

Appendix 4 Pre-Discharge Monitoring Program – Water Quality Technical Volume



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CAPITAL REGIONAL DISTRICT

CRD Core Area Wastewater Treatment Program Pre-Discharge Monitoring Program

Water Quality Technical Volume

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CAPITAL REGIONAL DISTRICT

CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM

WATER QUALITY TECHNICAL VOLUME

PROJECT 307071-00020 - CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM

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EXECUTIVE SUMMARY

The CRD Core Area Wastewater Treatment Project involves the construction of a wastewater treatment plant and the discharge of secondary treated effluent via a new outfall originating at McLoughlin Point with a point of discharge co-located with the existing Macaulay Point outfall. Pre-discharge water quality and water column profiles were collected in support of the Stage 2 Environmental Impact Study for the proposed discharge.

Pre-discharge water column profiles and water quality samples were collected at five stations, with the goal of providing a comprehensive baseline characterization of the receiving environment conditions prior to discharge. Two water quality stations were located near the proposed point of discharge (MP-4 and MP-5), one (AH-2) was located 4 km to the south west near Albert Head, one (MP-6) was located 7 km to the south west in deep water and the fifth (reference station FC-7) was located in Haro Strait.

Water column profiles measured temperature, salinity, pH, dissolved oxygen and turbidity. Temperature and salinity profiles provide ambient density characteristics used in the dilution modeling of the effluent plume. The toxicity of ammonia is influenced by the temperature, salinity, and pH of the receiving environment. *In situ* measurements were therefore used to determine the appropriate ammonia water quality guideline.

Oxygen concentrations did not meet either of the BC water quality guidelines for dissolved oxygen (30-day mean of 8 mg/L and instantaneous minimum of 5 mg/L) at all stations including the reference station FC-7. For cases where natural DO concentrations do not meet water quality guidelines, a statistically significant reduction below natural levels is not permitted.

Given that wastewater discharges occur within the vicinity of the baseline monitoring program, with the exception of the reference station (FC-7), where low DO concentrations were also measured, the low DO conditions could be natural or result from anthropogenic influences. However, given that low DO concentrations (< 5 mg/L) at depth were observed, DO concentrations in the receiving environment should continue to be monitored.

The measured turbidity of the receiving environment was low (clear water) during all sampling events.

Water quality sampling was conducted for a wide range of parameters including, microbiological indicators, conventional properties (physical, nutrients, anions), metals, organics and hormones and sterols.

The analysis of microbiological indicators (fecal coliforms and *Enterococci*) found that levels above either or both of the shellfish harvesting and recreational guidelines occurred at four of the five baseline water sampling stations (AH-2, MP-4, MP-5 and MP-6). Concentrations of both indicators were within guidelines during all seasons, and depths at the reference station FC-7. Median and 90th percentile microbiological shellfish harvesting guideline exceedances were measured at every station, except for the reference (FC-7). Mean primary contact recreational guideline exceedances were measured at MP-4 and MP-5, while maximum primary contact recreational guideline exceedances were measured at



AH-2, MP-4 and MP-5. Mean secondary contact recreational guideline exceedances were measured at MP-4.

Conventional parameters were measured to be within applicable guidelines with the exception of fluoride which was measured at the guideline limit on several occasions.

Trace metal concentrations were analyzed at three stations during all sampling events. When compared against BC and CCME water quality guidelines the measured concentrations were below applicable guidelines for the protection of marine aquatic life, with the following exceptions.

- Copper: a single exceedance of maximum allowable concentration was measured at AH-2 mid water sample during the winter 2012.
- Zinc: the maximum allowable concentration was exceeded in the AH-2 mid water sample during the winter 2012 sampling event and in the reference station FC-7 bottom sample in the fall 2010.

The source of the copper and zinc exceedances is unknown. These infrequent elevated concentrations may be natural anomalies or potentially introduced through field sampling (e.g. the exterior of the sampling equipment is equipped with some brass (alloy of zinc and copper) components).

Organic constituents (Group 1 and 2) and analysis of hormones and sterols were measured in bottom samples at three stations, during the winter and summer sampling event. The vast majority of the results were below the method detection limit and all were below the applicable water quality guidelines.

CONTENTS

1.	INTRODUCTION	1
1.1	Background and Project Objectives.....	1
1.2	Summary of Water Sampling	1
2.	METHODOLOGY	3
2.1	General Information	3
2.2	Survey Vessels	5
	2.2.1 Vessel Position and Station Keeping.....	6
2.3	Data Collection.....	6
	2.3.1 In Situ Water Column Profiles.....	6
	2.3.2 Water Samples	7
2.4	Quality Assurance / Quality Control	14
	2.4.1 Water Column Profiles	14
	2.4.2 Water Samples	14
	2.4.3 WMEP Program	18
2.5	Data Analysis and Statistics.....	20
	2.5.1 Comparison to Guidelines	20
	2.5.2 Spatial and Temporal Comparisons	20
3.	ANALYTICAL RESULTS	21
3.1	Water Column Profiles	21
	3.1.1 Water Quality Guidelines	21
	3.1.2 Water Column Profile Results.....	22
	3.1.3 Quality Assurance / Quality Control.....	25
3.2	Water Samples.....	26
	3.2.1 Microbiological Indicators	26
3.3	Conventional (Group 1 and 2).....	42
	3.3.1 Water Quality Guidelines	42
	3.3.2 Physical Properties	43



3.3.3	Major Anions	46
3.3.4	Nitrogen Compounds	52
3.3.5	Phosphorous Compounds	59
3.4	Trace Metals	64
3.4.1	Water Quality Guidelines	64
3.4.2	Results	65
3.4.3	Trace Metals Summary	77
3.5	Organics (Group 1)	77
3.5.1	Polycyclic Aromatic Hydrocarbons	78
3.5.2	Organochlorinated Pesticides	79
3.5.3	Chlorinated Phenolics	80
3.5.4	Volatile Organic Compounds (VOCs including BTEX)	81
3.5.5	Phthalates	81
3.5.6	Polybrominated Diphenyl Ethers	82
3.6	Organics (Group 2)	82
3.6.1	Polychlorinated Biphenyls	82
3.6.2	Nonylphenol and its ethoxylates	83
3.6.3	Hormones and Sterols	84
4.	QUALITY ASSURANCE / QUALITY CONTROL	84
4.1	Sample Representativeness	84
4.2	Replicate Precision	85
4.3	Bias	86
5.	SUMMARY	87
6.	CLOSURE	89
7.	REFERENCES	91

Tables within Text

TABLE A	WATER SAMPLE COLLECTION AND WATER COLUMN PROFILING DATES .	2
TABLE B	WATER QUALITY SAMPLING STATION LOCATIONS	4
TABLE C	FIELD SCHEDULE FOR 2010 – 2012 BASELINE DATA COLLECTION.....	5
TABLE D	RANGE AND ACCURACY OF THE SEABIRD SBE19.....	7
TABLE E	WATER QUALITY PARAMETERS.....	11
TABLE F	SAMPLE PARAMETERS, BOTTLE SIZE AND PRESERVATION METHOD.....	12
TABLE G	SAMPLE PARAMETERS, DATES AND STATIONS SAMPLED	13
TABLE H	ORGANICS, HORMONE AND STEROL SAMPLING SEASONS.....	13
TABLE I	FIELD SPLIT FREQUENCY	16
TABLE J	ANALYTICAL PARAMETER – HOLD TIMES	17
TABLE K	CRITERIA FOR DISCRIMINATING BETWEEN MARGINAL AND SEVERE DATA QUALITY OBJECT FAILURES FOR RSD OF TRIPLICATE SAMPLES (GOLDER 2007).....	19
TABLE L	CRITERIA FOR DISCRIMINATING BETWEEN MARGINAL AND SEVERE DATA QUALITY OBJECT FAILURES FOR ANALYTICAL BIAS (GOLDER 2007)	20
TABLE M	PROVINCIAL DISSOLVED OXYGEN CRITERIA FOR AQUATIC LIFE FOR MARINE AND ESTUARINE WATERS (MOE 1997).....	22
TABLE N	MICROBIOLOGICAL INDICATOR GUIDELINES	26
TABLE O	EXCEEDANCES OF MEDIAN MICROBIOLOGICAL INDICATORS RELATIVE TO THE SHELLFISH HARVESTING GUIDELINE	28
TABLE P	EXCEEDANCES FOR 90 TH PERCENTILE SHELLFISH HARVESTING GUIDELINE.....	31
TABLE Q	GEOMETRIC MEAN MICROBIOLOGICAL INDICATORS - EXCEEDANCES OF RECREATIONAL GUIDELINES	34
TABLE R	MAXIMUM MICROBIOLOGICAL INDICATORS - EXCEEDANCES OF RECREATIONAL GUIDELINES	37
TABLE S	GROUP 1 AND 2 WATER QUALITY GUIDELINES.....	42
TABLE T	MEAN PH.....	43
TABLE U	WATER QUALITY GUIDELINES FOR SUSPENDED SOLIDS (MOE 2001C) ...	44



TABLE V	FLUORIDE EXCEEDANCES.....	47
TABLE W	WATER QUALITY GUIDELINES FOR TRACE METALS	65
TABLE X	COPPER WATER QUALITY GUIDELINES	68
TABLE Y	LEAD WATER QUALITY GUIDELINES	73
TABLE Z	MAXIMUM LEAD CONCENTRATIONS	73
TABLE AA	WATER QUALITY GUIDELINES - MERCURY	73
TABLE BB	MARINE WATER QUALITY GUIDELINES – PAHS.....	78
TABLE CC	PAHS MEASURED AT REFERENCE STATION FC-7	79
TABLE DD	MARINE WATER QUALITY GUIDELINES - ORGANOCHLORINATED PESTICIDES.....	79
TABLE EE	MARINE WATER QUALITY GUIDELINES – CHLORINATED PHENOLICS.....	80
TABLE FF	MARINE WATER QUALITY GUIDELINES - HYDROCARBONS	81
TABLE GG	TOXIC EQUIVALENCY FACTORS (TEFS) FOR NP, NPES, NPECS, OP, OPES, AND OPECS.....	83

Photographs within Text

PHOTO A	NISKIN WATER SAMPLER.....	8
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Figures within Text

FIGURE A	MEDIAN ENTEROCOCCI	29
FIGURE B	MEDIAN FECAL COLIFORM	30
FIGURE C	90 TH PERCENTILE ENTEROCOCCI.....	32
FIGURE D	90 TH PERCENTILE FECAL COLIFORM.....	33
FIGURE E	GEOMETRIC MEAN ENTEROCOCCI	35
FIGURE F	GEOMETRIC MEAN FECAL COLIFORM	36
FIGURE G	MAXIMUM FECAL COLIFORM	38
FIGURE H	MAXIMUM ENTEROCOCCI.....	39
FIGURE I	MEAN TOTAL SUSPENDED SOLIDS (SPRING AND SUMMER)	45
FIGURE J	MEAN TOTAL SUSPENDED SOLIDS (FALL AND WINTER)	46
FIGURE K	MEAN FLUORIDE (SPRING AND SUMMER)	48

CAPITAL REGIONAL DISTRICT
CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM
WATER QUALITY TECHNICAL VOLUME

FIGURE L	MEAN FLUORIDE (FALL AND WINTER).....	49
FIGURE M	MEAN CHLORIDE (SPRING AND SUMMER)	51
FIGURE N	MEAN CHLORIDE (FALL AND WINTER)	52
FIGURE O	MEAN NITRATE CONCENTRATIONS AT MP-5 AND FC-7	53
FIGURE P	MEAN NITRATE CONCENTRATIONS (SPRING AND SUMMER)	54
FIGURE Q	MEAN NITRATE CONCENTRATIONS (FALL AND WINTER)	55
FIGURE R	MEAN AMMONIA (SPRING AND SUMMER)	57
FIGURE S	MEAN AMMONIA (FALL AND WINTER).....	58
FIGURE T	MEAN TOTAL PHOSPHOROUS (SPRING AND SUMMER).....	60
FIGURE U	MEAN TOTAL PHOSPHOROUS (FALL AND WINTER).....	61
FIGURE V	ORTHO-PHOSPHATE (SPRING AND SUMMER).....	62
FIGURE W	MEAN ORTHO-PHOSPHATE (FALL AND WINTER)	63
FIGURE X	TOTAL CADMIUM (SPRING AND SUMMER)	66
FIGURE Y	TOTAL CADMIUM (FALL AND WINTER)	67
FIGURE Z	TOTAL COPPER (SPRING AND SUMMER)	69
FIGURE AA	TOTAL COPPER (FALL AND WINTER)	70
FIGURE BB	MEAN TOTAL ZINC (SPRING AND SUMMER).....	75
FIGURE CC	MEAN TOTAL ZINC (FALL AND WINTER).....	76

Figures

FIGURE 1	REGIONAL MAP
FIGURE 2	WATER SAMPLING SITE PLAN

Tables

TABLE 1	MICROBIOLOGY
TABLE 2	ROUTINE PARAMETERS
TABLE 3	AMMONIA - N
TABLE 4	DISSOLVED METALS AND TRACE ELEMENTS



TABLE 5	TOTAL METALS AND TRACE ELEMENTS
TABLE 6	POLYCYCLIC AROMATIC HYDROCARBONS
TABLE 7	ORGANOCHLORINATED PESTICIDES
TABLE 8	PHENOLS
TABLE 9	HYDROCARBONS
TABLE 10	VOLATILE ORGANIC COMPOUNDS
TABLE 11	PHTHALATES
TABLE 12	POLYBROMINATED DEPHENYL ETHERS
TABLE 13	PCBS
TABLE 14	NONYLPHENOL AND ITS ETHOXYLATES
TABLE 15	HORMONES AND STEROLS
TABLE 16	FIELD BLANK ANALYSIS
TABLE 17	QA/QC ASSESSMENT

Appendices

APPENDIX 1	FIELD DATA SHEETS
APPENDIX 2	CERTIFICATES OF ANALYSIS
APPENDIX 3	SEABIRD SBE19 – CALIBRATION RECORDS

List of Acronyms

5-IN-30	FIVE SAMPLES IN A 30-DAY PERIOD
BC	BRITISH COLUMBIA
CAWTP	CORE AREA WASTEWATER TREATMENT PROJECT
CCME	CANADIAN COUNCIL OF MINISTERS OF THE ENVIRONMENT
CFU	COLONY FORMING UNIT
COA	CERTIFICATES OF ANALYSIS
COC	CHAIN OF CUSTODY
CRD	CAPITAL REGIONAL DISTRICT
DO	DISSOLVED OXYGEN
DOC	DISSOLVED ORGANIC CARBON
DL	DETECTION LIMIT
EIS	ENVIRONMENTAL IMPACT STUDY
EQUIS	ENVIRONMENTAL QUALITY INFORMATION SYSTEM
GPS	GLOBAL POSITIONING SYSTEM
MOE	MINISTRY OF ENVIRONMENT
MWR	MUNICIPAL WASTEWATER REGULATION
PAH	POLYCYCLIC AROMATIC HYDROCARBON
PBDE	POLYBROMINATED DIPHENYL ETHERS
PCB	POLYCHLORINATED BIPHENYLS
PSU	PRACTICAL SALINITY UNIT
QA/QC	QUALITY ASSURANCE / QUALITY CONTROL
RDL	REPORTABLE DETECTION LIMIT
RPD	RELATIVE PERCENT DIFFERENCES
RSD	RELATIVE STANDARD DEVIATION
TAN	TOTAL AMMONIA NITROGEN
TEQ	TOXIC EQUIVALENCY
TKN	TOTAL KJELDAHL NITROGEN



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TOC	TOTAL ORGANIC CARBON
TSS	TOTAL SUSPENDED SOLIDS
VOC	VOLATILE ORGANIC COMPOUNDS
WAAS	WIDE AREA AUGMENTATION SYSTEM
WMEP	WASTEWATER AND MARINE ENVIRONMENT PROGRAM

1. INTRODUCTION

This report summarizes the pre-discharge baseline water quality monitoring conducted on behalf of the Capital Regional District (CRD) as part of the CRD Core Area Wastewater Treatment Project (CAWTP) near Victoria, BC (Figure 1).

1.1 Background and Project Objectives

The CRD is planning to implement secondary wastewater treatment for the CRD core area. Proposed treatment and disposal options involve the discharge of treated effluent to the marine environment. As part of the Environmental Impact Study (EIS) for the discharge, the CRD undertook a pre-discharge baseline monitoring program.

The monitoring program was established for a Stage 2 level EIS for site specific baseline characterization required by the BC Ministry of Environment (MOE). This program included the collection of the following site specific biological, chemical and physical characteristics:

- water quality;
- water column profiles;
- current profiles;
- benthic chemistry;
- benthic toxicity;
- benthic bioaccumulation; and,
- benthic macro fauna.

The pre-discharge monitoring program was initiated in May 2009, by Golder Associates Ltd (Golder 2009a and 2009b). At program start-up, CRD anticipated constructing up to two wastewater treatment facilities; one in Saanich East that would discharge effluent via a new outfall offshore of Finnerty Cove and a second treatment facility in Colwood that would discharge effluent via a new outfall offshore of Albert Head. The pre-discharge monitoring program was initiated at Finnerty Cove and Albert Head near the anticipated point of discharge for the two new outfalls.

Since the program was initiated, the treatment strategy changed to a single treatment plant at McLoughlin Point in Esquimalt. Effluent from the plant will be discharged through a new outfall in the vicinity of the existing Macaulay Point outfall. The scope of the monitoring program was modified to account for these project changes.

1.2 Summary of Water Sampling

For completeness, a summary of the water sampling *in situ* water column profiles completed as part of the pre-discharge monitoring program is provided in Table A. Figure 2 show the station locations of water sampling.



Table A Water Sample Collection and Water Column Profiling Dates

Season	Completed By	Locations
Spring 2009	Golder Associates Ltd.	Albert Head Finnerty Cove
Summer & Fall 2009	Golder Associates Ltd	Finnerty Cove
Winter & Spring 2010	WorleyParsons	Albert Head Finnerty Cove
Summer & Fall 2010	WorleyParsons	Albert Head Finnerty Cove McLoughlin Point
Winter 2011 to Spring 2012	WorleyParsons	Albert Head Finnerty Cove McLoughlin Point

2. METHODOLOGY

2.1 General Information

The CRD Core Area Wastewater Treatment Project pre-discharge monitoring program was conducted during 12 separate seasonal 5-in-30 events from January 2010 to April 2012. A 5-in-30 event is a set of five sampling events within a 30-day period. Sampling events were completed seasonally, spring, summer, fall and winter as defined by the astronomical timing:

- Spring: March 21 to June 20
- Summer: June 21 to September 22
- Fall: September 23 to December 21
- Winter: December 22 to March 20

Two years of quarterly baseline water quality data collection was targeted for this program. The baseline water samples were collected at a total of nine stations over the study period. Three stations were located in the vicinity of Finnerty Cove, identified with the prefix FC in this report. Three stations were located in the vicinity of Albert Head, identified with the prefix AH. Initially, sampling was conducted at six stations; AH-1, AH-2, AH-3 and FC-4, FC-6, FC-7 (initially FC-5).

In summer 2010, with the change in the location of the proposed wastewater treatment facility and discharge location, the sampling program was expanded to include three additional stations in the vicinity of McLoughlin Point, identified with the prefix MP: MP-4, MP-5 and MP-6. As a result, the program was prolonged to accommodate two full years of sampling at MP-4, MP-5 and MP-6. At the same time, two stations at Finnerty Cove (FC-4 and FC-6) were abandoned in 2010; two more stations at Albert Head (AH-1 and AH-3) were abandoned in 2011. As this study is intended to provide baseline water quality data specifically for the proposed McLoughlin Point discharge, the results of data collected at the abandoned stations and data collected prior to the addition of stations MP-4, MP-5 and MP-6 are not discussed in the report. The initial results of these abandoned stations can be found in *Spring 2009 Water Quality Monitoring Survey for Baseline Monitoring at Proposed Outfall Study Areas Located in Finnerty Cove and Albert Head: Data Report* (Golder 2009a) and *Summer 2009 Water Quality Survey Baseline Monitoring at Proposed Finnerty Cove Outfall Study Area: Data Report* (Golder 2009b). The locations of the sampling stations are shown in Figure 2 and coordinates of the stations sampled are provided in Table B. Stations MP-4 and MP-5 correspond to sampling locations Mac – 01 and Mac – 30 used historically by the CRD as part of their receiving environment monitoring (*Pers. comm.* Lowe 2010; CRD 2009).



Table B Water Quality Sampling Station Locations

Baseline Station	CRD Station Name	Longitude	Latitude
AH-2	n/a	48°23.22' N	123° 27.83' W
MP-4	Mac - 01	48°24.18' N	123° 24.62' W
MP-5	Mac - 30	48°23.75' N	123° 24.62' W
MP-6	n/a	48°23.37' N	123° 28.10' W
FC-7	n/a	48°29.90' N	123° 16.11' W

The protocol for a 5-in-30 event involves five weekly sample collections over a 30-day period. Two years of baseline water quality data was required to be collected for this program. The individual sampling dates for each 5-in-30 event are provided in Table C. The sampling events are identified by the season of data collection.

**CAPITAL REGIONAL DISTRICT
CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM
WATER QUALITY TECHNICAL VOLUME**

Table C Field Schedule for 2010 – 2012 Baseline Data Collection

5-in-30 Event	Stations Sampled	Sample Dates				
		Week 1	Week 2	Week 3	Week 4	Week 5
Spring 2009 ²	AH-2, FC-7 (AH-1, AH-3, FC-4, FC-5) ¹	4-May-09	11-May-09	12-May-09	14-May-09	20-May-09
		5-May-09		13-May-09		21-May-09
Summer 2009 ²	FC-7 (FC-4, FC-5) ¹	14-Sep-09	21-Sep-09	23-Sep-09	28-Sep-09	5-Oct-09
Winter 2010	AH-2, FC-7	20-Jan-10	26-Jan-10	2-Feb-10	9-Feb-10	17-Feb-10
Spring 2010	(AH-1, AH-3, FC-4, FC-5) ¹	28-Apr-10	6-May-10	12-May-10	18-May-10	25-May-10
Summer 2010	AH-2, FC-7, MP-4, MP-5,	26-Jul-10	28-Jul-10	3-Aug-10	10-Aug-10	17-Aug-10
Fall 2010	MP-6 (AH-1, AH-3) ¹	26-Jul-10	28-Jul-10	3-Aug-10	10-Aug-10	17-Aug-10
Winter 2011		16-Mar-11	22-Mar-11	28-Mar-11	7-Apr-11	12-Apr-11
Spring 2011		4-May-11	9-May-11	17-May-11	25-May-11	30-May-11
Summer 2011	AH-2, FC-7, MP-4, MP-5,	20-Jul-11	26-Jul-11	2-Aug-11	9-Aug-11	16-Aug-11
Fall 2011	MP-6	31-Oct-11	7-Nov-11	15-Nov-11	28-Nov-11	30-Nov-11
Winter 2012		8-Feb-12	15-Feb-12	21-Feb-12	27-Feb-12	4-Mar-12
Spring 2012		15-May-12	22-May-12	28-May-12	31-May-12	6-Jun-12

¹ Stations later abandoned

² Results from the work completed by Golder Associates Ltd. was summarized in Golder 2009a and 2009b.

2.2 Survey Vessels

The baseline data collection was conducted from one of three vessels:

Alluminator	20 ft Aluminum Vessel
Queequeg	20 ft Boston Whaler
Kuroshio	35 ft Aluminum Vessel.

High speed vessels were used to limit the time spent travelling between sampling stations and to allow samples to be collected from targeted stations in a single day. Each vessel was fitted with a hydraulic winch for raising and lowering sampling equipment.



2.2.1 Vessel Position and Station Keeping

Positioning of the sampling vessel was determined using a Holux GR-231u Global Positioning System (GPS) receiver connected to a notebook computer. The computer operated Fugawi Global Navigator 4.5, a real-time navigational chart package. The GPS was Wide Area Augmentation System (WAAS) enabled and has a reported horizontal accuracy of less than 2.2 m 95% of the time (Holux 2011).

Positioning of the vessel was the responsibility of the skipper. At each station the drift track (a combination of wind and current forces) of the vessel was established. The vessel was then positioned up drift of the station. As the vessel approached the station, the sampler was deployed prior to arrival on station and then triggered when the vessel drifted over the station, to obtain the samples on station.

2.3 Data Collection

The baseline field sampling included the collection of *in situ* water column profiles and water quality samples. Transcribed field data sheets, including the time and depth of sample collections are included in Appendix 1. Certificates of Analysis (COA) reports coupled with Chain of Custody (COC) forms are provided in Appendix 2.

2.3.1 In Situ Water Column Profiles

Water column profiles were collected at all sampling locations (Figure 2) during each sampling event. The water column profiles were collected *in situ* using a Seabird SBE19 Plus V2 profiler fitted with sensors to measure the following parameters:

- temperature;
- salinity
- depth;
- pH;
- dissolved oxygen (DO); and,
- turbidity.

The range and accuracy reported by the manufacturer for the Seabird SBE19 is provided in Table D. The instrument requires factory calibration annually. Certificates of factory calibration are provided in Appendix 3.

Table D Range and Accuracy of the Seabird SBE19

Seabird SBE19		
Sensor	Range	Reported Accuracy
Conductivity (Salinity)	0 - 90 mS/cm	± 0.005
Temperature	-5 to +35 °C	± 0.005
pH	0 to 14 pH	±0.1
DO	120%	±2%
Turbidity	0-2,000 NTU	±1%
Pressure	0 to 100 m	0.1% of full range

The profiler, attached to a hydro wire, was lowered into the water and allowed to equilibrate for 60 seconds prior to deployment through the water column. The profiler was lowered toward the seafloor at a steady speed of approximately 0.3 to 0.4 m/s, acquiring data at a rate of 4 Hz. This descent rate is within the recommended profiling rate for the Seabird SBE19 (Sea-bird Electronics Inc. 2009). The profiler was lowered using a winch until it was within one to two meters above the seabed, determined by a metered pulley and depth sounder.

The sensor data were recorded internally in the instrument. Data files from the profiler were downloaded from the instrument after each sampling event and a backup copy made. The data was filtered using the Seabird Data Processing – Win 32 software, removing readings prior to equilibration of the instrument (60 seconds) and data collected during the retrieval of the instrument from its maximum depth. The data was then averaged for each meter of the water column and plotted.

2.3.2 Water Samples

Water quality samples were collected at the sampling locations (Figure 2) during each sampling event in accordance with the *British Columbia Field Sampling Manual* (MWLAP 2003).

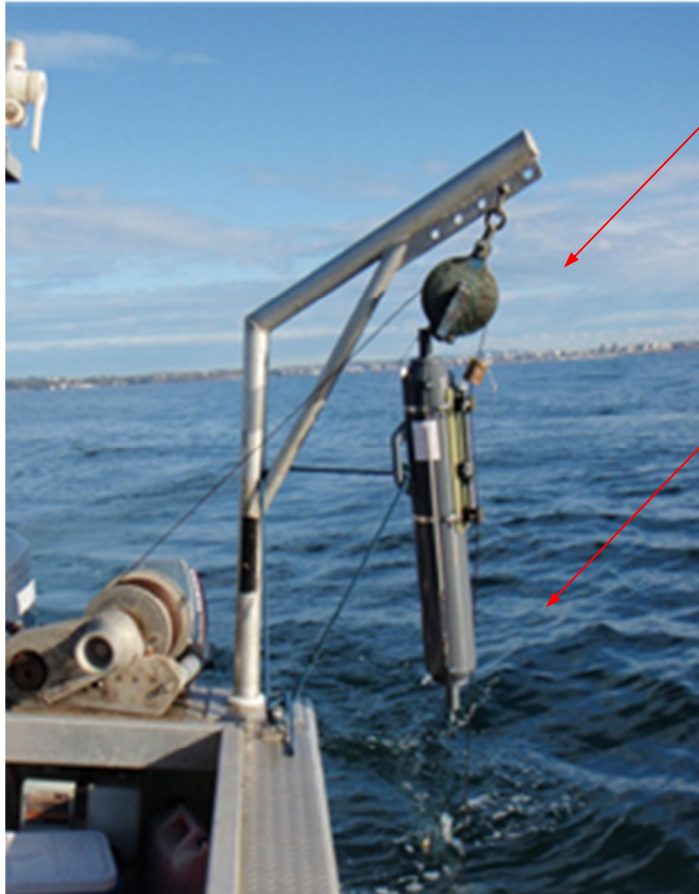
Sample Collection and Handling

Discrete water samples were collected at each station, and at three depths, using a 10 L Ocean Test Equipment Niskin water sampler, hereon referred to as the sampler (Photo A). The 10 L sampler provided sufficient volume to collect the majority of the samples at each station in one deployment. Triplicate samples required multiple casts at the desired depth and station to collect the necessary volume of water required for lab analysis. Individual samples were collected at the following depths:

- Surface: 1 m below the water surface;
- Mid: mid-depth in the water column (depth is station specific); and,
- Bottom: 2 m above the seabed.



Photo A Niskin Water Sampler



Metered Pulley

Niskin Water Sampler

The sampler is fitted with an external spring mechanism and the interior is Teflon coated. These features reduce the potential for contamination of the samples. The sampler was cleaned before each sample collection by rinsing the interior of the bottle with de-ionized water. As an additional measure to reduce the potential of cross-contamination, deep water samples were conducted first at each station. This allowed the sampler to be thoroughly rinsed through the water column before a sample was taken.

The sampler was attached to a hydro wire with a weight suspended approximately 1 m below the sample bottle. When on station, the sampler was triggered by sending a messenger down the hydro wire and tripping the closure mechanism. Aboard the vessel, the sampler was retrieved and the water sample was sub-sampled into individual sample containers provided by the laboratory.

Bottom water samples (2 m above the seabed) were collected using a bottom-touch method. The bottom-touch method involves:

- positioning the vessel to ensure it will be up-drift of the sampling station;
- quickly lowering the sampler to about 10 m above the ocean floor depth, estimated using the depth sounder and metered pulley;
- slowly lowering the sampler until the suspended weight touched the seabed, which was detected by noticing the slack in the rope tension;
- marking the depth on the wire and then raising it by approximately 2 m; and,
- allowing the vessel to drift for a few seconds to move away from the disturbed seabed and then re-lowering the bottle on station to the marked bottom depth and releasing the messenger to trip the closure mechanism on the sampler.

Mid depth and surface samples were collected after the bottom water sample. The location of the mid-depth sample was determined based on the depth of the bottom water sample at the particular station. Surface water samples were collected at a water depth of 1 m.

The individual sampling depths for each station, time of sample and sampling date are provided in Appendix 1.

Sample bottles and preservatives were provided by Maxxam Analytics, herein referred to as Maxxam. Care was taken to reduce the chance of sample bottle contamination. The mouths and inside of sample bottles and lids were not touched. The type of sample bottle used was specific to the analysis to be performed as required by the laboratory (Table F). Water samples were preserved in the field according to the preservation method specified by Maxxam (Table F), and then labelled and stored on ice in coolers. Preserved samples were delivered to Maxxam in Victoria and AXYS Analytical Services (herein referred to as AXYS) in Sidney, BC under chain of custody (COC) for analysis. Upon receipt of samples, Maxxam logged the samples, applied labels and stored them in fridges kept at 2 - 6 °C prior to analysis (*Pers. comm.* Nordbruket 2013). After analysis, all samples at the Victoria Maxxam were kept at room temperature until disposal. The individual analyses that were included within each parameter type are outlined in Table E and Section 0.

Analytical Parameters

Water samples were analyzed for eight parameter groups:

- microbiological;
- nutrients;
- conventional (Group 1 and 2);
- trace metals;
- organics (Group 1 and 2); and,
- hormones and sterols.



WorleyParsons

resources & energy

Samples were delivered by WorleyParsons staff within 30 hours from time of sampling, as this was the shortest parameter hold time (microbiological). Analytical methods are reported in the Maxxam Certificate of Analysis (COA) and AXYS Analysis Reports provided in Appendix 2. Table E identifies the analysis tested in each parameter group. Table F identifies the sample bottle size and the preservation method used. The stations and dates of each parameter type tested are summarized in Table G and Table H.

CAPITAL REGIONAL DISTRICT

CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM

WATER QUALITY TECHNICAL VOLUME

Table E Water Quality Parameters

Parameter Group	Analysis
Microbiological	<i>Enterococcus</i>
	Fecal Coliform
Conventionals (Group 1)	Major Anions
	Ammonia
	pH
	Conductivity
	TSS
	Nitrate
	Nitrite
	Nitrate + Nitrite
Conventionals (Group 2)	Dissolved Organic Carbon (DOC)
	Total Phosphate
	Orthophosphate
	Total Organic Carbon (TOC)
	Total Kjeldahl Nitrogen (TKN)
Trace Metals	Total Trace Metals by Chelation
	Dissolved Trace Metals by Chelation
Organics (Group 1)	Polycyclic Aromatic Hydrocarbons (PAHs)
	Organochlorinated Pesticides
	Chlorinated Phenolics
	Volatile Organic Compounds (VOCs including BTEX)
	Phthalates
	Polybrominated Diphenyl Ethers (PBDEs)
Organics (Group 2)	Polychlorinated Biphenyls (PCBs)
	Nonylphenol and its Ethoxylates
Hormones and Sterols	Hormones and Sterols

AXYS conducted the following analyses: hormones and sterols, nonylphenols its ethoxylates and PBDEs, while Maxxam conducted the remainder of the analyses.



Table F Sample Parameters, Bottle Size and Preservation Method

Analysis	Type of Bottle	Volume of Sample Bottles (mL)	Preservation Method
<i>Enterococcus</i>	Plastic	240	Sodium Thiosulphate
Fecal Coliform	Plastic	240	Sodium Thiosulphate
pH	Plastic	2,000	Cold
Conductivity			
TSS			
Nitrate, Nitrite and Nitrate+Nitrite			
Ammonia	Plastic	120	H2SO4
TKN			
Total Phosphate (as P)	Plastic	120	H2SO4
TOC	Plastic	120	H2SO4
DOC	Plastic	120	Cold ¹
Major Anions	Plastic	120	Cold
Dissolved Orthophosphate		120	Cold
Total Trace Metals	Plastic	120	HNO3
Hardness			
Dissolved Trace Metals	Plastic	120	Cold ¹
PAHs	Amber Glass	2 X 250	Sodium Bisulfate
Organochlorinated Pesticides	Amber Glass	1,000	Cold
Chlorinated Phenolics	Amber Glass	1,000	Cold
VOCs including BTEX	Vials	3 X 40	Sodium Bisulfate
Phthalates	Amber Glass	1,000	Cold
PBDEs	Amber Glass	2 X 1,000	Cold
PCBs	Amber Glass	1,000	Cold
Nonylphenol and its Ethoxylates	Amber Glass	2 X 1,000	Cold
Hormones and Sterols	Amber Glass	2 X 1,000	Cold

¹ Filtered and preserved by laboratory

**CAPITAL REGIONAL DISTRICT
CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM
WATER QUALITY TECHNICAL VOLUME**

Table G Sample Parameters, Dates and Stations Sampled

Parameter Type	Stations	Depths	Sampling Events Per Season
Microbiological	All	All	All
Nutrients	All	All	All
Conventionals (Group 1)	All	All	All
Conventionals (Group 2)	All	All	All
Trace Metals	AH-2, MP-4, FC-7	All	One
Organics (Group 1)	AH-2, MP-4, FC-7	Bottom	Twice
Organics (Group 2)	AH-2, MP-4, FC-7	Bottom	One
Hormones & Sterols	AH-2, MP-4, FC-7	Bottom	One

Table H Organics, Hormone and Sterol Sampling Seasons

Year	Season	AH-2		FC-7		MP-4		MP-5		MP-6	
		Standard Suite	Organics + H&S	Standard Suite	Organics + H&S	Standard Suite	Organics + H&S	Standard Suite	Organics + H&S	Standard Suite	Organics + H&S
2009	Spring	x		x							
	Fall			x							
2010	Winter	x	x	x	x						
	Spring	x	x	x	x						
	Summer	x	x	x	x	x	x	x	x	x	
	Fall	x		x		x		x		x	
2011	Winter	x	x	x	x	x	x	x	x	x	
	Spring	x		x		x		x		x	
	Summer	x	x	x	x	x	x	x	x	x	
2012	Fall	x		x		x		x		x	
	Winter	x	x	x	x	x	x	x	x	x	
	Spring	x		x		x		x		x	
Total		11	6	12	6	8	4	8	4	8	0

Standard Suite includes: Conventional (Group 1), Conventional (Group 2) Biological, Nutrients, & Trace Metals
Organics + H&S includes: Organics (Group 1), Organics (Group 2),



2.4 Quality Assurance / Quality Control

2.4.1 Water Column Profiles

The quality assurance and quality control (QA/QC) measures for the Seabird profiler involved field, manufacturer and data handling procedures.

Field

The QA/QC measures that facilitated accurate data collection in the field included:

- Annual Seabird sensor calibration by manufacturer;
- Annual Seabird diagnostic by manufacturer;
- Sensor stabilization period (60 seconds) prior to descent; and,
- Rinse Seabird probes with 0.1% Triton X-100 solution followed by an internal and external rinse with deionized water or fresh, clean tap water after field use, as per *Care and Cleaning Instructions for Seabird* (Seabird 2008).

Data Handling

The QA/QC measures used to achieve quality data and prevent data loss involved the following:

- Bench testing equipment prior to deployment to ensure proper function prior to each sampling date;
- Use of waterproof and tear proof paper and labels and pens for field data sheets;
- Uploading and analysis of profile data with Seabird specific software; and,
- Back up of data after each sampling event.

2.4.2 Water Samples

QA/QC procedures related to the collection and analysis of water samples are discussed below.

Field

In accordance with the *British Columbia Field Sampling Manual* (MWLAP 2003), the field QA/QC plan included procedures to reduce the risk of contamination to the samples. The field QA/QC procedures involved the following:

- Thorough rinsing of equipment with de-ionized water prior to sampling;
- Thorough rinsing of equipment through the water column by collecting the deepest sample first;
- Prevent sample contamination by carefully handling bottles and lids to prevent them from contact and overhead drips;

- Fill coolers with ice packs to maintain sample temperature of less than 10°C;
- Wearing a new pair of nitrile gloves at each station when handling samplings to prevent contamination; and,
- Maintaining a clean work area.

