11.3
2-Sep-07	13.5	15.7	11.3
3-Sep-07	14.3	16.9	11.8
4-Sep-07	14.6	16.8	12.8
5-Sep-07	13.7	16.3	11.4
6-Sep-07	12.9	15.3	10.4
7-Sep-07	11.9	14.7	9.3
8-Sep-07	12.3	15.3	9.7
9-Sep-07	13.1	16.1	10.1
10-Sep-07	14.6	18.0	11.7
11-Sep-07	13.9	14.7	12.7
12-Sep-07	12.2	15.5	9.8
13-Sep-07	11.8	15.2	9.1
14-Sep-07	11.9	14.8	9.4
15-Sep-07	12.0	13.5	10.9
16-Sep-07	12.4	15.4	11.2
17-Sep-07	10.4	13.9	7.8
18-Sep-07	8.7	10.0	7.0
19-Sep-07	7.3	10.1	5.1
20-Sep-07	8.9	11.6	7.0
21-Sep-07	9.2	12.7	7.0
22-Sep-07	8.9	10.3	7.8
23-Sep-07	9.2	12.2	7.2
24-Sep-07	8.0	9.7	6.5
25-Sep-07	9.2	12.1	7.6
26-Sep-07	9.4	12.1	7.6
27-Sep-07	9.0	11.4	8.0
28-Sep-07	6.4	7.6	5.6
29-Sep-07	6.2	7.7	4.7
30-Sep-07	6.7	8.2	5.2
1-Oct-07	7.3	9.5	5.8
2-Oct-07	7.0	10.0	5.3
3-Oct-07	5.2	8.1	3.3
4-Oct-07	4.7	5.6	4.0
5-Oct-07	4.5	6.2	2.7
6-Oct-07	5.0	7.3	3.1
7-Oct-07	6.5	8.5	5.3
8-Oct-07	4.8	7.5	2.8
9-Oct-07	3.4	4.9	1.7
10-Oct-07	4.4	7.0	2.8
11-Oct-07	4.6	7.6	2.6
12-Oct-07	3.5	5.9	1.8
13-Oct-07	3.6	5.4	2.2
14-Oct-07	5.3	7.5	3.4
15-Oct-07	5.9	7.3	4.5
16-Oct-07	6.9	8.6	5.9
17-Oct-07	6.5	8.1	4.9
18-Oct-07	3.5	4.7	2.3
19-Oct-07	2.8	4.1	1.8
20-Oct-07	2.5	3.4	1.6
21-Oct-07	1.0	2.1	0.0
22-Oct-07	2.9	4.1	1.6
23-Oct-07	3.4	3.8	3.0
24-Oct-07	3.2	4.2	2.0
25-Oct-07	1.1	2.1	-0.1
26-Oct-07	0.5	1.4	-0.1
27-Oct-07	1.7	3.5	0.4
28-Oct-07	1.4	2.0	0.5
29-Oct-07	1.2	1.9	0.4
30-Oct-07	0.7	1.7	-0.1
31-Oct-07	1.8	2.9	1.2
1-Nov-07	0.4	1.5	-0.1
2-Nov-07	0.2	1.3	-0.1
3-Nov-07	0.0	0.0	-0.1
4-Nov-07	-0.1	0.0	-0.1
5-Nov-07	0.0	0.0	-0.1
6-Nov-07	0.0	0.0	-0.1
7-Nov-07	0.0	0.0	-0.1
Mean	**9.9**	**12.2**	**8.0**
Max	**24.4**	**29.6**	**20.7**
Min	**-0.5**	**-0.5**	**-0.5**

Appendix C6: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025758 and 1025756 combined
Location Moberly 6



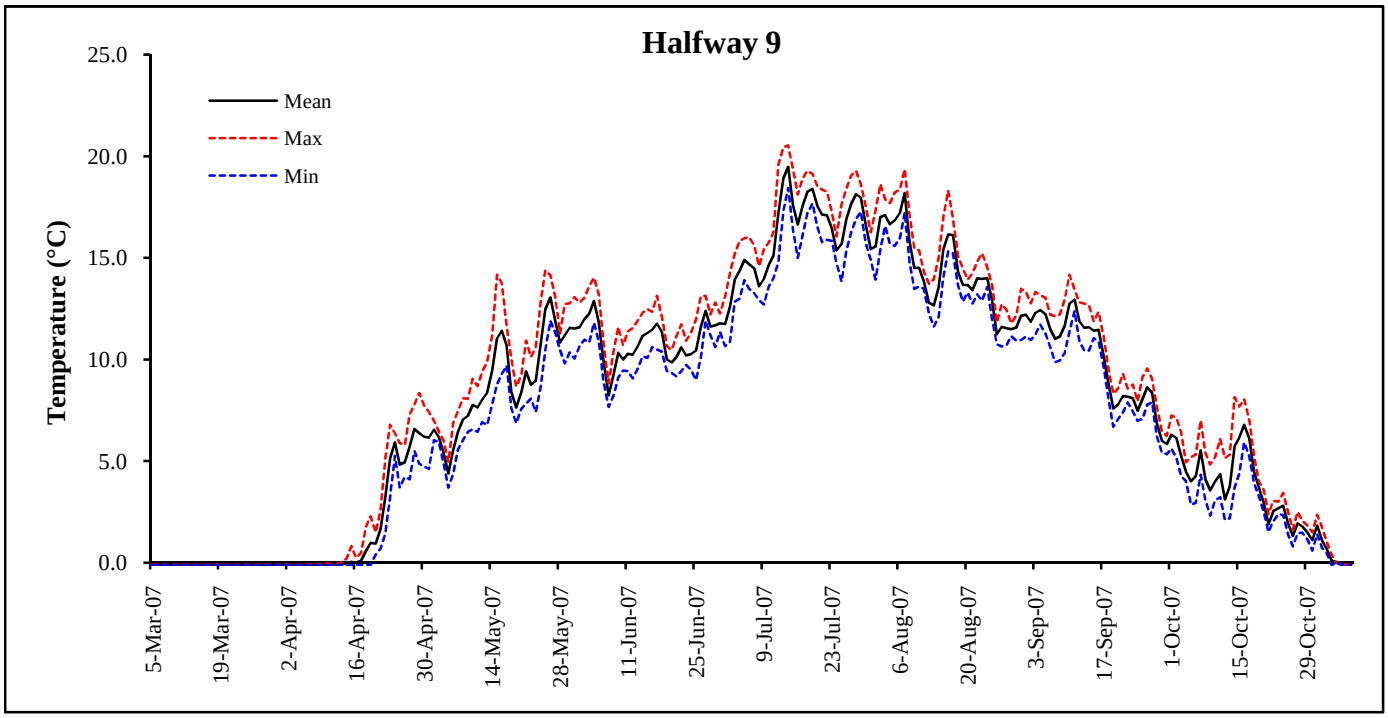
Appendix C7: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025761
Location Halfway 9

Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
5-Mar-07	-0.1	-0.1	-0.1	22-Apr-07	3.2	5.1	1.4	9-Jun-07	10.3	11.6	9.1
6-Mar-07	-0.1	-0.1	-0.1	23-Apr-07	5.1	6.8	3.2	10-Jun-07	10.0	10.7	9.5
7-Mar-07	-0.1	-0.1	-0.1	24-Apr-07	5.9	6.4	5.3	11-Jun-07	10.3	11.4	9.4
8-Mar-07	-0.1	-0.1	-0.1	25-Apr-07	4.8	5.9	3.7	12-Jun-07	10.2	11.5	9.1
9-Mar-07	-0.1	-0.1	-0.1	26-Apr-07	4.9	5.8	4.2	13-Jun-07	10.7	11.9	9.5
10-Mar-07	-0.1	-0.1	-0.1	27-Apr-07	5.7	7.3	4.1	14-Jun-07	11.2	12.3	10.1
11-Mar-07	-0.1	-0.1	-0.1	28-Apr-07	6.6	7.8	5.5	15-Jun-07	11.3	12.5	10.1
12-Mar-07	-0.1	-0.1	-0.1	29-Apr-07	6.4	8.3	4.9	16-Jun-07	11.5	12.3	10.6
13-Mar-07	-0.1	-0.1	-0.1	30-Apr-07	6.2	7.7	4.7	17-Jun-07	11.8	13.1	10.5
14-Mar-07	-0.1	-0.1	-0.1	1-May-07	6.2	7.4	4.6	18-Jun-07	11.4	12.1	10.4
15-Mar-07	-0.1	-0.1	-0.1	2-May-07	6.6	7.0	6.0	19-Jun-07	10.0	10.7	9.4
16-Mar-07	-0.1	-0.1	-0.1	3-May-07	6.2	6.5	5.9	20-Jun-07	9.9	10.5	9.3
17-Mar-07	-0.1	-0.1	-0.1	4-May-07	5.4	6.0	4.9	21-Jun-07	10.1	11.2	9.2
18-Mar-07	-0.1	-0.1	-0.1	5-May-07	4.4	5.0	3.7	22-Jun-07	10.6	11.7	9.4
19-Mar-07	-0.1	-0.1	-0.1	6-May-07	5.5	6.9	4.4	23-Jun-07	10.2	10.9	9.7
20-Mar-07	-0.1	-0.1	-0.1	7-May-07	6.4	7.5	5.6	24-Jun-07	10.3	11.3	9.5
21-Mar-07	-0.1	-0.1	-0.1	8-May-07	7.1	8.1	6.1	25-Jun-07	10.4	12.0	9.0
22-Mar-07	-0.1	-0.1	-0.1	9-May-07	7.2	8.1	6.4	26-Jun-07	11.6	13.1	10.1
23-Mar-07	-0.1	-0.1	-0.1	10-May-07	7.8	9.1	6.6	27-Jun-07	12.4	13.1	11.9
24-Mar-07	-0.1	-0.1	-0.1	11-May-07	7.6	8.7	6.4	28-Jun-07	11.6	12.2	11.2
25-Mar-07	-0.1	-0.1	-0.1	12-May-07	8.0	9.4	6.9	29-Jun-07	11.7	12.8	10.6
26-Mar-07	-0.1	-0.1	-0.1	13-May-07	8.4	9.9	6.8	30-Jun-07	11.8	12.3	11.3
27-Mar-07	-0.1	-0.1	-0.1	14-May-07	9.5	11.2	7.8	1-Jul-07	11.7	13.1	10.7
28-Mar-07	-0.1	-0.1	-0.1	15-May-07	11.0	14.2	8.8	2-Jul-07	12.6	14.2	10.9
29-Mar-07	-0.1	-0.1	-0.1	16-May-07	11.4	13.8	9.3	3-Jul-07	13.9	15.2	12.8
30-Mar-07	-0.1	-0.1	-0.1	17-May-07	10.7	11.7	9.7	4-Jul-07	14.4	15.8	13.0
31-Mar-07	-0.1	-0.1	-0.1	18-May-07	8.4	10.0	7.6	5-Jul-07	14.9	16.0	13.9
1-Apr-07	-0.1	-0.1	-0.1	19-May-07	7.6	8.7	6.9	6-Jul-07	14.7	16.0	13.5
2-Apr-07	-0.1	-0.1	-0.1	20-May-07	8.4	9.2	7.6	7-Jul-07	14.5	15.6	13.3
3-Apr-07	-0.1	-0.1	-0.1	21-May-07	9.4	10.9	7.8	8-Jul-07	13.6	14.6	12.9
4-Apr-07	-0.1	-0.1	-0.1	22-May-07	8.8	10.1	8.1	9-Jul-07	14.0	15.4	12.7
5-Apr-07	-0.1	-0.1	-0.1	23-May-07	8.9	10.6	7.4	10-Jul-07	14.6	15.7	13.6
6-Apr-07	-0.1	-0.1	-0.1	24-May-07	10.7	12.8	8.6	11-Jul-07	15.1	16.3	14.0
7-Apr-07	-0.1	-0.1	-0.1	25-May-07	12.5	14.4	10.5	12-Jul-07	17.2	19.6	14.8
8-Apr-07	-0.1	-0.1	-0.1	26-May-07	13.1	14.1	11.9	13-Jul-07	18.9	20.4	17.3
9-Apr-07	-0.1	-0.1	-0.1	27-May-07	11.9	13.1	11.3	14-Jul-07	19.5	20.5	18.4
10-Apr-07	-0.1	0.0	-0.1	28-May-07	10.8	11.3	10.5	15-Jul-07	17.6	19.4	16.4
11-Apr-07	-0.1	-0.1	-0.1	29-May-07	11.2	12.7	9.8	16-Jul-07	16.7	18.1	15.0
12-Apr-07	-0.1	-0.1	-0.1	30-May-07	11.6	12.8	10.3	17-Jul-07	17.6	18.9	16.1
13-Apr-07	-0.1	0.0	-0.1	31-May-07	11.5	13.1	10.1	18-Jul-07	18.3	19.3	17.2
14-Apr-07	0.0	0.2	-0.1	1-Jun-07	11.6	12.8	10.7	19-Jul-07	18.4	19.1	17.7
15-Apr-07	0.0	0.8	-0.1	2-Jun-07	12.0	13.0	11.0	20-Jul-07	17.6	18.5	16.5
16-Apr-07	0.0	0.2	-0.1	3-Jun-07	12.3	13.6	10.8	21-Jul-07	17.1	18.4	15.8
17-Apr-07	0.1	0.5	-0.1	4-Jun-07	12.9	14.0	11.8	22-Jul-07	17.1	18.3	15.9
18-Apr-07	0.6	1.8	-0.1	5-Jun-07	11.8	13.2	10.9	23-Jul-07	16.5	17.3	15.8
19-Apr-07	1.0	2.3	-0.1	6-Jun-07	9.9	10.8	8.9	24-Jul-07	15.4	16.1	14.7
20-Apr-07	0.9	1.5	0.4	7-Jun-07	8.2	8.8	7.7	25-Jul-07	15.7	17.7	13.8
21-Apr-07	1.7	2.6	0.7	8-Jun-07	9.3	10.4	8.2	26-Jul-07	16.9	18.4	15.4

Appendix C7: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025761
Location Halfway 9

Date	Mean	Max	Min
27-Jul-07	17.7	19.1	16.3
28-Jul-07	18.2	19.3	16.9
29-Jul-07	18.0	18.6	17.3
30-Jul-07	16.7	17.6	15.7
31-Jul-07	15.4	16.3	14.9
1-Aug-07	15.6	17.3	13.9
2-Aug-07	17.0	18.6	15.4
3-Aug-07	17.1	17.9	16.6
4-Aug-07	16.7	17.7	15.7
5-Aug-07	16.9	18.2	15.6
6-Aug-07	17.2	18.4	16.0
7-Aug-07	18.2	19.4	17.2
8-Aug-07	15.8	17.2	14.8
9-Aug-07	14.5	15.5	13.5
10-Aug-07	14.5	15.4	13.6
11-Aug-07	13.9	14.3	13.5
12-Aug-07	12.8	13.7	12.2
13-Aug-07	12.7	14.0	11.6
14-Aug-07	13.5	15.0	12.1
15-Aug-07	15.4	17.0	14.0
16-Aug-07	16.2	18.3	15.3
17-Aug-07	16.1	17.0	15.2
18-Aug-07	14.3	15.1	13.6
19-Aug-07	13.7	14.5	12.8
20-Aug-07	13.7	13.9	13.3
21-Aug-07	13.4	14.2	12.8
22-Aug-07	14.0	14.8	13.2
23-Aug-07	14.0	15.2	12.9
24-Aug-07	14.0	14.6	13.6
25-Aug-07	12.9	13.7	12.0
26-Aug-07	11.2	11.8	10.8
27-Aug-07	11.6	12.7	10.6
28-Aug-07	11.5	12.5	10.7
29-Aug-07	11.5	11.8	11.2
30-Aug-07	11.6	12.2	10.9
31-Aug-07	12.2	13.5	11.0
1-Sep-07	12.2	13.3	11.1
2-Sep-07	11.9	12.8	11.0
3-Sep-07	12.3	13.3	11.2
4-Sep-07	12.4	13.2	11.7
5-Sep-07	12.2	13.0	11.3
6-Sep-07	11.5	12.2	10.6
7-Sep-07	11.0	12.1	9.9
8-Sep-07	11.1	12.2	10.0
9-Sep-07	11.7	12.9	10.3
10-Sep-07	12.8	14.2	11.4
11-Sep-07	12.9	13.4	12.4
12-Sep-07	11.9	12.8	10.9
13-Sep-07	11.6	12.8	10.4
14-Sep-07	11.6	12.7	10.4
15-Sep-07	11.4	11.9	11.1
16-Sep-07	11.5	12.3	10.9
17-Sep-07	10.2	11.1	9.6
18-Sep-07	8.8	9.5	8.0
19-Sep-07	7.6	8.3	6.7
20-Sep-07	7.8	8.6	7.1
21-Sep-07	8.2	9.3	7.4
22-Sep-07	8.2	8.6	7.9
23-Sep-07	8.1	8.8	7.4
24-Sep-07	7.5	7.9	7.0
25-Sep-07	8.0	9.1	7.1
26-Sep-07	8.6	9.6	7.8
27-Sep-07	8.4	9.1	7.9
28-Sep-07	6.9	7.7	6.2
29-Sep-07	6.0	6.5	5.4
30-Sep-07	5.8	6.3	5.3
1-Oct-07	6.3	7.2	5.6
2-Oct-07	6.1	7.1	5.2
3-Oct-07	5.3	6.4	4.3
4-Oct-07	4.5	4.9	4.0
5-Oct-07	4.0	5.2	2.9
6-Oct-07	4.3	5.3	3.0
7-Oct-07	5.5	7.0	4.3
8-Oct-07	4.1	5.4	3.1
9-Oct-07	3.6	4.8	2.3
10-Oct-07	4.0	5.2	3.1
11-Oct-07	4.4	6.1	3.2
12-Oct-07	3.1	5.2	2.1
13-Oct-07	3.8	5.3	2.2
14-Oct-07	5.7	8.1	3.7
15-Oct-07	6.2	7.7	4.4
16-Oct-07	6.8	8.0	5.9
17-Oct-07	6.1	7.0	5.2
18-Oct-07	4.5	5.3	3.9
19-Oct-07	3.7	4.0	3.3
20-Oct-07	2.9	3.6	2.5
21-Oct-07	1.9	2.4	1.5
22-Oct-07	2.5	3.1	2.0
23-Oct-07	2.7	3.0	2.4
24-Oct-07	2.8	3.4	2.3
25-Oct-07	1.9	2.5	1.4
26-Oct-07	1.3	1.6	0.8
27-Oct-07	1.9	2.5	1.5
28-Oct-07	1.8	2.1	1.5
29-Oct-07	1.5	1.8	1.1
30-Oct-07	1.1	1.5	0.6
31-Oct-07	1.8	2.4	1.4
1-Nov-07	1.1	1.8	0.7
2-Nov-07	0.7	1.0	0.5
3-Nov-07	0.1	0.4	-0.1
4-Nov-07	0.0	0.0	0.0
5-Nov-07	-0.1	-0.1	-0.1
6-Nov-07	-0.1	-0.1	-0.1
7-Nov-07	-0.1	-0.1	-0.1
Mean	**8.1**	**9.0**	**7.3**
Max	**19.5**	**20.5**	**18.4**
Min	**-0.1**	**-0.1**	**-0.1**

Appendix C7: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025761
Location Halfway 9



Appendix C8: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025768
Location Farrell 11

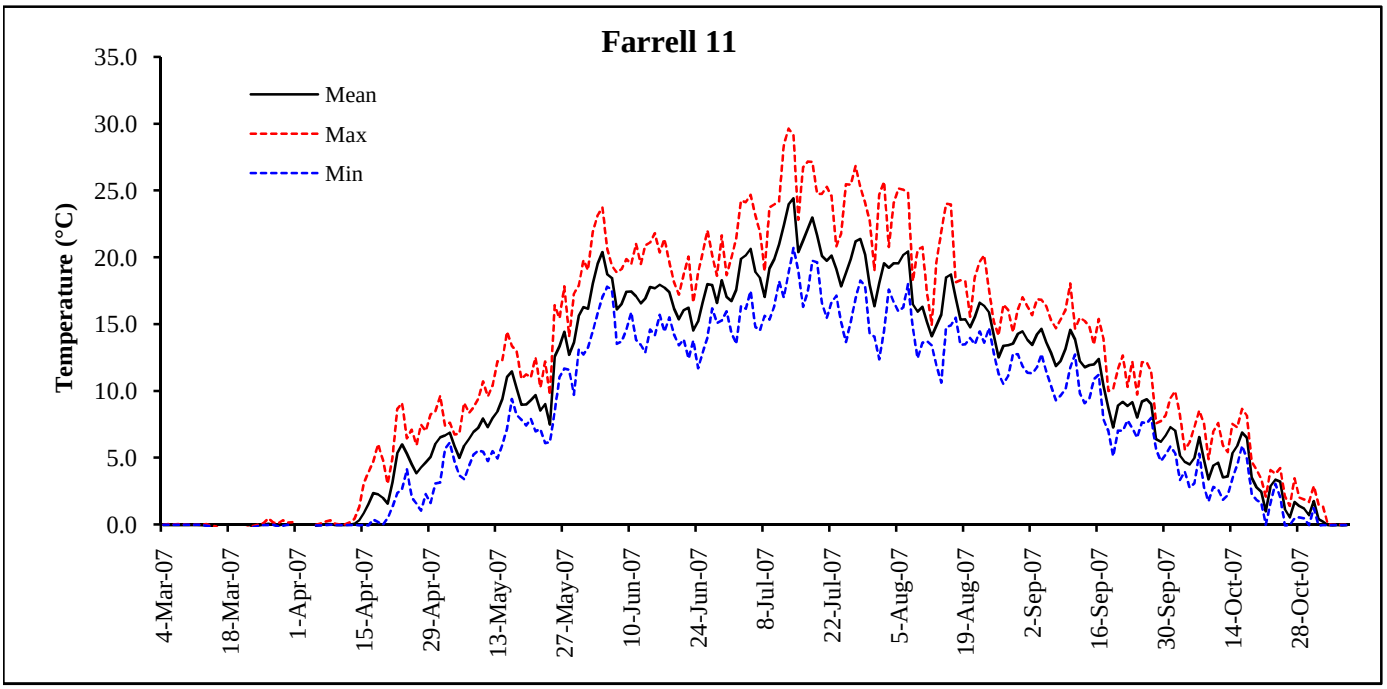
Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
4-Mar-07	0.0	0.0	0.0	23-Apr-07	6.0	9.1	2.6	12-Jun-07	16.6	19.5	13.4
5-Mar-07	0.0	0.0	0.0	24-Apr-07	5.3	6.5	4.1	13-Jun-07	16.9	20.9	12.9
6-Mar-07	0.0	0.0	0.0	25-Apr-07	4.5	7.1	2.0	14-Jun-07	17.8	21.1	14.6
7-Mar-07	0.0	0.0	0.0	26-Apr-07	3.8	5.9	1.6	15-Jun-07	17.7	21.8	14.1
8-Mar-07	0.0	0.0	0.0	27-Apr-07	4.3	7.5	1.0	16-Jun-07	18.0	20.4	15.7
9-Mar-07	0.0	0.0	0.0	28-Apr-07	4.7	7.0	2.3	17-Jun-07	17.7	21.4	14.4
10-Mar-07	0.0	0.0	0.0	29-Apr-07	5.1	8.2	1.6	18-Jun-07	17.4	19.7	15.5
11-Mar-07	0.0	0.0	0.0	30-Apr-07	6.0	8.5	3.1	19-Jun-07	16.2	18.1	14.2
12-Mar-07	0.0	0.0	0.0	1-May-07	6.5	9.6	3.1	20-Jun-07	15.4	17.2	13.4
13-Mar-07	-0.1	0.0	-0.1	2-May-07	6.7	7.4	5.6	21-Jun-07	16.0	18.7	13.8
14-Mar-07	-0.1	-0.1	-0.1	3-May-07	6.9	7.6	6.1	22-Jun-07	16.2	20.1	12.4
15-Mar-07	-0.3	-0.1	-0.5	4-May-07	5.9	6.7	4.7	23-Jun-07	14.5	16.6	13.8
16-Mar-07	-0.5	-0.5	-0.5	5-May-07	5.0	6.8	3.7	24-Jun-07	15.2	18.8	11.7
17-Mar-07	-0.5	-0.4	-0.5	6-May-07	5.9	9.1	3.4	25-Jun-07	16.6	20.3	12.8
18-Mar-07	-0.4	-0.4	-0.4	7-May-07	6.4	8.3	4.4	26-Jun-07	18.0	22.0	14.0
19-Mar-07	-0.4	-0.4	-0.4	8-May-07	6.9	8.8	5.2	27-Jun-07	17.9	20.2	16.2
20-Mar-07	-0.4	-0.3	-0.4	9-May-07	7.2	9.4	5.5	28-Jun-07	16.6	18.6	15.1
21-Mar-07	-0.3	-0.3	-0.4	10-May-07	8.0	10.7	5.4	29-Jun-07	18.3	21.6	15.2
22-Mar-07	-0.3	-0.2	-0.3	11-May-07	7.3	9.6	4.7	30-Jun-07	17.1	18.7	16.0
23-Mar-07	-0.1	-0.1	-0.2	12-May-07	8.0	10.4	5.5	1-Jul-07	16.7	20.0	14.4
24-Mar-07	-0.1	0.0	-0.1	13-May-07	8.5	12.2	4.9	2-Jul-07	17.6	21.4	13.5
25-Mar-07	0.0	0.1	-0.1	14-May-07	9.4	12.3	5.9	3-Jul-07	19.9	24.2	16.3
26-Mar-07	0.1	0.5	-0.1	15-May-07	11.1	14.4	7.2	4-Jul-07	20.2	24.1	16.2
27-Mar-07	0.0	0.1	0.0	16-May-07	11.5	13.4	9.4	5-Jul-07	20.6	24.7	17.5
28-Mar-07	0.0	0.1	-0.1	17-May-07	10.2	13.0	8.2	6-Jul-07	18.9	23.1	14.8
29-Mar-07	0.0	0.3	-0.1	18-May-07	9.0	10.9	7.8	7-Jul-07	18.5	21.9	14.5
30-Mar-07	0.0	0.1	0.0	19-May-07	9.0	11.2	7.4	8-Jul-07	17.1	19.0	15.6
31-Mar-07	0.0	0.2	-0.1	20-May-07	9.3	11.0	7.9	9-Jul-07	19.2	23.7	15.3
1-Apr-07				21-May-07	9.7	12.5	7.0	10-Jul-07	19.9	24.0	16.3
2-Apr-07				22-May-07	8.5	10.2	7.1	11-Jul-07	21.0	24.2	18.2
3-Apr-07				23-May-07	9.0	12.2	6.1	12-Jul-07	22.4	28.5	17.0
4-Apr-07				24-May-07	7.5	9.7	6.2	13-Jul-07	24.0	29.6	18.9
5-Apr-07	-0.1	0.0	-0.1	25-May-07	12.6	16.4	8.5	14-Jul-07	24.4	29.1	20.7
6-Apr-07	0.0	0.1	-0.1	26-May-07	13.4	15.4	11.0	15-Jul-07	20.4	22.8	19.0
7-Apr-07	0.0	0.2	-0.1	27-May-07	14.4	17.8	11.7	16-Jul-07	21.3	26.7	16.3
8-Apr-07	0.0	0.3	0.0	28-May-07	12.7	14.1	11.6	17-Jul-07	22.2	27.2	17.5
9-Apr-07	0.0	0.1	-0.1	29-May-07	13.6	17.3	9.7	18-Jul-07	23.0	27.1	19.7
10-Apr-07	0.0	0.0	-0.1	30-May-07	15.6	17.9	13.1	19-Jul-07	21.7	24.8	19.6
11-Apr-07	0.0	0.0	-0.1	31-May-07	16.3	19.8	12.7	20-Jul-07	20.1	24.8	16.6
12-Apr-07	0.0	0.1	-0.1	1-Jun-07	16.2	19.1	13.2	21-Jul-07	19.8	25.3	15.4
13-Apr-07	0.1	0.4	-0.1	2-Jun-07	18.1	21.9	14.5	22-Jul-07	20.1	24.6	16.6
14-Apr-07	0.3	1.3	-0.1	3-Jun-07	19.5	23.1	15.8	23-Jul-07	19.1	20.8	17.1
15-Apr-07	0.8	3.1	-0.1	4-Jun-07	20.4	23.7	17.0	24-Jul-07	17.8	21.8	15.1
16-Apr-07	1.5	3.9	-0.1	5-Jun-07	18.7	20.6	17.8	25-Jul-07	18.8	25.5	13.6
17-Apr-07	2.4	4.7	0.4	6-Jun-07	18.5	19.4	17.6	26-Jul-07	19.9	25.5	15.2
18-Apr-07	2.3	6.0	0.2	7-Jun-07	16.1	18.9	13.5	27-Jul-07	21.2	26.8	16.9
19-Apr-07	2.0	4.8	0.0	8-Jun-07	16.5	19.1	13.7	28-Jul-07	21.4	25.3	18.2
20-Apr-07	1.6	3.0	0.5	9-Jun-07	17.4	19.9	14.6	29-Jul-07	20.2	24.1	17.8
21-Apr-07	3.2	5.0	1.3	10-Jun-07	17.5	19.5	15.9	30-Jul-07	18.0	22.8	14.3
22-Apr-07	5.3	8.6	2.3	11-Jun-07	17.1	21.0	13.8	31-Jul-07	16.4	19.0	14.1

Appendix C8: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025768
Location Farrell 11

Date	Mean	Max	Min
1-Aug-07	18.1	24.7	12.4
2-Aug-07	19.6	25.7	14.5
3-Aug-07	19.2	20.8	17.6
4-Aug-07	19.6	24.1	16.7
5-Aug-07	19.6	25.2	16.0
6-Aug-07	20.2	25.1	16.2
7-Aug-07	20.5	24.9	18.0
8-Aug-07	16.5	18.2	14.7
9-Aug-07	15.9	20.6	12.4
10-Aug-07	16.3	20.8	13.6
11-Aug-07	15.2	17.4	13.7
12-Aug-07	14.1	14.9	13.4
13-Aug-07	14.9	19.7	11.9
14-Aug-07	15.7	21.9	10.6
15-Aug-07	18.5	24.0	14.7
16-Aug-07	18.7	24.0	14.9
17-Aug-07	17.0	18.1	15.5
18-Aug-07	15.4	18.3	13.4
19-Aug-07	15.4	18.2	13.5
20-Aug-07	14.8	15.6	14.0
21-Aug-07	15.5	18.6	13.5
22-Aug-07	16.6	19.7	14.4
23-Aug-07	16.4	20.2	13.6
24-Aug-07	15.9	17.6	14.7
25-Aug-07	14.2	15.2	12.8
26-Aug-07	12.5	14.1	11.3
27-Aug-07	13.4	16.5	10.5
28-Aug-07	13.4	16.1	11.1
29-Aug-07	13.5	14.4	12.8
30-Aug-07	14.3	16.1	12.8
31-Aug-07	14.4	17.0	11.8
1-Sep-07	13.8	16.3	11.3
2-Sep-07	13.5	15.7	11.3
3-Sep-07	14.3	16.9	11.8
4-Sep-07	14.6	16.8	12.8
5-Sep-07	13.7	16.3	11.4
6-Sep-07	12.9	15.3	10.4
7-Sep-07	11.9	14.7	9.3
8-Sep-07	12.3	15.3	9.7
9-Sep-07	13.1	16.1	10.1
10-Sep-07	14.6	18.0	11.7
11-Sep-07	13.9	14.7	12.7
12-Sep-07	12.2	15.5	9.8
13-Sep-07	11.8	15.2	9.1
14-Sep-07	11.9	14.8	9.4
15-Sep-07	12.0	13.5	10.9
16-Sep-07	12.4	15.4	11.2
17-Sep-07	10.4	13.9	7.8
18-Sep-07	8.7	10.0	7.0
19-Sep-07	7.3	10.1	5.1
20-Sep-07	8.9	11.6	7.0
21-Sep-07	9.2	12.7	7.0
22-Sep-07	8.9	10.3	7.8
23-Sep-07	9.2	12.2	7.2
24-Sep-07	8.0	9.7	6.5
25-Sep-07	9.2	12.1	7.6
26-Sep-07	9.4	12.1	7.6
27-Sep-07	9.0	11.4	8.0
28-Sep-07	6.4	7.6	5.6
29-Sep-07	6.2	7.7	4.7
30-Sep-07	6.7	8.2	5.2
1-Oct-07	7.3	9.5	5.8
2-Oct-07	7.0	10.0	5.3
3-Oct-07	5.2	8.1	3.3
4-Oct-07	4.7	5.6	4.0
5-Oct-07	4.5	6.2	2.7
6-Oct-07	5.0	7.3	3.1
7-Oct-07	6.5	8.5	5.3
8-Oct-07	4.8	7.5	2.8
9-Oct-07	3.4	4.9	1.7
10-Oct-07	4.4	7.0	2.8
11-Oct-07	4.6	7.6	2.6
12-Oct-07	3.5	5.9	1.8
13-Oct-07	3.6	5.4	2.2
14-Oct-07	5.3	7.5	3.4
15-Oct-07	5.9	7.3	4.5
16-Oct-07	6.9	8.6	5.9
17-Oct-07	6.5	8.1	4.9
18-Oct-07	3.5	4.7	2.3
19-Oct-07	2.8	4.1	1.8
20-Oct-07	2.5	3.4	1.6
21-Oct-07	1.0	2.1	0.0
22-Oct-07	2.9	4.1	1.6
23-Oct-07	3.4	3.8	3.0
24-Oct-07	3.2	4.2	2.0
25-Oct-07	1.1	2.1	-0.1
26-Oct-07	0.5	1.4	-0.1
27-Oct-07	1.7	3.5	0.4
28-Oct-07	1.4	2.0	0.5
29-Oct-07	1.2	1.9	0.4
30-Oct-07	0.7	1.7	-0.1
31-Oct-07	1.8	2.9	1.2
1-Nov-07	0.4	1.5	-0.1
2-Nov-07	0.2	1.3	-0.1
3-Nov-07	0.0	0.0	-0.1
4-Nov-07	-0.1	0.0	-0.1
5-Nov-07	0.0	0.0	-0.1
6-Nov-07	0.0	0.0	-0.1
7-Nov-07	0.0	0.0	-0.1

Date	Mean	Max	Min
Mean	**9.9**	**12.2**	**8.0**
Max	**24.4**	**29.6**	**20.7**
Min	**-0.5**	**-0.5**	**-0.5**

Appendix C8: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025768
Location Farrell 11



Appendix C9: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1027515
Location Pine 16

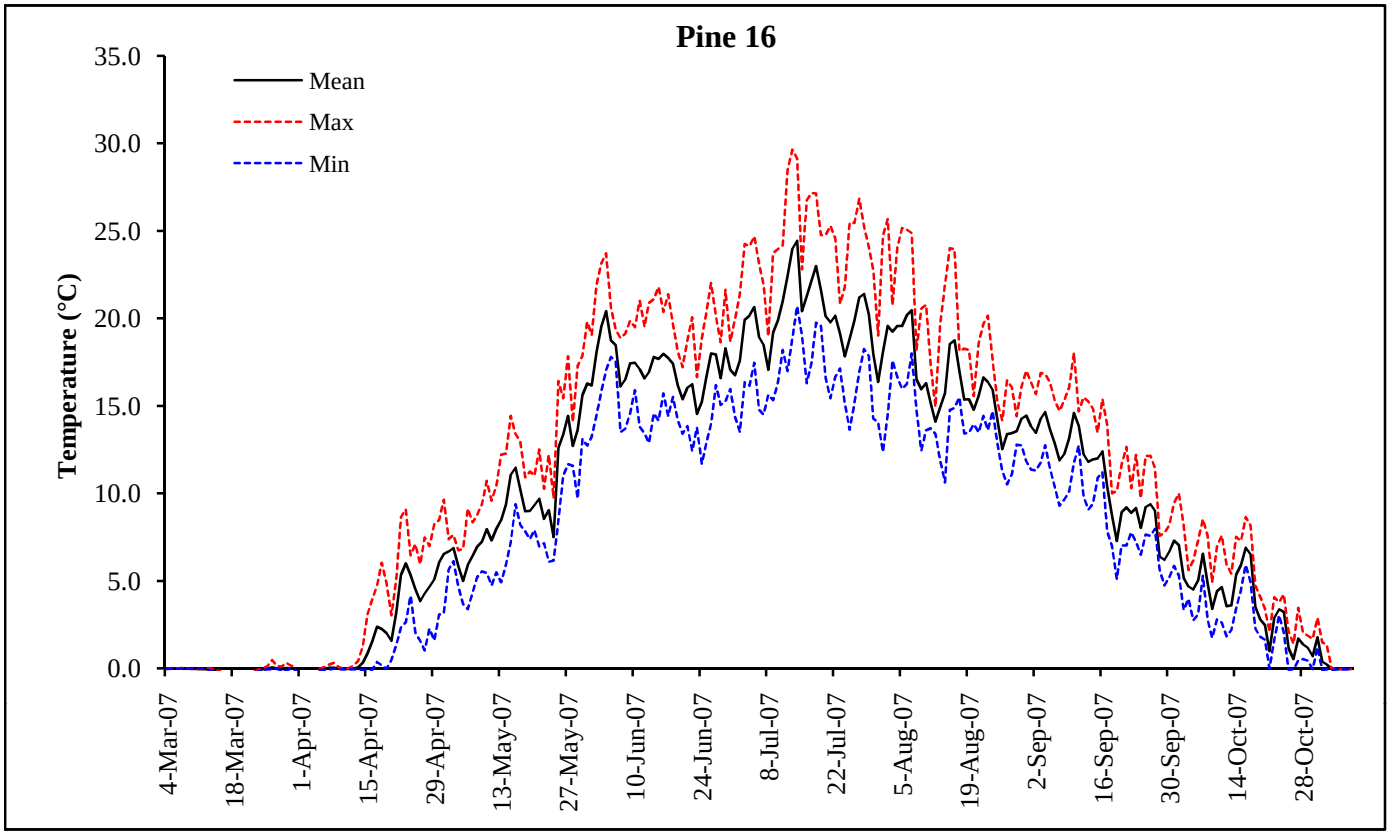
Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
4-Mar-07	0.0	0.0	0.0	23-Apr-07	6.0	9.1	2.6	12-Jun-07	16.6	19.5	13.4
5-Mar-07	0.0	0.0	0.0	24-Apr-07	5.3	6.5	4.1	13-Jun-07	16.9	20.9	12.9
6-Mar-07	0.0	0.0	0.0	25-Apr-07	4.5	7.1	2.0	14-Jun-07	17.8	21.1	14.6
7-Mar-07	0.0	0.0	0.0	26-Apr-07	3.8	5.9	1.6	15-Jun-07	17.7	21.8	14.1
8-Mar-07	0.0	0.0	0.0	27-Apr-07	4.3	7.5	1.0	16-Jun-07	18.0	20.4	15.7
9-Mar-07	0.0	0.0	0.0	28-Apr-07	4.7	7.0	2.3	17-Jun-07	17.7	21.4	14.4
10-Mar-07	0.0	0.0	0.0	29-Apr-07	5.1	8.2	1.6	18-Jun-07	17.4	19.7	15.5
11-Mar-07	0.0	0.0	0.0	30-Apr-07	6.0	8.5	3.1	19-Jun-07	16.2	18.1	14.2
12-Mar-07	0.0	0.0	0.0	1-May-07	6.5	9.6	3.1	20-Jun-07	15.4	17.2	13.4
13-Mar-07	-0.1	0.0	-0.1	2-May-07	6.7	7.4	5.6	21-Jun-07	16.0	18.7	13.8
14-Mar-07	-0.1	-0.1	-0.1	3-May-07	6.9	7.6	6.1	22-Jun-07	16.2	20.1	12.4
15-Mar-07	-0.3	-0.1	-0.5	4-May-07	5.9	6.7	4.7	23-Jun-07	14.5	16.6	13.8
16-Mar-07	-0.5	-0.5	-0.5	5-May-07	5.0	6.8	3.7	24-Jun-07	15.2	18.8	11.7
17-Mar-07	-0.5	-0.4	-0.5	6-May-07	5.9	9.1	3.4	25-Jun-07	16.6	20.3	12.8
18-Mar-07	-0.4	-0.4	-0.4	7-May-07	6.4	8.3	4.4	26-Jun-07	18.0	22.0	14.0
19-Mar-07	-0.4	-0.4	-0.4	8-May-07	6.9	8.8	5.2	27-Jun-07	17.9	20.2	16.2
20-Mar-07	-0.4	-0.3	-0.4	9-May-07	7.2	9.4	5.5	28-Jun-07	16.6	18.6	15.1
21-Mar-07	-0.3	-0.3	-0.4	10-May-07	8.0	10.7	5.4	29-Jun-07	18.3	21.6	15.2
22-Mar-07	-0.3	-0.2	-0.3	11-May-07	7.3	9.6	4.7	30-Jun-07	17.1	18.7	16.0
23-Mar-07	-0.1	-0.1	-0.2	12-May-07	8.0	10.4	5.5	1-Jul-07	16.7	20.0	14.4
24-Mar-07	-0.1	0.0	-0.1	13-May-07	8.5	12.2	4.9	2-Jul-07	17.6	21.4	13.5
25-Mar-07	0.0	0.1	-0.1	14-May-07	9.4	12.3	5.9	3-Jul-07	19.9	24.2	16.3
26-Mar-07	0.1	0.5	-0.1	15-May-07	11.1	14.4	7.2	4-Jul-07	20.2	24.1	16.2
27-Mar-07	0.0	0.1	0.0	16-May-07	11.5	13.4	9.4	5-Jul-07	20.6	24.7	17.5
28-Mar-07	0.0	0.1	-0.1	17-May-07	10.2	13.0	8.2	6-Jul-07	18.9	23.1	14.8
29-Mar-07	0.0	0.3	-0.1	18-May-07	9.0	10.9	7.8	7-Jul-07	18.5	21.9	14.5
30-Mar-07	0.0	0.1	0.0	19-May-07	9.0	11.2	7.4	8-Jul-07	17.1	19.0	15.6
31-Mar-07	0.0	0.2	-0.1	20-May-07	9.3	11.0	7.9	9-Jul-07	19.2	23.7	15.3
1-Apr-07				21-May-07	9.7	12.5	7.0	10-Jul-07	19.9	24.0	16.3
2-Apr-07				22-May-07	8.5	10.2	7.1	11-Jul-07	21.0	24.2	18.2
3-Apr-07				23-May-07	9.0	12.2	6.1	12-Jul-07	22.4	28.5	17.0
4-Apr-07				24-May-07	7.5	9.7	6.2	13-Jul-07	24.0	29.6	18.9
5-Apr-07	-0.1	0.0	-0.1	25-May-07	12.6	16.4	8.5	14-Jul-07	24.4	29.1	20.7
6-Apr-07	0.0	0.1	-0.1	26-May-07	13.4	15.4	11.0	15-Jul-07	20.4	22.8	19.0
7-Apr-07	0.0	0.2	-0.1	27-May-07	14.4	17.8	11.7	16-Jul-07	21.3	26.7	16.3
8-Apr-07	0.0	0.3	0.0	28-May-07	12.7	14.1	11.6	17-Jul-07	22.2	27.2	17.5
9-Apr-07	0.0	0.1	-0.1	29-May-07	13.6	17.3	9.7	18-Jul-07	23.0	27.1	19.7
10-Apr-07	0.0	0.0	-0.1	30-May-07	15.6	17.9	13.1	19-Jul-07	21.7	24.8	19.6
11-Apr-07	0.0	0.0	-0.1	31-May-07	16.3	19.8	12.7	20-Jul-07	20.1	24.8	16.6
12-Apr-07	0.0	0.1	-0.1	1-Jun-07	16.2	19.1	13.2	21-Jul-07	19.8	25.3	15.4
13-Apr-07	0.1	0.4	-0.1	2-Jun-07	18.1	21.9	14.5	22-Jul-07	20.1	24.6	16.6
14-Apr-07	0.3	1.3	-0.1	3-Jun-07	19.5	23.1	15.8	23-Jul-07	19.1	20.8	17.1
15-Apr-07	0.8	3.1	-0.1	4-Jun-07	20.4	23.7	17.0	24-Jul-07	17.8	21.8	15.1
16-Apr-07	1.5	3.9	-0.1	5-Jun-07	18.7	20.6	17.8	25-Jul-07	18.8	25.5	13.6
17-Apr-07	2.4	4.7	0.4	6-Jun-07	18.5	19.4	17.6	26-Jul-07	19.9	25.5	15.2
18-Apr-07	2.3	6.0	0.2	7-Jun-07	16.1	18.9	13.5	27-Jul-07	21.2	26.8	16.9
19-Apr-07	2.0	4.8	0.0	8-Jun-07	16.5	19.1	13.7	28-Jul-07	21.4	25.3	18.2
20-Apr-07	1.6	3.0	0.5	9-Jun-07	17.4	19.9	14.6	29-Jul-07	20.2	24.1	17.8
21-Apr-07	3.2	5.0	1.3	10-Jun-07	17.5	19.5	15.9	30-Jul-07	18.0	22.8	14.3
22-Apr-07	5.3	8.6	2.3	11-Jun-07	17.1	21.0	13.8	31-Jul-07	16.4	19.0	14.1

Appendix C9: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1027515
Location Pine 16

Date	Mean	Max	Min	Date	Mean	Max	Min
1-Aug-07	18.1	24.7	12.4	20-Sep-07	8.9	11.6	7.0
2-Aug-07	19.6	25.7	14.5	21-Sep-07	9.2	12.7	7.0
3-Aug-07	19.2	20.8	17.6	22-Sep-07	8.9	10.3	7.8
4-Aug-07	19.6	24.1	16.7	23-Sep-07	9.2	12.2	7.2
5-Aug-07	19.6	25.2	16.0	24-Sep-07	8.0	9.7	6.5
6-Aug-07	20.2	25.1	16.2	25-Sep-07	9.2	12.1	7.6
7-Aug-07	20.5	24.9	18.0	26-Sep-07	9.4	12.1	7.6
8-Aug-07	16.5	18.2	14.7	27-Sep-07	9.0	11.4	8.0
9-Aug-07	15.9	20.6	12.4	28-Sep-07	6.4	7.6	5.6
10-Aug-07	16.3	20.8	13.6	29-Sep-07	6.2	7.7	4.7
11-Aug-07	15.2	17.4	13.7	30-Sep-07	6.7	8.2	5.2
12-Aug-07	14.1	14.9	13.4	1-Oct-07	7.3	9.5	5.8
13-Aug-07	14.9	19.7	11.9	2-Oct-07	7.0	10.0	5.3
14-Aug-07	15.7	21.9	10.6	3-Oct-07	5.2	8.1	3.3
15-Aug-07	18.5	24.0	14.7	4-Oct-07	4.7	5.6	4.0
16-Aug-07	18.7	24.0	14.9	5-Oct-07	4.5	6.2	2.7
17-Aug-07	17.0	18.1	15.5	6-Oct-07	5.0	7.3	3.1
18-Aug-07	15.4	18.3	13.4	7-Oct-07	6.5	8.5	5.3
19-Aug-07	15.4	18.2	13.5	8-Oct-07	4.8	7.5	2.8
20-Aug-07	14.8	15.6	14.0	9-Oct-07	3.4	4.9	1.7
21-Aug-07	15.5	18.6	13.5	10-Oct-07	4.4	7.0	2.8
22-Aug-07	16.6	19.7	14.4	11-Oct-07	4.6	7.6	2.6
23-Aug-07	16.4	20.2	13.6	12-Oct-07	3.5	5.9	1.8
24-Aug-07	15.9	17.6	14.7	13-Oct-07	3.6	5.4	2.2
25-Aug-07	14.2	15.2	12.8	14-Oct-07	5.3	7.5	3.4
26-Aug-07	12.5	14.1	11.3	15-Oct-07	5.9	7.3	4.5
27-Aug-07	13.4	16.5	10.5	16-Oct-07	6.9	8.6	5.9
28-Aug-07	13.4	16.1	11.1	17-Oct-07	6.5	8.1	4.9
29-Aug-07	13.5	14.4	12.8	18-Oct-07	3.5	4.7	2.3
30-Aug-07	14.3	16.1	12.8	19-Oct-07	2.8	4.1	1.8
31-Aug-07	14.4	17.0	11.8	20-Oct-07	2.5	3.4	1.6
1-Sep-07	13.8	16.3	11.3	21-Oct-07	1.0	2.1	0.0
2-Sep-07	13.5	15.7	11.3	22-Oct-07	2.9	4.1	1.6
3-Sep-07	14.3	16.9	11.8	23-Oct-07	3.4	3.8	3.0
4-Sep-07	14.6	16.8	12.8	24-Oct-07	3.2	4.2	2.0
5-Sep-07	13.7	16.3	11.4	25-Oct-07	1.1	2.1	-0.1
6-Sep-07	12.9	15.3	10.4	26-Oct-07	0.5	1.4	-0.1
7-Sep-07	11.9	14.7	9.3	27-Oct-07	1.7	3.5	0.4
8-Sep-07	12.3	15.3	9.7	28-Oct-07	1.4	2.0	0.5
9-Sep-07	13.1	16.1	10.1	29-Oct-07	1.2	1.9	0.4
10-Sep-07	14.6	18.0	11.7	30-Oct-07	0.7	1.7	-0.1
11-Sep-07	13.9	14.7	12.7	31-Oct-07	1.8	2.9	1.2
12-Sep-07	12.2	15.5	9.8	1-Nov-07	0.4	1.5	-0.1
13-Sep-07	11.8	15.2	9.1	2-Nov-07	0.2	1.3	-0.1
14-Sep-07	11.9	14.8	9.4	3-Nov-07	0.0	0.0	-0.1
15-Sep-07	12.0	13.5	10.9	4-Nov-07	-0.1	0.0	-0.1
16-Sep-07	12.4	15.4	11.2	5-Nov-07	0.0	0.0	-0.1
17-Sep-07	10.4	13.9	7.8	6-Nov-07	0.0	0.0	-0.1
18-Sep-07	8.7	10.0	7.0	7-Nov-07	0.0	0.0	-0.1
19-Sep-07	7.3	10.1	5.1				

	Mean	Max	Min
Mean	**9.9**	**12.2**	**8.0**
Max	**24.4**	**29.6**	**20.7**
Min	**-0.5**	**-0.5**	**-0.5**

Appendix C9: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1027515
Location Pine 16

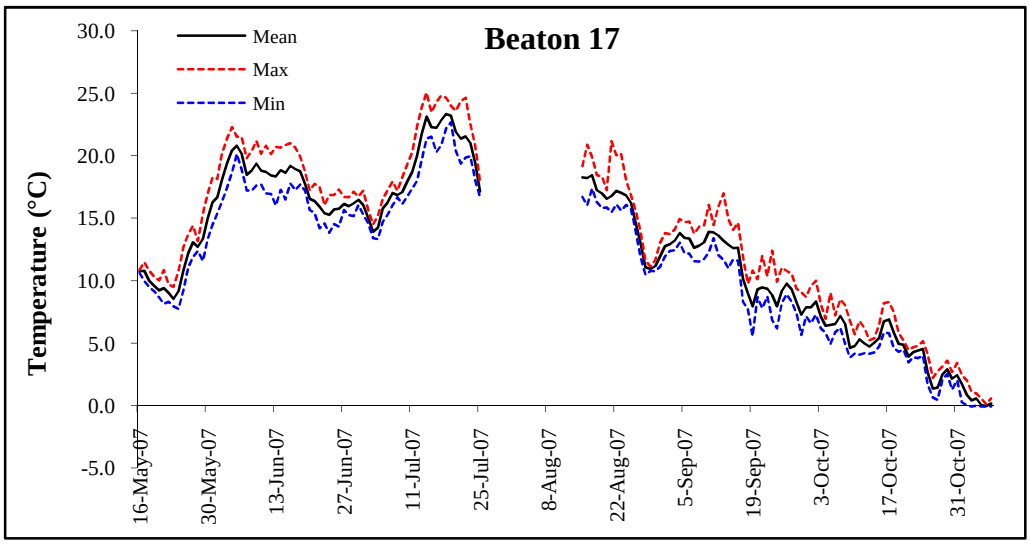


Appendix C10: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1026027
Location Beaton 17

Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
May 16, 2007	10.8	10.9	10.6	July 3, 2007	13.9	14.5	13.4	August 20, 2007	16.5	17.2	15.9
May 17, 2007	10.8	11.5	10.0	July 4, 2007	14.2	15.2	13.3	August 21, 2007	16.8	21.2	15.5
May 18, 2007	10.0	10.8	9.5	July 5, 2007	15.8	16.5	14.7	August 22, 2007	17.2	20.0	16.1
May 19, 2007	9.6	10.3	9.2	July 6, 2007	16.2	17.2	15.3	August 23, 2007	17.0	20.2	15.6
May 20, 2007	9.2	10.0	8.7	July 7, 2007	17.0	17.9	16.1	August 24, 2007	16.8	18.0	16.1
May 21, 2007	9.4	10.8	8.2	July 8, 2007	16.8	17.2	16.7	August 25, 2007	16.2	16.8	15.7
May 22, 2007	9.0	9.7	8.3	July 9, 2007	17.1	18.2	16.2	August 26, 2007	14.5	15.5	13.9
May 23, 2007	8.5	9.5	7.9	July 10, 2007	17.9	19.2	16.7	August 27, 2007	13.0	13.9	11.9
May 24, 2007	9.2	10.8	7.7	July 11, 2007	18.7	20.2	17.4	August 28, 2007	11.0	11.6	10.5
May 25, 2007	10.8	12.7	9.2	July 12, 2007	20.0	22.3	18.0	August 29, 2007	10.9	11.1	10.8
May 26, 2007	12.2	13.7	11.1	July 13, 2007	21.8	23.9	19.7	August 30, 2007	11.2	11.7	10.8
May 27, 2007	13.1	14.4	11.9	July 14, 2007	23.1	25.0	21.4	August 31, 2007	12.0	13.0	11.1
May 28, 2007	12.7	13.2	12.4	July 15, 2007	22.3	23.4	21.5	September 1, 2007	12.8	13.8	12.0
May 29, 2007	13.3	15.4	11.6	July 16, 2007	22.2	24.3	20.3	September 2, 2007	12.9	13.7	12.4
May 30, 2007	15.0	17.0	13.3	July 17, 2007	22.8	24.8	20.9	September 3, 2007	13.2	14.1	12.4
May 31, 2007	16.3	18.2	14.5	July 18, 2007	23.3	24.6	22.2	September 4, 2007	13.8	14.9	13.0
June 1, 2007	16.7	18.1	15.4	July 19, 2007	23.2	24.0	22.7	September 5, 2007	13.4	14.7	12.2
June 2, 2007	18.1	20.2	16.3	July 20, 2007	21.9	23.6	20.4	September 6, 2007	13.4	14.7	12.2
June 3, 2007	19.4	21.4	17.5	July 21, 2007	21.3	24.3	19.4	September 7, 2007	12.6	13.8	11.6
June 4, 2007	20.4	22.3	18.7	July 22, 2007	21.5	24.6	19.9	September 8, 2007	12.8	14.3	11.5
June 5, 2007	20.8	21.5	20.2	July 23, 2007	21.0	22.5	20.0	September 9, 2007	13.1	14.4	11.8
June 6, 2007	20.1	21.5	18.9	July 24, 2007	19.4	20.8	18.1	September 10, 2007	13.9	16.1	12.3
June 7, 2007	18.5	19.8	17.2	July 25, 2007	17.1	17.9	16.7	September 11, 2007	13.8	14.4	13.4
June 8, 2007	18.8	20.4	17.2	July 26, 2007				September 12, 2007	13.6	15.9	12.1
June 9, 2007	19.4	21.2	17.6	July 27, 2007				September 13, 2007	13.2	17.0	11.7
June 10, 2007	18.8	20.2	17.7	July 28, 2007				September 14, 2007	12.9	14.9	11.0
June 11, 2007	18.7	20.8	17.0	July 29, 2007				September 15, 2007	12.6	14.1	11.7
June 12, 2007	18.4	20.1	16.9	July 30, 2007				September 16, 2007	12.6	14.6	11.6
June 13, 2007	18.3	20.7	16.0	July 31, 2007				September 17, 2007	10.1	11.9	8.3
June 14, 2007	18.8	20.6	17.3	August 1, 2007				September 18, 2007	9.0	9.8	7.7
June 15, 2007	18.6	20.8	16.5	August 2, 2007				September 19, 2007	7.9	10.8	5.6
June 16, 2007	19.2	21.0	17.8	August 3, 2007				September 20, 2007	9.3	10.1	8.7
June 17, 2007	18.9	20.6	17.2	August 4, 2007				September 21, 2007	9.5	12.0	7.8
June 18, 2007	18.8	19.9	17.7	August 5, 2007				September 22, 2007	9.3	10.3	8.7
June 19, 2007	17.8	18.7	17.2	August 6, 2007				September 23, 2007	8.8	12.4	6.9
June 20, 2007	16.5	17.2	15.7	August 7, 2007				September 24, 2007	7.9	9.9	6.2
June 21, 2007	16.4	17.7	15.4	August 8, 2007				September 25, 2007	9.2	11.0	8.2
June 22, 2007	15.9	17.5	14.2	August 9, 2007				September 26, 2007	9.7	10.8	8.9
June 23, 2007	15.4	16.0	14.6	August 10, 2007				September 27, 2007	9.3	10.5	8.3
June 24, 2007	15.3	16.8	13.9	August 11, 2007				September 28, 2007	8.3	9.3	7.4
June 25, 2007	15.7	16.8	14.5	August 12, 2007				September 29, 2007	7.3	9.1	5.7
June 26, 2007	15.7	17.3	14.3	August 13, 2007				September 30, 2007	7.9	8.7	7.2
June 27, 2007	16.1	16.7	15.7	August 14, 2007				October 1, 2007	7.9	9.6	6.6
June 28, 2007	15.9	16.7	15.2	August 15, 2007	18.2	19.2	16.7	October 2, 2007	8.3	10.0	7.3
June 29, 2007	16.2	17.1	15.2	August 16, 2007	18.2	20.9	16.1	October 3, 2007	7.1	8.1	6.2
June 30, 2007	16.5	16.7	16.1	August 17, 2007	18.4	19.9	17.4	October 4, 2007	6.4	6.9	5.8
July 1, 2007	16.0	17.2	15.3	August 18, 2007	17.2	18.4	16.3	October 5, 2007	6.5	9.0	4.9
July 2, 2007	15.0	15.6	14.6	August 19, 2007	17.0	18.3	15.8	October 6, 2007	6.5	7.2	5.9

Appendix C10: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1026027
Location Beaton 17

Date	Mean	Max	Min
October 7, 2007	7.2	8.5	6.2
October 8, 2007	6.5	8.0	5.0
October 9, 2007	4.6	6.8	3.9
October 10, 2007	4.8	5.7	4.2
October 11, 2007	5.3	6.8	4.1
October 12, 2007	5.0	6.2	4.2
October 13, 2007	4.7	5.2	4.2
October 14, 2007	5.0	5.4	4.3
October 15, 2007	5.4	6.5	4.7
October 16, 2007	6.7	8.2	5.8
October 17, 2007	6.9	8.3	5.8
October 18, 2007	5.8	7.5	4.6
October 19, 2007	4.9	5.8	4.3
October 20, 2007	4.9	5.2	4.5
October 21, 2007	3.9	4.5	3.5
October 22, 2007	4.3	4.7	3.9
October 23, 2007	4.4	4.8	3.8
October 24, 2007	4.5	5.2	4.0
October 25, 2007	2.6	4.1	1.7
October 26, 2007	1.3	2.2	0.7
October 27, 2007	1.4	2.7	0.5
October 28, 2007	2.5	3.1	2.1
October 29, 2007	2.9	3.6	2.5
October 30, 2007	2.1	2.7	1.3
October 31, 2007	2.4	3.4	2.0
November 1, 2007	1.7	2.4	0.3
November 2, 2007	0.9	2.0	0.1
November 3, 2007	0.4	1.1	-0.1
November 4, 2007	0.6	1.0	0.0
November 5, 2007	0.0	0.6	-0.1
November 6, 2007	0.0	0.1	-0.1
November 7, 2007	0.2	0.6	-0.1
Mean	**12.5**	**13.8**	**11.4**
Max.	**23.3**	**25.0**	**22.7**
Min.	**0.0**	**0.1**	**-0.1**



Appendix C11: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025769
Location Kiskatinaw 18

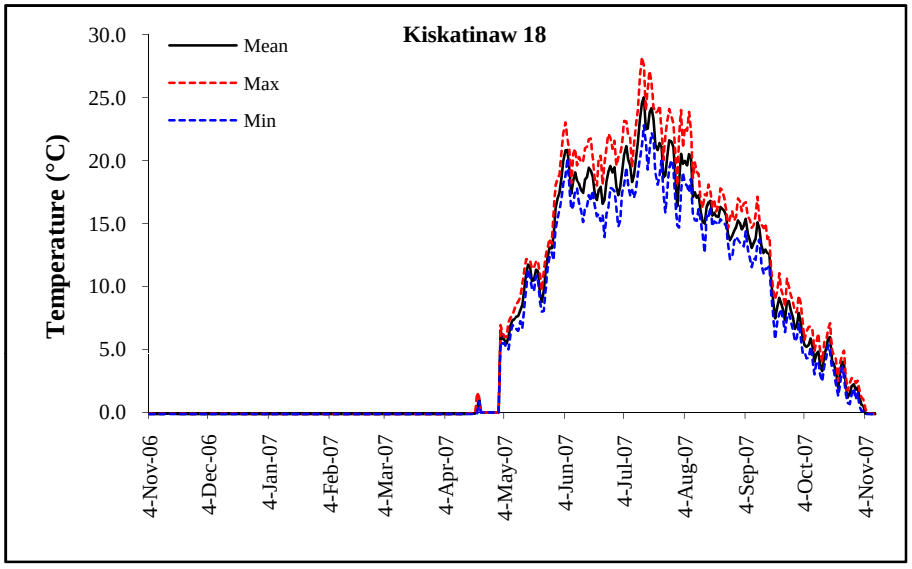
Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
4-Nov-06	-0.1	-0.1	-0.1	26-Dec-06	-0.1	-0.1	-0.1	16-Feb-07	-0.1	-0.1	-0.1
5-Nov-06	-0.1	-0.1	-0.1	27-Dec-06	-0.1	-0.1	-0.1	17-Feb-07	-0.1	-0.1	-0.1
6-Nov-06	-0.1	-0.1	-0.1	28-Dec-06	-0.1	-0.1	-0.1	18-Feb-07	-0.1	-0.1	-0.1
7-Nov-06	-0.1	-0.1	-0.1	29-Dec-06	-0.1	-0.1	-0.1	19-Feb-07	-0.1	-0.1	-0.1
8-Nov-06	-0.1	-0.1	-0.1	30-Dec-06	-0.1	-0.1	-0.1	20-Feb-07	-0.1	-0.1	-0.1
9-Nov-06	-0.1	-0.1	-0.1	31-Dec-06	-0.1	-0.1	-0.1	21-Feb-07	-0.1	-0.1	-0.1
10-Nov-06	-0.1	-0.1	-0.1	1-Jan-07	-0.1	-0.1	-0.1	22-Feb-07	-0.1	-0.1	-0.1
11-Nov-06	-0.1	-0.1	-0.1	2-Jan-07	-0.1	-0.1	-0.1	23-Feb-07	-0.1	-0.1	-0.1
12-Nov-06	-0.1	-0.1	-0.1	3-Jan-07	-0.1	-0.1	-0.1	24-Feb-07	-0.1	-0.1	-0.1
13-Nov-06	-0.1	-0.1	-0.1	4-Jan-07	-0.1	-0.1	-0.1	25-Feb-07	-0.1	-0.1	-0.1
14-Nov-06	-0.1	-0.1	-0.1	5-Jan-07	-0.1	-0.1	-0.1	26-Feb-07	-0.1	-0.1	-0.1
15-Nov-06	-0.1	-0.1	-0.1	6-Jan-07	-0.1	-0.1	-0.1	27-Feb-07	-0.1	-0.1	-0.1
16-Nov-06	-0.1	-0.1	-0.1	7-Jan-07	-0.1	-0.1	-0.1	28-Feb-07	-0.1	-0.1	-0.1
17-Nov-06	-0.1	-0.1	-0.1	8-Jan-07	-0.1	-0.1	-0.1	1-Mar-07	-0.1	-0.1	-0.1
18-Nov-06	-0.1	-0.1	-0.1	9-Jan-07	-0.1	-0.1	-0.1	2-Mar-07	-0.1	-0.1	-0.1
19-Nov-06	-0.1	-0.1	-0.1	10-Jan-07	-0.1	-0.1	-0.1	3-Mar-07	-0.1	-0.1	-0.1
20-Nov-06	-0.1	-0.1	-0.1	11-Jan-07	-0.1	-0.1	-0.1	4-Mar-07	-0.1	-0.1	-0.1
21-Nov-06	-0.1	-0.1	-0.1	12-Jan-07	-0.1	-0.1	-0.1	5-Mar-07	-0.1	-0.1	-0.1
22-Nov-06	-0.1	-0.1	-0.1	13-Jan-07	-0.1	-0.1	-0.1	6-Mar-07	-0.1	-0.1	-0.1
23-Nov-06	-0.1	-0.1	-0.1	14-Jan-07	-0.1	-0.1	-0.1	7-Mar-07	-0.1	-0.1	-0.1
24-Nov-06	-0.1	-0.1	-0.1	15-Jan-07	-0.1	-0.1	-0.1	8-Mar-07	-0.1	-0.1	-0.1
25-Nov-06	-0.1	-0.1	-0.1	16-Jan-07	-0.1	-0.1	-0.1	9-Mar-07	-0.1	-0.1	-0.1
26-Nov-06	-0.1	-0.1	-0.1	17-Jan-07	-0.1	-0.1	-0.1	10-Mar-07	-0.1	-0.1	-0.1
27-Nov-06	-0.1	-0.1	-0.1	18-Jan-07	-0.1	-0.1	-0.1	11-Mar-07	-0.1	-0.1	-0.1
28-Nov-06	-0.1	-0.1	-0.1	19-Jan-07	-0.1	-0.1	-0.1	12-Mar-07	-0.1	-0.1	-0.1
29-Nov-06	-0.1	-0.1	-0.1	20-Jan-07	-0.1	-0.1	-0.1	13-Mar-07	-0.1	-0.1	-0.1
30-Nov-06	-0.1	-0.1	-0.1	21-Jan-07	-0.1	-0.1	-0.1	14-Mar-07	-0.1	-0.1	-0.1
1-Dec-06	-0.1	-0.1	-0.1	22-Jan-07	-0.1	-0.1	-0.1	15-Mar-07	-0.1	-0.1	-0.1
2-Dec-06	-0.1	-0.1	-0.1	23-Jan-07	-0.1	-0.1	-0.1	16-Mar-07	-0.1	-0.1	-0.1
3-Dec-06	-0.1	-0.1	-0.1	24-Jan-07	-0.1	-0.1	-0.1	17-Mar-07	-0.1	-0.1	-0.1
4-Dec-06	-0.1	-0.1	-0.1	25-Jan-07	-0.1	-0.1	-0.1	18-Mar-07	-0.1	-0.1	-0.1
5-Dec-06	-0.1	-0.1	-0.1	26-Jan-07	-0.1	-0.1	-0.1	19-Mar-07	-0.1	-0.1	-0.1
6-Dec-06	-0.1	-0.1	-0.1	27-Jan-07	-0.1	-0.1	-0.1	20-Mar-07	-0.1	-0.1	-0.1
7-Dec-06	-0.1	-0.1	-0.1	28-Jan-07	-0.1	-0.1	-0.1	21-Mar-07	-0.1	-0.1	-0.1
8-Dec-06	-0.1	-0.1	-0.1	29-Jan-07	-0.1	-0.1	-0.1	22-Mar-07	-0.1	-0.1	-0.1
9-Dec-06	-0.1	-0.1	-0.1	30-Jan-07	-0.1	-0.1	-0.1	23-Mar-07	-0.1	-0.1	-0.1
10-Dec-06	-0.1	-0.1	-0.1	31-Jan-07	-0.1	-0.1	-0.1	24-Mar-07	-0.1	-0.1	-0.1
11-Dec-06	-0.1	-0.1	-0.1	1-Feb-07	-0.1	-0.1	-0.1	25-Mar-07	-0.1	-0.1	-0.1
12-Dec-06	-0.1	-0.1	-0.1	2-Feb-07	-0.1	-0.1	-0.1	26-Mar-07	-0.1	-0.1	-0.1
13-Dec-06	-0.1	-0.1	-0.1	3-Feb-07	-0.1	-0.1	-0.1	27-Mar-07	-0.1	-0.1	-0.1
14-Dec-06	-0.1	-0.1	-0.1	4-Feb-07	-0.1	-0.1	-0.1	28-Mar-07	-0.1	-0.1	-0.1
15-Dec-06	-0.1	-0.1	-0.1	5-Feb-07	-0.1	-0.1	-0.1	29-Mar-07	-0.1	-0.1	-0.1
16-Dec-06	-0.1	-0.1	-0.1	6-Feb-07	-0.1	-0.1	-0.1	30-Mar-07	-0.1	-0.1	-0.1
17-Dec-06	-0.1	-0.1	-0.1	7-Feb-07	-0.1	-0.1	-0.1	31-Mar-07	-0.1	-0.1	-0.1
18-Dec-06	-0.1	-0.1	-0.1	8-Feb-07	-0.1	-0.1	-0.1	1-Apr-07	-0.1	-0.1	-0.1
19-Dec-06	-0.1	-0.1	-0.1	9-Feb-07	-0.1	-0.1	-0.1	2-Apr-07	-0.1	-0.1	-0.1
20-Dec-06	-0.1	-0.1	-0.1	10-Feb-07	-0.1	-0.1	-0.1	3-Apr-07	-0.1	-0.1	-0.1
21-Dec-06	-0.1	-0.1	-0.1	11-Feb-07	-0.1	-0.1	-0.1	4-Apr-07	-0.1	-0.1	-0.1
22-Dec-06	-0.1	-0.1	-0.1	12-Feb-07	-0.1	-0.1	-0.1	5-Apr-07	-0.1	-0.1	-0.1
23-Dec-06	-0.1	-0.1	-0.1	13-Feb-07	-0.1	-0.1	-0.1	6-Apr-07	-0.1	-0.1	-0.1
24-Dec-06	-0.1	-0.1	-0.1	14-Feb-07	-0.1	-0.1	-0.1	7-Apr-07	-0.1	-0.1	-0.1
25-Dec-06	-0.1	-0.1	-0.1	15-Feb-07	-0.1	-0.1	-0.1	8-Apr-07	-0.1	-0.1	-0.1