Sample documentation included the following:

- Labelling all field sample bottles and field data sheets with pencil and waterproof labels;
- Recording sample time, depth, matrix and preservation method were recorded; and,
- Use of COC records for laboratory correspondence.

Laboratory

The laboratory QA/QC measures included procedures to obtain high quality lab results as well as measures to verify the results. The laboratory QA/QC plan involved the following:

Certificate of Analysis Reports: Certificate of Analysis (COA) reports provide test results, analytical and laboratory methodology, date of analysis, unique sample identifiers, unique job numbers and a Quality Assurance (QA) report.

Field Blanks: Field blanks were conducted during each sampling event. The purpose of a field blank is to determine if contamination has occurred due to field sampling (sample collection equipment) and/or processing methodology (contaminated bottles). Field blanks are laboratory provided, analyte-free, deionized water that are handled identically to a genuine field collected sample. The deionized water is dispensed through the sampler into the sample bottles, undergoing the same preservation process as the genuine field collected samples. Field blanks were analyzed for all water parameters tested in the field program.

Field Splits: Triplicate field samples for water were collected at stations AH-1, AH -2 and MP-4. The sampling frequency for each field split is provided in Table I. Split samples are homogenized sub-samples taken from the sampler and divided into three sub-samples. The purpose of field replicates is to help determine the precision of the sampling program. Relative Percent Differences (RPD) were calculated to determine variability between samples and their replicates. Field replicates are multiple samples collected at the same site, water depth and time, by the same person and using the same methodology (equipment and procedures).



Table I Field Split Frequency

Parameter Type	Stations	Depths	Per Season
Microbiological	AH-2 & MP-4	All	Once
Nutrients	AH-2 & MP-4	All	Once
Conventional (Group 1)	AH-2 & MP-4	All	Once
Conventional (Group 2)	AH-2 & MP-4	All	Once
Trace Metals	MP-4	All	Once
Organics (Group 1)	MP-4	Bottom	Twice
Organics (Group 2)	MP-4	Bottom	Once
Hormones & Sterols	MP-4	Bottom	Once

Laboratory Method Blank: Method blanks are analyte-free samples that are analyzed alongside field collected samples. The purpose of a method blank is to determine the presence and scale of any contamination during laboratory processing (methodology, environment, equipment, reagents) (MWLAP 2003). Laboratory method blanks should not exceed the method detection limit, where they do; any detected values above the reporting limits (2 X RDL) require re-analysis (MWLAP 2003; Maxxam 2010).

Laboratory Matrix Spikes: A matrix spike is a portion of a sample spike with a known concentration of an analyte of interest has been added. The purpose of a matrix spike is to identify sample matrix interference and determine the accuracy of the analytical methodology. The percent recovery of the matrix spike is compared to the QC limits. If the percent recovery is outside of the QC limits, the samples are then re-run for single parameter tests. For multiple parameter tests, the samples are not re-run and the data is accepted to be true if less than 10% of the parameters are outside of the QC limits.

Spiked Blanks: Spiked blanks are a blank matrix to which a known amount of the analyte is added. The purpose of a spiked blank is to identify laboratory contamination. If the percent recovery is outside the QC limits, the samples are re-run for single parameter tests. For multiple parameter tests, the samples are not re-run and the data is accepted to be true if less than 10% of the parameters are outside of the QC limits.

Hold Times: Maximum sample hold times as outlined by the BC MOE were identified prior to the field sampling program (MOE 2011). Following preservation requirements (Table F) the hold times are identified in Table J.

CAPITAL REGIONAL DISTRICT

CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM

WATER QUALITY TECHNICAL VOLUME

Table J Analytical Parameter – Hold Times

Analytical Parameter	Hold Time
pH	Immediately
Alkalinity	14 Days
Ammonia	28 Days
Chlorinated Phenolics	7 Days
Conductivity	28 Days
Dissolved Metals	28 Days
DOC	28 Days
<i>Enterococcus</i>	30 Hours
Fecal coliform	30 Hours
Hormones and Sterols	7 Days
Major Anions	28 Days
Nitrate/Nitrite	72 Hours
Nonylphenol and its Ethoxylates	14 Days
Organochlorinated Pesticides	7 Days
Orthophosphate	72 Hours
Phthalates	7 Days
PBDEs	1 Year
PCBs	None
PAHs	7 Days
TKN	28 Days
TOC	28 Days
Total Metals	28 Days
Total Phosphorus	28 Days
TSS	7 Days
VOCs including BTEX	14 Days



Data Handling

QA/QC measures associated with data handling, included:

- Use of water-proof and tear proof paper and labels and pens for field data sheets;
- Use of chain of custody records for lab correspondence;
- Backing up electronic data;
- Keeping thorough notes, photos, GPS coordinates, tide heights, weather, and all potential confounding factors observed during all field days and at all sites; and,
- Saving station positions in the digital chart software as well as in field notes for redundancy.

2.4.3 WMEP Program

Quality assurance and quality control procedures were guided by the *Report on Wastewater and Marine Environment Programs Quality Assurance and Quality Control Analytical Program Review* (Golder Associates 2009d), with reference to the *British Columbia Field Sampling Manual* (MOE 2003) and the *Standard Methods for the Examination of Water and Wastewater* (APHA 1998).

Sample Representativeness

The Wastewater and Marine Environment Program (WMEP) recommendation for blank samples is that if the concentration of the blank is above the detection limit, it should not be greater than 10% of the associated sample concentration for that time. Furthermore, Maxxam Analytics suggests that if the blank concentration is within twice the detection limit, it does not need to be retested. Although the WMEP does not provide a recommendation for processing values near detection limits for blank samples, there is acknowledgement that as concentrations approach detection limits, the probability of error increases substantially and; therefore, five times the detection limit (5xDL) is an appropriate scale for samples. These three suggestions for criteria were used to assess the sample blanks.

Replicate Precision

The sample precision was assessed according to the guidelines and criteria set out in the WMEP review. Triplicates of samples were compared using the relative standard deviation (RSD). The allowable range of RSD for triplicate samples varies depending on the analyte being considered (Table K). In each case, values less than 5xDL were considered acceptable even if their RSD exceeded guidelines, as recommended in the WMEP Review (Golder 2009).

Table K Criteria for discriminating between marginal and severe data quality object failures for RSD of triplicate samples (Golder 2007)

Analyte Group	Relative Standard Deviation Criteria		
	Pass	Marginal Failure	Severe Failure
Microbiology		None Provided	
TSS, BOD, SO ₄ ²⁻ , Hardness, COD	<15%	15-25%	>25%
Nitrogenous Compounds	<10%	10-15%	>15%
TOC	<25%	25-40%	>40%
Metals, Oil & Grease	<20%	20-30%	>30%
Organics	<50%	50-75%	>75%

The precision of microbiological samples were compared to a precision criteria based on the method outlined in the *Standard Methods for the Examination of Water and Wastewater* (APHA 1998). The range of logarithms (R) was calculated between the samples and each of its replicate samples, where (R) is the logarithm of the sample minus the logarithm of the replicate. A precision criteria as then calculated from the first 15 samples, where the precision criteria is $3.27 * (R)$.

A precision criterion of 0.53 was calculated for fecal coliforms and 1.69 for *Enterococci*. The range of logarithms was then compared to the criteria. If the range was below the criteria then the data was considered acceptable and indicated with an A (i.e. within the normal variability). If the range was above the criteria then the data was considered unacceptable and indicated with a U.

Analytical Bias

Analytical bias was assessed for laboratory matrix spikes, reference samples, and surrogate recoveries according to the guidelines and criteria set out in the WMEP review. The DQOs for these parameters are provided in Table L.



Table L Criteria for discriminating between marginal and severe data quality object failures for analytical bias (Golder 2007)

Parameter Group	Relative Standard Deviation Criteria		
	Pass	Marginal Failure	Severe Failure
Microbiology		None Provided	
Metals, S ²⁻ , phenolics, TOC	75-125%	60-75% or 125-140%	<60% or > 140%
NO ₃ , NO ₂ , NO ₃ , SO ₄ Hardness	80-120%	70-80% or 120-130%	<80% or >130%
BOD, COD, TKN	80-120%	70-80% or 120-130%	<80% or >130%
Organics	50-150%	25-50% or 150-175%	<25% or >175%
Hormones and Sterols		None Provided	

2.5 Data Analysis and Statistics

2.5.1 Comparison to Guidelines

Water quality data were uploaded into an Environmental Quality Information System (EQUIS) 5.5.1 database (Earthsoft, Concord, MA) and compared to relevant provincial and federal guidelines. These guidelines included:

- *BC Water Quality Guidelines (Criteria)* (MOE 2006)
 - These guidelines provide acute (instantaneous) and chronic (30-day average) concentration guidelines for the protection of saltwater aquatic life.
- *Canadian Council of Ministers of the Environment (CCME) – Canadian Water Quality Guidelines for the Protection of Aquatic Life* (CCME 1999)
 - These guidelines provide nationally endorsed, science-based goals for maintaining quality in aquatic ecosystems. Water quality data were compared to the appropriate CCME Marine guidelines.

2.5.2 Spatial and Temporal Comparisons

Select parameters were plotted with respect to depth for each sampling season. Visual comparisons of both spatial and temporal variations could then be made.

3. ANALYTICAL RESULTS

3.1 Water Column Profiles

Water column profile data is plotted in Figures P-1 through P-30. Each parameter; temperature, salinity, pH, DO, and turbidity, are plotted with respect to depth for each seasonal sampling event.

The density profile, which is based on the temperature and salinity of the receiving water, is particularly important with respect to the dilution of the effluent plume. The water column profile data was therefore used in the hydrodynamic modelling of the effluent plume.

3.1.1 Water Quality Guidelines

The BC MOE has published water quality guidelines for temperature, pH, DO and turbidity. The water quality guidelines for marine and estuarine aquatic life are as follows:

Temperature

The water quality guidelines for temperature for marine and estuarine aquatic life are:

- plus or minus one degree Celsius change from natural ambient background;
- the natural temperature cycle characteristic of the site should not be altered in amplitude or frequency by human activities; and,
- the maximum rate of any human-induced temperature change should not exceed 0.5 degrees Celsius per hour.

pH

The guideline for *pH in marine waters is an unrestricted change within a range from 7.0 to 8.7* (MOE 1991).

Dissolved Oxygen

The guidelines for DO in marine and estuarine water are provided in Table M.



Table M Provincial Dissolved Oxygen Criteria for Aquatic Life for Marine and Estuarine Waters (MOE 1997)

Guideline in Water Column (mg O ₂ /L)	
30-day mean ¹	8
Instantaneous minimum ²	5

¹ Based on at least 5 approximately evenly spaced samples in 30-days. If a diurnal cycle exists, measurements should be taken when oxygen levels are low (usually early morning).

² Minimum level to be maintained at all times.

Turbidity

The water quality guideline for turbidity are “Change from background of 2 NTU at any one time for a duration of 30 d in all waters during clear flows or in clear waters, and change from background of 8 NTU at any one time for a duration of 24 h in all waters during clear flows or in clear waters.” (MOE 2001c)

Additional Criteria

The temperature, salinity and pH of the receiving water also influence the ratio of ionized ammonia to un-ionized ammonia in the receiving environment. The water quality guideline for ammonia is therefore based on ambient conditions at the time of sampling; this is discussed in greater detail in Section 3.3.4. The temperature, salinity and pH at each station and at the depth of individual water samples were extracted from the profile data. These parameters were used to determine the appropriate ammonia water quality guideline values.

3.1.2 Water Column Profile Results

Temperature

Water column profiles for temperature are plotted in Figures P-1 through P-5. Each temperature profile collected is plotted with respect to depth for each season.

Measured temperature profiles were not compared to the BC water quality guideline, as the baseline water monitoring program was not specifically designed to monitor the effects of the existing discharge and therefore “natural background conditions” versus any one location cannot be specifically defined. This is to say, that for any location and depth it cannot be certain if an observed temperature difference is a result of natural variability or an anthropogenic source.

Seasonally, the measured temperature profiles followed an anticipated pattern. Highest temperatures were measured near the surface in the summer, while coolest temperatures were measured in the winter over the entire profile. Summer profiles showed the most variability within the seasonal sampling events. Temperatures varied by over 2 °C between the weekly sampling events. Coldest summer sea water temperatures were observed at depth, below 60 m.

Fall temperature profiles were measured to be more uniform both temporally and spatially. The temperatures in the top 60 m of the water column were between 8°C and 10°C with low variability with depth. At station MP-6, a slight thermocline was observed at depth (between 50 and 75 m) in several of the fall profiles, and temperatures below the thermocline were less than 8°C.

Winter temperatures were by far the most uniform amongst the sampling events. In general temperatures measured between 7°C and 8°C throughout the water column. Spring temperatures were generally above winter temperatures.

Salinity

Water column profiles for salinity are plotted in Figures P-6 through P-10. Each salinity profile measured is plotted with respect to depth for each season.

The salinity and, to a lesser extent, the temperature determine the density of water. In relation to a municipal wastewater discharge the density difference between the effluent and the receiving water has a significant influence on the dynamics of the effluent plume. The effluent will have a density similar to fresh water which will be lower than sea water. When this low density effluent is discharged into the marine environment it will tend to “float” towards the surface.

The salinity/density profile of the receiving environment plays an important role in how the effluent plume interacts with the receiving environment. Effluent is buoyant and as it mixes with the receiving water its density increases if a strong gradient (stratification) in the salinity profile exists. As the effluent mixes with the receiving water, the density of the effluent plume can become greater than the ambient water above the plume.

At that point the effluent will no longer rise and will effectively become trapped below the water surface. On the contrary, if there is only a small gradient (no stratification) in the water column profile then the effluent plume is less likely to reach the density of the ambient water and can continue to rise until the effluent plume surfaces.

The measured salinity profiles followed a similar pattern to the temperature profiles. Strong salinity gradients and the greatest variability in salinities with depth were observed primarily in the summer and spring. In the summer, salinities as low as 27 psu (practical salinity unit) (reference station FC-7 2010) were measured at the surface. Salinities increased to 30 to 32 psu at depths of 50 m at stations AH-2, MP-4, MP-5 and reference station FC-7. At station MP-6 the measured salinities increased with increasing depth, where near the seabed (~85 m) the salinity was approximately 31.5 psu.

Winter profiles were the least stratified, with low variability with depth in the top 50 m of the water column at each station. A halocline/ salinity gradient was observed at a depth of approximately 40 m during both years of winter seasonal sampling events.

This seasonal variation in near surface salinities, lower salinities in the summer and higher salinities in the winter is primarily a result of fresh water discharges to the Georgia Basin. The largest single source of fresh water to the Georgia Basin is the Fraser River, which has peak flow (freshet) between May and July.



Lowest flows in the Fraser River are generally observed in the winter between January and March (Thomson 1981).

pH

The measured pH profiles are plotted in Figures P-11 through P-15. Each pH profile is plotted with respect to depth for each season. The measured pH values were all within the BC water quality guidelines which are discussed further in 3.3.2.

Dissolved Oxygen

The BC water quality guideline for dissolved oxygen is a 30-day mean concentration of 8 mg/L and an instantaneous minimum of 5 mg/L (MOE 1997).

DO profiles concentrations are plotted in Figures P-16 through P-20 with respect to percent saturation and in Figures P-21 through P-25 with respect to mg/L O₂. Oxygen concentrations showed some seasonal variability in measured dissolved oxygen concentrations.

Summer DO concentrations were generally between 8 mg/L and 5 mg/L in the top 40 m of the water column. During a single sampling day, (August 3, 2010) dissolved oxygen concentrations above 8 mg/L were measured in the top 10 m of the water column at 4 of the five stations (AH-2, MP-4, MP-5 and reference station FC-7). This high dissolved oxygen concentration corresponded with higher temperatures and lower salinities than what was measured in the other summer 2010 water column profiles. Below a depth of 40 m, dissolved oxygen concentrations approached and/or dropped below 5 mg/L. At station MP-6 the concentrations continued to decline with depth, converging at concentrations of 2.6 to 2.8 mg/L at a depth of 86 m.

The concentration of DO in the fall was generally between 5 mg/L and 8 mg/L in the top 50 m of the water column. Concentrations below 5 mg/L were observed during the fall below a depth of 30 m. A minimum concentration of 3.0 mg/L was measured at 85 m depth at MP-6.

The highest average concentrations were measured in the winter sampling events. In the winter 2011 sampling event concentrations at or above 8 mg/L were measured at all stations in the top 50 m of the water column. Winter 2012 profiles had slightly lower DO concentrations in the top 50 m of the water column but near 8 mg/L. At MP-6 the dissolved oxygen concentrations remained relatively high (above 7 mg/L) until a depth of approximately 70 m where during both years (winter) oxygen concentrations dropped noticeably. The minimum measured DO concentration was 4.2 mg/L at a depth of 87 m.

The spring oxygen profiles were generally between 5 mg/L and 8 mg/L, with some measured DO concentrations greater than 8 mg/L. Similar to the summer and fall sampling events, concentrations below 5 mg/L were observed below approximately 60 m depth at station MP-6.

DO concentrations below 5 mg/L did not meet BC water quality guidelines for DO. The guideline stipulates that for cases where natural DO concentrations do not meet criteria, *i.e. no statistically significant reduction below natural levels should be permitted* (MOE 1997).

Given that wastewater discharges occur within the vicinity of the baseline monitoring program, with the exception of the reference station (FC-7), where low DO concentrations were also measured, the low DO conditions may be natural or result from anthropogenic influences. However, given that low DO concentrations (< 5 mg/L), were observed at depth, DO concentrations in the receiving environment should continue to be monitored.

Turbidity

Turbidity profiles measured during the sampling program are provided in figures P-26 through P-30. The water quality guideline for turbidity is “*change from background of 2 NTU at any one time for a duration of 30 d in all waters during clear flows or in clear waters, and change from background of 8 NTU at any one time for a duration of 24 h in all waters during clear flows or in clear waters.*” (MOE 2001c)

The measured turbidity was generally low, below 2 NTU, for the majority of the profiles. At station MP-6, a slight increase in turbidity was observed in the deep water, but levels were generally below 4 NTU.

The turbidity measured in the spring of 2012 was significantly higher (up to 13 NTU) than other measurements. High turbidity was measured at all stations and during all sampling dates during the spring 2012 season. The reason for the higher turbidity is not known, but could be associated with phytoplankton production.

3.1.3 Quality Assurance / Quality Control

Calibration records for the SBE 19plus are provided in Appendix 3. All measured turbidity values during the spring 2012 sampling event were higher than previous sampling events. The turbidity sensor was factory calibrated prior to this sampling event and found to be within acceptable limits.

The location of station AH-2 is adjacent to a large underwater rock outcrop. Occasionally during sampling, the wind pushed the sampling vessel into shallower water during CTD casts. This resulted in CTD casts of differing maximum depths.



3.2 Water Samples

3.2.1 Microbiological Indicators

Analytical results of the microbiological indicators are provided in Table 1. Median, 90th percentile, geometric mean and maximum values for each depth at each station for all seasons were calculated and provided in Table 1. Non-detect concentrations were handled as half the detection limit for the purpose of median, 90th percentile, geometric mean and maximum value calculations (for example, <1cfu/100 mL was handled as 0.5 cfu/100 mL).

Guidelines

Water samples were analyzed for two microbiological indicators; fecal coliform and *Enterococci*. The BC and Canadian water quality guidelines for microbiological parameters relate to the use(s) of the water body in question. For marine water, guidelines exist for shellfish harvesting and recreational water. The applicable guidelines (MOE 2001b and Health Canada 2012) are provided in Table N. Note that the BC shellfish water quality guidelines are consistent with the Canadian Food Inspection Agency (2008) *Canadian Shellfish Sanitation Program, Manual of Operations*.

Table N Microbiological Indicator Guidelines

Water Use		Enterococci	Fecal Coliforms
Shellfish Harvesting	MOE 2001b	≤ 11 cfu/100 mL (90th percentile)	≤ 43 cfu/100 mL (90th percentile)
		≤ 4 cfu/100 mL (median)	≤ 14 cfu/100 mL (median)
Recreation Secondary Contact	MOE 2001b.	≤ 100 cfu/100 mL (geometric mean)	None
	Health Canada 2012	None	None
Recreation Primary Contact	MOE 2001b.	≤ 20 cfu/100 mL (geometric mean)	≤ 200 cfu/100 mL (geometric mean)
	Health Canada 2012	≤ 35 cfu/100 mL (geometric mean) ≤ 70 cfu/100 mL (Single Sample Maximum)	≤ 200 cfu/100 mL (geometric mean) ≤ 400 cfu/100 mL (Single Sample Maximum)

The shellfish water quality guidelines are applicable for water used for shellfish harvesting as defined in the Municipal Wastewater Regulation (MWR), i.e. “*bodies of water capable of supporting shellfish in quantities that permit aboriginal, commercial or recreational shellfish harvesting*” (BC 2012). Shellfish are

defined as: “all edible species of oysters, clams, mussels and scallops either shucked, in the shell, fresh or fresh frozen or whole or in part. For the purposes of marine biotoxin control, predatory gastropod molluscs shall also be included” (Canadian Food Inspection Agency 2011).

Health Canada, considers recreational activities as “as any activity involving intentional or incidental immersion in natural waters” (Health Canada 2012). The types of recreational water are defined by Health Canada (2012) based on the anticipated contact people will have with the water. These are defined as:

•*Primary contact: Activities in which the whole body or the face and trunk are frequently immersed or the face is frequently wetted by spray, and where it is likely that some water will be swallowed (e.g., swimming, surfing, waterskiing, whitewater canoeing/rafting/kayaking, windsurfing, subsurface diving).*

•*Secondary contact: Activities in which only the limbs are regularly wetted and in which greater contact (including swallowing water) is unusual (e.g., rowing, sailing, canoe touring, fishing).* (Health Canada 2012).

The locations at which sampling occurred do not correspond to specific recreational or shellfish harvesting areas; therefore, the guidelines are simply provided for points of reference. Concentrations above guideline values do not necessarily constitute a risk to human health. The specific locations of shellfish and recreational water and the implication of possible exceedances of the water quality guidelines are not discussed in this report.

Comparison to Shellfish Harvesting Guidelines

The median and 90th percentile values were calculated for both fecal coliforms and *Enterococci* at each depth, station and season.

The median concentrations of *Enterococci* and fecal coliforms are plotted in Figure A and Figure B and are compared against the shellfish water quality guidelines. The location, depth and season where the median concentration of either fecal coliforms or *Enterococci* exceeded their applicable water quality guidelines is also summarized in Table O.



Table O Exceedances of Median Microbiological Indicators Relative to the Shellfish Harvesting Guideline

	Station Depth	AH-2			FC-7			MP-4			MP-5			MP-6		
		S*	M	B	S	M	B	S	M	B	S	M	B	S	M	B
Spring	2011	X	X	X					X	X			X			
	2012		X	X					X	X		X	X			
Summer	2010		X	X						X			X			
	2011		X	X					X	X		X	X			
Fall	2010	X	X	X				X	X	X	X	X	X			
	2011		X	X				X	X	X		X	X		X	
Winter	2011	X		X				X	X	X	X	X	X	X		
	2012	X	X						X	X	X	X	X		X	
Total		4	7	7	0	0	0	3	7	8	3	6	8	1	2	0

***S = Surface Water, M = Mid Water, B = Bottom Water**

Concentrations of both *Enterococci* and fecal coliforms consistently exceeded the shellfish harvesting guideline in the mid and bottom samples collected from AH-2, MP-4 and MP-5 for all four seasons. Surface samples exceeded the guideline during four of the eight sampling events at AH-2, and three of the eight sampling events at MP-4 and MP-5.

At reference station FC-7, the median concentrations of fecal coliforms were all less than 5 cfu/100mL and *Enterococci* median concentrations were either at or below the method detection limit of 1 cfu/100mL. This was consistent between all three depths and all seasons.

At station MP-6 there were three sampling events where the guidelines were exceeded. The fecal coliform guideline was exceeded at the surface during the winter 2011 sampling event and the *Enterococci* guideline was exceeded in the mid water samples during the fall 2011 and winter 2012 sampling events. During the spring and summer sampling events, median concentrations in the surface and mid samples were all less than the guidelines while the median concentrations in the bottom samples (~86 m) were less than 4 cfu/100 mL during all four seasons.

**CAPITAL REGIONAL DISTRICT
CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM
WATER QUALITY TECHNICAL VOLUME**

Figure A Median Enterococci

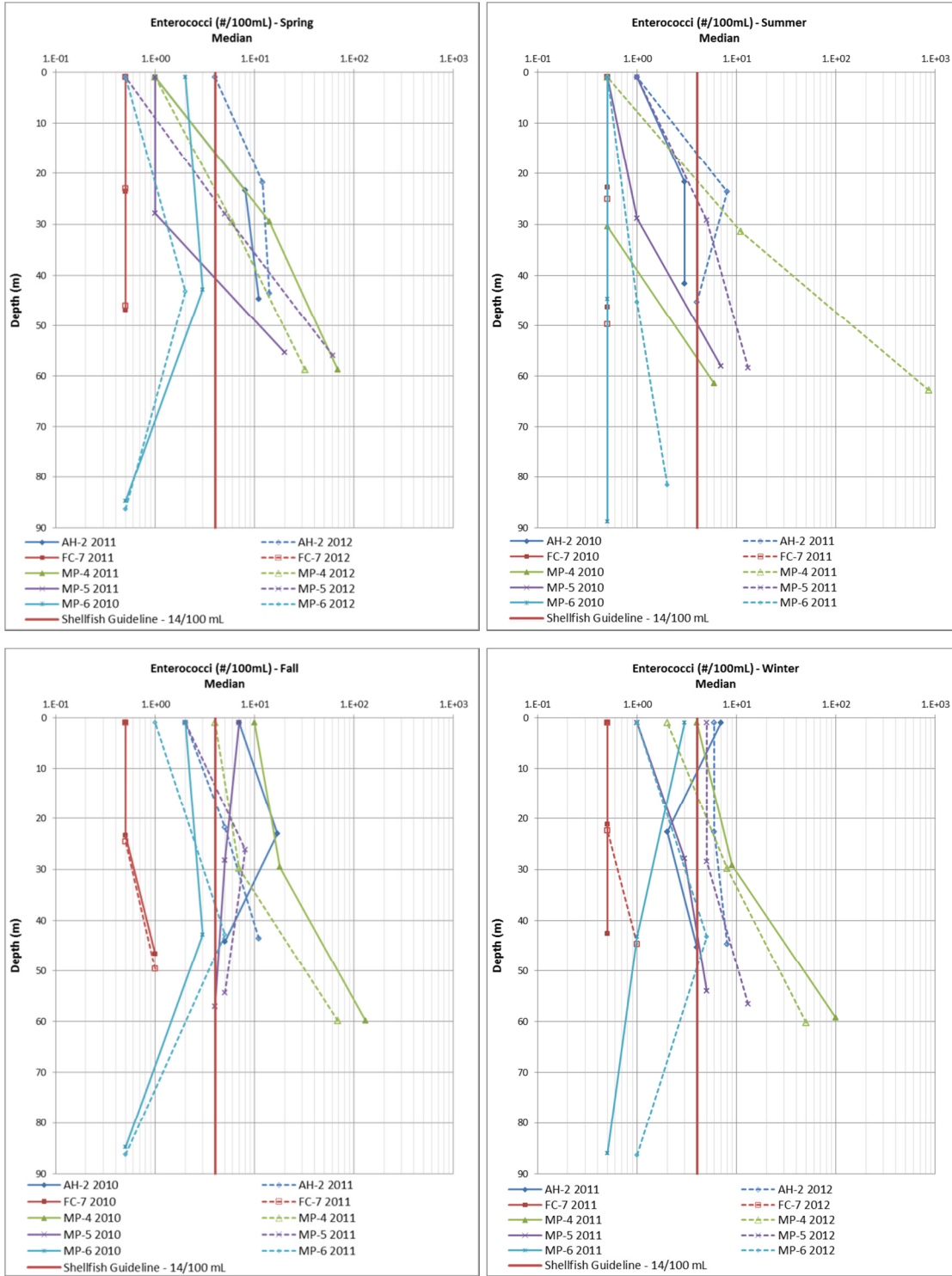
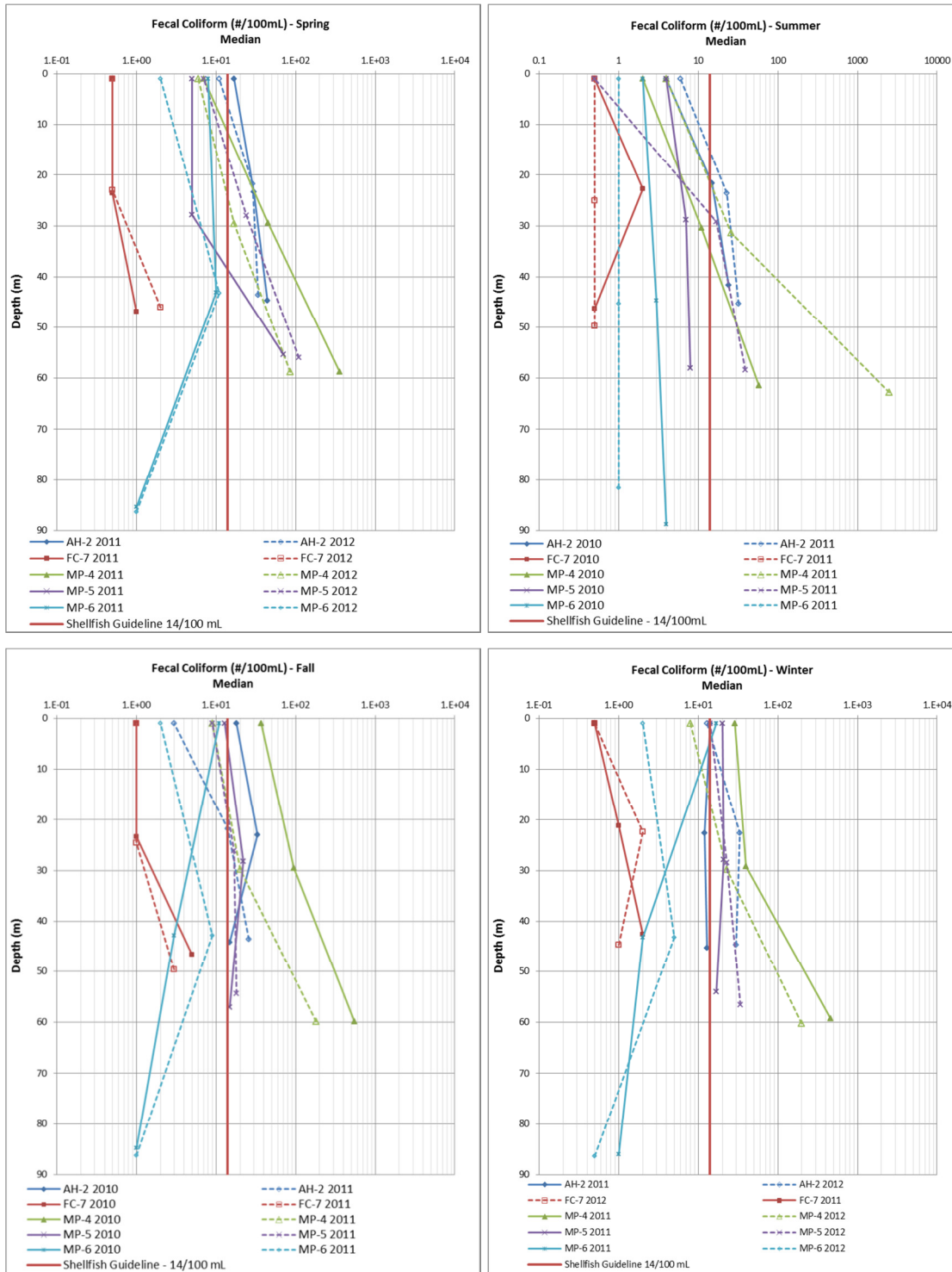




Figure B Median Fecal Coliform



CAPITAL REGIONAL DISTRICT

CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM

WATER QUALITY TECHNICAL VOLUME

The 90th percentile concentrations of *Enterococci* and fecal coliforms are plotted in Figure C and Figure D and are compared against the shellfish water quality guidelines. The location, depth and season where the 90th percentile concentration of either fecal coliforms or *Enterococci* exceeded their applicable water quality guidelines is also summarized in Table P.

Table P Exceedances for 90th Percentile Shellfish Harvesting Guideline

	Station Depth	AH-2			FC-7			MP-4			MP-5			MP-6		
		S*	M	B	S	M	B	S	M	B	S	M	B	S	M	B
Spring	2011	X	X	X				X	X	X			X			X
	2012		X	X					X	X		X	X		X	X
Summer	2010			X					X	X		X	X			
	2011		X	X				X	X	X		X	X		X	
Fall	2010	X	X	X				X	X	X	X	X	X		X	
	2011	X	X	X				X	X	X		X	X			
Winter	2011	X	X	X				X	X	X	X		X			
	2012	X	X	X				X	X	X	X	X	X			
Total		5	7	8	0	0	0	6	8	8	3	6	8	0	3	2

***S = Surface Water, M = Mid Water, B = Bottom Water**

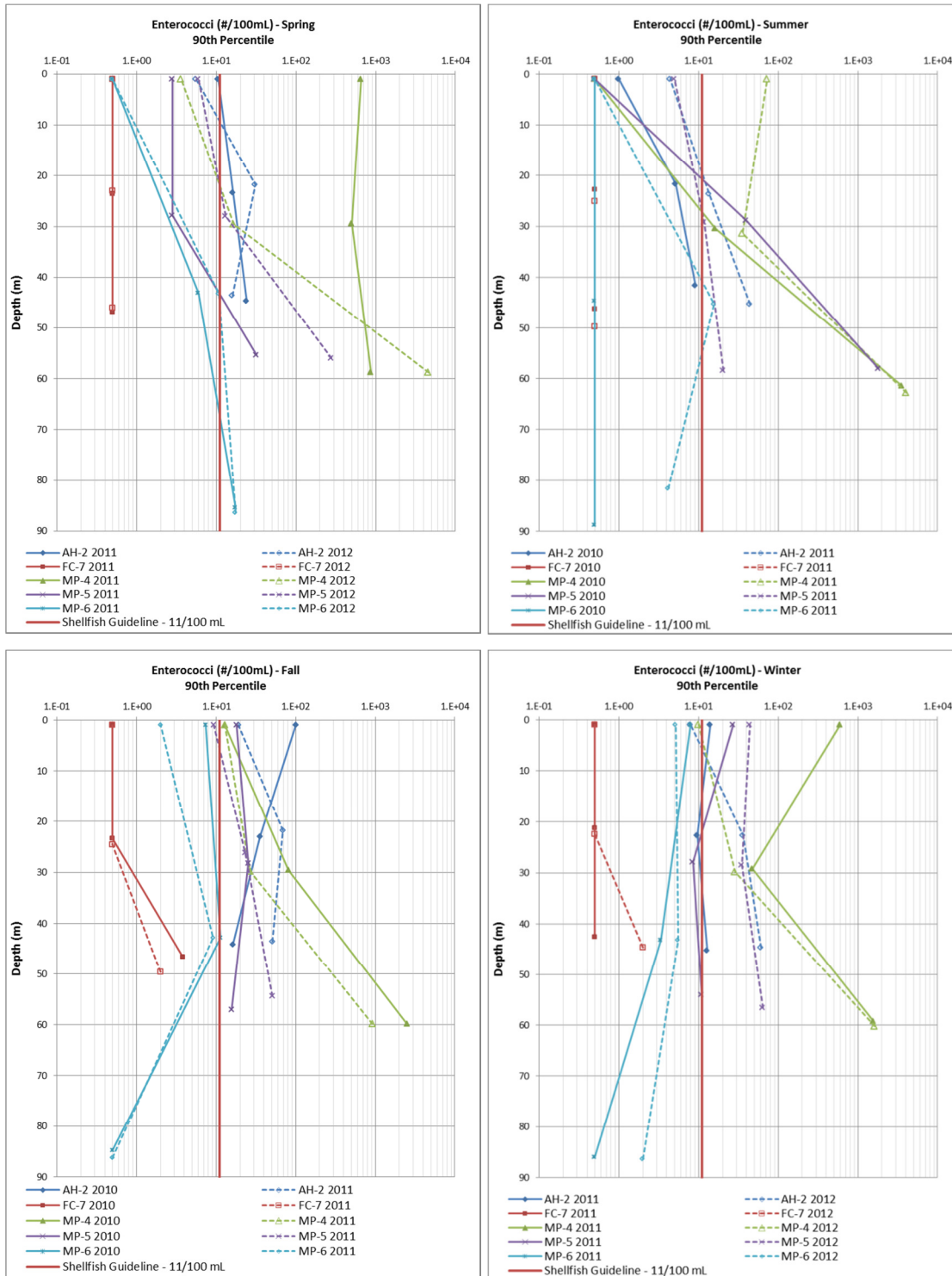
Results of the 90th percentile analysis are similar to those of the median concentrations. The highest number of exceedances were found at stations AH-2, MP-4 and MP-5 in the mid and deep water samples. At all three of these locations, the bottom sample exceeded either the fecal coliform or the *Enterococci* 90th percentile guideline during all eight of the sampling events. Mid water samples exceeded the guidelines for all eight sampling events at MP-4, for seven of the eight sampling events at AH-2 and six of the eight sampling events at MP-5.

The fecal coliform or *Enterococci* 90th percentile guideline was also exceeded in the surface samples collected from AH-2, MP-4 and MP-5. The majority of the exceedances occurred in the winter and fall sampling events. During both the 2011 and 2012 winter sampling event the guidelines were exceeded at the surface for all three locations. The guidelines were also exceeded at AH-2 and MP-4 during both fall sampling events and at MP-5 during the 2012 fall sampling event.