Appendix C11: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025769
Location Kiskatinaw 18

Date	Mean	Max	Min	Date	Mean	Max	Min	Date	Mean	Max	Min
9-Apr-07	-0.1	-0.1	-0.1	31-May-07	17.0	18.6	15.3	22-Jul-07	21.4	24.4	18.8
10-Apr-07	-0.1	-0.1	-0.1	1-Jun-07	17.4	18.8	16.1	23-Jul-07	21.1	22.4	20.0
11-Apr-07	-0.1	-0.1	-0.1	2-Jun-07	18.5	20.6	16.9	24-Jul-07	18.7	20.0	17.5
12-Apr-07	-0.1	-0.1	-0.1	3-Jun-07	20.0	22.2	18.2	25-Jul-07	18.8	22.0	15.8
13-Apr-07	-0.1	-0.1	-0.1	4-Jun-07	20.8	23.0	18.8	26-Jul-07	20.3	23.1	17.7
14-Apr-07	-0.1	-0.1	-0.1	5-Jun-07	20.8	21.7	20.2	27-Jul-07	21.6	24.1	19.4
15-Apr-07	-0.1	-0.1	-0.1	6-Jun-07	19.3	20.9	17.9	28-Jul-07	21.5	23.5	20.0
16-Apr-07	-0.1	-0.1	-0.1	7-Jun-07	17.4	18.2	16.1	29-Jul-07	21.1	22.9	19.5
17-Apr-07	-0.1	0.0	-0.1	8-Jun-07	18.4	20.5	16.4	30-Jul-07	18.9	20.8	16.8
18-Apr-07	-0.1	0.0	-0.1	9-Jun-07	19.1	20.9	17.6	31-Jul-07	16.4	18.0	14.9
19-Apr-07	-0.1	0.0	-0.1	10-Jun-07	18.4	19.6	17.8	1-Aug-07	18.3	22.1	14.7
20-Apr-07	0.4	1.6	0.0	11-Jun-07	18.2	20.3	16.7	2-Aug-07	20.5	24.0	17.5
21-Apr-07	1.0	1.2	0.9	12-Jun-07	17.6	19.9	16.0	3-Aug-07	19.7	21.0	19.1
22-Apr-07	0.0	0.0	0.0	13-Jun-07	17.4	19.9	15.1	4-Aug-07	20.0	22.6	18.2
23-Apr-07	0.0	0.0	0.0	14-Jun-07	18.5	21.0	16.3	5-Aug-07	19.6	22.3	18.0
24-Apr-07	0.0	0.0	0.0	15-Jun-07	18.7	21.1	16.4	6-Aug-07	20.5	23.9	17.5
25-Apr-07	0.0	0.0	0.0	16-Jun-07	19.5	21.7	17.2	7-Aug-07	20.3	22.5	18.5
26-Apr-07	0.0	0.0	0.0	17-Jun-07	19.2	21.7	16.7	8-Aug-07	17.1	18.6	15.8
27-Apr-07	0.0	0.0	0.0	18-Jun-07	18.7	20.2	17.6	9-Aug-07	17.5	19.8	15.3
28-Apr-07	0.0	0.0	0.0	19-Jun-07	17.5	18.6	16.4	10-Aug-07	17.1	19.1	15.2
29-Apr-07	0.0	0.0	0.0	20-Jun-07	16.9	18.0	15.6	11-Aug-07	17.3	18.9	16.1
30-Apr-07	0.0	0.0	0.0	21-Jun-07	17.7	20.2	15.7	12-Aug-07	16.0	16.9	15.3
1-May-07	0.0	0.0	0.0	22-Jun-07	17.9	20.4	15.2	13-Aug-07	15.1	16.2	14.1
2-May-07	6.5	6.9	5.6	23-Jun-07	16.6	18.1	15.7	14-Aug-07	15.0	17.3	12.7
3-May-07	5.9	6.3	5.5	24-Jun-07	16.9	19.9	13.9	15-Aug-07	16.3	17.2	15.6
4-May-07	5.8	6.0	5.5	25-Jun-07	18.4	21.0	15.7	16-Aug-07	16.7	18.1	15.4
5-May-07	5.5	6.0	5.1	26-Jun-07	19.1	22.1	16.2	17-Aug-07	16.8	17.5	16.3
6-May-07	6.1	7.2	5.0	27-Jun-07	19.6	21.8	17.8	18-Aug-07	15.6	16.3	14.8
7-May-07	6.9	7.5	6.2	28-Jun-07	19.1	20.9	17.7	19-Aug-07	15.9	16.7	15.2
8-May-07	7.3	7.7	6.9	29-Jun-07	19.5	21.6	17.6	20-Aug-07	15.6	16.0	15.1
9-May-07	7.4	8.2	6.9	30-Jun-07	17.9	19.6	16.2	21-Aug-07	15.5	16.5	14.9
10-May-07	7.6	8.6	6.6	1-Jul-07	17.3	20.3	14.7	22-Aug-07	16.3	17.8	15.3
11-May-07	7.6	8.8	6.5	2-Jul-07	17.9	20.6	15.2	23-Aug-07	16.2	17.6	15.1
12-May-07	8.1	9.2	7.2	3-Jul-07	19.1	21.3	17.4	24-Aug-07	16.0	17.1	15.0
13-May-07	8.5	10.2	6.7	4-Jul-07	20.5	23.1	18.1	25-Aug-07	15.6	16.1	14.8
14-May-07	9.8	11.3	8.3	5-Jul-07	21.1	23.1	19.4	26-Aug-07	14.1	14.7	13.4
15-May-07	11.0	12.2	9.7	6-Jul-07	20.1	22.0	18.0	27-Aug-07	13.7	15.5	12.2
16-May-07	11.7	12.2	11.3	7-Jul-07	19.6	21.9	17.2	28-Aug-07	14.0	16.0	12.4
17-May-07	11.6	12.1	10.8	8-Jul-07	18.3	19.5	17.7	29-Aug-07	14.4	15.2	13.6
18-May-07	10.4	11.4	9.9	9-Jul-07	18.8	21.2	17.0	30-Aug-07	14.7	15.5	14.0
19-May-07	10.5	11.5	9.6	10-Jul-07	20.1	22.8	17.6	31-Aug-07	15.3	17.0	13.7
20-May-07	11.3	12.0	10.9	11-Jul-07	21.5	24.0	18.9	1-Sep-07	15.0	16.8	13.5
21-May-07	11.2	12.1	10.4	12-Jul-07	23.1	26.5	20.0	2-Sep-07	14.5	16.0	13.3
22-May-07	9.5	11.0	8.9	13-Jul-07	24.6	28.2	21.2	3-Sep-07	14.9	16.6	13.2
23-May-07	8.8	9.7	8.0	14-Jul-07	25.0	27.5	22.8	4-Sep-07	15.4	16.7	14.4
24-May-07	9.6	11.1	8.0	15-Jul-07	22.5	24.0	21.5	5-Sep-07	14.1	15.6	12.9
25-May-07	11.2	12.4	9.8	16-Jul-07	22.5	25.7	19.3	6-Sep-07	13.7	15.3	12.3
26-May-07	12.3	13.1	11.4	17-Jul-07	23.8	27.1	20.9	7-Sep-07	13.1	14.7	11.5
27-May-07	13.1	13.8	12.3	18-Jul-07	24.2	26.2	22.2	8-Sep-07	13.5	14.9	12.2
28-May-07	13.0	13.4	12.7	19-Jul-07	23.3	24.2	21.7	9-Sep-07	13.8	15.7	12.1
29-May-07	14.1	16.1	12.1	20-Jul-07	21.2	23.8	19.0	10-Sep-07	15.1	17.1	13.4
30-May-07	16.2	18.0	14.6	21-Jul-07	20.8	23.9	18.1	11-Sep-07	14.6	15.3	13.7

Appendix C11: Daily water temperature data from the 2006-2007 Peace River Water Quality Project.
Unit No. 1025769
Location Kiskatinaw 18

Date	Mean	Max	Min
12-Sep-07	13.3	14.9	11.8
13-Sep-07	12.7	14.6	11.0
14-Sep-07	12.9	15.0	11.4
15-Sep-07	12.7	13.8	11.4
16-Sep-07	12.6	14.0	11.6
17-Sep-07	10.3	11.2	9.4
18-Sep-07	8.9	9.7	7.6
19-Sep-07	7.5	9.0	5.8
20-Sep-07	8.4	9.7	7.2
21-Sep-07	9.1	11.1	7.8
22-Sep-07	8.7	9.7	8.2
23-Sep-07	8.2	9.3	7.4
24-Sep-07	7.3	8.4	6.4
25-Sep-07	8.8	10.7	7.5
26-Sep-07	8.9	10.0	7.9
27-Sep-07	8.1	9.3	7.3
28-Sep-07	7.5	8.7	6.5
29-Sep-07	6.6	8.0	5.6
30-Sep-07	6.9	8.0	5.9
1-Oct-07	7.9	9.3	7.1
2-Oct-07	7.1	8.7	6.0
3-Oct-07	5.9	7.2	4.8
4-Oct-07	5.3	5.8	4.8
5-Oct-07	5.2	6.4	4.3
6-Oct-07	5.4	6.8	4.3
7-Oct-07	5.9	6.8	5.2
8-Oct-07	5.2	6.5	4.2
9-Oct-07	4.1	4.9	3.0
10-Oct-07	4.7	5.5	4.0
11-Oct-07	4.8	6.3	4.0
12-Oct-07	3.8	4.8	3.0
13-Oct-07	3.3	4.0	2.5
14-Oct-07	4.6	5.6	3.7
15-Oct-07	5.1	5.8	4.4
16-Oct-07	5.9	6.6	5.4
17-Oct-07	6.0	7.1	4.8
18-Oct-07	4.1	4.9	3.5
19-Oct-07	3.8	4.5	3.3
20-Oct-07	3.3	4.2	2.3
21-Oct-07	2.0	2.5	1.3
22-Oct-07	3.1	3.9	2.2
23-Oct-07	4.0	4.5	3.6
24-Oct-07	4.0	4.9	2.9
25-Oct-07	2.1	2.8	1.5
26-Oct-07	1.2	1.8	0.8
27-Oct-07	1.5	2.3	0.7
28-Oct-07	2.1	2.7	1.4
29-Oct-07	2.3	2.7	1.9
30-Oct-07	1.8	2.3	1.0
31-Oct-07	2.0	2.5	1.6
1-Nov-07	1.2	1.7	0.5
2-Nov-07	0.6	1.2	0.1
3-Nov-07	0.5	1.0	0.1
4-Nov-07	-0.1	0.3	-0.1
5-Nov-07	-0.1	-0.1	-0.1
6-Nov-07	-0.1	-0.1	-0.1
7-Nov-07	-0.1	-0.1	-0.1
8-Nov-07	-0.1	-0.1	-0.1
9-Nov-07	-0.1	-0.1	-0.1
Mean	**6.6**	**7.4**	**6.0**
Max	**25.0**	**28.2**	**22.8**
Min	**-0.1**	**-0.1**	**-0.1**



APPENDIX D

Summary of Monthly Mean, Maximum, and Minimum Water Temperatures form the Peace River and Tributary Sites

May 15, 2009
Report No. 06-1490-006

Appendix D: Summary of monthly water temperature data collected from temperature data loggers placed in the Peace River watershed and selected tributaries between November 2006 and November 2007.

Peace River Mainstem

Year	Date	Peace 1				Peace 2				Peace 3				Peace 4				Peace 5			
		Mean	Max	Min	n	Mean	Max	Min	n	Mean	Max	Min	n	Mean	Max	Min	n	Mean	Max	Min	n
2006	Nov.									3.3	7.0	0.9	27.4	3.3	7.0	0.8	27.5	1.7	5.6	-0.1	26.0
	Dec.									1.8	2.8	0.9	31.0	1.8	2.8	0.9	31.0	1.1	2.4	-0.1	31.0
2007	Jan.									0.4	1.9	-0.1	31.0	0.4	1.9	-0.1	31.0	0.2	1.8	-0.1	31.0
	Feb.									0.0	0.3	-0.1	28.0	0.0	0.3	-0.1	28.0	-0.1	0.0	-0.1	28.0
	Mar.	0.6	1.5	-0.1	23.1	0.6	2.5	-0.3	21.9	0.5	2.6	-0.1	30.6	0.5	2.0	-0.1	31.0	0.5	3.4	-0.1	30.8
	April	1.4	2.5	0.0	29.2	2.0	4.3	0.0	22.7	1.7	4.2	-0.1	24.4	1.7	4.4	-0.1	28.6	1.8	6.1	-0.1	30.0
	May	2.8	4.2	1.4	31.0	3.8	6.7	1.6	31.0	5.2	8.4	2.8	31.0	4.9	9.9	2.7	29.0	6.9	1.5	4.1	31.0
	June	5.7	8.6	3.6	30.0	7.2	10.3	4.2	30.0	8.8	11.0	6.4	30.0	9.3	11.3	7.3	26.8	11.1	13.4	8.8	30.0
	July	9.3	11.0	7.8	31.0	10.5	14.2	8.0	26.0	10.8	13.0	9.0	31.0	11.6	13.7	9.8	31.0	14.0	17.7	11.9	31.0
	Aug.	9.3	12.1	7.6	31.0	10.3	14.5	7.5	29.3	10.7	13.4	8.3	14.4	10.7	13.6	8.6	31.0	12.1	15.5	9.8	25.2
	Sept.	11.3	12.6	8.3	30.0	11.4	13.2	8.4	30.0					11.4	13.5	9.5	30.0	11.6	14.9	9.7	30.0
	Oct.	9.8	11.0	8.7	31.0	9.5	11.0	8.4	31.0					9.1	10.8	7.8	31.0	8.4	11.1	6.8	31.0
	Nov.	7.8	8.7	7.0	14.4	7.4	8.4	6.6	14.5					7.2	7.9	6.4	9	6.3	7.3	5.2	8.0
Mean		**6.6**			**27.9**	**6.2**			**26.3**	**2.3**			**26.9**	**3.1**			**27.4**	**2.9**			**27.4**
Max.		**11.3**	**12.6**	**8.7**	**31.0**	**11.4**	**14.5**	**8.4**	**31.0**	**10.8**	**13.4**	**9.0**	**31.0**	**11.6**	**13.7**	**9.8**	**31.0**	**14.0**	**17.7**	**11.9**	**31.0**
Min.		**0.6**	**1.5**	**-0.1**	**14.4**	**0.6**	**2.5**	**-0.3**	**14.5**	**0.0**	**0.3**	**-0.1**	**14.4**	**0.0**	**0.3**	**-0.1**	**8.6**	**-0.1**	**0.0**	**-0.1**	**8.0**

Peace River Tributaries

Year	Date	Moberly 6				Halfway 9				Farrell 11				Pine 16				Beatton 17				Kiskatinaw 18			
		Mean	Max	Min	n	Mean	Max	Min	n	Mean	Max	Min	n	Mean	Max	Min	n	Mean	Max	Min	n	Mean	Max	Min	n
2006	Nov.													-0.1	0.1	-0.4	27.5					-0.1	-0.1	-0.1	26.4
	Dec.													-0.1	0.0	-0.1	31.0					-0.1	-0.1	-0.1	31.0
2007	Jan.													-0.1	0.0	-0.4	31.0					-0.1	-0.1	0.1	31.0
	Feb.													-0.2	-0.1	-0.3	28.0					-0.1	-0.1	-0.1	28.0
	Mar.	-0.1	0.1	-0.1	28.4	-0.1	0.0	-0.1	26.5	-0.1	0.5	-0.5	27.4	-0.2	-0.1	-0.3	31.0					-0.1	-0.1	-0.1	31.0
	April	0.0	0.7	-0.2	9.0	1.8	8.3	-0.1	29.5	2.3	9.1	-0.1	25.4	1.4	7.9	-0.1	30.0					-0.1	1.6	-0.1	29.5
	May	8.8	14.1	3.9	29.1	8.8	14.4	3.7	31.0	7.8	14.4	3.1	23.4	7.1	10.6	5.3	31.0	11.3	18.2	7.7	15.4	8.6	18.6	5.0	31.0
	June	13.5	15.7	10.6	29.9	10.9	14.0	7.7	30.0	16.9	22.0	11.7	24.2	9.3	11.4	7.0	30.0	17.8	22.3	13.9	30.0	18.5	23.0	13.9	30.0
	July	18.2	21.3	14.4	31.0	16.1	20.5	10.7	31.0	20.0	29.6	13.5	31.0	15.2	19.9	11.1	31.0	19.7	25.0	13.3	24.4	20.8	28.2	14.7	31.0
	Aug.	16.1	19.6	13.3	31.0	15.0	19.4	10.6	31.0	16.3	25.7	10.5	31.0	16.2	20.6	13.2	20.6	15.3	21.2	10.5	16.5	16.7	24.0	12.2	31.0
	Sept.	11.9	14.9	7.6	30.0	10.0	14.2	5.3	30.0	10.9	18.0	4.7	30.0	11.0	17.8	5.0	19.0	11.1	17.0	5.6	30.0	11.2	17.1	5.6	30.0
	Oct.	5.4	8.0	3.3	31.0	3.7	8.1	0.6	31.0	3.8	10.0	-0.1	31.0	5.3	11.6	3.0	31.0	4.9	10.0	0.5	31.0	4.1	9.3	0.7	31.0
	Nov.	2.2	3.7	1.2	6.5	0.3	1.8	-0.1	5.4	0.1	1.5	-0.1	6.6	1.4	3.4	0.2	8.0	0.2	2.4	-0.1	30.0	0.2	1.7	-0.1	8.5
Mean		**7.4**			**25.1**	**8.4**			**27.3**	**6.3**			**25.6**	**2.3**			**25.7**				**25.3**	**3.0**			**28.1**
Max.		**18.2**	**21.3**	**14.4**	**31.0**	**16.1**	**20.5**	**10.7**	**31.0**	**20.0**	**29.6**	**13.5**	**31.0**	**16.2**	**20.6**	**13.2**	**31.0**	**19.7**	**25.0**	**13.9**	**31.0**	**20.8**	**28.2**	**14.7**	**31.0**
Min.		**-0.1**	**0.1**	**-0.2**	**6.5**	**-0.1**	**0.0**	**-0.1**	**5.4**	**-0.1**	**0.5**	**-0.5**	**6.6**	**-0.2**	**-0.1**	**-0.4**	**8.0**	**0.2**	**2.4**	**-0.1**	**15.4**	**-0.1**	**-0.1**	**-0.1**	**8.5**

n = Days

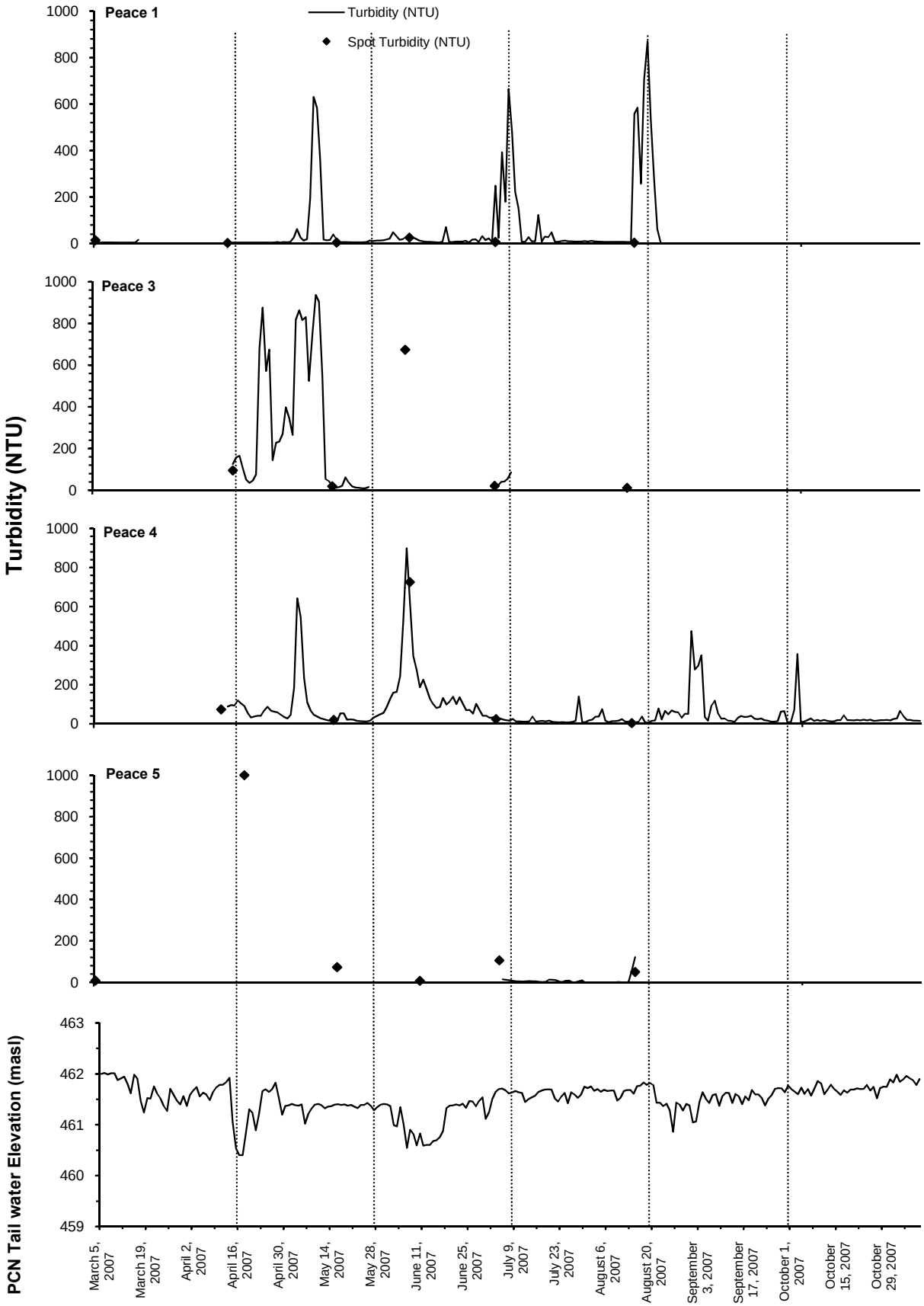
APPENDIX E

Temperature, Conductivity and Turbidity Readings from YSI Data Logging Sondes Located in the Peace River between March and November 2007

May 15, 2009
Report No. 06-1490-006

Golder Associates

Appendix E: Plots of continuous turbidity readings from YSI data logging sondes located in the Peace River Mainstem between March and November of 2007.



Appendix E: Continuous temperature, conductivity and turbidity readings from YSI data logging sondes located in the Peace River mainstem between March and November of 2007.

Date	Site Peace 4					Site Peace 3					Site Peace 1					Site Peace 5					PCN Tailwater Elevation (masl)
	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	
05-Mar-07											0.5	189.4	197.0	5.2	13.4			181		8.1	462.00221
06-Mar-07											0.5	189.4		4.2							462.02108
07-Mar-07											0.6	191.3		4.1							461.98988
08-Mar-07											0.7	190.0		4.2							462.01433
09-Mar-07											0.8	189.9		4.5							462.01642
10-Mar-07											0.6	190.0		4.3							461.88346
11-Mar-07											0.6	189.3		4.2							461.91392
12-Mar-07											0.6	189.9		4.1							461.94675
13-Mar-07											0.6	185.5		4.1							461.80308
14-Mar-07											0.6	192.3		4.0							461.62225
15-Mar-07											0.5	191.0		4.0							461.98525
16-Mar-07											0.5	190.1		4.1							461.911
17-Mar-07											0.5	168.3		4.2							461.46542
18-Mar-07											0.3	188.0		14.9							461.241
19-Mar-07																					461.52783
20-Mar-07																					461.51475
21-Mar-07																					461.75625
22-Mar-07																					461.6155
23-Mar-07																					461.51479
24-Mar-07																					461.36975
25-Mar-07																					461.26888
26-Mar-07																					461.70733
27-Mar-07																					461.58833
28-Mar-07																					461.47754
29-Mar-07																					461.40267
30-Mar-07																					461.56238
31-Mar-07																					461.37129
01-Apr-07																					461.58658
02-Apr-07																					461.6745
03-Apr-07																					461.74408
04-Apr-07																					461.55742
05-Apr-07																					461.63075
06-Apr-07																					461.59996

Appendix E: Continuous temperature, conductivity and turbidity readings from YSI data logging sondes located in the Peace River mainstem between March and November of 2007.

Date	Site Peace 4					Site Peace 3					Site Peace 1					Site Peace 5					PCN Tailwater Elevation (masl)
	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	
07-Apr-07																					461.48633
08-Apr-07																					461.64071
09-Apr-07																					461.73946
10-Apr-07																					461.78775
11-Apr-07																					461.78875
12-Apr-07					73.0																461.83704
13-Apr-07	10.0	85.4		34.9																	461.92325
14-Apr-07	2.5	199.6		87.8									174.0		1.2						461.05025
15-Apr-07	2.8	204.9		95.0							1.6	185.6		3.7							460.52854
16-Apr-07	3.1	218.3		92.9		3.3	214.3		125.6	95.0	1.6	185.0		3.6							460.40113
17-Apr-07	3.1	227.3		118.7		3.0	220.2		157.6		1.7	184.7		3.6							460.40138
18-Apr-07	3.5	229.3		103.9		3.4	225.3		164.0		1.7	185.5		4.4							460.82963
19-Apr-07	2.9	211.5		90.4		2.7	208.8		103.7		1.7	186.3		3.8				221		1000.0	461.30354
20-Apr-07	2.5	203.9		53.9		2.3	203.3		51.7		1.6	185.4		3.6							461.23833
21-Apr-07	2.3	202.3		32.1		2.3	202.2		34.9		1.6	185.1		3.6							460.88904
22-Apr-07	3.1	205.2		37.1		3.1	205.0		46.6		1.6	185.3		3.6							461.21063
23-Apr-07	3.1	197.8		40.6		3.0	197.4		75.6		1.7	185.0		4.0							461.6615
24-Apr-07	3.1	197.2		41.1		3.0	197.9		680.6		1.7	185.0		4.2							461.69917
25-Apr-07	3.0	199.3		67.0		3.0	200.5		875.2		1.7	185.0		4.1							461.64804
26-Apr-07	3.0	196.9		86.5		2.9	198.4		571.0		1.7	184.4		4.1							461.70579
27-Apr-07	3.1	194.7		66.3		3.1	196.6		674.3		1.8	184.2		4.2							461.82792
28-Apr-07	3.6	194.1		62.3		3.6	196.0		143.6		1.9	184.5		4.3							461.53838
29-Apr-07	3.6	194.5		57.8		3.6	195.9		227.5		2.0	184.6		6.0							461.20129
30-Apr-07	3.9	195.4		47.3		3.9	195.8		232.0		1.9	183.8		4.3							461.37013
01-May-07	3.6	192.2		34.6		3.5	192.7		269.4		1.7	182.7		5.7							461.38038
02-May-07	3.4	191.0		27.3		3.3	192.0		397.2		1.7	182.7		5.4							461.41146
03-May-07	2.9	192.0		45.3		3.0	192.8		346.4		1.8	184.7		7.4							461.38775
04-May-07	3.3	199.0		184.1		3.4	199.0		265.3		1.9	184.0		26.2							461.37508
05-May-07	3.6	198.3		641.9		3.7	200.4		817.5		2.1	183.6		61.2							461.40317
06-May-07	4.3	189.0		546.1		4.3	189.2		862.6		2.2	183.9		25.8							461.01913
07-May-07	4.8	188.4		234.0		4.8	187.4		815.5		2.3	184.0		12.0							461.20871
08-May-07	4.5	188.2		109.4		4.6	187.8		830.3		2.4	183.6		18.7							461.32092
09-May-07	4.5	190.0		67.0		4.5	189.6		523.7		2.4	183.7		194.2							461.39854

Appendix E: Continuous temperature, conductivity and turbidity readings from YSI data logging sondes located in the Peace River mainstem between March and November of 2007.

	Site Peace 4					Site Peace 3					Site Peace 1					Site Peace 5					
Date	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	PCN Tailwater Elevation (masl)
10-May-07	4.5	190.8		45.6		4.5	191.7		745.5		2.4	184.7		630.4							461.41113
11-May-07	4.5	191.9		36.5		4.5	192.9		936.2		2.5	185.0		583.0							461.38763
12-May-07	4.7	199.3		28.5		4.7	194.7		903.9		2.6	185.6		358.1							461.32542
13-May-07	4.8	194.0		23.5		4.8	195.0		545.0		2.7	185.5		16.7							461.35571
14-May-07	5.1	194.6		18.0		5.1	195.7		53.2		2.7	185.0		13.2							461.36583
15-May-07	5.3	194.6		15.1		5.3	196.0		43.3		2.8	184.7		15.6							461.39463
16-May-07	5.5	195.9	185.0	13.6	19.5	5.5	196.5	186.0	21.0	18.6	2.9	183.0		38.2				188			461.40625
17-May-07	5.4	196.7		12.9		5.4	198.3		11.0		3.0	179.3	173.0	15.8	3.1					73.0	461.38958
18-May-07	4.7	200.9		53.7		4.8	199.4		14.4		2.9	183.0		5.4							461.40017
19-May-07	4.6	202.4		52.8		4.6	201.6		20.4		2.9	183.0		5.7							461.37917
20-May-07	5.0	202.3		20.1		5.0	204.1		61.3		3.0	183.0		5.6							461.39375
21-May-07	5.3	202.5		22.0		5.6	204.7		37.5		3.1	183.0		5.4							461.3585
22-May-07	5.2	201.5		20.8		5.3	201.7		18.6		3.1	183.0		5.1							461.32796
23-May-07	5.0	202.0		14.8		5.2	201.6		13.0		3.2	183.0		5.3							461.39192
24-May-07	5.7	201.6		12.6		5.9	201.7		11.1		3.3	183.1		5.0							461.39333
25-May-07	6.3	202.2		11.5		6.4	202.2		9.7		3.4	183.1		4.8							461.42929
26-May-07	6.7	203.7		11.4		6.9	203.7		9.1		3.6	183.5		6.2							461.37238
27-May-07	6.7	207.0		15.2		6.8	205.5		15.5		3.7	183.5		12.5							461.28521
28-May-07	6.4	210.4		30.7		7.3	2.0		-2.3		3.7	183.3		10.6							461.34783
29-May-07	6.6	212.7		39.5		13.9	0.0		-1.9		3.8	183.0		12.2							461.39663
30-May-07	7.4	215.1		48.6		14.9	0.0		-1.3		3.9	183.2		12.1							461.41042
31-May-07	7.5	217.4		55.9		18.0	0.0		-0.2		3.9	183.3		13.2							461.39921
01-Jun-07	7.7	221.2		85.8		20.5	0.0		0.0		3.9	183.1		16.8							461.36683
02-Jun-07	8.3	228.1		126.3		23.1	0.0		0.0		4.0	183.1		20.7							460.994
03-Jun-07	9.5	234.1		159.4		24.3	0.0		0.0		4.2	183.1		47.7							460.96904
04-Jun-07	9.7	231.3		163.1		21.8	0.0		0.1		4.2	183.0		32.3							461.34575
05-Jun-07	9.1	231.9		242.3		22.4	0.0		-3.6		4.3	183.0		15.4							461.01796
06-Jun-07	9.0	239.9		525.8		22.7	0.0		-0.2		4.5	183.0		18.1							460.54525
07-Jun-07	8.6	245.1		897.8		25.3	0.0	226.0	-1.1	674.0	4.5	182.7		28.2							460.90271
08-Jun-07	8.4	244.1	222.0	627.9	725.0	22.2	0.0		-0.2		4.9	174.6	162.0	31.0	24.7			178			460.81421
09-Jun-07	9.2	246.1		346.5		25.2	0.0		-0.5		4.8	180.3		25.7							460.59417
10-Jun-07	9.6	251.2		274.1		24.7	0.0		-0.4		4.8	181.0		19.7							460.83008
11-Jun-07	8.9	240.9		187.0		19.4	0.0		-1.6		5.0	182.1		12.7						7.1	460.59033

Appendix E: Continuous temperature, conductivity and turbidity readings from YSI data logging sondes located in the Peace River mainstem between March and November of 2007.

	Site Peace 4					Site Peace 3					Site Peace 1					Site Peace 5					
Date	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	PCN Tailwater Elevation (masl)
12-Jun-07	9.5	248.0		225.5		18.6	0.0		-0.2		5.2	182.3		8.8							460.60154
13-Jun-07	9.9	247.0		180.7		18.4	0.0		-0.3		5.3	182.3		7.3							460.60129
14-Jun-07	10.1	246.2		129.1		14.9	0.0		-0.3		5.4	182.2		7.0							460.67917
15-Jun-07	9.9	242.5		102.0		15.3	0.0		0.0		5.4	183.0		5.8							460.69433
16-Jun-07	10.0	240.4		80.5		15.0	0.0		0.0		5.3	183.2		5.0							460.75763
17-Jun-07	9.7	238.8		86.0		15.8	0.0		0.0		5.5	184.0		4.0							460.879
18-Jun-07	9.6	232.0		131.9		16.8	0.0		0.0		5.5	184.0		7.6							461.32675
19-Jun-07	8.4	226.2		98.0		15.8	0.0		0.0		5.2	184.0		69.6							461.37475
20-Jun-07	8.0	227.3		113.0		14.1	0.0		0.0		5.4	184.7		5.9							461.38217
21-Jun-07	8.3	225.3		137.6		13.1	0.0		-1.3		6.3	186.5		6.3							461.4025
22-Jun-07	9.1	227.0		100.5		12.1	0.0		-1.8		6.6	187.2		8.0							461.37983
23-Jun-07	9.0	226.5		136.0		11.2	0.0		-1.9		6.4	187.1		8.5							461.41763
24-Jun-07	8.8	226.6		101.0		10.6	0.0		-1.0		7.0	187.7		7.6							461.33363
25-Jun-07	9.6	228.5		69.4		9.9	0.0		-1.9		7.6	188.0		11.1							461.47025
26-Jun-07	10.3	226.7		71.2		9.5	0.0		-2.0		7.9	187.6		3.9							461.45946
27-Jun-07	10.6	224.3		51.9		9.4	0.0		-2.0		8.3	186.5		16.9							461.36017
28-Jun-07	10.5	225.7		101.3		9.2	0.0		-2.1		8.3	185.4		17.7							461.46683
29-Jun-07	10.3	223.0		69.2		9.2	0.0		-2.1		8.3	183.7		5.6							461.54179
30-Jun-07	10.3	225.7		40.4		9.1	0.0		-2.1		8.2	183.5		31.0							461.118
01-Jul-07	10.5	225.9		40.6		8.9	0.0		-2.1		8.1	184.1		14.6							461.25188
02-Jul-07	10.7	221.6		31.3		8.7	0.0		-1.7		8.5	182.1		21.7							461.50583
03-Jul-07	11.4	218.1		31.4		8.6	0.0		-1.6		9.2	181.1		5.8							461.64979
04-Jul-07	11.8	213.9	178.0	38.7	23.2	8.3	0.4	188.0	12.5	20.5	9.4	177.2	169.0	254.1	5.9						461.704
05-Jul-07	11.9	208.2		28.3		9.4	38.4		21.0		10.6	5.0		1.9				180		106.0	461.71104
06-Jul-07	11.6	210.9		22.4		9.3	150.5		39.5		9.2	179.1		24.1		13.76	206.3		14.0		461.67963
07-Jul-07	11.5	210.1		18.4		7.5	215.9		42.3		9.1	178.3		392.6		13.49	204.9		12.2		461.616
08-Jul-07	10.8	209.2		15.7		7.9	216.4		54.9		9.1	178.0		179.4		12.78	202.9		9.4		461.63563
09-Jul-07	11.1	209.0		24.3		8.0	199.8		85.4		9.1	178.9		665.2		12.51	203		6.8		461.66483
10-Jul-07	11.6	208.8		12.1		26.5	2.9		-3.1		9.4	179.0		480.8		13.25	204.3		5.1		461.63996
11-Jul-07	11.6	207.5		11.5							9.2	179.0		222.1		13.6	205.8		4.5		461.62663
12-Jul-07	12.0	207.0		10.2							9.4	179.0		149.0		14.19	205.6		3.3		461.448
13-Jul-07	12.9	208.3		11.2							9.6	178.9		6.8		15.48	206.2		5.0		461.50838
14-Jul-07	13.2	205.8		11.7							9.9	178.9		6.8		16.02	202		5.5		461.53846

Appendix E: Continuous temperature, conductivity and turbidity readings from YSI data logging sondes located in the Peace River mainstem between March and November of 2007.

	Site Peace 4					Site Peace 3					Site Peace 1					Site Peace 5					
Date	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	PCN Tailwater Elevation (masl)
15-Jul-07	12.4	205.5		36.5							10.1	178.2		27.0		15.29	200.3		4.6		461.57358
16-Jul-07	12.1	203.3		10.4							9.8	177.7		9.2		14.51	198.4		4.1		461.644
17-Jul-07	12.1	201.4		13.1							9.5	176.2		8.7		14.61	194.9		2.4		461.67733
18-Jul-07	11.6	201.4		14.8							9.0	177.2		122.3		14.15	195.3		1.3		461.69192
19-Jul-07	11.5	200.9		12.2							8.9	177.7		6.9		13.65	197.3		2.7		461.70025
20-Jul-07	11.4	201.9		15.6							8.8	179.1		29.1		13.77	200.5		13.4		461.69275
21-Jul-07	11.1	204.0		9.6							8.4	179.1		26.7		13.64	202.5		11.2		461.51713
22-Jul-07	11.0	203.5		8.5							8.1	179.7		48.4		13.54	203.6		11.0		461.45663
23-Jul-07	11.6	199.6		6.5							9.2	177.6		6.6		13.99	207.2		3.5		461.55617
24-Jul-07	11.2	197.3		7.8							9.5	176.5		7.1		13.36	205.8		0.6		461.62808
25-Jul-07	11.8	199.2		6.7							9.8	175.3		10.2		13.51	203.6		7.0		461.42454
26-Jul-07	11.7	196.6		7.2							9.4	178.5		12.3		13.91	204.3		8.0		461.63983
27-Jul-07	12.4	194.0		10.0							10.2	175.5		9.1		13.96	198.9		-0.4		461.59933
28-Jul-07	12.8	193.2		14.3							10.7	174.1		8.6		14.49	198.9		-0.4		461.53271
29-Jul-07	12.2	195.9		139.4							10.4	175.1		7.9		14.34	199.5		4.2		461.59529
30-Jul-07	11.5	192.9		7.4							9.9	176.4		8.2		13.39	200.8		8.9		461.75321
31-Jul-07	10.8	192.8		8.0							9.4	176.5		8.4		12.56	199.4		-1.2		461.72108
01-Aug-07	11.0	191.9		16.9							9.1	177.0		9.8		12.27	199.6		-2.4		461.75529
02-Aug-07	12.9	189.0		20.6							10.9	173.4		8.0		13.78	195.4		-2.2		461.66858
03-Aug-07	13.0	187.5		35.2							11.7	170.9		11.7		14.3	193.3		-2.1		461.70371
04-Aug-07	12.4	188.6		37.5							11.2	171.8		8.2		13.8	193.4		-1.8		461.65313
05-Aug-07	11.9	191.0		74.6							10.5	172.9		7.2		13.54	195.2		-0.7		461.68775
06-Aug-07	11.9	190.8		15.4							9.9	174.0		7.3		13.51	196.8		-0.8		461.66654
07-Aug-07	11.9	191.2		6.9							10.0	174.6		7.0		13.72	197.4		-1.9		461.67633
08-Aug-07	10.8	191.3		13.1							9.7	175.0		6.4		12.57	197.1		-1.2		461.67575
09-Aug-07	10.8	192.6		13.6												11.95	198.6		-0.1		461.47754
10-Aug-07	11.6	191.2		15.2												12.74	204.1		1.1		461.532
11-Aug-07	10.3	191.5		23.6												12.48	203.1		0.5		461.6655
12-Aug-07	9.3	193.8		11.2												10.85	202.2		-0.8		461.68296
13-Aug-07	9.2	194.9		10.7				192.6		11.2						10.44	206.7		0.6		461.68413
14-Aug-07	9.6	196.0	143.5	11.4	2.9											11.1	216.9		54.3		461.6105
15-Aug-07	9.9	196.3		7.3									181.0		2.7	12.26	246	192.7	121.5	50.1	461.76258
16-Aug-07	10.5	193.9		10.1																	461.76979

Appendix E: Continuous temperature, conductivity and turbidity readings from YSI data logging sondes located in the Peace River mainstem between March and November of 2007.

	Site Peace 4					Site Peace 3					Site Peace 1					Site Peace 5					
Date	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	PCN Tailwater Elevation (masl)
17-Aug-07	10.9	191.9		36.8																	461.83221
18-Aug-07	9.7	192.7		6.6																	461.78721
19-Aug-07	9.3	194.1		5.7																	461.82575
20-Aug-07	9.3	195.1		14.2																	461.77992
21-Aug-07	10.0	198.7		17.0																	461.43417
22-Aug-07	10.7	201.7		78.5																	461.43346
23-Aug-07	11.5	200.7		22.5																	461.36513
24-Aug-07	11.6	201.9		65.2																	461.41592
25-Aug-07	10.6	204.4		48.6																	461.28779
26-Aug-07	9.7	210.7		68.7																	460.86492
27-Aug-07	10.2	221.6		60.8																	461.44013
28-Aug-07	10.2	208.0		58.0																	461.39413
29-Aug-07	10.2	207.2		30.9																	461.27888
30-Aug-07	10.2	206.0		50.3																	461.4085
31-Aug-07	10.4	205.7		50.7																	461.37963
01-Sep-07	10.4	207.5		474.1																	461.04679
02-Sep-07	10.1	212.0		277.3																	461.06275
03-Sep-07	10.5	206.3		295.9																	461.4475
04-Sep-07	11.1	200.5		350.1																	461.64167
05-Sep-07	10.8	197.7		34.6																	461.50771
06-Sep-07	10.4	199.7		15.3																	461.42963
07-Sep-07	10.9	195.0		91.5																	461.58463
08-Sep-07	11.7	192.5		118.0																	461.60308
09-Sep-07	12.4	191.0		53.8																	461.37321
10-Sep-07	12.9	190.2		25.2																	461.56342
11-Sep-07	12.5	188.6		26.7																	461.63179
12-Sep-07	12.4	186.4		16.2																	461.62925
13-Sep-07	12.5	187.5		14.0																	461.431
14-Sep-07	12.2	187.4		10.0																	461.60754
15-Sep-07	11.8	187.7		30.1																	461.563
16-Sep-07	11.9	187.5		39.3																	461.40642
17-Sep-07	11.6	187.1		34.1																	461.55754
18-Sep-07	11.4	183.1		35.1																	461.48258

Appendix E: Continuous temperature, conductivity and turbidity readings from YSI data logging sondes located in the Peace River mainstem between March and November of 2007.

Date	Site Peace 4					Site Peace 3					Site Peace 1					Site Peace 5					PCN Tailwater Elevation (masl)
	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	
19-Sep-07	11.4	184.0		40.2																	461.68683
20-Sep-07	11.9	182.7		25.6																	461.59796
21-Sep-07	11.4	183.9		22.7																	461.59725
22-Sep-07	11.3	183.8		26.9																	461.52496
23-Sep-07	11.5	182.8		18.2																	461.38067
24-Sep-07	11.3	182.8		16.2																	461.5155
25-Sep-07	11.6	183.1		11.1																	461.58296
26-Sep-07	11.1	182.9		11.1																	461.70813
27-Sep-07	11.0	182.2		13.7																	461.72217
28-Sep-07	11.2	180.1		61.7																	461.71867
29-Sep-07	11.0	179.2		64.3																	461.64138
30-Sep-07	10.8	181.5		6.6																	461.76942
01-Oct-07	10.7	182.3		8.1																	461.70146
02-Oct-07	10.0	185.9		71.3																	461.65308
03-Oct-07	9.5	188.4		356.7																	461.60488
04-Oct-07	9.6	185.9		8.7																	461.73196
05-Oct-07	10.0	184.4		10.9																	461.60696
06-Oct-07	10.1	183.8		18.7																	461.70608
07-Oct-07	9.5	186.4		27.4																	461.57196
08-Oct-07	9.1	187.8		14.0																	461.71813
09-Oct-07	9.3	184.6		19.5																	461.86221
10-Oct-07	9.5	185.6		14.1																	461.81496
11-Oct-07	9.8	185.2		19.7																	461.60271
12-Oct-07	9.3	187.0		14.7																	461.69496
13-Oct-07	8.9	187.8		11.6																	461.7925
14-Oct-07	9.5	186.0		12.0																	461.70642
15-Oct-07	10.0	184.7		17.8																	461.65217
16-Oct-07	10.0	187.4		18.7																	461.58904
17-Oct-07	9.9	188.2		43.0																	461.68088
18-Oct-07	9.3	190.3		18.4																	461.62938
19-Oct-07	9.0	191.4		18.5																	461.69233
20-Oct-07	8.7	193.3		17.5																	461.694
21-Oct-07	8.3	192.2		18.9																	461.71592

Appendix E: Continuous temperature, conductivity and turbidity readings from YSI data logging sondes located in the Peace River mainstem between March and November of 2007.

	Site Peace 4					Site Peace 3					Site Peace 1					Site Peace 5					
Date	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	Temperature (°C)	Conductivity (µS/cm)	Spot Conductivity (µS/cm)	Turbidity (NTU)	Spot Tubidity (NTU)	PCN Tailwater Elevation (masl)
22-Oct-07	8.6	192.4		17.1																	461.70325
23-Oct-07	8.7	192.0		20.5																	461.70938
24-Oct-07	8.7	189.8		16.5																	461.78646
25-Oct-07	8.3	187.4		20.8																	461.67625
26-Oct-07	8.2	188.6		14.8																	461.74671
27-Oct-07	8.3	190.3		15.1																	461.51992
28-Oct-07	8.3	188.8		18.3																	461.72379
29-Oct-07	8.3	188.7		17.7																	461.75388
30-Oct-07	8.0	188.3		18.9																	461.74483
31-Oct-07	8.1	189.4		17.3																	461.89725
01-Nov-07	7.7	189.8		24.4																	461.83575
02-Nov-07	7.6	189.5		27.2																	461.98842
03-Nov-07	7.4	187.5		66.0																	461.84821
04-Nov-07	7.3	186.8		38.8																	461.89554
05-Nov-07	7.0	188.1		19.2																	461.96213
06-Nov-07	7.1	188.0		19.5																	461.91417
07-Nov-07	7.1	188.0		15.7																	461.87658
08-Nov-07	6.8	188.5		15.6																	461.78375
09-Nov-07	6.5	190.2		14.0																	461.90054

APPENDIX F

Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 - November 2007

May 15, 2009
Report No. 06-1490-006

Golder Associates

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Peace 1 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	15-APR-07	17-MAY-07	08-JUN-07	04-JUL-07	14-AUG-07	14-AUG-07			
Sample Period	Winter	Spring 1	Spring 2	Spring 3	Spring 3	Late Summer	Late Summer			
Date Sampled	04-MAR-07	15-APR-07	17-MAY-07	08-JUN-07	04-JUL-07	14-AUG-07	14-AUG-07			
Time Sampled	10:25	16:45	11:45	16:00	10:00	N/A	11:15			
ALS Sample ID	L483753-10	L496604-5	L507216-1	L515733-1	L527080-5	L542126-19	L542126-1			
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Hardness (as CaCO3) (mg/L)	92.5	94	99.7	95.4	105	91	92.1			
Colour, True (CU)	<5.0	<5.0	5.0	7.3	6.1	6.0	6.0			
Conductivity (µS/cm)	188	176	186	171	180	178	173			
pH (mg/L)	8.22	8.16	7.88	8.17	8.16	8.13	8.07			
Total Dissolved Solids (mg/L)	111	101	109	111	98.0	110	101			
Total Suspended Solids (mg/L)	<3.0	<3.0	3.7	14.8	5.5	<3.0	3.5			
Turbidity (NTU)	1.07	1.41	3.88	22.8	5.56	2.64	2.54			
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	<0.004	<0.004	0.0086	0.010	0.0085	0.011	0.012			
Ammonia as N (mg/L)	<0.020	<0.020	0.024	0.031	<0.020	<0.020	<0.020			
Acidity (to pH 8.3) CaCO3 (mg/L)	2.0	1.0	5.9	1.7	1.2	<1.0	<1.0			
Alkalinity-Total CaCO3 (mg/L)	91.1	76.0	84.2	77.2	72.0	80.8	78.2			
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050			
Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			
Fluoride (F) (mg/L)	0.041	0.038	0.035	0.027	<0.020	0.035	0.037			
Sulfate (SO4) (mg/L)	15.5	13.0	12.5	12.3	12.1	12.2	12.2			
Sulphide as S (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020			
Nitrate and Nitrite as N (mg/L)	0.0675	0.053	0.052	0.138	0.0563	0.0735	0.0533			
Nitrate (as N) (mg/L)			0.0520	0.138	0.0563	0.0735	0.0523			
Nitrite (as N) (mg/L)			<0.0010	<0.0010	<0.0010	<0.0010	0.0010			
Total Kjeldahl Nitrogen (mg/L)	0.084	0.098	0.075	0.227	0.122	0.143	0.140			
Total Nitrogen (mg/L)	0.152	0.151	0.18	0.365	0.178	0.12	0.16			
Ortho Phosphate as P (mg/L)	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0010			
Total Dissolved Phosphate P (mg/L)	0.0023	<0.0020	<0.0020	0.0026	<0.0020	<0.0020	<0.0020			
Total Phosphate as P (mg/L)	0.0051	0.0037	0.0066	0.0232	0.0092	0.0056	0.0054			

Sample Site: Peace 1 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	15-APR-07	17-MAY-07	08-JUN-07	04-JUL-07	14-AUG-07	14-AUG-07			
Total Metals										
Aluminum (Al)-Total (mg/L)	0.0236	0.0369	0.0278	0.0650	0.049	0.0257	0.0287			
Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010			
Arsenic (As)-Total (mg/L)	0.00018	0.00021	0.00020	0.00021	0.00022	0.00019	0.00019			
Barium (Ba)-Total (mg/L)	0.0299	0.0313	0.0335	0.0440	0.0313	0.0304	0.0295			
Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050			
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050			
Boron (B)-Total (mg/L)	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010			
Cadmium (Cd)-Total (mg/L)	<0.000050	<0.000050	<0.00010	<0.000050	<0.000050	<0.000050	<0.000050			
Calcium (Ca)-Total (mg/L)	27.1	29.8	28.8	28.3	30.4	26.8	26.1			
Chromium (Cr)-Total (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050			
Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00020	0.00012	<0.00010	<0.00010	<0.00010			
Copper (Cu)-Total (mg/L)	0.00057	0.00078	0.00080	0.00090	0.00075	0.00076	0.00064			
Iron (Fe)-Total (mg/L)	<0.030	0.042	0.059	0.132	0.075	0.046	0.038			
Lead (Pb)-Total (mg/L)	<0.000050	0.000062	<0.00010	0.000222	0.000078	0.000055	0.000052			
Lithium (Li)-Total (mg/L)	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050			
Magnesium (Mg)-Total (mg/L)	6.10	6.08	6.31	6.34	6.81	6.20	5.95			
Manganese (Mn)-Total (mg/L)	0.00193	0.00225	0.00523	0.00843	0.00427	0.00243	0.00230			
Mercury (Hg)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
Molybdenum (Mo)-Total (mg/L)	0.000766	0.000847	0.00074	0.000618	0.000905	0.000705	0.000677			
Nickel (Ni)-Total (mg/L)	0.00059	0.00068	<0.0010	0.00089	0.00066	0.00069	<0.00050			
Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30			
Potassium (K)-Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010			
Silicon (Si)-Total (mg/L)	2.07	2.01	1.95	2.00	1.89	1.92	1.89			
Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000020	<0.000010	<0.000010	<0.000010	<0.000010			
Sodium (Na)-Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Strontium (Sr)-Total (mg/L)	0.101	0.102	0.107	0.0953	0.108	0.0909	0.0887			
Thallium (Tl)-Total (mg/L)	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010			
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010			
Titanium (Ti)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010			
Uranium (U)-Total (mg/L)	0.000469	0.000465	0.000475	0.000476	0.000458	0.000440	0.000430			
Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010			
Zinc (Zn)-Total (mg/L)	0.0035	<0.0040	<0.0020	<0.0030	0.0016	0.0022	0.0012			

Sample Site: Peace 1 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	15-APR-07	17-MAY-07	08-JUN-07	04-JUL-07	14-AUG-07	14-AUG-07			
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	0.0023	0.0028	0.0066	0.0242	0.0040	0.0049	0.0052			
Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00020	0.00074	<0.00010	<0.00010	<0.00010			
Arsenic (As)-Dissolved (mg/L)	0.00016	0.00018	<0.00020	0.00016	0.00018	0.00017	0.00018			
Barium (Ba)-Dissolved (mg/L)	0.0290	0.0294	0.0322	0.0358	0.0304	0.0289	0.0306			
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050			
Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050			
Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010			
Cadmium (Cd)-Dissolved (mg/L)	<0.000050	<0.000050	<0.00010	<0.000050	<0.000050	<0.000050	<0.000050			
Calcium (Ca)-Dissolved (mg/L)	27.1	27.5	29.4	27.9	31.0	26.4	26.8			
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050			
Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010			
Copper (Cu)-Dissolved (mg/L)	0.00042	0.00114	0.00198	0.00069	0.00054	0.00071	0.00056			
Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030			
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.00010	<0.000050	<0.000050	<0.000050	<0.000050			
Lithium (Li)-Dissolved (mg/L)	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050			
Magnesium (Mg)-Dissolved (mg/L)	6.05	6.18	6.37	6.26	6.85	6.09	6.08			
Manganese (Mn)-Dissolved (mg/L)	0.000369	0.000662	0.00205	0.00215	0.000252	0.000672	0.000703			
Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
Molybdenum (Mo)-Dissolved (mg/L)	0.000757	0.000784	0.00074	0.000717	0.000757	0.000716	0.000709			
Nickel (Ni)-Dissolved (mg/L)	<0.00050	0.00061	0.0017	0.00062	0.00058	0.00099	<0.00050			
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30			
Potassium (K)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010			
Silicon (Si)-Dissolved (mg/L)	2.00	2.01	1.96	1.97	1.89	1.88	1.90			
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000020	<0.000010	<0.000010	<0.000010	<0.000010			
Sodium (Na)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Strontium (Sr)-Dissolved (mg/L)	0.0978	0.0951	0.104	0.0957	0.107	0.0888	0.0899			
Thallium (Tl)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010			
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010			
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010			
Uranium (U)-Dissolved (mg/L)	0.000453	0.000457	0.000453	0.000508	0.000449	0.000425	0.000430			
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010			
Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0012	0.0025	0.0019	0.0014	0.0060	<0.0010			
Organic Parameters										
Chlorophyll a (µg/L)	0.424	0.364	0.834	0.567	0.645	0.526	0.444			
Dissolved Organic Carbon (mg/L)	2.04	2.13	2.46	2.75	2.42	2.48	2.53			
Total Inorganic Carbon (mg/L)	12.8	11.3	16.5	15.4	12.1	14.5	14.4			
Total Organic Carbon (mg/L)	2.22	2.13	2.65	3.17	2.52	2.73	2.65			

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Peace 2 **Sampling Matrix: Water**

Date Sampled	15-APR-07	16-APR-07	22-MAY-07	06-JUN-07	04-JUL-07	14-AUG-07				
Sample Period	Spring 1	Spring 1	Spring 2	Spring 3	Spring 3	Late Summer				
Date Sampled	15-APR-07	16-APR-07	22-MAY-07	06-JUN-07	04-JUL-07	14-AUG-07				
Time Sampled	15:30	15:30	13:00	16:00	12:30	13:50				
ALS Sample ID	L496604-2	L496604-9	L508268-3	L515422-4	L527080-6	L542126-2				
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0				
Hardness (as CaCO3) (mg/L)	105	106	105	99.3	103	91.9				
Colour, True (CU)	<5.0	<5.0	7.4	5.8	5.8	5.9				
Conductivity (µS/cm)	185	193	184	185	186	179				
pH (mg/L)	8.15	8.15	8.07	8.20	8.12	8.12				
Total Dissolved Solids (mg/L)	106	109	109	106	104	105				
Total Suspended Solids (mg/L)	8.2	19.2	17.0	<3.0	7.0	<3.0				
Turbidity (NTU)	12.2	18.6	16.3	4.22	5.76	2.34				
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	0.0043	<0.004	0.010	0.009	0.0078	0.013				
Ammonia as N (mg/L)	0.021	<0.020	<0.020	<0.020	<0.020	<0.020				
Acidity (to pH 8.3) CaCO3 (mg/L)	1.3	1.2	1.7	2.2	3.0	<1.0				
Alkalinity-Total CaCO3 (mg/L)	80.6	79.8	85.1	79.9	67.8	80.0				
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050				
Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
Fluoride (F) (mg/L)	0.040	0.039	0.035	0.038	<0.020	0.037				
Sulfate (SO4) (mg/L)	14.9	15.2	13.0	13.5	12.2	12.4				
Sulphide as S (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020				
Nitrate and Nitrite as N (mg/L)	0.0475	0.0481		0.045	0.0535	0.0461				
Nitrate (as N) (mg/L)			0.0602	0.0450	0.0535	0.0461				
Nitrite (as N) (mg/L)			<0.0010	<0.0010	<0.0010	<0.0010				
Total Kjeldahl Nitrogen (mg/L)	0.083	0.095	0.215	0.120	0.115	0.129				
Total Nitrogen (mg/L)	0.131	0.143	0.275	0.165	0.169	0.12				
Ortho Phosphate as P (mg/L)	0.0015	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010				
Total Dissolved Phosphate P (mg/L)	0.0031	0.0034	0.0022	0.0023	<0.0020	<0.0020				
Total Phosphate as P (mg/L)	0.0131	0.0193	0.0198	0.0069	0.0080	0.0054				

Sample Site: Peace 2 **Sampling Matrix: Water**

Date Sampled	15-APR-07	16-APR-07	22-MAY-07	06-JUN-07	04-JUL-07	14-AUG-07				
Total Metals										
Aluminum (Al)-Total (mg/L)	**0.213**	**0.420**	**0.334**	0.0254	0.0406	0.0299				
Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	0.00035	<0.00010	<0.00010	<0.00010				
Arsenic (As)-Total (mg/L)	0.00033	0.00049	0.00033	0.00021	0.00020	0.00020				
Barium (Ba)-Total (mg/L)	0.0376	0.0439	0.0416	0.0346	0.0322	0.0306				
Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050				
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050				
Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010				
Cadmium (Cd)-Total (mg/L)	<0.000050	**0.000054**	**0.000070**	<0.000050	<0.000050	<0.000050				
Calcium (Ca)-Total (mg/L)	25.9	31.5	30.4	28.9	31.5	28.9				
Chromium (Cr)-Total (mg/L)	<0.00050	0.00096	0.00059	<0.00050	<0.00050	<0.00050				
Cobalt (Co)-Total (mg/L)	0.00016	0.00029	0.00020	<0.00010	<0.00010	<0.00010				
Copper (Cu)-Total (mg/L)	0.00157	0.00173	0.00134	0.00073	0.00067	0.00067				
Iron (Fe)-Total (mg/L)	0.225	**0.512**	**0.432**	0.046	0.079	0.043				
Lead (Pb)-Total (mg/L)	0.000180	0.000355	0.000269	0.000054	0.000068	<0.000050				
Lithium (Li)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050				
Magnesium (Mg)-Total (mg/L)	5.91	6.74	6.88	6.65	7.18	6.22				
Manganese (Mn)-Total (mg/L)	0.00794	0.0200	0.0102	0.00380	0.00485	0.00244				
Mercury (Hg)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050				
Molybdenum (Mo)-Total (mg/L)	0.00129	0.000888	0.000824	0.000719	0.000663	0.000671				
Nickel (Ni)-Total (mg/L)	0.00125	0.00166	0.00129	0.00071	0.00065	<0.00050				
Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30				
Potassium (K)-Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0				
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010				
Silicon (Si)-Total (mg/L)	1.96	2.58	2.40	1.85	1.94	1.86				
Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010				
Sodium (Na)-Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0				
Strontium (Sr)-Total (mg/L)	0.101	0.109	0.108	0.0985	0.105	0.0918				
Thallium (Tl)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				
Titanium (Ti)-Total (mg/L)	<0.010	0.011	0.010	<0.010	<0.010	<0.010				
Uranium (U)-Total (mg/L)	0.000483	0.000520	0.000499	0.000487	0.000458	0.000445				
Vanadium (V)-Total (mg/L)	0.0012	0.0020	0.0015	<0.0010	<0.0010	<0.0010				
Zinc (Zn)-Total (mg/L)	<0.0060	<0.0060	0.0034	<0.0010	0.0011	<0.0010				

Sample Site: Peace 2 **Sampling Matrix: Water**

Date Sampled	15-APR-07	16-APR-07	22-MAY-07	06-JUN-07	04-JUL-07	14-AUG-07				
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	0.0092	0.0105	0.0172	0.0036	0.0033	0.0038				
Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				
Arsenic (As)-Dissolved (mg/L)	0.00021	0.00022	0.00020	0.00019	0.00017	0.00019				
Barium (Ba)-Dissolved (mg/L)	0.0318	0.0343	0.0349	0.0336	0.0304	0.0299				
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050				
Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050				
Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010				
Cadmium (Cd)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050				
Calcium (Ca)-Dissolved (mg/L)	31.0	31.4	30.5	29.0	30.2	26.7				
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050				
Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				
Copper (Cu)-Dissolved (mg/L)	0.00061	0.00063	0.00073	0.00090	0.00053	0.00053				
Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030				
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050				
Lithium (Li)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050				
Magnesium (Mg)-Dissolved (mg/L)	6.70	6.78	6.97	6.55	6.66	6.15				
Manganese (Mn)-Dissolved (mg/L)	0.00212	0.00856	0.00190	0.00129	0.000196	0.000451				
Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050				
Molybdenum (Mo)-Dissolved (mg/L)	0.000975	0.000819	0.000714	0.000752	0.000685	0.000709				
Nickel (Ni)-Dissolved (mg/L)	0.00070	0.00070	0.00060	0.00063	0.00060	<0.00050				
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30				
Potassium (K)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0				
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010				
Silicon (Si)-Dissolved (mg/L)	1.93	1.91	1.94	1.81	1.85	1.83				
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010				
Sodium (Na)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0				
Strontium (Sr)-Dissolved (mg/L)	0.0981	0.102	0.105	0.0981	0.104	0.0917				
Thallium (Tl)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010				
Uranium (U)-Dissolved (mg/L)	0.000472	0.000504	0.000472	0.000506	0.000450	0.000427				
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010				
Zinc (Zn)-Dissolved (mg/L)	0.0015	<0.0010	<0.0010	0.0022	<0.0010	<0.0010				
Organic Parameters										
Chlorophyll a (µg/L)	0.449	0.563	0.654	0.709	0.813	0.633				
Dissolved Organic Carbon (mg/L)	2.35	2.29	2.86	2.82	2.36	2.48				
Total Inorganic Carbon (mg/L)	15.4	16.2	16.8	14.4	11.8	14.4				
Total Organic Carbon (mg/L)	2.39	2.60	3.58	2.95	2.70	2.65				

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Peace 3 **Sampling Matrix: Water**

Date Sampled	03-NOV-06	16-APR-07	16-MAY-07	16-MAY-07	08-JUN-07	08-JUN-07	04-JUL-07	14-AUG-07		
Sample Period	Fall	Spring 1	Spring 2	Spring 2	Spring 3	Spring 3	Spring 3	Late Summer		
Date Sampled	03-NOV-06	16-APR-07	16-MAY-07	16-MAY-07	08-JUN-07	08-JUN-07	04-JUL-07	14-AUG-07		
Time Sampled	16:11	10:45	N/A	17:30	N/A	11:00	15:00	16:00		
ALS Sample ID	4	L496604-3	L506847-9	L506847-3	L515733-4	L515733-2	L527080-7	L542126-3		
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
Hardness (as CaCO3) (mg/L)	91.1	111	107	105	130	129	110	102		
Colour, True (CU)	6.2	8.1	11.2	10	18.2	16.8	8.0	6.2		
Conductivity (µS/cm)	181	201	194	190	231	227	202	189		
pH (mg/L)	8.03	8.16	8.14	8.1	8.23	8.24	8.16	8.17		
Total Dissolved Solids (mg/L)	102	130	119	122	161	165	121	108		
Total Suspended Solids (mg/L)	3.0	93.7	14	24.2	1020	954	38.0	6.0		
Turbidity (NTU)	3.13	86.2	14.3	13.7	757	759	21.4	4.32		
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	<0.004	<0.004		0.011	0.010	0.009	0.0099	0.0097		
Ammonia as N (mg/L)	<0.020	<0.020	<0.020	<0.020	0.093	0.043	<0.020	<0.020		
Acidity (to pH 8.3) CaCO3 (mg/L)	2.5	1.3	1.4	1.5	1.5	1.5	1.4	<1.0		
Alkalinity-Total CaCO3 (mg/L)	85.6	84.5	91.9	89.6	115	117	77.5	84.7		
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050		
Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
Fluoride (F) (mg/L)	0.039	0.048	0.045	0.045	0.046	0.060	0.021	0.039		
Sulfate (SO4) (mg/L)	12.3	18.6	15.2	15	17.9	17.9	14.5	13.8		
Sulphide as S (mg/L)	<0.020	<0.020	<0.020	<0.020	0.023	<0.020	<0.020	<0.020		
Nitrate and Nitrite as N (mg/L)	0.0388	0.0555			0.051	0.0523	0.0457	0.0428		
Nitrate (as N) (mg/L)	0.0386		0.0421	0.0428	0.0510	0.0523	0.0457	0.0428		
Nitrite (as N) (mg/L)	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Total Kjeldahl Nitrogen (mg/L)	0.123	0.134	0.148	0.149	1.63	1.62	0.217	0.126		
Total Nitrogen (mg/L)	0.110	0.19	0.19	0.192	1.68	1.67	0.263	0.10		
Ortho Phosphate as P (mg/L)		0.0065	0.0013	<0.0010	0.0109	0.0110	<0.0010	<0.0010		
Total Dissolved Phosphate P (mg/L)	<0.0020	0.0091	0.0031	0.0029	0.0097	0.0099	<0.0020	<0.0020		
Total Phosphate as P (mg/L)	0.0077	0.106	0.0209	0.0258	0.984	0.85	0.0445	0.0081		

Sample Site: Peace 3 **Sampling Matrix: Water**

Date Sampled	03-NOV-06	16-APR-07	16-MAY-07	16-MAY-07	08-JUN-07	08-JUN-07	04-JUL-07	14-AUG-07		
Total Metals										
Aluminum (Al)-Total (mg/L)	0.0405	**2.08**	**0.292**	**0.35**	**8.44**	**10.000**	**0.509**	0.0400		
Antimony (Sb)-Total (mg/L)	<0.00010	0.00015	<0.00010	<0.00010	0.00066	0.00079	0.00011	<0.00010		
Arsenic (As)-Total (mg/L)	0.00019	0.00118	0.00032	0.00035	**0.00527**	**0.00768**	0.00047	0.00021		
Barium (Ba)-Total (mg/L)	0.0317	0.0783	0.0498	0.0445	0.372	0.506	0.0539	0.0353		
Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050		
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050		
Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	0.025	0.030	<0.010	<0.010		
Cadmium (Cd)-Total (mg/L)	<0.000050	**0.000128**	<0.000050	<0.000050	**0.00143**	**0.00165**	**0.000060**	<0.000050		
Calcium (Ca)-Total (mg/L)	27.1	34.2	31.6	30.9	78.5	83.0	33.6	29.9		
Chromium (Cr)-Total (mg/L)	<0.00050	0.00373	0.00054	0.00062	0.0167	0.0218	0.00114	<0.00050		
Cobalt (Co)-Total (mg/L)	<0.00010	0.00127	0.00022	0.00021	0.00595	0.00752	0.00030	<0.00010		
Copper (Cu)-Total (mg/L)	0.00064	**0.00421**	0.00161	0.0013	**0.0159**	**0.0200**	0.00200	0.00079		
Iron (Fe)-Total (mg/L)	0.065	**2.44**	**0.426**	**0.452**	**14.4**	**21.1**	**0.724**	0.094		
Lead (Pb)-Total (mg/L)	0.000056	0.00136	0.000255	0.000245	0.00870	0.0117	0.000502	0.000084		
Lithium (Li)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	0.013	0.017	<0.0050	<0.0050		
Magnesium (Mg)-Total (mg/L)	6.09	7.79	7.14	7.13	17.7	20.1	8.04	6.42		
Manganese (Mn)-Total (mg/L)	0.00319	0.0547	0.0101	0.00952	0.227	0.246	0.0135	0.00410		
Mercury (Hg)-Total (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050		
Molybdenum (Mo)-Total (mg/L)	0.000721	0.00125	0.000869	0.000966	0.00327	0.00418	0.00112	0.000802		
Nickel (Ni)-Total (mg/L)	0.00060	0.00473	0.00143	0.00149	0.0235	0.0301	0.00187	<0.00050		
Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	1.07	1.26	<0.30	<0.30		
Potassium (K)-Total (mg/L)	<2.0	<2.0	<2.0	<2.0	4.1	5.0	<2.0	<2.0		
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010		
Silicon (Si)-Total (mg/L)	1.72	5.64	2.43	2.5	20.4	24.3	2.79	1.82		
Silver (Ag)-Total (mg/L)	<0.000010	0.000027	<0.000010	<0.000010	**0.000178**	**0.000278**	0.000017	<0.000010		
Sodium (Na)-Total (mg/L)	<2.0	2.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		
Strontium (Sr)-Total (mg/L)	0.0955	0.118	0.108	0.11	0.202	0.218	0.127	0.0997		
Thallium (Tl)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	**0.00036**	**0.00053**	<0.00010	<0.00010		
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00020	<0.00010	<0.00010		
Titanium (Ti)-Total (mg/L)	<0.010	0.053	<0.010	<0.010	0.203	0.202	0.011	<0.010		
Uranium (U)-Total (mg/L)	0.000448	0.000623	0.000486	0.000486	0.00161	0.00172	0.000550	0.000447		
Vanadium (V)-Total (mg/L)	<0.0010	**0.0086**	0.0014	0.0017	**0.0479**	**0.0583**	0.0029	<0.0010		
Zinc (Zn)-Total (mg/L)	<0.0010	**0.0138**	0.0035	0.0037	**0.0928**	**0.118**	0.0055	0.0012		

Sample Site: Peace 3 **Sampling Matrix: Water**

Date Sampled	03-NOV-06	16-APR-07	16-MAY-07	16-MAY-07	08-JUN-07	08-JUN-07	04-JUL-07	14-AUG-07		
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	<0.0040	0.0345	0.0392	0.0173	0.0493	0.0518	0.0115	0.0057		
Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00074	0.00068	<0.00010	<0.00010		
Arsenic (As)-Dissolved (mg/L)	0.00018	0.00026	0.00022	0.00016	0.00028	0.00026	0.00020	0.00018		
Barium (Ba)-Dissolved (mg/L)	0.0306	0.0363	0.0404	0.0345	0.0553	0.0533	0.0362	0.0334		
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050		
Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050		
Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	<0.010	<0.010		
Cadmium (Cd)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.00010	<0.00010	<0.000050	<0.000050		
Calcium (Ca)-Dissolved (mg/L)	26.6	32.5	31.1	30.7	37.4	36.9	31.8	29.8		
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050		
Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00010	0.00012	<0.00010	<0.00020	<0.00020	<0.00010	<0.00010		
Copper (Cu)-Dissolved (mg/L)	<0.00080	0.00081	0.00095	0.00066	0.00086	0.00109	0.00065	0.00055		
Iron (Fe)-Dissolved (mg/L)	<0.030	0.037	0.127	<0.030	0.043	0.046	<0.030	<0.030		
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	0.000165	<0.000050	<0.00010	<0.00010	<0.000050	<0.000050		
Lithium (Li)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050		
Magnesium (Mg)-Dissolved (mg/L)	5.97	7.18	7.07	6.98	8.99	8.90	7.40	6.63		
Manganese (Mn)-Dissolved (mg/L)	<0.00030	0.00926	0.00866	0.00204	0.00218	0.00241	0.000457	0.00142		
Mercury (Hg)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050		
Molybdenum (Mo)-Dissolved (mg/L)	0.000762	0.00100	0.000803	0.000843	0.00224	0.00224	0.00100	0.000836		
Nickel (Ni)-Dissolved (mg/L)	0.00053	0.00111	0.00105	0.00071	0.0012	0.0012	0.00086	<0.00050		
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30		
Potassium (K)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010		
Silicon (Si)-Dissolved (mg/L)	1.67	1.92	1.88	1.92	1.76	1.76	1.76	1.77		
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000020	<0.000020	<0.000010	<0.000010		
Sodium (Na)-Dissolved (mg/L)	<2.0	2.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		
Strontium (Sr)-Dissolved (mg/L)	0.0984	0.107	0.102	0.097	0.133	0.131	0.117	0.0997		
Thallium (Tl)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00020	<0.00010	<0.00010		
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00020	<0.00010	<0.00010		
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		
Uranium (U)-Dissolved (mg/L)	0.000451	0.000520	0.000468	0.000443	0.000623	0.000630	0.000444	0.000452		
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010		
Zinc (Zn)-Dissolved (mg/L)	<0.0010	<0.0010	0.0012	<0.0010	0.0021	0.0020	<0.0010	<0.0010		
Organic Parameters										
Chlorophyll a (µg/L)	0.838	0.845	0.805	0.775	0.676	0.237	0.980	0.724		
Dissolved Organic Carbon (mg/L)	2.29	2.54	3.56	3.47	3.40	3.71	2.51	2.42		
Total Inorganic Carbon (mg/L)	16.1	17.2	14.5	16.7	34.2	34.0	14.1	15.7		
Total Organic Carbon (mg/L)	2.48	3.34	3.88	3.53	5.85	4.90	3.02	2.59		

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Peace 4 **Sampling Matrix: Water**

Date Sampled	03-NOV-06	03-NOV-06	02-MAR-07	02-MAR-07	16-APR-07	16-MAY-07	08-JUN-07	05-JUL-07	14-AUG-07	
Sample Period	Fall	Fall	Winter	Winter	Spring 1	Spring 2	Spring 3	Spring 3	Late Summer	
Date Sampled	03-NOV-06	03-NOV-06	02-MAR-07	02-MAR-07	16-APR-07	16-MAY-07	08-JUN-07	05-JUL-07	14-AUG-07	
Time Sampled	14:01	14:01	16:00	16:00	12:00	15:45	13:00	16:00	16:50	
ALS Sample ID	2	1	L483753-3	L483753-2	L496604-4	L506847-2	L515733-3	L527080-8	L542126-4	
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Hardness (as CaCO3) (mg/L)	88.8	89.5	92.1	91.2	106	104	131	114	104	
Colour, True (CU)	6.3	8.1	<5.0	<5.0	6.7	11	18.2	7.9	5.8	
Conductivity (µS/cm)	182	181	187	187	202	190	226	206	198	
pH (mg/L)	7.95	7.55	8.15	8.16	8.17	8.09	8.23	7.47	8.19	
Total Dissolved Solids (mg/L)	101	103	98.0	114	128	123	162	111	119	
Total Suspended Solids (mg/L)	4.5	3.5	<3.0	<3.0	64.2	36.9	1010	54.5	4.5	
Turbidity (NTU)	2.95	3.56	0.94	1.10	67.2	14.6	770	24.2	3.93	
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	0.0055	0.009	0.0075	0.010	
Ammonia as N (mg/L)	0.031	0.035	0.023	0.026	<0.020	<0.020	0.050	<0.020	<0.020	
Acidity (to pH 8.3) CaCO3 (mg/L)	2.9	3.6	2.9	3.0	<1.0	1.6	1.6	7.8	<1.0	
Alkalinity-Total CaCO3 (mg/L)	89.0	86.4	99.2	87.6	80.3	89	116	77.4	89.0	
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Fluoride (F) (mg/L)	0.041	0.040	0.042	0.040	0.047	0.046	0.047	0.021	0.041	
Sulfate (SO4) (mg/L)	12.4	12.4	14.0	14.0	17.8	15.4	17.8	14.4	14.7	
Sulphide as S (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Nitrate and Nitrite as N (mg/L)	0.0437	0.0428	0.0604	0.058	0.0475		0.057	0.0499	0.0412	
Nitrate (as N) (mg/L)	0.0428	0.0422				0.0418	0.0570	0.0499	0.0412	
Nitrite (as N) (mg/L)	<0.0010	<0.0010				<0.0010	<0.0010	<0.0010	<0.0010	
Total Kjeldahl Nitrogen (mg/L)	0.183	0.200	0.078	0.064	0.093	0.144	1.50	0.201	0.117	
Total Nitrogen (mg/L)	0.140	0.180	0.138	0.122	0.141	0.186	1.55	0.251	0.09	
Ortho Phosphate as P (mg/L)			<0.0010	<0.0010	0.0038	0.001	0.0107	<0.0010	<0.0010	
Total Dissolved Phosphate P (mg/L)	0.0042	0.0053	<0.0020	<0.0020	0.0068	0.003	0.0100	<0.0020	<0.0020	
Total Phosphate as P (mg/L)	0.0144	0.0156	0.0152	0.0047	0.0777	0.0231	1.17	0.0233	0.0070	

Sample Site: Peace 4 **Sampling Matrix: Water**

Date Sampled	03-NOV-06	03-NOV-06	02-MAR-07	02-MAR-07	16-APR-07	16-MAY-07	08-JUN-07	05-JUL-07	14-AUG-07	
Total Metals										
Aluminum (Al)-Total (mg/L)	0.0391	0.0357	0.0244	0.0254	**1.78**	**0.392**	**8.55**	**0.654**	0.0463	
Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00016	<0.00010	0.00074	0.00013	<0.00010	
Arsenic (As)-Total (mg/L)	0.00020	0.00021	0.00018	0.00017	0.00099	0.00037	**0.00617**	0.00059	0.00022	
Barium (Ba)-Total (mg/L)	0.0326	0.0329	0.0307	0.0308	0.0707	0.047	0.429	0.0659	0.0368	
Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	
Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.027	<0.010	<0.010	
Cadmium (Cd)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	**0.000104**	**5.2e-005**	**0.00169**	**0.000086**	<0.000050	
Calcium (Ca)-Total (mg/L)	26.5	27.4	27.6	27.5	32.5	31.1	83.2	33.7	31.4	
Chromium (Cr)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00327	0.00069	0.0178	0.00144	<0.00050	
Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00099	0.00023	0.00677	0.00041	<0.00010	
Copper (Cu)-Total (mg/L)	0.00067	0.00065	0.00055	0.00055	**0.00342**	0.00137	**0.0176**	0.00189	0.00079	
Iron (Fe)-Total (mg/L)	0.071	0.071	<0.030	0.033	**1.93**	**0.51**	**16.6**	**0.889**	0.075	
Lead (Pb)-Total (mg/L)	0.000072	0.000065	<0.000050	<0.000050	0.00108	0.000272	0.00990	0.000584	0.000071	
Lithium (Li)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.014	<0.0050	<0.0050	
Magnesium (Mg)-Total (mg/L)	5.97	6.17	5.82	5.77	7.05	7.23	19.1	8.00	7.04	
Manganese (Mn)-Total (mg/L)	0.00372	0.00399	0.00194	0.00204	0.0418	0.0103	0.240	0.0193	0.00318	
Mercury (Hg)-Total (mg/L)			<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Molybdenum (Mo)-Total (mg/L)	0.000748	0.000722	0.000738	0.000739	0.00107	0.000953	0.00354	0.00122	0.000856	
Nickel (Ni)-Total (mg/L)	0.00067	0.00068	<0.00050	0.00050	0.00400	0.00157	0.0260	0.00217	<0.00050	
Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	1.19	<0.30	<0.30	
Potassium (K)-Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	4.3	<2.0	<2.0	
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	
Silicon (Si)-Total (mg/L)	1.71	1.74	2.04	2.06	4.71	2.64	20.6	3.01	1.89	
Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	0.000029	<0.000010	**0.000202**	0.000016	<0.000010	
Sodium (Na)-Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Strontium (Sr)-Total (mg/L)	0.0980	0.0956	0.0962	0.0957	0.112	0.109	0.215	0.134	0.106	
Thallium (Tl)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	**0.00043**	<0.00010	<0.00010	
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	
Titanium (Ti)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	0.038	0.011	0.182	0.015	<0.010	
Uranium (U)-Total (mg/L)	0.000445	0.000437	0.000448	0.000457	0.000596	0.000488	0.00167	0.000580	0.000465	
Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	**0.0072**	0.0018	**0.0512**	0.0038	<0.0010	
Zinc (Zn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0112	0.0049	**0.101**	0.0066	0.0014	

Sample Site: Peace 4 **Sampling Matrix: Water**

Date Sampled	03-NOV-06	03-NOV-06	02-MAR-07	02-MAR-07	16-APR-07	16-MAY-07	08-JUN-07	05-JUL-07	14-AUG-07	
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	<0.0040	<0.0040	0.0023	0.0024	0.0318	0.0237	0.0454	0.0112	0.0042	
Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00068	<0.00010	<0.00010	
Arsenic (As)-Dissolved (mg/L)	0.00018	0.00019	0.00016	0.00015	0.00024	0.00017	0.00026	0.00020	0.00019	
Barium (Ba)-Dissolved (mg/L)	0.0307	0.0309	0.0302	0.0300	0.0380	0.0356	0.0527	0.0386	0.0354	
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	
Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	
Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	
Cadmium (Cd)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.00010	<0.000050	<0.000050	
Calcium (Ca)-Dissolved (mg/L)	26.0	26.2	27.4	27.1	30.9	30.4	37.7	32.9	30.4	
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	
Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	
Copper (Cu)-Dissolved (mg/L)	<0.00090	<0.0010	0.00044	0.00044	0.00073	0.00071	0.00082	0.00056	0.00053	
Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	0.041	0.044	0.030	<0.030	
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.00010	<0.000050	<0.000050	
Lithium (Li)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	
Magnesium (Mg)-Dissolved (mg/L)	5.83	5.86	5.78	5.73	6.96	6.92	8.85	7.74	6.83	
Manganese (Mn)-Dissolved (mg/L)	<0.00030	<0.00030	0.000461	0.000449	0.00736	0.00233	0.00256	0.000547	0.000596	
Mercury (Hg)-Dissolved (mg/L)			<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Molybdenum (Mo)-Dissolved (mg/L)	0.000779	0.000797	0.000761	0.000740	0.000903	0.000847	0.00226	0.00111	0.000957	
Nickel (Ni)-Dissolved (mg/L)	0.00056	0.00057	<0.00050	<0.00050	0.00087	0.00076	0.0012	0.00075	<0.00050	
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	
Potassium (K)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	
Silicon (Si)-Dissolved (mg/L)	1.62	1.60	1.98	2.00	1.85	1.9	1.78	1.82	1.75	
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000020	<0.000010	<0.000010	
Sodium (Na)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Strontium (Sr)-Dissolved (mg/L)	0.0980	0.0981	0.0955	0.0956	0.104	0.0989	0.131	0.124	0.107	
Thallium (Tl)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Uranium (U)-Dissolved (mg/L)	0.000448	0.000453	0.000447	0.000442	0.000515	0.000445	0.000603	0.000483	0.000459	
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	
Zinc (Zn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	
Organic Parameters										
Chlorophyll a (µg/L)	1.19	1.05	0.646	0.569	0.665	0.915	0.584	0.961	0.662	
Dissolved Organic Carbon (mg/L)	2.27	2.40	2.13	2.11	2.39	3.56	3.44	2.57	2.35	
Total Inorganic Carbon (mg/L)	16.1	15.8	16.0	16.9	17.9	15.3	33.9	19.5	17.5	
Total Organic Carbon (mg/L)	2.44	2.47	2.28	2.31	3.06	3.78	4.79	2.83	2.56	

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Peace 5 **Sampling Matrix: Water**

Date Sampled	04-NOV-06	02-MAR-07	19-APR-07	16-MAY-07	08-JUN-07	05-JUL-07	05-JUL-07	15-AUG-07		
Sample Period	Fall	Winter	Spring 2	Spring 2	Spring 3	Spring 3	Spring 3	Late Summer		
Date Sampled	04-NOV-06	02-MAR-07	19-APR-07	16-MAY-07	08-JUN-07	05-JUL-07	05-JUL-07	15-AUG-07		
Time Sampled	12:45	10:30	10:15	11:45	18:30	17:00	17:00	16:00		
ALS Sample ID	6	L483753-1	L497294-1	L506847-1	L515827-1	L527080-11	L527080-9	L543666-1		
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
Hardness (as CaCO3) (mg/L)	89.5	92.8	117	99.7	104	107	108	105		
Colour, True (CU)	7.0	<5.0	51.5	37.2	28.7	32.6	20.5	10.3		
Conductivity (µS/cm)	185	191	239	176	182	190	195	202		
pH (mg/L)	8.05	8.15	8.03	7.86	8.20	8.13	7.97	8.20		
Total Dissolved Solids (mg/L)	103	111	280	136	191	115	118	121		
Total Suspended Solids (mg/L)	4.5	7.0	1570	288	905	271	154	69.3		
Turbidity (NTU)	3.96	2.95	2030	91	678	146	85.1	46.2		
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	<0.004	<0.004		0.015	0.014	0.014	0.011	0.0057		
Ammonia as N (mg/L)	<0.020	0.040	0.172	<0.020	0.041	<0.020	0.021	<0.020		
Acidity (to pH 8.3) CaCO3 (mg/L)	2.2	3.1	2.3	2.3	1.7	3.2	5.2	1.3		
Alkalinity-Total CaCO3 (mg/L)	88.2	89.9	71.7	83.6	97.1	68.7	76.2	90.0		
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050		
Chloride (Cl) (mg/L)	<0.50	<0.50	1.75	<0.50	<0.50	<0.50	<0.50	<0.50		
Fluoride (F) (mg/L)	0.041	0.041	0.097	0.055	0.039	0.030	0.032	0.047		
Sulfate (SO4) (mg/L)	13.2	14.5	35.4	15.8	9.04	14.9	13.9	14.2		
Sulphide as S (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020		
Nitrate and Nitrite as N (mg/L)	0.0344	0.0555	0.428		0.0574	0.0377	0.0333	0.0503		
Nitrate (as N) (mg/L)	0.0343			0.0391	0.0574	0.0377	0.0333	0.0503		
Nitrite (as N) (mg/L)	<0.0010			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Total Kjeldahl Nitrogen (mg/L)	0.126	0.159	2.42	0.379	1.21	0.107	0.353	0.247		
Total Nitrogen (mg/L)	0.130	0.215	2.85	0.418	1.26	0.145	0.386	0.30		
Ortho Phosphate as P (mg/L)		0.0035	0.0209	0.0033	0.0090	0.0038	0.0024	<0.0010		
Total Dissolved Phosphate P (mg/L)	0.0041	0.0046	0.053	0.0089	0.0055	0.0083	0.0057	0.0023		
Total Phosphate as P (mg/L)	0.0107	0.0106	1.20	0.147	0.76	0.229	0.125	0.0487		

Sample Site: Peace 5 **Sampling Matrix: Water**

Date Sampled	04-NOV-06	02-MAR-07	19-APR-07	16-MAY-07	08-JUN-07	05-JUL-07	05-JUL-07	15-AUG-07		
Total Metals										
Aluminum (Al)-Total (mg/L)	0.0431	0.0410	**19.5**	**2.59**	**8.10**	**2.86**	**2.44**	**1.57**		
Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	0.00070	0.00017	0.00052	0.00022	0.00019	0.00013		
Arsenic (As)-Total (mg/L)	0.00023	0.00020	**0.0155**	0.00178	0.00473	0.00245	0.00168	0.00079		
Barium (Ba)-Total (mg/L)	0.0345	0.0349	0.627	0.112	0.372	0.165	0.120	0.0824		
Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	0.0014	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050		
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050		
Boron (B)-Total (mg/L)	<0.010	<0.010	0.043	0.012	<0.020	0.011	<0.010	<0.010		
Cadmium (Cd)-Total (mg/L)	<0.000050	<0.000050	**0.00111**	**0.000161**	**0.00099**	**0.000184**	**0.000184**	**0.000083**		
Calcium (Ca)-Total (mg/L)	27.5	26.9	43.2	30.6	58.3	32.2	33.4	32.2		
Chromium (Cr)-Total (mg/L)	<0.00050	<0.00050	0.0350	0.00422	0.0147	0.00548	0.00436	0.00271		
Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	0.0178	0.00173	0.00699	0.00225	0.00165	0.00078		
Copper (Cu)-Total (mg/L)	0.00070	0.00110	**0.0476**	**0.00613**	**0.0171**	**0.00636**	**0.00459**	0.00270		
Iron (Fe)-Total (mg/L)	0.119	0.111	**39.2**	**4.08**	**17.6**	**5.31**	**3.74**	**1.76**		
Lead (Pb)-Total (mg/L)	0.000085	0.000181	0.0213	0.00218	0.00995	0.00287	0.00206	0.00104		
Lithium (Li)-Total (mg/L)	<0.0050	<0.0050	0.031	0.0054	0.015	0.0058	<0.0050	<0.0050		
Magnesium (Mg)-Total (mg/L)	6.21	5.71	15.7	7.53	14.4	8.12	7.73	7.78		
Manganese (Mn)-Total (mg/L)	0.00545	0.00560	0.497	0.0571	0.304	0.0781	0.0595	0.0296		
Mercury (Hg)-Total (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050		
Molybdenum (Mo)-Total (mg/L)	0.000694	0.000714	0.00204	0.000847	0.00153	0.00125	0.00122	0.000955		
Nickel (Ni)-Total (mg/L)	0.00070	0.00082	0.0559	0.00663	0.0241	0.00807	0.00577	0.00326		
Phosphorus (P)-Total (mg/L)	<0.30	<0.30	1.18	<0.30	0.82	<0.30	<0.30	<0.30		
Potassium (K)-Total (mg/L)	<2.0	<2.0	6.1	<2.0	3.8	<2.0	<2.0	<2.0		
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010		
Silicon (Si)-Total (mg/L)	1.73	2.01	25.6	6.85	17.5	8.00	5.89	4.64		
Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	**0.000374**	4.8e-005	**0.000195**	0.000046	0.000043	<0.000040		
Sodium (Na)-Total (mg/L)	<2.0	<2.0	6.4	<2.0	<2.0	<2.0	<2.0	<2.0		
Strontium (Sr)-Total (mg/L)	0.0993	0.0958	0.180	0.101	0.104	0.126	0.117	0.112		
Thallium (Tl)-Total (mg/L)	<0.00010	<0.00010	**0.00045**	<0.00010	0.00029	<0.00010	<0.00010	<0.00010		
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	0.00025	0.00017	<0.00020	<0.00010	0.00011	<0.00010		
Titanium (Ti)-Total (mg/L)	<0.010	<0.010	0.114	0.064	0.167	0.085	0.045	0.032		
Uranium (U)-Total (mg/L)	0.000464	0.000486	0.00258	0.00056	0.00112	0.000733	0.000629	0.000527		
Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	**0.0686**	**0.0101**	**0.0377**	**0.0130**	**0.0107**	**0.0063**		
Zinc (Zn)-Total (mg/L)	0.0010	0.0029	**0.181**	**0.0195**	**0.0878**	**0.0256**	**0.0196**	0.0105		

Sample Site: Peace 5 **Sampling Matrix: Water**

Date Sampled	04-NOV-06	02-MAR-07	19-APR-07	16-MAY-07	08-JUN-07	05-JUL-07	05-JUL-07	15-AUG-07		
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	<0.0040	0.0028	**0.447**	0.0532	**0.119**	0.0614	0.0377	0.0184		
Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	0.00025	<0.00010	0.00070	<0.00010	<0.00010	<0.00010		
Arsenic (As)-Dissolved (mg/L)	0.00019	0.00017	0.00079	0.00027	0.00035	0.00029	0.00024	0.00020		
Barium (Ba)-Dissolved (mg/L)	0.0318	0.0317	0.0386	0.0415	0.0636	0.0460	0.0436	0.0445		
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050		
Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050		
Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.020	<0.010	<0.020	<0.010	<0.010	<0.010		
Cadmium (Cd)-Dissolved (mg/L)	<0.000050	<0.000050	<0.00010	<0.000050	<0.00010	<0.000050	<0.000050	<0.000050		
Calcium (Ca)-Dissolved (mg/L)	26.1	27.6	32.5	28.8	30.5	30.7	31.9	30.3		
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050		
Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	0.00054	0.00015	<0.00020	<0.00010	<0.00010	<0.00010		
Copper (Cu)-Dissolved (mg/L)	<0.0010	0.00061	0.00257	0.00112	0.00114	0.00113	0.00091	0.00088		
Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	**0.588**	0.149	0.139	0.120	0.051	<0.030		
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	0.00055	6.9e-005	<0.00010	0.000069	<0.000050	<0.000050		
Lithium (Li)-Dissolved (mg/L)	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.0050		
Magnesium (Mg)-Dissolved (mg/L)	5.88	5.82	8.84	6.74	6.62	7.37	6.85	7.18		
Manganese (Mn)-Dissolved (mg/L)	<0.00030	0.00220	0.0485	0.00846	0.00495	0.00247	0.00188	0.000917		
Mercury (Hg)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050		
Molybdenum (Mo)-Dissolved (mg/L)	0.000767	0.000764	0.00082	0.000651	0.00105	0.000927	0.000921	0.000809		
Nickel (Ni)-Dissolved (mg/L)	0.00055	0.00069	0.0030	0.00139	0.0013	0.00123	0.00101	0.00071		
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30		
Potassium (K)-Dissolved (mg/L)	<2.0	<2.0	2.9	<2.0	<2.0	<2.0	<2.0	<2.0		
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010		
Silicon (Si)-Dissolved (mg/L)	1.58	2.01	2.55	1.89	1.50	1.87	1.79	1.81		
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000020	<0.000010	<0.000020	<0.000010	<0.000010	<0.000010		
Sodium (Na)-Dissolved (mg/L)	<2.0	<2.0	6.5	<2.0	<2.0	<2.0	<2.0	<2.0		
Strontium (Sr)-Dissolved (mg/L)	0.0979	0.0970	0.101	0.0866	0.0853	0.107	0.109	0.101		
Thallium (Tl)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00020	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010		
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00020	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010		
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	0.029	<0.010	<0.010	<0.010	<0.010	<0.010		
Uranium (U)-Dissolved (mg/L)	0.000460	0.000462	0.000676	0.000367	0.000363	0.000433	0.000419	0.000428		
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010		
Zinc (Zn)-Dissolved (mg/L)	<0.0010	<0.0010	0.0027	<0.0010	0.0025	<0.0010	<0.0010	<0.0010		
Organic Parameters										
Chlorophyll a (µg/L)	1.36	0.620	0.882	0.644	0.164	0.326	0.716	0.908		
Dissolved Organic Carbon (mg/L)	2.51	2.21	8.00	7.18	4.39	4.77	4.23	3.49		
Total Inorganic Carbon (mg/L)	16.4	17.0	28.8	14.1	28.6	12.6	17.9	13.9		
Total Organic Carbon (mg/L)	2.55	2.69	13.4	7.77	5.75	5.82	4.78	4.47		

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Moberly 6 **Sampling Matrix: Water**

Date Sampled	03-MAR-07	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07					
Sample Period	Winter	Spring 2	Spring 3	Spring 3	Late Summer					
Date Sampled	03-MAR-07	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07					
Time Sampled	11:00	19:00	12:00	11:15	12:00					
ALS Sample ID	L483753-4	L506847-5	L515422-5	L527080-14	L541389-1					
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0	<1.0					
Hardness (as CaCO3) (mg/L)	127	105	92.5	95.3	99.4					
Colour, True (CU)	8.2	21.5	29.7	25.9	15.7					
Conductivity (µS/cm)	256	186	171	171	182					
pH (mg/L)	8.06	8.12	8.07	8.25	8.24					
Total Dissolved Solids (mg/L)	149	124	112	107	116					
Total Suspended Solids (mg/L)	5.2	57.6	250	32.0	<3.0					
Turbidity (NTU)	2.37	39.9	153	25.2	5.02					
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	<0.004	0.012	0.012	0.0096	0.0089					
Ammonia as N (mg/L)	<0.020	0.021	<0.020	0.023	0.021					
Acidity (to pH 8.3) CaCO3 (mg/L)	3.7	1.5	3.2	1.0	<1.0					
Alkalinity-Total CaCO3 (mg/L)	136	93.3	83.2	71.9	87.7					
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050					
Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50					
Fluoride (F) (mg/L)	0.078	0.065	0.067	0.031	0.061					
Sulfate (SO4) (mg/L)	9.56	6.6	6.07	5.61	6.50					
Sulphide as S (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020					
Nitrate and Nitrite as N (mg/L)	0.0377		0.0162	<0.0050	<0.0050					
Nitrate (as N) (mg/L)		0.0221	0.0152	<0.0050	<0.0050					
Nitrite (as N) (mg/L)		<0.0010	0.0010	<0.0010	<0.0010					
Total Kjeldahl Nitrogen (mg/L)	0.194	0.337	0.81	0.250	0.224					
Total Nitrogen (mg/L)	0.232	0.359	0.83	0.25	0.20					
Ortho Phosphate as P (mg/L)	<0.0010	0.0017	0.0037	0.0011	<0.0010					
Total Dissolved Phosphate P (mg/L)	0.0027	0.0058	0.0098	0.0048	0.0042					
Total Phosphate as P (mg/L)	0.0081	0.07	0.303	0.0440	0.0116					

Sample Site: Moberly 6 **Sampling Matrix: Water**

Date Sampled	03-MAR-07	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07					
Total Metals										
Aluminum (Al)-Total (mg/L)	0.0462	**0.763**	**2.58**	**0.493**	0.0389					
Antimony (Sb)-Total (mg/L)	<0.00010	0.00012	0.00031	0.00011	<0.00010					
Arsenic (As)-Total (mg/L)	0.00014	0.00056	0.00173	0.00042	0.00027					
Barium (Ba)-Total (mg/L)	0.154	0.16	0.237	0.140	0.119					
Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050					
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050					
Boron (B)-Total (mg/L)	<0.010	<0.010	0.011	<0.010	<0.010					
Cadmium (Cd)-Total (mg/L)	**0.000081**	**6.5e-005**	**0.000239**	**0.000061**	<0.000050					
Calcium (Ca)-Total (mg/L)	35.7	29.7	28.2	24.4	26.4					
Chromium (Cr)-Total (mg/L)	<0.00050	0.00131	0.00551	0.00106	<0.00050					
Cobalt (Co)-Total (mg/L)	<0.00010	0.00055	0.00200	0.00030	<0.00010					
Copper (Cu)-Total (mg/L)	0.00068	0.00217	**0.00618**	0.00170	0.00098					
Iron (Fe)-Total (mg/L)	0.099	**1.25**	**4.72**	**0.751**	0.152					
Lead (Pb)-Total (mg/L)	0.000246	0.000722	0.00939	0.000472	0.000102					
Lithium (Li)-Total (mg/L)	<0.0050	<0.0050	0.0056	<0.0050	<0.0050					
Magnesium (Mg)-Total (mg/L)	9.55	8.3	8.59	7.29	7.64					
Manganese (Mn)-Total (mg/L)	0.00317	0.0369	0.0978	0.0215	0.00596					
Mercury (Hg)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050					
Molybdenum (Mo)-Total (mg/L)	0.000380	<0.00040	0.000534	0.000329	0.000348					
Nickel (Ni)-Total (mg/L)	0.00087	0.0029	0.00782	0.00233	0.00109					
Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30					
Potassium (K)-Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0					
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010					
Silicon (Si)-Total (mg/L)	1.78	2.64	8.13	2.17	1.14					
Silver (Ag)-Total (mg/L)	<0.000010	1.8e-005	0.000060	0.000013	<0.000010					
Sodium (Na)-Total (mg/L)	3.0	<2.0	<2.0	<2.0	<2.0					
Strontium (Sr)-Total (mg/L)	0.0766	0.0676	0.0702	0.0614	0.0568					
Thallium (Tl)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010					
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010					
Titanium (Ti)-Total (mg/L)	<0.010	0.012	0.091	0.012	<0.010					
Uranium (U)-Total (mg/L)	0.000195	0.000201	0.000339	0.000155	0.000139					
Vanadium (V)-Total (mg/L)	<0.0010	0.0029	**0.0109**	0.0021	<0.0010					
Zinc (Zn)-Total (mg/L)	0.0021	0.0067	**0.0269**	0.0049	0.0013					

Sample Site: Moberly 6 **Sampling Matrix: Water**

Date Sampled	03-MAR-07	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07					
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	0.0028	0.0244	0.0597	0.0341	0.0062					
Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	0.00011	<0.00010	<0.00010					
Arsenic (As)-Dissolved (mg/L)	0.00012	0.00019	0.00030	0.00023	0.00027					
Barium (Ba)-Dissolved (mg/L)	0.152	0.119	0.109	0.116	0.118					
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050					
Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050					
Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010					
Cadmium (Cd)-Dissolved (mg/L)	**0.000071**	<0.000050	<0.000050	<0.000050	<0.000050					
Calcium (Ca)-Dissolved (mg/L)	35.1	28.9	24.9	25.6	26.9					
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00070					
Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010					
Copper (Cu)-Dissolved (mg/L)	0.00061	0.00085	0.00129	0.00087	0.00069					
Iron (Fe)-Dissolved (mg/L)	<0.030	0.056	0.106	0.090	0.055					
Lead (Pb)-Dissolved (mg/L)	0.000138	<0.000050	0.000123	0.000056	<0.000050					
Lithium (Li)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050					
Magnesium (Mg)-Dissolved (mg/L)	9.46	8.08	7.38	7.62	7.81					
Manganese (Mn)-Dissolved (mg/L)	0.00198	0.0033	0.00555	0.00178	0.00191					
Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050					
Molybdenum (Mo)-Dissolved (mg/L)	0.000399	0.000338	0.000367	0.000283	0.000349					
Nickel (Ni)-Dissolved (mg/L)	0.00072	0.00112	0.00149	0.00125	0.00098					
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30					
Potassium (K)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0					
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010					
Silicon (Si)-Dissolved (mg/L)	1.69	1.42	1.55	1.37	1.06					
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010					
Sodium (Na)-Dissolved (mg/L)	2.7	<2.0	<2.0	<2.0	<2.0					
Strontium (Sr)-Dissolved (mg/L)	0.0767	0.0598	0.0558	0.0579	0.0583					
Thallium (Tl)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010					
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010					
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010					
Uranium (U)-Dissolved (mg/L)	0.000197	0.000142	0.000159	0.000120	0.000131					
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010					
Zinc (Zn)-Dissolved (mg/L)	0.0020	<0.0010	0.0025	<0.0010	<0.0010					
Organic Parameters										
Chlorophyll a (µg/L)	0.364	1.63	1.09	1.72	0.471					
Dissolved Organic Carbon (mg/L)	4.90	6.75	7.32	6.27	5.35					
Total Inorganic Carbon (mg/L)	15.3	18.6	15.2	12.0	16.9					
Total Organic Carbon (mg/L)	5.47	7.72	8.64	6.70	5.74					

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Moberly 7 **Sampling Matrix: Water**

Date Sampled	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07						
Sample Period	Spring 2	Spring 3	Spring 3	Late Summer						
Date Sampled	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07						
Time Sampled	17:45	14:45	15:30	14:00						
ALS Sample ID	L506847-6	L515422-6	L527080-15	L541389-2						
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0						
Hardness (as CaCO3) (mg/L)	110	96.5	104	123						
Colour, True (CU)	20.8	33.7	23.8	12.2						
Conductivity (µS/cm)	198	182	186	222						
pH (mg/L)	8.13	8.10	8.21	8.28						
Total Dissolved Solids (mg/L)	142	129	114	139						
Total Suspended Solids (mg/L)	148	651	96.0	7.5						
Turbidity (NTU)	95.9	508	54.5	6.94						
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	0.013	0.013	0.013	0.0075						
Ammonia as N (mg/L)	<0.020	0.020	<0.020	<0.020						
Acidity (to pH 8.3) CaCO3 (mg/L)	1.3	2.9	1.5	<1.0						
Alkalinity-Total CaCO3 (mg/L)	102	88.2	75.9	108						
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050						
Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50						
Fluoride (F) (mg/L)	0.07	0.068	0.041	0.069						
Sulfate (SO4) (mg/L)	8.03	7.71	6.50	9.51						
Sulphide as S (mg/L)	<0.020	<0.020	<0.020	<0.020						
Nitrate and Nitrite as N (mg/L)		0.0125	<0.0050	<0.0050						
Nitrate (as N) (mg/L)	0.0206	0.0125	<0.0050	<0.0050						
Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010						
Total Kjeldahl Nitrogen (mg/L)	0.477	1.68	0.278	0.269						
Total Nitrogen (mg/L)	0.497	1.69	0.278	0.25						
Ortho Phosphate as P (mg/L)	0.0028	0.0076	0.0015	<0.0010						
Total Dissolved Phosphate P (mg/L)	0.0062	0.0143	0.0050	0.0028						
Total Phosphate as P (mg/L)	0.165	0.80	0.0756	0.0143						

Sample Site: Moberly 7 **Sampling Matrix: Water**

Date Sampled	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07						
Total Metals										
Aluminum (Al)-Total (mg/L)	**2.31**	**6.59**	**1.30**	0.0537						
Antimony (Sb)-Total (mg/L)	0.00021	0.00041	0.00014	<0.00010						
Arsenic (As)-Total (mg/L)	0.00133	0.00406	0.00079	0.00030						
Barium (Ba)-Total (mg/L)	0.197	0.404	0.162	0.135						
Beryllium (Be)-Total (mg/L)	<0.00050	0.00050	<0.00050	<0.00050						
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050						
Boron (B)-Total (mg/L)	0.012	0.019	<0.010	<0.010						
Cadmium (Cd)-Total (mg/L)	**0.000137**	**0.000555**	**0.000063**	<0.000050						
Calcium (Ca)-Total (mg/L)	33.3	38.4	28.1	34.0						
Chromium (Cr)-Total (mg/L)	0.00399	0.0122	0.00248	<0.00050						
Cobalt (Co)-Total (mg/L)	0.00144	0.00550	0.00069	<0.00010						
Copper (Cu)-Total (mg/L)	**0.00449**	**0.0149**	0.00272	0.00102						
Iron (Fe)-Total (mg/L)	**3.33**	**14.5**	**1.71**	0.181						
Lead (Pb)-Total (mg/L)	0.00179	0.00856	0.000923	0.000121						
Lithium (Li)-Total (mg/L)	0.0055	0.0126	<0.0050	<0.0050						
Magnesium (Mg)-Total (mg/L)	9.46	12.4	8.14	8.95						
Manganese (Mn)-Total (mg/L)	0.0674	0.217	0.0343	0.0146						
Mercury (Hg)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050						
Molybdenum (Mo)-Total (mg/L)	<0.00060	0.000859	0.000491	0.000478						
Nickel (Ni)-Total (mg/L)	0.00589	0.0185	0.00359	0.00123						
Phosphorus (P)-Total (mg/L)	<0.30	0.62	<0.30	<0.30						
Potassium (K)-Total (mg/L)	<2.0	3.9	<2.0	<2.0						
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010						
Silicon (Si)-Total (mg/L)	5.8	19.0	4.05	1.42						
Silver (Ag)-Total (mg/L)	5e-005	**0.000173**	0.000034	<0.000010						
Sodium (Na)-Total (mg/L)	<2.0	2.1	<2.0	<2.0						
Strontium (Sr)-Total (mg/L)	0.0748	0.0808	0.0712	0.0711						
Thallium (Tl)-Total (mg/L)	<0.00010	0.00021	<0.00010	<0.00010						
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010						
Titanium (Ti)-Total (mg/L)	0.048	0.222	0.033	<0.010						
Uranium (U)-Total (mg/L)	0.000336	0.000702	0.000231	0.000211						
Vanadium (V)-Total (mg/L)	**0.0092**	**0.0259**	0.0054	<0.0010						
Zinc (Zn)-Total (mg/L)	**0.0163**	**0.0571**	0.0093	0.0018						

Sample Site: Moberly 7 **Sampling Matrix: Water**

Date Sampled	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07						
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	0.0381	**0.109**	0.0340	0.0078						
Antimony (Sb)-Dissolved (mg/L)	<0.00010	0.00013	<0.00010	<0.00010						
Arsenic (As)-Dissolved (mg/L)	0.00021	0.00038	0.00025	0.00028						
Barium (Ba)-Dissolved (mg/L)	0.109	0.0966	0.116	0.134						
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050						
Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050						
Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010						
Cadmium (Cd)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050						
Calcium (Ca)-Dissolved (mg/L)	30.4	26.2	28.4	34.2						
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00070						
Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010						
Copper (Cu)-Dissolved (mg/L)	0.00102	0.00147	0.00089	0.00077						
Iron (Fe)-Dissolved (mg/L)	0.065	0.153	0.076	0.032						
Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000168	<0.000050	<0.000050						
Lithium (Li)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050						
Magnesium (Mg)-Dissolved (mg/L)	8.34	7.54	8.13	9.16						
Manganese (Mn)-Dissolved (mg/L)	0.00353	0.00204	0.00286	0.00824						
Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050						
Molybdenum (Mo)-Dissolved (mg/L)	0.000365	0.000478	0.000344	0.000489						
Nickel (Ni)-Dissolved (mg/L)	0.00128	0.00166	0.00123	0.00099						
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30						
Potassium (K)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0						
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010						
Silicon (Si)-Dissolved (mg/L)	1.48	1.73	1.42	1.20						
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010						
Sodium (Na)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0						
Strontium (Sr)-Dissolved (mg/L)	0.0607	0.0603	0.0619	0.0731						
Thallium (Tl)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010						
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010						
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010						
Uranium (U)-Dissolved (mg/L)	0.000183	0.000272	0.000153	0.000207						
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010						
Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0041	<0.0010	<0.0010						
Organic Parameters										
Chlorophyll a (µg/L)	1.67	0.334	1.52	0.454						
Dissolved Organic Carbon (mg/L)	6.56	7.06	6.02	4.72						
Total Inorganic Carbon (mg/L)	18.8	18.9	13.3	20.5						
Total Organic Carbon (mg/L)	8.13	11.0	7.65	4.80						

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Halfway 8 **Sampling Matrix: Water**

Date Sampled	05-MAR-07	22-MAY-07	10-JUN-07	09-JUL-07	16-AUG-07					
Sample Period	Winter	Spring 2	Spring 3	Spring 3						
Date Sampled	05-MAR-07	22-MAY-07	10-JUN-07	09-JUL-07	16-AUG-07					
Time Sampled	16:00	15:30	18:30	09:30	17:00					
ALS Sample ID	L483753-7	L508268-1	L515949-2	L527475-1	L543666-2					
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0	<1.0					
Hardness (as CaCO3) (mg/L)	252	173	175	214	221					
Colour, True (CU)	<5.0	40.2	15.3	9.7	<5.0					
Conductivity (µS/cm)	463	295	290	346	392					
pH (mg/L)	8.23	8.18	8.29	8.26	8.42					
Total Dissolved Solids (mg/L)	285	193	195	216	237					
Total Suspended Solids (mg/L)	<3.0	63.0	254	32.5	18.3					
Turbidity (NTU)	0.58	59.2	284	40.3	14.2					
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	<0.004	0.011	0.012	<0.004	0.0066					
Ammonia as N (mg/L)	<0.020	<0.020	<0.020	0.028	<0.020					
Acidity (to pH 8.3) CaCO3 (mg/L)	1.6	1.3	<1.0	<1.0	<1.0					
Alkalinity-Total CaCO3 (mg/L)	218	131	152	163	180					
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050					
Chloride (Cl) (mg/L)	0.89	<0.50	<0.50	<0.50	<0.50					
Fluoride (F) (mg/L)	0.103	0.085	0.055	0.093	0.095					
Sulfate (SO4) (mg/L)	50.5	30.9	24.0	33.6	40.6					
Sulphide as S (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020					
Nitrate and Nitrite as N (mg/L)	0.099		0.0529	0.0065	<0.0050					
Nitrate (as N) (mg/L)		<0.0050	0.0529	0.0065	<0.0050					
Nitrite (as N) (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010					
Total Kjeldahl Nitrogen (mg/L)	<0.050	0.457	0.67	0.138	0.145					
Total Nitrogen (mg/L)	0.099	0.457	0.57	0.144	0.21					
Ortho Phosphate as P (mg/L)	0.0016	0.0023	0.0069	0.0030	<0.0010					
Total Dissolved Phosphate P (mg/L)	0.0023	0.0076	0.0065	0.0042	0.0022					
Total Phosphate as P (mg/L)	0.0032	0.0789	0.333	0.0421	0.0186					

Sample Site: Halfway 8 **Sampling Matrix: Water**

Date Sampled	05-MAR-07	22-MAY-07	10-JUN-07	09-JUL-07	16-AUG-07					
Total Metals										
Aluminum (Al)-Total (mg/L)	0.0082	**1.42**	**5.60**	**0.800**	**0.311**					
Antimony (Sb)-Total (mg/L)	0.00012	0.00027	0.00060	0.00029	0.00020					
Arsenic (As)-Total (mg/L)	0.00011	0.00090	0.00243	0.00061	0.00033					
Barium (Ba)-Total (mg/L)	0.107	0.119	0.213	0.0987	0.0987					
Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050					
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050					
Boron (B)-Total (mg/L)	0.010	0.014	0.021	0.013	0.022					
Cadmium (Cd)-Total (mg/L)	**0.000058**	**0.000146**	**0.00079**	**0.000099**	**0.000059**					
Calcium (Ca)-Total (mg/L)	73.1	48.5	63.1	61.2	61.2					
Chromium (Cr)-Total (mg/L)	<0.00050	0.00247	0.0126	0.00181	0.00076					
Cobalt (Co)-Total (mg/L)	<0.00010	0.00083	0.00249	0.00044	0.00021					
Copper (Cu)-Total (mg/L)	0.00019	0.00331	**0.120**	0.00176	<0.0010					
Iron (Fe)-Total (mg/L)	<0.030	**1.98**	**6.40**	**1.01**	**0.465**					
Lead (Pb)-Total (mg/L)	<0.000050	0.00102	0.00397	0.000664	0.000234					
Lithium (Li)-Total (mg/L)	0.0071	0.0070	<0.010	0.0059	0.0069					
Magnesium (Mg)-Total (mg/L)	17.3	13.4	15.5	14.7	16.7					
Manganese (Mn)-Total (mg/L)	0.00140	0.0288	0.0879	0.0192	0.0168					
Mercury (Hg)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050					
Molybdenum (Mo)-Total (mg/L)	0.00363	0.00258	0.00392	0.00386	0.00436					
Nickel (Ni)-Total (mg/L)	0.00051	0.00468	0.0133	0.00333	0.00174					
Phosphorus (P)-Total (mg/L)	<0.30	<0.30	0.37	<0.30	<0.30					
Potassium (K)-Total (mg/L)	<2.0	<2.0	3.0	<2.0	<2.0					
Selenium (Se)-Total (mg/L)	0.0015	0.0011	<0.0020	0.0014	0.0012					
Silicon (Si)-Total (mg/L)	2.02	4.30	18.9	3.28	2.20					
Silver (Ag)-Total (mg/L)	<0.000010	0.000036	**0.000105**	0.000018	<0.000010					
Sodium (Na)-Total (mg/L)	2.9	2.8	<2.0	2.0	3.4					
Strontium (Sr)-Total (mg/L)	0.325	0.205	0.199	0.248	0.308					
Thallium (Tl)-Total (mg/L)	<0.00010	<0.00010	0.00025	<0.00010	<0.00010					
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	0.00807	<0.00010	<0.00010					
Titanium (Ti)-Total (mg/L)	<0.010	0.039	0.452	0.017	<0.010					
Uranium (U)-Total (mg/L)	0.000839	0.000629	0.00112	0.000802	0.000866					
Vanadium (V)-Total (mg/L)	<0.0010	**0.0064**	**0.0304**	0.0054	0.0020					
Zinc (Zn)-Total (mg/L)	<0.0010	0.0112	**0.0536**	0.0084	0.0036					

Sample Site: Halfway 8 **Sampling Matrix: Water**

Date Sampled	05-MAR-07	22-MAY-07	10-JUN-07	09-JUL-07	16-AUG-07					
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	<0.0010	0.0698	0.0477	0.0205	0.0039					
Antimony (Sb)-Dissolved (mg/L)	0.00014	0.00016	0.00076	0.00021	0.00016					
Arsenic (As)-Dissolved (mg/L)	<0.00010	0.00026	0.00031	0.00020	0.00019					
Barium (Ba)-Dissolved (mg/L)	0.106	0.0773	0.0660	0.0730	0.0837					
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050					
Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050					
Boron (B)-Dissolved (mg/L)	<0.010	0.012	<0.020	<0.010	0.011					
Cadmium (Cd)-Dissolved (mg/L)	<0.000050	<0.000050	<0.00010	<0.000050	<0.000050					
Calcium (Ca)-Dissolved (mg/L)	72.3	47.9	49.2	61.6	60.9					
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00060	<0.0010	<0.00050	<0.00050					
Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00012	<0.00020	<0.00010	<0.00010					
Copper (Cu)-Dissolved (mg/L)	0.00017	0.00129	0.00085	0.00057	0.00046					
Iron (Fe)-Dissolved (mg/L)	<0.030	0.119	0.038	<0.030	<0.030					
Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000064	<0.00010	<0.000050	<0.000050					
Lithium (Li)-Dissolved (mg/L)	0.0076	0.0059	<0.010	0.0051	0.0068					
Magnesium (Mg)-Dissolved (mg/L)	17.4	13.0	12.6	14.5	16.7					
Manganese (Mn)-Dissolved (mg/L)	0.00101	0.00693	0.00406	0.00512	0.00203					
Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050					
Molybdenum (Mo)-Dissolved (mg/L)	0.00371	0.00242	0.00364	0.00347	0.00396					
Nickel (Ni)-Dissolved (mg/L)	0.00052	0.00198	0.0014	0.00156	0.00094					
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30					
Potassium (K)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0					
Selenium (Se)-Dissolved (mg/L)	0.0014	0.0011	<0.0020	0.0015	0.0016					
Silicon (Si)-Dissolved (mg/L)	1.99	1.75	1.67	1.70	1.63					
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000020	<0.000010	<0.000010					
Sodium (Na)-Dissolved (mg/L)	3.0	2.8	<2.0	<2.0	2.2					
Strontium (Sr)-Dissolved (mg/L)	0.329	0.195	0.194	0.230	0.282					
Thallium (Tl)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010					
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010					
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010					
Uranium (U)-Dissolved (mg/L)	0.000833	0.000528	0.000728	0.000666	0.000759					
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010					
Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0010	0.0085	<0.0010	<0.0010					
Organic Parameters										
Chlorophyll a (µg/L)	0.105	0.872	0.314	0.217	0.215					
Dissolved Organic Carbon (mg/L)	1.17	8.93	3.90	3.00	2.07					
Total Inorganic Carbon (mg/L)	49.6	26.6	35.8	35.5	27.1					
Total Organic Carbon (mg/L)	1.26	12.2	6.93	3.77	2.52					

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Halfway 9 **Sampling Matrix: Water**

Date Sampled	05-MAR-07	22-MAY-07	10-JUN-07	04-JUL-07	16-AUG-07					
Sample Period	Winter	Spring 2	Spring 3	Spring 3						
Date Sampled	05-MAR-07	22-MAY-07	10-JUN-07	04-JUL-07	16-AUG-07					
Time Sampled	11:30	17:50	17:00	13:30	15:00					
ALS Sample ID	L483753-6	L508268-2	L515949-1	L527080-10	L543666-3					
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0	<1.0					
Hardness (as CaCO3) (mg/L)	260	175	166	185	219					
Colour, True (CU)	<5.0	38.5	14.7	17.6	<5.0					
Conductivity (µS/cm)	482	298	299	335	393					
pH (mg/L)	8.19	8.21	8.32	8.21	8.47					
Total Dissolved Solids (mg/L)	299	202	205	210	245					
Total Suspended Solids (mg/L)	<3.0	66.0	686	161	28.8					
Turbidity (NTU)	2.05	66.1	457	112	25.6					
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	<0.004	0.010	0.009	0.0076	0.0055					
Ammonia as N (mg/L)	<0.020	<0.020	<0.020	0.024	<0.020					
Acidity (to pH 8.3) CaCO3 (mg/L)	2.8	1.0	<1.0	1.9	<1.0					
Alkalinity-Total CaCO3 (mg/L)	232	130	160	138	182					
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050					
Chloride (Cl) (mg/L)	0.93	<0.50	<0.50	<0.50	<0.50					
Fluoride (F) (mg/L)	0.100	0.086	0.059	0.068	0.096					
Sulfate (SO4) (mg/L)	56.4	31.5	24.9	29.5	41.0					
Sulphide as S (mg/L)	<0.020	<0.020	0.022	<0.020	<0.020					
Nitrate and Nitrite as N (mg/L)	0.083		0.0554	0.0208	<0.0050					
Nitrate (as N) (mg/L)		<0.0050	0.0554	0.0208	<0.0050					
Nitrite (as N) (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010					
Total Kjeldahl Nitrogen (mg/L)	<0.050	0.294	0.98	0.333	0.156					
Total Nitrogen (mg/L)	0.083	0.294	0.34	0.354	0.18					
Ortho Phosphate as P (mg/L)	0.0017	0.0030	0.0083	0.0036	0.0011					
Total Dissolved Phosphate P (mg/L)	0.0028	0.0089	0.0081	0.0052	0.0023					
Total Phosphate as P (mg/L)	0.0057	0.0912	0.77	0.147	0.0338					

Sample Site: Halfway 9 **Sampling Matrix: Water**

Date Sampled	05-MAR-07	22-MAY-07	10-JUN-07	04-JUL-07	16-AUG-07					
Total Metals										
Aluminum (Al)-Total (mg/L)	0.0316	**1.57**	**5.62**	**2.53**	**0.731**					
Antimony (Sb)-Total (mg/L)	0.00013	0.00025	0.00061	0.00035	0.00021					
Arsenic (As)-Total (mg/L)	0.00013	0.00104	0.00325	0.00156	0.00046					
Barium (Ba)-Total (mg/L)	0.101	0.124	0.314	0.150	0.104					
Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050					
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050					
Boron (B)-Total (mg/L)	0.012	0.014	0.023	0.015	0.017					
Cadmium (Cd)-Total (mg/L)	<0.000050	**0.000140**	**0.00106**	**0.000238**	**0.000070**					
Calcium (Ca)-Total (mg/L)	74.4	48.6	80.9	60.4	61.5					
Chromium (Cr)-Total (mg/L)	<0.00050	0.00278	0.0118	0.00510	0.00148					
Cobalt (Co)-Total (mg/L)	<0.00010	0.00099	0.00411	0.00139	0.00037					
Copper (Cu)-Total (mg/L)	0.00036	**0.00374**	**0.0107**	**0.00455**	0.00164					
Iron (Fe)-Total (mg/L)	0.049	**2.26**	**10.4**	**3.53**	**0.813**					
Lead (Pb)-Total (mg/L)	<0.000050	0.00120	0.00634	0.00193	0.000437					
Lithium (Li)-Total (mg/L)	0.0088	0.0074	0.0114	0.0074	0.0082					
Magnesium (Mg)-Total (mg/L)	18.1	13.4	19.9	16.4	16.8					
Manganese (Mn)-Total (mg/L)	0.00457	0.0329	0.158	0.0525	0.0179					
Mercury (Hg)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050					
Molybdenum (Mo)-Total (mg/L)	0.00330	0.00273	0.00311	0.00381	0.00430					
Nickel (Ni)-Total (mg/L)	0.00075	0.00491	0.0165	0.00698	0.00250					
Phosphorus (P)-Total (mg/L)	<0.30	<0.30	0.83	<0.30	<0.30					
Potassium (K)-Total (mg/L)	<2.0	<2.0	3.3	<2.0	<2.0					
Selenium (Se)-Total (mg/L)	0.0015	0.0011	0.0013	0.0016	0.0012					
Silicon (Si)-Total (mg/L)	1.99	4.19	16.2	8.20	3.06					
Silver (Ag)-Total (mg/L)	<0.000010	0.000033	**0.000135**	0.000038	<0.000020					
Sodium (Na)-Total (mg/L)	4.7	2.8	<2.0	<2.0	2.9					
Strontium (Sr)-Total (mg/L)	0.337	0.212	0.195	0.262	0.293					
Thallium (Tl)-Total (mg/L)	<0.00010	<0.00010	0.00026	0.00010	<0.00010					
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	0.00010	<0.00010	<0.00010					
Titanium (Ti)-Total (mg/L)	<0.010	0.034	0.153	0.088	0.019					
Uranium (U)-Total (mg/L)	0.000894	0.000658	0.00138	0.000933	0.000847					
Vanadium (V)-Total (mg/L)	<0.0010	**0.0070**	**0.0341**	**0.0138**	0.0038					
Zinc (Zn)-Total (mg/L)	0.0011	**0.0134**	**0.0608**	**0.0211**	0.0093					

Sample Site: Halfway 9 **Sampling Matrix: Water**

Date Sampled	05-MAR-07	22-MAY-07	10-JUN-07	04-JUL-07	16-AUG-07					
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	0.0018	0.0781	0.0558	0.0369	0.0070					
Antimony (Sb)-Dissolved (mg/L)	0.00013	0.00015	0.00122	0.00020	0.00016					
Arsenic (As)-Dissolved (mg/L)	0.00011	0.00027	0.00029	0.00025	0.00021					
Barium (Ba)-Dissolved (mg/L)	0.0981	0.0773	0.0644	0.0693	0.0841					
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050					
Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050					
Boron (B)-Dissolved (mg/L)	0.011	0.012	<0.010	<0.010	0.012					
Cadmium (Cd)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050					
Calcium (Ca)-Dissolved (mg/L)	74.5	48.5	46.6	51.2	60.4					
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00070	<0.00050	<0.00050	<0.00050					
Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00016	0.00012	0.00010	<0.00010					
Copper (Cu)-Dissolved (mg/L)	0.00116	0.00138	0.00106	0.00191	0.00050					
Iron (Fe)-Dissolved (mg/L)	0.038	0.132	0.039	0.034	<0.030					
Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000072	0.000147	0.000082	<0.000050					
Lithium (Li)-Dissolved (mg/L)	0.0086	0.0057	<0.0050	<0.0050	0.0069					
Magnesium (Mg)-Dissolved (mg/L)	18.0	13.1	12.1	13.8	16.6					
Manganese (Mn)-Dissolved (mg/L)	0.00421	0.00632	0.00581	0.00368	0.00141					
Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050					
Molybdenum (Mo)-Dissolved (mg/L)	0.00328	0.00246	0.00357	0.00333	0.00393					
Nickel (Ni)-Dissolved (mg/L)	0.00242	0.00211	0.00170	0.00200	0.00087					
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30					
Potassium (K)-Dissolved (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0					
Selenium (Se)-Dissolved (mg/L)	0.0016	0.0012	0.0016	0.0014	0.0015					
Silicon (Si)-Dissolved (mg/L)	1.97	1.78	1.63	1.65	1.59					
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010					
Sodium (Na)-Dissolved (mg/L)	4.7	2.9	<2.0	<2.0	2.5					
Strontium (Sr)-Dissolved (mg/L)	0.318	0.199	0.188	0.230	0.281					
Thallium (Tl)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010					
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010					
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010					
Uranium (U)-Dissolved (mg/L)	0.000862	0.000546	0.000692	0.000651	0.000787					
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010					
Zinc (Zn)-Dissolved (mg/L)	0.0020	0.0016	0.0021	0.0018	<0.0010					
Organic Parameters										
Chlorophyll a (µg/L)	0.129	0.737	0.0796	0.166	0.179					
Dissolved Organic Carbon (mg/L)	1.30	3.88	3.59	4.13	1.99					
Total Inorganic Carbon (mg/L)	40.8	27.8	42.0	28.6	29.3					
Total Organic Carbon (mg/L)	1.53	9.63	4.90	5.17	2.59					

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Lynx 10 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Sample Period	Winter	Spring 1	Spring 2	Spring 3	Spring 3					
Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Time Sampled	12:00	10:35	13:00	11:15	12:15	10:00				
ALS Sample ID	L483753-9	L496604-6	L507216-2	L515422-1	L527475-2	L543666-4				
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0				
Hardness (as CaCO3) (mg/L)	471	207	218	246	406	390				
Colour, True (CU)	<5.0	35.3	41.5	26.7	10.7	6.2				
Conductivity (µS/cm)	824	388	392	441	663	721				
pH (mg/L)	8.29	8.16	8.25	8.40	8.36	8.28				
Total Dissolved Solids (mg/L)	389	297	251	281	411	457				
Total Suspended Solids (mg/L)	40.2	1960	240	330	8.5	37.8				
Turbidity (NTU)	21.0	1070	236	283	9.17	40.2				
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	<0.004	0.005	0.012	0.011	0.058	0.0068				
Ammonia as N (mg/L)	0.039	0.126	<0.020	<0.020	0.025	<0.020				
Acidity (to pH 8.3) CaCO3 (mg/L)	<1.0	1.5	1.7	<1.0	<1.0	<1.0				
Alkalinity-Total CaCO3 (mg/L)	466	163	195	222	314	338				
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050				
Chloride (Cl) (mg/L)	0.94	1.44	<0.50	<0.50	0.69	0.77				
Fluoride (F) (mg/L)	**0.267**	0.173	0.150	0.162	**0.273**	**0.264**				
Sulfate (SO4) (mg/L)	83.0	46.8	27.8	33.4	70.1	92.9				
Sulphide as S (mg/L)	<0.020	<0.020	0.040	<0.020	<0.020	<0.020				
Nitrate and Nitrite as N (mg/L)	0.14	0.0997	0.0373	0.0193	0.0105	0.0546				
Nitrate (as N) (mg/L)			0.0373	0.0193	0.0105	0.0546				
Nitrite (as N) (mg/L)			<0.0010	<0.0010	<0.0010	<0.0010				
Total Kjeldahl Nitrogen (mg/L)	0.138	2.28	0.93	0.81	0.193	0.209				
Total Nitrogen (mg/L)	0.278	2.38	0.92	0.83	0.203	0.33				
Ortho Phosphate as P (mg/L)	0.0089	0.0495	0.0093	0.0113	0.0059	0.0036				
Total Dissolved Phosphate P (mg/L)	0.0083	0.0696	0.0426	0.0160	0.0079	0.0054				
Total Phosphate as P (mg/L)	0.0346	1.37	0.290	0.351	0.0145	0.0344				

Sample Site: Lynx 10 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Total Metals										
Aluminum (Al)-Total (mg/L)	**0.166**	**13.0**	**5.44**	**3.53**	0.0493	**0.591**				
Antimony (Sb)-Total (mg/L)	0.00011	0.00101	0.00053	0.00052	0.00019	<0.00020				
Arsenic (As)-Total (mg/L)	0.00108	**0.0145**	0.00324	0.00352	0.00119	0.00138				
Barium (Ba)-Total (mg/L)	0.117	0.782	0.237	0.228	0.121	0.113				
Beryllium (Be)-Total (mg/L)	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050	<0.0010				
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050	<0.0010				
Boron (B)-Total (mg/L)	0.038	0.039	0.026	0.030	0.041	0.045				
Cadmium (Cd)-Total (mg/L)	**0.000065**	**0.00217**	**0.00061**	**0.000719**	<0.000050	<0.00010				
Calcium (Ca)-Total (mg/L)	93.4	154	67.4	77.0	82.7	73.0				
Chromium (Cr)-Total (mg/L)	<0.00050	0.0255	0.0095	0.00708	<0.00050	0.0013				
Cobalt (Co)-Total (mg/L)	0.00035	0.0137	0.00298	0.00267	0.00020	0.00047				
Copper (Cu)-Total (mg/L)	0.00144	**0.0422**	**0.0107**	**0.00935**	0.00129	0.00214				
Iron (Fe)-Total (mg/L)	**0.332**	**27.0**	**6.53**	**6.68**	0.117	**0.801**				
Lead (Pb)-Total (mg/L)	0.000335	0.0156	0.00363	0.00351	<0.000050	0.00038				
Lithium (Li)-Total (mg/L)	0.0264	0.029	0.015	0.0167	0.0249	0.028				
Magnesium (Mg)-Total (mg/L)	58.0	45.2	24.1	30.9	50.9	54.6				
Manganese (Mn)-Total (mg/L)	0.0376	**0.602**	0.140	0.147	0.0142	0.0271				
Mercury (Hg)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050				
Molybdenum (Mo)-Total (mg/L)	0.00489	0.00478	0.00242	0.00323	0.00479	0.00531				
Nickel (Ni)-Total (mg/L)	0.00201	0.0449	0.0130	0.0114	0.00282	0.0037				
Phosphorus (P)-Total (mg/L)	<0.30	1.64	<0.30	0.31	<0.30	<0.30				
Potassium (K)-Total (mg/L)	2.5	9.5	3.3	3.9	2.9	3.1				
Selenium (Se)-Total (mg/L)	<0.0010	**0.0028**	<0.0020	<0.0010	<0.0010	<0.0020				
Silicon (Si)-Total (mg/L)	6.61	23.7	14.2	13.6	5.70	7.09				
Silver (Ag)-Total (mg/L)	<0.000010	**0.000397**	0.000080	0.000078	<0.000010	<0.000030				
Sodium (Na)-Total (mg/L)	18.1	7.4	5.2	7.1	16.1	20.4				
Strontium (Sr)-Total (mg/L)	0.563	0.400	0.220	0.262	0.428	0.506				
Thallium (Tl)-Total (mg/L)	<0.00010	**0.00039**	<0.00020	0.00013	<0.00010	<0.00020				
Tin (Sn)-Total (mg/L)	<0.00010	<0.00020	<0.00020	<0.00010	<0.00010	<0.00020				
Titanium (Ti)-Total (mg/L)	<0.010	0.216	0.194	0.163	<0.010	0.023				
Uranium (U)-Total (mg/L)	0.00392	0.00324	0.00153	0.00170	0.00276	0.00362				
Vanadium (V)-Total (mg/L)	<0.0010	**0.0620**	**0.0211**	**0.0183**	<0.0010	0.0028				
Zinc (Zn)-Total (mg/L)	0.0040	**0.166**	**0.0373**	**0.0367**	0.0012	0.0060				

Sample Site: Lynx 10 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	0.0014	**0.115**	0.0654	0.0443	0.0083	0.0445				
Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00020	0.00021	0.00022	0.00019	<0.00020				
Arsenic (As)-Dissolved (mg/L)	0.00078	0.00083	0.00065	0.00096	0.00116	0.00114				
Barium (Ba)-Dissolved (mg/L)	0.108	0.0592	0.104	0.106	0.116	0.0972				
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050	<0.0010				
Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050	<0.0010				
Boron (B)-Dissolved (mg/L)	0.038	0.021	<0.020	0.024	0.040	0.046				
Cadmium (Cd)-Dissolved (mg/L)	<0.000050	<0.00010	<0.00010	<0.000050	<0.000050	<0.00010				
Calcium (Ca)-Dissolved (mg/L)	91.9	48.3	52.4	56.9	79.5	67.3				
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050	<0.0010				
Cobalt (Co)-Dissolved (mg/L)	0.00014	0.00061	0.00037	0.00028	0.00016	<0.00020				
Copper (Cu)-Dissolved (mg/L)	0.00049	**0.00360**	0.00269	0.00221	0.00113	0.00102				
Iron (Fe)-Dissolved (mg/L)	<0.030	0.082	0.080	0.032	<0.030	<0.030				
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.00010	<0.00010	0.000053	<0.000050	<0.00010				
Lithium (Li)-Dissolved (mg/L)	0.0253	0.012	<0.010	0.0120	0.0248	0.029				
Magnesium (Mg)-Dissolved (mg/L)	58.7	21.0	21.0	25.3	50.3	53.9				
Manganese (Mn)-Dissolved (mg/L)	0.0232	0.0263	0.0161	0.00352	0.00688	0.00768				
Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050				
Molybdenum (Mo)-Dissolved (mg/L)	0.00517	0.00278	0.00195	0.00281	0.00495	0.00556				
Nickel (Ni)-Dissolved (mg/L)	0.00130	0.0062	0.0036	0.00359	0.00284	0.0027				
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30				
Potassium (K)-Dissolved (mg/L)	2.6	6.0	<2.0	2.4	2.9	3.0				
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010	<0.0020				
Silicon (Si)-Dissolved (mg/L)	6.60	2.66	3.25	3.60	5.51	5.93				
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000020	<0.000020	<0.000010	<0.000010	<0.000020				
Sodium (Na)-Dissolved (mg/L)	18.7	7.0	5.1	6.9	15.9	20.7				
Strontium (Sr)-Dissolved (mg/L)	0.562	0.177	0.173	0.211	0.426	0.479				
Thallium (Tl)-Dissolved (mg/L)	<0.00010	<0.00020	<0.00020	<0.00010	<0.00010	<0.00020				
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00020	<0.00020	<0.00010	<0.00010	<0.00020				
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010				
Uranium (U)-Dissolved (mg/L)	0.00382	0.00167	0.00117	0.00160	0.00282	0.00350				
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010	<0.0020				
Zinc (Zn)-Dissolved (mg/L)	<0.0010	<0.0020	<0.0020	0.0026	<0.0010	<0.0020				
Organic Parameters										
Chlorophyll a (µg/L)	0.583	1.38	0.565	0.554	1.01	0.853				
Dissolved Organic Carbon (mg/L)	1.93	8.44	12.6	9.13	4.89	3.42				
Total Inorganic Carbon (mg/L)	104	25.2	48.5	56.1	42.4	57.2				
Total Organic Carbon (mg/L)	2.55	57.0	19.5	10.4	5.50	4.39				