At MP-6, the 90th percentile guidelines were exceeded during a total of four sampling events. The MP-6 exceedances included; bottom samples in both spring 2011 and 2012, and mid water samples in fall 2010, summer 2011 and spring 2012. Concentrations of both fecal coliforms and *Enterococci* were below the 90th percentile guidelines for all sampling events and depths at reference station FC-7.

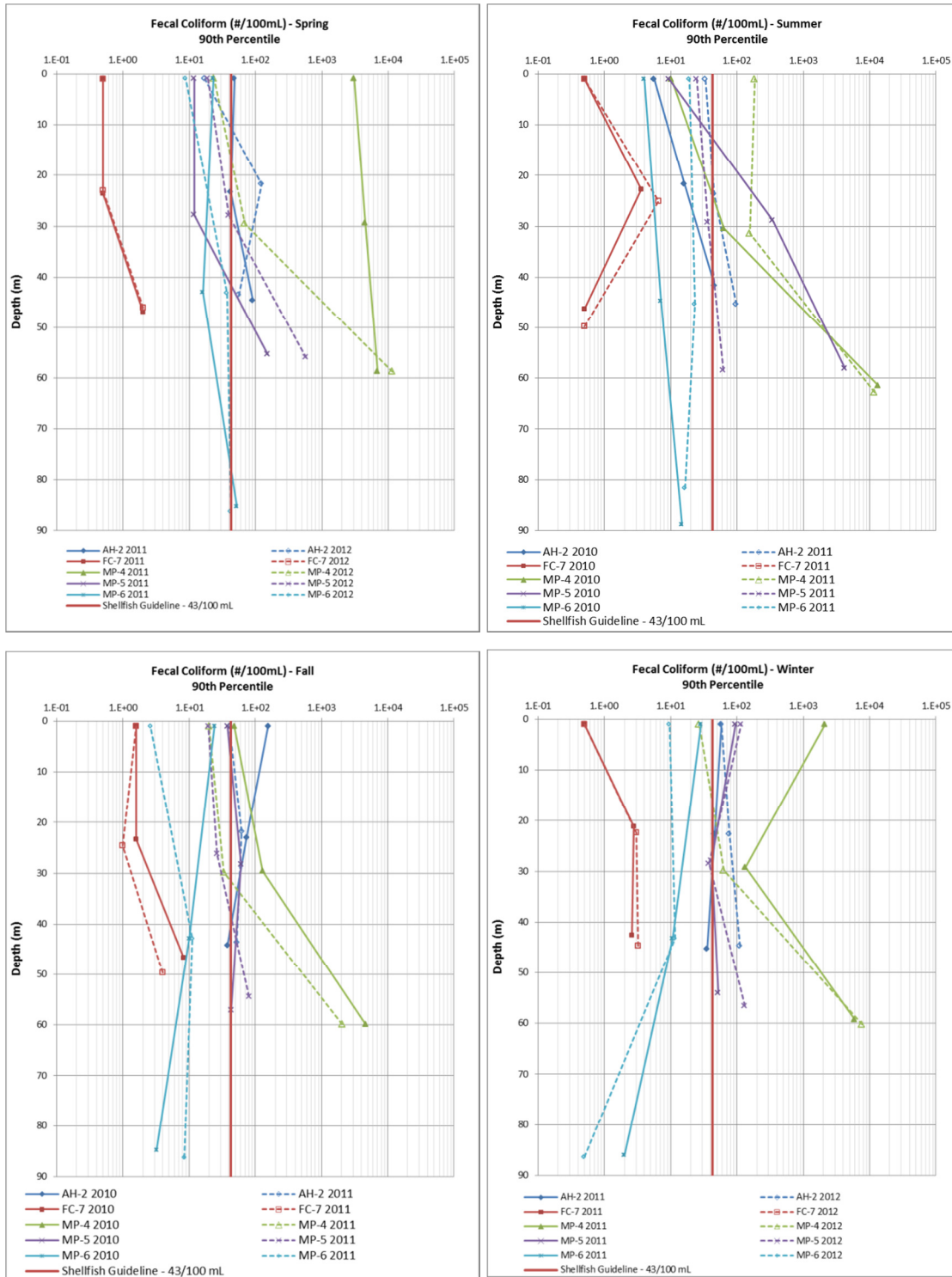


Figure C 90th Percentile Enterococci



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CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM
WATER QUALITY TECHNICAL VOLUME**

Figure D 90th Percentile Fecal Coliform





Comparison to Recreational Guidelines

The geometric mean and maximum values were calculated for both fecal coliforms and *Enterococci* at each depth, station and season.

The geometric mean concentrations of *Enterococci* and fecal coliforms are plotted in Figure E and Figure F and compared against the recreational water quality guidelines. Note, given a discrepancy between the BC primary contact guideline for *Enterococci* and Health Canada guideline, the more conservative 20 cfu/100 mL guideline is used in this analysis.

The location, depth and season where the geometric mean concentration of either fecal coliforms or *Enterococci* exceeded their applicable water quality guidelines are summarized in Table Q. When both the secondary contact and primary contact guidelines are exceeded the location is marked with an “O”, if only the primary contact guideline is exceeded it is marked with an “X”.

Table Q Geometric Mean Microbiological Indicators - Exceedances of Recreational Guidelines

	Station Depth	AH-2			FC-7			MP-4			MP-5			MP-6		
		S*	M	B	S	M	B	S	M	B	S	M	B	S	M	B
Spring	2011							X	X							
	2012								O			X				
Summer	2010								X			X				
	2011								O							
Fall	2010							X	O							
	2011								X							
Winter	2011								O							
	2012								O							
Total		0	0	0	0	0	0	0	2	8	0	0	2	0	0	0

***S = Surface Water, M = Mid Water, B = Bottom Water**

Geometric mean concentrations of fecal coliforms exceeded primary and secondary contact only at station MP-4 and MP-5. At station MP-4 the guidelines were exceeded in the bottom samples during all eight of the sampling events, while mid water samples exceeded the primary contact guideline in two of the eight sampling events. Surface water samples at station MP-4 were all below the recreational guideline. At station MP-5 the primary water quality guideline was exceeded during two of the eight sampling events in the bottom water samples, while mid and surface water samples were all below the guidelines.

Concentrations of fecal coliforms and *Enterococci* at the remaining three stations (AH-2, MP-6 and reference station FC-7) were all within the recreational water quality guideline. The lowest geometric mean concentrations were measured at reference station FC-7.

Figure E Geometric Mean Enterococci

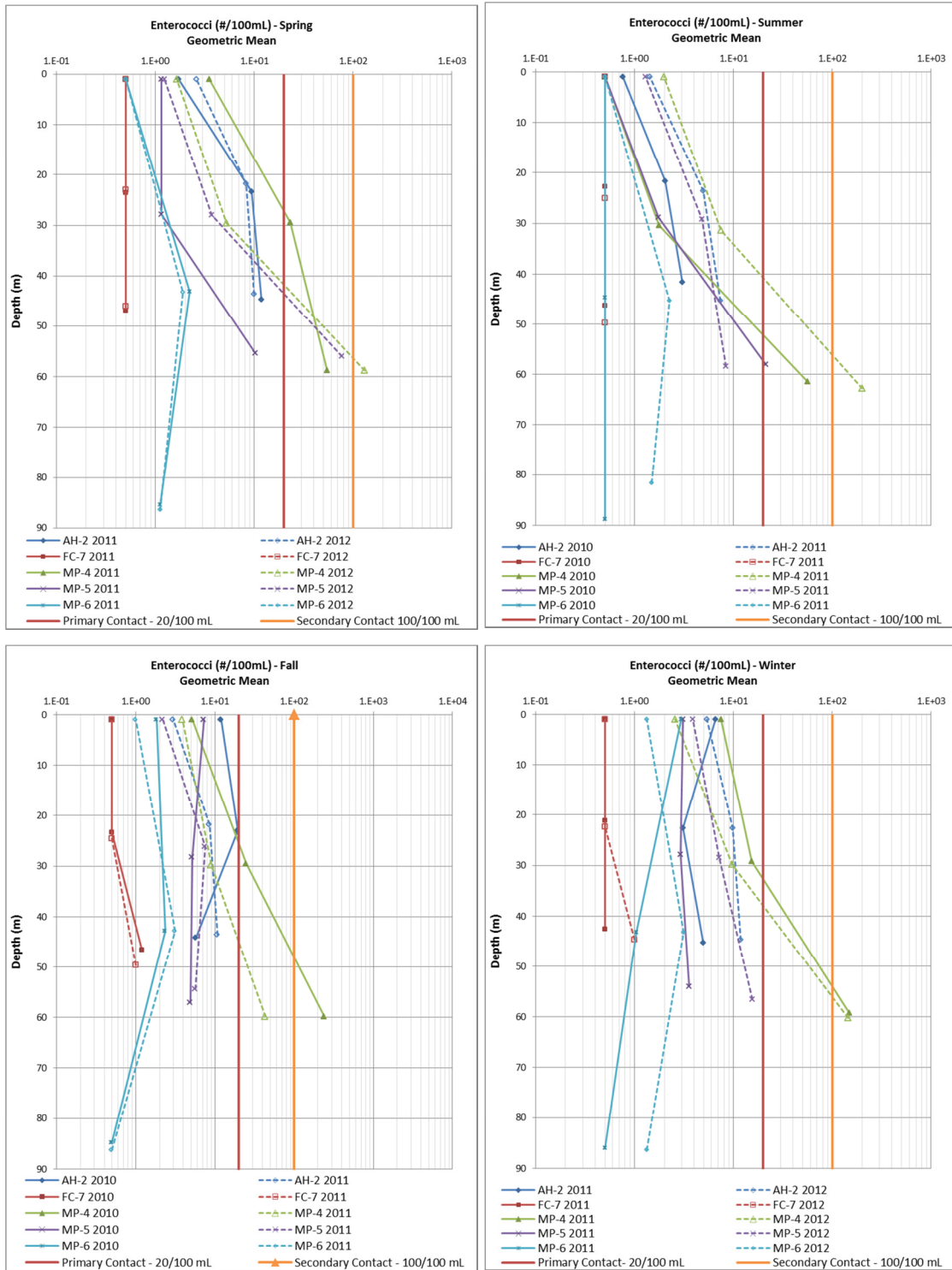
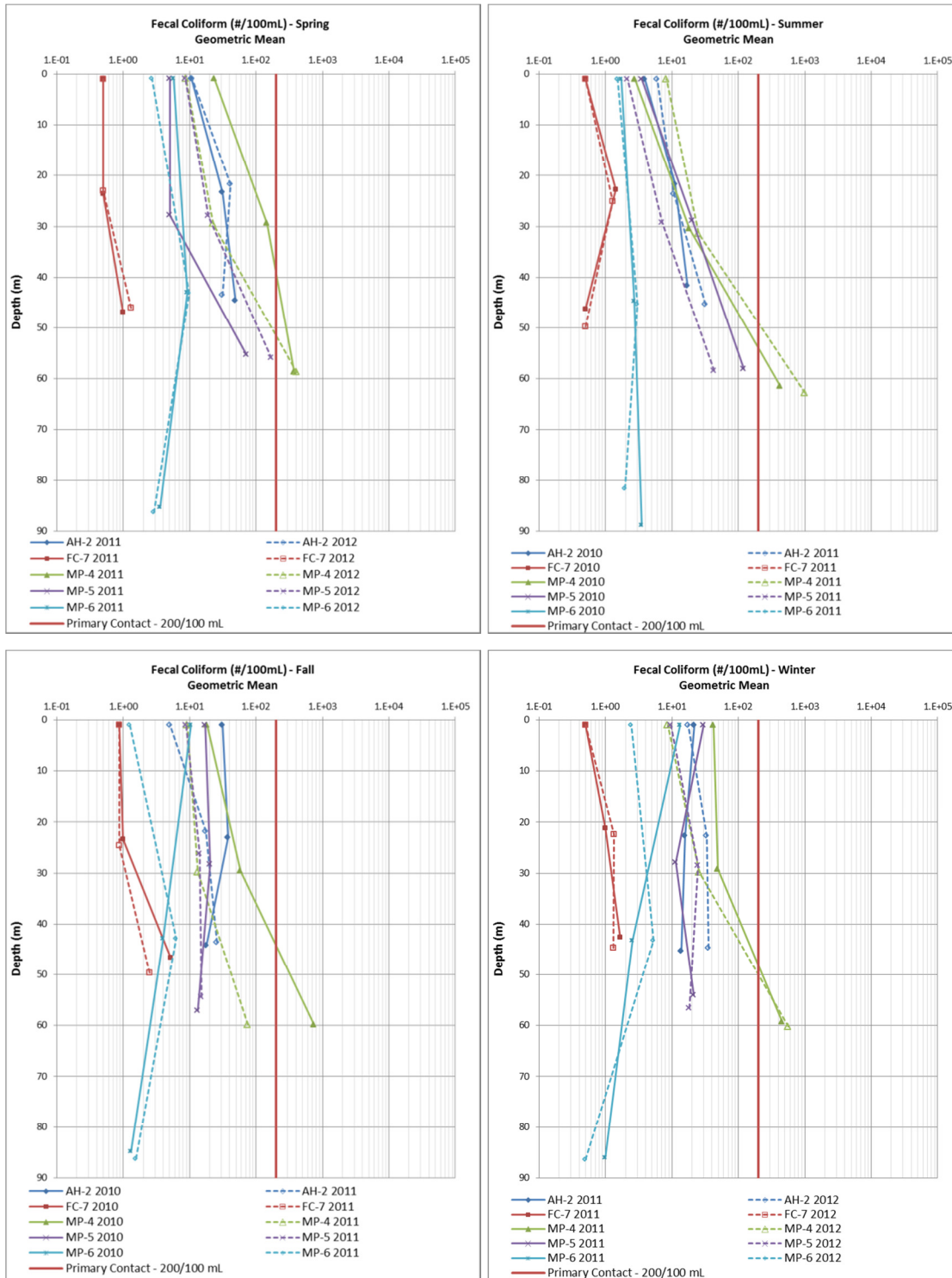




Figure F Geometric Mean Fecal Coliform



CAPITAL REGIONAL DISTRICT

CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM

WATER QUALITY TECHNICAL VOLUME

The maximum concentrations of *Enterococci* and fecal coliforms measured at each depth, station and season are plotted in Figure G and Figure H, and compared against the recreational water quality guidelines. The location, depth and season where the maximum concentration of either fecal coliforms or *Enterococci* exceeded their applicable water quality guidelines are summarized in Table R.

Table R Maximum Microbiological Indicators - Exceedances of Recreational Guidelines

	Station Depth	AH-2			FC-7			MP-4			MP-5			MP-6		
		S*	M	B	S	M	B	S	M	B	S	M	B	S	M	B
Spring	2011							X	X	X						
	2012									X			X			
Summer	2010									X		X				
	2011							X		X			X			
Fall	2010	X							X	X						
	2011		X	X						X						
Winter	2011							X		X						
	2012			X						X	X	X	X			
Total		1	1	2	0	0	0	3	2	8	1	1	3	0	0	0

***S = Surface Water, M = Mid Water, B = Bottom Water**

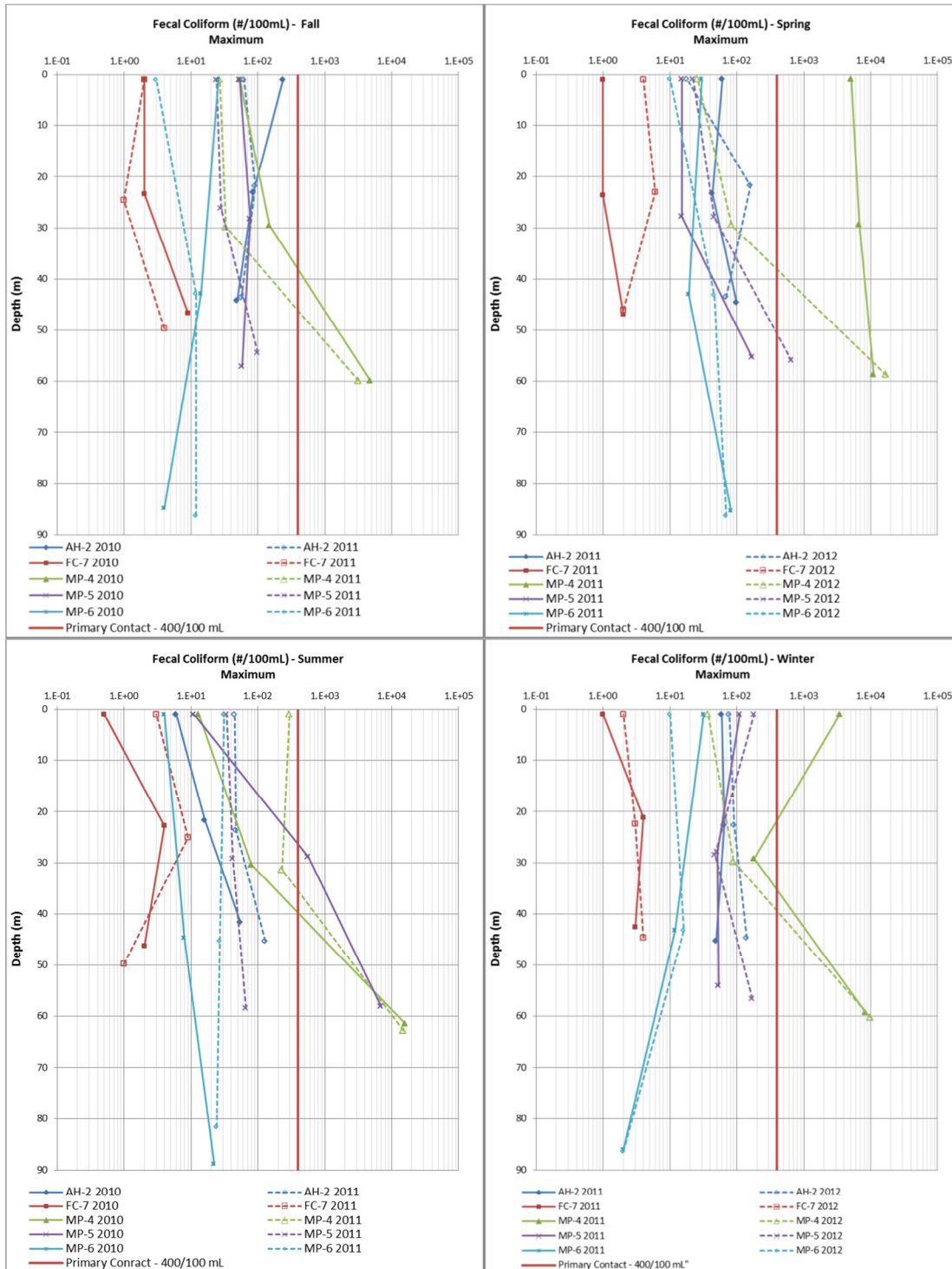
Maximum fecal coliform concentrations exceeded the maximum recreational water quality at three stations AH-2, MP-4 and MP-6. At the remaining two stations (MP-6 and reference station FC-7) maximum concentrations were within guidelines at all depths during all seasons.

Maximum concentrations were the highest at the bottom samples at station MP-4, where the recreational guideline was exceeded during all eight sampling events. At MP-4 the maximum concentration exceeded guidelines during the fall 2010 and spring 2011 sampling events at the mid water depth, and during the spring 2011, summer 2011, and winter 2011 sampling events at the surface.

Stations AH-2 and MP-5 each had multiple sampling events where maximum concentrations exceeded the guidelines. At AH-2 exceedances were measured; once at the surface (fall 2010), once in the mid water samples (fall 2011) and twice in the bottom water samples (fall 2010, and winter 2012). At MP-5 exceedances were measured; once at the surface (winter 2012), once in the mid water sample (summer 2010) and three times in the bottom water samples (summer 2011 and spring and winter 2012).

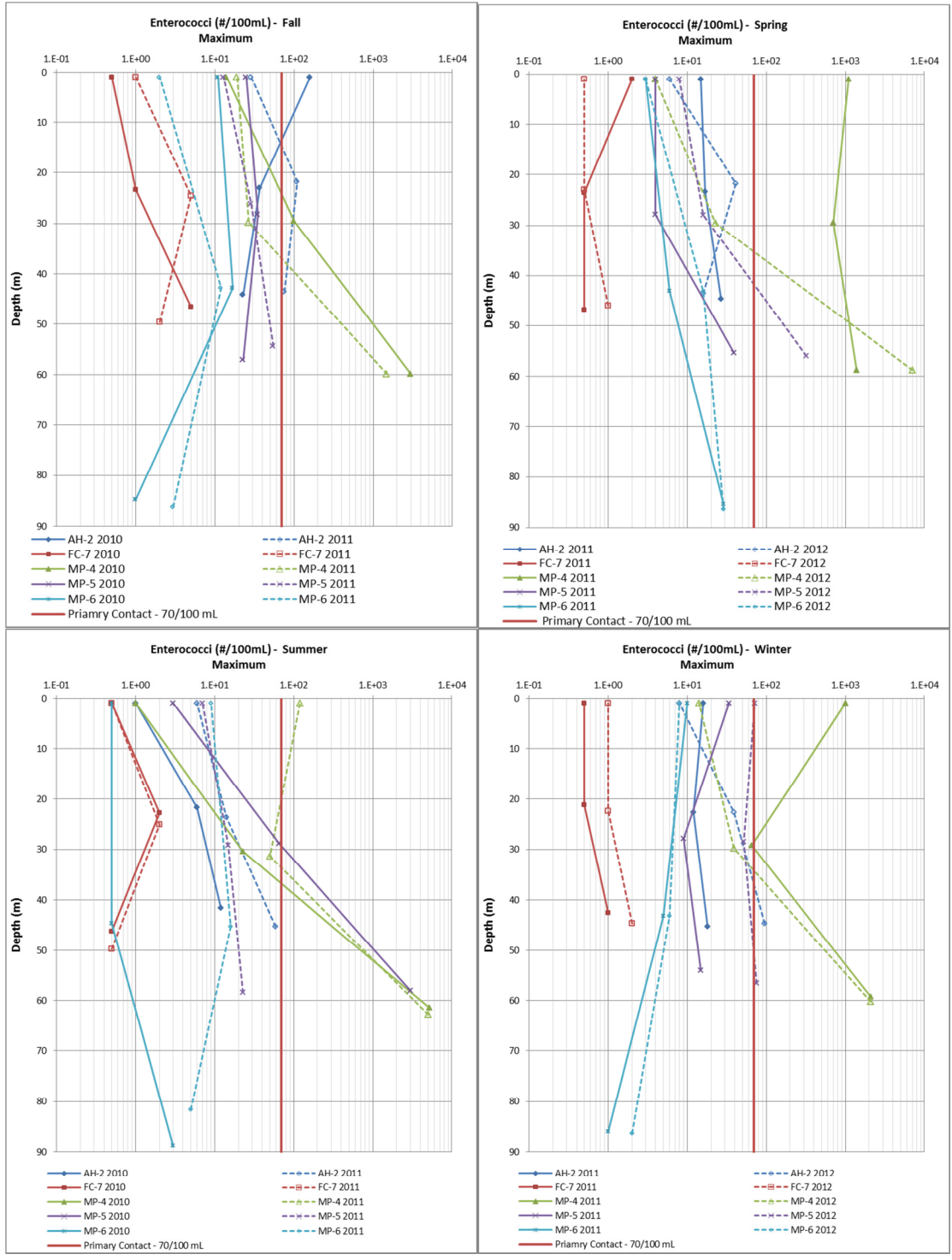


Figure G Maximum Fecal Coliform



**CAPITAL REGIONAL DISTRICT
CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM
WATER QUALITY TECHNICAL VOLUME**

Figure H Maximum Enterococci





Summary - Microbiological Indicators

Overall, microbiological indicators were measured to be above either or both of the shellfish harvesting and recreational guidelines for fecal coliforms and *Enterococci* at four of the five baseline water sampling stations (AH-2, MP-4, MP-5 and MP-6). Median and 90th percentile microbiological shellfish harvesting guideline exceedances were measured at every station, except for the reference station (FC-7). Mean primary contact recreational guideline exceedances were measured at MP-4 and MP-5, while maximum primary contact recreational guideline exceedances were measured at AH-2, MP-4 and MP-5. Mean secondary contact recreational guideline exceedances were measured at MP-4.

Shellfish harvesting and/or recreational activities do not necessarily occur at any of the sample sites¹; however, the guidelines were used as an indication of relative bacterial contamination of the receiving water and the potential for human health concerns.

Highest concentrations among the stations were measured in bottom water samples collected at MP-4 which is located directly over the diffuser of the Macaulay Point outfall. High concentrations, that exceeded both recreational guidelines and shellfish harvesting guidelines, were also measured at AH-2 near Albert Head and MP-5 located 580 m south east of the Macaulay Point diffuser.

At these three locations (AH-2, MP-4 and MP-5) the greatest number of guideline exceedances was measured in the bottom samples, which ranged in depth from approximately 60 m at MP-4 to 45 m at AH-2. Bottom samples collected at MP-4 were consistently over both the shellfish and recreational harvesting guidelines, while the bottom samples at MP-5 and AH-2 were generally within recreational guidelines but above shellfish harvesting guidelines.

Mid water samples at AH-2, MP-4 and MP-5 were generally found to have lower concentrations of fecal coliforms and *Enterococci* than the bottom samples at the respective stations. The measured concentrations at all three locations were generally within recreational guidelines but above shellfish harvesting guidelines. Recreational guidelines were exceeded during at least one of the eight sampling events at each location.

Surface water samples at AH-2, MP-4 and MP-5 had the least number of guideline exceedances between the three depth samples. The concentrations at all three locations were generally all below recreational guidelines. At stations AH-2 and MP-5 two individual samples (one at each location) exceeded the recreational guideline for the maximum concentration of *Enterococci*. Three samples exceeded the recreational guidelines at MP-4, two of them significantly. At MP-4 fecal coliform concentrations and *Enterococci* concentrations were 3,500 cfu/100 ml and 1,000 cfu/100mL respectively on March 28th, 2011 and 5,100 cfu/100 mL and 1,100 cfu/100 mL respectively on May 25, 2011.

¹ Shellfish harvesting does not occur in the water column (surface or mid water samples) and recreational activities do not occur below the water surface except diving which is highly unlikely in deep open water away from the shoreline.

CAPITAL REGIONAL DISTRICT

CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM
WATER QUALITY TECHNICAL VOLUME

The shellfish water quality guidelines were exceeded in surface samples at AH-2, MP-4 and MP-5; however, less frequently than the mid and bottom water samples, while the majority of the exceedances occurred in the fall and winter sampling events.

Fecal coliform and *Enterococci* concentrations at MP-6 were all within the recreational guidelines at all depths and seasons; however, concentrations exceeded shellfish harvesting guidelines during numerous sampling events. The majority of the guideline exceedances occurred in the mid water samples at a depth of approximately 43 m, similar to that of the deep water samples at AH-2. The shellfish guidelines were exceeded during one of the eight sampling events in the surface samples (winter 2011) and twice in the deep water samples (spring 2011 and 2012).

Results of the fecal coliform and *Enterococci* analysis found that all samples collected at reference station FC-7 for all three depths and all seasons were below 10 cfu/100 mL fecal coliforms and 5 cfu/100 mL *Enterococci*, placing the results well below the guidelines.



3.3 Conventional (Group 1 and 2)

The analytical results for the analysis of conventional (Group 1 and 2) parameters are provided in Table 2.

3.3.1 Water Quality Guidelines

Applicable BC MOE water quality guidelines for parameters included in the conventionals (Group 1 and 2) are provided in Table S.

Table S Group 1 and 2 Water Quality Guidelines

	Analyte	Guideline
Group 1	Major Anions	
	Hardness (CaCO ₃)	none
	Fluoride (F)	1.5 mg/L maximum
	Dissolved Sulphate (SO ₄)	none
	Dissolved Chloride (Cl)	Human activities should not cause the chloride of marine and estuarine waters to fluctuate by more than 10% of the natural chloride expected at that time and depth.
	Physical Properties	
	pH	7.0 to 8.7
	Conductivity	None
	Total Suspended Solids	Change from background of 25 mg/L at any one time for a duration of 24 h in all waters during clear flows or in clear waters. And, Change from background of 5 mg/L at any one time for a duration of 30-days in all waters during clear flows or in clear waters
	Nitrogen Compounds	
	Nitrate	3.7 mg/L (30-day mean)
	Nitrite	none
	Nitrate + Nitrite	none
	Ammonia	Table 3
Group 2	Nitrogen Compounds	
	Total Kjeldahl Nitrogen	none
	Phosphorous Compounds	
	Total Phosphate	none
	Orthophosphate	none
	Organic Carbon	
Dissolved Organic Carbon	none	
Total Organic Carbon	none	

3.3.2 Physical Properties

pH

The British Columbia water quality guideline for pH in marine waters is a range from 7.0 to 8.7 (MOE 1991). The measured pH including the minimum and maximum values for each sample location for each season are provided in Table 2. The range of measured pH was within the allowable range at all sampling locations.

The mean measured pH of the analytical samples is provided in Table T. The mean pH of the water samples was used to determine the applicable water quality guidelines for Ammonia.

Table T Mean pH

	Year	Spring		Summer		Fall 2010		Winter	
		2011	2012	2010	2011	2010	2011	2011	2012
AH-2	Surface	7.9	7.9	8.0	7.7	7.7	7.7	7.7	7.8
	Mid	7.8	7.8	7.9	7.7	7.7	7.7	7.8	7.8
	Bottom	7.9	7.8	7.9	7.7	7.7	7.7	7.8	7.8
FC-7	Surface	8.0	7.9	8.0	7.8	7.7	7.7	7.9	7.8
	Mid	8.0	7.9	8.0	7.8	7.7	7.7	7.9	7.8
	Bottom	7.9	7.9	7.9	7.7	7.7	7.7	7.8	7.8
MP-4	Surface	7.9	7.9	8.0	7.7	7.7	7.8	7.8	7.8
	Mid	7.9	7.9	7.9	7.7	7.7	7.8	7.8	7.8
	Bottom	7.8	7.8	7.9	7.7	7.7	7.7	7.8	7.8
MP-5	Surface	7.9	7.9	8.0	7.7	7.6	7.8	7.8	7.8
	Mid	7.9	7.9	7.9	7.7	7.7	7.7	7.8	7.8
	Bottom	7.9	7.8	7.8	7.6	7.7	7.8	7.8	7.8
MP-6	Surface	7.9	7.9	8.0	7.7	7.7	7.8	7.8	7.8
	Mid	7.9	7.9	8.0	7.7	7.7	7.7	7.8	7.8
	Bottom	7.8	7.8	7.7	7.6	7.7	7.7	7.7	7.8



Total Suspended Solids

The British Columbia approved water quality guidelines for total suspended solids (TSS) are provided in Table U (MOE 2001c).

Table U Water Quality Guidelines for Suspended Solids (MOE 2001c)

Non-filterable residue (TSS)	Applicable Background Conditions
Change from background of 25 mg/L at any one time for a duration of 24 hours	In all waters during clear flows or in clear waters
Change from background of 5 mg/L at any one time for a duration of 30 days	
Change from background of 10 mg/L at any time	When background is 25 - 100 mg/L during high flows or in turbid waters
Change from background of 10%	When background is >100 mg/L at any time during high flows or in turbid waters

The mean concentrations of TSS are provided in Figure I and Figure J. All measured TSS values were within “clear water” values as defined by the MOE (<25 mg/L). The allowable deviation from background concentrations is 25 mg/L at any one time for a duration of 24 hours and 5 mg/L at any one time for a duration of 30-days.

The baseline monitoring program is not designed or intended to monitor a specific source of pollution but to document existing receiving environment conditions.

The baseline monitoring results for TSS can be used in future monitoring for comparison.

**CAPITAL REGIONAL DISTRICT
CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM
WATER QUALITY TECHNICAL VOLUME**

Figure I Mean Total Suspended Solids (Spring and Summer)

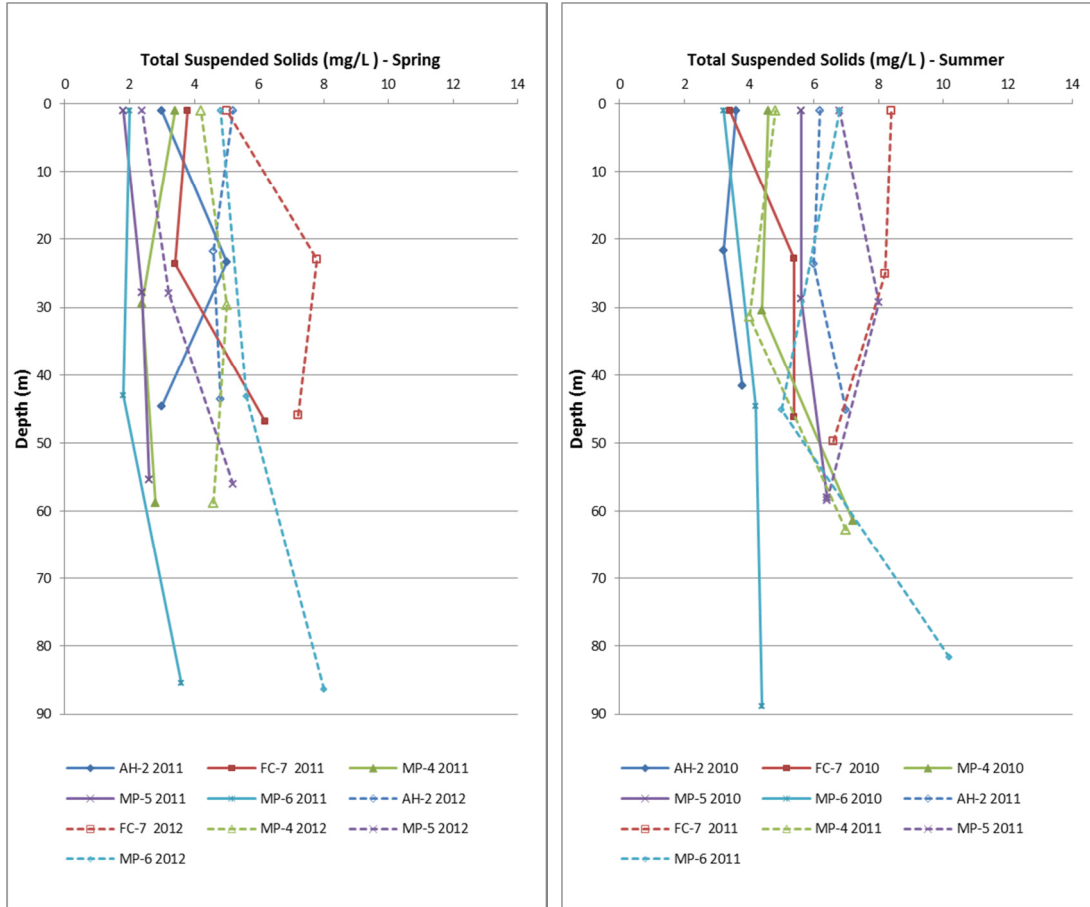
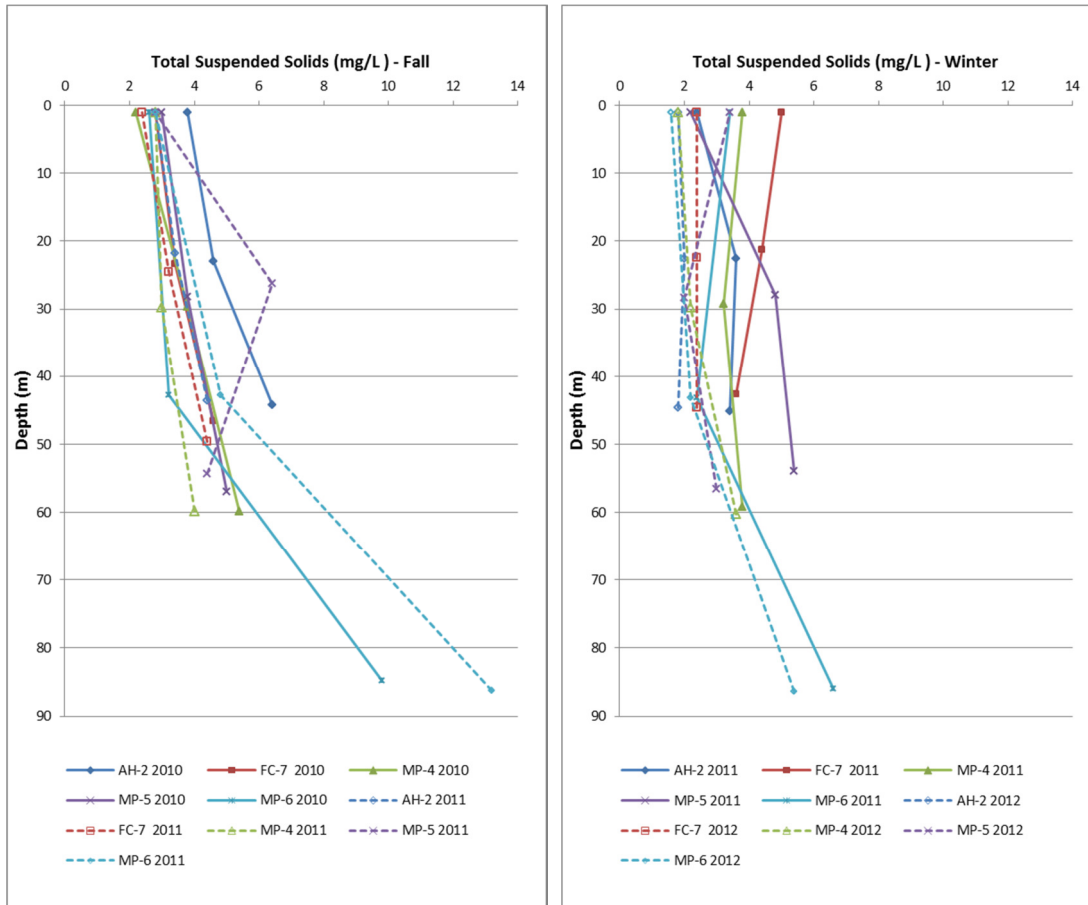




Figure J Mean Total Suspended Solids (Fall and Winter)



3.3.3 Major Anions

Water quality samples were analyzed for the following anions: hardness (CaCO_3), fluoride (F), dissolved sulphate (SO_4), and dissolved chloride (Cl). Of these, marine water quality guidelines exist for fluoride (F) and dissolved chloride (Cl) (Table S).