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Farrell 11 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Sample Period	Winter	Spring 1	Spring 2	Spring 3	Spring 3					
Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Time Sampled	14:30	13:30	16:00	14:00	14:30	13:00				
ALS Sample ID	L483753-8	L496604-7	L507216-3	L515422-2	L527475-3	L543666-5				
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0				
Hardness (as CaCO3) (mg/L)	428	252	124	129	231	247				
Colour, True (CU)	<5.0	19.2	63.9	35.6	26.2	14.0				
Conductivity (µS/cm)	881	482	237	248	399	468				
pH (mg/L)	8.23	8.28	8.10	8.26	8.42	8.48				
Total Dissolved Solids (mg/L)	582	314	179	181	254	302				
Total Suspended Solids (mg/L)	6.7	178	145	51.8	8.5	7.3				
Turbidity (NTU)	1.77	186	150	63.8	8.52	6.14				
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	<0.004	<0.004	0.022	0.013	0.079	0.010				
Ammonia as N (mg/L)	0.038	0.058	<0.020	<0.020	<0.020	<0.020				
Acidity (to pH 8.3) CaCO3 (mg/L)	2.2	<1.0	4.1	1.4	<1.0	<1.0				
Alkalinity-Total CaCO3 (mg/L)	293	187	100	109	195	222				
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050				
Chloride (Cl) (mg/L)	4.32	2.42	0.53	0.53	1.06	1.33				
Fluoride (F) (mg/L)	**0.317**	0.142	0.103	0.117	0.172	0.174				
Sulfate (SO4) (mg/L)	**216**	79.7	25.8	23.1	40.1	55.1				
Sulphide as S (mg/L)	<0.020	<0.020	0.038	<0.020	<0.020	<0.020				
Nitrate and Nitrite as N (mg/L)	0.0857	0.116	0.0976	<0.0050	<0.0050	<0.0050				
Nitrate (as N) (mg/L)			0.0976	<0.0050	<0.0050	<0.0050				
Nitrite (as N) (mg/L)			<0.0010	<0.0010	<0.0010	<0.0010				
Total Kjeldahl Nitrogen (mg/L)	0.126	0.644	1.17	0.518	0.379	0.350				
Total Nitrogen (mg/L)	0.212	0.76	0.79	0.518	0.379	0.42				
Ortho Phosphate as P (mg/L)	0.0060	0.0180	0.0062	0.0058	<0.0010	<0.0010				
Total Dissolved Phosphate P (mg/L)	0.0079	0.0289	0.0155	0.0127	0.0039	0.0043				
Total Phosphate as P (mg/L)	0.0137	0.246	0.213	0.0900	0.0173	0.0133				

Sample Site: Farrell 11 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Total Metals										
Aluminum (Al)-Total (mg/L)	**0.193**	**5.44**	**3.25**	**1.13**	0.0658	0.0829				
Antimony (Sb)-Total (mg/L)	<0.00020	0.00040	0.00039	0.00025	0.00021	0.00017				
Arsenic (As)-Total (mg/L)	0.00043	0.00299	0.00215	0.00119	0.00055	0.00049				
Barium (Ba)-Total (mg/L)	0.0895	0.158	0.143	0.104	0.115	0.103				
Beryllium (Be)-Total (mg/L)	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050				
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050				
Boron (B)-Total (mg/L)	0.032	0.029	0.022	0.020	0.028	0.036				
Cadmium (Cd)-Total (mg/L)	**0.00022**	**0.000392**	**0.000286**	**0.000150**	<0.000050	<0.000050				
Calcium (Ca)-Total (mg/L)	110	71.0	41.8	37.0	63.3	62.3				
Chromium (Cr)-Total (mg/L)	<0.0010	0.00967	0.00642	0.00219	<0.00050	<0.00050				
Cobalt (Co)-Total (mg/L)	0.00030	0.00386	0.00200	0.00081	0.00013	0.00011				
Copper (Cu)-Total (mg/L)	0.00151	**0.0124**	**0.00808**	**0.00510**	0.00210	0.00161				
Iron (Fe)-Total (mg/L)	0.095	**6.15**	**4.71**	**1.73**	0.170	0.114				
Lead (Pb)-Total (mg/L)	<0.00010	0.00295	0.00242	0.00102	0.000127	0.000077				
Lithium (Li)-Total (mg/L)	0.039	0.0174	0.0103	0.0081	0.0121	0.0174				
Magnesium (Mg)-Total (mg/L)	36.4	22.5	11.6	10.7	16.9	22.0				
Manganese (Mn)-Total (mg/L)	0.0270	0.150	0.0815	0.0427	0.0268	0.0174				
Mercury (Hg)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050				
Molybdenum (Mo)-Total (mg/L)	0.00148	0.00229	0.00107	0.00101	0.00145	0.00186				
Nickel (Ni)-Total (mg/L)	0.0083	0.0143	0.0101	0.00479	0.00280	0.00196				
Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30				
Potassium (K)-Total (mg/L)	2.2	4.4	2.2	<2.0	<2.0	2.4				
Selenium (Se)-Total (mg/L)	<0.0020	0.0015	<0.0010	<0.0010	<0.0010	<0.0010				
Silicon (Si)-Total (mg/L)	2.67	9.98	9.97	4.24	1.67	1.54				
Silver (Ag)-Total (mg/L)	<0.000020	0.000071	0.000059	0.000016	<0.000010	<0.000010				
Sodium (Na)-Total (mg/L)	34.0	11.8	4.6	5.3	9.5	14.4				
Strontium (Sr)-Total (mg/L)	0.359	0.201	0.103	0.0990	0.152	0.197				
Thallium (Tl)-Total (mg/L)	<0.00020	0.00011	<0.00010	<0.00010	<0.00010	<0.00010				
Tin (Sn)-Total (mg/L)	<0.00020	0.00011	<0.00010	<0.00010	<0.00010	<0.00010				
Titanium (Ti)-Total (mg/L)	<0.010	0.106	0.125	0.036	<0.010	<0.010				
Uranium (U)-Total (mg/L)	0.00211	0.00174	0.000658	0.000501	0.000804	0.00112				
Vanadium (V)-Total (mg/L)	<0.0020	**0.0206**	**0.0145**	0.0055	<0.0010	<0.0010				
Zinc (Zn)-Total (mg/L)	**0.0146**	**0.0440**	**0.0231**	0.0107	0.0010	0.0010				

Sample Site: Farrell 11 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	0.0053	0.0924	0.0892	0.0543	0.0078	0.0044				
Antimony (Sb)-Dissolved (mg/L)	<0.00020	0.00012	0.00018	0.00018	0.00018	0.00015				
Arsenic (As)-Dissolved (mg/L)	0.00037	0.00039	0.00047	0.00064	0.00047	0.00054				
Barium (Ba)-Dissolved (mg/L)	0.0878	0.0647	0.0632	0.0760	0.109	0.0999				
Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050				
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050				
Boron (B)-Dissolved (mg/L)	0.031	0.021	0.016	0.020	0.027	0.036				
Cadmium (Cd)-Dissolved (mg/L)	**0.00023**	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050				
Calcium (Ca)-Dissolved (mg/L)	111	65.4	34.1	34.8	64.2	62.1				
Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050				
Cobalt (Co)-Dissolved (mg/L)	0.00024	0.00067	0.00020	<0.00010	<0.00010	<0.00010				
Copper (Cu)-Dissolved (mg/L)	0.00099	0.00319	0.00299	0.00245	0.00164	0.00145				
Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	0.187	0.120	<0.030	<0.030				
Lead (Pb)-Dissolved (mg/L)	<0.00010	<0.000050	0.000127	0.000147	<0.000050	<0.000050				
Lithium (Li)-Dissolved (mg/L)	0.038	0.0130	0.0064	0.0071	0.0115	0.0169				
Magnesium (Mg)-Dissolved (mg/L)	36.7	21.4	9.50	10.1	17.2	22.2				
Manganese (Mn)-Dissolved (mg/L)	0.0193	0.0310	0.00870	0.00238	0.000905	0.00305				
Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050				
Molybdenum (Mo)-Dissolved (mg/L)	0.00142	0.00159	0.000670	0.000905	0.00129	0.00180				
Nickel (Ni)-Dissolved (mg/L)	0.0082	0.00419	0.00376	0.00244	0.00251	0.00209				
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30				
Potassium (K)-Dissolved (mg/L)	2.1	3.5	<2.0	<2.0	<2.0	2.4				
Selenium (Se)-Dissolved (mg/L)	<0.0020	0.0013	<0.0010	<0.0010	<0.0010	<0.0010				
Silicon (Si)-Dissolved (mg/L)	2.64	2.34	2.42	1.91	1.57	1.39				
Silver (Ag)-Dissolved (mg/L)	<0.000020	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010				
Sodium (Na)-Dissolved (mg/L)	34.2	12.1	4.5	5.4	9.7	14.7				
Strontium (Sr)-Dissolved (mg/L)	0.352	0.175	0.0798	0.0839	0.147	0.195				
Thallium (Tl)-Dissolved (mg/L)	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				
Tin (Sn)-Dissolved (mg/L)	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010				
Uranium (U)-Dissolved (mg/L)	0.00209	0.00143	0.000440	0.000481	0.000717	0.00107				
Vanadium (V)-Dissolved (mg/L)	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010				
Zinc (Zn)-Dissolved (mg/L)	**0.0124**	0.0017	0.0010	0.0069	<0.0010	<0.0010				
Organic Parameters										
Chlorophyll a (µg/L)	1.53	0.278	0.423	0.553	1.05	0.573				
Dissolved Organic Carbon (mg/L)	3.87	6.07	15.3	9.95	9.78	7.89				
Total Inorganic Carbon (mg/L)	65.9	9.63	21.1	21.8	42.4	35.5				
Total Organic Carbon (mg/L)	4.17	46.1	18.5	11.6	10.5	8.23				

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Cache 12 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Sample Period	Winter	Spring 1	Spring 2	Spring 3	Spring 3					
Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Time Sampled	15:00	15:30	17:00	16:30	15:50	18:00				
ALS Sample ID	L483753-5	L496604-8	L507216-4	L515422-3	L527475-4	L543666-6				
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0				
Hardness (as CaCO3) (mg/L)	652	140	201	401	518	596				
Colour, True (CU)	8.7	50.8	77.9	26.0	14.6	9.5				
Conductivity (µS/cm)	1420	345	470	955	1130	1310				
pH (mg/L)	7.91	8.03	8.10	8.32	8.31	8.25				
Total Dissolved Solids (mg/L)	964	347	335	702	823	1030				
Total Suspended Solids (mg/L)	22.2	2760	186	30.3	4.5	7.1				
Turbidity (NTU)	14.4	3520	250	44.7	4.90	6.29				
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	<0.004	0.021	0.027	0.017	0.081	0.0088				
Ammonia as N (mg/L)	0.042	0.214	0.054	<0.020	0.022	<0.020				
Acidity (to pH 8.3) CaCO3 (mg/L)	11.1	2.1	4.5	<1.0	<1.0	<1.0				
Alkalinity-Total CaCO3 (mg/L)	355	96.4	132	206	243	275				
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050				
Chloride (Cl) (mg/L)	20.9	2.06	3.10	4.78	5.88	11.9				
Fluoride (F) (mg/L)	**0.428**	0.158	0.159	**0.374**	**0.407**	**0.491**				
Sulfate (SO4) (mg/L)	**502**	75.2	**105**	**322**	**386**	**472**				
Sulphide as S (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020				
Nitrate and Nitrite as N (mg/L)	0.0173	0.125	0.0209	<0.0050	<0.0050	<0.0050				
Nitrate (as N) (mg/L)			0.0175	<0.0050	<0.0050	<0.0050				
Nitrite (as N) (mg/L)			0.0034	<0.0010	<0.0010	<0.0010				
Total Kjeldahl Nitrogen (mg/L)	0.312	4.34	1.71	0.775	0.398	0.383				
Total Nitrogen (mg/L)	0.329	4.47	1.25	0.775	0.398	0.47				
Ortho Phosphate as P (mg/L)	<0.0010	0.0389	0.0085	<0.0010	0.0013	0.0014				
Total Dissolved Phosphate P (mg/L)	0.0286	0.120	0.0232	0.0066	0.0053	0.0058				
Total Phosphate as P (mg/L)	0.0297	2.25	0.259	0.0635	0.0139	0.0116				

Sample Site: Cache 12 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Total Metals										
Aluminum (Al)-Total (mg/L)	**0.166**	**22.2**	**5.47**	**0.607**	0.0601	0.0445				
Antimony (Sb)-Total (mg/L)	<0.00020	0.00072	0.00050	0.00031	<0.00020	<0.00020				
Arsenic (As)-Total (mg/L)	0.00076	**0.0179**	0.00387	0.00103	0.00065	0.00063				
Barium (Ba)-Total (mg/L)	0.0486	0.679	0.175	0.0914	0.0695	0.0603				
Beryllium (Be)-Total (mg/L)	<0.0010	0.0015	<0.00050	<0.0010	<0.0010	<0.0010				
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010				
Boron (B)-Total (mg/L)	0.062	0.052	0.046	0.094	0.094	0.103				
Cadmium (Cd)-Total (mg/L)	<0.00010	**0.00232**	**0.000376**	<0.00010	<0.00010	<0.00010				
Calcium (Ca)-Total (mg/L)	172	83.6	53.1	98.2	127	146				
Chromium (Cr)-Total (mg/L)	<0.0010	0.0390	0.00986	0.0012	<0.0010	<0.0010				
Cobalt (Co)-Total (mg/L)	0.00302	0.0253	0.00582	0.00553	0.00067	0.00074				
Copper (Cu)-Total (mg/L)	0.00105	**0.0656**	**0.0131**	**0.00383**	0.00225	0.00103				
Iron (Fe)-Total (mg/L)	**0.361**	**48.3**	**9.28**	**1.19**	0.292	**0.327**				
Lead (Pb)-Total (mg/L)	0.00024	0.0240	0.00404	0.00066	<0.00010	<0.00010				
Lithium (Li)-Total (mg/L)	0.036	0.033	0.0139	0.026	0.031	0.041				
Magnesium (Mg)-Total (mg/L)	51.4	24.9	19.1	38.5	48.5	52.2				
Manganese (Mn)-Total (mg/L)	**0.882**	**1.21**	0.306	0.542	0.135	0.332				
Mercury (Hg)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050				
Molybdenum (Mo)-Total (mg/L)	0.00175	0.00504	0.00183	0.00192	0.00225	0.00258				
Nickel (Ni)-Total (mg/L)	0.0089	0.0759	0.0227	0.0220	0.0075	0.0045				
Phosphorus (P)-Total (mg/L)	<0.30	1.75	<0.30	<0.30	<0.30	<0.30				
Potassium (K)-Total (mg/L)	6.1	11.4	4.6	5.4	5.9	7.1				
Selenium (Se)-Total (mg/L)	<0.0020	**0.0032**	0.0011	<0.0020	<0.0020	<0.0020				
Silicon (Si)-Total (mg/L)	3.31	36.2	18.4	2.93	1.20	2.49				
Silver (Ag)-Total (mg/L)	<0.000020	**0.000410**	0.000090	<0.000020	<0.000020	<0.000020				
Sodium (Na)-Total (mg/L)	78.3	17.1	28.9	67.8	82.8	87.7				
Strontium (Sr)-Total (mg/L)	0.565	0.275	0.232	0.320	0.404	0.514				
Thallium (Tl)-Total (mg/L)	<0.00020	**0.00052**	0.00012	<0.00020	<0.00020	<0.00020				
Tin (Sn)-Total (mg/L)	<0.00020	<0.00020	<0.00010	<0.00020	<0.00020	<0.00020				
Titanium (Ti)-Total (mg/L)	<0.010	0.256	0.271	0.019	<0.010	<0.010				
Uranium (U)-Total (mg/L)	0.00294	0.00373	0.00183	0.00210	0.00217	0.00283				
Vanadium (V)-Total (mg/L)	<0.0020	**0.0794**	**0.0209**	0.0026	<0.0020	<0.0020				
Zinc (Zn)-Total (mg/L)	0.0080	**0.227**	**0.0501**	0.0104	<0.0020	<0.0020				

Sample Site: Cache 12 **Sampling Matrix: Water**

Date Sampled	04-MAR-07	17-APR-07	17-MAY-07	06-JUN-07	09-JUL-07	16-AUG-07				
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	0.0083	**0.114**	**0.113**	0.0286	0.0119	0.0047				
Antimony (Sb)-Dissolved (mg/L)	<0.00020	<0.00020	0.00029	0.00026	<0.00020	<0.00020				
Arsenic (As)-Dissolved (mg/L)	0.00061	0.00056	0.00059	0.00059	0.00052	0.00053				
Barium (Ba)-Dissolved (mg/L)	0.0409	0.0329	0.0621	0.0768	0.0686	0.0566				
Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010				
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010				
Boron (B)-Dissolved (mg/L)	0.061	0.026	0.038	0.093	0.095	0.105				
Cadmium (Cd)-Dissolved (mg/L)	<0.00010	<0.00010	<0.000050	<0.00010	<0.00010	<0.00010				
Calcium (Ca)-Dissolved (mg/L)	175	37.0	51.1	97.4	127	150				
Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	0.00198	<0.0010	<0.0010	<0.0010				
Cobalt (Co)-Dissolved (mg/L)	0.00286	0.00087	0.00157	0.00388	0.00059	0.00033				
Copper (Cu)-Dissolved (mg/L)	0.00066	**0.00339**	**0.00422**	0.00253	0.00208	0.00116				
Iron (Fe)-Dissolved (mg/L)	<0.030	0.204	0.263	<0.030	<0.030	<0.030				
Lead (Pb)-Dissolved (mg/L)	<0.00010	0.00013	0.000141	<0.00010	<0.00010	<0.00010				
Lithium (Li)-Dissolved (mg/L)	0.034	<0.010	0.0078	0.026	0.030	0.041				
Magnesium (Mg)-Dissolved (mg/L)	52.5	11.6	17.8	38.4	49.0	53.6				
Manganese (Mn)-Dissolved (mg/L)	**0.865**	0.174	0.161	0.374	0.125	0.144				
Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050				
Molybdenum (Mo)-Dissolved (mg/L)	0.00173	0.00155	0.00125	0.00208	0.00237	0.00267				
Nickel (Ni)-Dissolved (mg/L)	0.0086	0.0063	0.0101	0.0188	0.0076	0.0044				
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30				
Potassium (K)-Dissolved (mg/L)	6.2	6.8	3.0	5.2	5.8	7.4				
Selenium (Se)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0010	<0.0020	<0.0020	<0.0020				
Silicon (Si)-Dissolved (mg/L)	3.09	1.70	2.66	1.65	1.06	2.46				
Silver (Ag)-Dissolved (mg/L)	<0.000020	<0.000020	<0.000010	<0.000020	<0.000020	<0.000020				
Sodium (Na)-Dissolved (mg/L)	79.9	17.5	29.6	68.4	82.7	91.4				
Strontium (Sr)-Dissolved (mg/L)	0.543	0.113	0.189	0.324	0.413	0.521				
Thallium (Tl)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00010	<0.00020	<0.00020	<0.00020				
Tin (Sn)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00010	<0.00020	<0.00020	<0.00020				
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010				
Uranium (U)-Dissolved (mg/L)	0.00282	0.00100	0.00140	0.00221	0.00224	0.00291				
Vanadium (V)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0010	<0.0020	<0.0020	<0.0020				
Zinc (Zn)-Dissolved (mg/L)	0.0060	<0.0020	0.0018	<0.0020	<0.0020	<0.0020				
Organic Parameters										
Chlorophyll a (µg/L)	0.297	0.587	0.562	3.66	1.50	1.77				
Dissolved Organic Carbon (mg/L)	6.78	10.1	22.5	14.0	9.88	7.62				
Total Inorganic Carbon (mg/L)	66.3	41.0	29.7	43.6	55.9	45.1				
Total Organic Carbon (mg/L)	8.24	29.5	27.7	15.8	10.9	8.58				

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed - November 2006 to August 2007.

Sample Site: Travel Blank **Sampling Matrix: Water**

Date Sampled	13-OCT-06	06-MAR-07	18-APR-07	17-MAY-07	28-MAY-07	08-JUN-07	05-JUL-07	30-JUL-07		
Sample Period	Fall	Winter	Spring 1	Spring 2	Spring 3	Spring 3	Spring 3			
Date Sampled	13-OCT-06	06-MAR-07	18-APR-07	17-MAY-07	28-MAY-07	08-JUN-07	05-JUL-07	30-JUL-07		
Time Sampled	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
ALS Sample ID	10	L483753-11	L496604-12	L507216-6	L515422-9	L515422-8	L527080-12	L543666-10		
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0			<1.0	<1.0		
Hardness (as CaCO3) (mg/L)	<0.54				<0.50	<0.50		<0.50		
Colour, True (CU)	<5.0	<5.0	<5.0	<5.0			<5.0	<5.0		
Conductivity (µS/cm)	<2.0	<2.0	<2.0	<2.0			<2.0	<2.0		
pH (mg/L)	5.52	7.90	5.57	5.65			8.42	5.58		
Total Dissolved Solids (mg/L)	<10	<10	<10	<10			<10	<10		
Total Suspended Solids (mg/L)	<3.0	<3.0	<3.0	<3.0			<3.0	<3.0		
Turbidity (NTU)	<0.10	<0.10	<0.10	<0.10			<0.10	<0.10		
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)					0.011	0.011	0.0092	0.012		
Ammonia as N (mg/L)	<0.020	0.024		<0.020			<0.020	<0.020		
Acidity (to pH 8.3) CaCO3 (mg/L)	2.5	1.4	1.2	1.5			<1.0	2.0		
Alkalinity-Total CaCO3 (mg/L)	<2.0	<2.0	<2.0	<2.0			<2.0	<2.0		
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050			<0.050	<0.050		
Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50			<0.50	<0.50		
Fluoride (F) (mg/L)	<0.020	<0.020	<0.020	<0.020			<0.020	<0.020		
Sulfate (SO4) (mg/L)	<0.50	<0.50	<0.50	<0.50			<0.50	<0.50		
Sulphide as S (mg/L)	<0.020	<0.020		<0.020	<0.020	<0.020	<0.020	<0.020		
Nitrate and Nitrite as N (mg/L)	<0.0050	<0.0050		<0.0050			<0.0050	<0.0050		
Nitrate (as N) (mg/L)	<0.0050		<0.0050	<0.0050			<0.0050	<0.0050		
Nitrite (as N) (mg/L)	<0.0010		<0.0010	<0.0010			0.0013	<0.0010		
Total Kjeldahl Nitrogen (mg/L)	<0.050	<0.050		<0.050			<0.050	<0.050		
Total Nitrogen (mg/L)	<0.050	<0.060					<0.060	<0.05		
Ortho Phosphate as P (mg/L)		<0.0010	<0.0010	<0.0010			<0.0010	<0.0010		
Total Dissolved Phosphate P (mg/L)	0.0020	0.0021	<0.0020	<0.0020			<0.0020	<0.0020		
Total Phosphate as P (mg/L)	<0.0020	0.0023	<0.0020	<0.0020			<0.0020	<0.0020		

Sample Site: Travel Blank **Sampling Matrix: Water**

Date Sampled	13-OCT-06	06-MAR-07	18-APR-07	17-MAY-07	28-MAY-07	08-JUN-07	05-JUL-07	30-JUL-07		
Total Metals										
Aluminum (Al)-Total (mg/L)	<0.0010	<0.0010			<0.0010	<0.0020	<0.0010	<0.0010		
Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010			<0.00010	<0.00010	<0.00010	<0.00010		
Arsenic (As)-Total (mg/L)	<0.00010	<0.00010			<0.00010	<0.00010	<0.00010	<0.00010		
Barium (Ba)-Total (mg/L)	<0.000050	<0.000050			<0.000050	<0.000070	<0.000050	<0.000050		
Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050			<0.00050	<0.00050	<0.00050	<0.00050		
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050			<0.00050	<0.00050	<0.00050	<0.00050		
Boron (B)-Total (mg/L)	<0.010	<0.010			<0.010	<0.010	<0.010	<0.010		
Cadmium (Cd)-Total (mg/L)	<0.000050	<0.000050			<0.000050	<0.000050	<0.000050	<0.000050		
Calcium (Ca)-Total (mg/L)	<0.050	<0.050			<0.050	<0.050	<0.050	<0.050		
Chromium (Cr)-Total (mg/L)	<0.00050	<0.00050			<0.00050	<0.00050	<0.00050	<0.00050		
Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010			<0.00010	<0.00010	<0.00010	<0.00010		
Copper (Cu)-Total (mg/L)	<0.00010	0.00040			<0.00010	<0.00010	<0.00010	<0.00010		
Iron (Fe)-Total (mg/L)	<0.030	<0.030			<0.030	<0.030	<0.030	<0.030		
Lead (Pb)-Total (mg/L)	<0.000050	<0.000050			<0.000050	<0.000050	<0.000050	<0.000050		
Lithium (Li)-Total (mg/L)	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050		
Magnesium (Mg)-Total (mg/L)	<0.10	<0.10			<0.10	<0.10	<0.10	<0.10		
Manganese (Mn)-Total (mg/L)	<0.000050	<0.000050			<0.000050	<0.000050	<0.000050	<0.000050		
Mercury (Hg)-Total (mg/L)		<0.000050			<0.000050	<0.000050	<0.000050	<0.000050		
Molybdenum (Mo)-Total (mg/L)	<0.000050	<0.000050			<0.000050	<0.000050	<0.000050	<0.000050		
Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050			<0.00050	<0.00050	<0.00050	<0.00050		
Phosphorus (P)-Total (mg/L)	<0.30	<0.30			<0.30	<0.30	<0.30	<0.30		
Potassium (K)-Total (mg/L)	<2.0	<2.0			<2.0	<2.0	<2.0	<2.0		
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010			<0.0010	<0.0010	<0.0010	<0.0010		
Silicon (Si)-Total (mg/L)	<0.050	<0.050			<0.050	<0.050	<0.050	<0.050		
Silver (Ag)-Total (mg/L)	<0.000010	<0.000010			<0.000010	<0.000010	<0.000010	<0.000010		
Sodium (Na)-Total (mg/L)	<2.0	<2.0			<2.0	<2.0	<2.0	<2.0		
Strontium (Sr)-Total (mg/L)	<0.00010	<0.00010			<0.00010	<0.00010	<0.00010	<0.00010		
Thallium (Tl)-Total (mg/L)	<0.00010	<0.00010			<0.00010	<0.00010	<0.00010	<0.00010		
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010			<0.00010	<0.00010	<0.00010	<0.00010		
Titanium (Ti)-Total (mg/L)	<0.010	<0.010			<0.010	<0.010	<0.010	<0.010		
Uranium (U)-Total (mg/L)	<0.000010	<0.000010			<0.000010	<0.000010	<0.000010	<0.000010		
Vanadium (V)-Total (mg/L)	<0.0010	<0.0010			<0.0010	<0.0010	<0.0010	<0.0010		
Zinc (Zn)-Total (mg/L)	<0.0010	<0.0010			<0.0010	<0.0010	<0.0010	<0.0010		

Appendix F - Summary of Water Quality Analysis Results from the Peace River Watershed for 2007

Sample Site: Boudreau 13 **Sampling Matrix: Water**

Date Sampled	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07						
Sample Period	Spring 2	Spring 3	Spring 3	Late Summer						
Date Sampled	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07						
Time Sampled	15:00	15:30	12:45	14:20						
ALS Sample ID	L506847-4	L515422-7	L527080-13	L541389-3						
Physical Tests										
Salinity (EC) (g/L)	<1.0	<1.0	<1.0	<1.0						
Hardness (as CaCO3) (mg/L)	189	435	495	775						
Colour, True (CU)	118	34.3	14.0	13.4						
Conductivity (µS/cm)	342	750	858	1190						
pH (mg/L)	8	8.10	8.05	8.12						
Total Dissolved Solids (mg/L)	310	575	617	964						
Total Suspended Solids (mg/L)	23.6	19.3	8.0	<3.0						
Turbidity (NTU)	110	36.1	8.04	3.11						
Anions and Nutrients										
Absorbable Organic Halogen (AOX) (µg/L)	0.018	0.019	0.012	0.0066						
Ammonia as N (mg/L)	0.032	0.047	0.110	0.078						
Acidity (to pH 8.3) CaCO3 (mg/L)	2.9	4.4	6.8	3.9						
Alkalinity-Total CaCO3 (mg/L)	123	217	286	237						
Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050						
Chloride (Cl) (mg/L)	0.53	<0.50	<0.50	<0.50						
Fluoride (F) (mg/L)	0.116	**0.232**	**0.320**	**0.278**						
Sulfate (SO4) (mg/L)	59.7	**207**	**195**	**452**						
Sulphide as S (mg/L)	0.021	<0.020	<0.020	<0.020						
Nitrate and Nitrite as N (mg/L)		0.0094	0.0127	0.0293						
Nitrate (as N) (mg/L)	0.0276	0.0094	0.0114	0.0254						
Nitrite (as N) (mg/L)	<0.0010	<0.0010	0.0013	0.0039						
Total Kjeldahl Nitrogen (mg/L)	1.42	0.924	0.645	0.526						
Total Nitrogen (mg/L)	1.45	0.933	0.658	0.64						
Ortho Phosphate as P (mg/L)	0.0104	<0.0010	<0.0010	<0.0010						
Total Dissolved Phosphate P (mg/L)	0.0369	0.0099	0.0038	<0.0020						
Total Phosphate as P (mg/L)	0.129	0.0422	0.0154	0.0039						

Sample Site: Boudreau 13 **Sampling Matrix: Water**

Date Sampled	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07						
Total Metals										
Aluminum (Al)-Total (mg/L)	**1.47**	**0.554**	0.0380	0.0437						
Antimony (Sb)-Total (mg/L)	0.00034	0.00027	<0.00020	<0.00020						
Arsenic (As)-Total (mg/L)	0.00153	0.00112	0.00123	0.00079						
Barium (Ba)-Total (mg/L)	0.0892	0.0988	0.0604	0.0905						
Beryllium (Be)-Total (mg/L)	<0.00050	<0.0010	<0.0010	<0.0010						
Bismuth (Bi)-Total (mg/L)	<0.00050	<0.0010	<0.0010	<0.0010						
Boron (B)-Total (mg/L)	0.021	0.026	0.037	0.032						
Cadmium (Cd)-Total (mg/L)	**0.000442**	**0.00038**	<0.00010	**0.00011**						
Calcium (Ca)-Total (mg/L)	52	117	137	209						
Chromium (Cr)-Total (mg/L)	0.0026	<0.0010	<0.0010	<0.0010						
Cobalt (Co)-Total (mg/L)	0.0039	0.00474	0.00274	0.00139						
Copper (Cu)-Total (mg/L)	**0.00958**	**0.00583**	0.00090	0.00139						
Iron (Fe)-Total (mg/L)	**3.24**	**2.37**	**0.898**	**0.555**						
Lead (Pb)-Total (mg/L)	0.00116	0.00036	<0.00010	<0.00010						
Lithium (Li)-Total (mg/L)	0.0062	0.014	0.025	0.022						
Magnesium (Mg)-Total (mg/L)	14.8	31.5	33.6	51.3						
Manganese (Mn)-Total (mg/L)	0.0871	**0.559**	**1.38**	**0.671**						
Mercury (Hg)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050						
Molybdenum (Mo)-Total (mg/L)	0.00155	0.00282	0.00183	0.00214						
Nickel (Ni)-Total (mg/L)	0.0178	0.0244	0.0058	0.0081						
Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30						
Potassium (K)-Total (mg/L)	6.9	7.0	4.0	6.1						
Selenium (Se)-Total (mg/L)	<0.0010	<0.0020	<0.0020	<0.0020						
Silicon (Si)-Total (mg/L)	4.67	4.51	5.57	4.93						
Silver (Ag)-Total (mg/L)	2.6e-005	<0.000020	<0.000020	<0.000020						
Sodium (Na)-Total (mg/L)	2.4	4.6	8.0	6.5						
Strontium (Sr)-Total (mg/L)	0.137	0.268	0.375	0.459						
Thallium (Tl)-Total (mg/L)	<0.00010	<0.00020	<0.00020	<0.00020						
Tin (Sn)-Total (mg/L)	<0.00010	<0.00020	<0.00020	<0.00020						
Titanium (Ti)-Total (mg/L)	0.035	0.014	<0.010	<0.010						
Uranium (U)-Total (mg/L)	0.00147	0.00352	0.00229	0.00402						
Vanadium (V)-Total (mg/L)	0.006	<0.0020	<0.0020	<0.0020						
Zinc (Zn)-Total (mg/L)	**0.047**	**0.0504**	0.0066	0.0073						

Sample Site: Boudreau 13 **Sampling Matrix: Water**

Date Sampled	15-MAY-07	07-JUN-07	07-JUL-07	13-AUG-07						
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)	**0.156**	0.0465	<0.0020	<0.0020						
Antimony (Sb)-Dissolved (mg/L)	0.00027	0.00021	<0.00020	<0.00020						
Arsenic (As)-Dissolved (mg/L)	0.00071	0.00055	0.00094	0.00060						
Barium (Ba)-Dissolved (mg/L)	0.0658	0.0893	0.0585	0.0885						
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.0010	<0.0010	<0.0010						
Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.0010	<0.0010	<0.0010						
Boron (B)-Dissolved (mg/L)	0.018	0.024	0.036	0.033						
Cadmium (Cd)-Dissolved (mg/L)	**0.000259**	**0.00026**	<0.00010	<0.00010						
Calcium (Ca)-Dissolved (mg/L)	51.2	120	142	220						
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.0010	<0.0010	<0.0014						
Cobalt (Co)-Dissolved (mg/L)	0.00245	0.00423	0.00269	0.00120						
Copper (Cu)-Dissolved (mg/L)	**0.00654**	**0.00417**	0.00072	0.00103						
Iron (Fe)-Dissolved (mg/L)	**0.635**	<0.030	<0.030	<0.030						
Lead (Pb)-Dissolved (mg/L)	0.00013	<0.00010	<0.00010	<0.00010						
Lithium (Li)-Dissolved (mg/L)	<0.0050	0.014	0.025	0.022						
Magnesium (Mg)-Dissolved (mg/L)	14.8	33.0	34.4	54.9						
Manganese (Mn)-Dissolved (mg/L)	0.0486	0.551	**1.37**	**0.624**						
Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050						
Molybdenum (Mo)-Dissolved (mg/L)	0.00149	0.00303	0.00176	0.00212						
Nickel (Ni)-Dissolved (mg/L)	0.0134	0.0224	0.0056	0.0077						
Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30						
Potassium (K)-Dissolved (mg/L)	6.8	7.2	4.0	6.3						
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0020	<0.0020	<0.0020						
Silicon (Si)-Dissolved (mg/L)	2.23	3.78	5.65	5.08						
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000020	<0.000020	<0.000020						
Sodium (Na)-Dissolved (mg/L)	2.5	4.9	8.2	6.9						
Strontium (Sr)-Dissolved (mg/L)	0.125	0.293	0.372	0.464						
Thallium (Tl)-Dissolved (mg/L)	<0.00010	<0.00020	<0.00020	<0.00020						
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00020	<0.00020	<0.00020						
Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010						
Uranium (U)-Dissolved (mg/L)	0.00132	0.00347	0.00226	0.00400						
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0020	<0.0020	<0.0020						
Zinc (Zn)-Dissolved (mg/L)	**0.0151**	**0.0202**	0.0068	0.0049						
Organic Parameters										
Chlorophyll a (µg/L)	0.9	0.354	6.53	0.749						
Dissolved Organic Carbon (mg/L)	29.2	19.6	11.1	11.4						
Total Inorganic Carbon (mg/L)	23.1	45.8	53.7	47.4						
Total Organic Carbon (mg/L)	30.4	20.8	12.2	11.8						

Sample Site: Travel Blank **Sampling Matrix: Water**

Date Sampled	13-OCT-06	06-MAR-07	18-APR-07	17-MAY-07	28-MAY-07	08-JUN-07	05-JUL-07	30-JUL-07		
Dissolved Metals										
Aluminum (Al)-Dissolved (mg/L)								<0.0010		
Antimony (Sb)-Dissolved (mg/L)								<0.00010		
Arsenic (As)-Dissolved (mg/L)								<0.00010		
Barium (Ba)-Dissolved (mg/L)								<0.000050		
Beryllium (Be)-Dissolved (mg/L)								<0.00050		
Bismuth (Bi)-Dissolved (mg/L)								<0.00050		
Boron (B)-Dissolved (mg/L)								<0.010		
Cadmium (Cd)-Dissolved (mg/L)								<0.000050		
Calcium (Ca)-Dissolved (mg/L)								<0.050		
Chromium (Cr)-Dissolved (mg/L)								<0.00050		
Cobalt (Co)-Dissolved (mg/L)								<0.00010		
Copper (Cu)-Dissolved (mg/L)								<0.00010		
Iron (Fe)-Dissolved (mg/L)								<0.030		
Lead (Pb)-Dissolved (mg/L)								<0.000050		
Lithium (Li)-Dissolved (mg/L)								<0.0050		
Magnesium (Mg)-Dissolved (mg/L)								<0.10		
Manganese (Mn)-Dissolved (mg/L)								<0.000050		
Mercury (Hg)-Dissolved (mg/L)								<0.000050		
Molybdenum (Mo)-Dissolved (mg/L)								<0.000050		
Nickel (Ni)-Dissolved (mg/L)								<0.00050		
Phosphorus (P)-Dissolved (mg/L)								<0.30		
Potassium (K)-Dissolved (mg/L)								<2.0		
Selenium (Se)-Dissolved (mg/L)								<0.0010		
Silicon (Si)-Dissolved (mg/L)								<0.050		
Silver (Ag)-Dissolved (mg/L)								<0.000010		
Sodium (Na)-Dissolved (mg/L)								<2.0		
Strontium (Sr)-Dissolved (mg/L)								<0.00010		
Thallium (Tl)-Dissolved (mg/L)								<0.00010		
Tin (Sn)-Dissolved (mg/L)								<0.00010		
Titanium (Ti)-Dissolved (mg/L)								<0.010		
Uranium (U)-Dissolved (mg/L)								<0.000010		
Vanadium (V)-Dissolved (mg/L)								<0.0010		
Zinc (Zn)-Dissolved (mg/L)								<0.0010		
Organic Parameters										
Chlorophyll a (µg/L)	<0.00060	0.0067	<0.0007		<0.0013	0.0029	0.0302			
Dissolved Organic Carbon (mg/L)					<0.50	0.61	<0.50	<0.50		
Total Inorganic Carbon (mg/L)	<0.50	<0.50					<0.50	<0.50		
Total Organic Carbon (mg/L)	<0.50	<0.50					<0.50	<0.50		

APPENDIX G

Applicable Guidelines for Water Sediment Samples

May 15, 2009
Report No. 06-1490-006

Golder Associates

Appendix G1: **British Columbia Water Quality Guidelines (BCWG) and Council of Canadian Ministers of Environment (CCME) Guidelines and Contaminated Site Regulations for Aquatic Life.**

Parameter (all units in mg/L except where noted)	**Aquatic Life (BC WQ Guidelines - Approved)**	Notes	**CCME - Aquatic Life Freshwater**	Notes
Anions and Organics				
pH, Laboratory (pH)	6.5 - 9.0			
Conductivity (µS/cm)				
True Color (CU)				
Turbidity (NTU)	8 NTU/24 hrs. when background ≤ 8			
(maximum induced turbidity)	8 NTU when background 8 < 80			
	10 % when background ≥ 80			
Hardness (Total) $CaCO_3$				
Total Dissolved Solids				
Total Alkalinity $CaCO_3$	< 10, highly sensitive to acid inputs			
	10 < 20, moderately sensitive			
	> 20, low sensitivity			
Bicarbonate Alkalinity HCO_3				
Carbonate Alkalinity CO_3				
Hydroxide Alkalinity OH				
Dissolved Fluoride F		H (mg/L)		
	0.2	40		
Dissolved Chloride Cl	600			
Nitrate and Nitrite (as N)				
Dissolved Nitrate (as N)	200		13	
Nitrite (as N)		Cl (mg/L)		
	0.06		0.06	
Dissolved Sulphate SO_4	100			
Chemical Oxygen Demand				
Total Organic Carbon C				
Ammonia Nitrogen N	see separate schedule (Table 5)	pH, T		
Total Phosphorus P				
Total Phenolics			0.004	
Sulphide S				
Tannin and Lignin				
Metals				
Aluminum Al	If pH ≥ 6.5, 0.1	pH	0.005 if pH < 6.5; Ca < 4 mg/l; DOC < 2	
If pH < 6.5, then	3.35013		0.1 if pH ≥ 6.5; Ca ≥ 4 mg/l; DOC ≥ 2	
Antimony Sb	0.02[b]			
Arsenic As	0.005		0.005	
Barium Ba	5[b]			
Beryllium Be	0.0053[b]			
Bismuth Bi				
Boron B	1.2			
Cadmium Cd		H (mg/L)		H (mg/L)
	#NUM!		#NUM!	
Calcium Ca	< 4, highly sensitive to acid inputs			
	4 < 8, moderately sensitive			
	> 8, low sensitivity			
Chromium Cr	$.001^{VI}$, $.0089^{III}$	V[c]	$.001^{VI}$, $.0089^{III}$	V[c]
Cobalt Co	0.11			
Copper Cu		H (mg/L)		H (mg/L)
	0.00200		0.002	
Iron Fe	0.3[b]		0.3	
Lead Pb	If H ≤ 8 mg/l, 0.003	H (mg/L)		H (mg/L)
If H > 8 mg/l, then	#NUM!		0.001	
Lithium Li	0.87[b]			
Magnesium Mg				
Manganese Mn		H (mg/L)		
	0.54			
Mercury Hg	0.0001			
Molybdenum Mo	2		0.073	
Nickel Ni		H (mg/L)		H (mg/L)
	0.025		0.025	
Phosphorus P				
Potassium K				
Selenium Se	0.002 mean[d]		0.001	
Silicon Si				
Silver Ag		H (mg/L)		
	0.0001		0.0001	
Sodium Na				
Strontium Sr				
Tellurium Te				
Thallium Tl	0.0003		0.0008	
Thorium Th				
Tin Sn				
Titanium Ti				
Uranium U	0.3			
Vanadium V	0.006			
Zinc Zn		H (mg/L)		
	0.003	50	0.03	
Zirconium Zr				

a = 10°C is assumed

b = working guideline (not approved)

c = Standard is valence dependent

d = based on at least 5 weekly samples taken over a 30=day period

Note:

Shaded boxes indicate calculated formulas based upon the indicated criteria. Example values have been placed in selected shaded boxes to show resultant guideline based upon the indicated parameter for example, for flouride, when the hardness(H) is 40 mg/L, the BCWG limit for flouride is 0.2 mg/L, otherwise blank values are interpreted as zero and formulas calculate limits based on zero hardness.

Appendix G2: **British Columbia Sediment Quality Guidelines (BCSG) for aquatic Life, British Columbia Contaminated Site Regulations freshwater sediment criteria, Council of Canadian Ministers of Environment (CCME) Sediment Guidelines for aquatic life and Ontario Aquatic Sediment Quality Guidelines.**

Parameter (all units in mg/kg except where noted)	BC Sediment Quality for aquatic life		BC CSR - freshwater sediment criteria		CCME - Sediment Guidelines for aquatic life		Ontario - Aquatic Sediment Quality	
	ISQG[a]	PEL[b]	Sensitive[c]	Typical[d]	ISQG	PEL	LEL[e]	SEL[f]
Anions and Organics								
CaCO3 equivalent (%)								
Total Organic Carbon (%)							1	10
Total Carbon by Combustion (%)								
Inorganic Carbon (%)								
Phosphorus, Total							600	2000
Total Nitrogen by LECO (%)								
Metals								
Aluminum Al								
Antimony Sb								
Arsenic As	5.9	17	11	20	5.9	17	6	33
Barium Ba								
Beryllium Be								
Bismuth Bi								
Cadmium Cd	0.6	3.5	2.2	4.2	0.6	3.5	0.6	10
Calcium Ca								
Chromium Cr	37.3	90	56	110	37.3	90	26	110
Cobalt Co								
Copper Cu	35.7	197	120	240	35.7	197	16	110
Iron Fe	21200[e]						2%	4%
Lead Pb	35	91	57	110	35	91.3	31	250
Lithium Li								
Magnesium Mg								
Manganese Mn							460	1100
Mercury Hg	0.17	0.486	0.3	0.58	0.17	0.486	0.2	2
Molybdenum Mo								
Nickel Ni	16[e]						16	75
Phosphorus P								
Potassium K								
Selenium Se	5							
Silver Ag	0.5							
Sodium Na								
Strontium Sr								
Thallium Tl								
Tin Sn								
Titanium Ti								
Vanadium V								
Zinc Zn	123	315	200	380	123	315	120	820
PAHs								
Acenaphthene	0.00671	0.0889	0.055	0.11	0.00671	0.0889		
Acenaphthylene	0.00587	0.128	0.08	0.15	0.00587	0.128		
Anthracene	0.0469	0.245	0.15	0.29	0.0469	0.245	0.22	
Benz(a)anthracene	0.0317	0.385	0.24	0.46	0.0317	0.385	0.32	
Benzo(a)pyrene	0.0319	0.782	0.48	0.94	0.0319	0.782	0.37	
Benzo(b)fluoranthene								
Benzo(g,h,i)perylene	0.17[e]						0.17	
Benzo(k)fluroanthene	0.24[e]						0.24	
Chrysene	0.0571	0.862	0.53	1	0.0571	0.862	0.34	
Dibenz(a,h)anthracene	0.00622	0.135	0.084	0.16	0.00622	0.135	0.06	
Fluoranthene	0.111	2.355	1.5	2.8	0.111	2.355	0.75	
Fluorene	0.0212	0.144	0.089	0.17	0.0212	0.144	0.19	
Indeno(1,2,3-c,d)pyrene	0.2[e]						0.2	
2-Methylnaphthalene	0.0202	0.201	0.12	0.24	0.0202	0.201		
Naphthalene	0.0346	0.391	0.24	0.47	0.0346	0.391		
Phenanthrene	0.0419	0.515	0.32	0.62	0.0419	0.515	0.56	
Pyrene	0.053	0.875	0.54	1.1	0.053	0.875	0.49	

All values in mg/kg dry weight unless otherwise stated.

a. Interim Freshwater Sediment Quality Guidelines

b. Probable Effect Level

c. Sediment at a site with sensitive aquatic habitat and for which sensitive sediment management objectives apply.

d. Sediment that is not sensitive sediment.

e. Lowest Effect Level

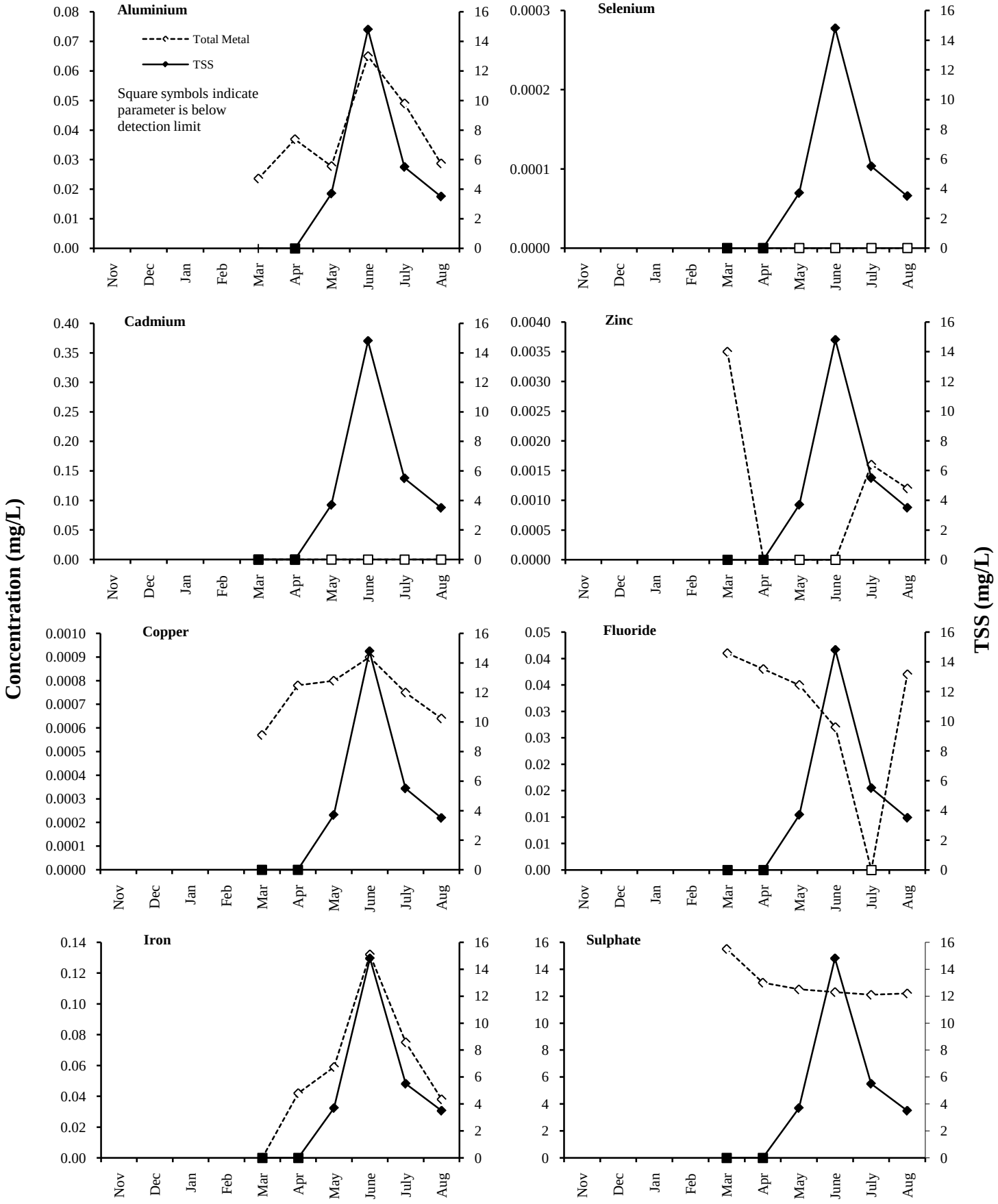
f. Severe Effect Level

APPENDIX H

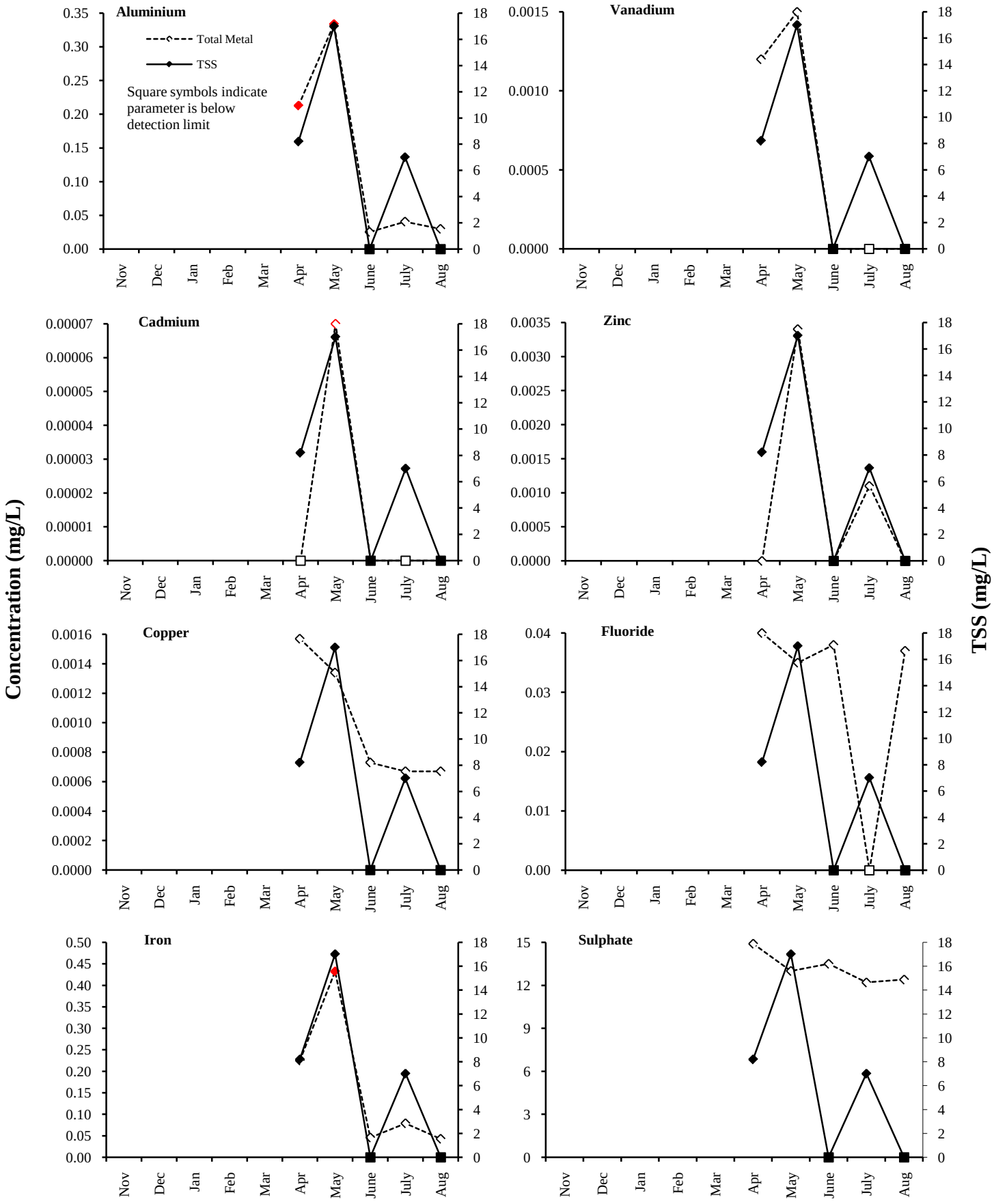
Plots of Selected Total Metal Concentrations Compared with TSS Levels from Analysis of Water Samples Taken between March 2007 - August 2007

May 15, 2009
Report No. 06-1490-006

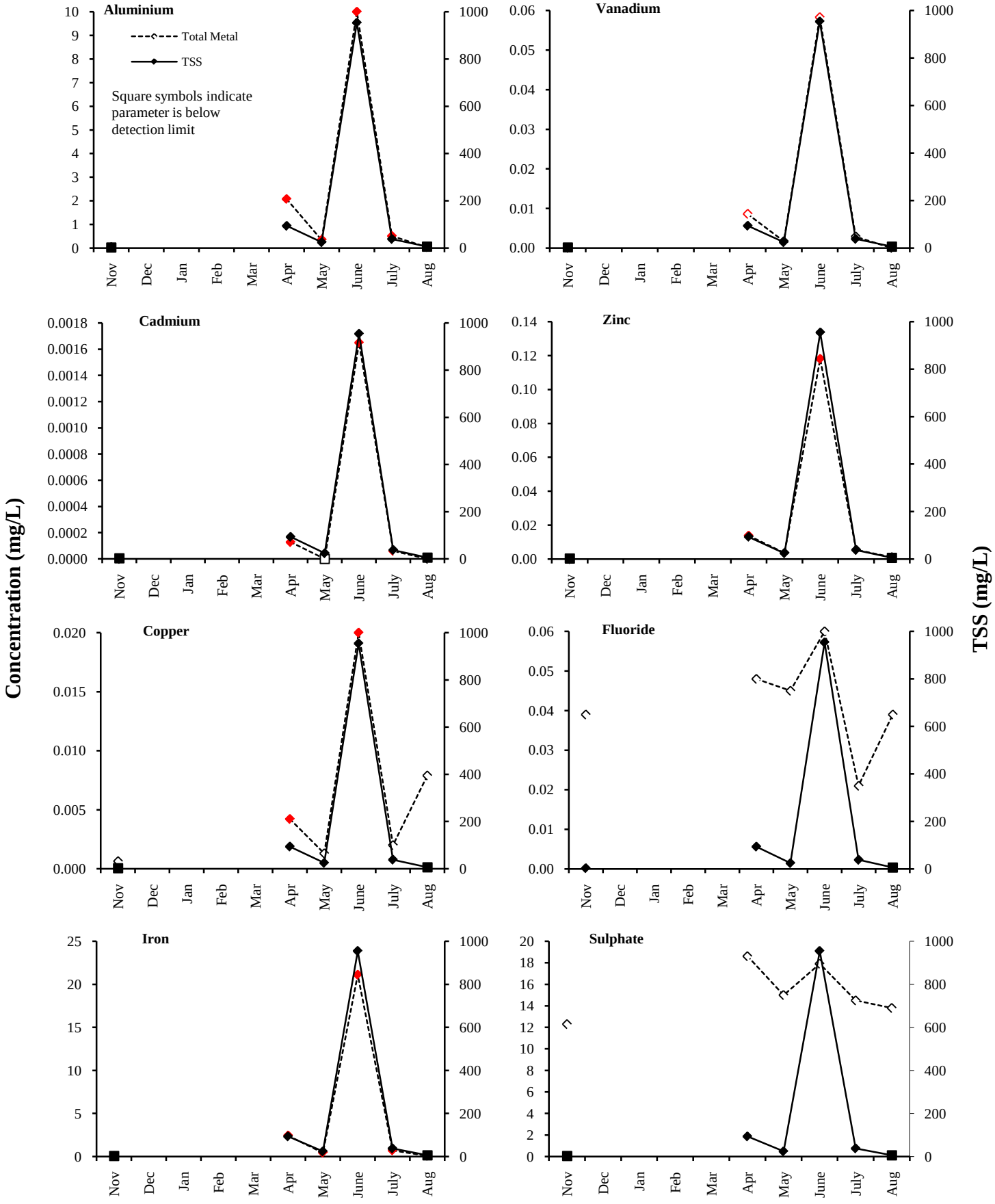
Golder Associates



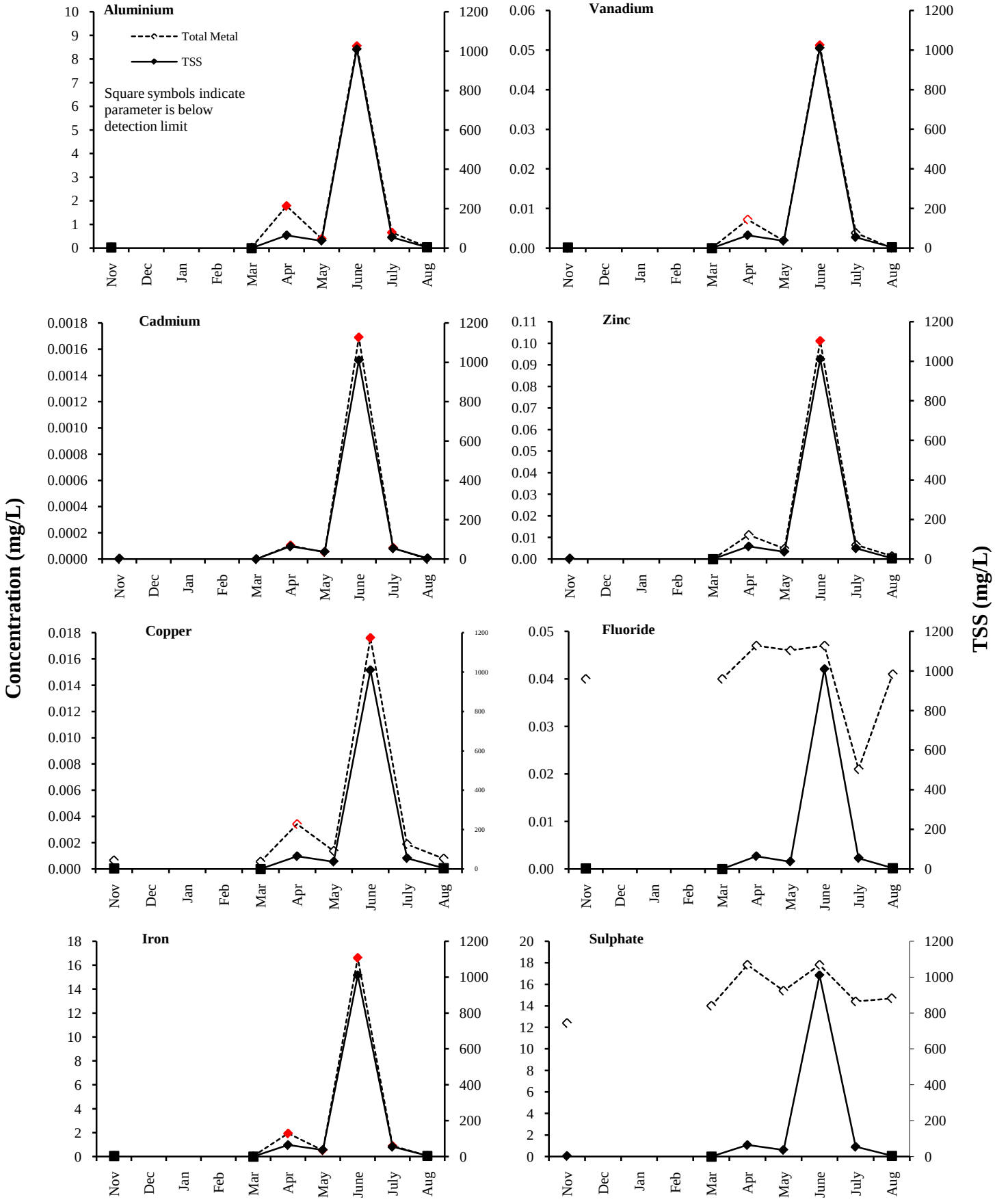
Appendix H1: **Plots of selected total metal concentrations compared to TSS levels at Peace 1 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



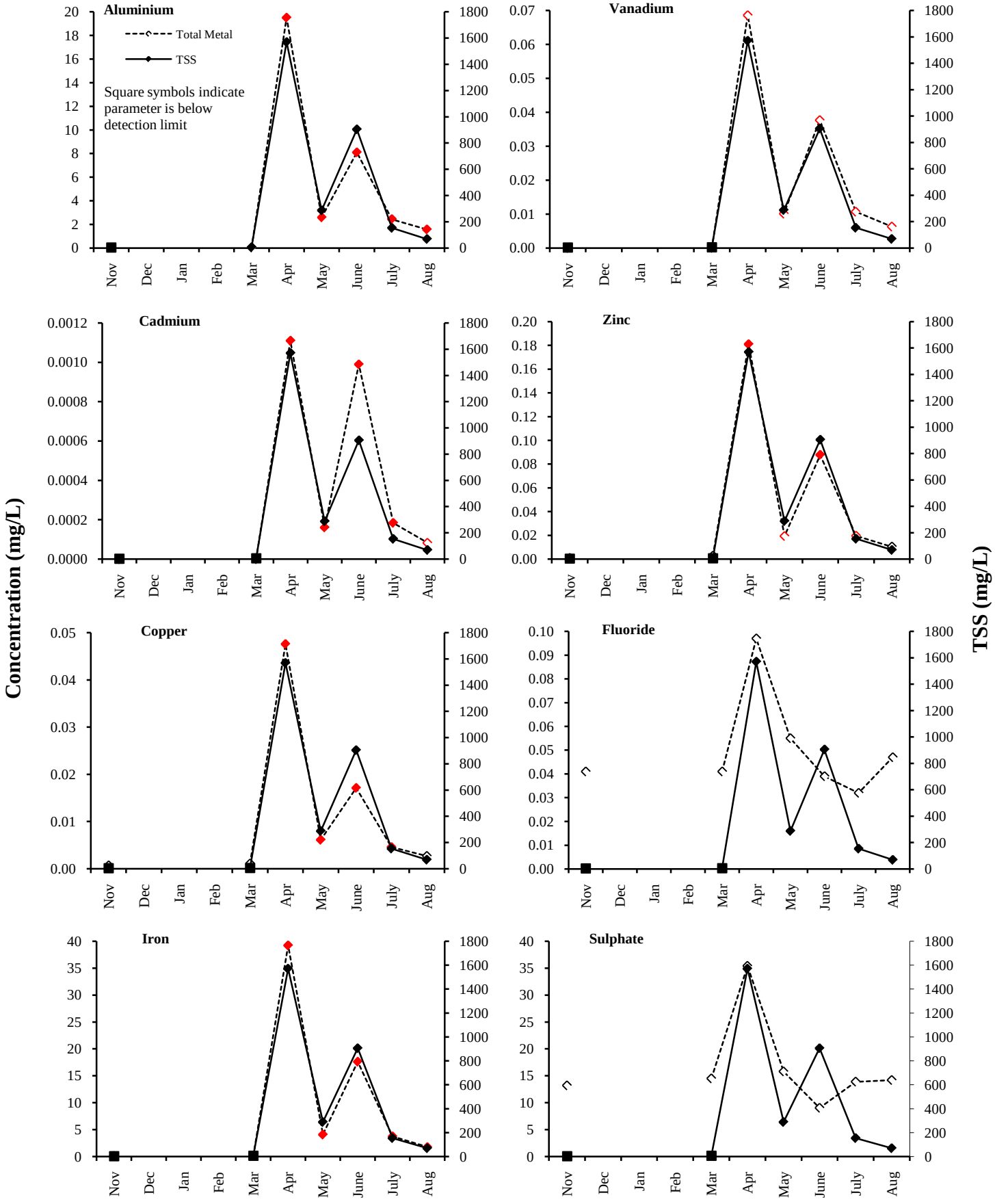
Appendix H2: **Plots of selected total metal concentrations compared to TSS levels at Peace 2 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



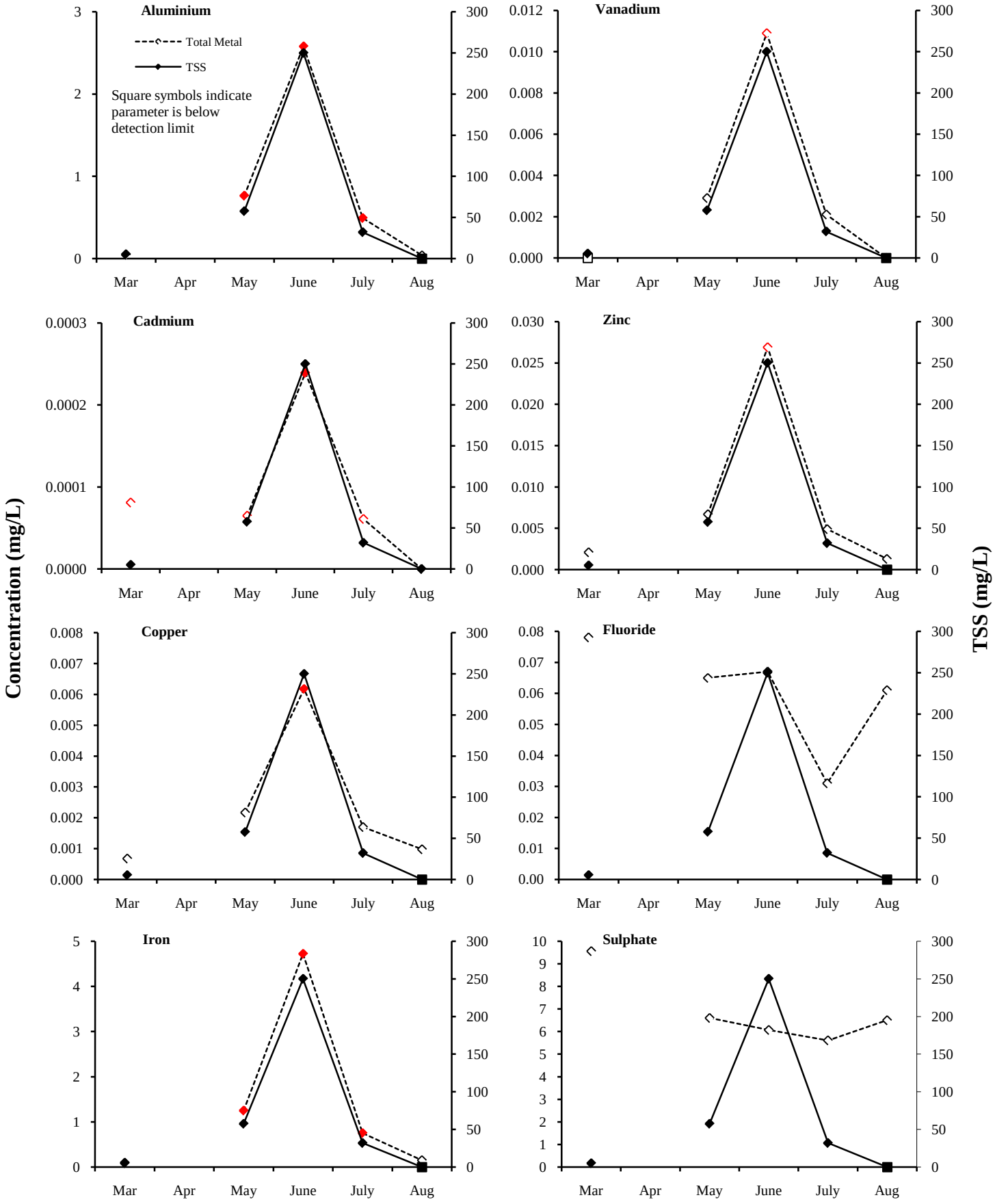
Appendix H3: **Plots of selected total metal concentrations compared to TSS levels at Peace 3 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



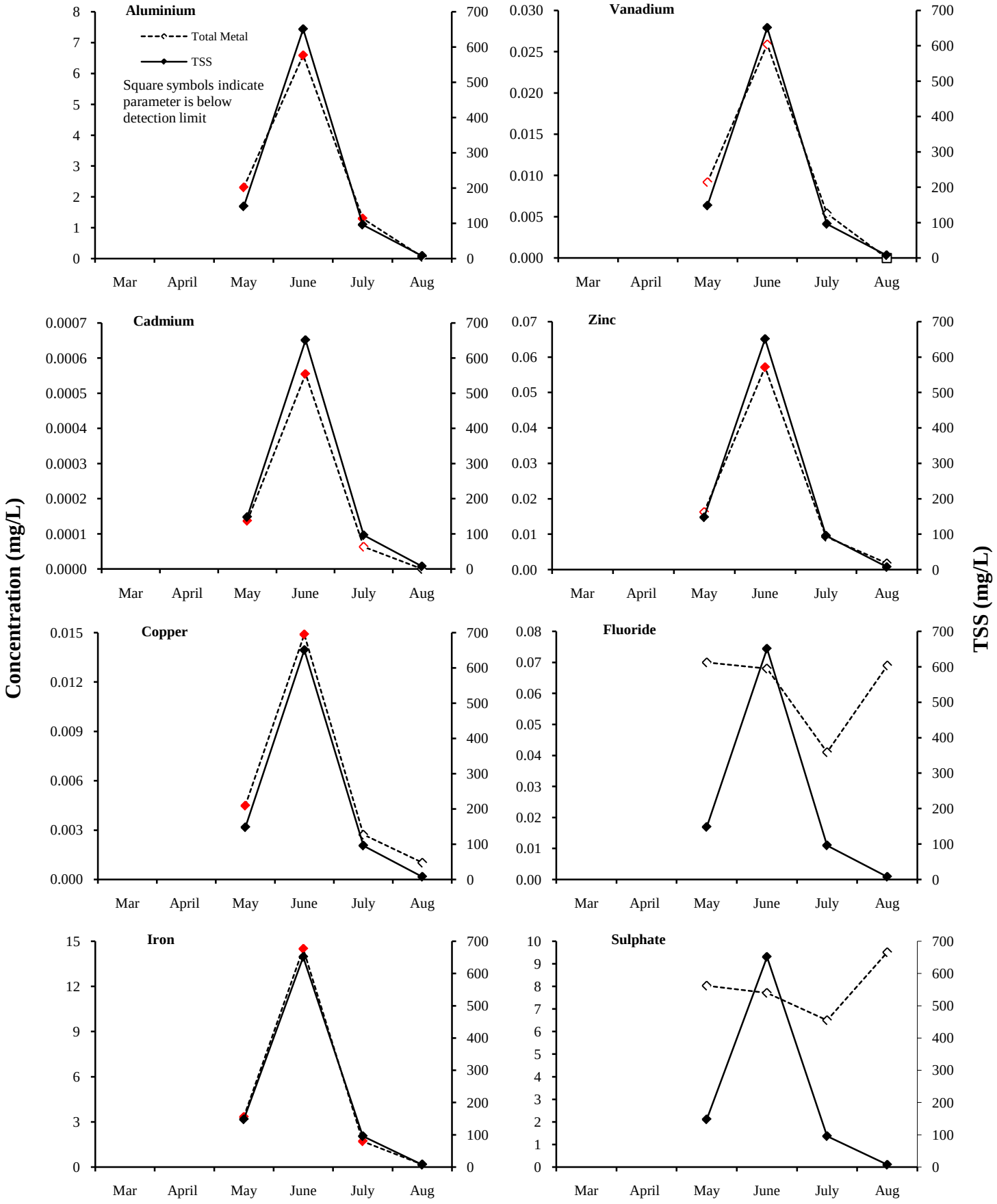
Appendix H4: **Plots of selected total metal concentrations compared to TSS levels at Peace 4 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



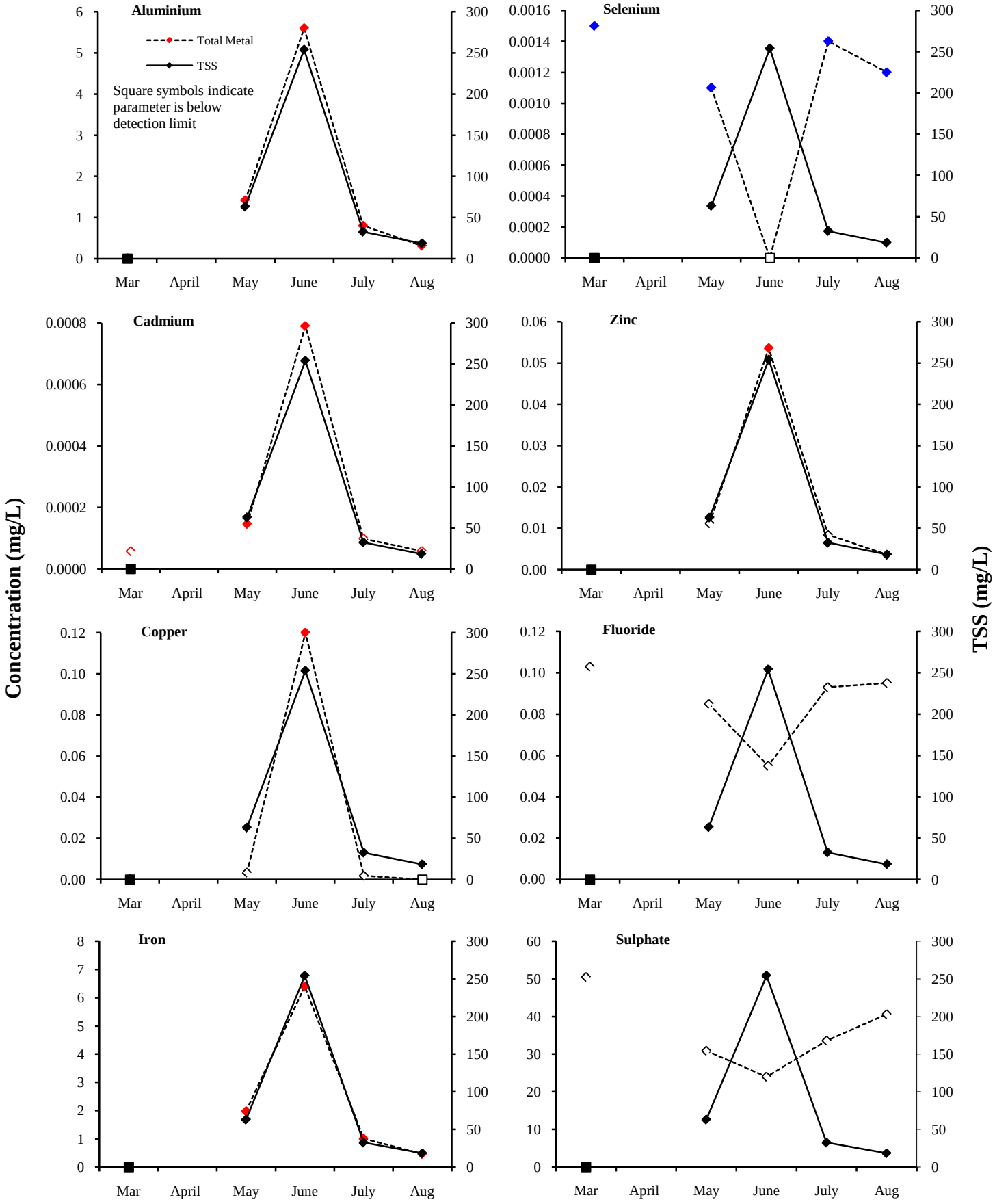
Appendix H5: **Plots of selected total metal concentrations compared to TSS levels at Peace 5 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



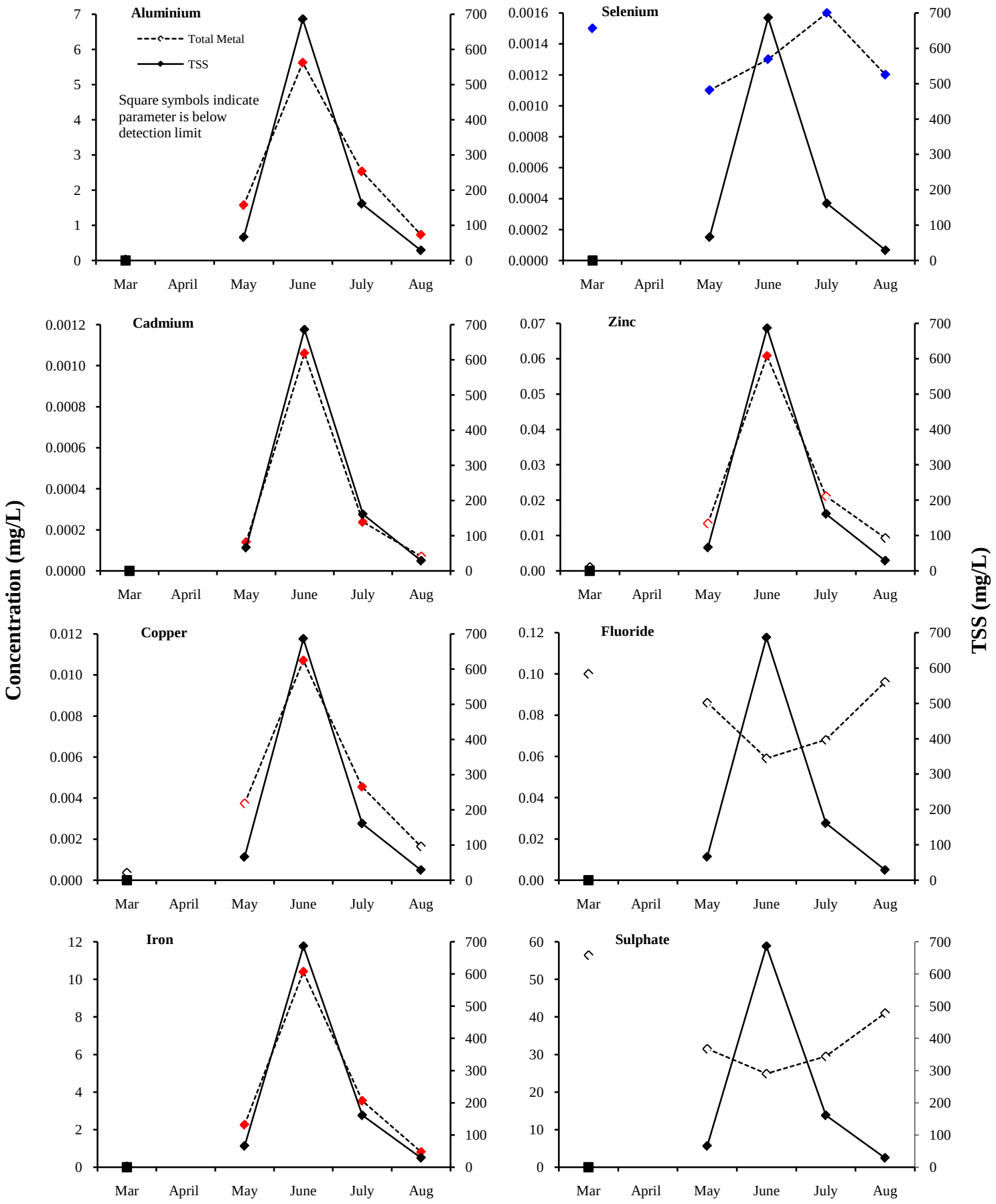
Appendix H6: **Plots of selected total metal concentrations compared to TSS levels at Moberly 6 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



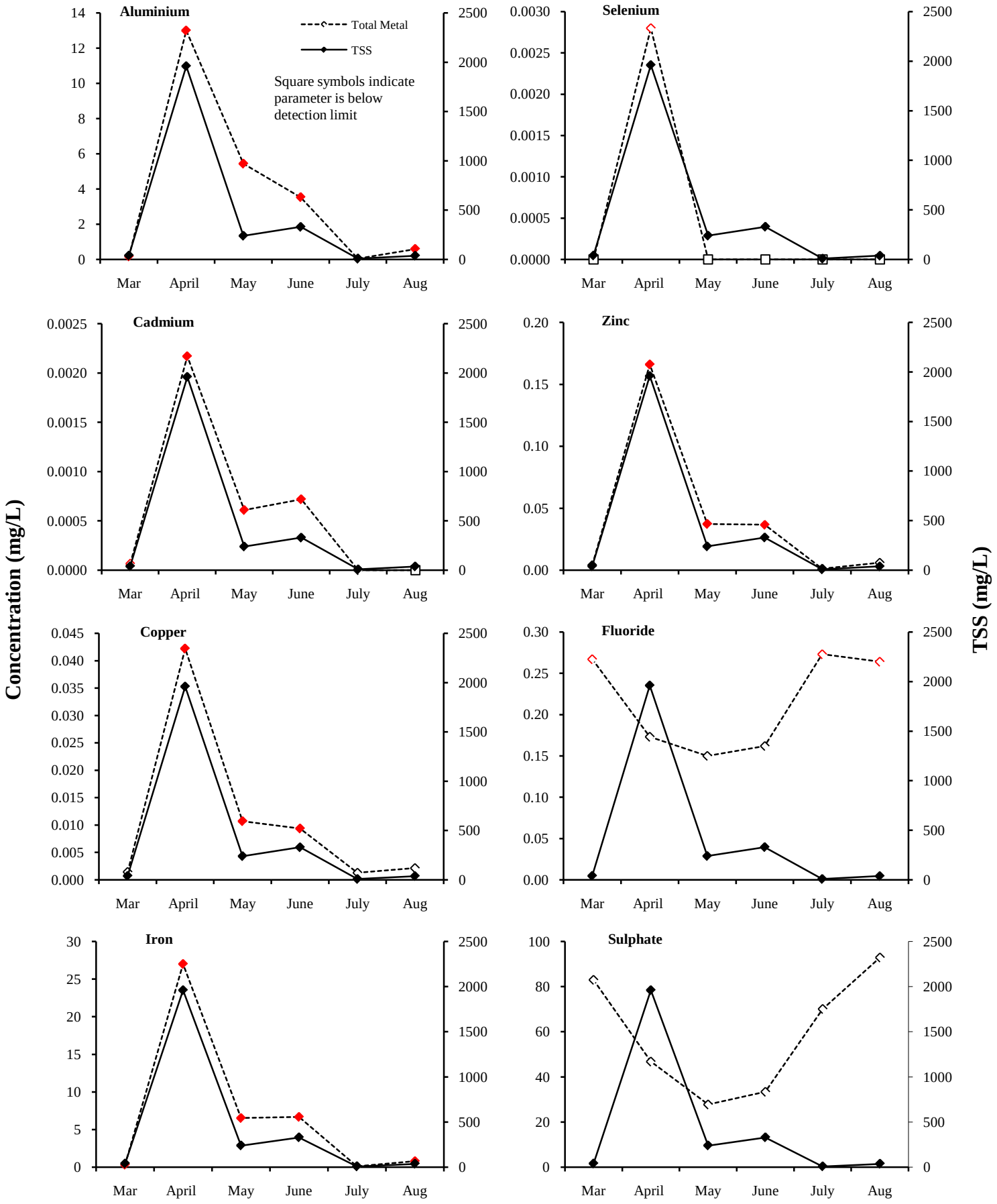
Appendix H7: **Plots of selected total metal concentrations compared to TSS levels at Moberly 7 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



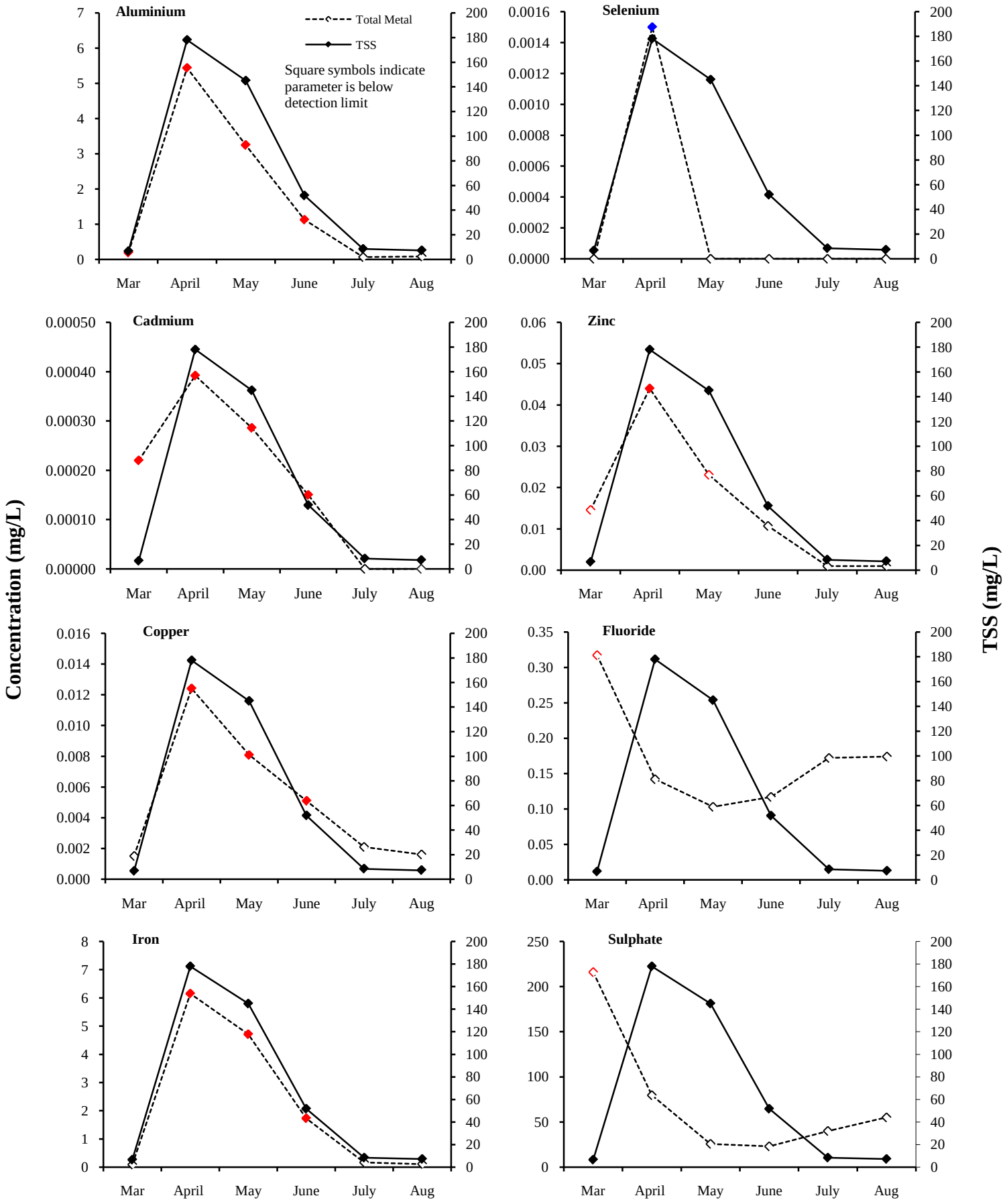
Appendix H8: **Plots of selected total metal concentrations compared to TSS levels at Halfway 8 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



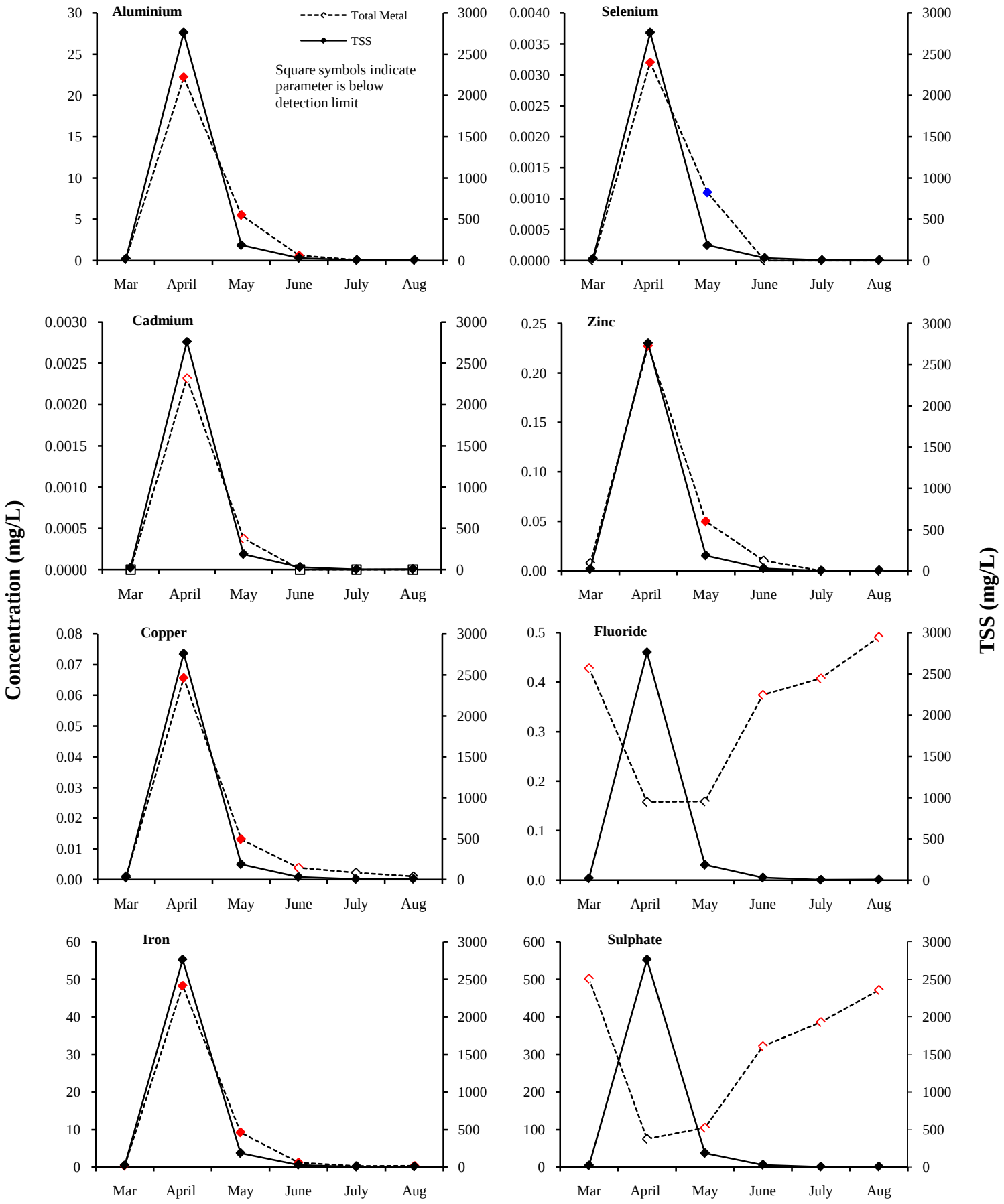
Appendix H9: **Plots of selected total metal concentrations compared to TSS levels at Halfway 9 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



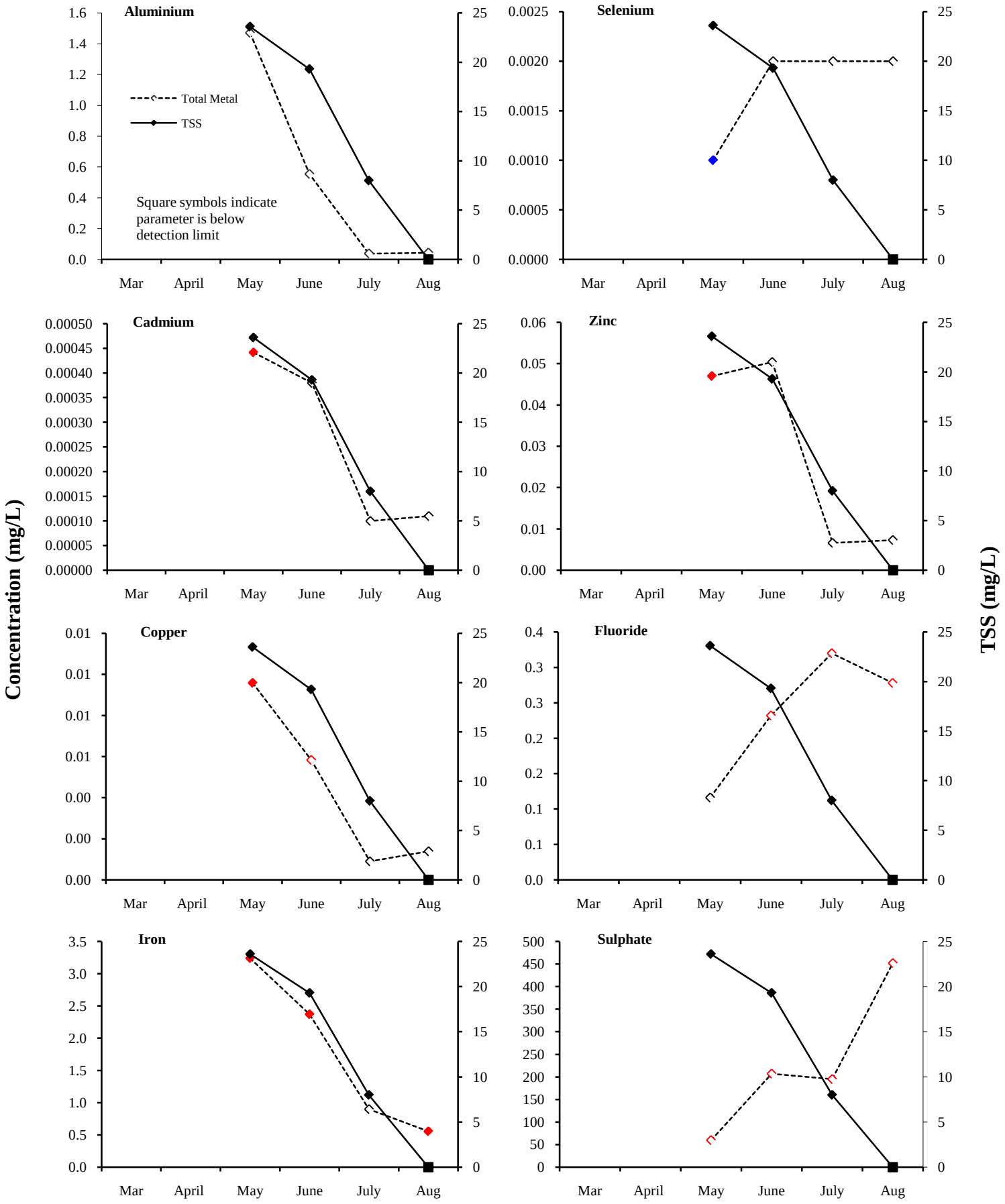
Appendix H10: **Plots of selected total metal concentrations compared to TSS levels at Lynx 10 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



Appendix H11: **Plots of selected total metal concentrations compared to TSS levels at Farrell 11 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



Appendix H12: **Plots of selected total metal concentrations compared to TSS levels at Cache 12 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**



Appendix H13: **Plots of selected total metal concentrations compared to TSS levels at Boudrreau 13 from analysis of water samples taken between November 2007 to August 2007. Exceedances of guidelines for protection of fresh water aquatice life are indicated as BCWG = open red, CCME = solid blue, both = solid red.**

APPENDIX I

Results of Analysis of Sediment Samples Taken from Peace River and Selected Tributary Stream Beds during July and August 2007

May 15, 2009
Report No. 06-1490-006

Golder Associates

Appendix I: **Results of analysis of river sediment samples taken from Peace River mainstem and selected tributary stream beds during July and August 2007.**

Site No	Moberly 6	Peace 1	Peace 2	Peace 4	Peace 5	Halfway 9	Moberly 6	Peace 1	Peace 2	Peace 3	Peace 4	Peace 5	Halfway 9	Aquatic Life (BC Sediment Quality Guidelines-Working)		CCME - Aquatic Life Freshwater		Ontario - Aquatic Sediment Quality	
Date Sampled	07-JUL-07	04-JUL-07	04-JUL-07	05-JUL-07	05-JUL-07	09-JUL-07	13-AUG-07	14-AUG-07	14-AUG-07	14-AUG-07	14-AUG-07	15-AUG-07	16-AUG-07						
Time Sampled	11:00	09:00	12:00	14:00	16:00	10:15	12:00	12:00	14:20	16:10	16:50	16:30	17:00						
ALS Sample ID	L528785-13	L528785-14	L528785-15	L528785-16	L528785-17	L528785-18	L541389-4	L542126-9	L542126-10	L542126-11	L542126-12	L543666-7	L543666-8						
														ISQG[a]	PEL[b]	ISQG	PEL	LEL[e]	SEL[f]
Physical Tests																			
% Moisture	42.3	17.5	15.8	11.6	31.8	21.6	27.4	19.4	15.3	17.9	30.0	33.3	20.4						
Oxidation-Reduction Potential (mV)	-50	140	140	130	-20	60	-	-	-	-	-	-	-						
pH	8.15	8.17	8.14	8.12	8.00	8.19	8.00	8.27	8.10	8.13	8.25	8.14	8.57						
Anions and Nutrients																			
Available Phosphate-P (mg/kg)	1	<1	1	1	1	1	-	-	-	-	-	-	-						
Metals (mg/kg except as noted)																			
Aluminum (Al)	6120	8590	5660	7370	5890	5190	5700	9000	9930	8470	5790	7340	5800						
Antimony (Sb)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10						
Arsenic (As)	**6.5**	**8.7**	<5.0	**6.1**	**6.7**	**8.3**	**6.2**	**8.6**	**6.5**	**10.7**	**7.6**	**7.6**	**8.9**	5.9	17	5.9	17	6	33
Barium (Ba)	329	204	102	268	326	360	283	216	298	296	421	353	492						
Beryllium (Be)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						
Bismuth (Bi)	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20						
Cadmium (Cd)	0.59	<0.50	<0.50	<0.50	<0.50	**0.67**	0.54	<0.50	**0.70**	**0.75**	0.54	<0.50	0.54	0.6	3.5	0.6	3.5	0.6	10
Calcium (Ca)	9060	20400	20400	13700	21500	23200	8460	19600	29100	12500	24600	20100	24800						
Chromium (Cr)	12.4	16.5	9.5	17.3	14.2	11.0	11.2	16.9	18.8	17.2	10.8	14.2	10.8	37.3	90	37.3	90	26	110
Cobalt (Co)	6.2	7.5	4.7	6.5	6.3	6.0	6.6	6.5	7.8	7.1	6.2	6.9	6.4						
Copper (Cu)	13.6	23.8	14.7	15.8	12.1	13.0	11.9	21.2	20.9	18.4	14.1	15.6	13.1	35.7	197	35.7	197	16	110
Iron (Fe)	14400	**22800**	13800	20000	19400	18300	17400	**25500**	20100	**27300**	17600	18600	21100	21200[e]				2%	4%
Lead (Pb)	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	35	91	35	91.3	31	250
Lithium (Li)	8.3	13.4	6.0	9.0	8.0	6.9	7.4	12.5	12.5	9.3	7.4	9.9	6.5						
Magnesium (Mg)	3920	9330	6370	7080	6700	5410	3130	9570	11700	6850	6920	6580	6260						
Manganese (Mn)	213	272	253	277	258	186	273	260	376	343	208	273	203					460	1100
Mercury (Hg)	0.057	0.085	<0.050	<0.050	<0.050	<0.050	<0.050	0.110	0.053	<0.050	<0.050	<0.050	<0.050	0.17	0.486	0.17	0.486	0.2	2
Molybdenum (Mo)	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0						
Nickel (Ni)	**20.5**	**27.7**	14.0	**20.6**	**19.1**	**20.1**	**19.3**	**24.0**	**23.6**	**22.7**	**18.2**	**21.4**	**20.9**	16[e]				16	75
Phosphorus (P)	744	882	519	823	807	1010	762	867	838	929	1000	813	1160						
Potassium (K)	1050	1260	550	1010	940	1170	1070	1660	1600	1480	1220	1360	1210						
Selenium (Se)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5					
Silver (Ag)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	0.5					
Sodium (Na)	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200						
Strontium (Sr)	26.3	45.0	38.7	37.3	49.6	59.4	27.3	52.9	68.4	44.1	64.1	47.0	60.3						
Thallium (Tl)	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50						
Tin (Sn)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0						
Titanium (Ti)	33.8	75.8	203	180	81.8	24.2	23.4	71.2	138	94.3	22.8	45.9	29.7						
Vanadium (V)	23.3	36.1	26.7	37.4	31.0	30.5	24.8	41.3	41.8	46.8	28.3	34.8	34.2						
Zinc (Zn)	67.0	87.7	43.5	64.7	67.1	82.5	64.8	79.2	75.4	85.5	82.8	72.5	87.3	123	315	123	315	120	820
Polycyclic Aromatic Hydrocarbons (mg/kg except as noted)																			
Acenaphthene	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.00671	0.0889	0.00671	0.0889		
Acenaphthylene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.00587	0.128	0.00587	0.128		
Anthracene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.0469	0.245	0.0469	0.245	0.22	
Benz(a)anthracene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.0317	0.385	0.0317	0.385	0.32	
Benzo(a)pyrene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.0319	0.782	0.0319	0.782	0.37	

Appendix I: **Results of analysis of river sediment samples taken from Peace River mainstem and selected tributary stream beds during July and August 2007.**

Site No	Moberly 6	Peace 1	Peace 2	Peace 4	Peace 5	Halfway 9	Moberly 6	Peace 1	Peace 2	Peace 3	Peace 4	Peace 5	Halfway 9	Aquatic Life (BC Sediment Quality Guidelines-Working)		CCME - Aquatic Life Freshwater		Ontario - Aquatic Sediment Quality	
Date Sampled	07-JUL-07	04-JUL-07	04-JUL-07	05-JUL-07	05-JUL-07	09-JUL-07	13-AUG-07	14-AUG-07	14-AUG-07	14-AUG-07	14-AUG-07	15-AUG-07	16-AUG-07						
Time Sampled	11:00	09:00	12:00	14:00	16:00	10:15	12:00	12:00	14:20	16:10	16:50	16:30	17:00						
ALS Sample ID	L528785-13	L528785-14	L528785-15	L528785-16	L528785-17	L528785-18	L541389-4	L542126-9	L542126-10	L542126-11	L542126-12	L543666-7	L543666-8						
Benzo(b)fluoranthene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050						
Benzo(g,h,i)perylene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.17[e]				0.17	
Benzo(k)fluroanthene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.24[e]				0.24	
Chrysene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.0571	0.862	0.0571	0.862	0.34	
Dibenz(a,h)anthracene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.00622	0.135	0.00622	0.135	0.06	
Fluoranthene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.111	2.355	0.111	2.355	0.75	
Fluorene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.0212	0.144	0.0212	0.144	0.19	
Indeno(1,2,3-c,d)pyrene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.2[e]				0.2	
2-Methylnaphthalene	**0.069**	**0.182**	<0.050	<0.050	**0.062**	**0.060**	-	**0.337**	**0.050**	**0.088**	**0.179**	**0.108**	**0.064**	0.0202	0.201	0.0202	0.201		
Naphthalene	<0.050	**0.075**	<0.050	<0.050	<0.050	<0.050	-	**0.137**	<0.050	<0.050	**0.086**	**0.064**	<0.050	0.0346	0.391	0.0346	0.391		
Phenanthrene	**0.065**	**0.079**	<0.050	<0.050	<0.050	<0.050	-	**0.178**	<0.050	**0.065**	**0.105**	**0.083**	**0.052**	0.0419	0.515	0.0419	0.515	0.56	
Pyrene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.053	0.875	0.053	0.875	0.49	
d8-Naphthalene (SS)	76	77	71	76	72	93	-	102	95	137	100	96	95						
d10-Acenaphthene (SS)	104	106	97	102	100	115	-	94	87	124	92	96	97						
d10-Phenanthrene (SS)	84	83	75	81	80	77	-	95	88	126	92	97	98						
d12-Chrysene (SS)	83	83	77	80	78	73	-	98	90	131	97	95	95						
Organic Parameters																			
$CaCO_3$ Equivalent	2.3	4.7	6.8	5.9	5.6	6.5	4.3	5.9	7.8	3.3	6.2	6.6	7.5						
Total Organic Carbon	1.4	1	0.5	0.6	0.5	0.7	1.5	1	1.1	0.8	0.6	1.5	0.8						
Total Carbon by Combustion	1.6	1.6	1.3	1.3	1.2	1.5	2.0	1.6	2.0	1.2	1.3	2.3	1.7						
Inorganic Carbon	0.2	0.5	0.8	0.7	0.6	0.8	0.5	0.7	0.9	0.4	0.7	0.8	0.9						
Particle Size																			
% Gravel (>2 mm)	3	30	35	25	<1	<1	-	-	-	-	-	-	-						
% Sand (2.0 mm – 0.063 mm)	55	58	48	53	80	66	-	-	-	-	-	-	-						
% Silt (0.063 mm – 4 μm)	34	11	13	16	16	29	-	-	-	-	-	-	-						
% Clay (<4 μm)	9	2	3	6	3	5	-	-	-	-	-	-	-						
XNo Class																			
Cation Exchange Capacity (meg/100 g)	-	-	-	-	-	-	-	770	650	640	310	-	-						
Total Nitrogen by LECO (%)	0.09	0.06	0.03	0.04	0.03	0.05	0.08	0.06	0.08	0.06	0.06	0.07	0.04						
Phosphorus, Total (mg/kg)	-	-	-	-	-	-	-	770	650	640	310	850	1100						

Notes:

[a] Interim Freshwater Sediment Quality Guidelines

[b] Probable Effect Level

[c] Sediment at a site with sensitive aquatic habitat and for which sensitive sediment management objectives apply.

[d] Sediment that is not sensitive sediment.

[e] Lowest Effect Level

[f] Severe Effect Level

Below legend is in reference to ISQG and LEL levels.

BOLD = exceedence in BCSQG for Aquatic Life

= exceedence in CCME (ISQG)

= exceedence in Ontario (LEL)

RED = exceedence of all 3 standards (ISQG/LEL)

APPENDIX J

Results of Analysis of Soils Samples Taken from Adjacent the Pace River during July 2007

May 15, 2009
Report No. 06-1490-006

Golder Associates

Appendix J: Results of analysis of soils samples taken from adjacent the Peace River mainstem during July 2007.

Site Number	Site 20	Site 20	Site 21	Site 21	Site 25	Site 25	Site 24	Site 24	Site 23	Site 23	Site 19	Site 19	**CSR Standards for AL**	**MCS**	**CSR Standards for PL**	**MCS**
Location	Peace River opposite confluence with Farrell Ck-south bank	Peace River opposite confluence with Farrell Ck - south bank	~ 500 m upstream of the Halfway R. Proximate to Peace 2 but on south bank	~ 500 m upstream of the Halfway R. Proximate to Peace 2 but on south bank	Halfway R. 1.5 km upstream of confluenece with the Peace R-west bank.	Halfway R. 1.5 km upstream of confluenece with the Peace R-west bank.	Peace Mainstem ~ 3 km downstream Tea Ck. - north bank	Peace Mainstem ~ 3 km downstream Tea Ck. - north bank	Peace R. ~ 2 km downstream of Cache Ck. - south bank	Peace R. ~ 2 km downstream of Cache Ck. - south bank	Peace R. north bank, along Lynx Ck downstream of Hwy. 23 bridge	Peace R. north bank, along Lynx Ck downstream of Hwy. 23 bridge				
Date Sampled	04-JUL-07	04-JUL-07	04-JUL-07	04-JUL-07	04-JUL-07	04-JUL-07	04-JUL-07	04-JUL-07	04-JUL-07	04-JUL-07	09-JUL-07	09-JUL-07				
ALS Sample ID	L528785-1	L528785-2	L528785-3	L528785-4	L528785-5	L528785-6	L528785-7	L528785-8	L528785-9	L528785-10	L528785-11	L528785-12				
Physical Tests																
% Moisture	59.4	17.3	21.3	20.6	5.76	11.5	54.2	4.56	32.6	10.1	5.60	9.26				
Oxidation-Reduction Potential (mV)	-	-	-	-	-	-	-	-	-	-	-	-				
pH	4.13	7.68	7.89	8.20	8.17	8.15	7.48	8.17	7.47	8.17	7.97	8.15				
Anions and Nutrients																
Available Phosphate-P (mg/kg)	8	<1	1	<1	<1	<1	28	1	1	<1	1	1				
Metals (mg/kg except as noted)																
Aluminum (Al)	4670	6390	21800	25100	4350	4310	3120	6250	9680	8150	4640	4690				
Antimony (Sb)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**20**	G	**20**	G
Arsenic (As)	<5.0	5.6	9.4	12.6	8.0	7.0	<5.0	5.5	6.9	5.2	5.9	6.3	**20**	F	**20**	F
Barium (Ba)	640	268	528	625	318	375	131	113	225	240	243	310	**750**	G	**500**	G
Beryllium (Be)	<0.50	<0.50	0.61	0.67	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**4**	G	**4**	G
Bismuth (Bi)	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20				
Cadmium (Cd)	1.85	0.81	0.67	0.74	0.51	<0.50	2.43	<0.50	0.62	<0.50	0.57	0.59	**2 - 35**	F/I/P	**2 - 35**	F/I/P
Calcium (Ca)	9620	38100	44900	44600	31100	31200	36800	22000	35700	34300	45100	44400				
Chromium (Cr)	7.2	12.6	46.1	52.8	8.8	8.8	6.7	12.5	20.8	18.1	11.7	12.1	**60 ^{VI} / 65 ^{III}**	F	**60 ^{VI} / 65 ^{III}**	F
Cobalt (Co)	2.4	4.9	15.9	18.7	5.1	4.9	3.3	5.1	8.5	7.5	4.1	4.1	**40**	G	**50**	G
Copper (Cu)	11.2	14.7	56.8	64.4	10.4	9.7	14.1	12.4	21.0	17.4	9.2	9.8	**90 - 150**	F/T/P	**90 - 150**	F/T/P
Iron (Fe)	8060	13200	34500	39400	17700	16500	8380	15800	20700	18000	10900	10900				
Lead (Pb)	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	**150 - 500**	F/I/P	**150 - 500**	F/I/P
Lithium (Li)	<2.0	7.0	25.1	27.8	5.9	5.2	3.2	7.1	14.4	11.7	5.5	5.6	**1,600**	S	**1,600**	S
Magnesium (Mg)	1480	11200	18700	19700	5390	6160	4520	6130	12100	9650	12600	13200				
Manganese (Mn)	20.0	247	677	763	192	160	193	275	404	321	186	176	**1,800**	S	**1,800**	S
Mercury (Hg)	0.148	<0.050	0.066	0.075	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	**15**	I	**15**	I
Molybdenum (Mo)	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	**5**	G	**10**	G
Nickel (Ni)	7.7	17.2	56.5	65.4	17.3	15.5	10	16.6	25.1	22.1	13.2	12.9	**150**	G	**100**	G
Phosphorus (P)	549	797	896	828	1160	1230	1030	688	893	696	750	750				
Potassium (K)	1140	1170	3430	3480	980	960	960	640	1190	1020	910	930				
Selenium (Se)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**2**	G	**3**	G
Silver (Ag)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**20**	G	**20**	G
Sodium (Na)	<200	<200	340	500	<200	<200	<200	<200	<200	<200	<200	<200	**NS (PQL)**	S	**NS (PQL)**	S
Strontium (Sr)	44.3	66.2	110	114	68.4	67.4	80.3	53.8	82.6	82.9	78.4	77.9	**47,000**	S	**47,000**	S
Thallium (Tl)	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	**2**	G		
Tin (Sn)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**5**	S	**50**	S
Titanium (Ti)	17.7	72.7	554	625	24.2	25.8	89.3	258	182	188	103	95.8				
Vanadium (V)	18.6	36.6	75.0	84.8	26.0	26.3	15.3	30.2	36.9	34.6	29.1	30.0	**200**	G	**200**	G
Zinc (Zn)	45.7	63.6	138	155	70.6	67.7	234	47.9	75.2	62.1	45.8	44.0	**150 - 450**	F/T/P	**150 - 450**	F/T/P
Organic Parameters																
$CaCO_3$ Equivalent (%)	1.0	22.4	8.3	12.4	7.8	7.7	3.3	5.4	7.8	9.5	14.2	13.1				
Total Organic Carbon (%)	34.1	2	2	0.6	0.6	0.7	25.8	0.6	9.1	1	1	1.1				
Total Carbon by Combustion (%)	34.1	4.7	2.9	2.1	1.5	1.6	26.1	1.2	10	2.1	2.7	2.7				
Inorganic Carbon (%)	<0.1	2.7	0.9	1.4	0.9	0.9	0.3	0.6	0.9	1.1	1.7	1.5				
Particle Size																
% Gravel (>2 mm)	6	45	<1	<1	<1	<1	3	<1	1	<1	1	<1				
% Sand (2.0 mm – 0.063 mm)	8	34	4	1	84	85	15	96	37	79	77	65				
% Silt (0.063 mm – 4 μm)	73	18	36	59	12	12	73	4	50	15	20	30				
% Clay (<4 μm)	13	4	60	40	3	3	10	<1	11	6	3	4				
XNo class																
Cation Exchange Capacity (meq/100 g)	113	8.0	14.7	7.6	2.9	3.2	110	1.6	26.4	3.1	2.8	2.5				
Total Nitrogen by LECO (%)	1.03	0.09	0.16	0.07	0.05	0.05	1.50	0.04	0.56	0.05	0.06	0.07				

Notes:

All units in mg/kg except where noted in table

Standards shown are from the Contaminated Sites Regulation (CSR), enacted in 1997, and updated from time to time.

Land Use abbreviations: AL (Agricultural); PL (Park Land)

MCS = Most Conservative Standard

Referenced site-specific factors include: G = Generic; I = Intake of Contaminated Soil; T = Toxicity to Invertebrates and Plants; S = Schedule 10

F = Fresh Water Aquatic Life; P = pH Dependent Standards

BOLD **BOLD**= exceedence in Agricultural Land Use

= exceedence in Park Land Use

= exceedenceof indicated range for parametere in one or more standards but soil pH negates this exceedence.

APPENDIX K

Discharge Calculations from Lynx, Farrell, Cache, and Boudreau Creeks

May 15, 2009
Report No. 06-1490-006

Golder Associates

Appendix K-1a: Flow measurement at Cache reek on May 17- 2007.

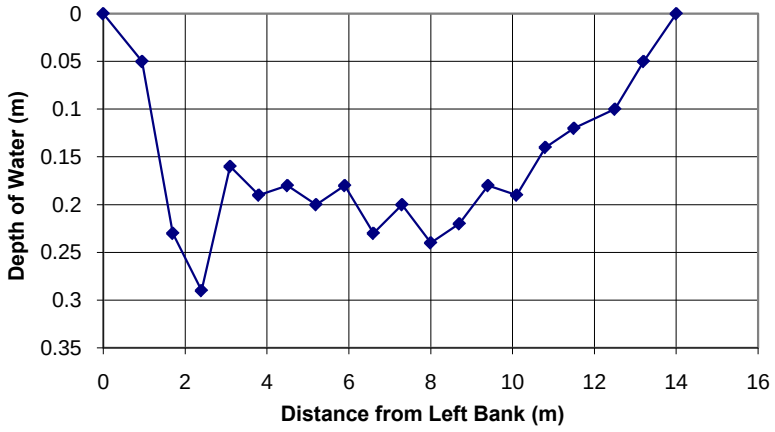
Flow Measurement Reach: Upstream Diversion Downstream
Flow Measurement Site # Cache 12
Date: 17-May-07
Time: 17:00 Measured by: MG/SH
Stage: 0.75
Stage: 4.18 down from old bridge

Weather (if noticeable): ……..

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	0	0	0						
2	0.95	0.05	0.11	0.024	0.001				RWE 0.95
3	1.7	0.23	0.36	0.105	0.025				
4	2.4	0.29	0.33	0.182	0.063				
5	3.1	0.16	0.51	0.158	0.066				
6	3.8	0.19	0.46	0.123	0.059				
7	4.5	0.18	0.49	0.130	0.062				
8	5.2	0.20	0.49	0.133	0.065				
9	5.9	0.18	0.52	0.133	0.067				
10	6.6	0.23	0.36	0.144	0.063				
11	7.3	0.20	0.46	0.151	0.062				
12	8.0	0.24	0.38	0.154	0.065				
13	8.7	0.22	0.37	0.161	0.060				
14	9.4	0.18	0.40	0.140	0.054				
15	10.1	0.19	0.36	0.130	0.049				
16	10.8	0.14	0.36	0.116	0.042				
17	11.5	0.12	0.36	0.091	0.033				
18	12.5	0.10	0.29	0.110	0.036				
19	13.2	0.05	0.18	0.053	0.012				
20	14	0	0	0.020	0.002				LWE 14.0
	TOTAL			**2.25**	**0.885**				

Wetted Width (Ww) 14.0
Mean Wetted Depth (Dw) 0.161 Ww/Dw= 87.0

Flow Measurement Section at Cache Creek

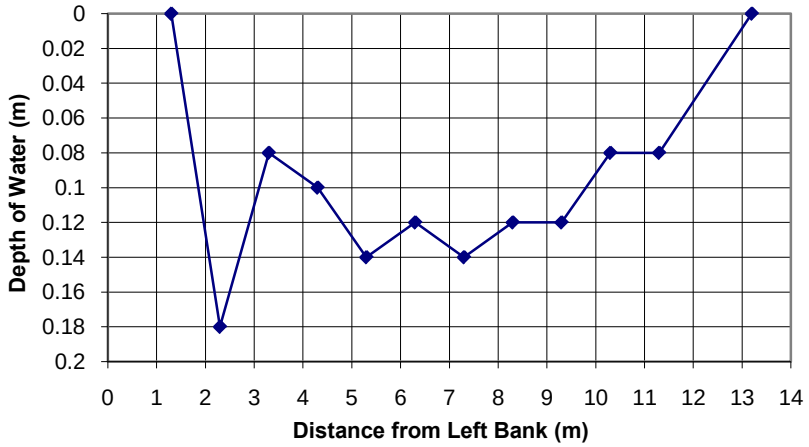


Appendix K-1b: Flow measurement at Cache reek on Jun 12- 2007.

Flow Measurement Reach: Upstream Diversion Downstream
Flow Measurement Site # Cache 12
Date: 06-Jun-07
Time: Recorded by: MG/SH Measured by: MG/SH
Stage 1: 4.32 m down from old bridge
Stage 2: 0.76 m down on piling of new bridge
Weather (if noticeable):

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	1.30	0	0						RWE 1.3
2	2.30	0.18	0.05	0.090	0.002				
3	3.30	0.08	0.10	0.130	0.010				
4	4.30	0.10	0.12	0.090	0.010				
5	5.30	0.14	0.15	0.120	0.016				
6	6.30	0.12	0.15	0.130	0.020				
7	7.30	0.14	0.18	0.130	0.021				
8	8.30	0.12	0.20	0.130	0.025				
9	9.30	0.12	0.18	0.120	0.023				
10	10.30	0.08	0.12	0.100	0.015				
11	11.30	0.08	0.07	0.080	0.008				
12	13.20	0	0	0.076	0.003				LWE 13.20
	TOTAL			**1.20**	**0.152**				
			Wetted Width	11.9					
			Mean Wetted Depth	0.101		Ww/Dw=	118.4		

Flow Measurement Section at Cache Creek



Appendix K-c4: Flow measurement at Cache reek on July 8 - 2007.

Flow Measurement Reach: Upstream Diversion Downstream
Flow Measurement Site # Cache 12
Date: 08-Jul-07
Time: 15:00 Recorded by: …….. Measured by: SH/HP
Stage 1: 4.34 down from old bridge
Stage 2: n/a m down on piling of new bridge
Weather (if noticeable):

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	1.40	0	0						RWE 1.40
2	2.00	0.10	0.01	0.030	0.000				
3	3.00	0.04	0.01	0.070	0.001				
4	4.00	0.03	0.01	0.035	0.000				
5	5.00	0.07	0.11	0.050	0.003				
6	6.00	0.14	0.12	0.105	0.012				
7	7.00	0.09	0.04	0.115	0.009				
8	8.00	0.06	0.17	0.075	0.008				
9	9.00	0.05	0.10	0.055	0.007				
10	10.00	0.04	0.06	0.045	0.004				
11	11.00	0.03	0.07	0.035	0.002				
12	12.00	0.01	0.03	0.020	0.001				
13	13.00	0	0	0.005	0.000				LWE 13
	TOTAL			**0.64**	**0.048**				
			Wetted Width	11.6					
			Mean Wetted Depth	0.055		Ww/Dw=	210.3		

Flow Measurement Section at Cache Creek

Appendix K-1: Flow measurement at Cache reek on August 16 - 2007.

Flow Measurement Reach: Upstream Diversion Downstream
Flow Measurement Site # Cache 12
Date: 16-Aug-07
Time: 17:45 Recorded by: …….. Measured by: …….
Stage: 0.52 m
Stage 2: 4.41 down from old bridge
Stage 3: 1.15 m down on piling of new bridge
Weather (if noticeable):

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	1.60	0	0						RWE 1.6
2	2.30	0.24	0	0.084	0.000				
3	3.00	0.24	0	0.168	0.000				
4	3.70	0.16	0	0.140	0.000				
5	4.40	0.12	0	0.098	0.000				
6	5.10	0.07	0	0.066	0.000				
7	5.80	0.10	0	0.060	0.000				
8	6.50	0.08	0	0.063	0.000				
9	7.20	0.07	0	0.053	0.000				
10	7.90	0.07	0	0.049	0.000				
11	8.60	0.06	0	0.046	0.000				
12	9.60	0	0	0.030	0.000				LWE 9.6
	TOTAL			**0.86**	**0.00**				
			Wetted Width	8.0					
			Mean Wetted Depth	0.107		Ww/Dw=	74.8		

Flow Measurement Section at Cache Creek

Appendix K-2a: Flow measurement at Farrell Creek on May 17 - 2007.

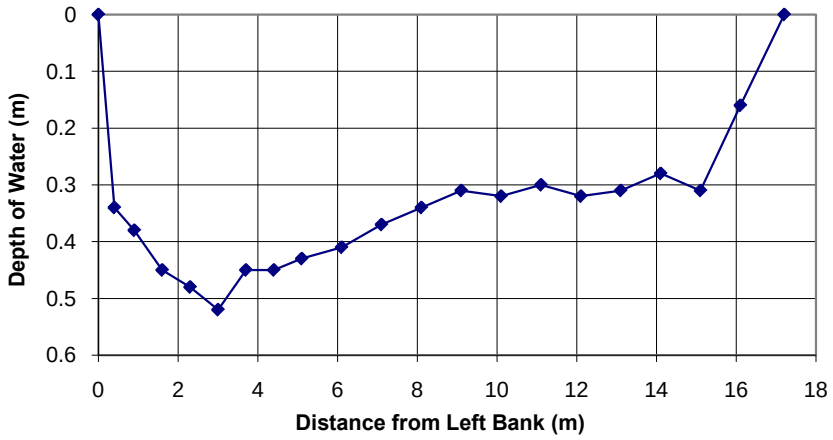
Flow Measurement Reach: Upstream Diversion Downstream
Flow Measurement Site # **Farrell 11**
Date: 17-May-07
Time: 14:15
Stage 0.68
Weather (if noticeable): …….

Measured by: MG/SH

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	0	0							
2	0.4	0.34	0.15	0.068	0.005				LWE 0.4
3	0.9	0.38	0.65	0.180	0.072				
4	1.6	0.45	0.79	0.291	0.209				
5	2.3	0.48	0.96	0.326	0.285				
6	3	0.52	0.97	0.350	0.338				
7	3.7	0.45	1.02	0.340	0.338				
8	4.4	0.45	0.88	0.315	0.299				
9	5.1	0.43	0.91	0.308	0.276				
10	6.1	0.41	0.83	0.420	0.365				
11	7.1	0.37	0.76	0.390	0.310				
12	8.1	0.34	0.66	0.355	0.252				
13	9.1	0.31	0.6	0.325	0.205				
14	10.1	0.32	0.58	0.315	0.186				
15	11.1	0.30	0.63	0.310	0.188				
16	12.1	0.32	0.53	0.310	0.180				
17	13.1	0.31	0.58	0.315	0.175				
18	14.1	0.28	0.48	0.295	0.156				
19	15.1	0.31	0.57	0.295	0.155				
20	16.1	0.16	0.26	0.235	0.098				
21	17.2	0	0	0.088	0.011				RWE 17.2
	TOTAL			**5.83**	**4.10**				

Wetted Width (Ww) 17.2
Mean Wetted Depth (Dw) 0.339 Ww/Dw= 50.7

Flow Measurement Section at Farrell Creek



Appendix K-2b: Flow measurement at Farrell Creek on Jun 6 - 2007.

Flow Measurement Reach: Upstream Diversion **Downstream**
Flow Measurement Site # **Farrell 11**
Date: 06-Jun-07
Time: 14:00 Recorded by: Measured by: MG/SH
Stage: 0.60 m
Weather (if noticeable): Overcast, partly sunny, 4-6 oC, felt very cold after 20 minutes of standing

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	9.60	0.00	0.00						RWE 9.6
2	10.60	0.14	0.26	0.070	0.009				
3	11.60	0.25	0.48	0.195	0.072				
4	12.60	0.23	0.49	0.240	0.116				
5	13.60	0.25	0.47	0.240	0.115				
6	14.60	0.29	0.54	0.270	0.136				
7	15.60	0.29	0.48	0.290	0.148				
8	16.60	0.30	0.43	0.295	0.134				
9	17.60	0.30	0.48	0.300	0.137				
10	18.60	0.32	0.55	0.310	0.160				
11	19.60	0.36	0.57	0.340	0.190				
12	20.60	0.36	0.66	0.360	0.221				
13	21.60	0.36	0.68	0.360	0.241				
14	22.60	0.40	0.76	0.380	0.274				
15	23.60	0.46	0.67	0.430	0.307				
16	24.60	0.42	0.58	0.440	0.275				
17	25.60	0.32	0.41	0.370	0.183				
18	26.00	0.24	0.16	0.112	0.032				LWE 26.0
	TOTAL			**5.00**	**2.75**				
			Wetted Width	16.4					
			Mean Wetted Depth	0.305		Ww/Dw=	53.8		

Flow Measurement Section at Farrell Creek

Appendix K-2c: Flow measurement at Farrell Creek on July 8 - 2007.

Flow Measurement Reach: Upstream Diversion Downstream
Flow Measurement Site # **Farrell 11**
Date: 08-Jul-07
Time: 13:40 Recorded by: …….. Measured by:SH/HP
Stage: 0.29 m
Weather (if noticeable): Overcast, partly sunny, 4-6 oC, felt very cold after 20 minutes of standing

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	0.00	0.00	0.00						
2	0.50	0.11	0.10	0.028	0.001				LWE 0.5
3	1.50	0.22	0.14	0.165	0.020				
4	2.50	0.24	0.17	0.230	0.036				
5	3.50	0.19	0.20	0.215	0.040				
6	4.50	0.18	0.21	0.185	0.038				
7	5.50	0.16	0.16	0.170	0.031				
8	6.50	0.16	0.15	0.160	0.025				
9	7.50	0.16	0.08	0.160	0.018				
10	8.50	0.12	0.11	0.140	0.013				
11	9.50	0.09	0.06	0.105	0.009				
12	10.50	0.09	0.09	0.090	0.007				
13	11.50	0.12	0.25	0.105	0.018				
14	12.50	0.12	0.27	0.120	0.031				
15	13.50	0.08	0.30	0.000	0.000				
16	14.50	0.08	0.24	0.080	0.022				
17	15.10	0	0	0.024	0.003				RWE 15.1
	TOTAL			**1.98**	**0.31**				

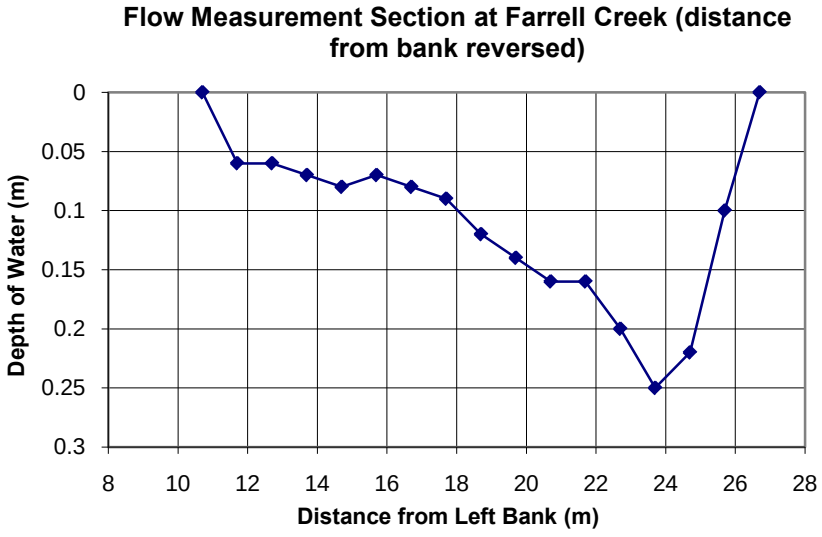
Wetted Width 15.1
Mean Wetted Depth 0.131 Ww/Dw= 115.4

Flow Measurement Section at Farrell Creek

Appendix K-2d: Flow measurement at Farrell Creek on Aug 16 - 2007.

Flow Measurement Reach: Upstream Diversion Downstream
Flow Measurement Site # **Farrell 11**
Date: 16-Aug-07
Time: 11:00 Recorded by: …… Measured by: MG/SH
Stage: 0.22 m
Weather (if noticeable): Overcast, partly sunny, 4-6 oC, felt very cold after 20 minutes of standing

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	10.70	0.00	0.00						RWE 10.7
2	11.70	0.06	0.19	0.030	0.003				
3	12.70	0.06	0.27	0.060	0.014				
4	13.70	0.07	0.24	0.065	0.017				
5	14.70	0.08	0.21	0.075	0.017				
6	15.70	0.07	0.27	0.075	0.018				
7	16.70	0.08	0.20	0.075	0.018				
8	17.70	0.09	0.10	0.085	0.013				
9	18.70	0.12	0.10	0.105	0.011				
10	19.70	0.14	0.08	0.130	0.012				
11	20.70	0.16	0.07	0.150	0.011				
12	21.70	0.16	0.08	0.160	0.012				
13	22.70	0.20	0.09	0.180	0.015				
14	23.70	0.25	0.07	0.225	0.018				
15	24.70	0.22	0.09	0.235	0.019				
16	25.70	0.1	0.05	0.160	0.011				
17	26.70	0	0	0.050	0.001				LWE 26.7
	TOTAL			**1.86**	**0.21**				
			Wetted Width	16.0					
			Mean Wetted Depth	0.116		Ww/Dw=	137.6		

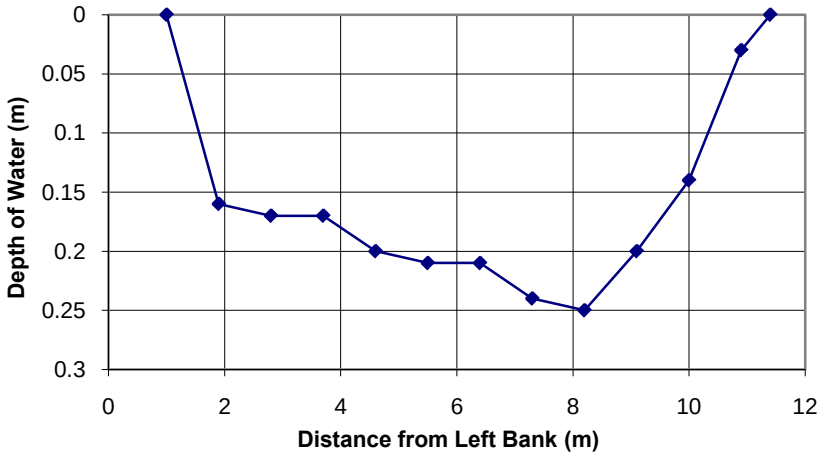


Appendix K-3a: Flow measurement at Lynx Creek on May 17 - 2007.

Flow Measurement Reach: Upstream Diversion Downstream
Flow Measurement Site # **Lynx 10**
Date: 17-May-07
Time: 13:00 Measured by: MG/SH
Stage 1: 1.5 down from Tree Pin
Weather (if noticeable): …….

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	1	0	0						RWE 1.0
2	1.9	0.16	0.44	0.072	0.016				
3	2.8	0.17	0.65	0.149	0.081				
4	3.7	0.17	0.75	0.153	0.107				
5	4.6	0.2	0.72	0.167	0.122				
6	5.5	0.21	0.78	0.185	0.138				
7	6.4	0.21	0.80	0.189	0.149				
8	7.3	0.24	0.87	0.203	0.169				
9	8.2	0.25	0.71	0.221	0.174				
10	9.1	0.2	1.56	0.203	0.230				
11	10	0.14	0.12	0.153	0.129				
12	10.9	0.03	0.1	0.077	0.008				
13	11.4	0	0	0.008	0.000				LWE 11.4
	TOTAL			**1.78**	**1.32**				
			Wetted Width (Ww)	10.4					
			Mean Wetted Depth (Dw)	0.171		Ww/Dw=	60.9		

Flow Measurement Section at Lynx Creek

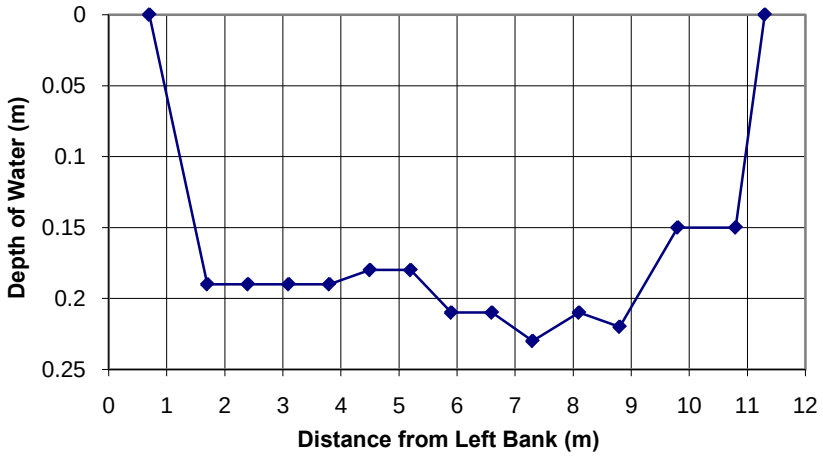


Appendix K-3b: Flow measurement at Lynx Creek on June 6 - 2007.

Flow Measurement Reach: Upstream Diversion **Downstream**
Flow Measurement Site # **Lynx 10**
Date: 06-Jun-07
Time: 11:15 Recorded by: ……. Measured by: …….
Stage 1: 1.480 m
Weather (if noticeable): Overcast, partly sunny, 4-6 oC, felt very cold after 20 minutes of standing

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	0.70	0	0						RWE 0.7
2	1.70	0.19	0.29	0.095	0.014				
3	2.40	0.19	0.41	0.133	0.047				
4	3.10	0.19	0.48	0.133	0.059				
5	3.80	0.19	0.52	0.133	0.067				
6	4.50	0.18	0.52	0.130	0.067				
7	5.20	0.18	0.58	0.126	0.069				
8	5.90	0.21	0.55	0.137	0.077				
9	6.60	0.21	0.64	0.147	0.087				
10	7.30	0.23	0.80	0.154	0.111				
11	8.10	0.21	0.71	0.176	0.133				
12	8.80	0.22	0.38	0.151	0.082				
13	9.80	0.15	0.40	0.185	0.072				
14	10.80	0.15	0.15	0.150	0.041				
15	11.30	0		0.038	0.003				LWE 11.3
	TOTAL			**1.89**	**0.929**				
			Wetted Width	10.6					
			Mean Wetted Depth	0.178		Ww/Dw=	59.6		

Flow Measurement Section at Lynx Creek

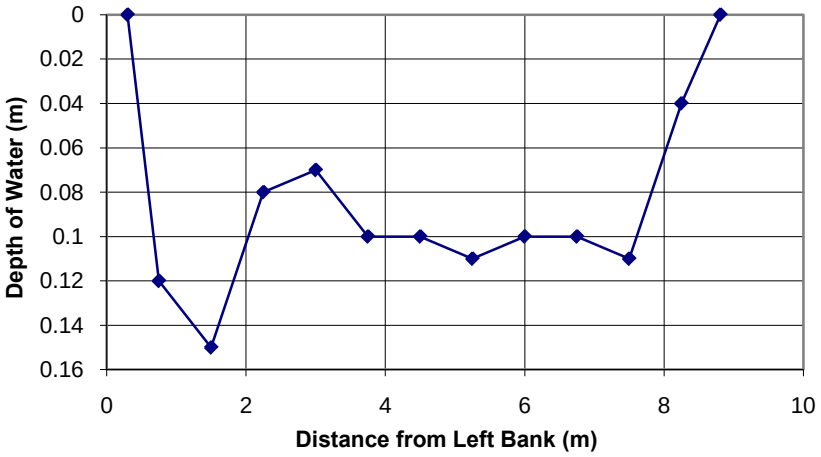


Appendix K-3c: Flow measurement at Lynx Creek on July 8 - 2007.

Flow Measurement Reach: Upstream Diversion Downstream
Flow Measurement Site # **Lynx 10**
Date: 08-Jul-07
Time: Recorded by: …….. Measured by: …….
Stage 1: 1.420 m
Weather (if noticeable): Overcast, partly sunny, 4-6 oC, felt very cold after 20 minutes of standing

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	0.30	0	0						RWE 0.30
2	0.75	0.12	0.07	0.027	0.001				
3	1.50	0.15	0.12	0.101	0.010				
4	2.25	0.08	0.14	0.086	0.011				
5	3.00	0.07	0.18	0.056	0.009				
6	3.75	0.10	0.22	0.064	0.013				
7	4.50	0.10	0.23	0.075	0.017				
8	5.25	0.11	0.22	0.079	0.018				
9	6.00	0.10	0.21	0.079	0.017				
10	6.75	0.10	0.22	0.075	0.016				
11	7.50	0.11	0.24	0.079	0.018				
12	8.25	0.04	0.2	0.056	0.012				
13	8.81	0	0	0.011	0.001				LWE 8.81
	TOTAL			**0.79**	**0.14**				
			Wetted Width	8.5					
			Mean Wetted Depth	0.093		Ww/Dw=	91.9		

Flow Measurement Section at Lynx Creek

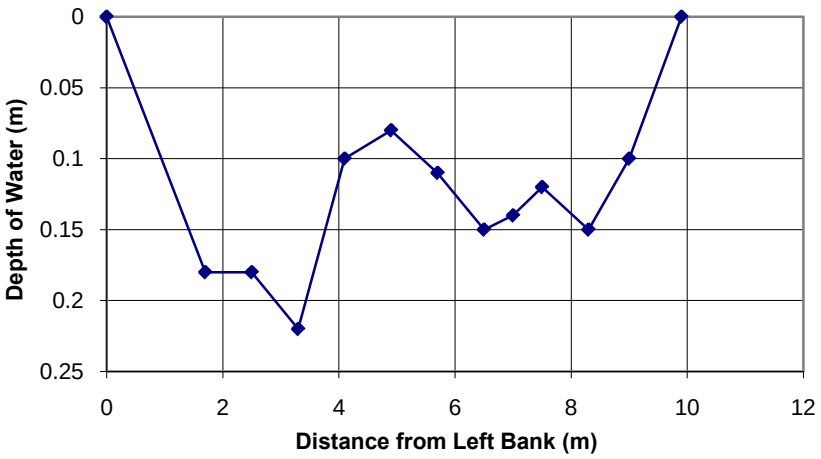


Appendix K-3d: Flow measurement at Lynx Creek on Aug 16 - 2007.