Fluoride

The maximum concentration of fluoride was calculated for each depth at each station for each of the eight seasonal sampling events. The seasonal maximum concentrations of fluoride are plotted with respect to depth for each season in Figure K and Figure L and compared with the water quality guideline of a maximum of 1.5 mg/L (MOE 1995) (Table S).

Maximum concentrations of fluoride were generally below the applicable water quality guideline during all eight sampling events. However, a number of individual samples were measured to be at or above the water quality guideline. The location, date and depth of these samples are provided in Table V.

CAPITAL REGIONAL DISTRICT

CRD CORE AREA WASTEWATER TREATMENT PROGRAM PRE-DISCHARGE MONITORING PROGRAM

WATER QUALITY TECHNICAL VOLUME

Table V Fluoride Exceedances

Station	Sample Depth	Concentration (mg/L)	Season /Sampling Event	Date
AH-2	Mid	1.5	Fall 2010	8-Nov-2010
AH-2	Bottom	1.5	Fall 2010	8-Nov-2010
MP-4	Surface	1.5	Fall 2010	8-Nov-2010
MP-5	Surface	1.5	Fall 2010	22-Mar-2011
MP-6	Bottom	1.8	Fall 2010	02-Nov-2010

Through the eight sampling events the mean fluoride concentrations varied from minimum concentrations (0.67 to 0.84 mg/L) during the summer 2010 sampling event and maximum concentrations (1.02 to 1.34 mg/L) measured during the fall 2010 sampling event. Natural levels of fluoride in the marine environment are reported to range from 0.86 to 1.4 mg/L with a mean ratio of fluoride to chloride of 6.71×10^{-5} to 1 (MOE 1995 and Dyson 1977). The majority of the measured concentrations were within this anticipated range however minimum measured concentrations were below this range.

Fluoride concentrations were generally consistent with depth and across stations during each sampling event. The most variability between stations was observed during the fall 2010 and winter 2011 sampling events (see Figure L).



Figure K Maximum Fluoride (Spring and Summer)

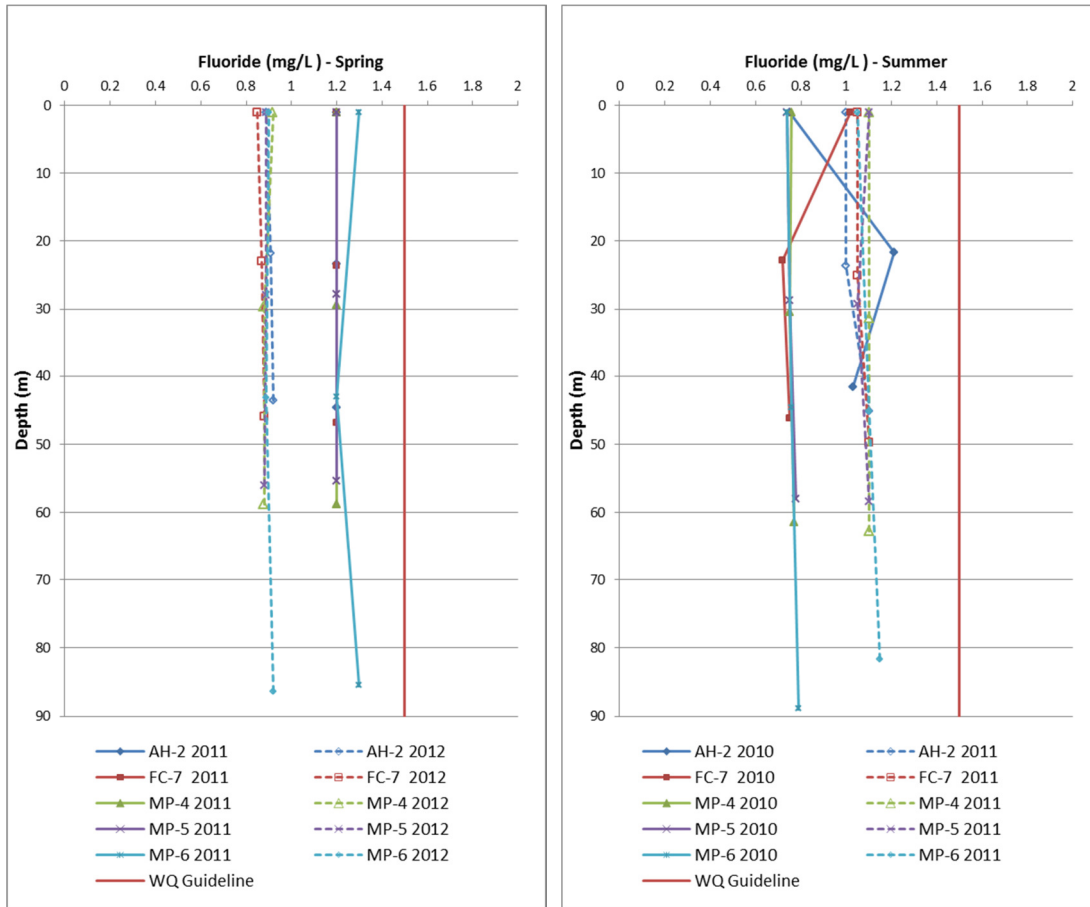
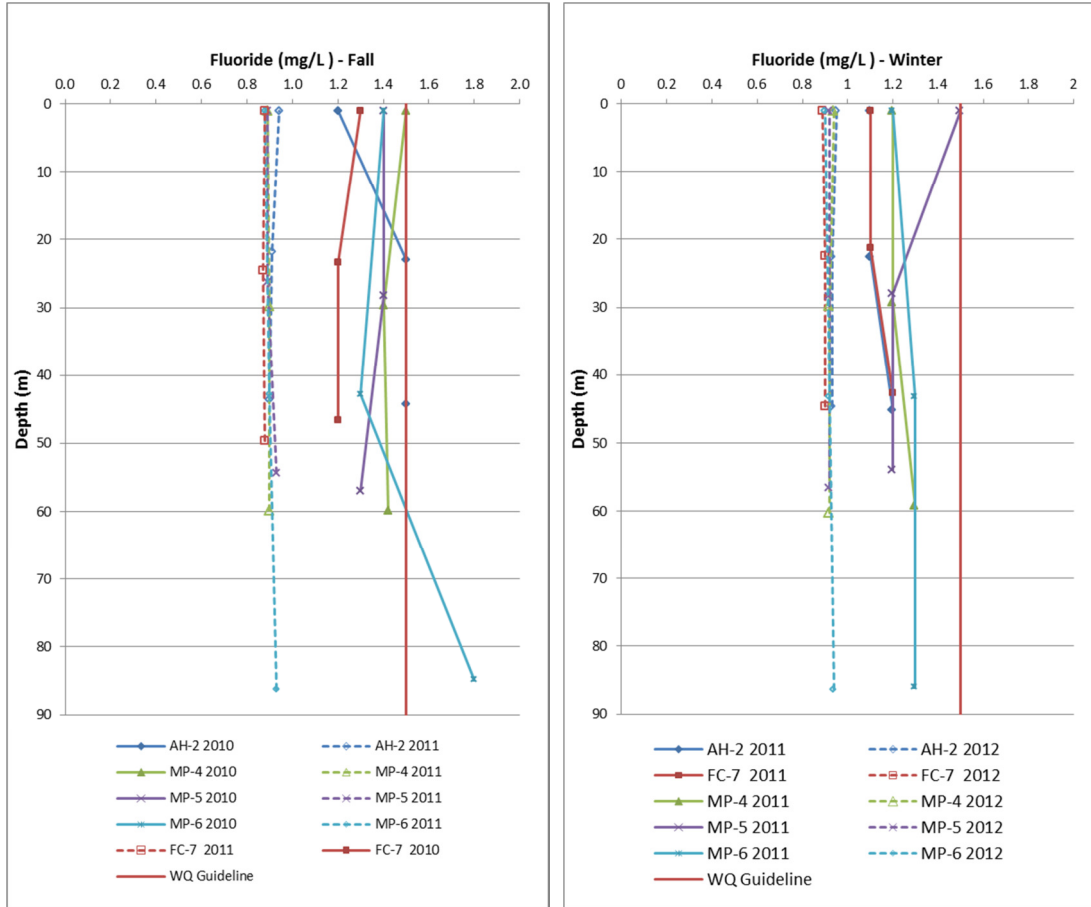


Figure L Maximum Fluoride (Fall and Winter)





Chloride

The mean concentration of chloride was plotted in Figure M and Figure N for each season, and each station with respect to depth. The BC water quality guideline for chloride is “*Human activities should not cause the chloride of marine and estuarine waters to fluctuate by more than 10% of the natural chloride expected at that time and depth.*” (MOE 2003b) Therefore the expected range of concentrations should be determined for future monitoring activities.

Based on the plots of chloride concentrations (Figure M and Figure N), there was no consistent variation in observed chloride concentrations between monitoring stations during the spring, summer and winter monitoring events, i.e. the chloride concentrations were not significantly lower or higher at one station in comparison to the other.

In the spring, the mean concentration varied between 17,000 mg/L and 17,600 mg/L in all the surface samples, while bottom samples (40 to 90 m water depth) varied between 17,200 and 19,000 mg/L. Summer mean concentrations varied between 17,800 and 18,400 mg/L in the majority of the surface samples, with a single station (MP-5, summer 2011) with a mean of 16,800 mg/L. Bottom samples during the summer events varied between 18,200 and 19,800 mg/L.

The greatest variation in chloride was observed in the fall 2010 sampling event. Surface concentrations during this event were lowest at reference station FC-7 (mean 15,600 mg/L) and highest at station MP-5 (17,600 mg/L). Bottom water samples varied in mean concentration between 17,400 and 18,900 mg/L

Winter mean concentrations of chloride varied between 17,000 and 18,200 mg/L in the surface samples, and between 17,400 and 19,200 mg/L in the bottom samples

The results of the analysis suggest that mean surface concentrations presently vary between 15,600 and 18,400 mg/L through the year. Chloride concentrations were slightly higher at depth with a range of 17,200 and 19,800 mg/L over the entire study period.

The discharge of a municipal wastewater effluent (with low chloride concentration) into the marine environment would result in lower than anticipated chloride concentrations. Minimum chloride concentrations were observed at reference station FC-7 furthest from the outfall. Observed variations in chloride concentrations are not believed to be specifically associated with human activities but primarily associated with natural variability.

In regards to the water quality guideline, the receiving environment fluctuation of 10% from the observed concentrations would therefore result in a range of acceptable chloride concentrations at the monitoring stations of 14,000 mg/L to 20,200 mg/L in surface waters and 15,500 mg/L to 21,100 mg/L in bottom waters.

Figure M Mean Chloride (Spring and Summer)

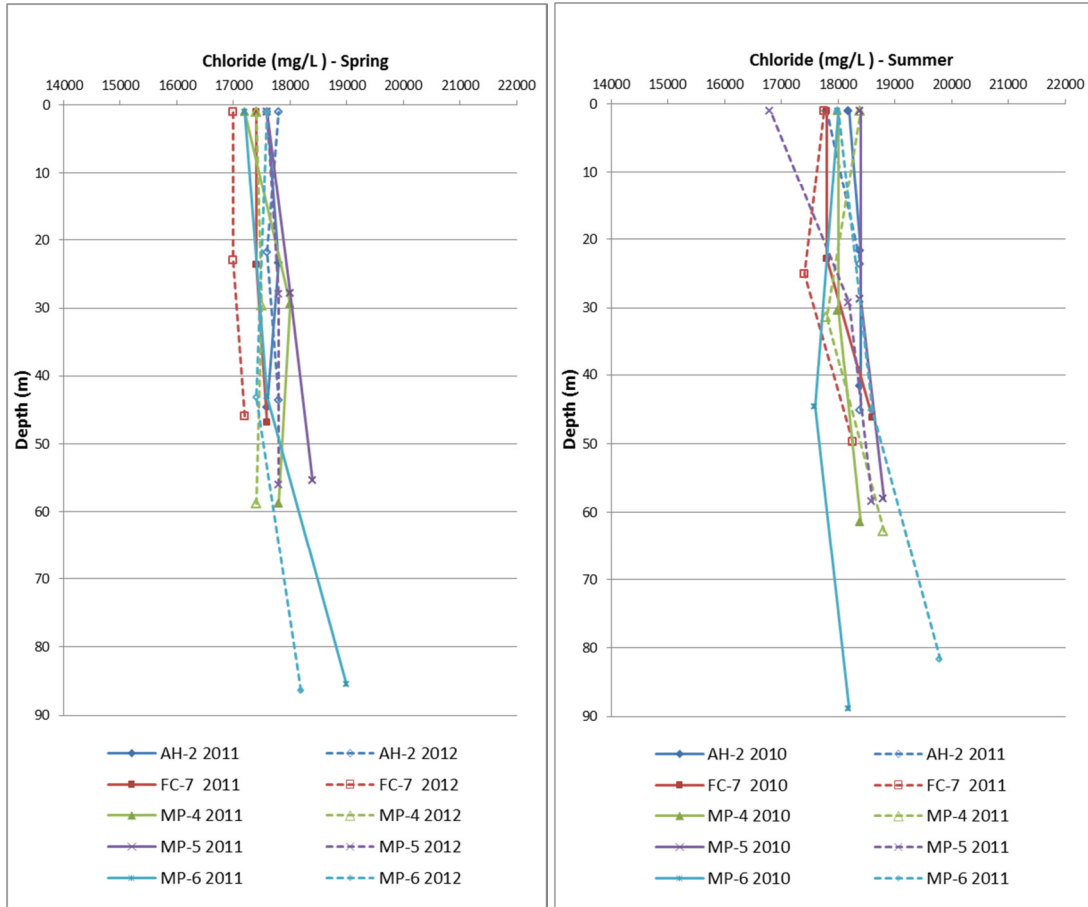
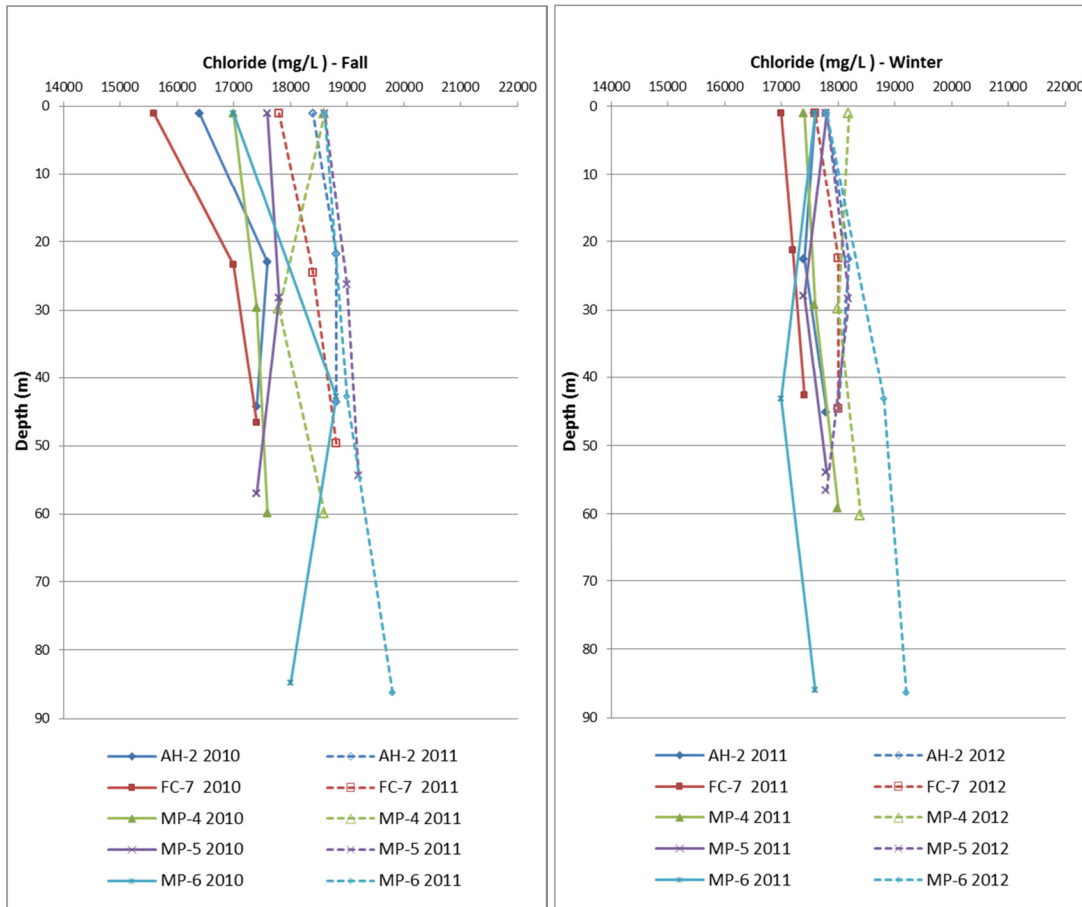




Figure N Mean Chloride (Fall and Winter)



3.3.4 Nitrogen Compounds

All baseline water quality samples were analyzed for nitrate, nitrite, nitrate plus nitrite, and ammonia, during all five dates of each seasonal sampling event. TKN was analyzed at each station and depth during one of the five sampling dates each season.

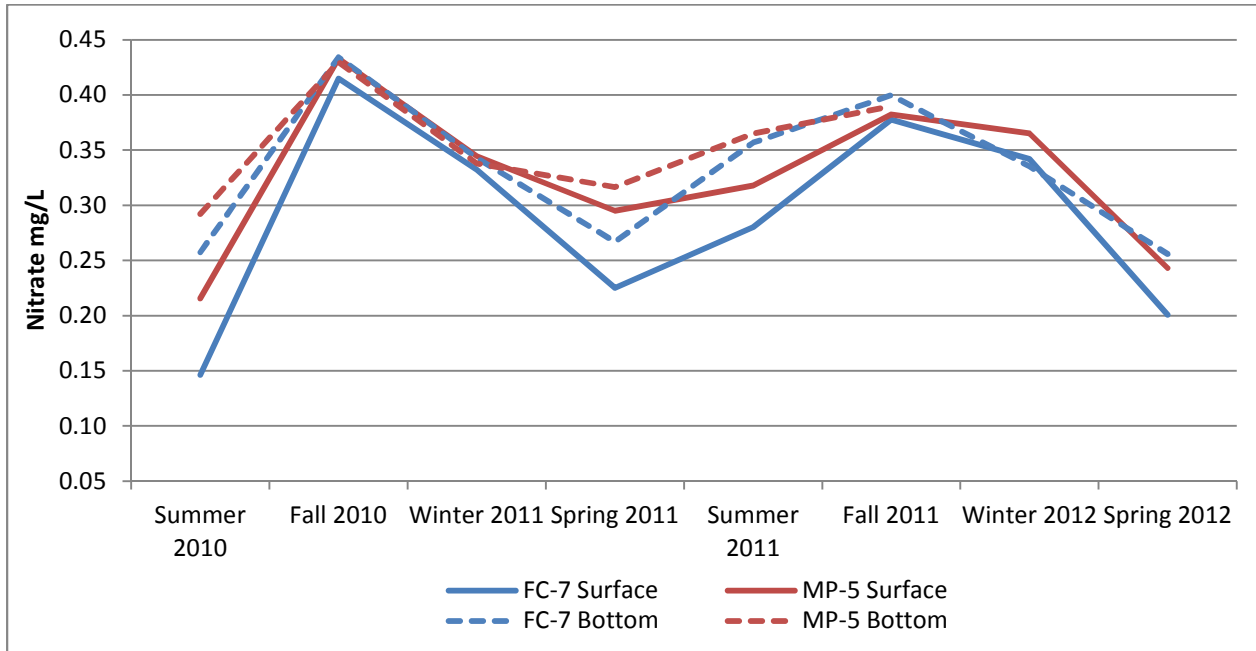
Nitrate

The mean concentrations of nitrate were plotted for each station with respect to depth for all four seasons in Figure P and Figure Q. The BC water quality guideline for nitrate is a 30-day mean concentration of 3.7 mg/L (MOE 1986a; MOE 2009). Mean concentrations measured well below the water quality guideline at all stations and depths.

Nitrate concentrations varied seasonally, with minimum concentrations measured in surface samples during spring and summer while maximum concentrations were measured in the fall. This seasonal

pattern can be seen in Figure O where the measured surface and bottom nitrate concentrations at MP-5 and reference station FC-7 are plotted.

Figure O Mean Nitrate Concentrations at MP-5 and Reference Station FC-7



During the spring sampling events, the mean concentrations varied from 0.20 mg/L to 0.31 mg/L in the surface samples. The lowest mean surface concentrations were measured at reference station FC-7 during both years spring sampling events. At reference station FC-7 mean nitrate concentrations increased slightly with depth, measuring 0.26 mg/L during both spring sampling events. The mean nitrate concentrations were greater than 0.25 mg/L at all depths for the remaining stations (AH-2, MP-4, MP-5, and MP-6). Maximum concentrations were observed in the bottom samples collected at MP-6 with mean concentrations of 0.36 and 0.40 mg/L in the two spring sampling events.

Summer concentrations of nitrate had low variability between stations; however, there was a greater variation between years of summer sampling. At stations AH-2, MP-4, MP-5, and MP-6 the mean concentration in surface samples ranged from 0.19 mg/L to 0.22 mg/L in the summer 2010 sampling event and 0.30 to 0.33 mg/L in the summer 2011 sampling event. Nitrate concentrations were a minimum at reference station FC-7 during both summer sampling events. The mean summer surface concentration at reference FC-7 was 0.15 mg/L in 2010 and 0.28 mg/L in 2011.

Nitrate concentrations generally increased with increasing depth at all stations during the summer. Maximum concentrations were measured in the bottom water samples at each station. During the 2010 summer sampling event, the maximum mean concentration (0.35 mg/L) was measured in the bottom



sample of MP-6, while in the summer 2011 the maximum mean concentration was measured to be 0.44 mg/L at the same station.

Overall, maximum nitrate concentrations were measured during the fall sampling events. In comparison to the spring and summer sampling events, there was little variation in the mean concentrations between the various stations and depths during each of the fall sampling events. Over the entire depth range, mean concentrations ranged from 0.37mg/L to 0.40 during the fall 2010 event and 0.42 to 0.45 mg/L during the fall 2011 event.

Winter concentrations had low variability between stations and depths. Mean winter nitrate concentrations were slightly lower than fall concentrations, ranging between 0.33 mg/L and 0.37 mg/L among all depths and stations.

Figure P Mean Nitrate Concentrations (Spring and Summer)

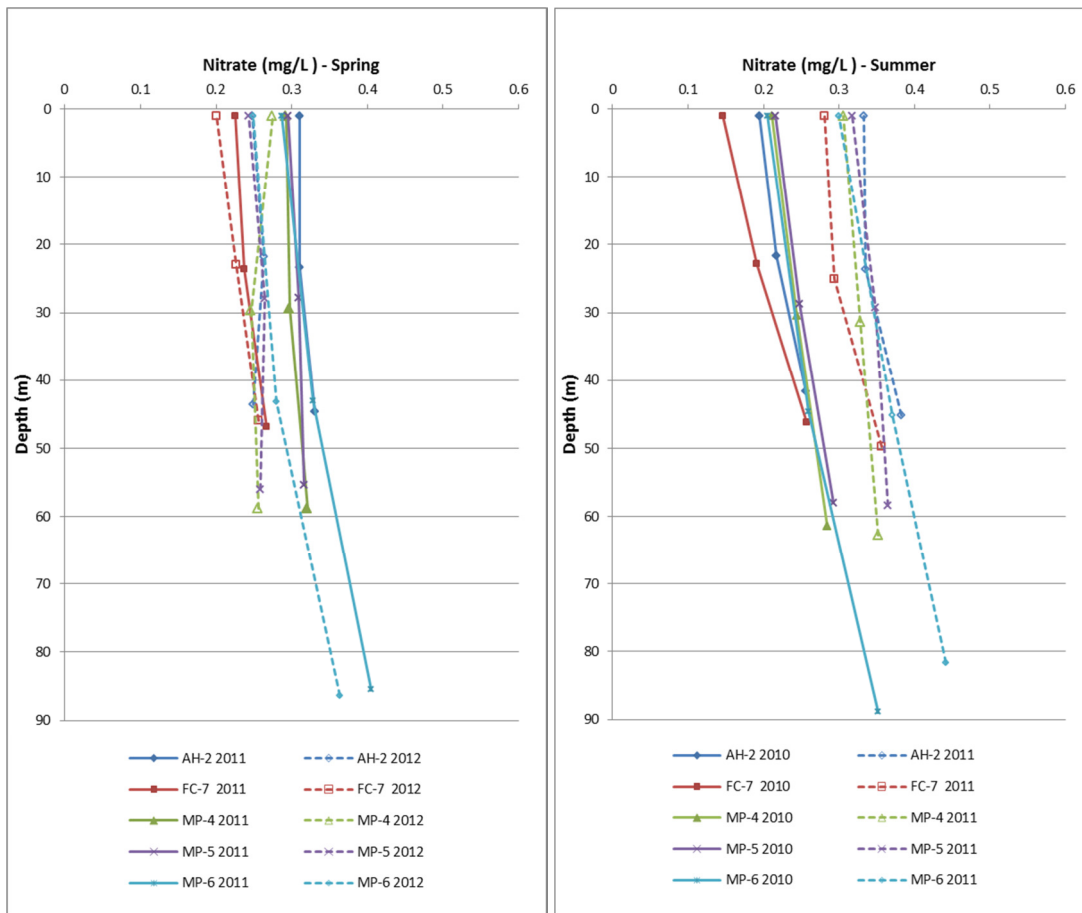
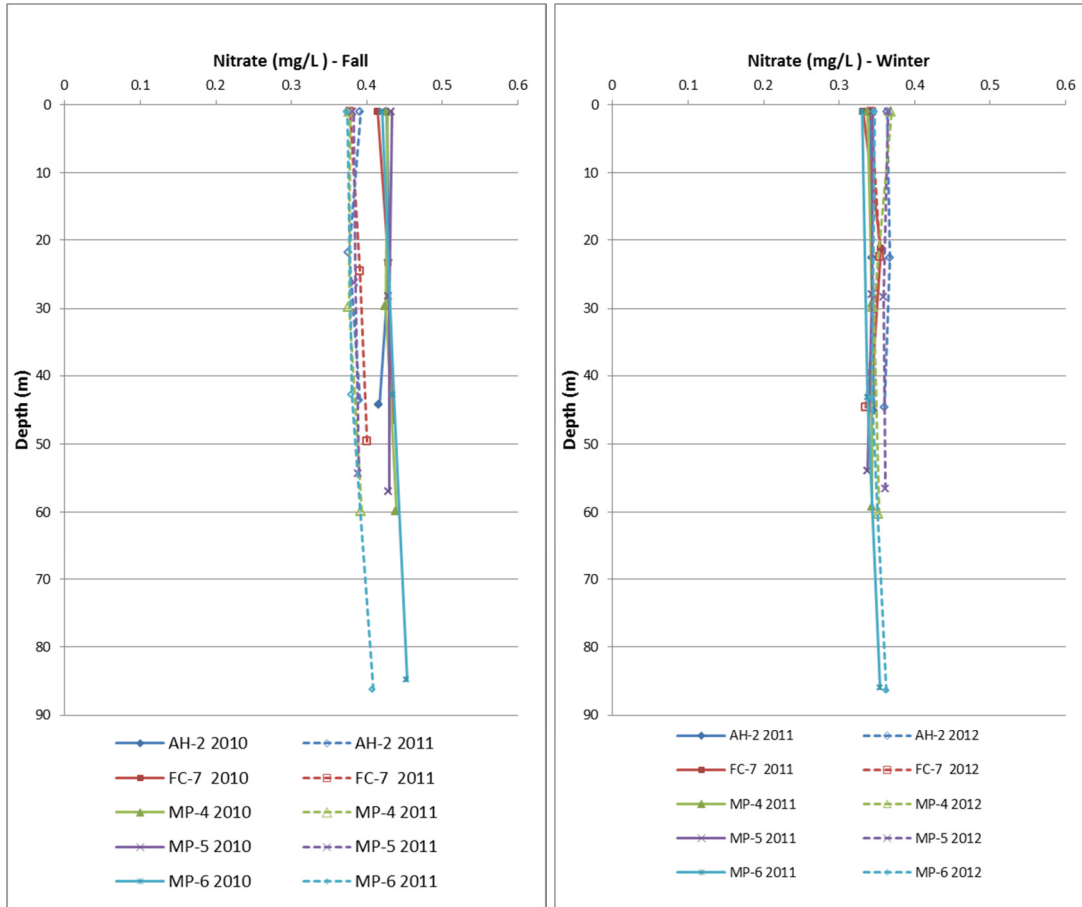


Figure Q Mean Nitrate Concentrations (Fall and Winter)





Nitrite

Nitrite is generally found in small quantities (under 0.005 mg/L) in the marine environment (MOE 1986). Measured nitrite concentrations are provided in Table 2. Mean nitrite concentrations ranged from 0.002 to 0.006 mg/L, within the range of expected values.

Ammonia

There are two forms of ammonia found in water, un-ionized ammonia (NH_3) and ionized ammonia or ammonium (NH_4^+). The two forms of ammonia exist in equilibrium that can be affected (shifted) by the salinity, temperature and pH of the water. Un-ionized ammonia is more toxic to fish as it has the ability to readily pass through the gills and into the blood stream (Golder 2009c). The proportion of ammonia that is un-ionized increases in the water with: higher pH (more basic), higher temperatures, and lower salinity.

The BC water quality guidelines are based on the total ammonia nitrogen (TAN), which is the concentration of nitrogen found in both species. There are two applicable guidelines:

- maximum concentration of TAN for protection of saltwater aquatic life (mg/L of nitrogen); and,
- average 5-in-30 day concentration of TAN for protection of saltwater aquatic life (mg/L of nitrogen)

Given the varying toxicity of ammonia for given water properties the guidelines are based on the temperature, salinity, and pH of the water.

The measured maximum and average 30-day ammonia concentration were calculated for each sampling event and location (station and depth). The average temperature, salinity and pH at the time of sampling were calculated based on the water column profile data. The applicable TAN guideline (maximum and 30-day average) was then selected from water quality guideline tables, and the measured results were compared against the applicable guideline.

The results of the analysis can be found in Table 3. The average concentration of TAN is also plotted in Figure R and Figure S. Depending on the measured water properties the maximum water quality guideline varied between 6.7 mg/L and 37.0 mg/L while the average 5-in-30 day guideline varied between 1.0 and 5.6 mg/L. Only the minimum 5-in-30 guideline of 1.0 mg/L is plotted in Figure R and Figure S for reference.

There were no exceedances of either the guideline as the mean concentrations were for the most part less than 0.15 mg/L. Highest values were measured during the summer 2010 sampling event. The maximum concentration during this sampling event was 0.66 mg/L in the mid water sample, and the average concentration was 0.24 mg/L. The applicable guidelines for the summer event were: 15 mg/L maximum and 2.2 mg/L mean.

Figure R Mean Ammonia (Spring and Summer)

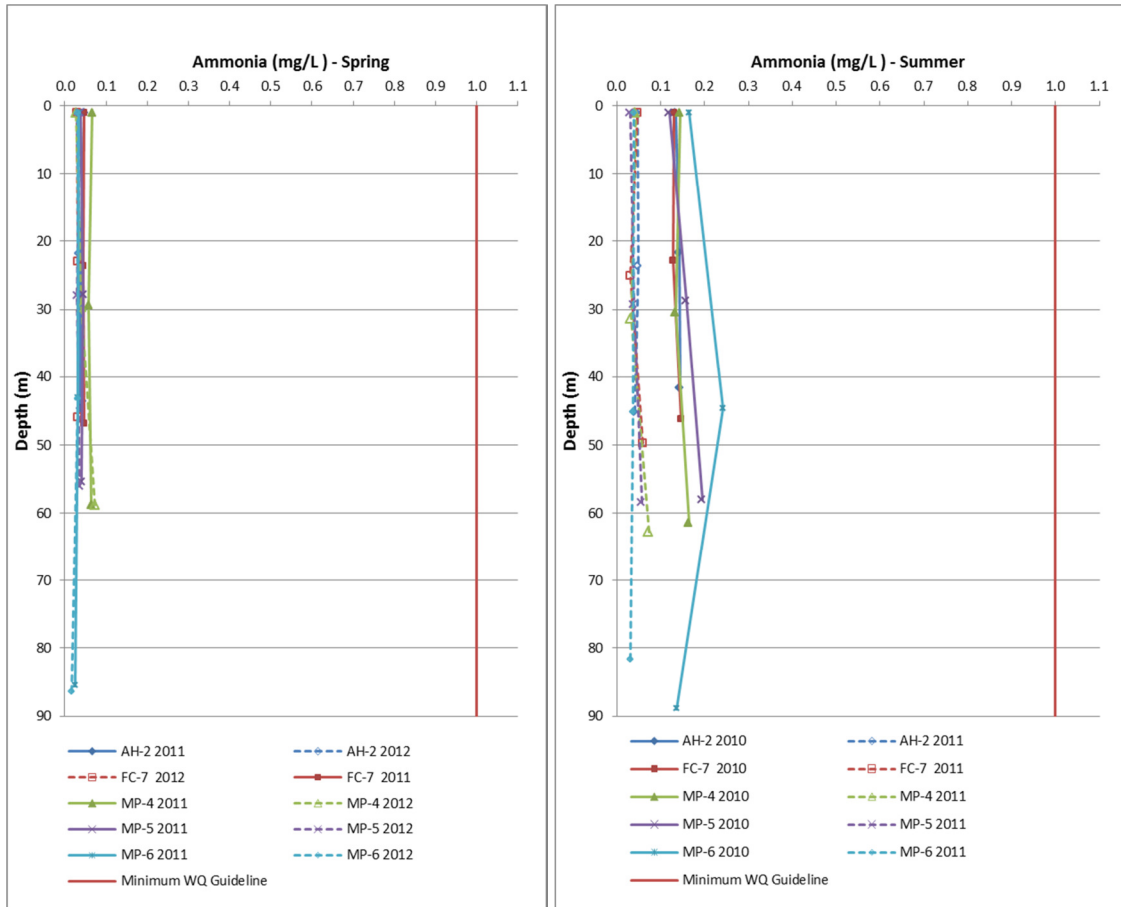
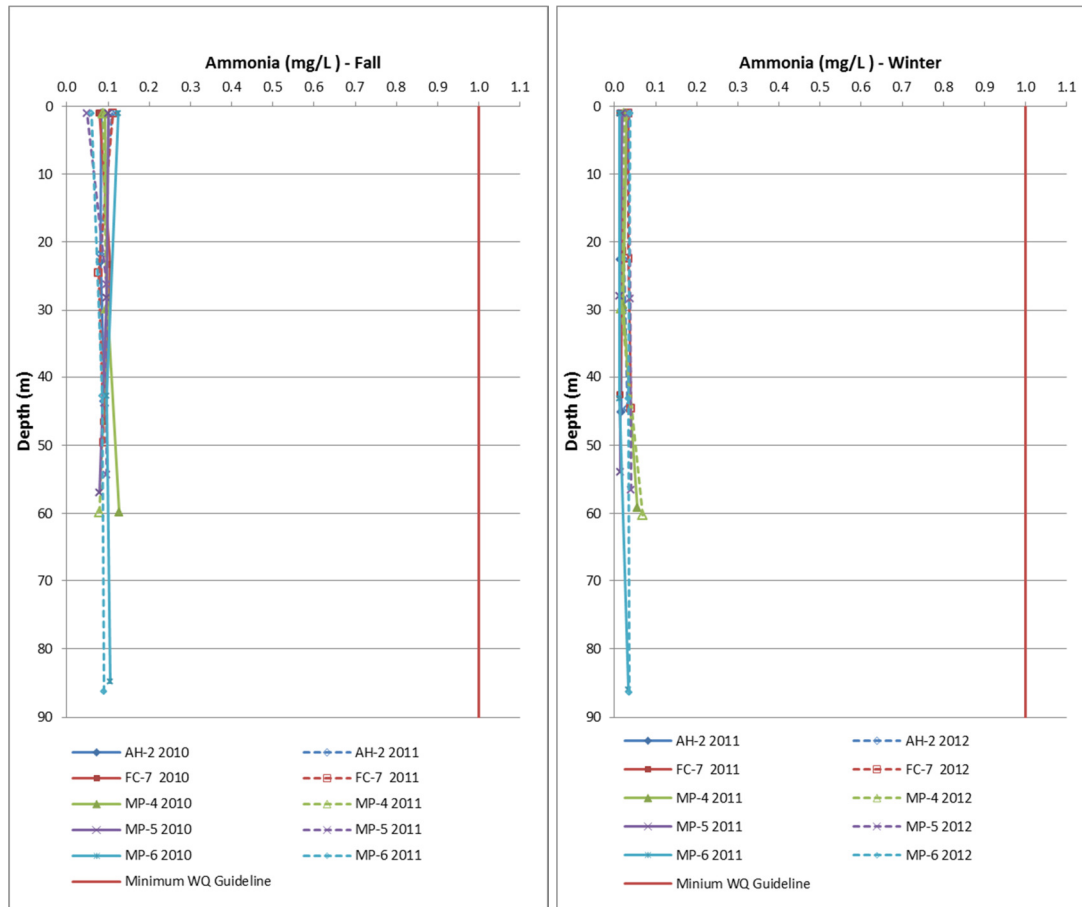




Figure S Mean Ammonia (Fall and Winter)



3.3.5 Phosphorous Compounds

There are no BC water quality guidelines for total phosphorus or ortho-phosphate. Phosphorous is required for primary production in aquatic environments. In freshwater environments phosphorus is often the limiting nutrient for primary production, whereas nitrogen is usually the limiting nutrient in marine environments. The ratio of available phosphorous to nitrogen in the receiving environment is an indication of the limiting nutrient within the water body. Phosphorous concentrations were examined to confirm which is the limiting nutrient.