Flow Measurement Reach: Upstream Diversion Downstream
Flow Measurement Site # **Lynx 10**
Date: 16-Aug-07
Time: 10:00 Recorded by: …….. Measured by: MG/SH
Stage 1: 1.600 m
Weather (if noticeable): Overcast, partly sunny, 4-6 oC, felt very cold after 20 minutes of standing

						GPS Reading			
S.No.	W_n	Y_n	V1_0.6	A (m2)	Q (m3/s)	Northing	Easting	Altitude	Remarks
	(m)	(m)	(m/s)	(m2)	(m3/s)	(m)	(m)	(ft)	
1	0	0	0						
2	1.70	0.18	0.02	0.153	0.002				RWE 1.7
3	2.50	0.18	0.08	0.144	0.007				
4	3.30	0.22	0.11	0.160	0.015				
5	4.10	0.10	0.10	0.128	0.013				
6	4.90	0.08	0.09	0.072	0.007				
7	5.70	0.11	0.20	0.076	0.011				
8	6.50	0.15	0.24	0.104	0.023				
9	7.00	0.14	0.25	0.073	0.018				
10	7.50	0.12	0.29	0.065	0.018				
11	8.30	0.15	0.21	0.108	0.027				
12	9.00	0.1	0.03	0.087	0.011				
13	9.90	0	0	0.045	0.001				LWE 9.9
	TOTAL			**1.22**	**0.152**				
			Wetted Width	9.9					
			Mean Wetted Depth	0.123		Ww/Dw=	80.7		

Flow Measurement Section at Lynx Creek



APPENDIX L

Selected Pictures from the Peace River Water Quality Program

May 15, 2009
Report No. 06-1490-006

Golder Associates

Photograph 1:

Installing temperature data loggers on the Kiskatinaw River in November 2006. Although prior to the onset of a major winter storm, access was still difficult due to developing ice and snow.

Photograph 3:

Launching boats along the Peace River is problematic in the winter because of snow and ice conditions. The boat launch at Hudson's Hope proximate to Peace 1 was barely possibly after the first snow fall of the winter in November 2006.

Photograph 2:

The lower Moberly River looking towards Moberly 7, is accessible by ATV in the summer, but winter access even by snowmobile is severely limited by existing deadfall and a tenuous access road to an adjacent well site.

Photograph 4:

The Taylor boat launch was inaccessible due to shore ice from November 2006 to March 2007.

Selected Pictures from the Peace River Water Quality Sampling Program November 2006 to November 2007

Golder Associates
Kamloops, BC

PROJECT No. 06-1490-006		SCALE: None	REV. 0
DRAWN	MG	Jul 28, 2008	**PLATE 1**
CHECK	MG	Sep. 15, 2008	
REVIEW	GA	Oct 21, 2008	

Photograph 5:

Attaching an anchoring cable and weight to a temperature data logger in the Pine River during November 2006.

Photograph 6:

After loss and damage to three of five sondes placed over the winter, swivels and chain and additional weight attached with two anchoring cables was used to secure turbidity sondes during the April 2007 field survey.

Photograph 7:

To make turbidity sondes less conspicuous, flotation buoys were partially deflated and set slightly under the surface of the water during the April 2007 survey session.

Photograph 8:

Taking a water sample from Boudreau Creek during May 2007.

Selected Pictures from the Peace River Water Quality Sampling Program November 2006 to November 2007

Golder Associates
Kamloops, BC

PROJECT No. 06-1490-006			SCALE: None	REV. 0
DRAWN	MG	Jul 28, 2008	**PLATE 2**	
CHECK	MG	Sep. 15, 2008		
REVIEW	GA	Oct 21, 2008		

Photograph 9:

Water samples collected from the Peace River during the winter were completed from shore using an extendable pole with a sampling vessel attached to the end of the pole as shown here in March 2007.

Photograph 10:

Ice augers used in March 2007 to access water for sampling in tributaries.

Photograph 11:

Ice depth ranged from 0.6 m to almost 1 m depending upon the tributary. This location is Cache Creek during the March 2007 survey session.

Photograph 12:

Water welling up from an access hole cut into Cache Creek during the March 2007 survey session.

Selected Pictures from the Peace River Water Quality Sampling Program November 2006 to November 2007

Golder Associates
Kamloops, BC

PROJECT No. 06-1490-006		SCALE: None	REV. 0
DRAWN	MG	Jul 28, 2008	**PLATE 3**
CHECK	MG	Sep. 15, 2008	
REVIEW	GA	Oct 21, 2008	

Photograph 13:

Taking a discharge measurement at Lynx Creek during May 2007.

Photograph 15:

Smashed temperature data logger found at Peace 3 during the June 2007 field survey. The second data logger was untouched but the YSI sonde had also been removed from its anchor, but was found on shore in July downstream of Peace 4.

Photograph 14:

The staff gauge affixed to an old wooden piling in Farrell Creek. Cache Creek and Lynx Creek required measurements to the water level from a bench mark.

Photograph 16:

Differences in ice conditions were obvious between upstream and downstream Peace River sample sites during the winter field survey. Note the lack of floating and shore ice at Peace 1 in March 2007.

Selected Pictures from the Peace River Water Quality Sampling Program November 2006 to November 2007

Golder Associates
Kamloops, BC

PROJECT No. 06-1490-006		SCALE: None	REV. 0
DRAWN	MG	Jul 28, 2008	PLATE 4
CHECK	MG	Sep. 15, 2008	
REVIEW	GA	Oct 21, 2008	

Photograph 21:

An example of a stand pipe housing a Total Gas Pressure (TGP) sonde used in the Pend Orielle River in Washington State. In this instance, the data logger is separate from the sonde and housed in a secure box on shore.

Photograph 21:

A close up of the perforated end of the stand pipe shown in Photo 21. In this case, the stand pipe is made of ABS pipe. If housed on a bridge abutment, stand pipes may be less obvious and less accessible, and; therefore, not as prone to tampering.

Photograph 23:

Pre-constructed cage housing a TGP data logging probe used in the Pend Orielle River in Washington State.

Photograph 24:

The TGP probe and dual float system prior to deployment in the Pend Orielle River in Washington State.

Selected Pictures from the Peace River Water Quality Sampling Program November 2006 to November 2007

Golder Associates
Kamloops, BC

PROJECT No. 06-1490-006		SCALE: None	REV. 0
DRAWN	MG	Jul 28, 2008	**PLATE 5**
CHECK	MG	Sep. 15, 2008	
REVIEW	GA	Oct 21, 2008	

Photograph 17:

A view upstream at Peace 5 at shore and floating ice conditions in the Peace River during March 2007. Compare these conditions to those in Photo 16.

Photograph 19:

The Peace 4 sonde was discovered damaged due to coiling of the attachment cable around the sonde. Swivels were used as a means to mitigate this type of problem with future deployments.

Photograph 18:

Cable attachments between sondes and anchors, sondes and shore or as in this case, between the sonde and the float. were prone to collecting debris. A deer carcass discovered caught up on the sonde placed at Peace 3 in April 2007 dragged the sonde to shore.

Photograph 20:

Cable found piled on shore, combined with the lack of rust except at the very end of the cable (inset) suggested the Peace 5 sonde was tampered with.

Selected Pictures from the Peace River Water Quality Sampling Program November 2006 to November 2007

Golder Associates
Kamloops, BC

PROJECT No. 06-1490-006			SCALE: None	REV. 0
DRAWN	MG	Jul 28, 2008		
CHECK	MG	Sep. 15, 2008		
REVIEW	GA	Oct 21, 2008		

PLATE 6

APPENDIX M

Relevant Hydrological Information based upon WSC Station Data from the Peace River Watershed

May 15, 2009
Report No. 06-1490-006

Golder Associates

Appendix M1: Water Survey of Canada data for Peace River and gauged tributaries on the Peace River for 2007. All data is in m3/s. Data for tributaries have yet to be finalized by the WSC.

Date	Discharge by Stream (WSC Stations)								% Discharge of Tributaries Relative to Peace R. Flows @ Hudson's Hope					% Discharge of Tributaries Relative to Peace R. Flows above the Pine River					% Discharge of Tributaries Relative to Peace R. Flows @ ALCES					Cummulative % Tributary Discharge compared to Peace R.		
	Peace R. @ Hudson Hope	Halfway R. Discharge	Moberly R. Discharge	Peace R. @ Pine	Pine R. Discharge	Beatton R. Discharge	Kiskatinaw R. @ Farmington	Peace R. @ Alces	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Peace R. @ Hudson Hope	Peace R. @ Pine	Peace R. @ Alces
01-Jan-07	1470	9.5	4.7	1490	23.7	1.8	0.80	1600	0.65%	0.32%	1.61%	0.05%	0.12%	0.64%	0.32%	1.59%	0.05%	0.12%	0.60%	0.29%	1.48%	0.05%	0.11%	2.8%	2.7%	2.5%
02-Jan-07	1370	9.4	4.9	1410	23.6	1.7	0.79	1600	0.69%	0.36%	1.72%	0.06%	0.13%	0.67%	0.35%	1.67%	0.06%	0.12%	0.59%	0.31%	1.48%	0.05%	0.11%	3.0%	2.9%	2.5%
03-Jan-07	1330	9.4	5.1	1320	23.5	1.7	0.78	1560	0.70%	0.38%	1.77%	0.06%	0.13%	0.71%	0.39%	1.78%	0.06%	0.13%	0.60%	0.33%	1.51%	0.05%	0.11%	3.0%	3.1%	2.6%
04-Jan-07	1470	9.3	5.1	1460	23.4	1.6	0.76	1580	0.63%	0.35%	1.59%	0.05%	0.11%	0.63%	0.35%	1.60%	0.05%	0.11%	0.59%	0.32%	1.48%	0.05%	0.10%	2.7%	2.7%	2.5%
05-Jan-07	1460	8.9	5.0	1450	23.2	1.5	0.74	1610	0.61%	0.34%	1.59%	0.05%	0.11%	0.61%	0.35%	1.60%	0.05%	0.11%	0.55%	0.31%	1.44%	0.05%	0.10%	2.7%	2.7%	2.4%
06-Jan-07	1470	8.6	4.7	1490	23.0	1.5	0.71	1620	0.58%	0.32%	1.56%	0.05%	0.10%	0.58%	0.32%	1.54%	0.05%	0.10%	0.53%	0.29%	1.42%	0.04%	0.09%	2.6%	2.6%	2.4%
07-Jan-07	1460	8.5	4.9	1490	22.8	1.5	0.72	1630	0.58%	0.33%	1.56%	0.05%	0.10%	0.57%	0.33%	1.53%	0.05%	0.10%	0.52%	0.30%	1.40%	0.04%	0.09%	2.6%	2.6%	2.4%
08-Jan-07	1470	8.4	5.1	1470	22.6	1.4	0.73	1640	0.57%	0.35%	1.54%	0.05%	0.10%	0.57%	0.35%	1.54%	0.05%	0.10%	0.51%	0.31%	1.38%	0.04%	0.09%	2.6%	2.6%	2.3%
09-Jan-07	1500	8.3	5.3	1500	22.4	1.4	0.75	1670	0.55%	0.35%	1.49%	0.05%	0.10%	0.55%	0.35%	1.49%	0.05%	0.10%	0.50%	0.32%	1.34%	0.05%	0.09%	2.5%	2.5%	2.3%
10-Jan-07	1520	8.4	5.9	1530	22.2	1.4	0.77	1680	0.55%	0.39%	1.46%	0.05%	0.09%	0.55%	0.38%	1.45%	0.05%	0.09%	0.50%	0.35%	1.32%	0.05%	0.09%	2.5%	2.5%	2.3%
11-Jan-07	1520	8.4	6.1	1400	22.0	1.4	0.79	1640	0.55%	0.40%	1.45%	0.05%	0.09%	0.60%	0.44%	1.57%	0.06%	0.10%	0.51%	0.37%	1.34%	0.05%	0.09%	2.5%	2.8%	2.4%
12-Jan-07	1520	8.4	6.2	1480	22.0	1.5	0.80	1590	0.55%	0.41%	1.45%	0.05%	0.10%	0.57%	0.42%	1.49%	0.05%	0.10%	0.53%	0.39%	1.38%	0.05%	0.09%	2.6%	2.6%	2.4%
13-Jan-07	1510	8.5	6.2	1530	21.9	1.5	0.82	1660	0.56%	0.41%	1.45%	0.05%	0.10%	0.55%	0.40%	1.43%	0.05%	0.10%	0.51%	0.37%	1.32%	0.05%	0.09%	2.6%	2.5%	2.3%
14-Jan-07	1500	8.5	6.3	1680	21.9	1.5	0.83	1720	0.57%	0.42%	1.46%	0.06%	0.10%	0.51%	0.37%	1.30%	0.05%	0.09%	0.49%	0.37%	1.27%	0.05%	0.09%	2.6%	2.3%	2.3%
15-Jan-07	1500	8.5	6.8	1720	21.8	1.6	0.83	1790	0.57%	0.45%	1.45%	0.06%	0.10%	0.49%	0.39%	1.27%	0.05%	0.09%	0.47%	0.38%	1.22%	0.05%	0.09%	2.6%	2.3%	2.2%
16-Jan-07	1500	8.5	6.9	1490	21.8	1.6	0.83	1550	0.57%	0.46%	1.45%	0.06%	0.10%	0.57%	0.46%	1.46%	0.06%	0.11%	0.55%	0.45%	1.41%	0.05%	0.10%	2.6%	2.7%	2.6%
17-Jan-07	1500	8.5	6.0	1490	21.8	1.6	0.82	1570	0.57%	0.40%	1.45%	0.05%	0.11%	0.57%	0.40%	1.46%	0.06%	0.11%	0.54%	0.38%	1.39%	0.05%	0.10%	2.6%	2.6%	2.5%
18-Jan-07	1490	8.6	6.6	1510	21.7	1.6	0.81	1610	0.58%	0.44%	1.46%	0.05%	0.11%	0.57%	0.44%	1.44%	0.05%	0.10%	0.54%	0.41%	1.35%	0.05%	0.10%	2.6%	2.6%	2.4%
19-Jan-07	1480	8.8	6.9	1510	21.7	1.6	0.81	1720	0.59%	0.46%	1.47%	0.05%	0.11%	0.58%	0.45%	1.44%	0.05%	0.10%	0.51%	0.40%	1.26%	0.05%	0.09%	2.7%	2.6%	2.3%
20-Jan-07	1490	8.9	6.5	1480	21.6	1.5	0.80	1790	0.60%	0.44%	1.45%	0.05%	0.10%	0.60%	0.44%	1.46%	0.05%	0.10%	0.50%	0.37%	1.21%	0.04%	0.09%	2.6%	2.7%	2.2%
21-Jan-07	1500	9.0	6.1	1500	21.6	1.5	0.78	1800	0.60%	0.41%	1.44%	0.05%	0.10%	0.60%	0.41%	1.44%	0.05%	0.10%	0.50%	0.34%	1.20%	0.04%	0.09%	2.6%	2.6%	2.2%
22-Jan-07	1500	9.0	5.5	1500	21.6	1.5	0.77	1590	0.60%	0.37%	1.44%	0.05%	0.10%	0.60%	0.37%	1.44%	0.05%	0.10%	0.57%	0.35%	1.36%	0.05%	0.09%	2.6%	2.6%	2.4%
23-Jan-07	1390	9.1	5.1	1470	21.5	1.5	0.77	1570	0.65%	0.37%	1.55%	0.06%	0.11%	0.62%	0.35%	1.46%	0.05%	0.10%	0.58%	0.33%	1.37%	0.05%	0.09%	2.7%	2.6%	2.4%
24-Jan-07	1510	9.1	5.9	1420	21.5	1.5	0.76	1480	0.60%	0.39%	1.42%	0.05%	0.10%	0.64%	0.42%	1.51%	0.05%	0.10%	0.61%	0.40%	1.45%	0.05%	0.10%	2.6%	2.7%	2.6%
25-Jan-07	1500	9.1	6.3	1500	21.5	1.5	0.75	1570	0.60%	0.42%	1.43%	0.05%	0.10%	0.60%	0.42%	1.43%	0.05%	0.10%	0.58%	0.40%	1.37%	0.05%	0.09%	2.6%	2.6%	2.5%
26-Jan-07	1480	9.0		1490	21.4	1.4	0.73	1560	0.61%		1.45%	0.05%	0.10%	0.60%	0.00%	1.44%	0.05%	0.10%	0.58%		1.37%	0.05%	0.09%	2.2%	2.2%	2.1%
27-Jan-07	1490	9.0		1490	21.4	1.4	0.73	1610	0.60%		1.44%	0.05%	0.09%	0.60%	0.00%	1.44%	0.05%	0.09%	0.56%		1.33%	0.05%	0.09%	2.2%	2.2%	2.0%
28-Jan-07	1490	9.0		1480	21.4	1.4	0.72	1750	0.60%		1.44%	0.05%	0.09%	0.61%	0.00%	1.45%	0.05%	0.09%	0.51%		1.22%	0.04%	0.08%	2.2%	2.2%	1.9%
29-Jan-07	1500	9.0		1500	21.3	1.3	0.71	1780	0.60%		1.42%	0.05%	0.09%	0.60%	0.00%	1.42%	0.05%	0.09%	0.50%		1.20%	0.04%	0.08%	2.2%	2.2%	1.8%
30-Jan-07	1660	8.9		1650	21.3	1.3	0.70	1870	0.53%		1.28%	0.04%	0.08%	0.54%	0.00%	1.29%	0.04%	0.08%	0.47%		1.14%	0.04%	0.07%	1.9%	2.0%	1.7%
31-Jan-07	1660	8.8		1680	21.3	1.3	0.69	1990	0.53%		1.28%	0.04%	0.08%	0.52%	0.00%	1.27%	0.04%	0.08%	0.44%		1.07%	0.03%	0.06%	1.9%	1.9%	1.6%
01-Feb-07	1740	8.7		1760	21.2	1.2	0.68	1960	0.50%		1.22%	0.04%	0.07%	0.49%	0.00%	1.20%	0.04%	0.07%	0.44%		1.08%	0.03%	0.06%	1.8%	1.8%	1.6%
02-Feb-07	1760	8.6		1800	21.2	1.2	0.68	1990	0.49%		1.20%	0.04%	0.07%	0.48%	0.00%	1.18%	0.04%	0.07%	0.43%		1.07%	0.03%	0.06%	1.8%	1.8%	1.6%
03-Feb-07	1730	8.4		1790	21.2	1.2	0.67	2070	0.49%		1.23%	0.04%	0.07%	0.47%	0.00%	1.18%	0.04%	0.07%	0.41%		1.02%	0.03%	0.06%	1.8%	1.8%	1.5%
04-Feb-07	1730	8.3		1780	21.1	1.2	0.66	2120	0.48%		1.22%	0.04%	0.07%	0.47%	0.00%	1.19%	0.04%	0.07%	0.39%		1.00%	0.03%	0.06%	1.8%	1.8%	1.5%
05-Feb-07	1720	8.2		1770	21.1	1.2	0.65	2150	0.48%		1.23%	0.04%	0.07%	0.46%	0.00%	1.19%	0.04%	0.06%	0.38%		0.98%	0.03%	0.05%	1.8%	1.8%	1.4%
06-Feb-07	1490	8.1		1530	21.1	1.2	0.64	1990	0.55%		1.42%	0.04%	0.08%	0.53%	0.00%	1.38%	0.04%	0.08%	0.41%		1.06%	0.03%	0.06%	2.1%	2.0%	1.6%
07-Feb-07	1590	8.1		1580	21.1	1.2	0.63	1850	0.51%		1.33%	0.04%	0.07%	0.51%	0.00%	1.34%	0.04%	0.07%	0.44%		1.14%	0.03%	0.06%	2.0%	2.0%	1.7%
08-Feb-07	1600	8.1		1580	20.9	1.2	0.63	1900	0.51%		1.31%	0.04%	0.07%	0.51%	0.00%	1.32%	0.04%	0.07%	0.43%		1.10%	0.03%	0.06%	1.9%	2.0%	1.6%
09-Feb-07	1580	8.1		1510	20.9	1.2	0.63	1780	0.51%		1.32%	0.04%	0.08%	0.54%	0.00%	1.38%	0.04%	0.08%	0.46%		1.17%	0.04%	0.07%	2.0%	2.0%	1.7%
10-Feb-07	1590	8.1		1630	20.8	1.2	0.63	1800	0.51%		1.31%	0.04%	0.08%	0.50%	0.00%	1.28%	0.04%	0.07%	0.45%		1.16%	0.04%	0.07%	1.9%	1.9%	1.7%
11-Feb-07	1510	8.2		1480	20.8	1.2	0.64	1830	0.54%		1.38%	0.04%	0.08%	0.55%	0.00%	1.41%	0.04%	0.08%	0.45%		1.14%	0.03%	0.07%	2.0%	2.1%	1.7%
12-Feb-07	1550	8.3		1570	20.7	1.2	0.65	1710	0.53%		1.34%	0.04%	0.08%	0.53%	0.00%	1.32%	0.04%	0.08%	0.48%		1.21%	0.04%	0.07%	2.0%	2.0%	1.8%
13-Feb-07	1640	8.3		1660	20.7	1.2	0.66	1770	0.51%		1.26%	0.04%	0.07%	0.50%	0.00%	1.25%	0.04%	0.07%	0.47%		1.17%	0.04%	0.07%	1.9%	1.9%	1.7%
14-Feb-07	1700	8.4		1710	20.9	1.2	0.68	1790	0.49%		1.23%	0.04%	0.07%	0.49%	0.00%	1.22%	0.04%	0.07%	0.47%		1.17%	0.04%	0.07%	1.8%	1.8%	1.7%
15-Feb-07	1730	8.5		1790	21.1	1.2	0.69	1970	0.49%		1.22%	0.04%	0.07%	0.47%	0.00%	1.18%	0.04%	0.07%	0.43%		1.07%	0.03%	0.06%	1.8%	1.8%	1.6%
16-Feb-07	1710	8.6		1760	21.2	1.2	0.69	1840	0.50%		1.24%	0.04%	0.07%	0.49%	0.00%	1.20%	0.04%	0.07%	0.47%		1.15%	0.04%	0.06%	1.9%	1.8%	1.7%
17-Feb-07	1610	8.6		1740	21.1	1.2	0.70	1810	0.54%		1.31%	0.04%	0.07%	0.50%	0.00%	1.21%	0.04%	0.07%	0.48%		1.17%	0.04%	0.06%	2.0%	1.8%	1.7%

Appendix M1: Water Survey of Canada data for Peace River and gauged tributaries on the Peace River for 2007. All data is in m3/s. Data for tributaries have yet to be finalized by the WSC.

Date	Discharge by Stream (WSC Stations)								% Discharge of Tributaries Relative to Peace R. Flows @ Hudson's Hope					% Discharge of Tributaries Relative to Peace R. Flows above the Pine River					% Discharge of Tributaries Relative to Peace R. Flows @ ALCES					Cummulative % Tributary Discharge compared to Peace R.		
	Peace R. @ Hudson Hope	Halfway R. Discharge	Moberly R. Discharge	Peace R. @ Pine	Pine R. Discharge	Beatton R. Discharge	Kiskatinaw R. @ Farmington	Peace R. @ Alces	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Peace R. @ Hudson Hope	Peace R. @ Pine	Peace R. @ Alces
18-Feb-07	1310	8.6		1330	21.0	1.2	0.70	1610	0.65%		1.60%	0.05%	0.09%	0.64%	0.00%	1.58%	0.05%	0.09%	0.53%		1.30%	0.04%	0.07%	2.4%	2.4%	2.0%
19-Feb-07	1600	8.5		1600	20.9	1.1	0.69	1490	0.53%		1.31%	0.04%	0.07%	0.53%	0.00%	1.31%	0.04%	0.07%	0.57%		1.40%	0.05%	0.08%	1.9%	1.9%	2.1%
20-Feb-07	1730	8.5		1690	20.8	1.1	0.67	1790	0.49%		1.20%	0.04%	0.07%	0.50%	0.00%	1.23%	0.04%	0.07%	0.47%		1.16%	0.04%	0.06%	1.8%	1.8%	1.7%
21-Feb-07	1650	8.5		1690	20.7	1.1	0.66	1720	0.51%		1.25%	0.04%	0.07%	0.50%	0.00%	1.22%	0.04%	0.07%	0.49%		1.20%	0.04%	0.07%	1.9%	1.8%	1.8%
22-Feb-07	1560	8.3		1660	20.6	1.1	0.65	1870	0.53%		1.32%	0.04%	0.07%	0.50%	0.00%	1.24%	0.04%	0.07%	0.44%		1.10%	0.03%	0.06%	2.0%	1.8%	1.6%
23-Feb-07	1690	8.3		1680	20.6	1.1	0.65	1700	0.49%		1.22%	0.04%	0.06%	0.49%	0.00%	1.23%	0.04%	0.06%	0.49%		1.21%	0.04%	0.06%	1.8%	1.8%	1.8%
24-Feb-07	1670	8.3		1690	20.5	1.1	0.64	1810	0.50%		1.23%	0.04%	0.06%	0.49%	0.00%	1.21%	0.04%	0.06%	0.46%		1.13%	0.04%	0.06%	1.8%	1.8%	1.7%
25-Feb-07	1700	8.2		1710	20.5	1.1	0.64	1890	0.48%		1.21%	0.04%	0.06%	0.48%	0.00%	1.20%	0.04%	0.06%	0.43%		1.08%	0.03%	0.06%	1.8%	1.8%	1.6%
26-Feb-07	1660	8.1		1680	20.4	1.1	0.64	1830	0.49%		1.23%	0.04%	0.06%	0.48%	0.00%	1.21%	0.04%	0.06%	0.44%		1.11%	0.03%	0.06%	1.8%	1.8%	1.7%
27-Feb-07	1550	8.1		1610	20.4	1.1	0.63	1740	0.52%		1.32%	0.04%	0.07%	0.50%	0.00%	1.27%	0.04%	0.07%	0.46%		1.17%	0.04%	0.06%	1.9%	1.9%	1.7%
28-Feb-07	1720	8.0		1750	20.4	1.1	0.62	1760	0.47%		1.19%	0.04%	0.06%	0.46%	0.00%	1.17%	0.04%	0.06%	0.46%		1.16%	0.04%	0.06%	1.8%	1.7%	1.7%
01-Mar-07	1670	8.0		1740	20.4	1.0	0.64	1820	0.48%		1.22%	0.04%	0.06%	0.46%	0.00%	1.17%	0.04%	0.06%	0.44%		1.12%	0.04%	0.06%	1.8%	1.7%	1.7%
02-Mar-07	1690	8.0		1680	20.3	1.0	0.66	1720	0.47%		1.20%	0.04%	0.06%	0.47%	0.00%	1.21%	0.04%	0.06%	0.46%		1.18%	0.04%	0.06%	1.8%	1.8%	1.7%
03-Mar-07	1540	7.9		1610	20.3	1.0	0.66	1790	0.51%		1.32%	0.04%	0.07%	0.49%	0.00%	1.26%	0.04%	0.06%	0.44%		1.13%	0.04%	0.06%	1.9%	1.9%	1.7%
04-Mar-07	1500	7.9		1310	20.3	1.0	0.66	1670	0.53%		1.35%	0.04%	0.07%	0.60%	0.00%	1.55%	0.05%	0.08%	0.47%		1.22%	0.04%	0.06%	2.0%	2.3%	1.8%
05-Mar-07	1530	7.8		1320	20.3	1.0	0.65	1630	0.51%		1.33%	0.04%	0.07%	0.59%	0.00%	1.54%	0.05%	0.08%	0.48%		1.25%	0.04%	0.06%	1.9%	2.3%	1.8%
06-Mar-07	1560	7.7		1480	20.4	1.0	0.65	1740	0.49%		1.31%	0.04%	0.06%	0.52%	0.00%	1.38%	0.04%	0.07%	0.44%		1.17%	0.04%	0.06%	1.9%	2.0%	1.7%
07-Mar-07	1530	7.7		1550	20.5	1.0	0.67	1750	0.50%		1.34%	0.04%	0.06%	0.50%	0.00%	1.32%	0.04%	0.06%	0.44%		1.17%	0.04%	0.06%	2.0%	1.9%	1.7%
08-Mar-07	1540	7.7		1560	20.6	1.0	0.69	1800	0.50%		1.34%	0.04%	0.06%	0.49%	0.00%	1.32%	0.04%	0.06%	0.43%		1.14%	0.04%	0.05%	1.9%	1.9%	1.7%
09-Mar-07	1570	7.7		1600	20.7	1.0	0.72	1680	0.49%		1.32%	0.05%	0.06%	0.48%	0.00%	1.29%	0.05%	0.06%	0.46%		1.23%	0.04%	0.06%	1.9%	1.9%	1.8%
10-Mar-07	1420	7.6		1420	20.8	1.0	0.74	1600	0.53%		1.46%	0.05%	0.07%	0.53%	0.00%	1.46%	0.05%	0.07%	0.47%		1.30%	0.05%	0.06%	2.1%	2.1%	1.9%
11-Mar-07	1470	7.5		1500	21.0	1.0	0.77	1580	0.51%		1.43%	0.05%	0.07%	0.50%	0.00%	1.40%	0.05%	0.06%	0.48%		1.33%	0.05%	0.06%	2.1%	2.0%	1.9%
12-Mar-07	1490	7.4		1500	21.2	1.0	0.79	1580	0.50%		1.42%	0.05%	0.06%	0.49%	0.00%	1.41%	0.05%	0.06%	0.47%		1.34%	0.05%	0.06%	2.0%	2.0%	1.9%
13-Mar-07	1370	7.4		1350	21.4	1.0	0.80	1490	0.54%		1.56%	0.06%	0.07%	0.54%	0.00%	1.59%	0.06%	0.07%	0.49%		1.44%	0.05%	0.06%	2.2%	2.3%	2.0%
14-Mar-07	1210	7.3		1340	21.6	0.9	0.80	1480	0.60%		1.79%	0.07%	0.08%	0.54%	0.00%	1.61%	0.06%	0.07%	0.49%		1.46%	0.05%	0.06%	2.5%	2.3%	2.1%
15-Mar-07	1540	7.2		1380	21.8	0.9	0.79	1450	0.47%		1.42%	0.05%	0.06%	0.52%	0.00%	1.58%	0.06%	0.07%	0.50%		1.50%	0.05%	0.06%	2.0%	2.2%	2.1%
16-Mar-07	1470	7.1		1500	22.3	0.9	0.79	1620	0.49%		1.52%	0.05%	0.06%	0.48%	0.00%	1.49%	0.05%	0.06%	0.44%		1.38%	0.05%	0.06%	2.1%	2.1%	1.9%
17-Mar-07	1080	7.1		1190	22.8	0.9	0.77	1460	0.66%		2.11%	0.07%	0.09%	0.60%	0.00%	1.92%	0.06%	0.08%	0.49%		1.56%	0.05%	0.06%	2.9%	2.7%	2.2%
18-Mar-07	933	7.1		904	23.3	0.9	0.76	1170	0.76%		2.50%	0.08%	0.10%	0.78%	0.00%	2.58%	0.08%	0.10%	0.60%		1.99%	0.07%	0.08%	3.4%	3.5%	2.7%
19-Mar-07	1160	7.0		1100	23.8	1.0	0.76	1090	0.61%		2.05%	0.07%	0.08%	0.64%	0.00%	2.16%	0.07%	0.09%	0.64%		2.18%	0.07%	0.09%	2.8%	3.0%	3.0%
20-Mar-07	1130	6.9		1140	24.4	1.0	0.76	1370	0.61%		2.16%	0.07%	0.08%	0.61%	0.00%	2.14%	0.07%	0.08%	0.51%		1.78%	0.06%	0.07%	2.9%	2.9%	2.4%
21-Mar-07	1330	7.0		1270	26.1	0.9	0.76	1490	0.52%		1.96%	0.06%	0.07%	0.55%	0.00%	2.06%	0.06%	0.07%	0.47%		1.75%	0.05%	0.06%	2.6%	2.7%	2.3%
22-Mar-07	1190	7.0		1180	27.8	0.9	0.76	1540	0.58%		2.34%	0.06%	0.08%	0.59%	0.00%	2.36%	0.06%	0.08%	0.45%		1.81%	0.05%	0.06%	3.1%	3.1%	2.4%
23-Mar-07	1120	7.0	18.9	1110	29.0	0.9	0.76	1240	0.62%	1.69%	2.59%	0.07%	0.08%	0.63%	1.70%	2.61%	0.07%	0.08%	0.56%	1.52%	2.34%	0.06%	0.08%	5.1%	5.1%	4.6%
24-Mar-07	1000	7.1	20.2	1060	30.2	0.9	0.77	1240	0.71%	2.02%	3.02%	0.08%	0.09%	0.67%	1.91%	2.85%	0.07%	0.09%	0.57%	1.63%	2.44%	0.06%	0.08%	5.9%	5.6%	4.8%
25-Mar-07	924	7.1	20.3	908	31.5	0.9	0.78	1060	0.77%	2.20%	3.41%	0.08%	0.10%	0.79%	2.24%	3.47%	0.09%	0.10%	0.67%	1.92%	2.97%	0.07%	0.09%	6.6%	6.7%	5.7%
26-Mar-07	1300	7.3	20.4	1120	32.5	0.9	0.79	1130	0.56%	1.57%	2.50%	0.06%	0.07%	0.65%	1.82%	2.90%	0.07%	0.08%	0.64%	1.81%	2.88%	0.07%	0.08%	4.8%	5.5%	5.5%
27-Mar-07	1210	7.4	20.4	1160	33.5	0.9	0.81	1300	0.61%	1.69%	2.77%	0.07%	0.07%	0.64%	1.76%	2.89%	0.07%	0.08%	0.57%	1.57%	2.58%	0.06%	0.07%	5.2%	5.4%	4.8%
28-Mar-07	1090	7.5	20.4	1130	34.6	0.9	0.81	1280	0.69%	1.87%	3.17%	0.07%	0.08%	0.66%	1.81%	3.06%	0.07%	0.08%	0.58%	1.59%	2.70%	0.06%	0.07%	5.9%	5.7%	5.0%
29-Mar-07	1020	7.5	20.9	1040	35.6	0.9	0.82	1210	0.74%	2.05%	3.49%	0.08%	0.09%	0.72%	2.01%	3.42%	0.08%	0.09%	0.62%	1.73%	2.94%	0.07%	0.07%	6.4%	6.3%	5.4%
30-Mar-07	1140	7.5	21.3	1020	36.2	0.9	0.85	1190	0.66%	1.87%	3.18%	0.07%	0.08%	0.74%	2.09%	3.55%	0.08%	0.09%	0.63%	1.79%	3.04%	0.07%	0.07%	5.9%	6.5%	5.6%
31-Mar-07	1000	7.5	22.0	999	36.8	0.9	0.83	1220	0.75%	2.20%	3.68%	0.08%	0.09%	0.75%	2.20%	3.68%	0.08%	0.09%	0.61%	1.80%	3.02%	0.07%	0.07%	6.8%	6.8%	5.6%
01-Apr-07	1160	7.5	23.8	1050	37.7	0.9	0.80	1180	0.64%	2.05%	3.25%	0.07%	0.08%	0.71%	2.27%	3.59%	0.08%	0.08%	0.63%	2.02%	3.19%	0.07%	0.07%	6.1%	6.7%	6.0%
02-Apr-07	1250	7.4	24.4	1160	38.6	0.9	0.77	1270	0.59%	1.95%	3.09%	0.06%	0.07%	0.64%	2.10%	3.33%	0.07%	0.07%	0.58%	1.92%	3.04%	0.06%	0.07%	5.8%	6.2%	5.7%
03-Apr-07	1290	7.3	23.6	1260	39.6	0.9	0.76	1400	0.57%	1.83%	3.07%	0.06%	0.07%	0.58%	1.87%	3.14%	0.06%	0.07%	0.52%	1.69%	2.83%	0.05%	0.06%	5.6%	5.7%	5.2%
04-Apr-07	1160	7.3	23.3	1090	40.5	0.9	0.74	1270	0.63%	2.01%	3.49%	0.06%	0.07%	0.67%	2.14%	3.72%	0.07%	0.08%	0.57%	1.83%	3.19%	0.06%	0.07%	6.3%	6.7%	5.7%
05-Apr-07	1210	7.2	23.1	1200	41.5	0.9	0.74	1330	0.60%	1.91%	3.43%	0.06%	0.07%	0.60%	1.93%	3.46%	0.06%	0.07%	0.54%	1.74%	3.12%	0.06%	0.06%	6.1%	6.1%	5.5%
06-Apr-07	1170	7.2	22.9	1130	42.7	0.9	0.75	1280	0.61%	1.96%	3.65%	0.06%	0.07%	0.63%	2.03%	3.78%	0.07%	0.08%	0.56%	1.79%	3.34%	0.06%	0.07%	6.4%	6.6%	5.8%

Appendix M1: Water Survey of Canada data for Peace River and gauged tributaries on the Peace River for 2007. All data is in m3/s. Data for tributaries have yet to be finalized by the WSC.

Date	Discharge by Stream (WSC Stations)								% Discharge of Tributaries Relative to Peace R. Flows @ Hudson's Hope					% Discharge of Tributaries Relative to Peace R. Flows above the Pine River					% Discharge of Tributaries Relative to Peace R. Flows @ ALCES					Cummulative % Tributary Discharge compared to Peace R.		
	Peace R. @ Hudson Hope	Halfway R. Discharge	Moberly R. Discharge	Peace R. @ Pine	Pine R. Discharge	Beatton R. Discharge	Kiskatinaw R. @ Farmington	Peace R. @ Alces	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Peace R. @ Hudson Hope	Peace R. @ Pine	Peace R. @ Alces
07-Apr-07	1090	7.1	23.3	1010	43.9	1.0	0.79	1210	0.65%	2.14%	4.03%	0.07%	0.09%	0.70%	2.31%	4.35%	0.08%	0.10%	0.59%	1.93%	3.63%	0.07%	0.08%	7.0%	7.5%	6.3%
08-Apr-07	1210	7.2	23.9	1140	45.1	1.7	0.85	1180	0.59%	1.98%	3.73%	0.07%	0.14%	0.63%	2.10%	3.96%	0.07%	0.15%	0.61%	2.03%	3.82%	0.07%	0.14%	6.5%	6.9%	6.7%
09-Apr-07	1300	7.2	24.8	1260	46.4	2.2	1.01	1380	0.55%	1.91%	3.57%	0.08%	0.17%	0.57%	1.97%	3.68%	0.08%	0.17%	0.52%	1.80%	3.36%	0.07%	0.16%	6.3%	6.5%	5.9%
10-Apr-07	1330	7.3	25.2	1330	47.7	2.7	1.41	1440	0.55%	1.89%	3.59%	0.11%	0.20%	0.55%	1.89%	3.59%	0.11%	0.20%	0.51%	1.75%	3.31%	0.10%	0.19%	6.3%	6.3%	5.9%
11-Apr-07	1330	7.7	24.5	1270	49.8	3.4	1.72	1450	0.58%	1.84%	3.74%	0.13%	0.26%	0.61%	1.93%	3.92%	0.14%	0.27%	0.53%	1.69%	3.43%	0.12%	0.23%	6.6%	6.9%	6.0%
12-Apr-07	1390	8.1	25.7	1330	51.9	4.1	2.21	1450	0.58%	1.85%	3.73%	0.16%	0.29%	0.61%	1.93%	3.90%	0.17%	0.31%	0.56%	1.77%	3.58%	0.15%	0.28%	6.6%	6.9%	6.3%
13-Apr-07	1490	8.8	25.8	1470	54.0	5.2	3.61	1560	0.59%	1.73%	3.62%	0.24%	0.35%	0.60%	1.76%	3.67%	0.25%	0.35%	0.56%	1.65%	3.46%	0.23%	0.33%	6.5%	6.6%	6.2%
14-Apr-07	763	10.0	25.9	1010	56.1	6.5	5.00	1410	1.31%	3.39%	7.35%	0.66%	0.85%	0.99%	2.56%	5.55%	0.50%	0.64%	0.71%	1.84%	3.98%	0.35%	0.46%	13.6%	10.2%	7.3%
15-Apr-07	418	10.9	25.5	685	58.0	8.3	6.20	1140	2.61%	6.10%	13.88%	1.48%	1.99%	1.59%	3.72%	8.47%	0.91%	1.21%	0.96%	2.24%	5.09%	0.54%	0.73%	26.1%	15.9%	9.6%
16-Apr-07	338	12.0	25.0	371	63.4	11.5	7.50	904	3.55%	7.40%	18.76%	2.22%	3.40%	3.23%	6.74%	17.09%	2.02%	3.10%	1.33%	2.77%	7.01%	0.83%	1.27%	35.3%	32.2%	13.2%
17-Apr-07	339	13.1	24.3	362	68.8	16.0	9.11	887	3.86%	7.17%	20.29%	2.69%	4.72%	3.62%	6.71%	19.01%	2.52%	4.42%	1.48%	2.74%	7.76%	1.03%	1.80%	38.7%	36.3%	14.8%
18-Apr-07	628	15.0	24.8	371	74.2	22.0	11.90	938	2.39%	3.95%	11.82%	1.89%	3.50%	4.04%	6.68%	20.00%	3.21%	5.93%	1.60%	2.64%	7.91%	1.27%	2.35%	23.6%	39.9%	15.8%
19-Apr-07	943	16.8	25.1	861	79.6	36.0	16.20	1230	1.78%	2.66%	8.44%	1.72%	3.82%	1.95%	2.92%	9.25%	1.88%	4.18%	1.37%	2.04%	6.47%	1.32%	2.93%	18.4%	20.2%	14.1%
20-Apr-07	926	18.7	21.0	928	85.0	50.0	28.10	1430	2.02%	2.27%	9.18%	3.03%	5.40%	2.02%	2.26%	9.16%	3.03%	5.39%	1.31%	1.47%	5.94%	1.97%	3.50%	21.9%	21.9%	14.2%
21-Apr-07	641	21.2	18.9	839	104.0	74.0	26.10	1410	3.31%	2.95%	16.22%	4.07%	11.54%	2.53%	2.25%	12.40%	3.11%	8.82%	1.50%	1.34%	7.38%	1.85%	5.25%	38.1%	29.1%	17.3%
22-Apr-07	922	23.8	17.3	674	123.0	110.0	26.90	1130	2.58%	1.88%	13.34%	2.92%	11.93%	3.53%	2.57%	18.25%	3.99%	16.32%	2.11%	1.53%	10.88%	2.38%	9.73%	32.6%	44.7%	26.6%
23-Apr-07	1230	36.5	16.0	1280	142.0	174.0	33.10	1550	2.97%	1.30%	11.54%	2.69%	14.15%	2.85%	1.25%	11.09%	2.59%	13.59%	2.35%	1.03%	9.16%	2.14%	11.23%	32.7%	31.4%	25.9%
24-Apr-07	1260	50.1	13.6	1260	174.0	238.0	43.10	1720	3.98%	1.08%	13.81%	3.42%	18.89%	3.98%	1.08%	13.81%	3.42%	18.89%	2.91%	0.79%	10.12%	2.51%	13.84%	41.2%	41.2%	30.2%
25-Apr-07	1220	66.1	9.3	1250	230.0	322.0	52.60	1840	5.42%	0.76%	18.85%	4.31%	26.39%	5.29%	0.74%	18.40%	4.21%	25.76%	3.59%	0.51%	12.50%	2.86%	17.50%	55.7%	54.4%	37.0%
26-Apr-07	1290	70.7	5.4	1320	277.0	401.0	74.80	1990	5.48%	0.42%	21.47%	5.80%	31.09%	5.36%	0.41%	20.98%	5.67%	30.38%	3.55%	0.27%	13.92%	3.76%	20.15%	64.3%	62.8%	41.7%
27-Apr-07	1380	76.6	5.3	1460	305.0	414.0	72.70	2180	5.55%	0.38%	22.10%	5.27%	30.00%	5.25%	0.36%	20.89%	4.98%	28.36%	3.51%	0.24%	13.99%	3.33%	18.99%	63.3%	59.8%	40.1%
28-Apr-07	1140	81.6	5.8	1340	332.0	422.0	74.10	2190	7.16%	0.51%	29.12%	6.50%	37.02%	6.09%	0.43%	24.78%	5.53%	31.49%	3.73%	0.26%	15.16%	3.38%	19.27%	80.3%	68.3%	41.8%
29-Apr-07	883	78.8	6.5	1080	323.0	416.0	80.60	2010	8.92%	0.73%	36.58%	9.13%	47.11%	7.30%	0.60%	29.91%	7.46%	38.52%	3.92%	0.32%	16.07%	4.01%	20.70%	102.5%	83.8%	45.0%
30-Apr-07	995	76.3	6.8	967	298.0	393.0	80.70	1740	7.67%	0.69%	29.95%	8.11%	39.50%	7.89%	0.71%	30.82%	8.35%	40.64%	4.39%	0.39%	17.13%	4.64%	22.59%	85.9%	88.4%	49.1%
01-May-07	998	73.1	7.4	1040	279.0	370.0	75.20	1800	7.32%	0.75%	27.96%	7.54%	37.07%	7.03%	0.72%	26.83%	7.23%	35.58%	4.06%	0.41%	15.50%	4.18%	20.56%	80.6%	77.4%	44.7%
02-May-07	1030	71.2	8.3	1060	273.0	340.0	70.30	1760	6.91%	0.81%	26.50%	6.83%	33.01%	6.72%	0.79%	25.75%	6.63%	32.08%	4.05%	0.47%	15.51%	3.99%	19.32%	74.1%	72.0%	43.3%
03-May-07	1010	79.3	11.6	1070	344.0	327.0	75.50	1780	7.85%	1.15%	34.06%	7.48%	32.38%	7.41%	1.08%	32.15%	7.06%	30.56%	4.46%	0.65%	19.33%	4.24%	18.37%	82.9%	78.3%	47.0%
04-May-07	1010	196.0	20.4	1160	498.0	345.0	140.00	2030	19.41%	2.02%	49.31%	13.86%	34.16%	16.90%	1.76%	42.93%	12.07%	29.74%	9.66%	1.00%	24.53%	6.90%	17.00%	118.8%	103.4%	59.1%
05-May-07	1030	306.0	24.9	1410	542.0	505.0	183.00	2520	29.71%	2.42%	52.62%	17.77%	49.03%	21.70%	1.77%	38.44%	12.98%	35.82%	12.14%	0.99%	21.51%	7.26%	20.04%	151.5%	110.7%	61.9%
06-May-07	751	235.0	30.0	1090	509.0	705.0	154.00	2590	31.29%	3.99%	67.78%	20.51%	93.87%	21.56%	2.75%	46.70%	14.13%	64.68%	9.07%	1.16%	19.65%	5.95%	27.22%	217.4%	149.8%	63.1%
07-May-07	896	193.0	33.2	1100	542.0	682.0	127.00	2360	21.54%	3.71%	60.49%	14.17%	76.12%	17.55%	3.02%	49.27%	11.55%	62.00%	8.18%	1.41%	22.97%	5.38%	28.90%	176.0%	143.4%	66.8%
08-May-07	968	165.0	34.5	1190	608.0	618.0	114.00	2500	17.05%	3.56%	62.81%	11.78%	63.84%	13.87%	2.90%	51.09%	9.58%	51.93%	6.60%	1.38%	24.32%	4.56%	24.72%	159.0%	129.4%	61.6%
09-May-07	1020	141.0	36.0	1180	631.0	551.0	106.00	2470	13.82%	3.53%	61.86%	10.39%	54.02%	11.95%	3.05%	53.47%	8.98%	46.69%	5.71%	1.46%	25.55%	4.29%	22.31%	143.6%	124.2%	59.3%
10-May-07	1020	129.0	38.1	1190	575.0	480.0	102.00	2390	12.65%	3.74%	56.37%	10.00%	47.06%	10.84%	3.20%	48.32%	8.57%	40.34%	5.40%	1.59%	24.06%	4.27%	20.08%	129.8%	111.3%	55.4%
11-May-07	1010	119.0	39.0	1170	566.0	421.0	86.80	2250	11.78%	3.86%	56.04%	8.59%	41.68%	10.17%	3.33%	48.38%	7.42%	35.98%	5.29%	1.73%	25.16%	3.86%	18.71%	122.0%	105.3%	54.7%
12-May-07	954	109.0	39.6	1100	561.0	376.0	73.70	2120	11.43%	4.15%	58.81%	7.73%	39.41%	9.91%	3.60%	51.00%	6.70%	34.18%	5.14%	1.87%	26.46%	3.48%	17.74%	121.5%	105.4%	54.7%
13-May-07	982	100.0	40.1	1100	557.0	335.0	67.10	2020	10.18%	4.08%	56.72%	6.83%	34.11%	9.09%	3.65%	50.64%	6.10%	30.45%	4.95%	1.99%	27.57%	3.32%	16.58%	111.9%	99.9%	54.4%
14-May-07	990	92.2	40.2	1080	548.0	300.0	61.00	1950	9.31%	4.06%	55.35%	6.16%	30.30%	8.54%	3.72%	50.74%	5.65%	27.78%	4.73%	2.06%	28.10%	3.13%	15.38%	105.2%	96.4%	53.4%
15-May-07	1010	87.5	40.4	1140	572.0	267.0	53.80	1970	8.66%	4.00%	56.63%	5.33%	26.44%	7.68%	3.54%	50.18%	4.72%	23.42%	4.44%	2.05%	29.04%	2.73%	13.55%	101.1%	89.5%	51.8%
16-May-07	1020	88.1	40.6	1130	642.0	239.0	48.30	1950	8.64%	3.98%	62.94%	4.74%	23.43%	7.80%	3.59%	56.81%	4.27%	21.15%	4.52%	2.08%	32.92%	2.48%	12.26%	103.7%	93.6%	54.3%
17-May-07	1010	96.4	41.9	1130	766.0	216.0	44.50	2050	9.54%	4.15%	75.84%	4.41%	21.39%	8.53%	3.71%	67.79%	3.94%	19.12%	4.70%	2.04%	37.37%	2.17%	10.54%	115.3%	103.1%	56.8%
18-May-07	1010	109.0	43.9	1150	783.0	199.0	42.80	2180	10.79%	4.35%	77.52%	4.24%	19.70%	9.48%	3.82%	68.09%	3.72%	17.30%	5.00%	2.01%	35.92%	1.96%	9.13%	116.6%	102.4%	54.0%
19-May-07	993	115.0	46.6	1170	701.0	186.0	40.80	2130	11.58%	4.69%	70.59%	4.11%	18.73%	9.83%	3.98%	59.91%	3.49%	15.90%	5.40%	2.19%	32.91%	1.92%	8.73%	109.7%	93.1%	51.1%
20-May-07	1010	117.0	49.1	1150	686.0	179.0	41.90	2020	11.58%	4.86%	67.92%	4.15%	17.72%	10.17%	4.27%	59.65%	3.64%	15.57%	5.79%	2.43%	33.96%	2.07%	8.86%	106.2%	93.3%	53.1%
21-May-07	985	118.0	52.3	1150	707.0	184.0	86.00	2080	11.98%	5.31%	71.78%	8.73%	18.68%	10.26%	4.55%	61.48%	7.48%	16.00%	5.67%	2.51%	33.99%	4.13%	8.85%	116.5%	99.8%	55.2%
22-May-07	950	114.0	52.9	1170	698.0	178.0	86.00	2120	12.00%	5.57%	73.47%	9.05%	18.74%	9.74%	4.52%	59.66%	7.35%	15.21%	5.38%	2.50%	32.92%	4.06%	8.40%	118.8%	96.5%	53.3%
23-May-07	975	111.0	53.1	1100	673.0	172.0	69.80	2020	11.38%	5.45%	69.03%	7.16%	17.64%	10.09%	4.83%	61.18%	6.35%	15.64%	5.50%	2.63%	33.32%	3.46%	8.51%	110.7%	98.1%	53.4%
24-May-07	985	108.0	52.4	1160	631.0	158.0	55.50	2000	10.96%	5.32%	64.06%	5.63%	16.04%	9.31%	4.52%	54.40%	4.78%	13.62%	5.40%	2.62%	31.55%	2.78%	7.90%	102.0%	86.6%	50.2%

Appendix M1: Water Survey of Canada data for Peace River and gauged tributaries on the Peace River for 2007. All data is in m3/s. Data for tributaries have yet to be finalized by the WSC.

Date	Discharge by Stream (WSC Stations)								% Discharge of Tributaries Relative to Peace R. Flows @ Hudson's Hope					% Discharge of Tributaries Relative to Peace R. Flows above the Pine River					% Discharge of Tributaries Relative to Peace R. Flows @ ALCES					Cummulative % Tributary Discharge compared to Peace R.		
	Peace R. @ Hudson Hope	Halfway R. Discharge	Moberly R. Discharge	Peace R. @ Pine	Pine R. Discharge	Beatton R. Discharge	Kiskatinaw R. @ Farmington	Peace R. @ Alces	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Peace R. @ Hudson Hope	Peace R. @ Pine	Peace R. @ Alces
25-May-07	1010	107.0	51.1	1190	632.0	152.0	45.60	1970	10.59%	5.06%	62.57%	4.51%	15.05%	8.99%	4.29%	53.11%	3.83%	12.77%	5.43%	2.59%	32.08%	2.31%	7.72%	97.8%	83.0%	50.1%
26-May-07	970	116.0	50.1	1140	718.0	135.0	38.70	1970	11.96%	5.16%	74.02%	3.99%	13.92%	10.18%	4.39%	62.98%	3.39%	11.84%	5.89%	2.54%	36.45%	1.96%	6.85%	109.1%	92.8%	53.7%
27-May-07	920	142.0	50.8	1100	842.0	124.0	33.50	2020	15.43%	5.52%	91.52%	3.64%	13.48%	12.91%	4.62%	76.55%	3.05%	11.27%	7.03%	2.51%	41.68%	1.66%	6.14%	**129.6%**	**108.4%**	59.0%
28-May-07	935	173.0	52.5	1190	970.0	116.0	29.50	2190	18.50%	5.61%	103.74%	3.16%	12.41%	14.54%	4.41%	81.51%	2.48%	9.75%	7.90%	2.40%	44.29%	1.35%	5.30%	**143.4%**	**112.7%**	61.2%
29-May-07	955	196.0	55.0	1260	958.0	113.0	26.80	2360	20.52%	5.76%	100.31%	2.81%	11.83%	15.56%	4.37%	76.03%	2.13%	8.97%	8.31%	2.33%	40.59%	1.14%	4.79%	**141.2%**	**107.0%**	57.2%
30-May-07	970	211.0	57.7	1310	995.0	114.0	24.00	2370	21.75%	5.95%	102.58%	2.47%	11.75%	16.11%	4.40%	75.95%	1.83%	8.70%	8.90%	2.43%	41.98%	1.01%	4.81%	**144.5%**	**107.0%**	59.1%
31-May-07	995	233.0	60.0	1340	1140.0	113.0	21.00	2490	23.42%	6.03%	114.57%	2.11%	11.36%	17.39%	4.48%	85.07%	1.57%	8.43%	9.36%	2.41%	45.78%	0.84%	4.54%	**157.5%**	**116.9%**	62.9%
01-Jun-07	1050	267.0	63.3	1380	1270.0	105.0	18.60	2670	25.43%	6.03%	120.95%	1.77%	10.00%	19.35%	4.59%	92.03%	1.35%	7.61%	10.00%	2.37%	47.57%	0.70%	3.93%	**164.2%**	**124.9%**	64.6%
02-Jun-07	860	298.0	66.9	1140	1340.0	94.9	16.40	2630	34.65%	7.78%	155.81%	1.91%	11.03%	26.14%	5.87%	117.5%	1.44%	8.32%	11.33%	2.54%	50.95%	0.62%	3.61%	**211.2%**	**159.3%**	69.1%
03-Jun-07	960	321.0	71.2	1070	1440.0	82.2	14.40	2540	33.44%	7.42%	150.00%	1.50%	8.56%	30.00%	6.65%	134.6%	1.35%	7.68%	12.64%	2.80%	56.69%	0.57%	3.24%	**200.9%**	**180.3%**	75.9%
04-Jun-07	1120	356.0	75.7	1460	1710.0	72.7	12.80	2860	31.79%	6.76%	152.68%	1.14%	6.49%	24.38%	5.18%	117.1%	0.88%	4.98%	12.45%	2.65%	**59.79%**	0.45%	2.54%	**198.9%**	**152.5%**	77.9%
05-Jun-07	729	442.0	81.6	1540	2070.0	70.6	11.60	3050	60.63%	11.19%	283.95%	1.59%	9.68%	28.70%	5.30%	134.4%	0.75%	4.58%	14.49%	2.68%	**67.87%**	0.38%	2.31%	**367.1%**	**173.8%**	87.7%
06-Jun-07	415	617.0	89.8	1240	2070.0	66.5	10.40	2960	148.7%	21.6%	498.8%	2.51%	16.02%	49.76%	7.24%	166.9%	0.84%	5.36%	20.84%	3.03%	**69.93%**	0.35%	2.25%	**687.6%**	**230.1%**	96.4%
07-Jun-07	658	691.0	102.0	1350	1880.0	59.5	10.40	2900	105.02%	15.50%	285.71%	1.58%	9.04%	51.19%	7.56%	139.3%	0.77%	4.41%	23.83%	3.52%	**64.83%**	0.36%	2.05%	**416.9%**	**203.2%**	94.6%
08-Jun-07	579	573.0	113.0	1420	1370.0	51.1	13.20	2620	98.96%	19.52%	236.61%	2.28%	8.83%	40.35%	7.96%	96.5%	0.93%	3.60%	21.87%	4.31%	**52.29%**	0.50%	1.95%	**366.2%**	**149.3%**	80.9%
09-Jun-07	440	468.0	119.0	1110	1110.0	52.1	15.30	2290	106.36%	27.05%	252.27%	3.48%	11.84%	42.16%	10.72%	100.0%	1.38%	4.69%	20.44%	5.20%	48.47%	0.67%	2.28%	**401.0%**	**159.0%**	77.0%
10-Jun-07	603	413.0	115.0	950	1120.0	49.7	14.40	2130	68.49%	19.07%	185.74%	2.39%	8.24%	43.47%	12.11%	117.9%	1.52%	5.23%	19.39%	5.40%	52.58%	0.68%	2.33%	**283.9%**	**180.2%**	80.4%
11-Jun-07	446	443.0	109.0	1100	1170.0	46.8	12.30	2380	99.33%	24.44%	262.33%	2.76%	10.49%	40.27%	9.91%	106.4%	1.12%	4.25%	18.61%	4.58%	49.16%	0.52%	1.97%	**399.3%**	**161.9%**	74.8%
12-Jun-07	451	436.0	107.0	952	1050.0	44.3	10.70	2210	96.67%	23.73%	232.82%	2.37%	9.82%	45.80%	11.24%	110.3%	1.12%	4.65%	19.73%	4.84%	47.51%	0.48%	2.00%	**365.4%**	**173.1%**	74.6%
13-Jun-07	451	381.0	103.0	888	902.0	40.6	9.88	2010	84.48%	22.84%	200.00%	2.19%	9.00%	42.91%	11.60%	101.6%	1.11%	4.57%	18.96%	5.12%	44.88%	0.49%	2.02%	**318.5%**	**161.8%**	71.5%
14-Jun-07	503	331.0	96.7	850	829.0	39.8	8.77	1830	65.81%	19.22%	164.81%	1.74%	7.91%	38.94%	11.38%	97.53%	1.03%	4.68%	18.09%	5.28%	45.30%	0.48%	2.17%	**259.5%**	**153.6%**	71.3%
15-Jun-07	522	305.0	89.9	842	830.0	44.0	7.89	1790	58.43%	17.22%	159.00%	1.51%	8.43%	36.22%	10.68%	98.57%	0.94%	5.23%	17.04%	5.02%	46.37%	0.44%	2.46%	**244.6%**	**151.6%**	71.3%
16-Jun-07	554	302.0	82.2	826	827.0	44.0	7.27	1760	54.51%	14.84%	149.28%	1.31%	7.94%	36.56%	9.95%	100.1%	0.88%	5.33%	17.16%	4.67%	46.99%	0.41%	2.50%	**227.9%**	**152.8%**	71.7%
17-Jun-07	635	305.0	76.3	889	860.0	43.7	6.79	1820	48.03%	12.02%	135.43%	1.07%	6.88%	34.31%	8.58%	96.74%	0.76%	4.92%	16.76%	4.19%	47.25%	0.37%	2.40%	**203.4%**	**145.3%**	71.0%
18-Jun-07	945	293.0	71.5	1150	853.0	50.2	6.96	2000	31.01%	7.57%	90.26%	0.74%	5.31%	25.48%	6.22%	74.17%	0.61%	4.37%	14.65%	3.58%	42.65%	0.35%	2.51%	134.9%	110.8%	63.7%
19-Jun-07	989	312.0	68.0	1320	806.0	79.4	6.63	2250	31.55%	6.88%	81.50%	0.67%	8.03%	23.64%	5.15%	61.06%	0.50%	6.02%	13.87%	3.02%	35.82%	0.29%	3.53%	128.6%	96.4%	56.5%
20-Jun-07	991	360.0	62.8	1440	693.0	96.5	6.09	2280	36.33%	6.34%	69.93%	0.61%	9.74%	25.00%	4.36%	48.13%	0.42%	6.70%	15.79%	2.75%	30.39%	0.27%	4.23%	122.9%	84.6%	53.4%
21-Jun-07	1010	339.0	58.7	1470	608.0	101.0	5.61	2200	33.56%	5.81%	60.20%	0.56%	10.00%	23.06%	3.99%	41.36%	0.38%	6.87%	15.41%	2.67%	27.64%	0.26%	4.59%	110.1%	75.7%	50.6%
22-Jun-07	1000	391.0	55.1	1470	630.0	105.0	4.98	2160	39.10%	5.51%	63.00%	0.50%	10.50%	26.60%	3.75%	42.86%	0.34%	7.14%	18.10%	2.55%	29.17%	0.23%	4.86%	118.6%	80.7%	54.9%
23-Jun-07	1030	380.0	51.8	1500	635.0	123.0	4.99	2190	36.89%	5.03%	61.65%	0.48%	11.94%	25.33%	3.45%	42.33%	0.33%	8.20%	17.35%	2.37%	29.00%	0.23%	5.62%	116.0%	79.7%	54.6%
24-Jun-07	973	334.0	51.3	1410	614.0	181.0	4.89	2200	34.33%	5.27%	63.10%	0.50%	18.60%	23.69%	3.64%	43.55%	0.35%	12.84%	15.18%	2.33%	27.91%	0.22%	8.23%	121.8%	84.1%	53.9%
25-Jun-07	1060	316.0	48.5	1370	561.0	159.0	4.61	2080	29.81%	4.58%	52.92%	0.43%	15.00%	23.07%	3.54%	40.95%	0.34%	11.61%	15.19%	2.33%	26.97%	0.22%	7.64%	102.7%	79.5%	52.4%
26-Jun-07	1070	285.0	46.8	1430	522.0	155.0	4.21	2090	26.64%	4.37%	48.79%	0.39%	14.49%	19.93%	3.27%	36.50%	0.29%	10.84%	13.64%	2.24%	24.98%	0.20%	7.42%	94.7%	70.8%	48.5%
27-Jun-07	982	255.0	44.9	1390	510.0	165.0	3.81	2070	25.97%	4.57%	51.93%	0.39%	16.80%	18.35%	3.23%	36.69%	0.27%	11.87%	12.32%	2.17%	24.64%	0.18%	7.97%	99.7%	70.4%	47.3%
28-Jun-07	1080	243.0	43.7	1350	522.0	130.0	3.58	1940	22.50%	4.05%	48.33%	0.33%	12.04%	18.00%	3.24%	38.67%	0.27%	9.63%	12.53%	2.25%	26.91%	0.18%	6.70%	87.2%	69.8%	48.6%
29-Jun-07	1110	243.0	43.7	1460	548.0	118.0	3.75	2110	21.89%	3.94%	49.37%	0.34%	10.63%	16.64%	2.99%	37.53%	0.26%	8.08%	11.52%	2.07%	25.97%	0.18%	5.59%	86.2%	65.5%	45.3%
30-Jun-07	826	238.0	42.0	1160	570.0	115.0	3.95	2000	28.81%	5.08%	69.01%	0.48%	13.92%	20.52%	3.62%	49.14%	0.34%	9.91%	11.90%	2.10%	28.50%	0.20%	5.75%	**117.3%**	83.5%	48.4%
01-Jul-07	918	231.0	40.7	1130	559.0	185.0	4.11	1920	25.16%	4.43%	60.89%	0.45%	20.15%	20.44%	3.60%	49.47%	0.36%	16.37%	12.03%	2.12%	29.11%	0.21%	9.64%	**111.1%**	90.2%	53.1%
02-Jul-07	1100	232.0	38.6	1360	519.0	400.0	11.80	2190	21.09%	3.51%	47.18%	1.07%	36.36%	17.06%	2.84%	38.16%	0.87%	29.41%	10.59%	1.76%	23.70%	0.54%	18.26%	**109.2%**	88.3%	54.9%
03-Jul-07	1240	218.0	36.8	1380	480.0	476.0	12.80	2420	17.58%	2.97%	38.71%	1.03%	38.39%	15.80%	2.67%	34.78%	0.93%	34.49%	9.01%	1.52%	19.83%	0.53%	19.67%	98.7%	88.7%	50.6%
04-Jul-07	1290	198.0	35.3	1580	459.0	396.0	10.10	2420	15.35%	2.74%	35.58%	0.78%	30.70%	12.53%	2.23%	29.05%	0.64%	25.06%	8.18%	1.46%	18.97%	0.42%	16.36%	85.1%	69.5%	45.4%
05-Jul-07	1280	184.0	33.7	1550	447.0	327.0	8.15	2330	14.38%	2.63%	34.92%	0.64%	25.55%	11.87%	2.17%	28.84%	0.53%	21.10%	7.90%	1.45%	19.18%	0.35%	14.03%	78.1%	64.5%	42.9%
06-Jul-07	1240	174.0	32.6	1540	438.0	270.0	6.86	2220	14.03%	2.63%	35.32%	0.55%	21.77%	11.30%	2.12%	28.44%	0.45%	17.53%	7.84%	1.47%	19.73%	0.31%	12.16%	74.3%	59.8%	41.5%
07-Jul-07	1180	164.0	31.0	1430	410.0	213.0	5.70	2110	13.90%	2.63%	34.75%	0.48%	18.05%	11.47%	2.17%	28.67%	0.40%	14.90%	7.77%	1.47%	19.43%	0.27%	10.09%	69.8%	57.6%	39.0%
08-Jul-07	1200	152.0	29.3	1410	365.0	174.0	4.93	1990	12.67%	2.44%	30.42%	0.41%	14.50%	10.78%	2.08%	25.89%	0.35%	12.34%	7.64%	1.47%	18.34%	0.25%	8.74%	60.4%	51.4%	36.4%
09-Jul-07	1220	143.0	28.2	1390	331.0	145.0	4.42	1880	11.72%	2.31%	27.13%	0.36%	11.89%	10.29%	2.03%	23.81%	0.32%	10.43%	7.61%	1.50%	17.61%	0.24%	7.71%	53.4%	46.9%	34.7%
10-Jul-07	1170	133.0	26.9	1330	305.0	133.0	3.89	1810	11.37%	2.30%	26.07%	0.33%	11.37%	10.00%	2.02%	22.93%	0.29%	10.00%	7.35%	1.49%	16.85%	0.21%	7.35%	51.4%	45.2%	33.2%
11-Jul-07	1180	127.0	25.5	1350	308.0	123.0	3.42	1770	10.76%	2.16%	26.10%	0.29%	10.42%	9.41%	1.89%	22.81%	0.25%	9.11%	7.18%	1.44%	17.40%	0.19%	6.95%	49.7%	43.5%	33.2%

Appendix M1: Water Survey of Canada data for Peace River and gauged tributaries on the Peace River for 2007. All data is in m3/s. Data for tributaries have yet to be finalized by the WSC.

Date	Discharge by Stream (WSC Stations)								% Discharge of Tributaries Relative to Peace R. Flows @ Hudson's Hope					% Discharge of Tributaries Relative to Peace R. Flows above the Pine River					% Discharge of Tributaries Relative to Peace R. Flows @ ALCES					Cummulative % Tributary Discharge compared to Peace R.		
	Peace R. @ Hudson Hope	Halfway R. Discharge	Moberly R. Discharge	Peace R. @ Pine	Pine R. Discharge	Beatton R. Discharge	Kiskatinaw R. @ Farmington	Peace R. @ Alces	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Peace R. @ Hudson Hope	Peace R. @ Pine	Peace R. @ Alces
12-Jul-07	1230	124.0	24.1	1330	335.0	112.0	3.07	1760	10.08%	1.96%	27.24%	0.25%	9.11%	9.32%	1.81%	25.19%	0.23%	8.42%	7.05%	1.37%	19.03%	0.17%	6.36%	48.6%	45.0%	34.0%
13-Jul-07	1100	123.0	23.0	1120	338.0	99.7	2.86	1660	11.18%	2.09%	30.73%	0.26%	9.06%	10.98%	2.05%	30.18%	0.26%	8.90%	7.41%	1.39%	20.36%	0.17%	6.01%	53.3%	52.4%	35.3%
14-Jul-07	1170	121.0	22.0	1230	326.0	84.7	2.75	1710	10.34%	1.88%	27.86%	0.24%	7.24%	9.84%	1.79%	26.50%	0.22%	6.89%	7.08%	1.29%	19.06%	0.16%	4.95%	47.6%	45.2%	32.5%
15-Jul-07	1210	120.0	21.2	1250	327.0	74.8	2.57	1660	9.92%	1.75%	27.02%	0.21%	6.18%	9.60%	1.70%	26.16%	0.21%	5.98%	7.23%	1.28%	19.70%	0.15%	4.51%	45.1%	43.6%	32.9%
16-Jul-07	1260	119.0	20.2	1320	319.0	65.8	2.44	1710	9.44%	1.60%	25.32%	0.19%	5.22%	9.02%	1.53%	24.17%	0.18%	4.98%	6.96%	1.18%	18.65%	0.14%	3.85%	41.8%	39.9%	30.8%
17-Jul-07	1180	112.0	19.4	1390	296.0	60.7	2.14	1760	9.49%	1.64%	25.08%	0.18%	5.14%	8.06%	1.40%	21.29%	0.15%	4.37%	6.36%	1.10%	16.82%	0.12%	3.45%	41.5%	35.3%	27.9%
18-Jul-07	1180	104.0	18.6	1360	264.0	56.9	2.24	1740	8.81%	1.58%	22.37%	0.19%	4.82%	7.65%	1.37%	19.41%	0.16%	4.18%	5.98%	1.07%	15.17%	0.13%	3.27%	37.8%	32.8%	25.6%
19-Jul-07	1180	98.8	17.8	1340	278.0	53.7	2.28	1690	8.37%	1.51%	23.56%	0.19%	4.55%	7.37%	1.33%	20.75%	0.17%	4.01%	5.85%	1.05%	16.45%	0.13%	3.18%	38.2%	33.6%	26.7%
20-Jul-07	1170	101.0	17.3	1330	280.0	49.5	2.55	1690	8.63%	1.48%	23.93%	0.22%	4.23%	7.59%	1.30%	21.05%	0.19%	3.72%	5.98%	1.02%	16.57%	0.15%	2.93%	38.5%	33.9%	26.6%
21-Jul-07	1040	101.0	16.5	1230	281.0	46.4	2.62	1650	9.71%	1.59%	27.02%	0.25%	4.46%	8.21%	1.34%	22.85%	0.21%	3.77%	6.12%	1.00%	17.03%	0.16%	2.81%	43.0%	36.4%	27.1%
22-Jul-07	1000	92.3	15.5	1140	264.0	44.3	4.54	1560	9.23%	1.55%	26.40%	0.45%	4.43%	8.10%	1.36%	23.16%	0.40%	3.89%	5.92%	0.99%	16.92%	0.29%	2.84%	42.1%	36.9%	27.0%
23-Jul-07	1070	85.0	14.7	1210	243.0	40.0	5.23	1550	7.94%	1.37%	22.71%	0.49%	3.74%	7.02%	1.21%	20.08%	0.43%	3.31%	5.48%	0.95%	15.68%	0.34%	2.58%	36.3%	32.1%	25.0%
24-Jul-07	1120	79.9	14.1	1240	234.0	34.1	4.61	1580	7.13%	1.26%	20.89%	0.41%	3.04%	6.44%	1.14%	18.87%	0.37%	2.75%	5.06%	0.89%	14.81%	0.29%	2.16%	32.7%	29.6%	23.2%
25-Jul-07	965	74.6	13.6	1050	227.0	30.6	3.97	1460	7.73%	1.41%	23.52%	0.41%	3.17%	7.10%	1.30%	21.62%	0.38%	2.91%	5.11%	0.93%	15.55%	0.27%	2.10%	36.2%	33.3%	24.0%
26-Jul-07	1150	69.6	12.3	1260	208.0	28.1	3.59	1510	6.05%	1.07%	18.09%	0.31%	2.44%	5.52%	0.98%	16.51%	0.28%	2.23%	4.61%	0.81%	13.77%	0.24%	1.86%	28.0%	25.5%	21.3%
27-Jul-07	1110	65.5	11.6	1230	184.0	26.6	3.32	1560	5.90%	1.05%	16.58%	0.30%	2.40%	5.33%	0.94%	14.96%	0.27%	2.16%	4.20%	0.74%	11.79%	0.21%	1.71%	26.2%	23.7%	18.7%
28-Jul-07	1050	62.6	11.1	1180	166.0	25.4	3.06	1490	5.96%	1.06%	15.81%	0.29%	2.42%	5.31%	0.94%	14.07%	0.26%	2.15%	4.20%	0.74%	11.14%	0.21%	1.70%	25.5%	22.7%	18.0%
29-Jul-07	1100	59.8	10.6	1220	159.0	26.7	2.90	1510	5.44%	0.96%	14.45%	0.26%	2.43%	4.90%	0.87%	13.03%	0.24%	2.19%	3.96%	0.70%	10.53%	0.19%	1.77%	23.5%	21.2%	17.2%
30-Jul-07	1220	58.0	10.3	1310	157.0	24.1	2.86	1520	4.75%	0.84%	12.87%	0.23%	1.98%	4.43%	0.79%	11.98%	0.22%	1.84%	3.82%	0.68%	10.33%	0.19%	1.59%	20.7%	19.3%	16.6%
31-Jul-07	1200	56.0	10.1	1320	155.0	21.1	2.67	1570	4.67%	0.84%	12.92%	0.22%	1.76%	4.24%	0.77%	11.74%	0.20%	1.60%	3.57%	0.64%	9.87%	0.17%	1.34%	20.4%	18.6%	15.6%
01-Aug-07	1240	54.1	9.2	1320	146.0	20.4	2.52	1550	4.36%	0.74%	11.77%	0.20%	1.65%	4.10%	0.70%	11.06%	0.19%	1.55%	3.49%	0.59%	9.42%	0.16%	1.32%	18.7%	17.6%	15.0%
02-Aug-07	1160	51.9	8.5	1280	133.0	19.1	2.19	1540	4.47%	0.74%	11.47%	0.19%	1.65%	4.05%	0.67%	10.39%	0.17%	1.49%	3.37%	0.55%	8.64%	0.14%	1.24%	18.5%	16.8%	13.9%
03-Aug-07	1200	51.1	8.1	1300	122.0	17.8	2.16	1510	4.26%	0.68%	10.17%	0.18%	1.48%	3.93%	0.63%	9.38%	0.17%	1.37%	3.38%	0.54%	8.08%	0.14%	1.18%	16.8%	15.5%	13.3%
04-Aug-07	1150	50.8	7.9	1260	121.0	19.3	1.96	1520	4.42%	0.69%	10.52%	0.17%	1.68%	4.03%	0.63%	9.60%	0.16%	1.53%	3.34%	0.52%	7.96%	0.13%	1.27%	17.5%	15.9%	13.2%
05-Aug-07	1180	50.9	7.6	1220	126.0	20.3	1.92	1460	4.31%	0.64%	10.68%	0.16%	1.72%	4.17%	0.62%	10.33%	0.16%	1.66%	3.49%	0.52%	8.63%	0.13%	1.39%	17.5%	16.9%	14.2%
06-Aug-07	1190	50.4	7.1	1310	133.0	21.4	1.77	1530	4.24%	0.60%	11.18%	0.15%	1.80%	3.85%	0.54%	10.15%	0.14%	1.63%	3.29%	0.46%	8.69%	0.12%	1.40%	18.0%	16.3%	14.0%
07-Aug-07	1250	50.4	7.1	1250	135.0	26.0	1.70	1500	4.03%	0.56%	10.80%	0.14%	2.08%	4.03%	0.56%	10.80%	0.14%	2.08%	3.36%	0.47%	9.00%	0.11%	1.73%	17.6%	17.6%	14.7%
08-Aug-07	1260	51.0	6.9	1270	129.0	33.3	2.26	1530	4.05%	0.55%	10.24%	0.18%	2.64%	4.02%	0.55%	10.16%	0.18%	2.62%	3.33%	0.45%	8.43%	0.15%	2.18%	17.7%	17.5%	14.5%
09-Aug-07	1080	50.8	6.2	1110	130.0	32.8	3.91	1420	4.70%	0.58%	12.04%	0.36%	3.04%	4.58%	0.56%	11.71%	0.35%	2.95%	3.58%	0.44%	9.15%	0.28%	2.31%	20.7%	20.2%	15.8%
10-Aug-07	1130	52.0	5.9	1130	127.0	31.6	3.97	1380	4.60%	0.53%	11.24%	0.35%	2.80%	4.60%	0.53%	11.24%	0.35%	2.80%	3.77%	0.43%	9.20%	0.29%	2.29%	19.5%	19.5%	16.0%
11-Aug-07	1230	51.5	5.8	1310	115.0	29.8	3.68	1520	4.19%	0.47%	9.35%	0.30%	2.42%	3.93%	0.44%	8.78%	0.28%	2.27%	3.39%	0.38%	7.57%	0.24%	1.96%	16.7%	15.7%	13.5%
12-Aug-07	1220	53.6	6.1	1210	136.0	29.0	4.16	1470	4.39%	0.50%	11.15%	0.34%	2.38%	4.43%	0.50%	11.24%	0.34%	2.40%	3.65%	0.41%	9.25%	0.28%	1.97%	18.8%	18.9%	15.6%
13-Aug-07	1270	58.4	6.6	1290	268.0	26.4	4.79	1500	4.60%	0.52%	21.10%	0.38%	2.08%	4.53%	0.51%	20.78%	0.37%	2.05%	3.89%	0.44%	17.87%	0.32%	1.76%	28.7%	28.2%	24.3%
14-Aug-07	1220	61.0	8.2	1240	273.0	25.0	17.70	1640	5.00%	0.68%	22.38%	1.45%	2.05%	4.92%	0.66%	22.02%	1.43%	2.02%	3.72%	0.50%	16.65%	1.08%	1.52%	31.6%	31.0%	23.5%
15-Aug-07	1330	58.7	10.4	1370	220.0	24.5	32.40	1670	4.41%	0.78%	16.54%	**2.44%**	1.84%	4.28%	0.76%	16.06%	2.36%	1.79%	3.51%	0.62%	13.17%	1.94%	1.47%	26.0%	25.3%	20.7%
16-Aug-07	1330	55.3	11.2	1400	185.0	21.3	27.40	1720	4.16%	0.84%	13.91%	2.06%	1.60%	3.95%	0.80%	13.21%	1.96%	1.52%	3.22%	0.65%	10.76%	1.59%	1.24%	22.6%	21.4%	17.5%
17-Aug-07	1380	52.7	11.9	1440	165.0	19.9	22.30	1640	3.82%	0.86%	11.96%	1.62%	1.44%	3.66%	0.83%	11.46%	1.55%	1.38%	3.21%	0.73%	10.06%	1.36%	1.21%	19.7%	18.9%	16.6%
18-Aug-07	1340	53.3	12.6	1420	195.0	19.8	17.70	1660	3.98%	0.94%	14.55%	1.32%	1.48%	3.75%	0.89%	13.73%	1.25%	1.39%	3.21%	0.76%	11.75%	1.07%	1.19%	22.3%	21.0%	18.0%
19-Aug-07	1370	56.5	13.0	1450	219.0	18.9	16.00	1690	4.12%	0.95%	15.99%	1.17%	1.38%	3.90%	0.90%	15.10%	1.10%	1.30%	3.34%	0.77%	12.96%	0.95%	1.12%	23.6%	22.3%	19.1%
20-Aug-07	1330	63.9	14.1	1450	196.0	17.5	15.70	1700	4.80%	1.06%	14.74%	1.18%	1.32%	4.41%	0.97%	13.52%	1.08%	1.21%	3.76%	0.83%	11.53%	0.92%	1.03%	23.1%	21.2%	18.1%
21-Aug-07	1040	75.5	15.0	1120	181.0	17.9	14.50	1530	7.26%	1.44%	17.40%	1.39%	1.72%	6.74%	1.34%	16.16%	1.29%	1.60%	4.93%	0.98%	11.83%	0.95%	1.17%	29.2%	27.1%	19.9%
22-Aug-07	1030	83.0	15.2	1130	168.0	17.6	12.30	1420	8.06%	1.48%	16.31%	1.19%	1.71%	7.35%	1.35%	14.87%	1.09%	1.56%	5.85%	1.07%	11.83%	0.87%	1.24%	28.7%	26.2%	20.9%
23-Aug-07	991	86.9	15.2	1100	154.0	22.2	11.10	1400	8.77%	1.53%	15.54%	1.12%	2.24%	7.90%	1.38%	14.00%	1.01%	2.02%	6.21%	1.09%	11.00%	0.79%	1.59%	29.2%	26.3%	20.7%
24-Aug-07	1040	84.2	15.2	1080	145.0	35.9	10.90	1360	8.10%	1.46%	13.94%	1.05%	3.45%	7.80%	1.41%	13.43%	1.01%	3.32%	6.19%	1.12%	10.66%	0.80%	2.64%	28.0%	27.0%	21.4%
25-Aug-07	967	92.1	15.2	1090	139.0	52.5	10.30	1370	9.52%	1.57%	14.37%	1.07%	5.43%	8.45%	1.39%	12.75%	0.94%	4.82%	6.72%	1.11%	10.15%	0.75%	3.83%	32.0%	28.4%	22.6%
26-Aug-07	617	127.0	15.3	932	140.0	88.7	10.00	1360	20.58%	2.48%	22.69%	1.62%	14.38%	13.63%	1.64%	15.02%	1.07%	9.52%	9.34%	1.13%	10.29%	0.74%	6.52%	61.8%	40.9%	28.0%
27-Aug-07	1060	170.0	15.0	959	157.0	378.0	11.00	1330	16.04%	1.42%	14.81%	1.04%	35.66%	17.73%	1.56%	16.37%	1.15%	39.42%	12.78%	1.13%	11.80%	0.83%	28.42%	69.0%	76.2%	55.0%
28-Aug-07	997	158.0	14.8	1210	150.0	373.0	10.30	1830	15.85%	1.48%	15.05%	1.03%	37.41%	13.06%	1.22%	12.40%	0.85%	30.83%	8.63%	0.81%	8.20%	0.56%	20.38%	70.8%	58.4%	38.6%

Appendix M1: Water Survey of Canada data for Peace River and gauged tributaries on the Peace River for 2007. All data is in m3/s. Data for tributaries have yet to be finalized by the WSC.

Date	Discharge by Stream (WSC Stations)								% Discharge of Tributaries Relative to Peace R. Flows @ Hudson's Hope					% Discharge of Tributaries Relative to Peace R. Flows above the Pine River					% Discharge of Tributaries Relative to Peace R. Flows @ ALCES					Cummulative % Tributary Discharge compared to Peace R.		
	Peace R. @ Hudson Hope	Halfway R. Discharge	Moberly R. Discharge	Peace R. @ Pine	Pine R. Discharge	Beatton R. Discharge	Kiskatinaw R. @ Farmington	Peace R. @ Alces	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Peace R. @ Hudson Hope	Peace R. @ Pine	Peace R. @ Alces
29-Aug-07	963	141.0	14.6	1080	137.0	280.0	9.33	1640	14.64%	1.52%	14.23%	0.97%	29.08%	13.06%	1.35%	12.69%	0.86%	25.93%	8.60%	0.89%	8.35%	0.57%	17.07%	60.4%	53.9%	35.5%
30-Aug-07	1040	133.0	14.4	1160	129.0	217.0	8.34	1550	12.79%	1.38%	12.40%	0.80%	20.87%	11.47%	1.24%	11.12%	0.72%	18.71%	8.58%	0.93%	8.32%	0.54%	14.00%	48.2%	43.3%	32.4%
31-Aug-07	1030	129.0	14.1	1190	135.0	184.0	7.41	1580	12.52%	1.37%	13.11%	0.72%	17.86%	10.84%	1.18%	11.34%	0.62%	15.46%	8.16%	0.89%	8.54%	0.47%	11.65%	45.6%	39.5%	29.7%
01-Sep-07	755	122.0	13.7	1020	164.0	159.0	6.81	1510	16.16%	1.81%	21.72%	0.90%	21.06%	11.96%	1.34%	16.08%	0.67%	15.59%	8.08%	0.91%	10.86%	0.45%	10.53%	61.7%	45.6%	30.8%
02-Sep-07	762	112.0	13.3	822	161.0	137.0	6.72	1290	14.70%	1.75%	21.13%	0.88%	17.98%	13.63%	1.62%	19.59%	0.82%	16.67%	8.68%	1.03%	12.48%	0.52%	10.62%	56.4%	52.3%	33.3%
03-Sep-07	1060	102.0	12.8	1050	145.0	111.0	6.49	1320	9.62%	1.21%	13.68%	0.61%	10.47%	9.71%	1.22%	13.81%	0.62%	10.57%	7.73%	0.97%	10.98%	0.49%	8.41%	35.6%	35.9%	28.6%
04-Sep-07	1230	94.6	12.4	1260	134.0	97.3	6.01	1530	7.69%	1.01%	10.89%	0.49%	7.91%	7.51%	0.98%	10.63%	0.48%	7.72%	6.18%	0.81%	8.76%	0.39%	6.36%	28.0%	27.3%	22.5%
05-Sep-07	1100	88.0	12.1	1290	129.0	86.8	5.34	1610	8.00%	1.10%	11.73%	0.49%	7.89%	6.82%	0.94%	10.00%	0.41%	6.73%	5.47%	0.75%	8.01%	0.33%	5.39%	29.2%	24.9%	20.0%
06-Sep-07	1040	82.5	11.6	1110	130.0	79.6	4.84	1440	7.93%	1.12%	12.50%	0.47%	7.65%	7.43%	1.05%	11.71%	0.44%	7.17%	5.73%	0.81%	9.03%	0.34%	5.53%	29.7%	27.8%	21.4%
07-Sep-07	1160	78.0	11.1	1220	135.0	76.5	4.52	1500	6.72%	0.96%	11.64%	0.39%	6.59%	6.39%	0.91%	11.07%	0.37%	6.27%	5.20%	0.74%	9.00%	0.30%	5.10%	26.3%	25.0%	20.3%
08-Sep-07	1160	73.3	10.5	1210	135.0	77.9	4.26	1510	6.32%	0.91%	11.64%	0.37%	6.72%	6.06%	0.87%	11.16%	0.35%	6.44%	4.85%	0.70%	8.94%	0.28%	5.16%	25.9%	24.9%	19.9%
09-Sep-07	1000	68.7	10.1	1090	126.0	72.7	3.96	1460	6.87%	1.01%	12.60%	0.40%	7.27%	6.30%	0.93%	11.56%	0.36%	6.67%	4.71%	0.69%	8.63%	0.27%	4.98%	28.1%	25.8%	19.3%
10-Sep-07	1160	64.4	9.7	1150	116.0	64.6	3.69	1360	5.55%	0.84%	10.00%	0.32%	5.57%	5.60%	0.85%	10.09%	0.32%	5.62%	4.74%	0.72%	8.53%	0.27%	4.75%	22.3%	22.5%	19.0%
11-Sep-07	1220	62.1	9.4	1260	108.0	59.2	3.60	1510	5.09%	0.77%	8.85%	0.30%	4.85%	4.93%	0.75%	8.57%	0.29%	4.70%	4.11%	0.62%	7.15%	0.24%	3.92%	19.9%	19.2%	16.0%
12-Sep-07	1200	60.9	9.0	1300	108.0	53.4	3.40	1520	5.08%	0.75%	9.00%	0.28%	4.45%	4.68%	0.69%	8.31%	0.26%	4.11%	4.01%	0.59%	7.11%	0.22%	3.51%	19.6%	18.1%	15.4%
13-Sep-07	1050	58.9	8.7	1110	110.0	48.6	3.22	1430	5.61%	0.83%	10.48%	0.31%	4.63%	5.31%	0.78%	9.91%	0.29%	4.38%	4.12%	0.61%	7.69%	0.23%	3.40%	21.8%	20.7%	16.0%
14-Sep-07	1180	56.5	8.3	1270	102.0	45.0	3.06	1440	4.79%	0.71%	8.64%	0.26%	3.81%	4.45%	0.66%	8.03%	0.24%	3.54%	3.92%	0.58%	7.08%	0.21%	3.13%	18.2%	16.9%	14.9%
15-Sep-07	1150	53.9	8.0	1170	93.0	42.0	3.14	1420	4.69%	0.69%	8.09%	0.27%	3.65%	4.61%	0.68%	7.95%	0.27%	3.59%	3.80%	0.56%	6.55%	0.22%	2.96%	17.4%	17.1%	14.1%
16-Sep-07	1040	51.4	7.9	1090	86.9	39.0	0.35	1390	4.94%	0.76%	8.36%	0.03%	3.75%	4.72%	0.72%	7.97%	0.03%	3.58%	3.70%	0.57%	6.25%	0.03%	2.81%	17.8%	17.0%	13.3%
17-Sep-07	1170	49.5	7.6	1170	82.5	36.6	3.54	1320	4.23%	0.65%	7.05%	0.30%	3.13%	4.23%	0.65%	7.05%	0.30%	3.13%	3.75%	0.58%	6.25%	0.27%	2.77%	15.4%	15.4%	13.6%
18-Sep-07	1050	48.3	7.1	1260	82.6	34.8	3.34	1530	4.60%	0.68%	7.87%	0.32%	3.31%	3.83%	0.56%	6.56%	0.27%	2.76%	3.16%	0.46%	5.40%	0.22%	2.27%	16.8%	14.0%	11.5%
19-Sep-07	1240	47.0	6.6	1140	80.0	33.6	3.21	1330	3.79%	0.53%	6.45%	0.26%	2.71%	4.12%	0.58%	7.02%	0.28%	2.95%	3.53%	0.50%	6.02%	0.24%	2.53%	13.7%	14.9%	12.8%
20-Sep-07	1160	46.0	6.6	1170	75.1	33.2	3.05	1420	3.97%	0.57%	6.47%	0.26%	2.86%	3.93%	0.56%	6.42%	0.26%	2.84%	3.24%	0.47%	5.29%	0.21%	2.34%	14.1%	14.0%	11.5%
21-Sep-07	1160	44.9	6.4	1230	71.8	33.0	2.94	1430	3.87%	0.55%	6.19%	0.25%	2.84%	3.65%	0.52%	5.84%	0.24%	2.68%	3.14%	0.44%	5.02%	0.21%	2.31%	13.7%	12.9%	11.1%
22-Sep-07	1100	44.3	6.1	1170	81.0	32.5	2.84	1380	4.03%	0.56%	7.36%	0.26%	2.95%	3.79%	0.52%	6.92%	0.24%	2.78%	3.21%	0.44%	5.87%	0.21%	2.36%	15.2%	14.3%	12.1%
23-Sep-07	996	44.2	5.8	1090	108.0	32.4	2.80	1330	4.44%	0.58%	10.84%	0.28%	3.25%	4.06%	0.53%	9.91%	0.26%	2.97%	3.32%	0.44%	8.12%	0.21%	2.44%	19.4%	17.7%	14.5%
24-Sep-07	1080	43.9	5.5	1120	112.0	33.3	2.78	1320	4.06%	0.51%	10.37%	0.26%	3.08%	3.92%	0.49%	10.00%	0.25%	2.97%	3.33%	0.42%	8.48%	0.21%	2.52%	18.3%	17.6%	15.0%
25-Sep-07	1170	42.9	5.7	1150	108.0	33.6	2.84	1340	3.67%	0.48%	9.23%	0.24%	2.87%	3.73%	0.49%	9.39%	0.25%	2.92%	3.20%	0.42%	8.06%	0.21%	2.51%	16.5%	16.8%	14.4%
26-Sep-07	1250	42.3	5.6	1340	131.0	32.9	2.87	1520	3.38%	0.45%	10.48%	0.23%	2.63%	3.16%	0.42%	9.78%	0.21%	2.46%	2.78%	0.37%	8.62%	0.19%	2.16%	17.2%	16.0%	14.1%
27-Sep-07	1250	42.3	5.4	1300	162.0	31.7	2.80	1520	3.38%	0.44%	12.96%	0.22%	2.54%	3.25%	0.42%	12.46%	0.22%	2.44%	2.78%	0.36%	10.66%	0.18%	2.09%	19.5%	18.8%	16.1%
28-Sep-07	1270	42.6	5.0	1310	171.0	31.5	2.68	1550	3.35%	0.39%	13.46%	0.21%	2.48%	3.25%	0.38%	13.05%	0.20%	2.40%	2.75%	0.32%	11.03%	0.17%	2.03%	19.9%	19.3%	16.3%
29-Sep-07	1200	43.6	4.8	1270	180.0	31.4	2.58	1560	3.63%	0.40%	15.00%	0.22%	2.62%	3.43%	0.37%	14.17%	0.20%	2.47%	2.79%	0.30%	11.54%	0.17%	2.01%	21.9%	20.7%	16.8%
30-Sep-07	1320	43.6	4.7	1310	160.0	31.2	2.58	1540	3.30%	0.35%	12.12%	0.20%	2.36%	3.33%	0.35%	12.21%	0.20%	2.38%	2.83%	0.30%	10.39%	0.17%	2.03%	18.3%	18.5%	15.7%
01-Oct-07	1250	42.4	4.7	1350	144.0	32.1	2.65	1580	3.39%	0.37%	11.52%	0.21%	2.57%	3.14%	0.34%	10.67%	0.20%	2.38%	2.68%	0.29%	9.11%	0.17%	2.03%	18.1%	16.7%	14.3%
02-Oct-07	1200	41.5	4.8	1260	142.0	33.2	2.56	1500	3.46%	0.40%	11.83%	0.21%	2.77%	3.29%	0.38%	11.27%	0.20%	2.63%	2.77%	0.32%	9.47%	0.17%	2.21%	18.7%	17.8%	14.9%
03-Oct-07	1160	40.8	5.0	1170	201.0	33.2	2.50	1460	3.52%	0.43%	17.33%	0.22%	2.86%	3.49%	0.42%	17.18%	0.21%	2.84%	2.79%	0.34%	13.77%	0.17%	2.27%	24.3%	24.1%	19.3%
04-Oct-07	1270	40.3	4.7	1320	194.0	32.3	2.63	1580	3.17%	0.37%	15.28%	0.21%	2.54%	3.05%	0.36%	14.70%	0.20%	2.45%	2.55%	0.30%	12.28%	0.17%	2.04%	21.6%	20.8%	17.3%
05-Oct-07	1160	39.5	4.6	1210	165.0	32.4	2.68	1520	3.41%	0.40%	14.22%	0.23%	2.79%	3.26%	0.38%	13.64%	0.22%	2.68%	2.60%	0.30%	10.86%	0.18%	2.13%	21.1%	20.2%	16.1%
06-Oct-07	1240	38.5	4.7	1280	145.0	32.3	2.95	1530	3.10%	0.38%	11.69%	0.24%	2.60%	3.01%	0.37%	11.33%	0.23%	2.52%	2.52%	0.31%	9.48%	0.19%	2.11%	18.0%	17.5%	14.6%
07-Oct-07	1140	38.2	5.1	1230	140.0	32.6	3.18	1520	3.35%	0.45%	12.28%	0.28%	2.86%	3.11%	0.41%	11.38%	0.26%	2.65%	2.51%	0.34%	9.21%	0.21%	2.14%	19.2%	17.8%	14.4%
08-Oct-07	1270	38.0	4.8	1190	351.0	31.6	3.10	1450	2.99%	0.38%	27.64%	0.24%	2.49%	3.19%	0.40%	29.50%	0.26%	2.66%	2.62%	0.33%	24.21%	0.21%	2.18%	33.7%	36.0%	29.6%
09-Oct-07	1400	37.4	4.9	1390	381.0	30.9	3.07	1780	2.67%	0.35%	27.21%	0.22%	2.21%	2.69%	0.36%	27.41%	0.22%	2.22%	2.10%	0.28%	21.40%	0.17%	1.74%	32.7%	32.9%	25.7%
10-Oct-07	1370	36.6	4.9	1420	294.0	30.3	3.21	1790	2.67%	0.36%	21.46%	0.23%	2.21%	2.58%	0.35%	20.70%	0.23%	2.13%	2.04%	0.27%	16.42%	0.18%	1.69%	26.9%	26.0%	20.6%
11-Oct-07	1160	35.7	5.2	1310	248.0	29.8	3.45	1710	3.08%	0.44%	21.38%	0.30%	2.57%	2.73%	0.39%	18.93%	0.26%	2.27%	2.09%	0.30%	14.50%	0.20%	1.74%	27.8%	24.6%	18.8%
12-Oct-07	1240	35.0	5.5	1220	227.0	29.4	3.83	1540	2.82%	0.44%	18.31%	0.31%	2.37%	2.87%	0.45%	18.61%	0.31%	2.41%	2.27%	0.36%	14.74%	0.25%	1.91%	24.3%	24.7%	19.5%
13-Oct-07	1330	34.7	5.4	1330	206.0	27.7	3.78	1600	2.61%	0.41%	15.49%	0.28%	2.08%	2.61%	0.41%	15.49%	0.28%	2.08%	2.17%	0.34%	12.88%	0.24%	1.73%	20.9%	20.9%	17.3%
14-Oct-07	1260	34.3	5.6	1290	188.0	26.8	3.55	1610	2.72%	0.44%	14.92%	0.28%	2.13%	2.66%	0.43%	14.57%	0.28%	2.08%	2.13%	0.34%	11.68%	0.22%	1.66%	20.5%	20.0%	16.0%
15-Oct-07	1230	34.0	5.6	1270	188.0	25.1	3.48	1570	2.76%	0.45%	15.28%	0.28%	2.04%	2.68%	0.44%	14.80%	0.27%	1.98%	2.17%	0.35%	11.97%	0.22%	1.60%	20.8%	20.2%	16.3%

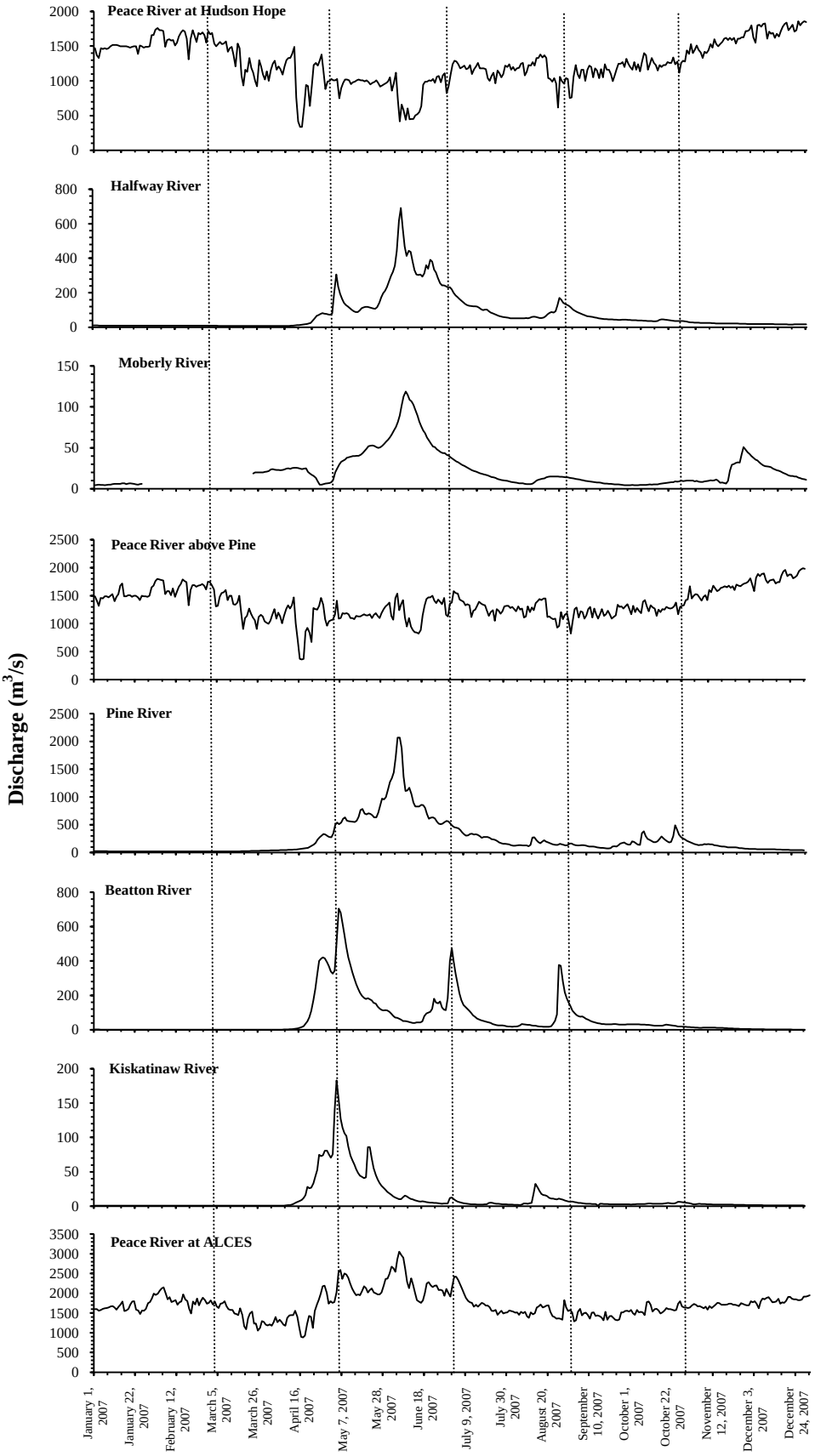
Appendix M1: Water Survey of Canada data for Peace River and gauged tributaries on the Peace River for 2007. All data is in m3/s. Data for tributaries have yet to be finalized by the WSC.

Date	Discharge by Stream (WSC Stations)								% Discharge of Tributaries Relative to Peace R. Flows @ Hudson's Hope					% Discharge of Tributaries Relative to Peace R. Flows above the Pine River					% Discharge of Tributaries Relative to Peace R. Flows @ ALCES					Cummulative % Tributary Discharge compared to Peace R.		
	Peace R. @ Hudson Hope	Halfway R. Discharge	Moberly R. Discharge	Peace R. @ Pine	Pine R. Discharge	Beatton R. Discharge	Kiskatinaw R. @ Farmington	Peace R. @ Alces	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Peace R. @ Hudson Hope	Peace R. @ Pine	Peace R. @ Alces
16-Oct-07	1150	34.7	5.7	1140	200.0	24.4	3.43	1490	3.02%	0.49%	17.39%	0.30%	2.12%	3.04%	0.50%	17.54%	0.30%	2.14%	2.33%	0.38%	13.42%	0.23%	1.64%	23.3%	23.5%	18.0%
17-Oct-07	1230	41.0	6.3	1250	243.0	24.5	3.51	1520	3.33%	0.51%	19.76%	0.29%	1.99%	3.28%	0.51%	19.44%	0.28%	1.96%	2.70%	0.42%	15.99%	0.23%	1.61%	25.9%	25.5%	20.9%
18-Oct-07	1200	44.5	6.7	1210	292.0	24.5	3.34	1570	3.71%	0.56%	24.33%	0.28%	2.04%	3.68%	0.55%	24.13%	0.28%	2.02%	2.83%	0.43%	18.60%	0.21%	1.56%	30.9%	30.7%	23.6%
19-Oct-07	1230	45.2	7.0	1260	256.0	24.7	3.44	1630	3.67%	0.57%	20.81%	0.28%	2.01%	3.59%	0.55%	20.32%	0.27%	1.96%	2.77%	0.43%	15.71%	0.21%	1.52%	27.3%	26.7%	20.6%
20-Oct-07	1230	43.7	7.4	1250	226.0	27.2	3.94	1600	3.55%	0.60%	18.37%	0.32%	2.21%	3.50%	0.59%	18.08%	0.32%	2.18%	2.73%	0.46%	14.13%	0.25%	1.70%	25.1%	24.7%	19.3%
21-Oct-07	1270	41.9	7.7	1300	202.0	31.1	4.44	1600	3.30%	0.60%	15.91%	0.35%	2.45%	3.22%	0.59%	15.54%	0.34%	2.39%	2.62%	0.48%	12.63%	0.28%	1.94%	22.6%	22.1%	17.9%
22-Oct-07	1260	40.6	8.0	1280	184.0	30.0	4.52	1590	3.22%	0.63%	14.60%	0.36%	2.38%	3.17%	0.62%	14.38%	0.35%	2.34%	2.55%	0.50%	11.57%	0.28%	1.89%	21.2%	20.9%	16.8%
23-Oct-07	1260	38.8	8.2	1270	190.0	27.7	4.33	1570	3.08%	0.65%	15.08%	0.34%	2.20%	3.06%	0.64%	14.96%	0.34%	2.18%	2.47%	0.52%	12.10%	0.28%	1.76%	21.4%	21.2%	17.1%
24-Oct-07	1340	37.7	8.1	1280	297.0	25.7	4.09	1580	2.81%	0.61%	22.16%	0.31%	1.92%	2.95%	0.64%	23.20%	0.32%	2.01%	2.39%	0.52%	18.80%	0.26%	1.63%	27.8%	29.1%	23.6%
25-Oct-07	1240	36.0	9.1	1310	492.0	24.6	4.00	1740	2.90%	0.74%	39.68%	0.32%	1.98%	2.75%	0.70%	37.56%	0.31%	1.88%	2.07%	0.52%	28.28%	0.23%	1.41%	45.6%	43.2%	32.5%
26-Oct-07	1280	35.9	9.1	1380	413.0	22.4	4.66	1800	2.80%	0.71%	32.27%	0.36%	1.75%	2.60%	0.66%	29.93%	0.34%	1.62%	1.99%	0.51%	22.94%	0.26%	1.24%	37.9%	35.1%	26.9%
27-Oct-07	1120	35.8	9.4	1170	326.0	20.4	6.22	1670	3.20%	0.84%	29.11%	0.56%	1.82%	3.06%	0.80%	27.86%	0.53%	1.74%	2.14%	0.56%	19.52%	0.37%	1.22%	35.5%	34.0%	23.8%
28-Oct-07	1260	35.6	10.4	1300	278.0	19.8	6.42	1640	2.83%	0.83%	22.06%	0.51%	1.57%	2.74%	0.80%	21.38%	0.49%	1.52%	2.17%	0.63%	16.95%	0.39%	1.21%	27.8%	26.9%	21.4%
29-Oct-07	1290	35.0	9.8	1320	254.0	19.1	5.85	1640	2.71%	0.76%	19.69%	0.45%	1.48%	2.65%	0.74%	19.24%	0.44%	1.45%	2.13%	0.59%	15.49%	0.36%	1.16%	25.1%	24.5%	19.7%
30-Oct-07	1280	33.8	10.1	1330	234.0	18.5	5.45	1630	2.64%	0.79%	18.28%	0.43%	1.45%	2.54%	0.76%	17.59%	0.41%	1.39%	2.07%	0.62%	14.36%	0.33%	1.13%	23.6%	22.7%	18.5%
31-Oct-07	1440	31.7	10.3	1420	212.0	17.9	5.24	1640	2.20%	0.72%	14.72%	0.36%	1.24%	2.23%	0.73%	14.93%	0.37%	1.26%	1.93%	0.63%	12.93%	0.32%	1.09%	19.2%	19.5%	16.9%
01-Nov-07	1390	29.7	10.3	1430	196.0	17.4	4.89	1690	2.14%	0.74%	14.10%	0.35%	1.25%	2.08%	0.72%	13.71%	0.34%	1.22%	1.76%	0.61%	11.60%	0.29%	1.03%	18.6%	18.1%	15.3%
02-Nov-07	1530	28.2	10.3	1670	180.0	16.8	4.30	1730	1.84%	0.67%	11.76%	0.28%	1.10%	1.69%	0.62%	10.78%	0.26%	1.01%	1.63%	0.60%	10.40%	0.25%	0.97%	15.7%	14.3%	13.8%
03-Nov-07	1400	27.1	10.2	1450	166.0	15.8	3.54	1710	1.94%	0.73%	11.86%	0.25%	1.13%	1.87%	0.70%	11.45%	0.24%	1.09%	1.58%	0.60%	9.71%	0.21%	0.92%	15.9%	15.4%	13.0%
04-Nov-07	1450	26.3	9.4	1500	155.0	14.9	2.66	1670	1.81%	0.65%	10.69%	0.18%	1.03%	1.75%	0.63%	10.33%	0.18%	0.99%	1.57%	0.57%	9.28%	0.16%	0.89%	14.4%	13.9%	12.5%
05-Nov-07	1510	25.7	9.9	1530	142.0	13.9	2.80	1680	1.70%	0.66%	9.40%	0.19%	0.92%	1.68%	0.65%	9.28%	0.18%	0.91%	1.53%	0.59%	8.45%	0.17%	0.83%	12.9%	12.7%	11.6%
06-Nov-07	1450	25.5	9.0	1520	133.0	13.0	3.29	1650	1.76%	0.62%	9.17%	0.23%	0.90%	1.68%	0.59%	8.75%	0.22%	0.86%	1.55%	0.55%	8.06%	0.20%	0.79%	12.7%	12.1%	11.1%
07-Nov-07	1410	25.1	8.8	1470	136.0	12.1	3.40	1620	1.78%	0.62%	9.65%	0.24%	0.86%	1.71%	0.60%	9.25%	0.23%	0.82%	1.55%	0.54%	8.40%	0.21%	0.75%	13.1%	12.6%	11.4%
08-Nov-07	1330	24.8	8.5	1410	140.0	12.3	3.30	1660	1.86%	0.64%	10.53%	0.25%	0.92%	1.76%	0.60%	9.93%	0.23%	0.87%	1.49%	0.51%	8.43%	0.20%	0.74%	14.2%	13.4%	11.4%
09-Nov-07	1420	24.5	9.2	1480	155.0	12.8	3.17	1590	1.73%	0.65%	10.92%	0.22%	0.90%	1.66%	0.62%	10.47%	0.21%	0.86%	1.54%	0.58%	9.75%	0.20%	0.81%	14.4%	13.8%	12.9%
10-Nov-07	1400	24.4	9.6	1510	149.0	13.3	3.00	1680	1.74%	0.68%	10.64%	0.21%	0.95%	1.62%	0.63%	9.87%	0.20%	0.88%	1.45%	0.57%	8.87%	0.18%	0.79%	14.2%	13.2%	11.9%
11-Nov-07	1440	24.3	10.0	1420	153.0	13.8	2.92	1630	1.69%	0.69%	10.63%	0.20%	0.96%	1.71%	0.70%	10.77%	0.21%	0.97%	1.49%	0.61%	9.39%	0.18%	0.85%	14.2%	14.4%	12.5%
12-Nov-07	1530	23.8	10.7	1600	150.0	13.9	2.81	1670	1.56%	0.70%	9.80%	0.18%	0.91%	1.49%	0.67%	9.38%	0.18%	0.87%	1.43%	0.64%	8.98%	0.17%	0.83%	13.2%	12.6%	12.0%
13-Nov-07	1480	23.0	10.4	1560	146.0	14.0	2.61	1710	1.55%	0.70%	9.86%	0.18%	0.95%	1.47%	0.67%	9.36%	0.17%	0.90%	1.35%	0.61%	8.54%	0.15%	0.82%	13.2%	12.6%	11.5%
14-Nov-07	1600	22.0	10.5	1680	133.0	13.5	2.48	1760	1.38%	0.66%	8.31%	0.16%	0.84%	1.31%	0.63%	7.92%	0.15%	0.80%	1.25%	0.60%	7.56%	0.14%	0.77%	11.3%	10.8%	10.3%
15-Nov-07	1530	21.9	11.6	1630	127.0	13.0	2.40	1750	1.43%	0.76%	8.30%	0.16%	0.85%	1.34%	0.71%	7.79%	0.15%	0.80%	1.25%	0.66%	7.26%	0.14%	0.74%	11.5%	10.8%	10.1%
16-Nov-07	1500	21.9	9.9	1580	121.0	12.5	2.37	1710	1.46%	0.66%	8.07%	0.16%	0.83%	1.39%	0.63%	7.66%	0.15%	0.79%	1.28%	0.58%	7.08%	0.14%	0.73%	11.2%	10.6%	9.8%
17-Nov-07	1530	21.9	7.6	1600	112.0	11.9	2.26	1710	1.43%	0.50%	7.32%	0.15%	0.78%	1.37%	0.48%	7.00%	0.14%	0.74%	1.28%	0.45%	6.55%	0.13%	0.70%	10.2%	9.7%	9.1%
18-Nov-07	1560	21.8	8.1	1640	111.0	11.6	2.22	1710	1.40%	0.52%	7.12%	0.14%	0.74%	1.33%	0.49%	6.77%	0.14%	0.71%	1.27%	0.47%	6.49%	0.13%	0.68%	9.9%	9.4%	9.0%
19-Nov-07	1610	21.8	7.4	1650	107.0	11.2	2.27	1720	1.35%	0.46%	6.65%	0.14%	0.70%	1.32%	0.45%	6.48%	0.14%	0.68%	1.27%	0.43%	6.22%	0.13%	0.65%	9.3%	9.1%	8.7%
20-Nov-07	1620	21.6	6.5	1670	103.0	10.9	2.29	1740	1.33%	0.40%	6.36%	0.14%	0.67%	1.29%	0.39%	6.17%	0.14%	0.65%	1.24%	0.37%	5.92%	0.13%	0.63%	8.9%	8.6%	8.3%
21-Nov-07	1590	21.4	9.9	1650	95.3	10.1	2.25	1740	1.35%	0.62%	5.99%	0.14%	0.64%	1.30%	0.60%	5.78%	0.14%	0.61%	1.23%	0.57%	5.48%	0.13%	0.58%	8.7%	8.4%	8.0%
22-Nov-07	1620	21.3	22.1	1680	92.7	9.4	2.21	1710	1.31%	1.36%	5.72%	0.14%	0.58%	1.27%	1.32%	5.52%	0.13%	0.56%	1.25%	1.29%	5.42%	0.13%	0.55%	9.1%	8.8%	8.6%
23-Nov-07	1590	21.2	29.4	1640	92.4	8.8	2.19	1710	1.33%	1.85%	5.81%	0.14%	0.55%	1.29%	1.79%	5.63%	0.13%	0.54%	1.24%	1.72%	5.40%	0.13%	0.51%	9.7%	9.4%	9.0%
24-Nov-07	1620	21.0	30.7	1670	93.3	8.2	2.16	1700	1.30%	1.90%	5.76%	0.13%	0.51%	1.26%	1.84%	5.59%	0.13%	0.49%	1.24%	1.81%	5.49%	0.13%	0.48%	9.6%	9.3%	9.1%
25-Nov-07	1540	20.8	31.8	1600	93.3	7.7	2.10	1680	1.35%	2.06%	6.06%	0.14%	0.50%	1.30%	1.99%	5.83%	0.13%	0.48%	1.24%	1.89%	5.55%	0.13%	0.46%	10.1%	9.7%	9.3%
26-Nov-07	1610	20.6	32.4	1700	88.3	7.2	2.02	1750	1.28%	2.01%	5.48%	0.13%	0.45%	1.21%	1.91%	5.19%	0.12%	0.42%	1.18%	1.85%	5.05%	0.12%	0.41%	9.3%	8.9%	8.6%
27-Nov-07	1610	20.2	32.2	1680	79.1	6.8	1.98	1730	1.25%	2.00%	4.91%	0.12%	0.42%	1.20%	1.92%	4.71%	0.12%	0.40%	1.17%	1.86%	4.57%	0.11%	0.39%	8.7%	8.3%	8.1%
28-Nov-07	1630	19.7	42.3	1670	77.4	6.3	1.91	1710	1.21%	2.60%	4.75%	0.12%	0.39%	1.18%	2.53%	4.63%	0.11%	0.38%	1.15%	2.47%	4.53%	0.11%	0.37%	9.1%	8.8%	8.6%
29-Nov-07	1630	19.3	51.1	1700	75.8	6.0	1.83	1700	1.18%	3.13%	4.65%	0.11%	0.37%	1.14%	3.01%	4.46%	0.11%	0.35%	1.14%	3.01%	4.46%	0.11%	0.35%	9.4%	9.1%	9.1%
30-Nov-07	1720	18.9	47.9	1720	71.7	5.6	1.79	1700	1.10%	2.78%	4.17%	0.10%	0.33%	1.10%	2.78%	4.17%	0.10%	0.33%	1.11%	2.82%	4.22%	0.11%	0.33%	8.5%	8.5%	8.6%
01-Dec-07	1720	18.6	44.9	1730	68.7	5.3	1.68	1800	1.08%	2.61%	3.99%	0.10%	0.31%	1.08%	2.60%	3.97%	0.10%	0.31%	1.03%	2.49%	3.82%	0.09%	0.30%	8.1%	8.0%	7.7%
02-Dec-07	1740	18.4	42.9	1750	66.7	5.1	1.65	1770	1.06%	2.47%	3.83%	0.09%	0.29%	1.05%	2.45%	3.81%	0.09%	0.29%	1.04%	2.42%	3.77%	0.09%	0.29%	7.7%	7.7%	7.6%

Appendix M1: Water Survey of Canada data for Peace River and gauged tributaries on the Peace River for 2007. All data is in m3/s. Data for tributaries have yet to be finalized by the WSC.

Date	Discharge by Stream (WSC Stations)								% Discharge of Tributaries Relative to Peace R. Flows @ Hudson's Hope					% Discharge of Tributaries Relative to Peace R. Flows above the Pine River					% Discharge of Tributaries Relative to Peace R. Flows @ ALCES					Cummulative % Tributary Discharge compared to Peace R.		
	Peace R. @ Hudson Hope	Halfway R. Discharge	Moberly R. Discharge	Peace R. @ Pine	Pine R. Discharge	Beatton R. Discharge	Kiskatinaw R. @ Farmington	Peace R. @ Alces	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Halfway R. Discharge	Moberly R. Discharge	Pine R. Discharge	Kiskatinaw R. @ Farmington	Beatton R. Discharge	Peace R. @ Hudson Hope	Peace R. @ Pine	Peace R. @ Alces
03-Dec-07	1800	18.2	40.3	1810	64.7	4.8	1.61	1800	1.01%	2.24%	3.59%	0.09%	0.27%	1.01%	2.23%	3.57%	0.09%	0.27%	1.01%	2.24%	3.59%	0.09%	0.27%	7.2%	7.2%	7.2%
04-Dec-07	1630	18.0	38.1	1700	63.5	4.6	1.57	1740	1.10%	2.34%	3.90%	0.10%	0.28%	1.06%	2.24%	3.74%	0.09%	0.27%	1.03%	2.19%	3.65%	0.09%	0.26%	7.7%	7.4%	7.2%
05-Dec-07	1550	17.7	35.9	1580	62.3	4.4	1.52	1620	1.14%	2.32%	4.02%	0.10%	0.28%	1.12%	2.27%	3.94%	0.10%	0.28%	1.09%	2.22%	3.85%	0.09%	0.27%	7.9%	7.7%	7.5%
06-Dec-07	1800	17.5	34.8	1820	61.4	4.1	1.46	1790	0.97%	1.93%	3.41%	0.08%	0.23%	0.96%	1.91%	3.37%	0.08%	0.23%	0.98%	1.94%	3.43%	0.08%	0.23%	6.6%	6.6%	6.7%
07-Dec-07	1810	17.4	32.6	1890	60.5	3.8	1.40	1870	0.96%	1.80%	3.34%	0.08%	0.21%	0.92%	1.72%	3.20%	0.07%	0.20%	0.93%	1.74%	3.24%	0.07%	0.20%	6.4%	6.1%	6.2%
08-Dec-07	1780	17.4	30.5	1850	58.8	3.7	1.37	1850	0.98%	1.71%	3.30%	0.08%	0.21%	0.94%	1.65%	3.18%	0.07%	0.20%	0.94%	1.65%	3.18%	0.07%	0.20%	6.3%	6.0%	6.0%
09-Dec-07	1820	17.4	28.9	1890	58.1	3.6	1.34	1880	0.96%	1.59%	3.19%	0.07%	0.20%	0.92%	1.53%	3.07%	0.07%	0.19%	0.93%	1.54%	3.09%	0.07%	0.19%	6.0%	5.8%	5.8%
10-Dec-07	1830	17.5	27.9	1900	57.9	3.5	1.29	1900	0.96%	1.52%	3.16%	0.07%	0.19%	0.92%	1.47%	3.05%	0.07%	0.18%	0.92%	1.47%	3.05%	0.07%	0.18%	5.9%	5.7%	5.7%
11-Dec-07	1610	17.5	27.4	1780	57.8	3.2	1.25	1840	1.09%	1.70%	3.59%	0.08%	0.20%	0.98%	1.54%	3.25%	0.07%	0.18%	0.95%	1.49%	3.14%	0.07%	0.18%	6.7%	6.0%	5.8%
12-Dec-07	1710	17.5	27.1	1730	58.3	3.0	1.23	1770	1.02%	1.58%	3.41%	0.07%	0.17%	1.01%	1.57%	3.37%	0.07%	0.17%	0.99%	1.53%	3.29%	0.07%	0.17%	6.3%	6.2%	6.1%
13-Dec-07	1680	17.5	26.6	1770	58.3	2.8	1.21	1780	1.04%	1.58%	3.47%	0.07%	0.17%	0.99%	1.50%	3.29%	0.07%	0.16%	0.98%	1.49%	3.28%	0.07%	0.16%	6.3%	6.0%	6.0%
14-Dec-07	1690	17.3	25.0	1780	58.1	2.7	1.19	1790	1.02%	1.48%	3.44%	0.07%	0.16%	0.97%	1.40%	3.26%	0.07%	0.15%	0.97%	1.40%	3.25%	0.07%	0.15%	6.2%	5.9%	5.8%
15-Dec-07	1620	17.2	24.0	1790	57.3	2.6	1.17	1860	1.06%	1.48%	3.54%	0.07%	0.16%	0.96%	1.34%	3.20%	0.07%	0.14%	0.92%	1.29%	3.08%	0.06%	0.14%	6.3%	5.7%	5.5%
16-Dec-07	1680	17.2	22.8	1720	56.7	2.4	1.16	1740	1.02%	1.36%	3.38%	0.07%	0.15%	1.00%	1.33%	3.30%	0.07%	0.14%	0.99%	1.31%	3.26%	0.07%	0.14%	6.0%	5.8%	5.8%
17-Dec-07	1640	16.8	22.3	1740	56.0	2.3	1.14	1770	1.02%	1.36%	3.41%	0.07%	0.14%	0.97%	1.28%	3.22%	0.07%	0.13%	0.95%	1.26%	3.16%	0.06%	0.13%	6.0%	5.7%	5.6%
18-Dec-07	1720	16.6	21.3	1740	53.5	2.2	1.13	1760	0.97%	1.24%	3.11%	0.07%	0.13%	0.95%	1.22%	3.07%	0.06%	0.13%	0.94%	1.21%	3.04%	0.06%	0.12%	5.5%	5.4%	5.4%
19-Dec-07	1780	16.4	20.0	1860	52.1	2.1	1.12	1810	0.92%	1.12%	2.93%	0.06%	0.12%	0.88%	1.08%	2.80%	0.06%	0.11%	0.91%	1.10%	2.88%	0.06%	0.11%	5.2%	4.9%	5.1%
20-Dec-07	1820	16.0	18.9	1930	50.7	2.0	1.10	1910	0.88%	1.04%	2.79%	0.06%	0.11%	0.83%	0.98%	2.63%	0.06%	0.10%	0.84%	0.99%	2.65%	0.06%	0.10%	4.9%	4.6%	4.6%
21-Dec-07	1840	15.7	17.9	1960	49.0	1.9	1.08	1910	0.85%	0.97%	2.66%	0.06%	0.10%	0.80%	0.91%	2.50%	0.06%	0.10%	0.82%	0.94%	2.57%	0.06%	0.10%	4.7%	4.4%	4.5%
22-Dec-07	1730	15.6	16.7	1850	47.5	1.8	1.04	1860	0.90%	0.97%	2.75%	0.06%	0.10%	0.84%	0.90%	2.57%	0.06%	0.10%	0.84%	0.90%	2.55%	0.06%	0.10%	4.8%	4.5%	4.4%
23-Dec-07	1770	15.4	15.9	1880	46.8	1.7	1.01	1850	0.87%	0.90%	2.64%	0.06%	0.10%	0.82%	0.85%	2.49%	0.05%	0.09%	0.83%	0.86%	2.53%	0.05%	0.09%	4.6%	4.3%	4.4%
24-Dec-07	1810	15.6	16.0	1880	46.4	1.7	1.01	1850	0.86%	0.88%	2.56%	0.06%	0.09%	0.83%	0.85%	2.47%	0.05%	0.09%	0.84%	0.86%	2.51%	0.05%	0.09%	4.5%	4.3%	4.4%
25-Dec-07	1710	16.1	15.4	1810	46.0	1.6	0.99	1830	0.94%	0.90%	2.69%	0.06%	0.09%	0.89%	0.85%	2.54%	0.05%	0.09%	0.88%	0.84%	2.51%	0.05%	0.09%	4.7%	4.4%	4.4%
26-Dec-07	1730	16.3	15.2	1830	45.7	1.6	0.98	1830	0.94%	0.88%	2.64%	0.06%	0.09%	0.89%	0.83%	2.50%	0.05%	0.09%	0.89%	0.83%	2.50%	0.05%	0.09%	4.6%	4.4%	4.4%
27-Dec-07	1860	16.4	14.0	1860	45.4	1.5	0.98	1840	0.88%	0.75%	2.44%	0.05%	0.08%	0.88%	0.75%	2.44%	0.05%	0.08%	0.89%	0.76%	2.47%	0.05%	0.08%	4.2%	4.2%	4.3%
28-Dec-07	1800	16.5	13.2	1940	45.0	1.5	0.96	1920	0.92%	0.73%	2.50%	0.05%	0.08%	0.85%	0.68%	2.32%	0.05%	0.08%	0.86%	0.69%	2.34%	0.05%	0.08%	4.3%	4.0%	4.0%
29-Dec-07	1840	16.4	12.3	1970	43.8	1.5	0.96	1920	0.89%	0.67%	2.38%	0.05%	0.08%	0.83%	0.62%	2.22%	0.05%	0.08%	0.85%	0.64%	2.28%	0.05%	0.08%	4.1%	3.8%	3.9%
30-Dec-07	1860	16.3	11.9	1990	41.7	1.5	0.95	1930	0.88%	0.64%	2.24%	0.05%	0.08%	0.82%	0.60%	2.10%	0.05%	0.07%	0.84%	0.62%	2.16%	0.05%	0.08%	3.9%	3.6%	3.7%
31-Dec-07	1850	16.1	11.4	1980		1.4	0.93	1950	0.87%	0.62%	0.00%	0.05%	0.08%	0.81%	0.58%	0.00%	0.05%	0.07%	0.83%	0.58%	0.00%	0.05%	0.07%	1.6%	1.5%	1.5%
MAD	**1268**	**74.2**	**23.2**	**1359**	**237.6**	**65.8**	**11.0**	**1724**	**5.9%**	**1.8%**	**18.7%**	**0.9%**	**5.2%**	**5.5%**	**1.7%**	**17.5%**	**0.8%**	**4.8%**	**4.3%**	**1.35%**	**13.8%**	**3.8%**	**3.8%**	32.5%	30.3%	23.9%
Jan	1491	8.8	5.8	1503	22.1	1.5	0.8	1658	0.6%	0.4%	1.5%	0.1%	0.1%	0.59%	0.38%	1.47%	0.05%	0.10%	0.5%	0.35%	1.3%	0.0%	0.1%	2.6%	2.6%	2.3%
Feb	1636	8.3		1662	20.9	1.2	0.7	1841	0.5%	0.0%	1.3%	0.0%	0.1%	0.50%	0.00%	1.25%	0.04%	0.07%	0.5%	0.00%	1.1%	0.0%	0.1%	1.9%	1.9%	1.7%
Mar	1271	7.3	20.5	1253	26.0	0.9	0.8	1422	0.6%	1.6%	2.0%	0.1%	0.1%	0.59%	1.64%	2.07%	0.06%	0.08%	0.5%	1.44%	1.8%	0.1%	0.1%	4.4%	4.4%	3.9%
Apr	1057	25.8	19.7	1059	112.4	104.7	22.2	1437	2.4%	1.9%	10.6%	**2.1%**	9.9%	2.44%	**1.86%**	10.62%	**2.09%**	**9.89%**	1.8%	1.37%	7.8%	**1.5%**	7.3%	**27.0%**	**26.9%**	**19.8%**
May	980	137.1	40.4	1159	649.9	296.8	71.7	2143	**14.0%**	**4.1%**	**66.3%**	**7.3%**	**30.3%**	**11.83%**	**3.49%**	**56.09%**	**6.19%**	**25.61%**	6.4%	1.89%	**30.3%**	**3.3%**	13.8%	**122.1%**	**103.2%**	**55.8%**
June	801	364.6	75.0	1231	997.3	86.2	8.8	2267	**45.5%**	**9.4%**	**124.4%**	1.1%	**10.8%**	**29.62%**	**6.09%**	**81.02%**	**0.72%**	**7.00%**	16.1%	3.31%	**44.0%**	0.4%	3.8%	**191.2%**	**124.5%**	**67.6%**
July	1152	122.0	22.0	1307	311.7	124.1	4.5	1787	**10.6%**	**1.9%**	**27.0%**	0.4%	**10.8%**	**9.34%**	1.69%	**23.85%**	0.34%	9.50%	6.8%	1.23%	**17.4%**	0.2%	6.9%	50.7%	44.7%	32.7%
Aug	1150	76.1	10.9	1228	158.4	69.1	9.7	1533	6.6%	0.9%	13.8%	0.8%	6.0%	6.19%	0.89%	12.89%	0.79%	5.62%	5.0%	0.71%	**10.3%**	0.6%	4.5%	28.2%	26.4%	21.1%
Sept	1123	61.8	8.4	1182	119.6	57.0	3.7	1444	5.5%	0.7%	10.7%	0.3%	5.1%	5.23%	0.71%	10.12%	0.31%	4.83%	4.3%	0.58%	8.3%	0.3%	3.9%	22.3%	21.2%	17.3%
Oct	1250	38.0	6.7	1281	242.4	27.2	3.9	1602	3.0%	0.5%	19.4%	0.3%	2.2%	2.97%	0.52%	18.92%	0.30%	2.12%	2.4%	0.42%	15.1%	0.2%	1.7%	25.4%	24.8%	19.9%
Nov	1432	26.3	9.5	1496	155.9	14.3	3.5	1667	1.8%	0.7%	10.9%	0.2%	1.0%	1.76%	0.64%	10.42%	0.23%	0.96%	1.6%	0.57%	9.4%	0.2%	0.9%	14.6%	14.0%	12.6%
Dec	1749	16.9	24.3	1829	54.6	2.8	1.2	1830	1.0%	1.4%	3.1%	0.1%	0.2%	0.92%	1.33%	2.99%	0.07%	0.15%	0.9%	1.33%	3.0%	0.1%	0.2%	5.7%	5.5%	5.5%

Appendix M2 Discharge curves at WSC stations located on the Peace River and its tributaries for 2007.