The mean total phosphorous measured at each station and depth is plotted for each season in Figure T and Figure U. The mean ortho-phosphorous concentrations are plotted in Figure V and Figure W.

Phosphorous concentrations followed a similar seasonal pattern as nitrate, with minimum concentrations observed in the spring and summer in surface samples and maximum concentrations observed in the fall. Spring surface concentrations of total phosphorous ranged from 0.056 mg/L (reference station FC-7 2012) to 0.067 mg/L (MP-5 2011), while summer surface concentrations ranged from 0.046 mg/L (reference station FC-7 2011) to 0.06 mg/L (MP-5 2011). Maximum surface concentrations were observed in the fall (up to 0.081 mg/L). Phosphorous generally increased with increasing depth during the spring and summer sampling events, and was relatively consistent with depth during the fall and winter sampling events.



Figure T Mean Total Phosphorous (Spring and Summer)

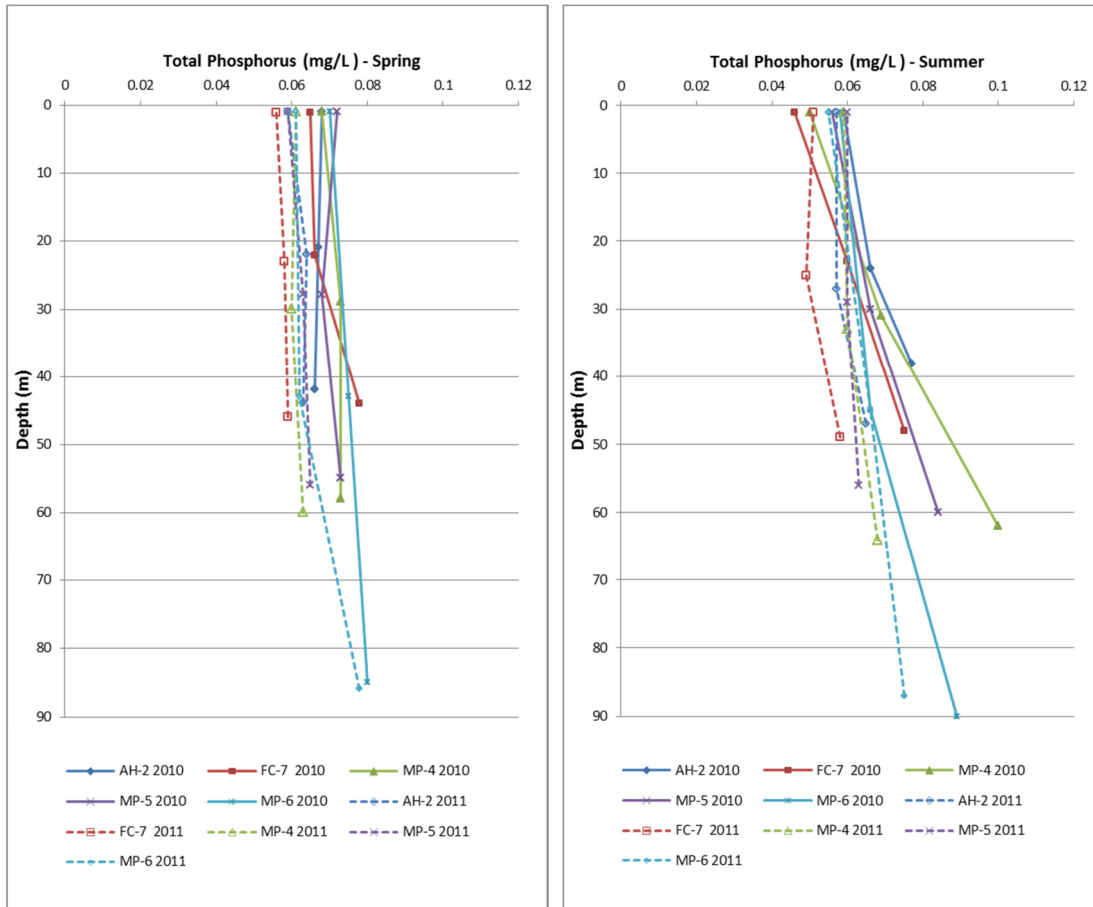


Figure U Mean Total Phosphorous (Fall and Winter)

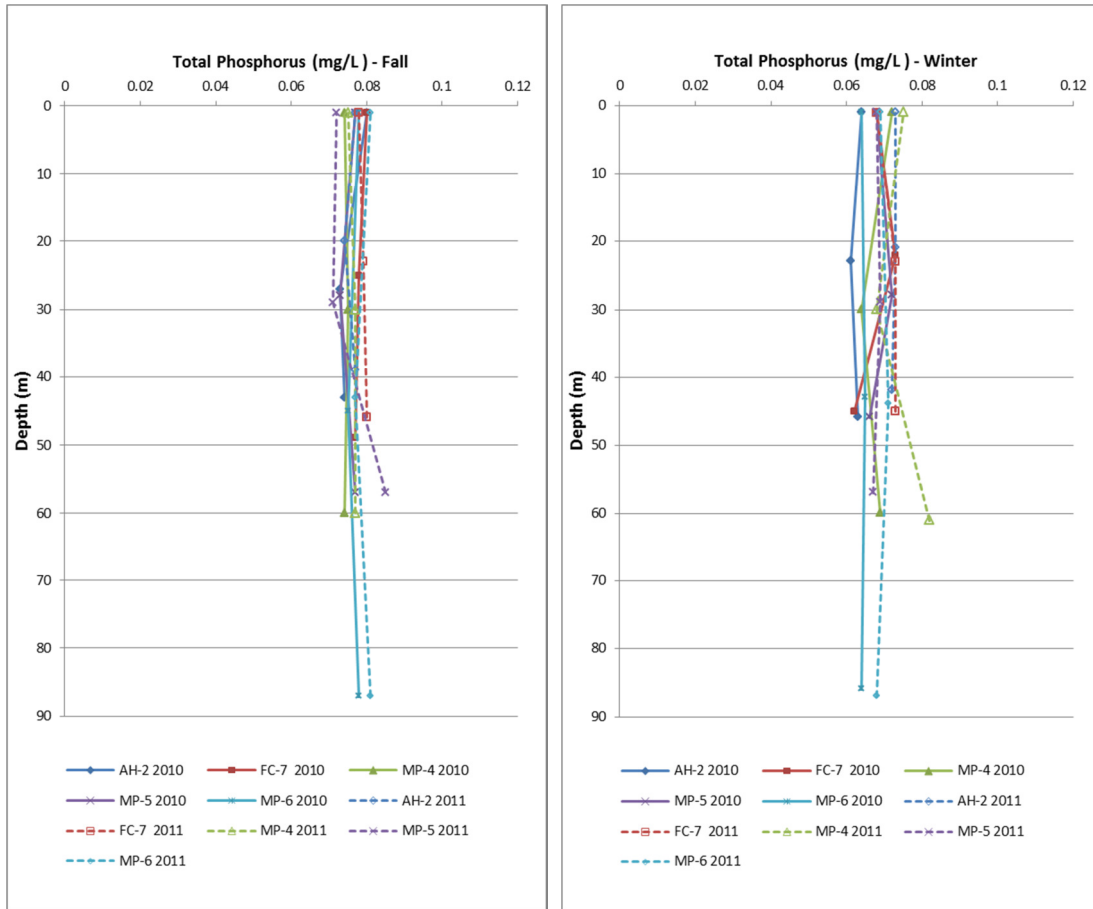




Figure V Mean Ortho-phosphate (Spring and Summer)

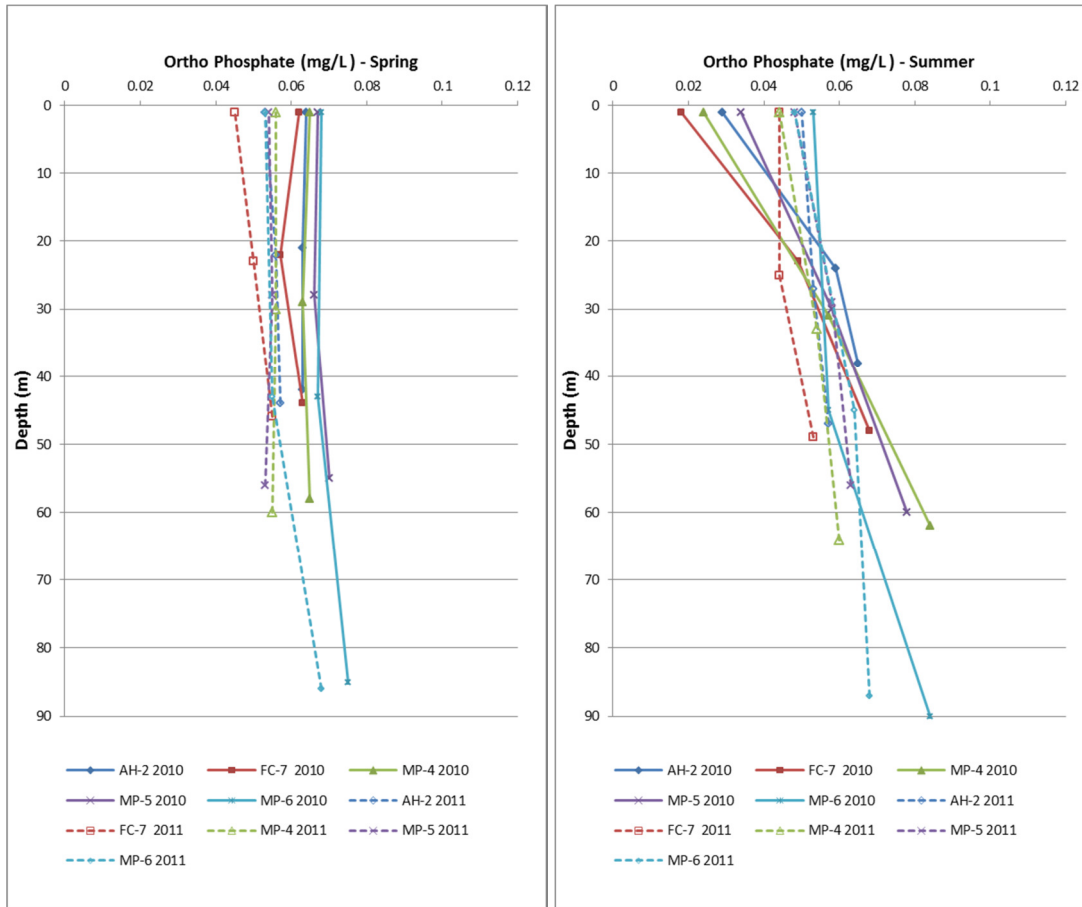
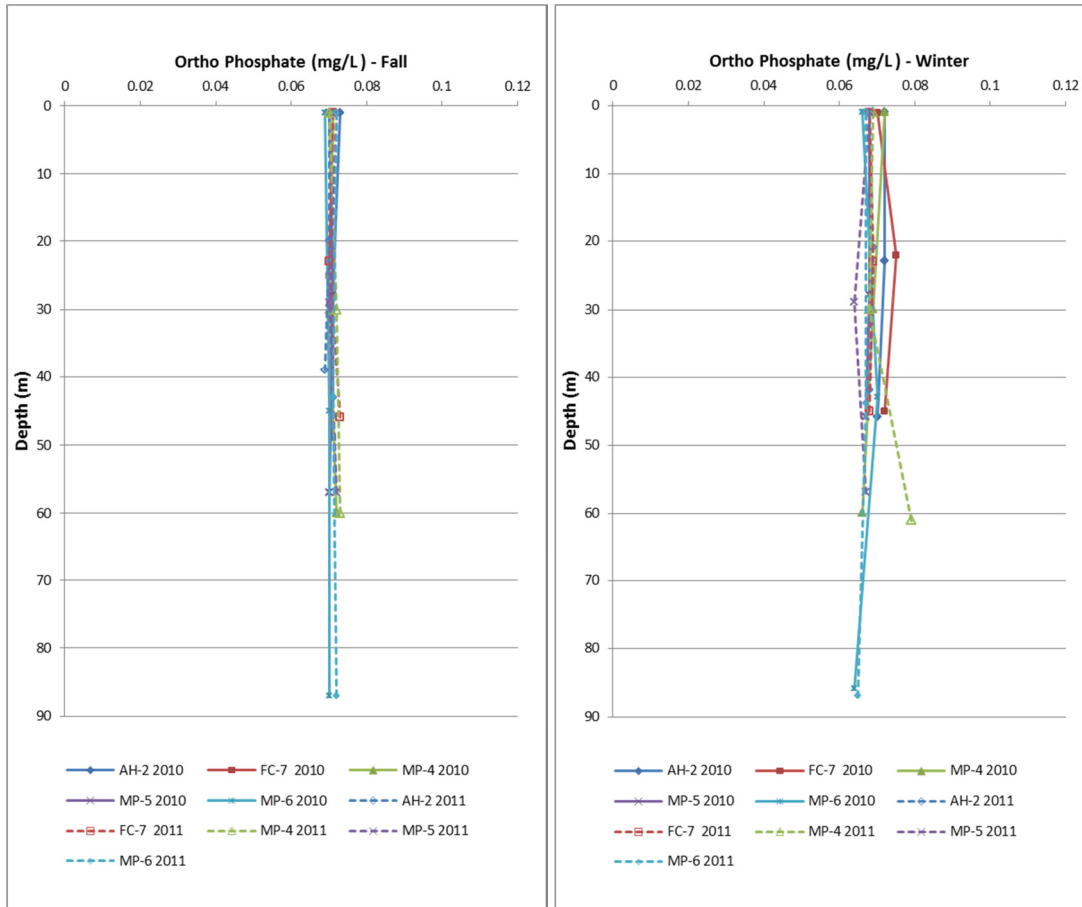


Figure W Mean Ortho-phosphate (Fall and Winter)





3.4 Trace Metals

Water quality samples were analyzed for a suite of both dissolved and total metals. The trace metals included: cadmium, calcium, cobalt, copper, iron, lead, manganese, mercury, nickel, and zinc.

Trace metals were collected on each sampling, day during each season, at all depths at three stations. Trace metals were collected at AH-1, MP-4, and reference station FC-7 during the summer and fall 2010 sampling events. After station AH-1 was abandoned, trace metals were collected at AH-2, MP-4 and reference station FC-7 for the remaining seasons.

Analytical results of the trace metals are provided in Table 5. Minimum, mean, maximum and standard deviation values for each depth at each station for all seasons were calculated and provided in Table 5. Non-detect concentrations were handled as half the detection limit for the purpose of these calculations (for example, <0.5 µg/L was handled as 0.25 µg/L).

3.4.1 Water Quality Guidelines

The BC MOE and the CCME water quality guidelines for total metals are provided in Table W. There are presently no guidelines for dissolved metals for marine waters as all of the potentially toxic forms of the metal are included in the measurement of total metals. The BC MOE water quality criteria overview reports state that if the total metal concentrations measured within a water body are within their criteria limits, then it can be determined that no concern exists with that particular metal.

A water body with a concentration above a guideline may not indicate a problem, as natural (non-anthropogenic) background concentrations in a water body occasionally will not meet a guideline. The following section therefore focuses on the total metal results in marine water.

BC water quality guidelines exist for both maximum and 30-day mean concentrations, while the CCME provides guidelines for short-term and long term exposures. Short term guidelines are “*meant to estimate severe effects and to protect most species against lethality during intermittent and transient events (e.g., spill events to aquatic-receiving environments, infrequent releases of shortlived / nonpersistent substances)*” (CCME 2007). Long term guidelines are “*meant to protect against all negative effects during indefinite exposures*”. Presently there are no short term guidelines for the protection of marine aquatic life for any of the trace metals analyzed. The long term guidelines are provided in Table W. For the purposes of this study the measured mean 30-day concentrations were compared against long term guidelines.

Table W Water Quality Guidelines for Trace Metals

Total Metals	Abbreviation	BC Water Quality		CCME
		Maximum (µg/L)	30 Day Mean (µg/L)	Long Term (µg/L)
Cadmium	Cd	-	-	0.12
Copper	Cu	3	2	-
Lead	Pb	140	2	-
Mercury	Hg	-	0.02 to 0.00125	0.016
Zinc	Zn	10	-	-

3.4.2 Results

Results for analysis of dissolved trace metals are provided in Table 4 and the results of total dissolved metals are provided in Table 5. Metals with marine water quality guidelines are discussed further in the following sections.

Cadmium

The mean concentrations of total cadmium measured at stations AH-1, AH-2, MP-4 and reference station FC-7 are plotted with respect to depth for each season in Figure X and Figure Y. Measured concentrations were below the CCME guideline for total cadmium during all sampling events (results were all less than 0.09 mg/L). The measured concentrations were generally consistent between the sampling stations during each sampling event. There was also little variation between measured concentrations between seasons.



Figure X Mean Total Cadmium (Spring and Summer)

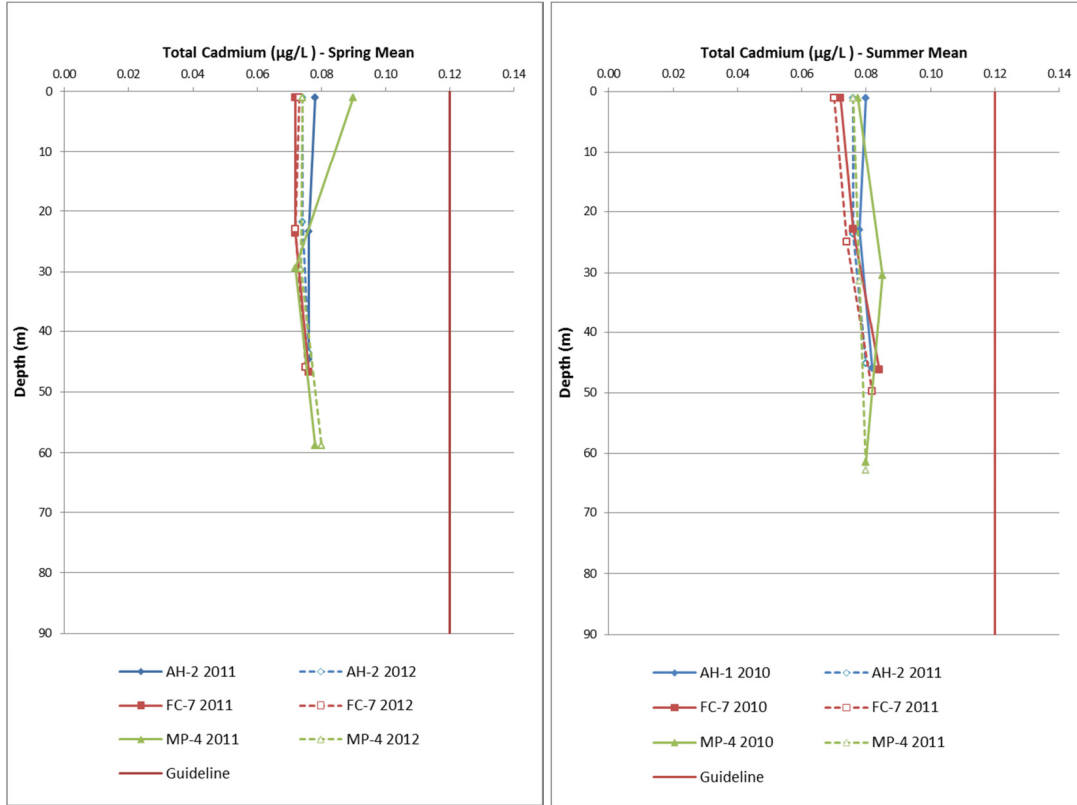
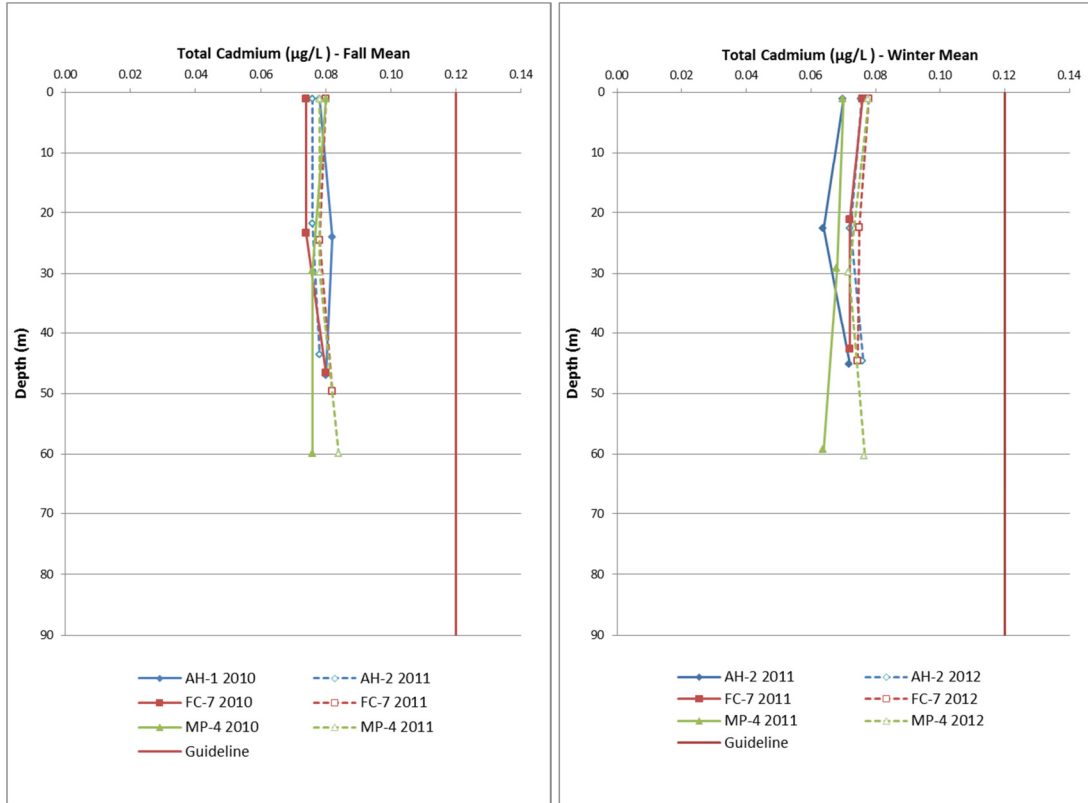


Figure Y Mean Total Cadmium (Fall and Winter)





Copper

The British Columbia approved water quality guidelines for copper for the protection of marine and estuarine aquatic life are provided in Table X (MOE 1987b).

Table X Copper Water Quality Guidelines

Guideline ($\mu\text{g/L}$ Total Copper)	
30-day Mean	$\leq 2 \mu\text{g/L}$
Maximum	$\leq 3 \mu\text{g/L}$

The mean concentration of total copper is provided in Table 5. The 30-day mean concentrations of total copper measured at each station are plotted for each season in Figure Z and Figure AA with respect to depth. The mean concentration of total copper was measured to be below the 30-day mean guidelines ($\leq 2 \mu\text{g/L}$) at all stations during all seasons.

Maximum concentration of total copper is provided in Table 5. The maximum concentrations of total copper measured at each station are plotted for each season in Figure BB and Figure CC. There was a single exceedance of the maximum water quality guideline on February 27, 2012, where a concentration $6.32 \mu\text{g/L}$ of total copper was measured at station AH-2. This single exceedance resulted in a higher mean concentration at that station and depth for the winter 2012 sampling event (as shown in Figure AA).

Figure Z Mean Total Copper (Spring and Summer)

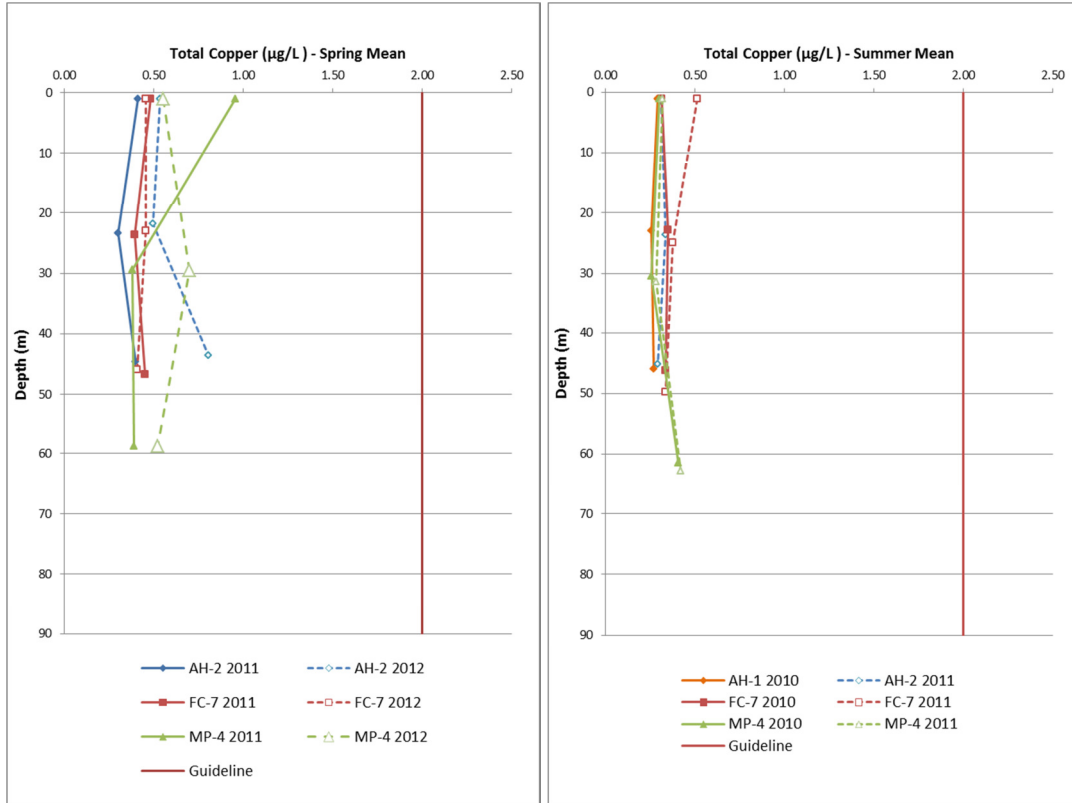




Figure AA Mean Total Copper (Fall and Winter)

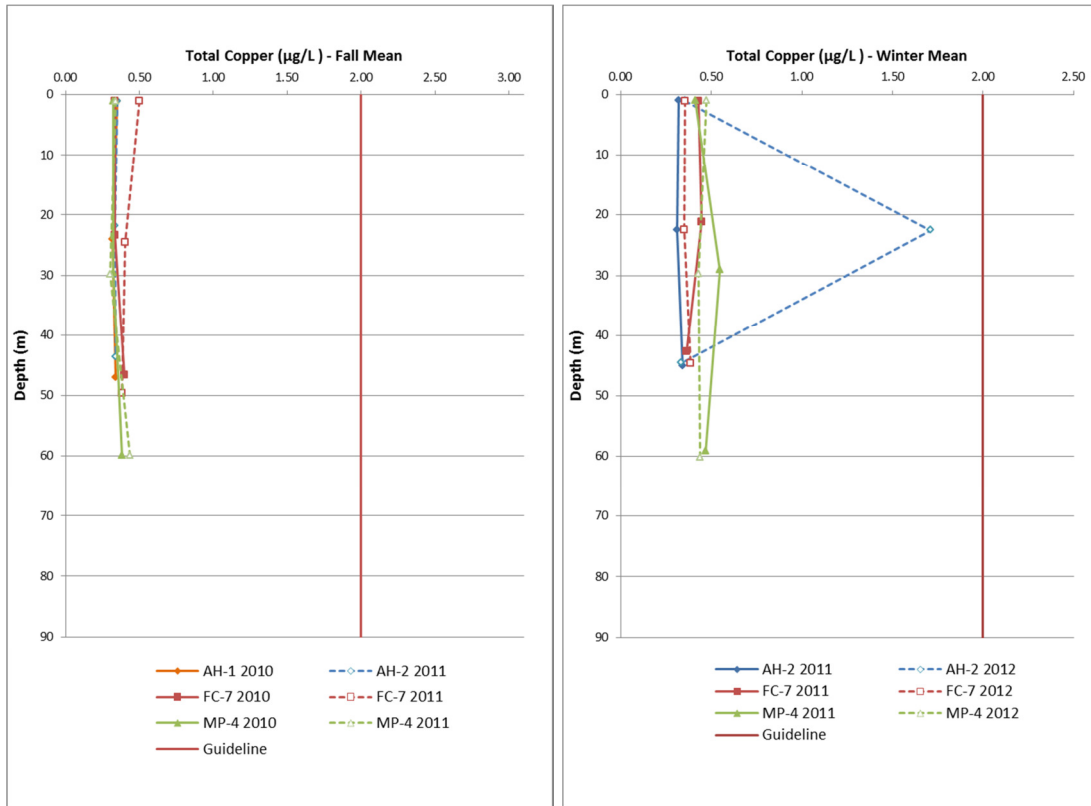


Figure BB Maximum Total Copper (Spring and Summer)

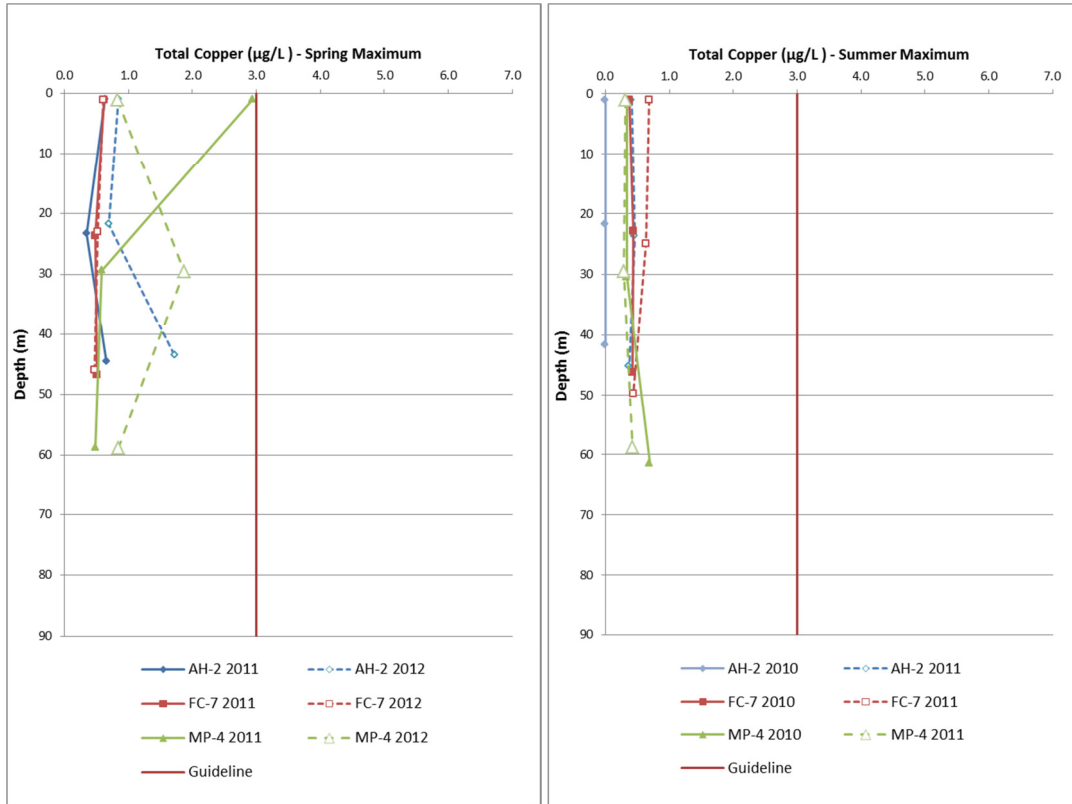
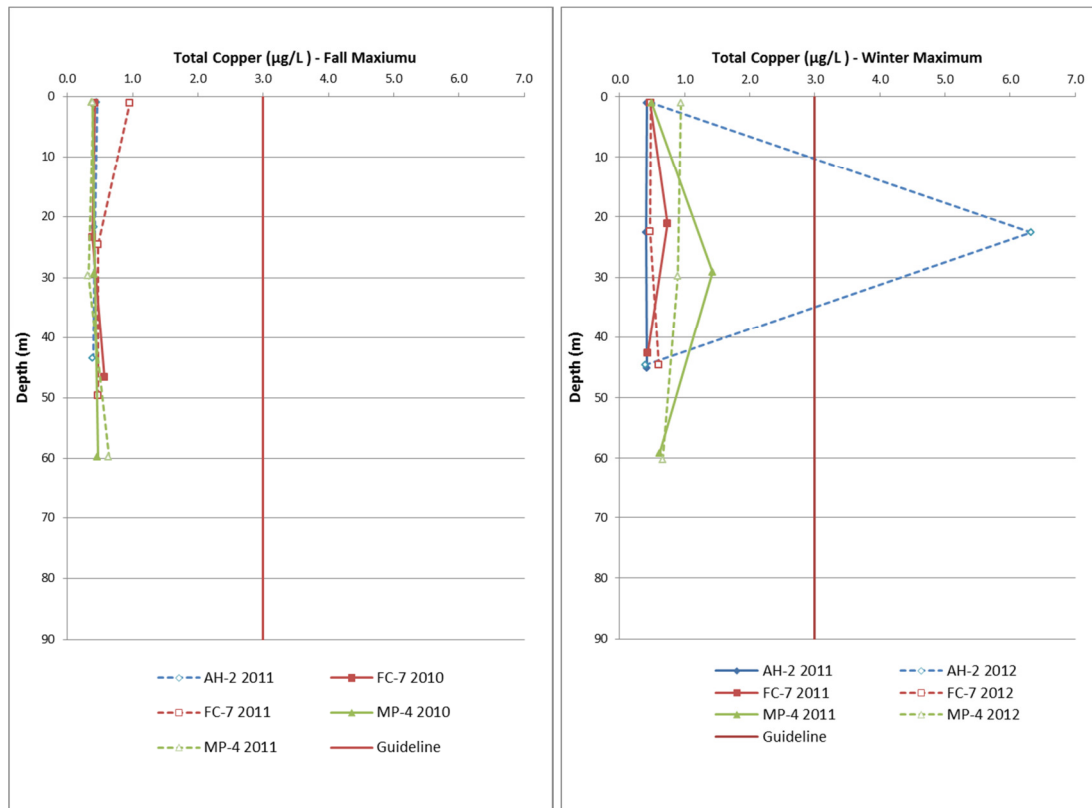




Figure CC Maximum Total Copper (Fall and Winter)



Lead

The British Columbia approved water quality guidelines for lead for the protection of marine and estuarine aquatic life are provided in Table Y (MOE 1987a).

Table Y Lead Water Quality Guidelines

Guideline (µg/L Total Lead)	
30-day Mean	≤ 2 µg/L
Maximum	≤ 140 µg/L

Measured concentrations of total lead were generally near or below the method detection limit (0.05 µg/L). Mean concentrations were not calculated if three or more of the five samples were below the detection limit. For the sample locations and seasons where the mean concentration was calculated (11 of 72) the mean concentrations were all below 0.07 µg/L.

Maximum total lead concentrations were generally below 0.2 µg/L. Samples with concentrations above 0.2 µg/L were measured at the stations and seasons shown in Table Z.

Table Z Maximum Lead Concentrations

Station	Depth	Season	Total Lead (µg/L)
AH-1	Bottom	Fall 2010	0.43
AH-1	Mid	Fall 2010	0.27
AH-1	Surface	Fall 2010	0.72
AH-2	Mid	Winter 2011	0.56
MP-4	Mid	Winter 2012	0.35

Mercury

The British Columbia and CCME approved water quality guidelines for mercury for the protection of marine and estuarine aquatic life and primary contact recreation are provided in Table AA (MOE 2006).

Table AA Water Quality Guidelines - Mercury

	Water Use	30-day average µg/L total Hg	Maximum at any time µg/L total Hg
BC MOE	Marine and Estuarine Aquatic Life	≤0.02 to 0.00125	
	Primary Contact Recreation	None proposed	1.0
CCME	Marine and Estuarine Aquatic Life	≤ 0.016	



The water quality guideline for total mercury is less when the concentration of methyl mercury is greater. Mean concentrations of total mercury were not calculated for any station as only a single sample (reference station FC-7 bottom, August 3, 2012) was measured above the detection limit of the analysis.

The detection limit for mercury was ($< 0.02 \mu\text{g/L}$) for the summer 2010 to fall 2011 sampling events, above the CCME guideline of $0.016 \mu\text{g/L}$. Because of the low guideline and sensitivity of the analysis, an exceedance cannot be confirmed. However, the detection limit for the winter and spring 2012 sampling events was $0.010 \mu\text{g/L}$, and all measured values were below the detection limit.

Zinc

The BC approved water quality guideline for zinc in marine and estuarine aquatic life is a maximum of $\leq 3 \mu\text{g/L}$ (MOE1999b). The water quality guideline for zinc was exceeded on two occasions; in the winter of 2012 a maximum concentration of $12.20 \mu\text{g/L}$ was measured at AH-2 mid, and in the fall of 2010 a maximum concentration of $10.30 \mu\text{g/L}$ was measured at reference station FC-7 surface. All other samples were below the water quality guidelines.

The 30-day maximum concentrations of total zinc measured at each station are plotted for each season in Figure DD and Figure EE with respect to depth.

Figure DD Maximum Total Zinc (Spring and Summer)

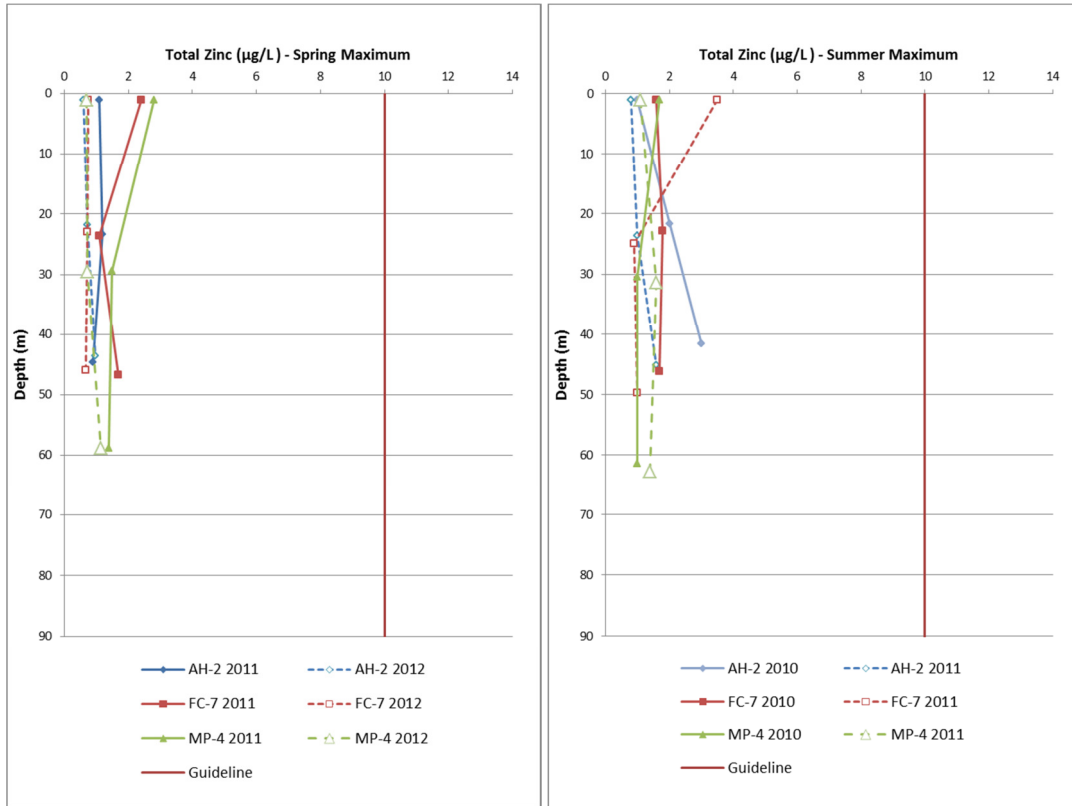
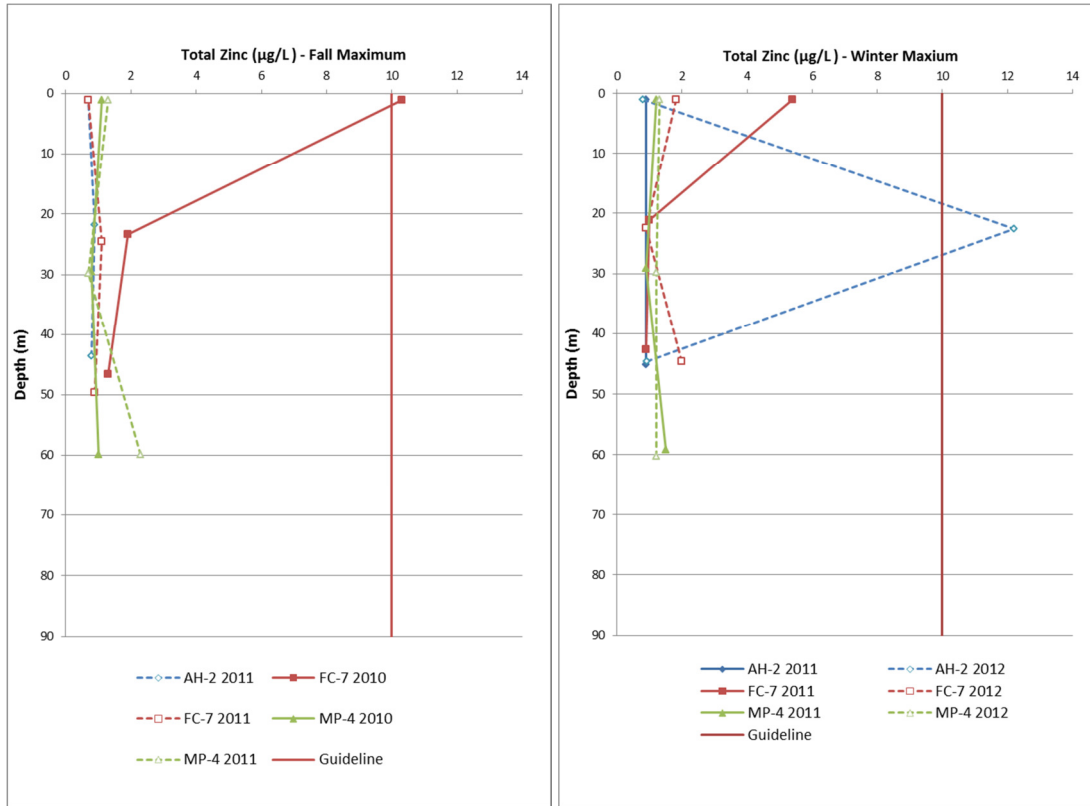




Figure EE Maximum Total Zinc (Fall and Winter)



3.4.3 Trace Metals Summary

Trace metal concentrations were analyzed at three stations during all sampling events. When compared against BC and CCME water quality guidelines the measured concentrations were below applicable guidelines for the protection of marine aquatic life, with the following exceptions.

- Copper: the maximum allowable concentration was exceeded at AH-2 mid water sample during the winter 2012.
- Zinc: the maximum allowable concentration was exceeded at AH-2 mid water sample during the winter 2012 sampling event and at reference station FC-7 surface sample in the fall 2010

The source of the copper and zinc exceedances is unknown. The exterior of the Niskin bottle used for sampling was equipped with some brass (which is an alloy of zinc and copper) components. Given these brass components are on the exterior of the device, it would seem an unlikely source of the elevated concentrations.

3.5 Organics (Group 1)

Bottom samples collected from stations AH-2, MP-4, MP-5 and reference station FC-7 during the summer 2010, winter 2011, summer 2011 and winter 2012 sampling events were analyzed for Organic (Group 1) parameters. Analysis included in the Organics (Group 1) included:

- PAHs
- Organochlorinated Pesticides
- Chlorinated Phenolics
- VOCs including BTEX
- Phthalates
- PBDEs



3.5.1 Polycyclic Aromatic Hydrocarbons

The BC water quality guidelines for PAHs are provided in Table BB.

Table BB Marine Water Quality Guidelines – PAHs

PAH	BC Marine Water Quality Guideline
Naphthalene	1 µg/L
Methylated naphthalene	1 µg/L
Acenaphthene	6 µg/L
Fluorene	12 µg/L
Chrysene	0.1 µg/L
Benzo[a]pyrene	0.01 µg/L

Results of the PAH analysis are provided in Table 6. All measured values were below the method detection limit except four parameters measured in the bottom samples at reference station FC-7 on May 12, 2010 and a single parameter on May 25, 2010 (Table CC). All measured PAHs were below the applicable guidelines.

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Table CC PAHs Measured at Reference Station FC-7

PAH	2-Methylnaphthalene (µg/L)	Benzo[g,h,i]perylene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Total PAHs (µg/L)
Guideline			1		
MDL	0.01	0.02	0.02	0.01	0.05
May 12,2010	0.02	0.02	0.03	0.02	0.08
May 25, 2010	0.01	< 0.02	< 0.02	< 0.01	<0.05

3.5.2 Organochlorinated Pesticides

There are two marine water quality guidelines for organochlorinated pesticides (endosulfan and permethrin). The water samples were not analyzed for permethrin, as a result, the CCME water quality guideline for endosulfan is provided in Table DD.

Table DD Marine Water Quality Guidelines - Organochlorinated Pesticides

Organochlorinated Pesticides	CCME Water Quality Guideline			Units
	MDL	Short Term	Long Term	
Endosulfan	0.005	0.09	0.002	µg/L

The results from the analysis of organochlorinated pesticides are provided in Table 7. The measured concentrations of endosulfan were below the detection limit (<0.005 µg/L). All organochlorinated pesticides were measured values were below the detection limit of the analysis (Table 7). The detection limit of the analysis is higher than the long term guideline and; therefore, it cannot be confirmed if measured levels are below the long term guideline.



3.5.3 Chlorinated Phenolics

The water quality guideline for chlorinated phenolics is based on the temperature and pH of the water body. The BC water quality guidelines for the chlorophenols are provided for a water temperature of 10°C and varying pH. A conservative pH of 7.7 was used to determine the applicable guideline.

A temperature conversion factor of 2 for every 10°C change in temperature is applied to the guideline (i.e. the value would be multiplied by 2 at 0 degrees C and by 0.5 at 20 degrees C). The temperature of the bottom water samples during the summer and winter sampling events (when chlorinated phenolics were measured) was generally below 10°C with the exception of reference station FC-7 in the summer of 2010, where temperatures near the bottom measured between 10°C and 12°C. The guideline at 10°C was therefore used for comparison. The BC water quality guidelines for chlorinated phenolics are provided in Table EE.

Table EEMarine Water Quality Guidelines – Chlorinated Phenolics

Chlorinated Phenol	Guideline	MDL
2,3,4,5-Tetrachlorophenol	2.8	<0.1
2,3,4,6-Tetrachlorophenol	8.0	<0.1
2,3,4-Trichlorophenol	3.6	<0.1
2,3,5,6-Tetrachlorophenol	3.6	<0.1
2,3,5-Trichlorophenol	3.7	<0.1
2,3,6-Trichlorophenol	12	<0.1
2,3-Dichlorophenol	8.3	<0.1
2,4 & 2,5-Dichlorophenol	3.7	<0.1
2,4,5-Trichlorophenol	3.3	<0.1
2,4,6-Trichlorophenol	8.8	<0.1
2,6-Dichlorophenol	15	<0.1
3&4-Methylphenol	13	<0.5
3,4,5-Trichlorophenol	3.3	<0.1
3,4-Dichlorophenol	4.3	<0.1
3,5-Dichlorophenol	3.4	<0.1

The results of the analysis are provided in Table 8. All measured values were below the method detection limits (Table FF), and well below the applicable water quality guidelines for the protection of marine aquatic life.

3.5.4 Volatile Organic Compounds (VOCs including BTEX)

The CCME water quality guidelines for hydrocarbons, VOCs including BTEX are provided in Table FF.

Table FF Marine Water Quality Guidelines - Hydrocarbons

Hydrocarbon	CCME Marine Water Quality Guideline (µg/L)	MDL (µg/L)
Benzene	110	<0.50
Ethylbenzene	25	<0.50
Methyl-t-butyl-ether (MTBE)	44	<4.0
1,2-Dichlorobenzene	42	<0.5

The results of the hydrocarbon analysis are provided in Table 9. All measured values were below the method detection limit except for three parameters measured in the bottom samples at AH-2 (May 25, 2012) and reference station FC-7 (May 12 and 25, 2012).

The one hydrocarbon concentration above the method detection limit at AH-2 (toluene) did not have a water quality guideline for the protection of marine aquatic life. The three hydrocarbon concentrations above the method detection limits at reference station FC-7 (toluene, LEPHw and HEPHw) did not have water quality guidelines for the protection of marine aquatic life.

All measured hydrocarbons were below applicable water quality guidelines for the protection of marine aquatic life.

The results of the analysis for VOCs are provided in Table 10. All measured values were below the method detection limits, except chloromethane and 1,1,2,2-tetrachloroethene and toluene.

Chloromethane was measured above the method detection limit at all stations during the summer 2010 sampling event. Measured concentrations ranged from <1 to 7 µg/L.

All measured volatile organic compounds were below applicable water quality guidelines for the protection of marine aquatic life.

3.5.5 Phthalates

The results of the analysis for phthalates are provided in Table 11. The majority of the measured values were below the method detection limits, except a few individual samples where bis (2-ethylhexyl) phthalate was measured at or two times the detection limit (<1 µg/L). A single sample from AH-2 (bottom) on February 15, 2012 measured 7 µg/L.



There are currently no water quality guidelines for phthalates for the protection of marine aquatic life.

3.5.6 Polybrominated Diphenyl Ethers

The results of the analysis for PBDEs are provided in Table 12. There are currently no water quality guidelines for PBDEs.

The majority of the results were below the method detection limits however some congeners (Br4-DPE-49, Br5-DPE-99, Br5-DPE-100, Br6-DPE-153, Br6-DPE-154, and Br10-DPE-209) were consistently measured above the method detection limits at all stations. The same congeners were measured at similar magnitudes in equipment blank and laboratory blank samples; therefore, reported concentrations in the samples should be interpreted as maximum values as they are lower or at similar levels to that of the lab blank and equipment blank.

3.6 Organics (Group 2)

Bottom samples collected from stations AH-1 (summer 2010 only) AH-2, MP-4 and reference station FC-7 during the summer and winter sampling events were analyzed for organics (Group 2) parameters.

Analysis included in the organics (Group 2) included:

- PCBs
- Nonylphenol and its ethoxylates
- Hormones and Sterols

3.6.1 Polychlorinated Biphenyls

The results of the analysis for polychlorinated biphenyls (PCBs) are provided in Table 13. There are no water quality guidelines for PCBs and all measured values were below the method detection limits.

3.6.2 Nonylphenol and its ethoxylates

The interim water quality guideline for nonylphenols and its ethoxylates for the protection of marine aquatic life is a toxic equivalency (TEQ) of 700 ng/L using nonylphenol toxic equivalency factors (TEFs) (CCME 2002).

The TEQ is calculated using the following equation:

$$TEQ = \sum_{i=1}^n (C_i \times TEF_i)$$

Where:

TEQ = concentration of the mixture of nonylphenolic (NP) compounds expressed as toxic equivalent of NP

n = number of nonylphenolic compounds

i = 1, 2, 3, ..., *n*

C_i = concentration of compound *i*

TEF_i = toxic equivalency factor for the compound *i*, (unitless).

The toxic equivalency factors provided by the CCME are listed in Table GG.

Table GG Toxic equivalency factors (TEFs) for NP, NPEs, NPECs, OP, OPEs, and OPECs

Chemical Compound	Chemical TEFs (relative to NP)
NP	1
NP _{<i>n</i>} EO (1 < <i>n</i> < 8)	0.5
NP _{<i>n</i>} EO (<i>n</i> > 9)	0.005
NP1EC	0.005
NP2EC	0.005
OP	0.5
OP _{<i>n</i>} EO (1 < <i>n</i> < 8)	0.5
OP _{<i>n</i>} EO (<i>n</i> > 9)	0.005
OP1EC	0.005
OP2EC	0.005

Results from the analysis of nonylphenols and its ethoxylates are provided in full in Table 14. The majority of samples had concentrations of nonylphenols below detection limits of the analysis. Concentrations of 4-nonylphenol of 21.40 ng/L (August 10, 2010) and 2.37 ng/L (April 7, 2011) were measured in the bottom water sample at MP-4.



The level of 4-nonylphenol in the lab blank for the Aug 10, 2010 samples was slightly above the method acceptance criteria of 20 ng/L. This compound is within method acceptance criteria in the other two additional lab blanks analyzed. The measured concentration should therefore be taken as a maximum value.

The measured concentrations in all samples analyzed were well below the water quality guideline of 700 ng/L (TEQ).

3.6.3 Hormones and Sterols

The results of the analysis for hormones and sterols are provided in Table 15. There are presently no water quality guidelines for hormones and sterols in marine water. The majority of the measured values were below the method detection limits with the following exceptions.

- 17 alpha-Ethinyl-Estradiol
- Cholesterol
- beta-Sitosterol

The same congeners were measured in equipment blank and laboratory blank samples; therefore, reported concentrations in the samples should be interpreted as maximum values as they generally are at similar values to that of the lab blank and equipment blank.

4. QUALITY ASSURANCE / QUALITY CONTROL

Quality Assurance and Quality Control QA/QC results were assessed according to the procedures outlined in Section 2.4.3. The results of the assessment against the data quality objectives (DQO) and the data qualifiers assigned to specific data points are provided in Table 17.

4.1 Sample Representativeness

Field blank sample analyses are compiled in Table 16 with the exception of phthalates, PBDEs and hormones and sterols which are included in their respective tables. Laboratory blank analysis results are provided in the certificates of analysis (Appendix 2).

The majority of constituents tested in the field blank samples were found to be either below detection limits, within 10% of the associated sample concentrations or within 2 x DL of the analysis. A number of marginal failures are listed in Table 17. Where severe failures of the DQO's were observed, the associated analytical results were rejected. Rejected values (identified with an 'R') were removed from calculations, including statistics and graphs. The following exceptions to this are noted:

- July 28, 2010: the field blank concentration of nitrate and nitrate+nitrite exceeded the associated sample concentration and greater than five times the detection limit. Indicates potential contamination and samples rejected and identified with R.

- Copper frequently appeared at field blank concentrations above detection limits and above 10% of the associated sample concentration. 93% of samples showed dissolved copper concentrations below 5xDL, and 56% below 2xDL. In comparison, 100% of samples showed total copper concentrations below 5xDL and 78% showed total copper concentrations below 2xDL. For associated dissolved copper concentrations where blank samples exceeded 5xDL, samples were rejected and identified with R.
- May 30, 2011: the field blank concentration of dissolved and total nickel was double the concentration of the associated sample. Indicates potential contamination and samples rejected and identified with R.
- May 12, 2010: chloroform was found in the blank sample at a concentration of 17 times the detection limits. All samples were measured to be below the method detection limit and therefore assigned the qualifier UN.
- Both field and lab blank analysis resulted in severe failures of DQO's of the following PBDE's: Br4-DPE-47, BrBr4-DPE-49, Br5-DPE-85, Br5-DPE-99, Br5-DPE-100, Br9-DPE-207, and Br9-DPE-208. Associated values below the detection limit were assigned UN and associated values above the detection limit were rejected.
- Hormones and Sterols: 17 alpha-ethinyl-estradiol, cholesterol, and beta-sitosterol were measured in equipment blank and laboratory blank samples; therefore, reported concentrations in the samples should be interpreted as maximum values as they generally at similar level to that of the lab blank and equipment blank.

4.2 Replicate Precision

Microbiology

All range of logarithms was considered acceptable, except a single range measured at MP-4 surface, on November 8, 2010 (Table 1). The measured values for this calculation were within 5 times the method detection limit and therefore were deemed acceptable.

Relative Standard Deviations

The RSD for all triplicate samples collected are calculated in the respective Tables 4 through 15. For all stations in each season, nearly all triplicate samples greater than five times the detection limits fell within the recommended RSD as outlined by the WMEP with only a few exceptions. In all of the above cases within the RSD, the values, including outliers remained below recommended water quality guidelines. The following exceptions were noted:

- **Group 1 and 2 Conventionals**

Ammonia showed high RSD (severe failures) in 35% of the replicate samples over the entire sampling period suggesting a lower than acceptable precision for the analysis.



The majority of the high ammonia RSDs were measured in samples collected at station MP-4, suggesting that there may be higher variability in ammonia at this station (possibly due to the Macaulay Point outfall effluent plume). Marginal and severe failures of the DQO's result in data qualifier "J" assigned to the associated samples and therefore the results are considered estimated values.

Nitrate and nitrite+nitrate exceeded recommended RSD at MP-4 on July 20 & 26, 2011 and May 22, 2012. Associated samples were assigned data qualifier "J".

Phosphate, fluoride and sulphate each exceeded their respective RSDs once throughout the sampling period. Associated samples assigned data qualifier "J".

On May 4, 2011 at AH-2 and on July 26, 2011 at MP-4, TSS exceeded recommended RSD. Associated samples were assigned data qualifier "J".

- **Metals (Dissolved and Total)**

On May 17, 2011, February 21, 2012 and May 28, 2012 2011 RSD exceeded recommended RSD criteria for copper, nickel and iron at MP-4. Associated samples assigned data qualifier "J".

On February 21, 2012, RSD exceeded recommended RSD criteria total nickel at MP-4. Associated samples were assigned data qualifier "J".

On November 15, 2011, RSD exceeded recommended RSD criteria dissolved nickel at MP-4. Associated samples were assigned data qualifier "J".

- **Organics**

PBDEs: Br4-DPE-49, Br5-DPE-85, Br5-DPE-99, Br5-DPE-100, Br6-DPE-153 each exceeded the recommended RSD criteria on at least one occasion.

4.3 Bias

The reported matrix spike and spiked blank results are provided in the certificates of analysis included in COA's included as Appendix 2. A single severe failure of the DQO's was noted, the matrix spike for the PAH quinoline, exceeded 175% resulting in the associated samples assigned data qualifier "R". Several marginal failures of either matrix spike or spiked blank DQO's are provided in Table 17. Associated samples were assigned data qualifier "J".

5. SUMMARY

This Technical Volume provides the water quality sample and water column profile baseline data for the proposed McLoughlin Point Outfall under the CRD Core Area Wastewater Treatment Program. A minimum of two years of data was collected at a variety of stations, including reference stations. The data was collected in accordance with quality assurance and quality control procedures. The data that did not meet QA/QC criteria were identified herein and should not be used in future analysis. The data collected is suitable to be used in future analysis such as the McLoughlin Point Outfall Environmental Impact Study and for Receiving Environment Monitoring.

6. CLOSURE

We trust that this report satisfies your current requirements and provides suitable documentation for your records. If you have any questions or require further details, please contact the undersigned at any time.

Report Prepared by

Original signed on file February 18, 2013.

Original signed on file February 18, 2013.

Peter Howland, B.Sc.
Physical Oceanographer

Jason Clarke, EIT
Manager - Aquatic and Marine Sciences

Senior Review by

Original signed and sealed on file February 18, 2013.

David A. (Dave) Jackson, MSc.Eng. M.A. (Econ), P.Eng.
Technical Director, Water & Wastewater Treatment

**Water Business Unit
Infrastructure & Environment
WorleyParsons Canada Services Ltd.**

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CAPITAL REGIONAL DISTRICT

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Personal Conversations

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Nordbruget, Debbie, Client Services, Maxxam Analytics, 2013

Figures

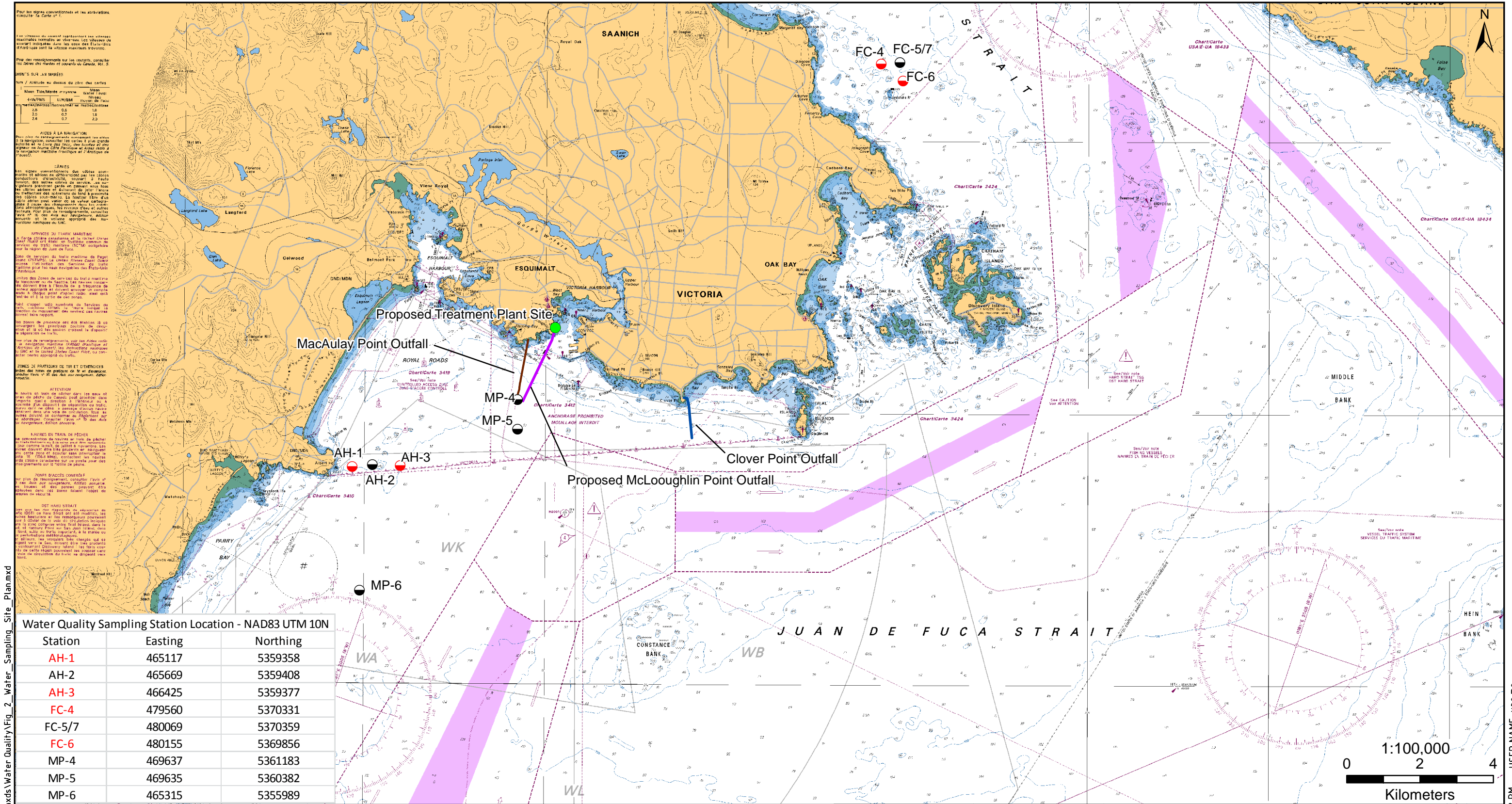
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<p>CRD Core Area Wastewater Treatment Program Pre-Discharge Monitoring Program Water Quality Technical Volume Regional Map</p>		
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Station	Easting	Northing
AH-1	465117	5359358
AH-2	465669	5359408
AH-3	466425	5359377
FC-4	479560	5370331
FC-5/7	480069	5370359
FC-6	480155	5369856
MP-4	469637	5361183
MP-5	469635	5360382
MP-6	465315	5355989

Legend

- Proposed Treatment Plant Site
- Water Quality Sampling Station
- Abandoned Sampling Station
- Macaulay Point Outfall
- Clover Point Outfall
- Proposed McLoughlin Point Outfall

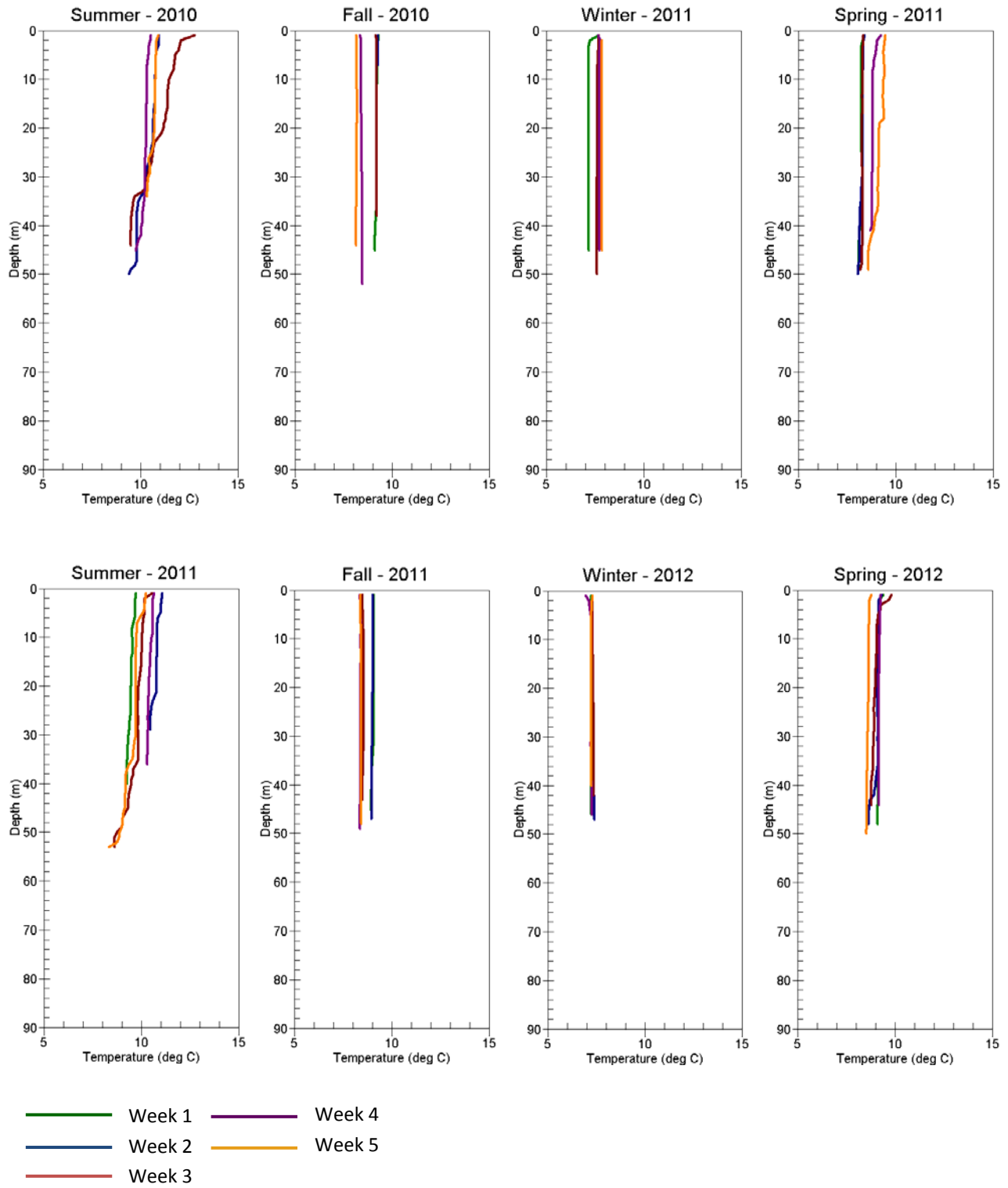
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CRD Core Area Wastewater Treatment Program Pre-Discharge Monitoring Program Water Quality Technical Volume Water Quality Sampling Site Plan		
WORLEYPARSONS PROJECT No. 307071-00020	FIG No. 2	REV 0

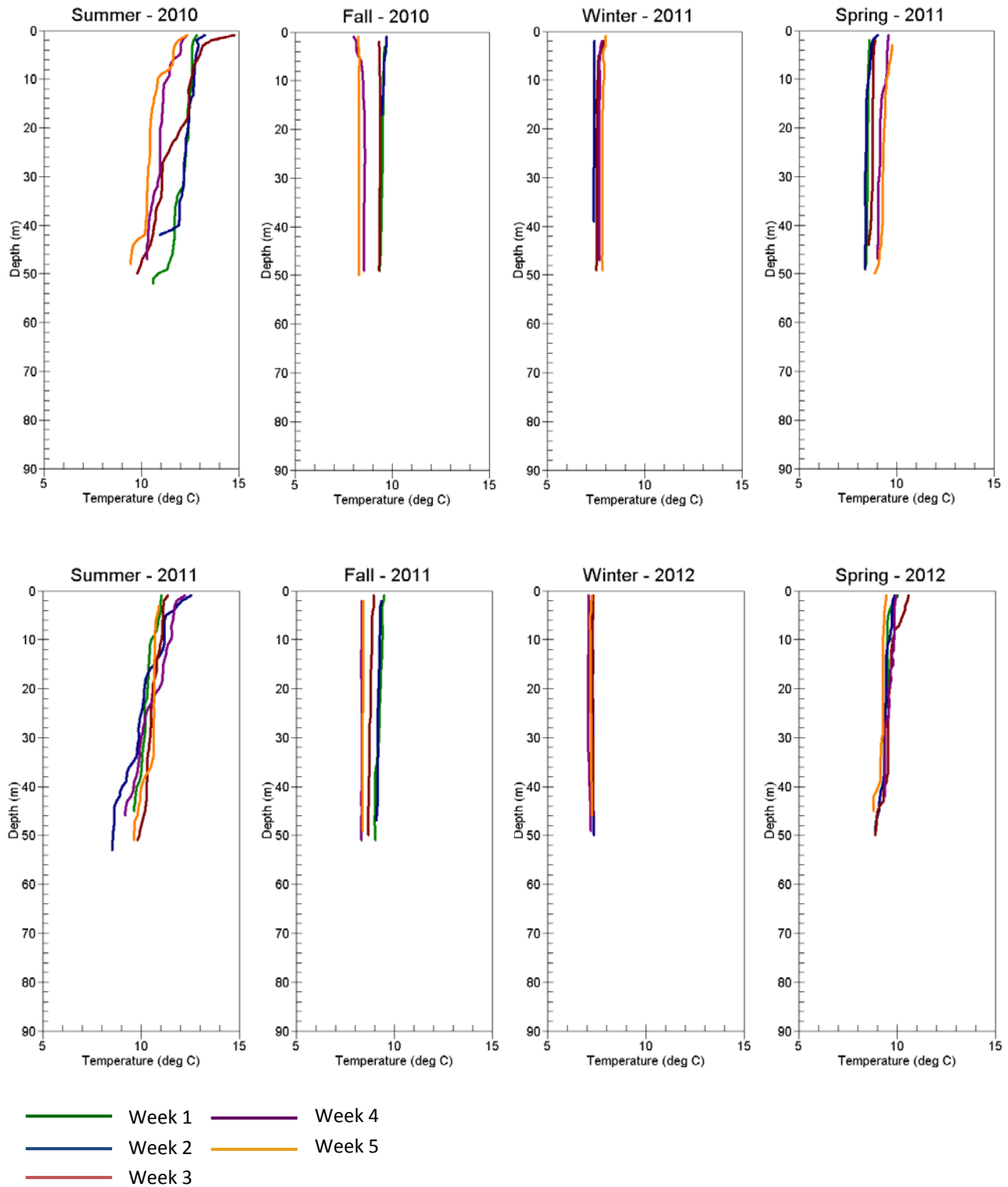
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Water Column Profiles