Appendix M3: Peace River daily discharge data and resultant flow exceedence curve based upon data from WSC Station - Peace River at Pine (07FA004).

day	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
1		990	602	1600	1430	1380	1700		958	1920	1460	1430	1770	1700	1690	1820	1640	1360	1560	1920	1380	1280	1480	1720	1570	1740	1550	1230	1490
2		910	753	1050	1430	1400	1700		957	1940	1450	1510	1760	1740	1700	1800	1630	1370	1650	1880	1360	1300	1440	1660	1740	1710	1540	1320	1410
3		1200	781	1110	1360	1420	1710		957	1990	1450	1610	1800	1870	1730	1790	1650	1400	1690	1890	1350	1350	1440	1630	1720	1750	1550	1580	1320
4		1260	745	1250	1360	1280	1800		958	1770	1470	1610	1820	1850	1780	1920	1710	1420	1770	1870	1400	1340	1260	1640	1520	1780	1600	1660	1460
5		1410	721	1490	1350	1000	1830		1010	1970	1460	1590	1810	1850	1820	1960	1790	1420	1800	1930	1350	1330	1260	1580	1570	1840	1720	1490	1450
6		1500	790	1790	1330	880	1780		1090	1840	1450	1570	1860	1490	1830	1980	1640	1400	1720	1830	1370	1450	1340	1580	1730	1690	1700	1600	1490
7		1400	857	1800	1280	1070	1890		1110	1840	1460	1610	1850	1450	1820	1950	1620	1380	1530	1760	1390	1450	1340	1620	1810	1630	1620	1510	1490
8		1230	882	1760	1050	950	1730		1280	1970	1440	1630	1910	1400	1800	1820	1600	1310	1520	1550	1380	1430	1450	1600	1820	1580	1290	1560	1470
9		1320	761	1800	985	880	1490		1330	1820	1450	1660	1920	1340	1750	1700	1570	1290	1520	1540	1360	1440	1360	1600	1800	1630	1210	1580	1500
10		1330	727	1720	1000	1070	1280		1320	2080	1430	1680	1550	1270	1770	1690	1580	1250	1430	1520	1370	1480	1340	1590	1900	1630	1240	1680	1530
11		1320	608	1730	1010	990	1040		1320	1930	1400	1640	1180	1110	1850	1690	1700	1230	1520	1540	1370	1460	1470	1580	1940	1630	1170	1650	1400
12		1300	722	1750	945	925	900		1300	1900	1390	1600	1050	1400	1920	1680	1620	1240	1520	1530	1380	1440	1540	1580	1730	1650	1110	1340	1480
13		1320	623	1740	863	925	890		1300	1910	1320	1600	1050	1630	1910	1680	1630	1250	1590	1530	1350	1460	1450	1570	1740	1640	1130	1410	1530
14		1450	488	1730	865	970	820		1370	1910	1290	1570	1050	1540	1900	1690	1640	1260	1650	1520	1380	1440	1540	1600	1900	1650	1110	1250	1680
15		1580	563	1720	750	965	580		1420	1800	1300	1590	790	1580	1950	1700	1630	1280	1610	1540	1440	1440	1590	1590	1770	1620	1060	966	1720
16		1500	695	1720	650	1160	670		1550	2010	1280	1580	774	1540	1920	1700	1630	1300	1660	1540	1410	1480	1680	1530	1880	1610	1080	1170	1490
17		1290	714	1720	680	1280	710		1500	1970	1300	1620	775	1750	1920	1720	1640	1310	1710	1540	1410	1490	1670	1570	1950	1660	1170	1490	1490
18		1110	678	1710	870	1400	680		1560	1920	1380	1650	779	1970	1910	1670	1660	1320	1460	1540	1460	1480	1510	1560	1910	1620	1190	1430	1510
19		1110	685	1700	848	1510	630		1570	1930	1430	1640	749	1850	1910	1720	1610	1350	1450	1540	1490	1450	1530	1560	1910	1620	1150	1570	1510
20		1100	674	1710	862	1600	470		1580	1960	1440	1590	739	2110	1900	1750	1570	1380	1420	1530	1480	1450	1520	1570	1870	1630	1080	1690	1480
21		970	608	1740	720	1530	640		1530	1920	1450	1600	742	2040	1900	1700	1560	1400	1410	1530	1390	1460	1520	1530	1860	1640	1160	1630	1500
22		1120	682	1800	760	1500	660		1590	2020	1400	1620	731	2000	1900	1720	1580	1440	1400	1540	1270	1470	1530	1540	1730	1620	1350	1520	1500
23		1010	490	1800	500	1600	700		1700	2040	1430	1640	801	1380	1900	1740	1600	1480	1400	1520	1370	1480	1540	1550	1710	1620	1390	1530	1470
24		980	601	1720	550	1410	910		1660	2060	1420	1660	890	1250	1910	1730	1630	1410	1410	1530	1410	1490	1560	1560	1600	1610	1200	1550	1420
25		1030	623	1730	600	1140	880		1640	2050	1440	1630	924	1920	1930	1730	1710	1300	1380	1530	1480	1470	1520	1560	1580	1490	1220	1600	1500
26		1300	533	1750	555	1290	820		1680	1950	1560	1590	851	1910	2040	1740	1520	1200	1390	1490	1510	1470	1530	1560	1600	1430	1080	1670	1490
27		1580	650	1720	475	1160	680		1680	1920	1610	1520	755	1890	2050	1750	1450	1200	1380	1490	1590	1460	1540	1570	1580	1440	1160	1710	1490
28		1590	716	1690	470	850	990		1680	1990	1590	1530	869	1880	2000	1760	1410	1210	1320	1480	1550	1540	1500	1570	1610	1460	1160	1610	1480
29		1580	768	1610	445	990	1070		1700	2130	1570	1540	1170	1880	1980	1750	1380	1270	1270	1460	1580	1480	1490	1560	1600	1450	1100	1690	1500
30		1580	761	1620	460	1230	1100		1750	2030	1560	1520	1440	1870	2000	1740	1400	1290	1250	1470	1630	1490	1510	1580	1610	1480	1190	1610	1650
31		1550	847	1630	438	1180	1240		1660	1860	1560	1500	1480	1870	2020	1730	1350	1300	1240	1480	1650	1510	1490	1580	1610	1690	1000	1490	1680
32		1410	894	1610	435	1100	1390		1660	1890	1600	1490	1160	1880	1980	1710	1320	1300	1240	1470	1650	1500	1470	1560	1580	1790	1100	1460	1760
33		1100	1070	1660	439	1040	1320		1670	1930	1700	1500	830	1890	1830	1690	1300	1300	1250	1470	1630	1500	1500	1500	1580	1720	1120	1480	1800
34		770	1430	1700	442	1280	1100		1710	1940	1810	1530	750	1900	1740	1660	1250	1300	1320	1470	1650	1510	1510	1510	1590	1730	1140	1350	1790
35		730	1330	1710	460	1210	1200		1760	1830	1830	1580	720	1910	1770	1690	1240	1300	1430	1480	1790	1480	1480	1510	1590	1720	1310	1150	1780
36		780	1440	1640	520	1110	1260		1720	1840	1820	1580	660	1770	1840	1720	1230	1300	1420	1490	1770	1490	1490	1490	1600	1740	1220	1130	1770
37		820	1480	1570	601	1270	1210		1760	1810	1810	1590	750	1850	1740	1700	1220	1310	1260	1480	1760	1490	1480	1510	1620	1740	1330	1200	1530
38		850	1580	1500	600	1220	1190		1700	1820	1810	1620	730	1930	1740	1550	1210	1310	1240	1480	1730	1510	1500	1520	1620	1790	1440	1170	1580
39		900	1390	1510	599	1160	1120		1700	1840	1800	1600	670	1980	1730	1570	1200	1310	1250	1490	1730	1500	1520	1650	1620	1760	1510	1200	1580
40		900	1370	1700	600	980	1180		1720	1820	1820	1430	680	1960	1700	1620	1190	1310	1240	1490	1780	1470	1540	1660	1610	1770	1310	1190	1510
41		925	1600	1750	600	860	1250		1790	1860	1650	1440	660	1930	1650	1650	1180	1300	1240	1460	1930	1480	1520	1800	1620	1810	1330	1410	1630
42		1030	1660	1750	600	830	1260		1720	1930	1590	1420	740	1920	1660	1830	1230	1300	1250	1470	1930	1500	1510	1830	1630	1780	1300	1490	1480
43		1020	1690	1750	600	860	1220		1760	1910	1550	1500	850	1910	1670	2070	1400	1320	1240	1470	1940	1540	1480	1890	1620	1850	1320	1480	1570
44		1070	1640	1750	600	950	1150		1790	2010	1700	1540	900	1940	1670	1820	1500	1310	1230	1500	1770	1790	1430	1900	1620	1810	1300	1500	1660
45		1150	1640	1640	600	980	1080		1680	1960	1650	1570	920	1800	1660	1770	1340	1310	1230	1500	1710	1770	1520	1900	1620	1770	1340	1480	1710
46		1200	1280	1650	599	910	980		1730	1910	1650	1560	820	1740	1650	1670	1270	1300	1230	1480	1800	1800	1510	1910	1630	1790	1300	1510	1790
47		1270	1300	1720	597	800	940		1820	1880	1710	1530	700	1750	1700	1780	1200	1300	1250	1500	1830	1790	1530	1900	1620	1650	1300	1480	1760
48		1300	1360	1700	592	830	930		1800	1870	1740	1500	580	1770	1830	1690	1050	1300	1230	1480	1810	1740	1510	1910	1600	1710	1310	1520	1740
49		1160	1140	1510	596	840	940		1770	1880	1730	1470	630	1830	1880	1650	950	1300	1250	1480	1900	1850	1510	1770	1610	1690	1490	1490	1330
50		990	835	1350	599	820	960		1780	1870	1720	1430	700	1780	1890	1910	900	1300	1240	1480	1920	1860	1530	1720	1630	1490	1650	1480	1600
51		1040	589	1210	606	770	990		1790	1850	1590	1390	800	1820	1880	1780	970	1310	1220	1480	1740	1820	1500	1720	1600	1480	1660	1520	1690

Appendix M3: Peace River daily discharge data and resultant flow exceedence curve based upon data from WSC Station - Peace River at Pine (07FA004).

day	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
52		1190	645	1130	604	728	1020		1810	1830	1530	1370	790	1800	1880	1720	920	1310	1190	1480	1690	1800	1520	1720	1560	1570	1570	1480	1690
53		1270	570	1110	602	718	970		1790	1810	1220	1350	820	1820	1870	1670	900	1310	1170	1480	1750	1800	1520	1700	1600	1650	1620	1500	1660
54		1210	805	1180	602	700	950		1810	1810	1090	1330	700	1860	1870	1690	895	1320	1160	1500	1690	1800	1510	1650	1620	1450	1570	1480	1680
55		1170	855	1200	604	660	940		1790	1810	1170	1240	580	1880	1860	1760	900	1320	1170	1470	1780	1800	1500	1580	1600	1460	1230	1420	1690
56		1200	810	1120	620	645	940		1760	1820	1090	1280	650	1890	1860	1690	905	1350	1180	1310	1570	1800	1460	1640	1630	1580	1340	1340	1710
57		1230	960	1110	505	720	950		1840	1810	1070	1250	770	1890	1910	1640	960	1380	1170	1320	1400	1770	1480	1640	1600	1630	1690	1480	1680
58		1170	1130	1100	425	760	980		1780	1780	1300	1210	810	1820	1960	1620	1000	1340	1170	1260	1330	1710	1490	1640	1610	1680	1630	1370	1610
59		950	1480	1110	435	720	1050		1870	1820	1410	1290	800	1160	1990	1800	950	1310	1170	1260	1310	1750	1490	1640	1610	1560	1630	1390	1750
60		760	1420	1130	500	640	1000		1760	1810	1620	1300	1000	1110	1990	1730	910	1300	1170	1260	1280	1740	1540	1640	1600	1600	1490	1180	1740
61		800	1390	1100	520	635	1330		1770	1850	1610	1440	1090	1120	1960	1710	905	1290	1210	1300	1230	1730	1520	1620	1600	1580	1460	1160	1680
62		930	1500	1020	502	640	1400		1780	1870	1440	1340	1070	1140	1900	1720	910	1280	1320	1350	1250	1760	1490	1660	1600	1510	1460	1170	1610
63		900	1560	925	500	660	1470		1590	1830	1410	962	1130	1110	1930	1720	925	1270	1400	1450	1270	1780	1540	1660	1610	1690	1460	1170	1310
64		755	1660	956	500	645	1380		1680	1850	1510	973	1210	1110	1970	1710	940	1280	1440	1470	1180	1790	1530	1560	1600	1720	1470	1160	1320
65		795	1570	970	504	650	1230		1650	1850	1460	1290	1280	1110	1870	1680	930	1290	1530	1470	1120	1830	1500	1540	1600	1570	1480	1170	1480
66		750	1550	930	508	663	1180		1810	1830	1620	913	1250	1110	1820	1700	900	1300	1430	1400	1090	1830	1490	1540	1600	1520	1130	1180	1550
67		710	1460	900	503	635	1320		1780	1830	1490	1000	1310	1110	1960	1680	930	1300	1410	1320	1200	1820	1510	1560	1660	1560	1190	1170	1560
68		500	1550	920	502	600	1550		1770	1850	1500	1030	1250	1100	1950	1680	910	1310	1410	1370	1280	1690	1490	1570	1670	1620	1210	1170	1600
69		480	1520	900	500	658	1550		1770	1790	1410	1050	957	1230	1940	1640	895	1300	1450	1510	1190	1830	1490	1520	1690	1510	1020	1160	1420
70		515	1500	960	504	640	1570		1790	1860	1140	870	1110	1330	1970	1690	890	1290	1590	1470	1180	1820	1500	1520	1700	1490	863	1160	1500
71		690	1500	960	507	650	1580		1790	1810	1110	913	1510	1330	1960	1670	895	1280	1670	1460	1240	1700	1500	1520	1800	1380	897	1180	1500
72		700	1520	910	509	682	1590		1750	1820	1200	996	1470	1330	1840	1660	880	1270	1680	1440	1190	1700	1490	1530	1810	1510	719	1180	1350
73		880	1680	900	503	670	1600		1840	1800	1300	805	1510	1340	1820	1660	870	1270	1670	1340	1160	1710	1510	1540	1830	1540	715	1160	1340
74		850	1640	910	502	638	1590		1750	1790	1240	777	1470	1340	1900	1690	885	1270	1670	1280	1280	1510	1510	1540	1740	1370	818	1090	1380
75		825	1630	960	500	670	1580		1780	1860	1250	774	1350	1330	2000	1690	890	1270	1670	1370	1260	1520	1460	1530	1660	1350	924	963	1500
76		800	1520	1160	500	750	1540		1750	1850	1290	846	890	1360	2020	1680	895	1260	1660	1420	1280	1630	1480	1490	1660	1490	898	1040	1190
77		1070	1520	1170	490	780	1520		1750	1850	1120	766	1140	1720	2000	1660	895	1260	1630	1390	1300	1650	1330	1470	1630	1450	974	1120	904
78		1050	1490	1030	450	758	1550		1770	1880	915	1120	1300	1730	1800	1660	890	1250	1510	1390	1260	1680	1280	1480	1680	1450	969	1070	1100
79		935	1550	1050	441	720	1500		1770	1860	885	1180	1130	1770	1700	1650	900	1250	1360	1400	1250	1660	1280	1490	1730	1570	973	1080	1140
80		705	1580	1080	455	770	1390		1720	1750	1070	1440	1320	2040	1680	1650	940	1240	1320	1320	1180	1660	1290	1500	1780	1410	980	1060	1270
81		700	1590	1070	535	757	1500		1750	1830	1210	1260	1500	2040	1670	1630	915	1230	1240	1260	1230	1540	1280	1510	1860	1120	965	1070	1180
82		650	1590	1000	472	728	1490		1770	1850	1260	1510	1310	1960	1670	1650	890	1210	1220	1340	1310	1530	1260	1530	1790	1190	1170	1080	1110
83		590	1530	970	480	690	1600		1700	1860	1440	1530	1210	1980	1660	1650	875	1200	1280	1410	1340	1600	1200	1500	1740	1030	1100	1100	1060
84		830	1360	960	490	620	1630		1830	1890	1660	1270	1260	2240	1660	1670	860	1180	1380	1300	1460	1620	1050	1500	1820	887	1120	1090	908
85		815	1510	1000	440	520	1590		1770	1860	1560	1120	1260	1870	1650	1630	790	1170	1240	1190	1550	1530	1050	1510	1690	1030	1130	1090	1120
86		860	1510	1160	422	550	1560		1770	1870	1610	1250	1300	1880	1600	1670	774	1160	1250	1170	1630	1410	1000	1500	1650	1520	1120	1100	1160
87		1000	1510	1300	460	525	1600		1810	1690	1600	1360	1370	1860	1500	1690	711	1160	1250	1140	1650	1410	1020	1540	1540	1600	1120	1090	1130
88		790	1520	1300	580	590	1700		1810	1800	1610	1310	1240	1880	1420	1590	566	1150	1250	1150	1660	1520	1020	1540	1460	1160	1170	1100	1040
89		600	1540	1310	435	530	1600		1850	1860	1620	1070	992	1900	1380	1600	519	1150	1220	1170	1660	1530	975	1540	1460	1020	1130	1100	1020
90		675	1550	1310	490	545	1380		1870	1840	1630	1060	656	1920	1360	1610	545	1150	1240	1260	1620	1250	1080	1560	1440	919	1300	1170	999
91		640	1560	1300	375	520	1500		1870	1860	1670	800	603	1910	1650	1410	545	1160	1340	1290	1610	1090	985	1720	1460	936	1310	1160	1050
92		875	1580	1300	325	620	1550		1880	1790	1710	1030	938	1900	1720	1390	532	1170	1530	1290	1670	1130	1050	1910	1470	1170	1310	1140	1160
93		805	1790	1300	320	680	1520		1890	1840	1600	1380	1120	1840	1710	1380	528	1170	1550	1360	1440	1080	1230	1960	1560	1110	1320	1240	1260
94		700	1280	1300	320	665	1510		1910	1850	1520	1270	1080	1860	1710	1380	519	1180	1560	1430	1370	1220	1350	2020	1550	1260	1300	1350	1090
95		640	1590	1300	320	743	1580		1870	1830	1420	1120	1120	1910	1720	1390	522	1180	1490	1260	1280	1220	1430	1830	1530	926	1470	1210	1200
96		570	1580	1300	322	642	1630		1930	1730	1350	1040	919	1920	1590	1360	665	1190	1500	1320	1480	1400	1580	1820	1500	1090	1450	1090	1130
97		570	1570	1260	311	855	1700		1950	1560	1280	945	633	1870	1520	1300	800	1190	1340	1400	1470	1520	1560	1680	1510	1300	1320	1230	1010
98		565	1580	1230	428	730	1700		1920	1550	1200	866	839	1850	1460	1250	782	1200	1390	1470	1510	1320	1520	1990	1520	1110	1520	1020	1140
99		565	1580	1260	418	880	1590		1950	1570	1060	1010	1110	1820	1470	1250	680	1200	1390	1520	1510	636	1640	1950	1540	1060	1420	988	1260
100		535	1530	1230	393	1030	1630		1880	1580	1170	1350	1070	1810	1440	1110	765	1210	1410	1520	1440	600	1570	1770	1520	839	1080	1150	1330
101		560	1550	1260	384	1090	1700		1960	1500	1230	1510	1020	1820	1290	1320	948	1220	1470	1510	1300	820	1570	1560	1430	437	1210	1210	1270
102		595	1530	1290	940	1140	1690		1960	1480	1210	1400	990	1850	1190	1460	1100	1210	1410	1500	1480	1000	1650	1590	1460	655	1230	1120	1330

Appendix M3: Peace River daily discharge data and resultant flow exceedence curve based upon data from WSC Station - Peace River at Pine (07FA004).

day	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
103		635	1540	1250	1000	1250	1500		2060	1540	1370	1070	754	1890	1570	1330	932	1180	1370	1490	1500	760	1570	1310	1410	743	1310	1070	1470
104		600	1490	1140	553	1260	1380		1990	1620	1150	1090	650	1920	1680	1340	733	1190	1400	1480	1530	800	1420	1230	1460	948	1370	1060	1010
105		535	1520	1110	624	1210	1390		2050	1770	808	1260	1040	1900	1570	1360	612	1200	1460	1520	1500	1030	1370	1280	1450	947	1360	864	685
106		595	1470	1070	788	1230	1420		2080	1790	1020	1260	1080	1980	1620	900	614	1230	1470	1510	1500	950	1360	1140	1250	1090	1340	926	371
107		630	1490	1090	767	1280	1430		2040	1780	1150	1130	926	1950	1620	568	623	1300	1460	1550	1400	1000	1320	980	1240	1060	1280	1040	362
108		655	1500	1030	783	1390	1440		2030	1700	1240	874	1070	1910	1580	829	790	1350	1360	1570	1280	1100	1310	935	1240	881	1280	1110	371
109		695	1540	1140	827	1420	1480		2030	1770	1200	958	1060	1970	1650	952	814	1400	1230	1580	1480	1250	1050	1010	1420	708	1280	1130	861
110		800	1550	1180	826	1410	1410		2040	1770	1120	908	805	2020	1690	823	903	1500	1250	1590	1550	1300	1080	920	1540	1020	1280	971	928
111		880	1540	1150	742	1240	1400		2020	1690	1040	1140	539	2000	1590	781	954	1710	1370	1610	1480	1190	1170	763	1570	1020	1200	1070	839
112		825	1550	1170	823	1140	1490		1990	1590	674	974	755	2010	1560	1080	885	1700	1300	1630	1450	1050	1200	1020	1770	975	1350	1110	674
113		920	1520	1110	838	770	1700		1990	1710	735	1240	990	2060	1690	1290	834	1700	1480	1600	1280	935	1460	1120	1710	942	1330	872	1280
114		820	1560	1180	731	703	1740		2060	1690	820	1440	1120	2040	1640	886	796	1720	1370	1630	1090	1120	1530	1190	1660	991	884	807	1260
115		784	1590	1200	747	1100	1700		2060	1680	750	1240	1230	1990	1540	997	733	1800	1220	1730	968	1270	1430	1060	1750	1020	943	830	1250
116		739	1550	1200	881	1110	1720		2030	1720	660	1050	1100	1940	1550	1010	442	1900	1400	1150	1520	1300	1110	982	1510	1080	1100	816	1320
117		609	1360	1240	669	1150	1720		1790	1760	630	1200	1120	1870	1460	740	431	1980	1460	1290	1620	1240	1280	758	1310	1340	840	847	1460
118		433	905	1170	777	1230	1570		1630	1720	670	1350	858	1860	1480	657	507	2340	1640	1350	1640	1240	1210	781	1300	1310	832	714	1340
119		420	695	1220	647	1320	1560		1690	1710	655	1270	1250	1880	1330	630	475	2300	1900	1390	1550	1300	809	1220	1470	1370	876	643	1080
120		569	703	1210	635	1220	1620		1670	1700	644	1270	1390	1940	1310	780	435	2260	1860	1460	1480	1140	1140	1240	1090	1240	664	582	967
121		356	725	834	543	1280	1450		1740	1710	714	1080	1020	1860	1220	500	440	2250	1870	1320	1100	1050	1450	1230	868	1120	548	646	1040
122		366	829	959	635	1300	1380		1570	1590	831	1040	838	1790	1300	600	486	2300	1770	1060	1040	1260	979	1250	836	1050	705	678	1060
123		388	833	930	866	1420	1530		1420	1550	749	785	736	1820	1010	700	434	2400	1600	705	1490	1450	622	982	670	1160	831	603	1070
124		405	811	747	1010	1370	1580		1480	1720	828	951	619	1860	1280	690	441	1700	1350	1020	1560	1200	888	693	611	1270	727	497	1160
125		396	1120	648	887	1390	1510		1580	1740	838	831	592	1900	1210	630	443	1600	1500	884	1480	1220	874	710	744	1280	822	433	1410
126		393	1140	688	747	1390	1570		1630	1730	784	1000	739	1920	970	590	444	1490	1750	695	1420	1370	811	1100	812	1340	588	460	1090
127		413	1210	851	815	1360	1590		1550	1770	839	1160	963	1940	890	600	446	1400	1340	906	1490	1320	1330	951	822	1160	615	696	1100
128		385	1190	909	634	1290	1530		1520	1430	828	1500	1070	1950	943	650	451	1400	1380	873	1460	915	1550	841	779	1060	549	796	1190
129		382	1490	782	725	1380	1610		1150	861	760	1640	1220	1920	472	690	451	1460	1440	654	1380	1450	1370	932	602	1100	717	866	1180
130		386	1500	866	896	1310	1510		1000	759	760	1440	1160	1900	589	700	459	1510	1110	577	1590	1360	1180	814	561	842	939	841	1190
131		416	1580	1190	1430	1310	1590		1200	732	810	1520	810	1800	686	800	491	1390	823	640	1580	1500	1400	607	501	721	643	815	1170
132		377	1120	1170	1460	1280	1620		1340	1010	770	1290	612	1700	403	900	517	1320	905	723	1570	1490	1270	769	680	979	566	851	1100
133		380	1130	1230	1440	1250	1590		1290	1140	716	843	817	1880	469	960	552	1290	1160	755	1560	1490	660	1170	1040	794	827	843	1100
134		389	1120	1200	1470	1120	1600		1190	1000	655	1050	954	1850	477	715	574	1300	1240	1040	1570	1280	800	1430	1030	777	947	599	1080
135		424	1370	1010	1520	1260	1590		1380	893	777	1380	825	1840	472	512	600	1700	1330	1020	1560	1040	1090	1440	913	1000	712	852	1140
136		514	1140	958	1530	1440	1550		1330	940	964	1400	946	1800	521	533	633	1600	1370	943	1270	1010	523	1280	986	991	887	1040	1130
137		436	1150	1060	1520	1460	1610		1250	1110	725	1670	1170	1890	713	698	648	1550	1340	883	1830	1490	447	808	974	754	684	1060	1130
138		445	1230	1050	1560	1500	1630		1220	1340	779	1560	1250	1710	779	787	659	1310	856	898	1720	1480	402	595	918	847	702	958	1150
139		439	1280	1320	1560	1810	1230		1270	1260	1120	1680	749	1810	589	712	663	1050	893	1150	1780	1390	515	568	911	850	849	771	1170
140		437	1310	1190	1540	1740	1150		1380	1300	1130	1020	720	1870	560	689	665	842	1570	1020	1800	1490	473	565	1150	920	821	637	1150
141		424	1410	910	1470	1440	1300		1650	1250	699	1400	1020	1900	545	659	641	873	1700	980	1810	1390	674	619	1040	676	663	460	1150
142		428	1310	726	1530	1370	1420		1560	1260	876	1580	957	1840	535	650	620	1030	1330	901	1510	1260	547	605	1280	705	627	604	1170
143		402	1170	576	1490	1690	1300		1510	1150	1330	1500	984	1760	528	644	658	1230	1270	935	1430	1390	853	547	1150	686	624	465	1100
144		411	970	548	1660	1690	1330		1330	970	1240	1730	949	1810	524	649	625	1380	885	924	1520	1430	636	515	649	525	619	501	1160
145		443	890	537	1620	1630	1140		1220	878	1080	1160	772	1790	520	664	608	1410	682	1210	1720	1460	423	556	577	505	753	591	1190
146		459	900	578	1370	1570	1400		1630	1300	1010	846	717	1800	550	678	619	1060	819	1340	1470	1440	414	521	614	523	746	579	1140
147		522	1320	660	1380	1560	950		1480	1420	1090	1100	693	1810	580	665	667	902	1070	1240	1280	1540	413	528	666	711	833	668	1100
148		501	1750	637	1320	1550	942		1540	1380	900	1080	741	1490	548	650	642	1060	1120	1190	1380	1440	539	570	644	807	848	543	1190
149	1100	438	1460	500	1330	1530	976		1730	1200	799	1060	889	1730	489	607	671	1350	1150	1140	621	1370	994	612	532	584	809	559	1260
150	1050	427	1190	504	1350	1440	1010		1590	1100	1090	1110	939	1840	391	588	673	1490	1090	910	602	1420	1160	651	533	510	715	786	1310
151	1290	440	1160	534	1270	1230	937		1490	961	1510	1260	889	1920	421	559	661	1470	1030	771	965	1370	1050	672	613	632	927	663	1340
152	1550	469	1270	632	1050	1410	1000		1580	1020	1220	1870	880	1450	423	525	646	1700	1030	745	1040	1230	920	759	603	579	973	827	1380
153	1390	592	1540	760	923	1360	1110		1460	1050	1210	2510	819	1650	369	510	611	2240	1060	740	743	1150	826	636	659	790	930	629	1140

Appendix M3: Peace River daily discharge data and resultant flow exceedence curve based upon data from WSC Station - Peace River at Pine (07FA004).

day	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
154	1180	484	1250	764	945	940	1370		1800	999	1320	1960	667	1830	362	508	616	2200	1090	735	772	1270	1160	624	580	745	767	545	1070
155	1620	484	1170	709	721	806	1380		1840	1130	1160	1450	821	2080	357	506	599	2360	978	949	838	1160	1060	633	549	646	799	519	1460
156	2020	472	1290	743	560	1110	1480		1840	1180	865	1340	1370	1720	392	510	602	2350	987	851	604	844	801	654	570	793	777	512	1540
157	1600	499	1080	764	527	1430	1610		1550	1080	1080	1060	1300	1400	444	527	573	2530	1010	872	637	692	751	649	597	760	962	498	1240
158	1370	533	905	731	637	1570	1530		818	1090	782	1320	991	1350	428	578	658	2340	910	777	946	1190	791	894	587	583	1140	492	1350
159	1170	520	800	673	600	2000	1370		1380	1360	744	1440	885	1370	450	665	692	2270	813	887	1190	1350	1170	978	523	712	1010	503	1420
160	1050	477	820	677	931	2500	977		1500	1350	786	1460	801	1370	373	849	681	2370	776	828	1170	1400	992	909	553	772	820	483	1110
161	980	458	750	678	889	2390	1130		1330	1250	1140	1110	787	1330	448	934	667	2370	778	788	1210	1020	922	864	808	751	750	477	950
162	1110	407	920	669	915	1860	1310		1650	1410	673	1180	898	1160	397	822	619	2270	702	735	1340	1500	2010	846	822	624	1160	475	1100
163	1280	483	820	690	944	1770	1560		1710	1810	680	1880	845	1230	547	731	611	2200	707	575	1160	1610	3230	837	706	534	1110	489	952
164	1420	536	697	714	999	1760	1560		1740	1770	970	2330	979	1330	554	754	751	2180	673	549	963	1850	3670	814	667	591	1360	582	888
165	1580	527	720	722	831	1860	1520		1930	1930	1060	2560	982	882	519	1230	593	2040	659	546	1370	1690	2800	774	642	778	1530	539	850
166	1350	499	685	822	771	2010	1510		1760	1780	906	1770	925	786	735	1120	629	2060	641	574	1400	1610	2100	754	630	776	1420	479	842
167	1140	486	862	787	662	1880	1430		1950	1840	959	1530	746	830	582	923	785	1880	710	614	1150	1590	1800	762	677	827	1380	474	826
168	1190	516	887	691	823	1360	1580		1890	1810	928	1320	962	826	590	879	819	1980	855	670	1240	1420	1700	827	758	749	1420	485	889
169	1290	615	1050	763	858	885	1670		1700	1790	637	1620	861	835	544	796	784	2240	826	578	1590	907	1600	925	726	693	1280	481	1150
170	1400	785	905	817	802	891	1700		1750	1740	1120	1360	736	821	525	734	767	2550	762	533	1270	780	1450	837	1030	918	984	467	1320
171	1510	1020	785	720	1140	1030	1760		1760	1720	1500	1120	685	1340	513	701	798	2490	836	541	907	926	1350	692	982	731	1300	692	1440
172	1550	973	770	682	1480	1020	1660		1930	1800	1380	1190	734	905	502	672	695	2380	741	552	945	1110	1300	654	949	625	1380	919	1470
173	1490	922	755	715	1310	1020	1630		2010	1700	1140	1210	819	633	540	651	653	2320	809	542	951	1150	1250	627	770	872	1290	913	1470
174	1530	796	777	557	1260	1220	1600		2030	1710	1180	999	710	662	882	572	634	2470	1130	565	929	1240	1220	664	604	885	1100	991	1500
175	1560	688	766	543	1100	930	2010		1980	1700	1300	788	760	869	1310	461	597	2430	1350	511	1100	969	1100	946	1020	622	883	862	1410
176	1500	599	770	529	1230	784	1770		1960	1520	1020	984	865	901	987	617	571	2490	1260	487	1070	724	1050	774	944	605	948	821	1370
177	1410	622	748	510	1350	904	1840		1820	1400	965	1450	835	675	844	613	622	3320	1290	482	809	688	975	637	937	533	651	967	1430
178	1310	551	798	505	1260	872	1720		1800	1330	1240	1430	728	545	814	582	820	4030	1130	472	625	939	950	834	971	687	668	988	1390
179	1360	522	721	516	1390	858	1780		1790	1430	1500	1450	743	528	966	750	867	4840	1060	468	959	957	970	576	963	762	876	792	1350
180	1530	561	661	487	1740	919	1810		1820	1480	1280	1350	799	522	1240	966	809	5410	1040	462	1480	1140	1080	629	903	829	874	927	1460
181	1380	507	675	506	1730	1000	1550		1770	1480	1170	1210	764	577	1130	855	557	5300	951	470	1250	1130	1200	529	912	620	1130	886	1160
182	1180	552	929	596	1750	743	1720		1700	1520	1170	709	640	631	1060	711	657	5260	932	506	847	938	1300	649	828	509	914	872	1130
183	1380	578	808	506	1490	626	1830		1700	1150	851	787	577	642	1040	562	545	5280	946	509	613	870	1250	918	2040	522	1100	977	1360
184	1880	565	649	508	1860	495	1770		1780	1110	1070	834	567	769	1020	953	571	5410	922	536	566	786	1300	1210	2330	529	1080	1070	1380
185	1940	552	780	544	2220	530	1760		1720	752	1220	798	573	1010	963	1530	1090	5380	831	565	555	687	1100	1460	1720	514	1250	1020	1580
186	1860	541	590	616	3340	812	1600		1670	1110	1450	790	506	783	905	1370	1630	5340	758	503	555	856	895	1630	1540	750	1170	676	1550
187	1710	521	607	623	3510	749	1460		1780	1580	1440	1040	395	567	873	1120	1570	5250	710	519	823	725	731	1690	1370	882	1160	509	1540
188	1480	539	669	640	3520	844	1310		1780	1610	1290	966	374	500	831	919	1500	5320	732	982	1050	612	724	1680	1570	1120	958	448	1430
189	915	612	652	612	3890	917	1280		1820	1410	1530	699	358	659	824	823	1310	5260	886	963	990	634	608	1680	1400	974	897	469	1410
190	1090	592	562	547	4040	740	1430		1930	1530	1590	694	301	663	793	785	1200	5350	834	760	806	735	659	2060	1370	642	1220	432	1390
191	1350	559	578	561	3950	914	1630		1900	1230	1570	833	320	685	759	706	1090	5370	717	793	702	951	793	2080	1480	744	1200	577	1330
192	1470	540	658	576	3850	1310	1530		1440	1200	1690	899	325	673	729	680	1200	5390	680	638	769	882	842	2190	1550	1020	1300	462	1350
193	1470	498	644	524	3710	1470	1550		1320	1300	1620	1250	307	593	680	699	1220	5380	602	447	901	973	773	2550	1460	928	1540	389	1330
194	1460	552	558	498	2990	1510	1470		1290	1550	1580	1270	342	532	654	821	1150	5410	609	516	1090	965	803	3020	1340	688	1550	402	1120
195	1550	460	585	500	2950	1580	1630		1440	1740	1420	1060	300	499	615	869	1340	5500	580	733	810	998	832	3490	1490	897	1540	452	1230
196	1490	435	641	639	3020	1180	1300		1430	1620	1370	850	271	651	624	744	1240	5460	555	658	656	1040	604	3520	1460	1370	1550	484	1250
197	1570	448	931	616	3040	1150	1560		1410	1740	1050	734	598	522	687	721	1040	5430	611	926	600	1100	606	3280	1510	1460	1500	417	1320
198	1570	458	1060	567	2990	1060	1520		1390	1420	1180	883	553	498	637	604	1220	5410	639	1000	613	1120	580	2930	1540	1340	1550	572	1390
199	1590	580	650	550	2930	1530	1480		1370	1600	1170	853	426	567	600	630	1490	5480	616	875	892	1570	711	2420	1650	914	1550	796	1360
200	1510	597	457	538	2080	1930	1310		1190	1550	1270	878	437	490	617	898	1460	5720	502	699	978	1540	953	2240	1590	937	1530	631	1340
201	1410	532	886	522	1080	1950	1230		1260	1640	1200	865	417	480	610	785	1370	5530	496	706	1000	1480	1230	2400	1400	1150	1420	760	1330
202	1330	522	1420	498	1110	1660	1010		1350	1590	1250	858	323	507	684	1000	1320	5280	564	935	1010	1860	1790	2750	1500	1290	1420	900	1230
203	1280	486	1470	482	1280	1580	1050		1440	1660	1640	813	375	630	615	1240	1180	4840	711	939	786	1800	1280	2630	1600	1240	1480	987	1140
204	1090	472	1310	479	2180	1680	1180	379	1260	1570	1480	779	587	800	590	1100	1360	5020	698	1050	751	1810	963	2710	1530	1360	1440	949	1210

Appendix M3: Peace River daily discharge data and resultant flow exceedence curve based upon data from WSC Station - Peace River at Pine (07FA004).

day	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
205	1240	581	1000	518	2190	1670	1240	392	1420	1510	1530	838	575	910	568	701	1570	5330	676	1030	592	1480	946	2660	1480	1220	1370	979	1240
206	1260	565	1210	489	2140	1600	1230	404	1380	1490	1530	972	597	820	562	669	922	5630	551	710	494	1650	885	2520	1300	1270	1670	1060	1050
207	1130	631	1230	469	1370	1660	1240	342	1100	1720	1620	1020	489	720	575	866	1020	5650	549	645	660	1760	883	2620	819	974	1510	956	1260
208	1110	663	1210	469	1450	1560	1230	324	1240	1720	1490	1030	567	650	563	704	912	5540	540	795	789	1650	975	2600	660	1230	1450	1010	1230
209	1030	655	1290	452	1520	1590	1150	312	1770	1630	1430	1020	346	750	581	785	996	5530	628	1050	777	1740	1200	2550	1030	1170	1190	868	1180
210	959	649	1240	474	1900	1630	1250	447	1540	1730	1170	685	392	960	696	952	694	5490	1040	921	901	1310	1080	2490	1100	1080	1350	648	1220
211	766	630	940	454	1920	1570	1160	552	1440	1540	1420	796	527	1070	1290	762	587	5420	942	984	1300	1110	938	1920	1380	1250	1310	454	1310
212	1110	616	1390	545	2020	1680	1050	627	1420	1430	1400	909	559	1130	1250	522	662	5460	909	902	975	989	757	1760	1330	1370	1240	449	1320
213	1210	691	1280	566	2090	1540	1060	547	1600	1170	1480	796	592	1260	944	554	918	5580	977	602	522	1040	775	1800	1200	1340	1310	544	1320
214	1150	590	1290	434	2070	1580	1060	494	2400	1080	1440	650	602	1100	817	1050	739	5590	822	462	587	1260	864	1450	658	1270	1290	973	1280
215	1120	719	1570	448	2020	1530	944	430	2210	1180	1460	601	435	940	774	1280	802	4730	549	539	1010	1580	1020	1390	880	1270	1260	887	1300
216	1090	668	1080	491	1890	1610	780	425	2020	1460	1360	493	378	880	1070	1160	775	3160	519	968	1230	1290	739	1190	520	1420	1420	677	1260
217	948	612	944	433	1820	1620	530	374	1890	1540	1410	435	290	920	1260	1040	631	1270	740	1020	811	1310	696	1150	684	1420	1480	607	1220
218	1060	600	806	414	1570	1600	740	345	1690	1630	1410	556	338	870	1300	875	540	2200	850	838	547	1130	587	1330	779	1360	1480	493	1310
219	1160	666	741	411	1480	1590	858	315	1700	1570	1510	757	357	930	1180	729	504	4210	862	699	595	927	697	1300	746	1410	1190	449	1250
220	1340	731	561	406	1510	1570	896	341	1520	1590	1510	977	464	860	930	1010	500	4610	653	462	500	729	882	1380	958	1280	1390	602	1270
221	1200	723	591	400	1120	1520	951	394	1220	1610	1290	1100	435	770	1100	980	533	4610	514	434	506	827	859	1390	1030	1130	1310	848	1110
222	1190	738	670	388	1040	1560	843	291	1330	1540	1220	1210	372	640	1770	943	505	4560	674	525	771	1120	673	1280	887	1360	1220	1050	1130
223	1060	723	670	612	961	1590	790	317	1500	1270	1210	906	315	610	1070	923	486	3550	961	764	565	1050	538	1210	779	1460	1350	1030	1310
224	755	685	679	510	607	1310	760	317	1620	1190	1550	768	402	820	947	1020	480	3450	927	937	451	1040	497	1430	778	1380	1450	684	1210
225	660	705	685	639	612	1240	862	340	1640	1240	1380	961	571	1050	1150	911	476	3410	734	1170	547	888	703	1570	1050	1400	1440	446	1290
226	1170	885	714	696	455	1260	873	402	1420	1350	1560	769	674	1120	965	812	472	3440	623	1180	421	641	695	1630	1120	1340	1360	485	1240
227	1030	831	700	372	462	1270	942	372	1420	1150	1410	841	493	1100	1070	900	470	3460	705	946	436	656	842	1550	1150	1260	1480	686	1370
228	991	892	451	649	721	1320	1100	387	1300	1260	1370	1080	473	800	1040	1010	487	3380	608	746	432	809	701	1500	1130	879	1510	476	1400
229	926	875	491	888	641	1280	1280	368	1310	1310	1310	1040	483	720	1070	1000	594	2920	469	929	716	764	763	1270	1080	1100	1540	424	1440
230	711	841	654	1170	699	1230	1150	394	1500	1200	1480	841	296	830	988	981	653	2230	435	1100	833	1120	666	1120	1120	1260	1510	437	1420
231	594	870	751	1390	887	1460	1280	454	1490	1070	1430	513	309	1000	880	1180	622	2010	534	1080	801	1140	622	1190	1160	1390	1560	435	1450
232	555	980	818	1350	819	1210	1470	379	1450	1230	1410	594	642	1060	1010	1000	593	1920	582	1300	824	1060	513	1280	987	647	1450	423	1450
233	713	1040	778	1340	660	1170	1440	513	1220	1090	1430	687	664	1080	1050	862	589	1860	450	1300	665	880	567	1320	860	662	1370	534	1120
234	783	835	692	1390	643	1350	1560	461	1340	940	1480	850	469	1030	932	869	621	1920	567	1190	476	807	600	1390	900	565	1540	589	1130
235	752	700	585	1450	1450	1430	1580	443	1180	1150	1380	830	475	850	804	1050	607	1930	538	948	625	1400	619	1330	889	465	1420	510	1100
236	851	610	741	1530	1320	1410	1530	363	1240	1280	1430	715	541	550	1150	1030	600	1900	470	1220	780	1320	801	1420	970	488	1350	621	1080
237	944	585	795	1530	1210	1480	1520	371	1220	1380	1380	621	402	650	2080	928	634	1860	515	1390	736	1210	743	1400	1200	564	1480	690	1090
238	896	610	678	1510	1300	1360	1630	427	1160	1290	1320	405	468	760	2130	957	631	1900	713	1370	796	1220	647	1410	1120	557	1240	450	932
239	905	680	566	1500	1230	1090	1470	539	1230	1410	1140	465	628	903	1740	864	572	1900	624	1400	831	1270	583	1520	1120	557	1260	431	959
240	1110	790	771	1600	1310	1200	1580	678	1170	1260	1180	853	723	880	1380	727	557	1840	480	1350	777	994	822	1450	1140	555	1250	620	1210
241	1110	820	706	1590	1400	1360	1610	917	1320	1110	1440	1200	834	1040	1070	829	594	1940	504	1150	551	732	763	1500	1150	556	1430	804	1080
242	1040	930	644	1590	1340	1320	1580	773	1580	1320	1430	1230	684	697	885	929	604	1860	570	672	470	933	607	1470	937	552	1290	560	1160
243	1050	1080	773	999	900	1300	1540	486	1630	1370	1310	1150	519	407	1320	830	534	1840	518	1360	739	628	632	1310	760	568	1260	641	1190
244	906	1110	920	986	1130	1190	1550	479	1560	1340	1280	991	330	514	1420	988	546	1880	463	1340	763	680	692	1440	745	687	1240	639	1020
245	774	1200	943	1230	1510	1030	1300	435	1510	1190	894	908	496	726	1290	1060	639	1880	791	1470	684	772	624	1380	1190	707	1140	627	822
246	721	1310	936	1180	1590	911	1380	430	1570	1160	878	976	402	707	1240	993	491	1880	758	1430	644	705	480	1450	1190	708	1040	425	1050
247	702	1070	1120	898	1530	638	1480	426	1590	1080	723	1030	496	736	1180	728	477	1880	715	1350	618	512	620	1410	1180	661	992	429	1260
248	1160	1120	1270	780	1200	543	1600	464	1580	1020	915	1060	538	1180	887	455	495	1870	876	1070	716	538	841	1470	1160	611	844	521	1290
249	1290	1110	1220	757	1510	1070	1530	438	1510	1000	1240	1090	812	1330	835	518	902	1890	866	651	740	1000	752	1600	1050	599	1110	866	1110
250	1200	1190	1170	765	1710	1130	1510	360	1480	841	1340	1170	455	610	917	810	801	1840	764	655	1280	1210	719	1470	874	627	995	790	1220
251	1240	1360	1090	1160	1700	1250	1590	334	1470	1080	1390	859	386	412	1130	771	688	1880	1080	1240	1130	1150	699	993	855	633	1040	570	1210
252	1230	1480	1050	1230	1600	1600	1480	375	1510	1290	1160	934	532	567	1060	747	549	1860	1410	1120	1220	1170	606	1050	800	639	1100	450	1090
253	1380	1390	1160	1270	1390	1810	1570	336	1530	1460	1080	1030	474	886	1110	682	443	1850	1250	1020	1040	1030	524	1460	1000	624	987	387	1150
254	1190	1280	1150	1210	1500	1840	1550	342	1430	1400	1070	1490	419	952	1270	446	465	1880	1130	945	1240	1160	695	1410	1120	760	769	376	1260
255	1080	1180	1150	938	1470	1800	1530	354	1300	1230	970	1520	602	1200	1210	573	807	1850	1320	450	1240	1350	702	1450	1280	1070	770	509	1300

Appendix M3: Peace River daily discharge data and resultant flow exceedence curve based upon data from WSC Station - Peace River at Pine (07FA004).

day	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
256	1110	1110	1140	1110	1410	1540	1450	352	1450	1500	1000	1650	597	1140	1280	951	1040	1860	1590	424	1500	1460	683	1520	1170	1030	950	728	1110
257	1180	1100	1120	986	1580	1450	1800	319	1460	1480	1070	1530	600	1120	1340	1260	903	1850	1580	981	1490	1460	979	1540	903	888	1050	436	1270
258	1160	940	1190	939	1620	1400	1980	325	1600	1540	1070	1600	598	1190	1620	1300	833	1830	1600	902	1570	1470	891	1420	1210	951	1080	432	1170
259	1110	920	1150	1070	1660	1510	2040	338	1510	1580	901	1590	674	1430	1220	1390	644	1840	1690	1050	1520	1430	590	1450	1240	934	1260	441	1090
260	1280	970	1110	1400	1590	1580	1900	347	1640	1570	1050	1480	632	1610	1190	1260	549	1780	1670	1130	1470	1070	498	1400	1320	826	1080	440	1170
261	1480	1110	1090	1350	1570	1600	1830	470	1620	1510	1060	1190	696	1530	1130	1140	561	1880	1600	1170	1400	933	712	1450	1350	908	916	447	1260
262	1500	1180	1140	1290	1530	1670	1770	1300	1380	1190	1060	1180	833	1490	1070	1170	615	1780	1450	1210	1030	1260	736	1600	1370	1190	1030	573	1140
263	1530	1270	1110	1180	1600	1690	1920	1230	1530	1380	1090	1180	843	1080	1240	1340	618	1840	672	1310	1110	1300	654	1390	1510	1010	1060	500	1170
264	1550	1330	1150	1210	1710	1680	1960	1010	1570	1470	1080	1320	756	762	1340	1260	547	1850	531	1290	1510	1600	715	1480	1300	995	1080	548	1230
265	1440	1410	1540	1030	1510	1640	1910	1180	1450	1520	1060	1280	766	842	1220	1200	529	1820	515	1160	1340	1180	765	1410	1160	1140	1060	443	1170
266	1240	1500	1540	904	1490	1650	1800	1240	1510	1550	1060	1230	847	1390	1120	1130	549	1760	499	1210	1320	617	611	1480	1190	1180	1150	653	1090
267	1120	1470	1480	1060	1550	1440	1710	1170	1360	1540	1060	1300	1000	1460	1210	1200	544	1700	515	1060	1340	503	650	1450	1200	1410	1110	752	1120
268	1300	1460	1480	1270	1550	1540	1680	1080	1360	1390	1070	1170	1190	1480	1240	973	543	1730	500	1340	1030	476	972	1450	1240	1390	979	1040	1150
269	1300	1410	1430	1330	1520	1440	1670	1190	1310	1290	1080	1370	1140	1400	1220	1170	499	1580	472	801	943	494	949	1500	1400	1220	1100	1060	1340
270	1390	1350	1440	1360	1600	1250	1660	1150	780	1460	1320	1400	1190	1580	1190	1310	728	1670	468	530	1240	651	829	1380	1220	1060	1080	1020	1300
271	1470	1190	1450	1140	1550	1250	1700	1320	1320	1430	1050	1390	1270	1040	1210	1430	722	1350	424	1010	1340	657	684	1190	955	1120	947	751	1310
272	1180	1060	1470	1160	1580	1560	1660	1340	1560	1340	930	1380	1420	1350	987	1230	593	979	457	1200	1430	724	648	1080	1230	1130	1000	731	1270
273	927	1270	1450	1460	1710	1430	1730	1380	1560	1400	920	1280	1650	1570	1020	1280	1020	838	537	1180	1630	670	608	1300	1330	1050	1130	756	1310
274	1050	1400	1470	1530	1710	1120	1620	1060	1540	1580	1030	1440	1650	1550	1090	1130	704	994	575	1180	1570	925	704	1280	1420	1070	1260	615	1350
275	1420	1350	1490	1610	1680	1370	1670	1230	1560	1240	1240	1570	1580	1350	970	1040	1060	896	820	1270	909	870	869	1220	1390	995	1220	859	1260
276	1360	1220	1470	1700	1580	1200	1490	1210	1650	1020	1030	1570	1630	1160	941	1140	1140	847	643	911	1190	495	1000	1290	1360	1020	1350	1060	1170
277	1140	1200	1510	1720	1630	1000	1500	982	1200	1320	958	1520	1570	1030	974	1290	1160	788	486	995	1440	845	1200	1450	1310	718	1240	1020	1320
278	1140	1190	1580	1720	1550	984	1680	1110	1390	1370	976	1590	1540	766	1050	1040	1320	574	493	1170	1280	900	1320	1340	1230	866	1410	1090	1210
279	870	1160	1350	1710	1470	982	1620	1270	1520	1310	1080	1570	1600	1010	1170	1150	1290	514	605	1170	903	900	1230	1220	1350	874	1450	1070	1280
280	791	1290	1510	1700	1430	950	1710	1400	1540	1280	1270	1560	1630	1380	1210	1440	1020	417	671	1210	1200	890	1130	1220	1450	861	1330	896	1230
281	1020	1170	1510	1740	1560	920	1680	1340	1610	1460	1330	1560	1490	1380	1100	1400	765	502	810	1330	1440	450	1270	1300	1500	741	1550	754	1190
282	1040	1180	1520	1750	1600	786	1590	1340	1550	1430	1220	1620	1560	1440	1120	1230	747	1200	742	1210	1490	442	1380	1310	1490	741	1430	722	1390
283	835	1280	1520	1780	1620	874	1610	1310	1430	1210	1090	1680	1560	1390	1070	1190	787	1300	588	1310	1280	445	1380	1370	1410	788	1600	870	1420
284	1030	1160	1520	1770	1610	947	1440	1190	1480	1400	1150	1410	1490	1110	1020	1360	815	1310	461	889	1340	843	1390	1410	1560	656	1380	815	1310
285	714	1140	1520	1780	1240	1810	1700	1050	1390	1560	1100	1630	1550	791	1010	1470	796	1450	453	1000	1290	1010	1330	1340	1360	594	1270	1070	1220
286	432	1400	1460	1500	1340	2060	1710	1050	1460	1560	1290	1650	1630	780	1130	1300	733	1580	469	941	1370	840	1360	1270	1270	752	1110	983	1330
287	357	1450	1470	1200	1270	2380	1700	1210	1480	1440	1330	1680	1550	1010	1090	1270	685	1530	680	954	1470	915	1310	1320	1330	906	935	1030	1290
288	902	1430	1520	1340	1110	2460	1650	1220	1540	1470	1240	1660	1490	1500	1110	1480	634	1500	1090	874	1560	929	1310	1410	1200	789	1020	889	1270
289	1030	1420	1510	1250	1070	2430	1620	1080	1430	1490	1480	1600	1540	1590	1080	1210	777	1520	1210	1360	996	882	1340	1270	1240	708	1090	1030	1140
290	1160	1460	1500	1110	1180	1800	1420	1020	1590	1410	1270	1560	1510	1550	1120	1270	895	1510	1790	1070	689	1080	1350	1310	1250	739	1020	909	1250
291	914	1470	1470	1170	1030	1700	1530	960	1440	1410	1160	1550	1500	1680	1210	1270	991	1500	1040	1040	1070	1190	1390	1590	1080	707	925	804	1210
292	1270	1460	1510	1310	1070	1680	1670	999	1490	1540	1130	1570	1730	1480	1250	1270	1030	1510	1450	1200	1110	1200	1430	1460	1060	866	1050	867	1260
293	1300	1450	1520	1430	957	1730	1660	1180	1440	1500	1240	1520	1600	1650	1170	1250	1180	1100	1610	1410	1190	1220	1300	1170	1460	921	1220	940	1250
294	1220	1430	1470	1340	825	1790	1670	1200	1460	1490	1270	1700	1650	1650	1180	1510	992	872	1550	1210	1140	1150	1320	1440	1300	998	1190	976	1300
295	1270	1430	1480	1210	886	1720	1640	1190	1440	1500	1050	1540	1790	1450	1200	1370	741	1170	1540	1340	1200	1210	1390	1320	1040	905	1030	915	1280
296	1280	1410	1520	1150	717	1720	1610	1280	1480	1470	1070	1660	1850	1520	1120	1430	871	1360	1500	1280	1090	1160	1460	1380	1030	913	1030	1030	1270
297	1170	1440	1450	1030	909	1700	1590	1310	1380	1560	1190	1650	1870	1080	1070	1450	1160	1380	1490	1410	1130	1310	1460	1420	1090	917	1030	942	1280
298	775	1440	1370	1080	1500	1670	1610	1270	1550	1550	899	1660	1890	684	1230	1360	886	1170	1580	1510	1100	1370	1450	1510	1290	910	1400	957	1310
299	560	1430	1460	1090	1400	1590	1600	1150	1510	1530	760	1710	1880	625	1290	1310	920	1330	1580	1480	1380	1340	1580	1580	1100	976	1270	964	1380
300	790	1430	1600	1030	1370	1480	1630	1110	1530	1510	827	1650	1890	644	1480	1090	1060	1080	1600	1550	1530	1320	1630	1400	1090	1070	1410	1160	1170
301	975	1430	1490	1100	1330	1500	1670	1110	1590	1520	749	1430	1900	1390	1430	1190	1030	847	1570	1500	1150	1390	1650	1480	1330	1100	1400	1110	1300
302	1290	1440	1510	1180	1250	1570	1680	1100	1560	1500	850	1410	1880	1590	1280	1470	824	924	1600	1470	1070	1330	1630	1550	1330	1080	1270	1090	1320
303	1210	1430	1430	970	1340	1700	1660	1190	1580	1560	1150	1500	1800	1350	1180	1300	997	1220	1640	1500	897	1350	1540	1520	1500	959	1380	1190	1330
304	1210	1400	1260	830	1270	1550	1690	1130	1550	1590	1300	1470	1680	1520	1210	1250	1430	1320	1500	1580	674	1440	1570	1540	1360	833	1470	1310	1420
305	1180	1420	1320	1000	1280	1430	1530	1060	1350	1600	1380	1490	1620	1410	1380	1450	1400	1300	1510	1610	1100	1120	1590	1560	1500	784	1520	1180	1430
306	1270	1390	1520	1160	1330	1450	1420	969	1420	1520	1200	1630	1670	1710	1470	1550	1320	1560	1290	1550	961	1440	1640	1540	1380	962	1390	1270	1670

Appendix M3: Peace River daily discharge data and resultant flow exceedence curve based upon data from WSC Station - Peace River at Pine (07FA004).

day	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
307	1230	1360	1530	1210	1270	1460	1590	1080	1510	1470	840	1760	1690	1670	1540	1560	1400	1110	1600	1590	1080	1430	1510	1430	1480	1090	1330	1290	1450
308	1290	1250	1590	1100	1310	1510	1660	1180	1480	1520	580	1880	1660	1740	1530	1700	986	1110	1510	1530	1000	1400	1440	1650	1550	1030	1310	1100	1500
309	1280	1360	1630	1160	1120	1460	1700	1190	1540	1470	640	1920	1620	1900	1490	1730	956	1350	1740	1630	1050	942	1520	1510	1410	1150	1220	960	1530
310	1310	1410	1630	1100	1410	1510	1680	1170	1350	1480	665	1920	1670	1550	1520	1740	1370	1410	1620	1650	1080	1130	1700	1540	1190	1210	1250	1120	1520
311	1340	1370	1600	1130	1440	1420	1610	1110	1190	1540	640	1970	1650	1630	1540	1730	1280	1550	1940	1590	946	1250	1810	1470	1170	1230	1240	1120	1470
312	1400	1370	1650	1220	1480	1420	1530	1250	962	1560	740	1930	1550	1820	1630	1740	1260	1470	1800	1660	875	1510	1800	1550	1100	1200	1360	1060	1410
313	1600	1380	1660	1350	1410	1470	1600	1260	1220	1560	720	1880	1400	1690	1650	1790	1300	1350	1800	1860	823	1450	1540	1520	1040	1170	1170	1010	1480
314	1300	1340	1610	1510	1570	1450	1600	1390	1410	1530	660	1850	1560	1790	1690	1870	1340	722	1910	1880	1110	1390	1650	1420	1240	1150	1230	974	1510
315	1320	1340	1550	1490	1530	1410	1590	1150	1410	1480	560	1710	1670	1790	1730	1820	1200	611	1960	1890	888	1770	1590	1520	1170	1270	1180	1090	1420
316	1400	1290	1480	1490	1390	1410	1600	1300	1210	1720	518	1510	1710	1690	1790	1770	1020	727	1930	1840	711	1660	1490	1630	1200	1200	1250	874	1600
317	1380	1220	1570	1510	1370	1510	1600	1260	1160	1750	565	1070	1650	1720	1840	1700	1030	1000	1950	1900	672	1550	1520	1480	1310	1230	1220	1090	1560
318	1480	1200	1630	1550	1360	1550	1600	1280	1330	1560	535	1190	1600	1710	1900	1920	1040	1150	1940	1870	740	1780	1560	1400	1150	1030	1260	1130	1680
319	1420	1200	1600	1440	1250	1510	1530	1390	1200	1660	490	1440	1660	1880	1920	1650	940	1240	1960	1830	642	1800	1030	1720	1080	811	1470	1080	1630
320	1490	1270	1620	1540	1280	1560	1440	1400	1480	1660	535	1470	1750	1420	1810	1520	970	1180	1910	1750	625	1750	939	1470	1020	1160	1580	1150	1580
321	1360	1280	1650	1600	1090	1530	1510	1350	1760	1710	530	1430	1710	1640	1710	1560	1000	1200	1910	1730	630	1730	884	1420	1090	1030	1550	1220	1600
322	1270	1210	1600	1570	1090	1580	1620	1410	1720	1670	500	1390	1630	1750	1730	1670	910	1260	1910	1780	645	1830	588	1460	1200	1230	1630	1250	1640
323	1390	1010	1660	1560	1100	1610	1760	1490	1700	1660	600	1450	1570	1720	1830	1700	860	1330	1910	1600	680	1940	731	1660	1370	1490	1430	1210	1650
324	1550	1060	1710	1590	869	1540	1690	1580	1730	1820	1050	1500	1720	1640	1680	1640	900	1400	1870	1720	783	1770	690	1780	1490	1360	1280	1180	1670
325	1540	927	1680	1690	1110	1600	1750	1610	1750	1960	1480	1510	1620	1650	1760	1760	1200	1540	1880	1830	508	1930	769	1560	1580	1440	1600	1270	1650
326	1480	927	1450	1860	739	1580	1730	1550	1700	1990	1650	1160	1630	1710	1900	1850	1220	1580	1960	1840	865	1880	1040	1700	1690	1350	1550	1270	1680
327	1510	962	1700	1900	616	1600	1770	1540	1760	1630	1700	1030	1660	1730	1820	1600	1220	1610	1890	1870	958	1910	1050	1670	1560	1390	1540	1300	1640
328	1520	948	1700	1890	618	1570	1780	1550	1710	1510	1500	970	1710	1770	1840	1750	1210	1610	1870	1840	834	1800	1230	1770	1620	1420	1560	1280	1670
329	1530	1050	1740	1780	690	1530	1800	1550	1690	1380	1300	1330	1680	1710	1900	1860	1190	1620	1710	1790	680	1840	1340	1800	1640	1300	1420	1270	1600
330	1510	1140	1610	1900	567	1590	1880	1540	1720	1200	1130	1600	1740	1760	1960	1900	1130	1580	1940	1440	451	1820	1810	1710	1630	1040	1470	1450	1700
331	1490	1220	1650	1710	500	1560	1870	1540	1750	1200	1120	1610	1670	1720	2000	1910	1150	1400	1870	1310	448	1810	1760	1790	1350	828	1530	1690	1680
332	1460	1210	1670	1850	571	1520	1870	1560	1550	1490	1130	1590	1590	1720	2030	1930	1140	1340	1750	1350	750	1900	1830	1770	1420	1030	1570	1820	1670
333	1480	990	1730	1610	718	1530	1820	1590	1570	1430	1120	1650	1700	1700	2040	1980	1200	1340	1880	1350	900	1870	1780	1730	1470	1190	1710	1950	1700
334	1480	939	1790	1690	816	1560	1800	1600	1690	1460	1160	1750	1820	1750	2090	1930	1560	1400	1880	1340	1200	1950	1750	1620	1440	1340	1670	1800	1720
335	1450	778	1750	1600	868	1470	1800	1580	1660	1460	1210	1820	1850	1870	2000	1900	1470	1490	1930	1320	1400	1980	1250	1740	1370	1490	1710	1580	1730
336	1610	841	1820	1730	941	1510	1780	1500	1870	1400	1220	1810	1770	1820	1940	1880	1400	1480	1930	1330	1390	1890	1130	1890	1450	1480	1700	1660	1750
337	1500	947	1760	1570	931	1620	1720	1440	1990	1180	1160	1830	1780	1830	1920	1910	1360	1460	1840	1440	1400	1720	1520	1760	1500	1620	1620	1680	1810
338	1470	995	1820	1230	924	1530	1710	1400	2000	1120	1130	1780	1800	1720	1930	1920	1600	1470	1890	1880	1390	1880	1600	1740	1460	1650	1630	1670	1700
339	1370	1070	1820	1160	933	1610	1750	1400	1820	1060	1100	1730	1640	1800	2000	1970	1700	1490	1860	1940	1410	1860	1670	1700	1530	1590	1640	1590	1580
340	1370	1150	1670	1330	986	1580	1770	1410	2010	1240	1070	1650	1700	1810	2030	1980	1640	1500	1870	1910	1420	1720	1900	1760	1420	1540	1640	1620	1820
341	1500	1110	1770	1500	1330	1660	1790	1420	1940	1300	1080	1680	1710	1930	2030	1930	1600	1500	1870	1700	1420	1890	1830	1780	1550	1620	1640	1740	1890
342	1440	1130	1490	1570	1460	1700	1800	1470	1790	1200	1090	1660	1550	1890	2020	1950	1630	1470	1930	1340	1410	1810	1920	1760	1480	1640	1700	1730	1850
343	1240	1150	1180	1710	1390	1740	1800	1470	1850	1270	1050	1720	1700	1910	2010	1900	1670	1450	1900	1390	1390	1750	1880	1760	1560	1600	1860	1760	1890
344	1330	1070	1340	1600	1390	1690	1800	1490	1800	1300	1060	1780	1760	1930	2010	1800	1680	1450	1850	1720	1400	1550	1860	1730	1560	1540	2020	1740	1900
345	1450	1080	1300	1660	1430	1790	1810	1530	1850	1360	1170	1780	1650	1870	1980	1760	1690	1460	1910	1860	1390	1700	1880	1770	1640	1400	1980	1700	1780
346	1580	1030	1210	1580	1480	1780	1800	1400	1940	1230	1250	1760	1650	1850	2060	1750	1690	1450	1940	1800	1400	1710	1890	1650	1640	1300	2000	1710	1730
347	1390	905	1380	1560	1500	1720	1800	1350	1940	1270	1270	1740	1750	1840	1950	1760	1700	1430	1950	1710	1410	1700	1880	1370	1640	1260	1970	1680	1770
348	831	927	1590	1530	1510	1560	1800	1290	1800	1050	1200	1730	1850	1870	1850	1770	1700	1450	1940	1820	1400	1640	1910	1530	1690	1380	1920	1600	1780
349	920	816	1660	1510	1500	1700	1800	1270	1670	1050	1130	1730	1830	1840	1840	1810	1700	1440	1920	1790	1380	1740	1990	1380	1710	1500	1940	1630	1790
350	953	873	1640	1650	1500	1660	1790	1300	1810	1050	1140	1740	1800	1860	1830	1850	1700	1430	1920	1840	1320	1690	2000	1300	1730	1550	1830	1590	1720
351	970	896	1580	1450	1500	1670	1780	1420	1770	1400	1150	1760	1790	1930	1820	1800	1690	1440	1930	1890	1350	1810	1970	1700	1670	1540	1920	1630	1740
352	722	985	1640	1500	1500	1710	1780	1500	1800	1390	1160	1780	1840	1940	1900	1780	1690	1460	1930	1940	1360	1290	1970	1700	1660	1550	1920	1710	1740
353	629	1110	1760	1470	1500	1540	1790	1390	1850	1090	1150	1800	1810	1930	1940	1810	1680	1490	1910	1940	1380	1260	2010	1610	1670	1550	1910	1720	1860
354	622	1050	1660	1460	1500	1510	1780	1370	1970	1200	1380	1790	1770	1920	1930	1820	1650	1490	1890	1960	1390	1500	2020	1510	1680	1550	1920	1720	1930
355	547	980	1750	1510	1550	1600	1790	1380	1860	1260	1600	1810	1790	1910	1890	1780	1550	1450	1900	1940	1400	1490	1930	1520	1540	1550	1920	1660	1960
356	690	850	1620	1500	1610	1620	1770	1340	1930	1280	1680	1820	1820	1810	1960	1770	1520	1410	1930	1970	1370	1460	1980	1840	1670	1540	1850	1700	1850
357	592	800	1400	1480	1630	1620	1800	1300	1720	1200	1650	1820	1800	1740	2000	1770	1500	1390	1920	1970	1350	1440	1930	1710	1630	1550	1680	1730	1880

Appendix M3: Peace River daily discharge data and resultant flow exceedence curve based upon data from WSC Station - Peace River at Pine (07FA004).

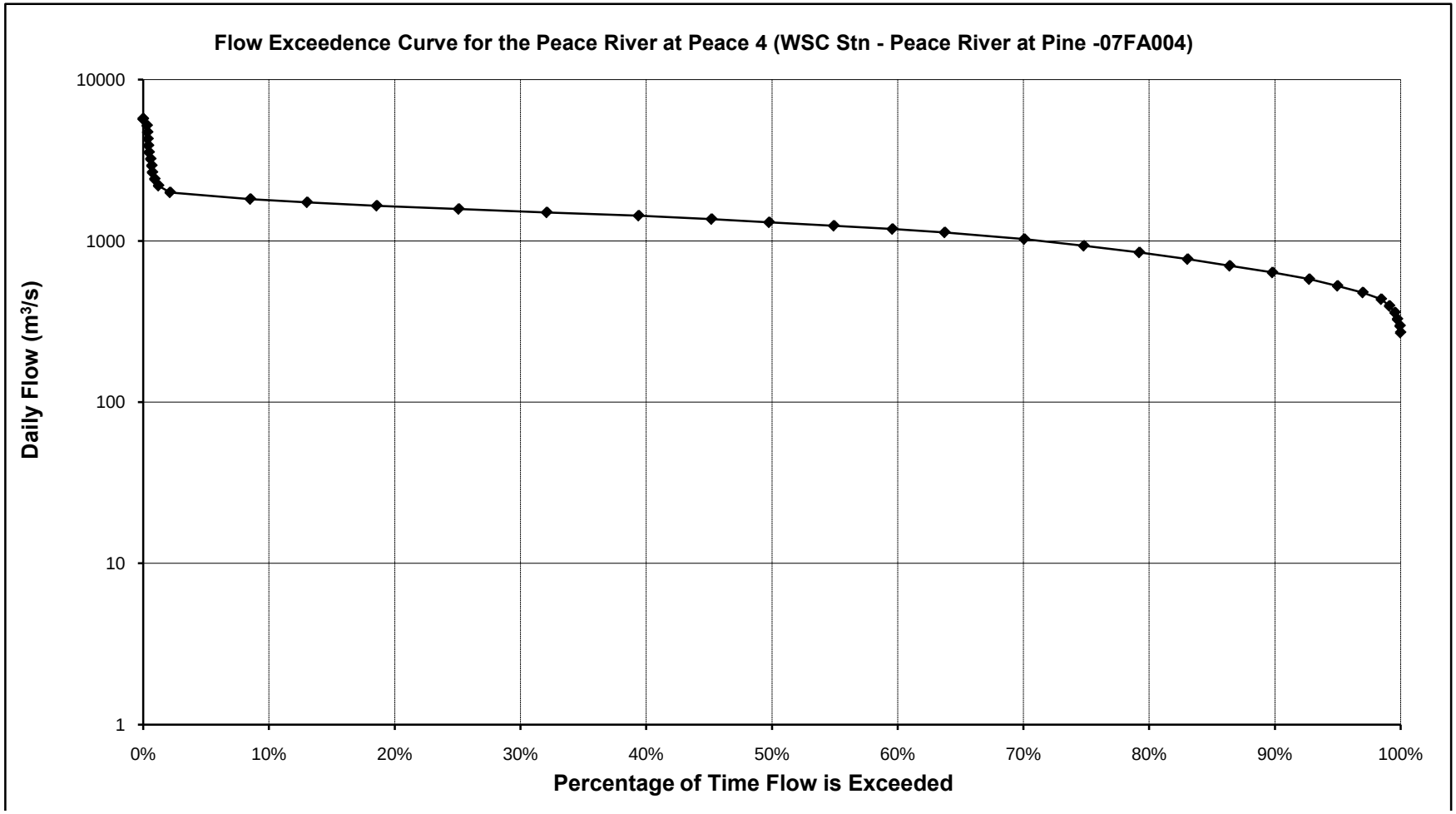
day	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
358	555	825	1410	1460	1610	1620	1770	1310	1900	1390	1500	1750	1780	1730	1960	1780	1490	1350	1910	1970	1320	1480	2000	1610	1600	1450	1520	1700	1880
359	530	685	1140	1390	1600	1610	1760	1170	1780	1240	990	1700	1760	1750	1870	1790	1480	1320	1910	1960	1260	1460	1960	1240	1510	1410	1290	1620	1810
360	522	650	910	1440	1600	1600	1770	1110	1830	757	960	1680	1740	1760	1660	1790	1460	1310	1920	1960	1210	1470	1950	843	1480	1400	1260	1490	1830
361	506	625	1020	1420	1590	1600	1780	1110	1830	645	1200	1700	1820	1650	1800	1790	1470	1340	1920	1970	1230	1510	1920	1310	1580	1400	1320	1540	1860
362	1000	625	1320	1420	1580	1610	1780	1110	1850	730	1650	1730	1690	1560	2000	1780	1480	1390	1950	1950	1260	1340	1970	1510	1640	1390	1460	1570	1940
363	1320	600	1650	1400	1570	1630	1790	1130	1920	1240	1590	1760	1640	1540	1900	1770	1480	1440	1960	1770	1250	1270	1970	1580	1710	1370	1350	1530	1970
364	1280	635	1960	1410	1570	1620	1790	1190	1930	1280	1490	1740	1720	1570	1930	1760	1460	1490	1880	1570	1310	1450	1950	1530	1700	1380	1390	1570	1990
365	1450	640	1910	1430	1600	1620	1790	1210	2030	1310	1390	1700	1800	1650	2000	1760	1450	1480	1910	1390	1310	1250	1850	1600	1680	1390	1400	1540	1980
366		670				1620				1260				1680				1480				1350				1570			

Appendix M3: Peace River daily discharge data and resultant flow exceedence curve based upon data from WSC Station - Peace River at Pine (07FA004).

day	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007

Flow Duration Curve

Cumulat Q	(m^3/s)
1.000	270
1.000	297
0.998	327
0.996	359
0.991	395
0.985	435
0.970	478
0.950	526
0.927	579
0.898	637
0.864	700
0.831	770
0.792	847
0.748	932
0.701	1025
0.638	1128
0.596	1184
0.549	1241
0.498	1303
0.452	1365
0.394	1433
0.321	1501
0.251	1576
0.186	1651
0.130	1734
0.085	1816
0.021	1998
0.012	2198
0.009	2418
0.007	2659
0.007	2925
0.006	3218
0.005	3540
0.004	3894
0.004	4283
0.004	4711
0.003	5182
0.000	5701
0.000	5720



APPENDIX N

Selected Pictures of Soil Profiles from Soil Sample Sites

Photograph 1:

Sampling soil from 1 of 3 pits excavated at Site 20, the Peace River bank opposite the confluence with Farrell Creek.

Photograph 3:

Soil sample Pit 3 at Site 21 the south bank of the Peace River across from, but 500 m upstream of the confluence with the Halfway River..

Photograph 2:

Soil profile of Site 20.

Photograph 4:

The general area of soil sample pits on the bank of the Peace River at Site 21 above.

Soil Sample profiles of pits excavated during soil sampling along the Peace River Mainstem

Golder Associates
Kamloops, BC

PROJECT No. 06-1490-006			SCALE: None	REV. 0
DRAWN	MG	Jan 10, 2009	**PLATE 1**	
CHECK	MG	Jan 29, 2009		
REVIEW	MG	Feb 10, 2009		

Photograph 5:

Soil pit sampled at the Halfway River at Site 25, 1.5 km upstream of the confluence with the Peace River . Sands comprised most of the soil at this site.

Photograph 4:

Soil profile of Site 23 – 2 km downstream of Cache Creek on the south bank of the Peace River

Photograph 6:

A second soil pit at Site 25, showing the sandy consistency of this area.

Photograph 7:

A second of 3 sample pits at Site 23, highlighting the organic layer near the surface.

Soil Sample profiles of pits excavated during soil sampling along the Peace River Mainstem

Golder Associates
Kamloops, BC

PROJECT No. 06-1490-006			SCALE: None	REV. 0
DRAWN	MG	Jan 10, 2009	**PLATE 2**	
CHECK	MG	Jan 29, 2009		
REVIEW	MG	Feb 10, 2009		

Photograph 9:

A soil pit sampled at Site 25, the north side of the Peace River approximately 3 km downstream of Tea Creek.

Photograph 10:

A second soil sample pit at Site 25.

Soil Sample profiles of pits excavated during soil sampling along the Peace River Mainstem

Golder Associates
Kamloops, BC

PROJECT No. 06-1490-006			SCALE: None	REV. 0
DRAWN	MG	Jan 10, 2009	**PLATE 3**	
CHECK	MG	Jan 29, 2009		
REVIEW	MG	Feb 10, 2009		

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