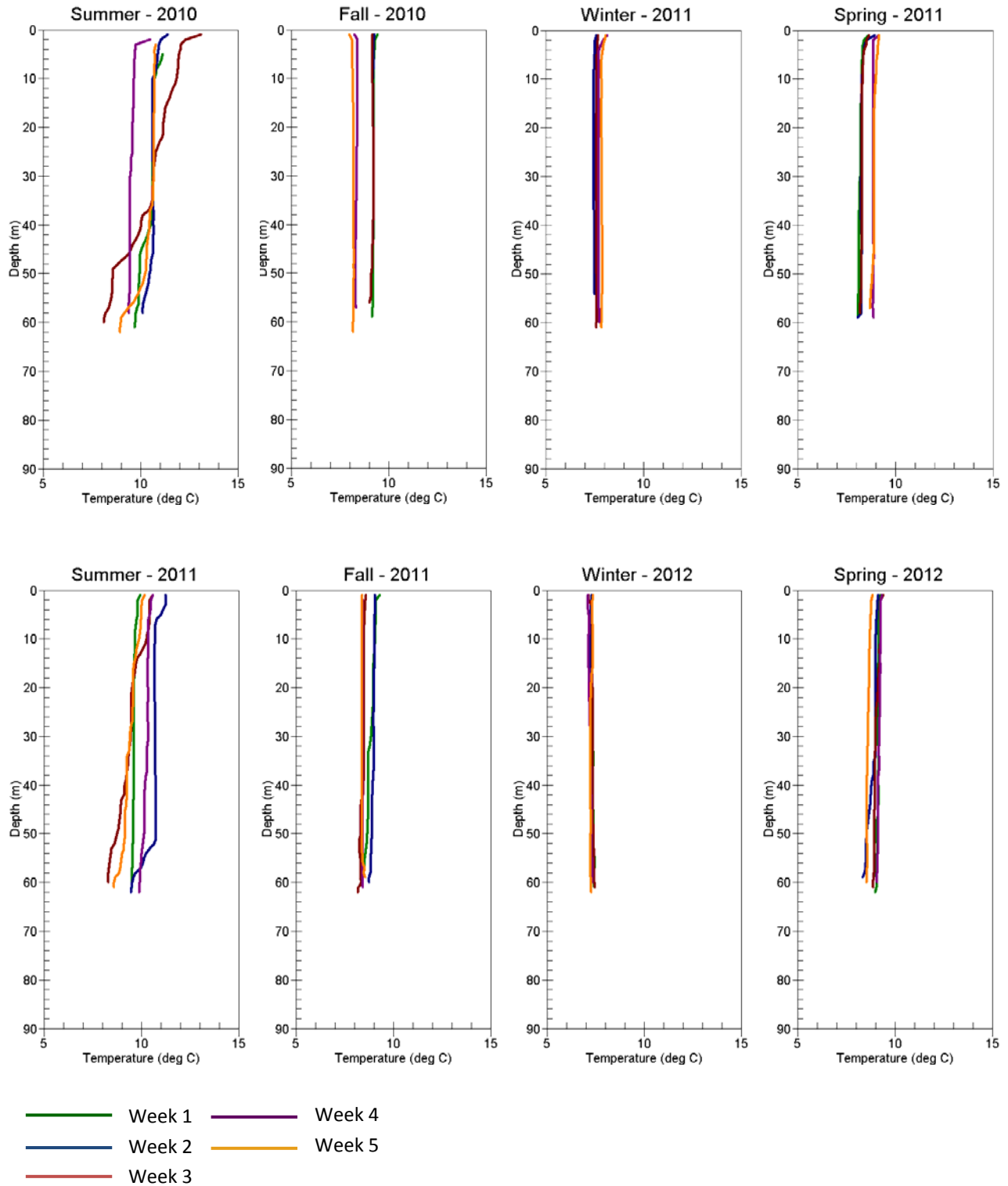





— Week 1 — Week 4
— Week 2 — Week 5
— Week 3

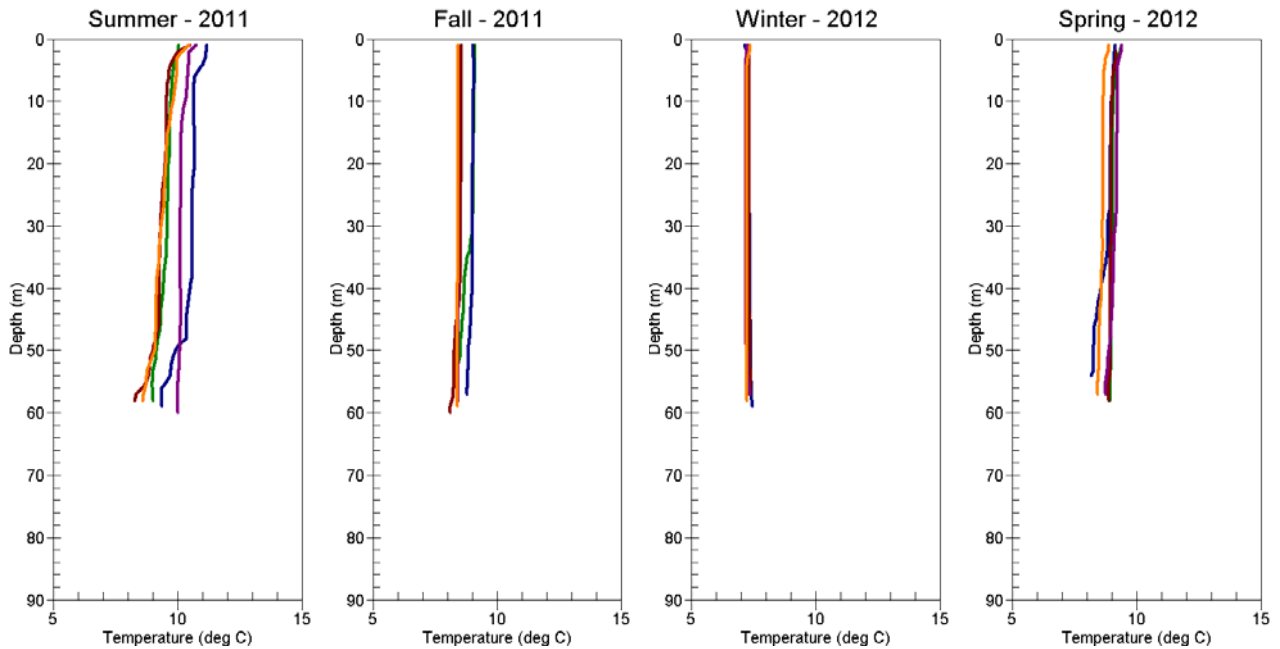
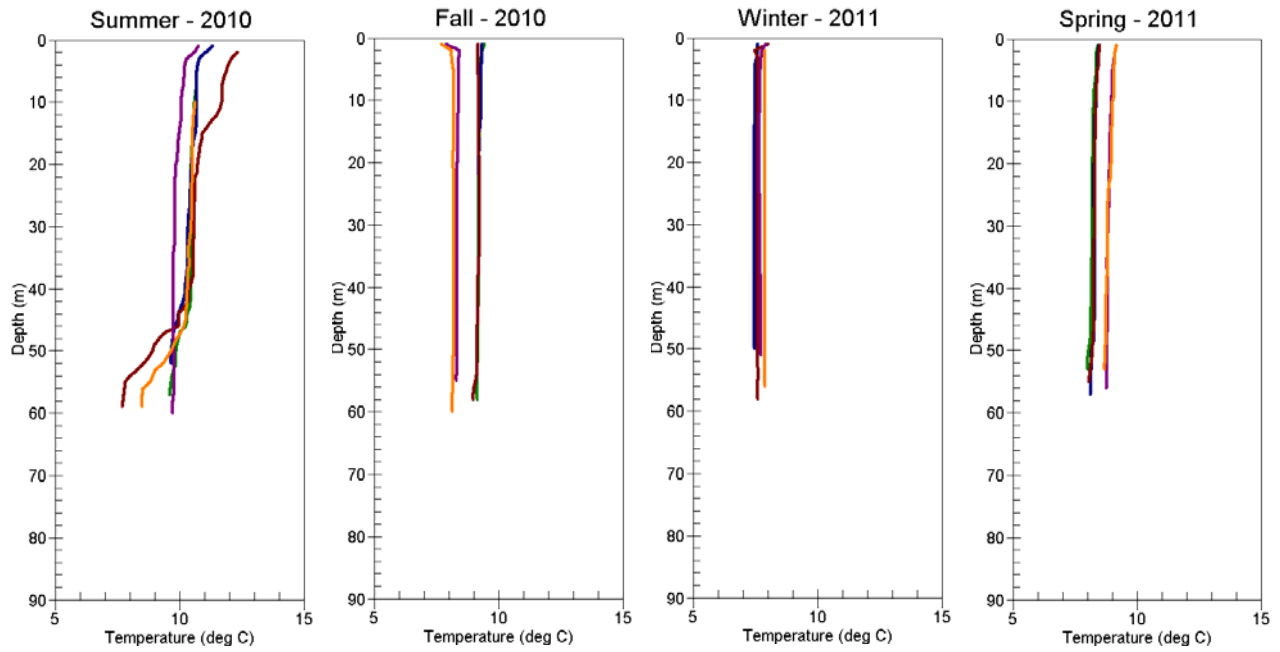
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- Week 1 — Week 4
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- Week 3

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CAPITAL REGIONAL DISTRICT
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 WATER COLUMN PROFILES
 STATION MP5 - TEMPERATURE (°C)

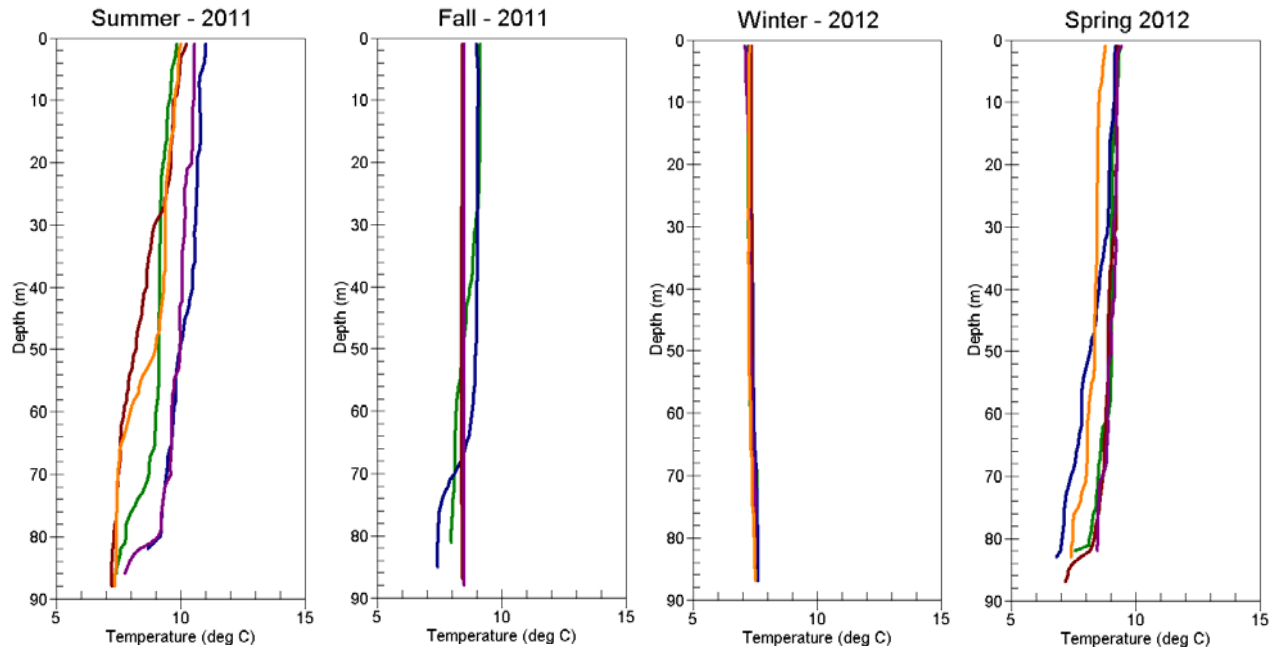
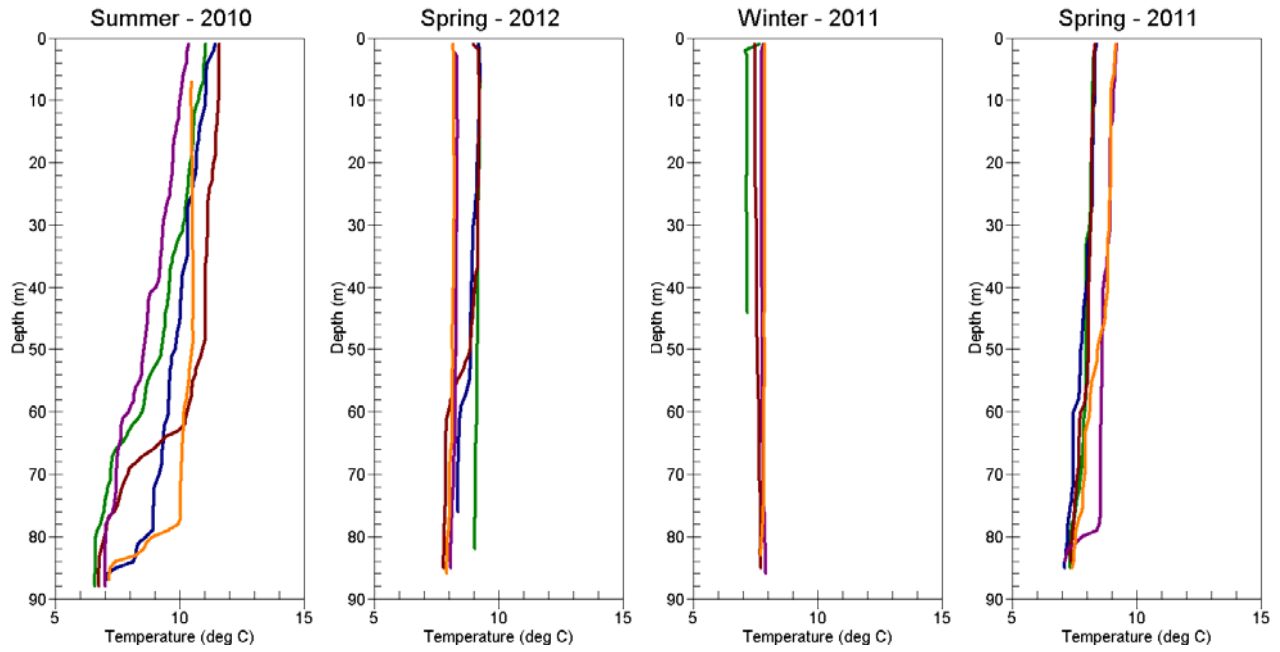
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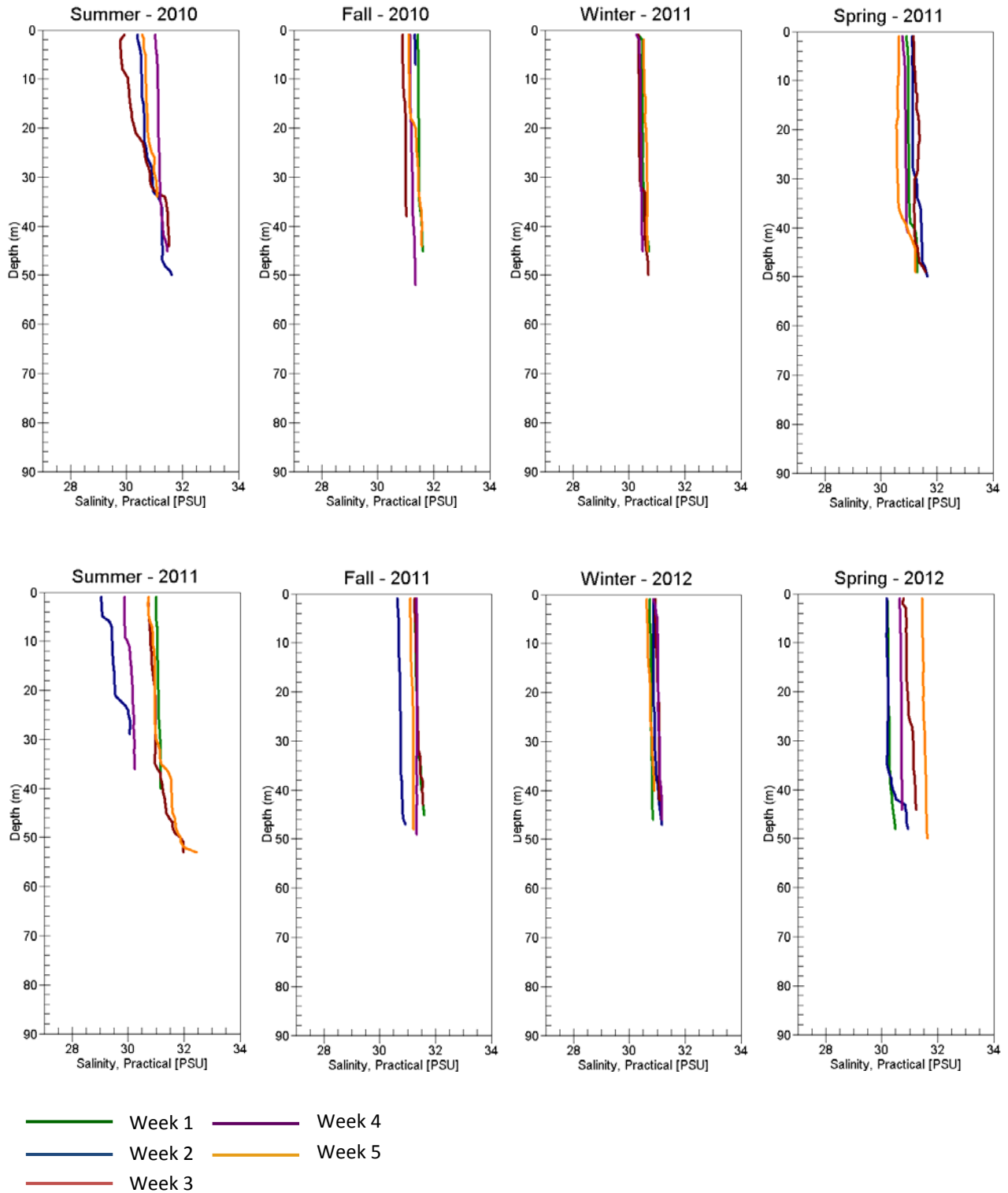
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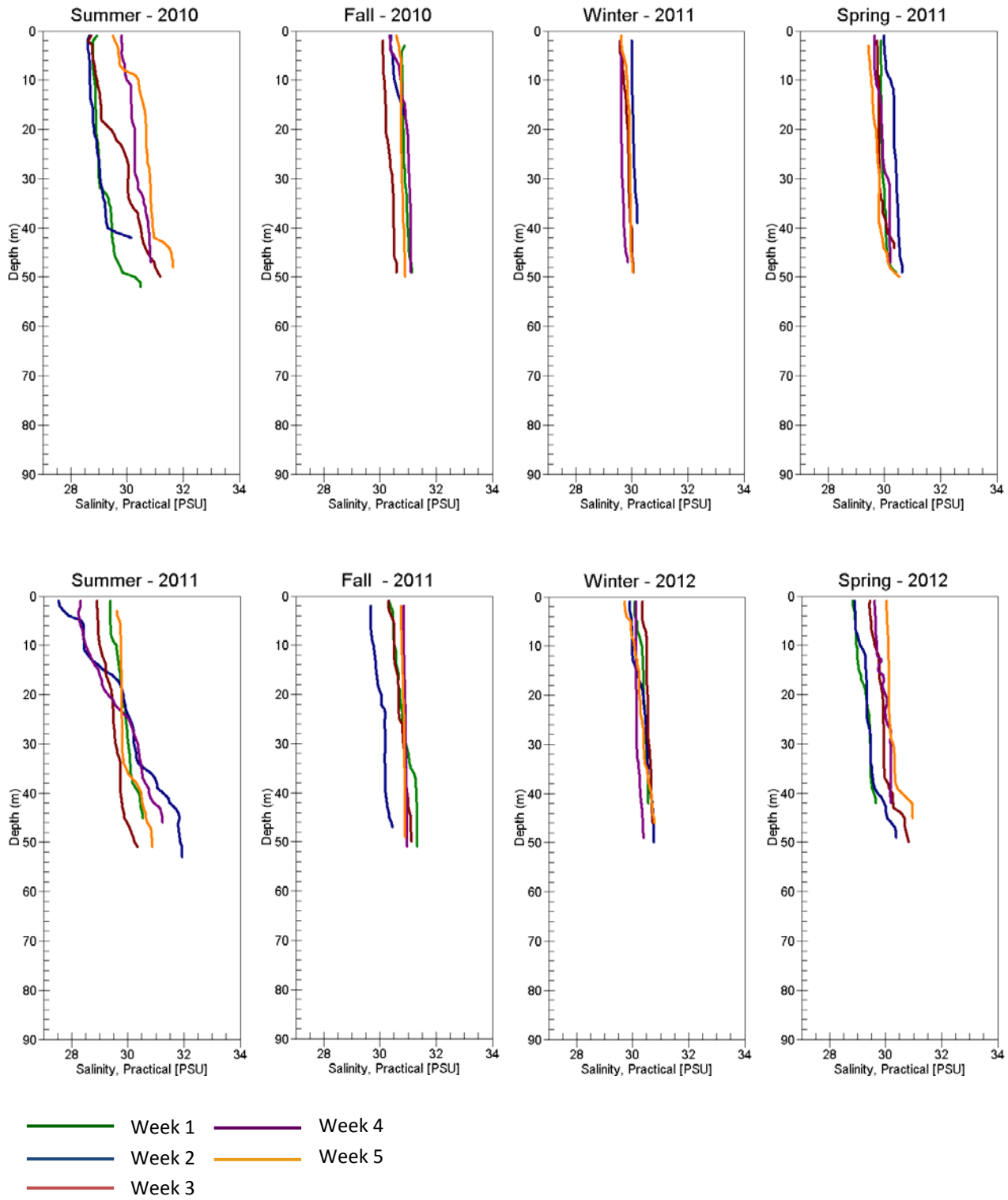





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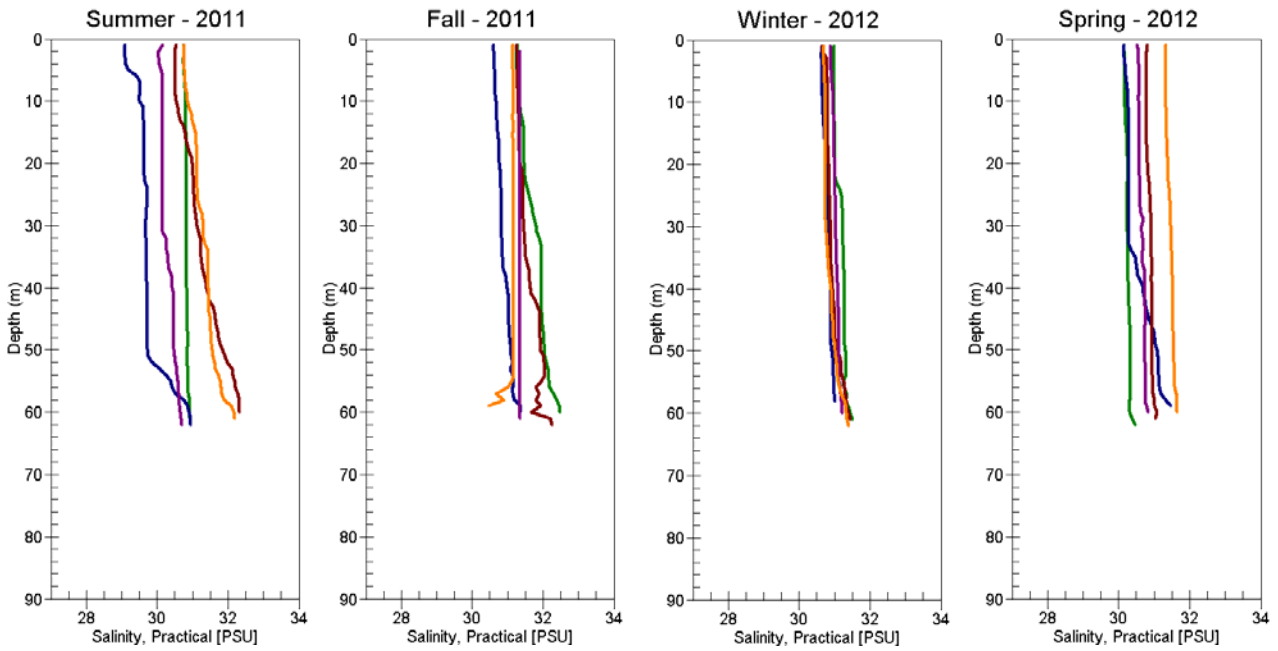
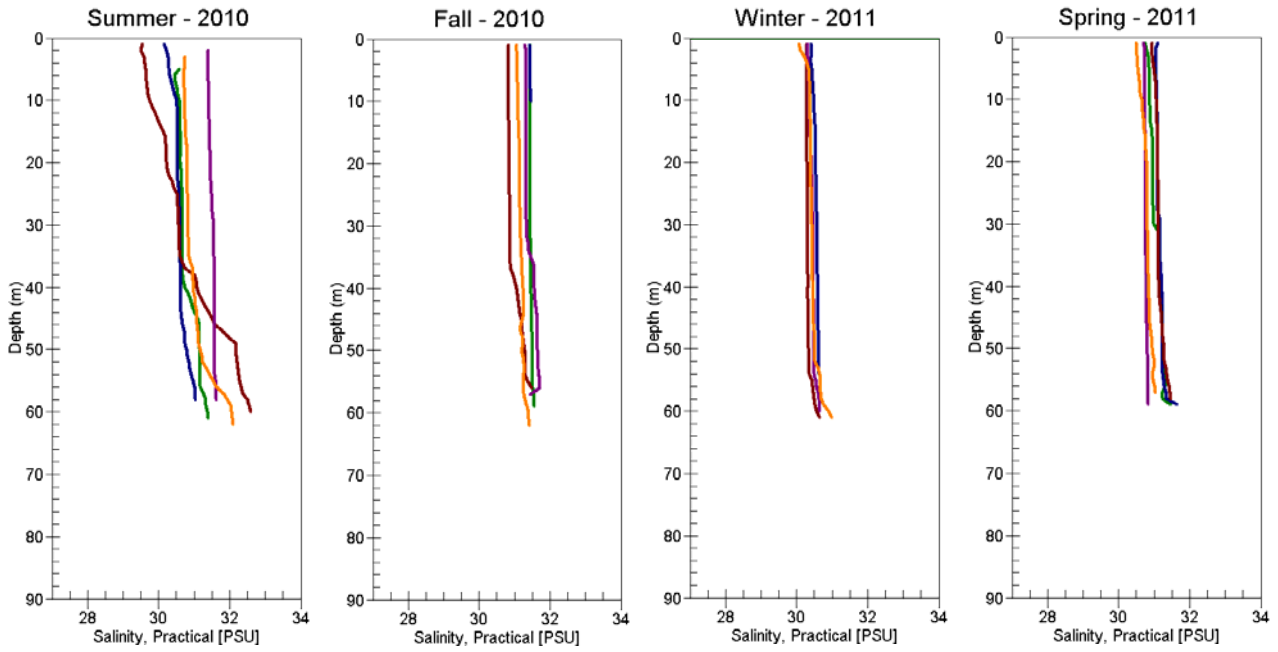
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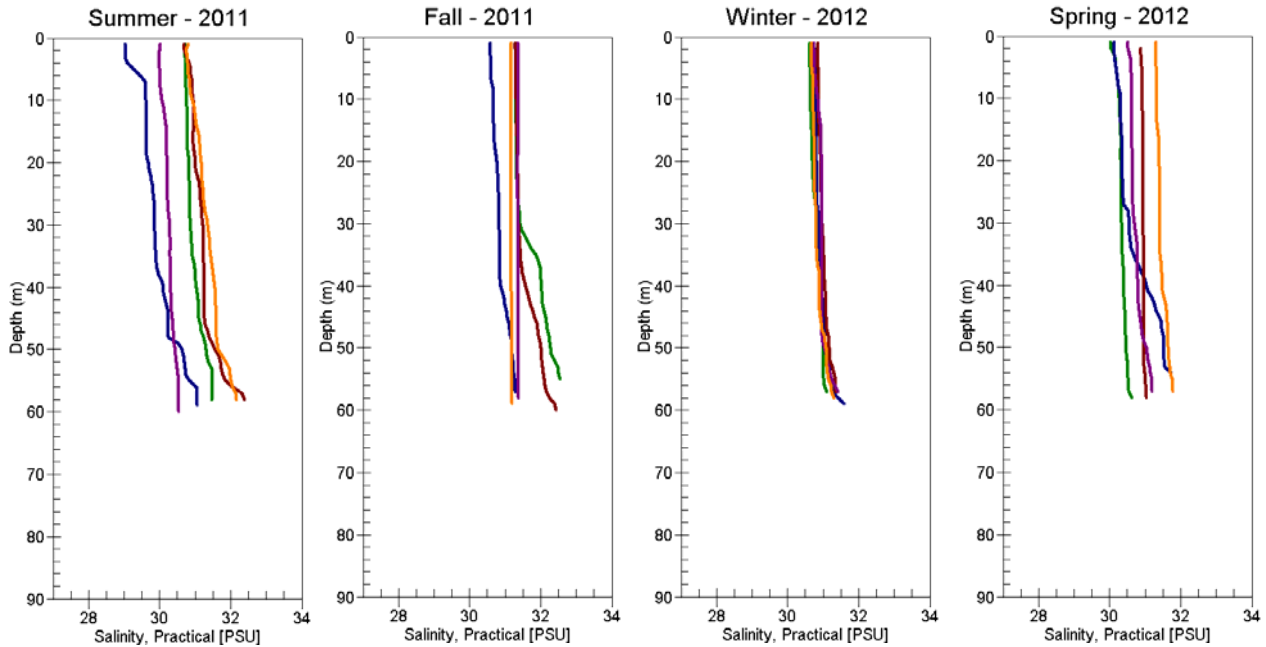
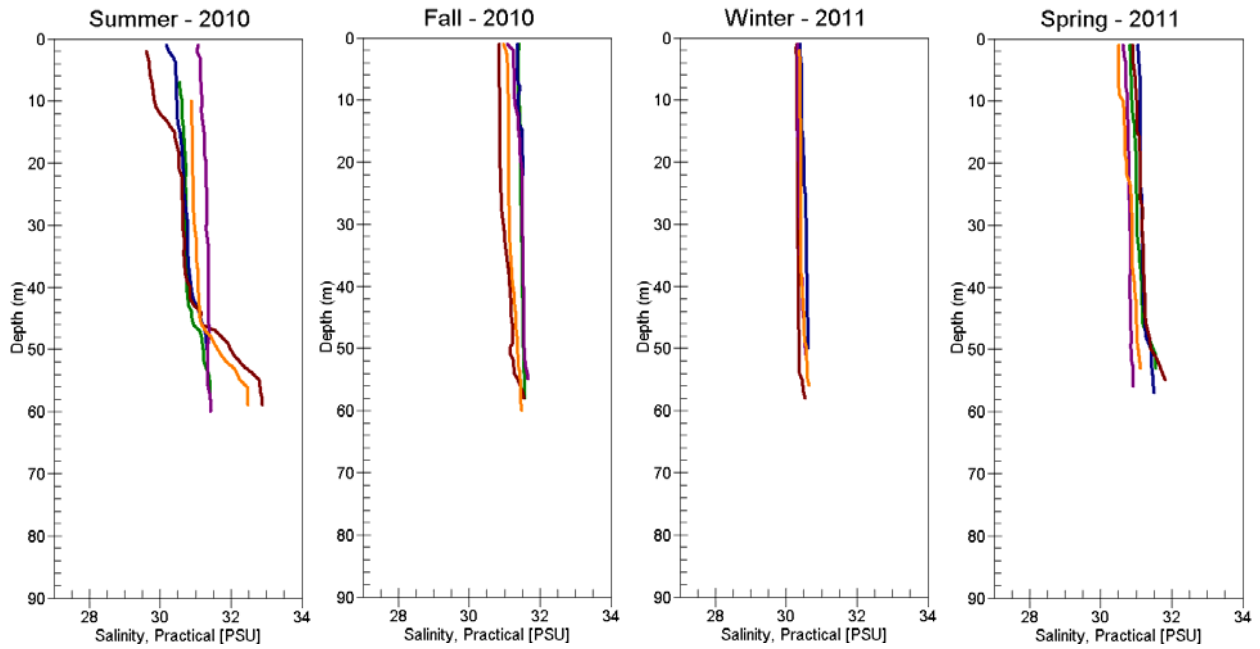


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CAPITAL REGIONAL DISTRICT
WATER QUALITY TECHNICAL VOLUME
WATER COLUMN PROFILES
STATION MP5 - SALINITY (PSU)

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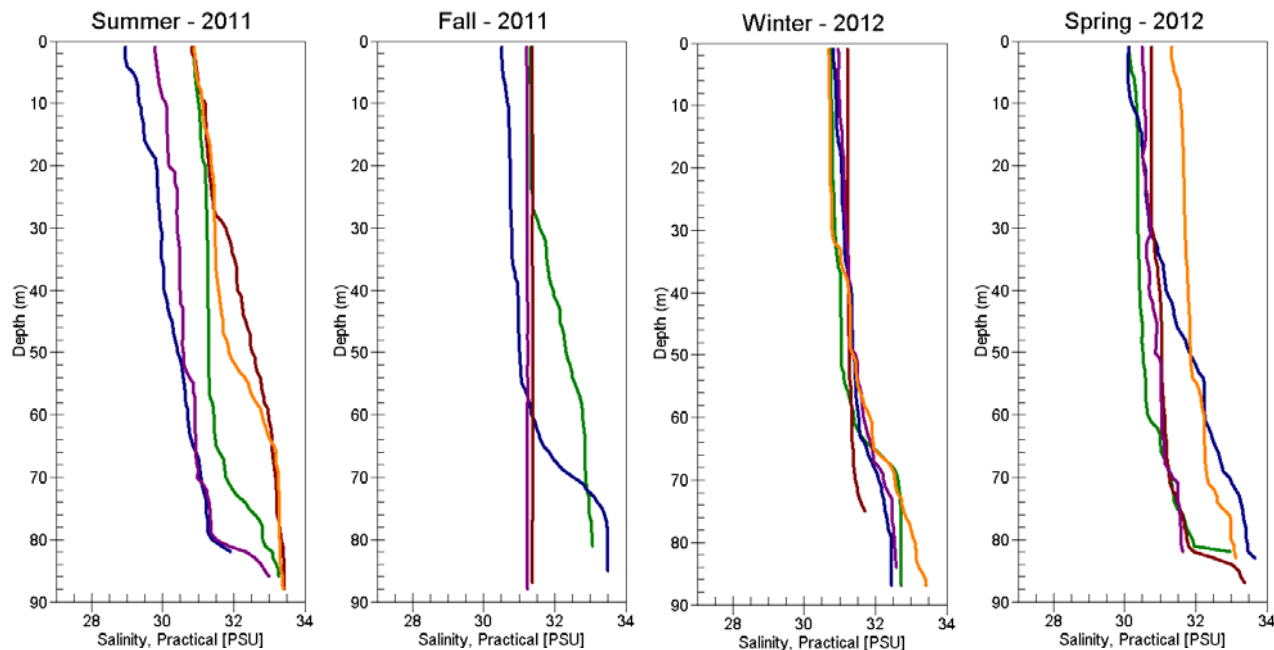
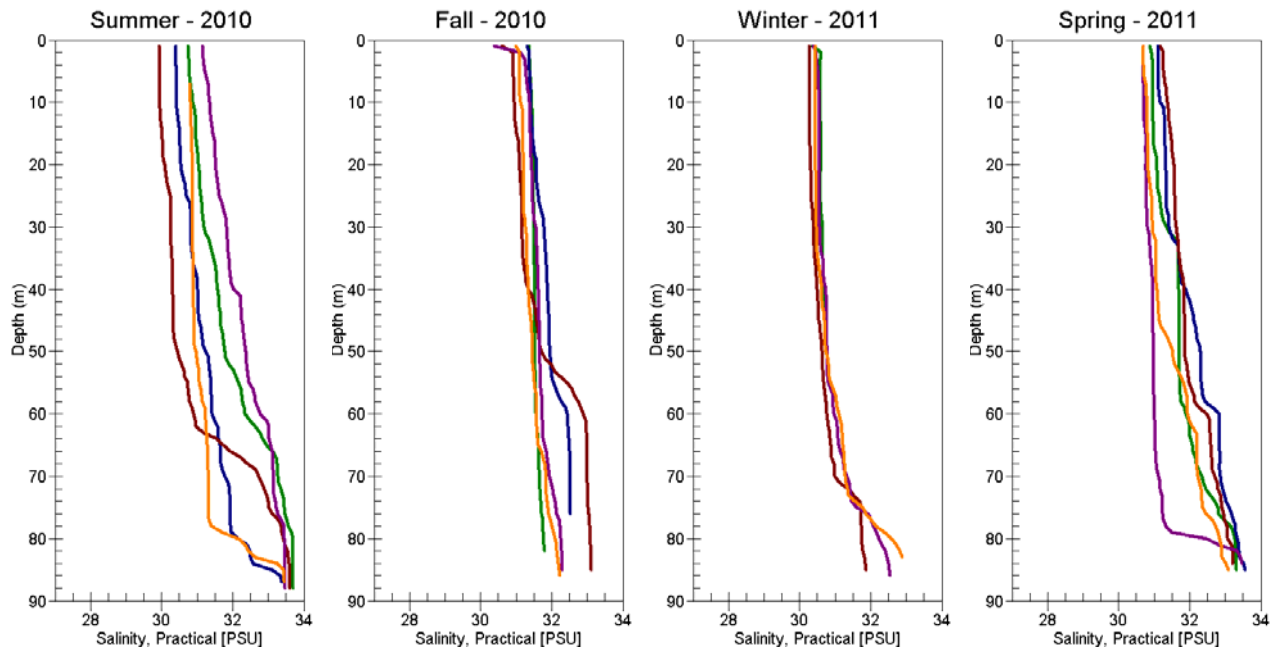
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FIG No

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- Week 2 — Week 5
- Week 3

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CAPITAL REGIONAL DISTRICT
PRE-DISCHARGE MONITORING PROGRAM
WATER COLUMN PROFILES
STATION MP6 - SALINITY (PSU)

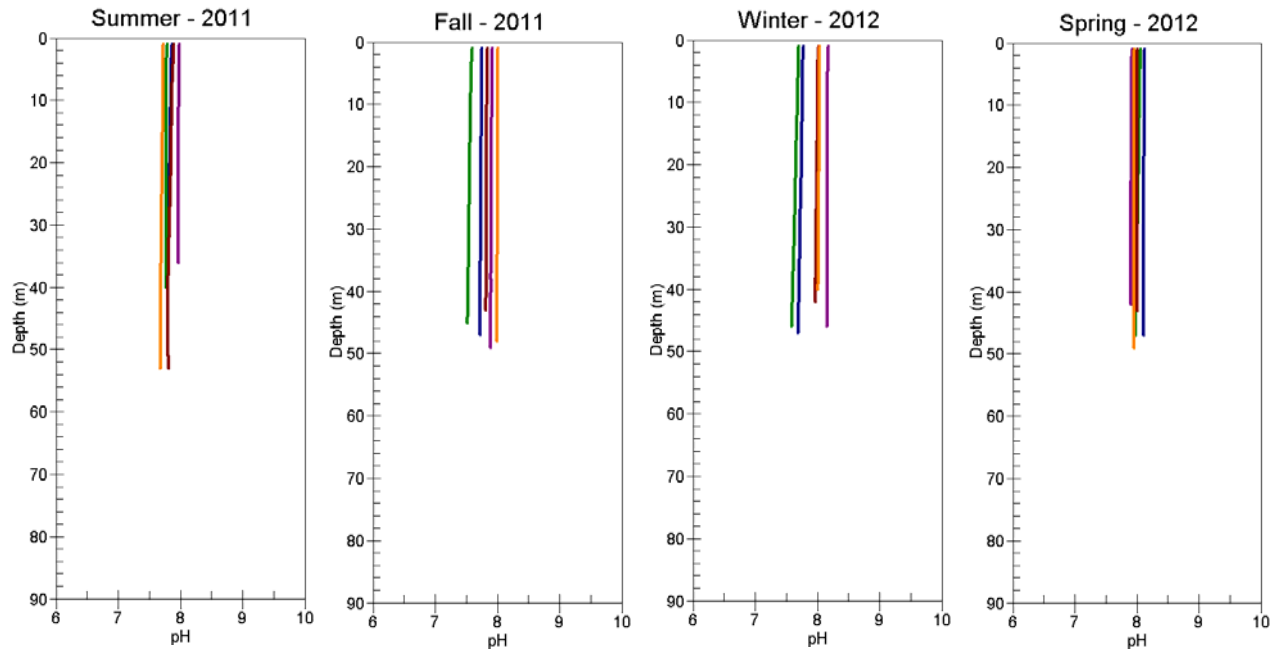
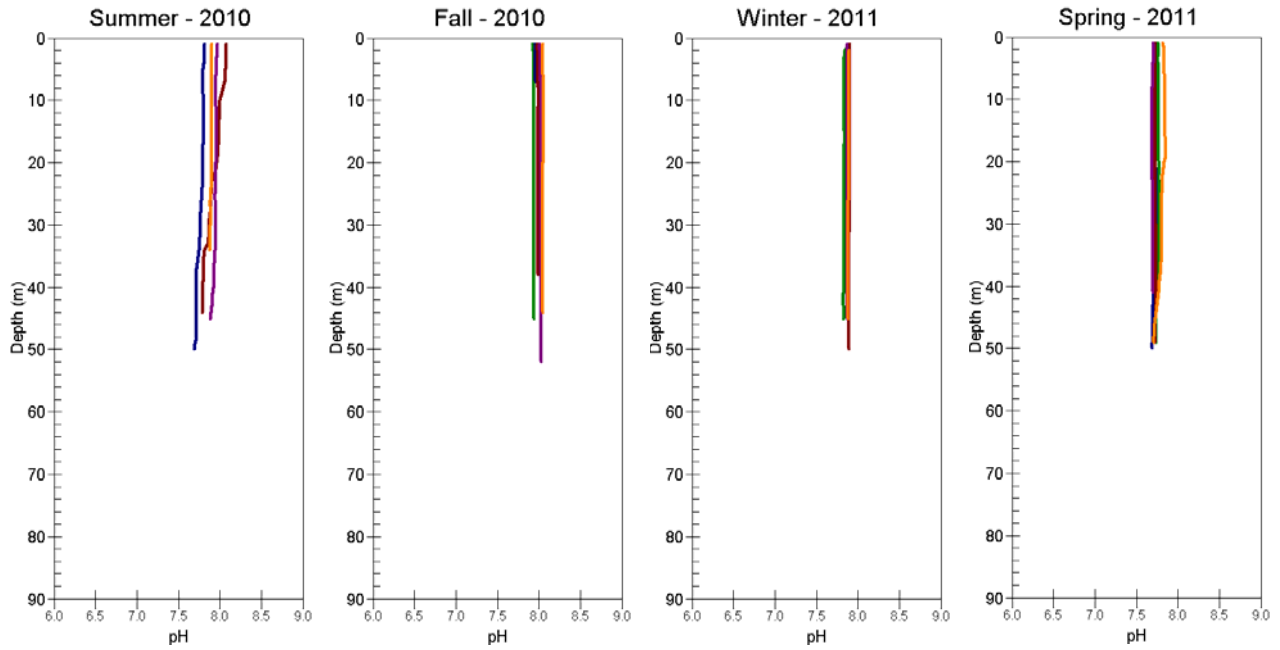
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WORLEYPARSONS PROJECT No.

FIG No

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REV



- Week 1
- Week 2
- Week 3
- Week 4
- Week 5

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CUSTOMER



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CAPITAL REGIONAL DISTRICT
WATER QUALITY TECHNICAL VOLUME
WATER COLUMN PROFILES
STATION AH2 - pH

Date:

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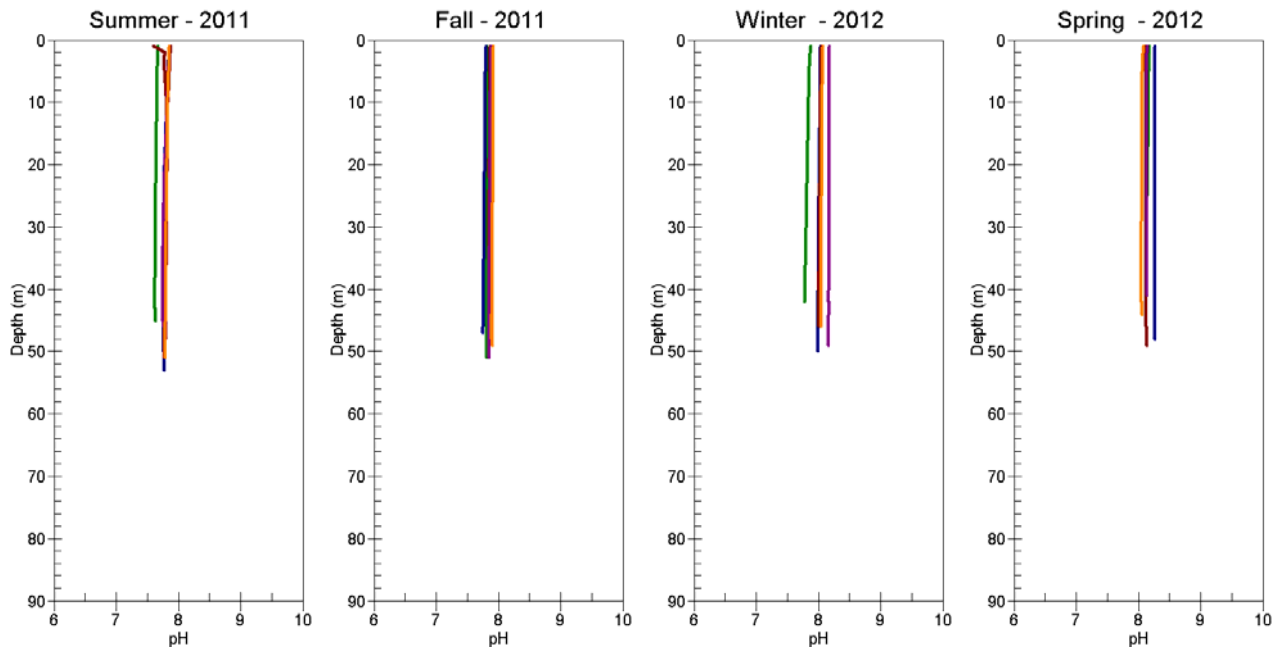
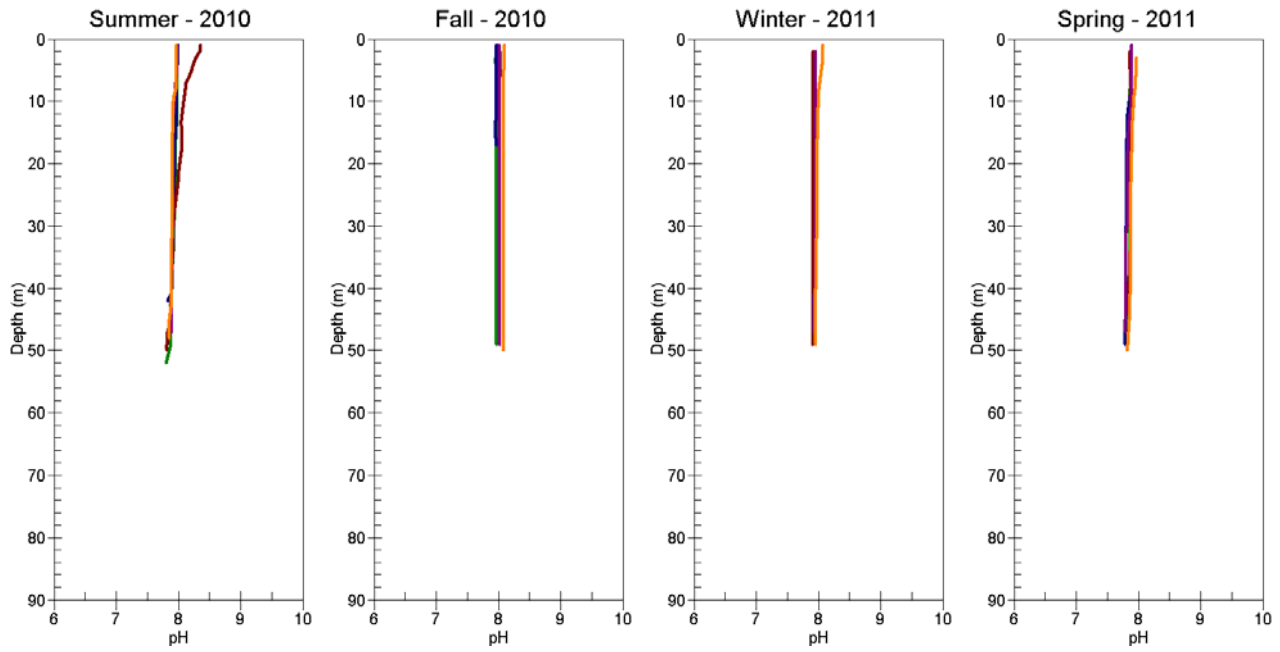
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FIG No

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P-11



- Week 1
- Week 2
- Week 3
- Week 4
- Week 5

A SHEET | SCALE | NTS

CUSTOMER



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CAPITAL REGIONAL DISTRICT
WATER QUALITY TECHNICAL VOLUME
WATER COLUMN PROFILES
STATION FC7 - pH

Date:

Drawn by:

Edited by:

App'd by:

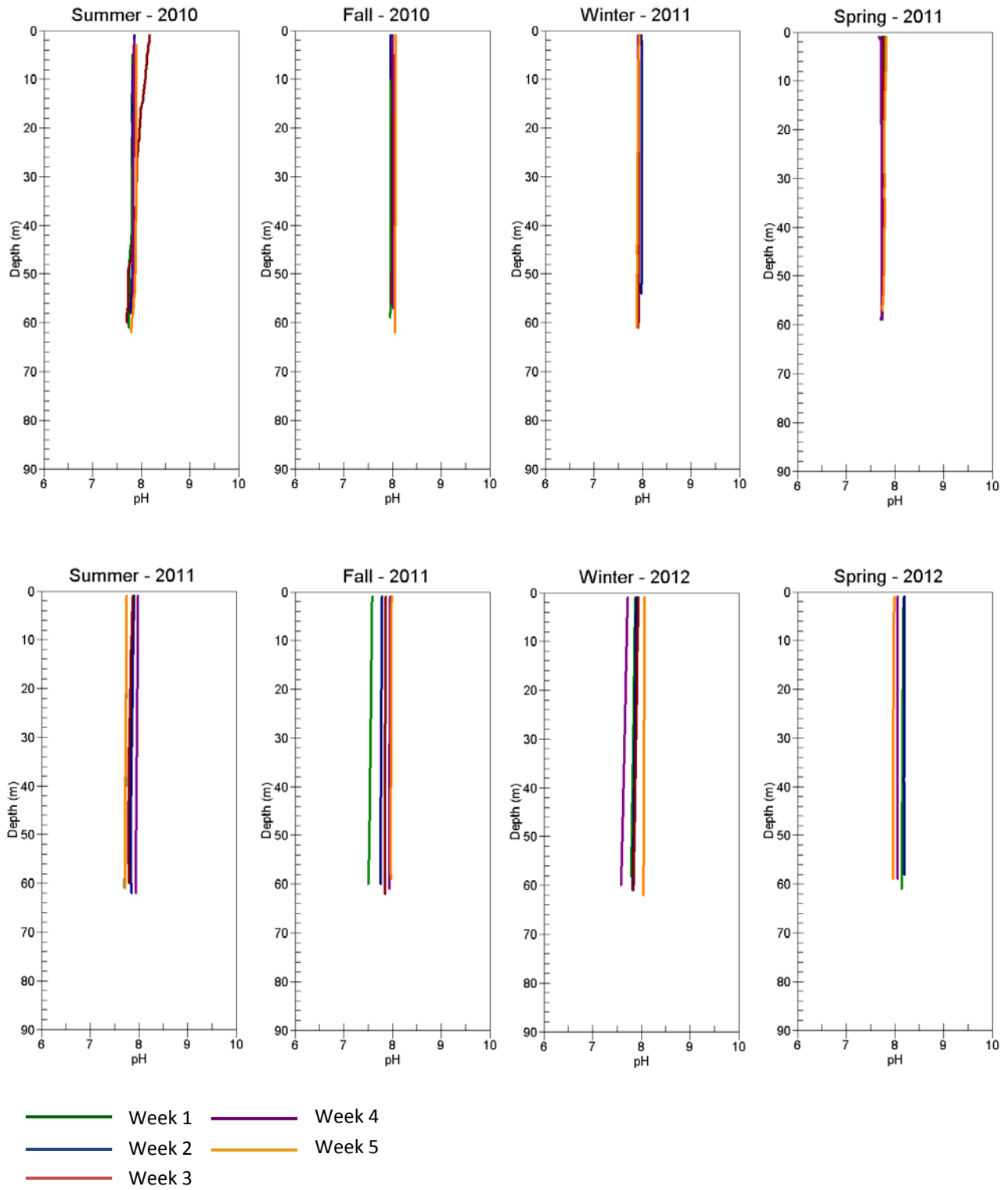
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WORLEYPARSONS PROJECT No.

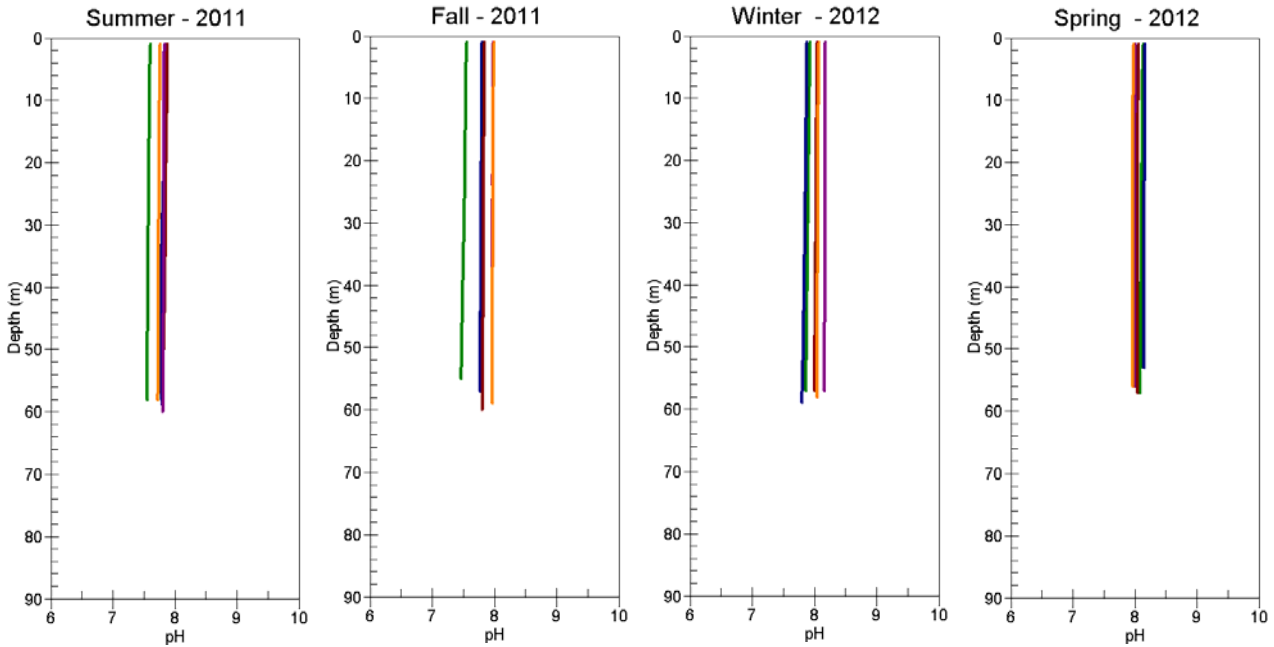
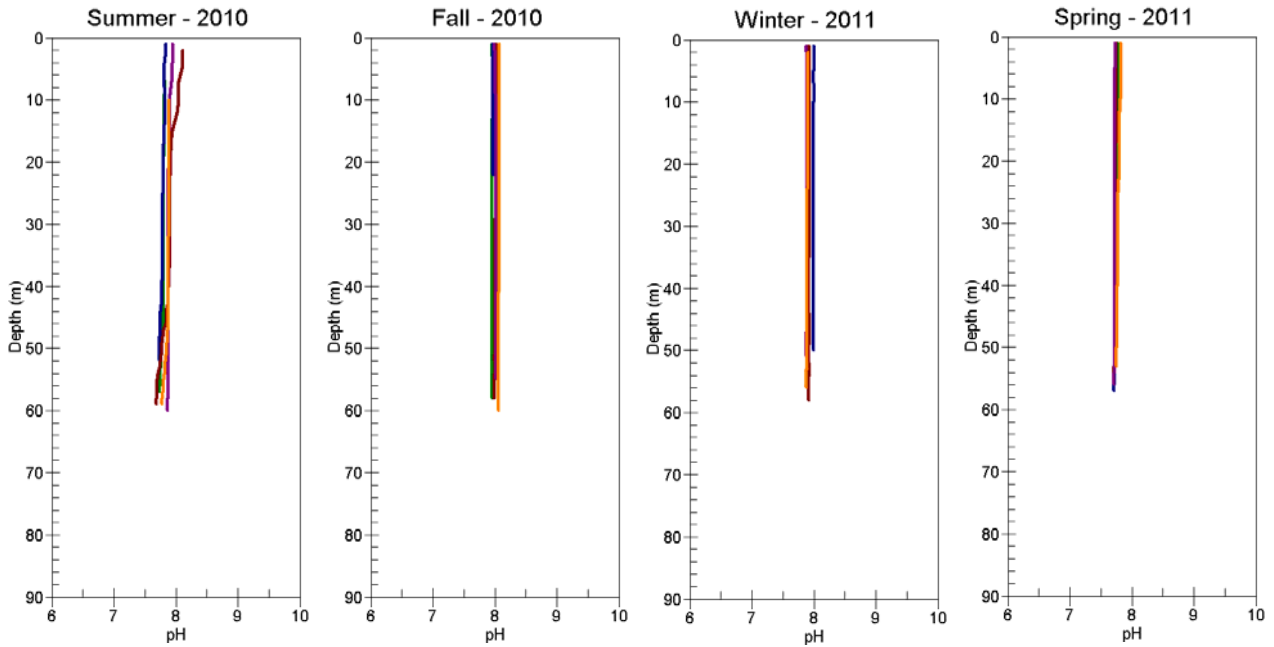
FIG No

P-12

REV



A SHEET	SCALE	NTS	CUSTOMER	 WorleyParsons resources & energy
			 <i>Making a difference...together</i>	
Date:				CAPITAL REGIONAL DISTRICT WATER QUALITY TECHNICAL VOLUME WATER COLUMN PROFILES STATION MP4 - pH
Drawn by:				
Edited by:				
App'd by:			WORLEYPARSONS PROJECT No. FIG No	
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- Week 1 — Week 4
- Week 2 — Week 5
- Week 3

A SHEET | SCALE | NTS

CUSTOMER



WorleyParsons
resources & energy

CAPITAL REGIONAL DISTRICT
WATER QUALITY TECHNICAL VOLUME
WATER COLUMN PROFILES
STATION MP5 - pH

Date:

Drawn by:

Edited by:

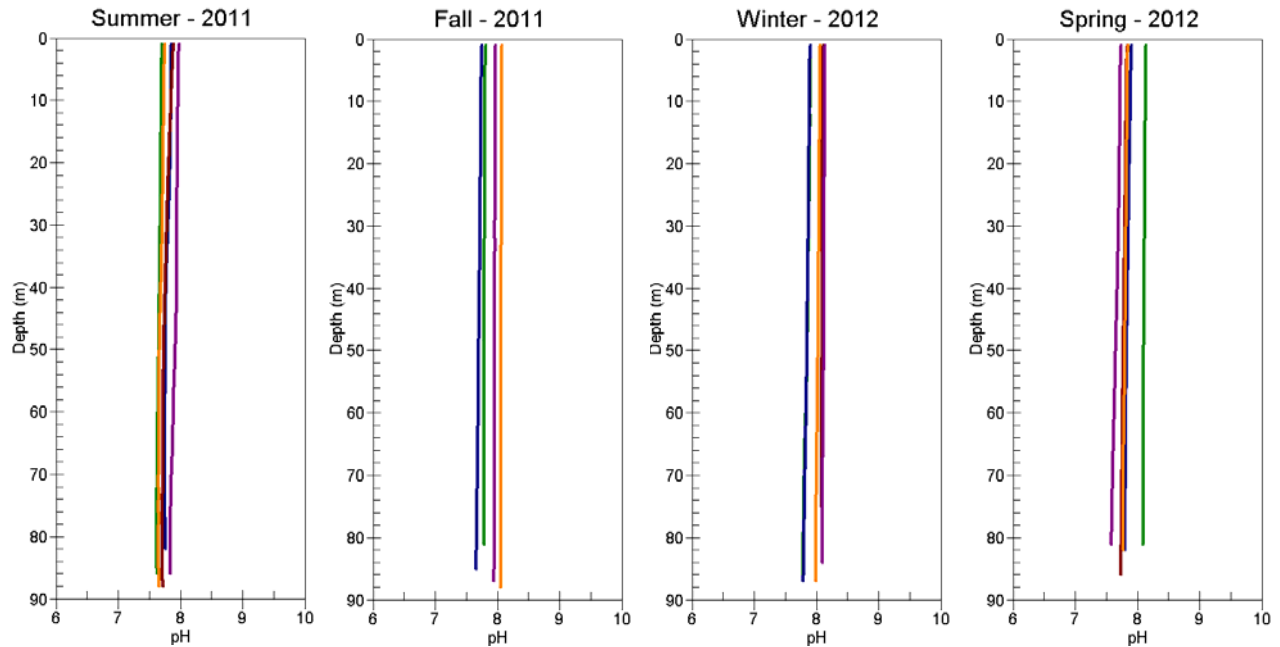
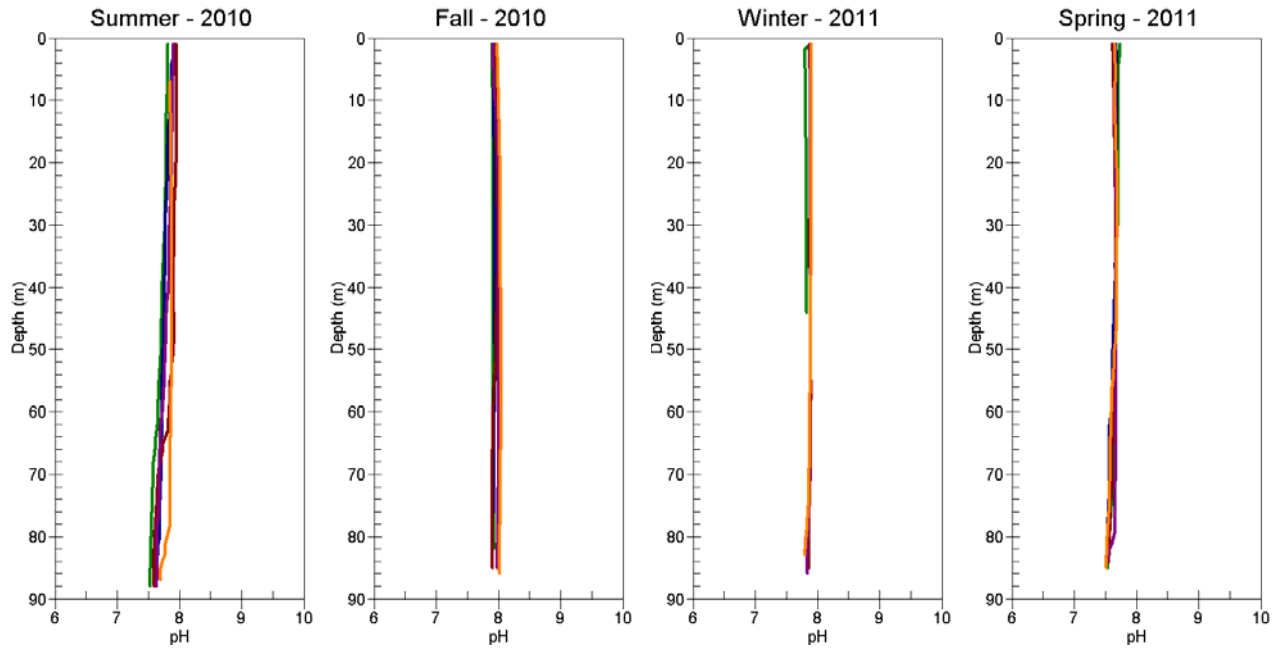
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WORLEYPARSONS PROJECT No.

FIG No

REV



- Week 1 — Week 4
- Week 2 — Week 5
- Week 3

A SHEET | SCALE | NTS

CUSTOMER



WorleyParsons
resources & energy

CAPITAL REGIONAL DISTRICT
PRE-DISCHARGE MONITORING PROGRAM
WATER COLUMN PROFILES
STATION MP6 - pH

Date:
Drawn by:
Edited by:
App'd by:

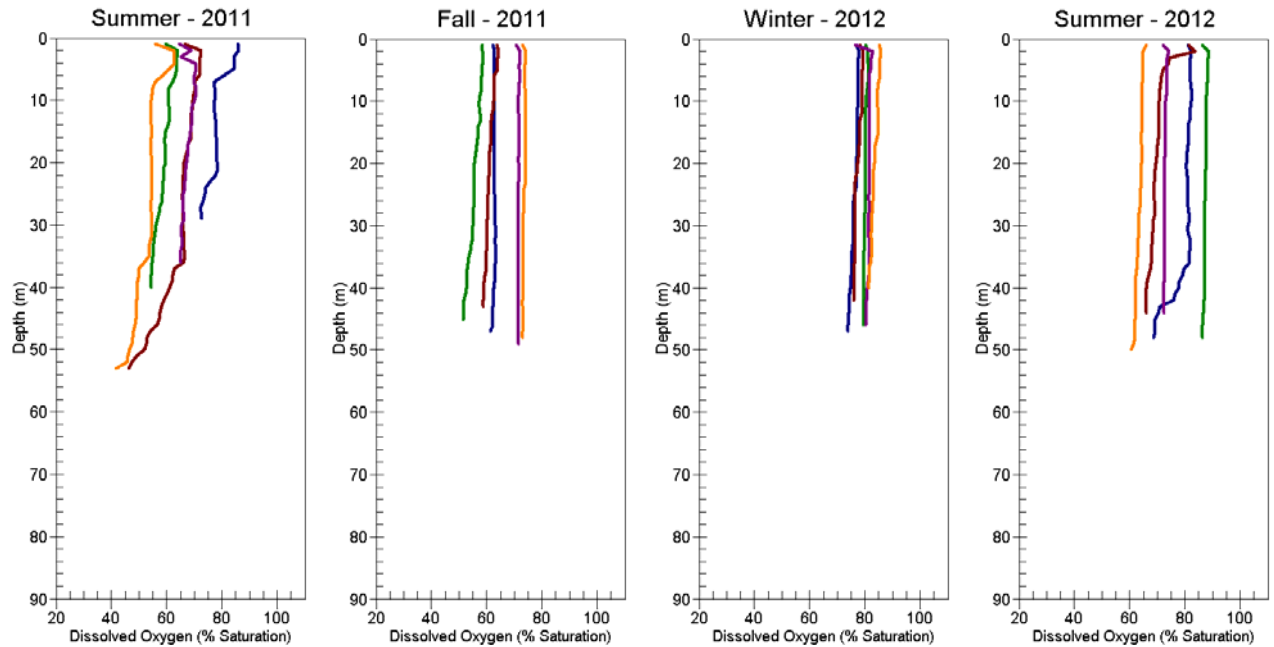
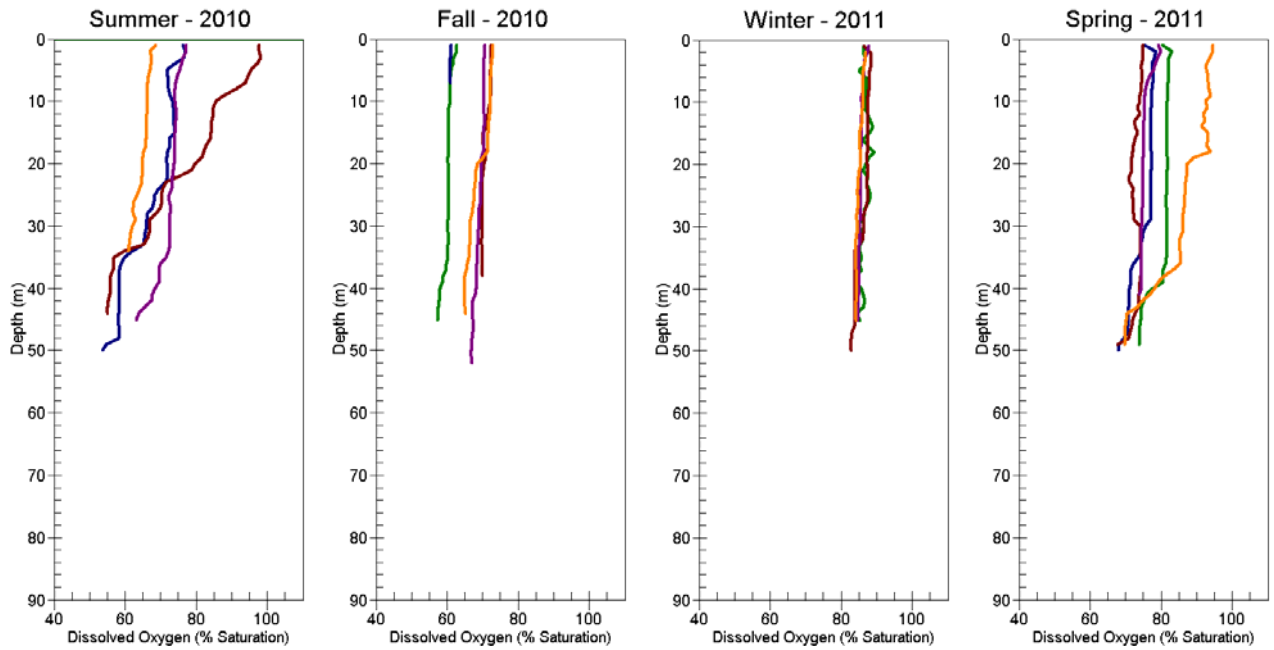
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WORLEYPARSONS PROJECT No.

FIG No

P-15

REV



- Week 1 — Week 4
- Week 2 — Week 5
- Week 3

A SHEET | SCALE | NTS

CUSTOMER



WorleyParsons
resources & energy

Date:
Drawn by:
Edited by:
App'd by:

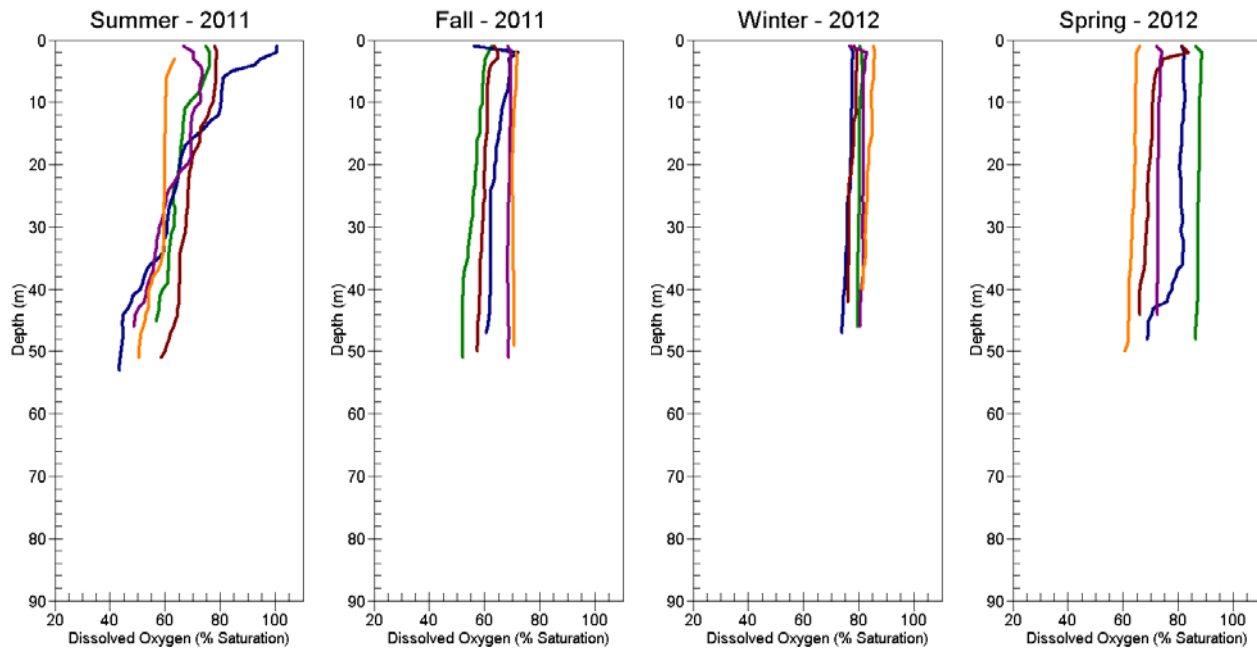
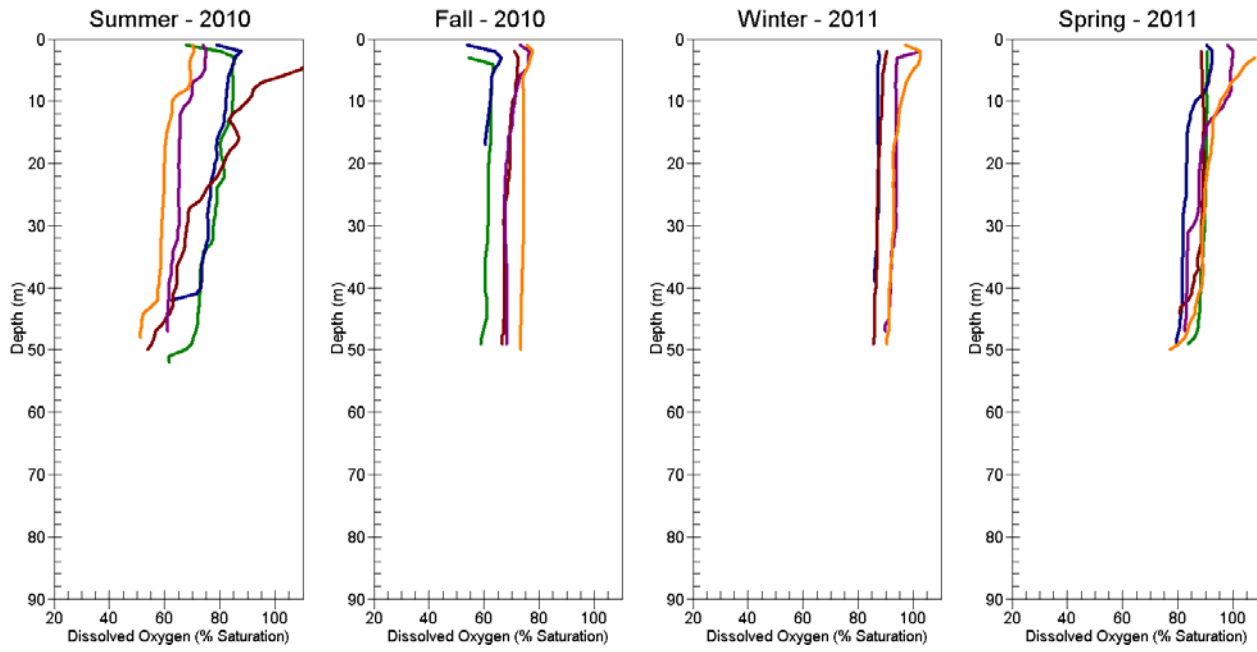
CAPITAL REGIONAL DISTRICT
WATER QUALITY TECHNICAL VOLUME
WATER COLUMN PROFILES
STATION AH2 - DISSOLVED OXYGEN (% SATURATION)

"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."

WORLEYPARSONS PROJECT No.

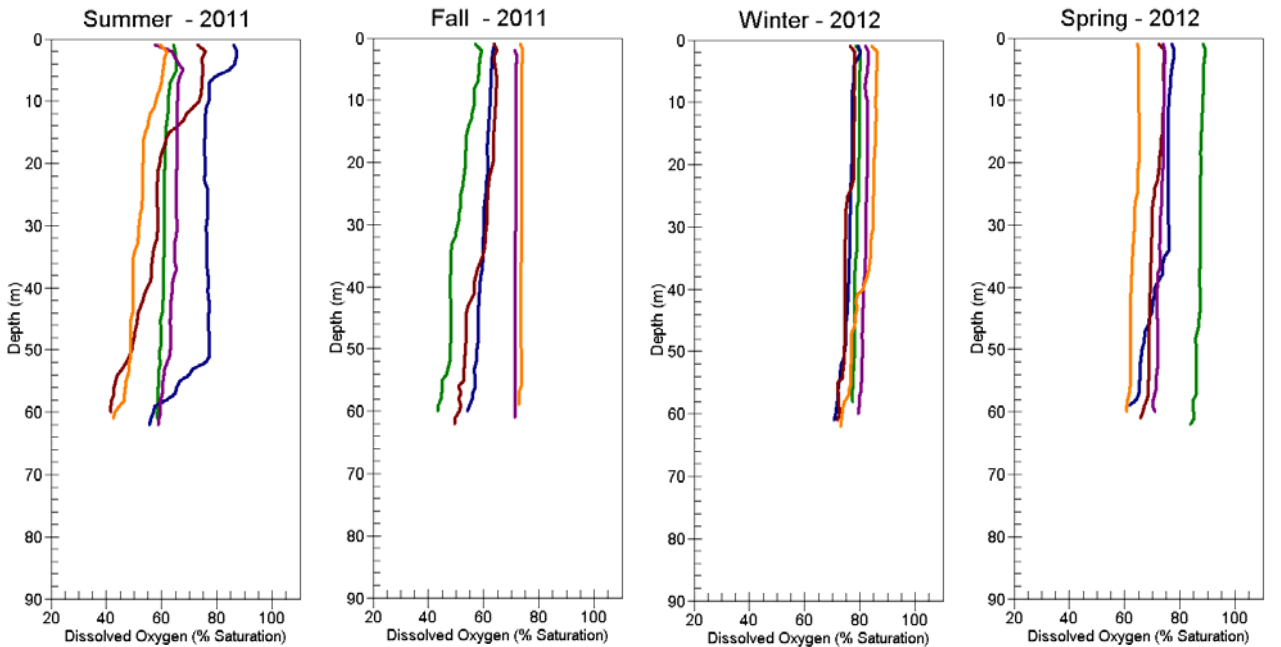
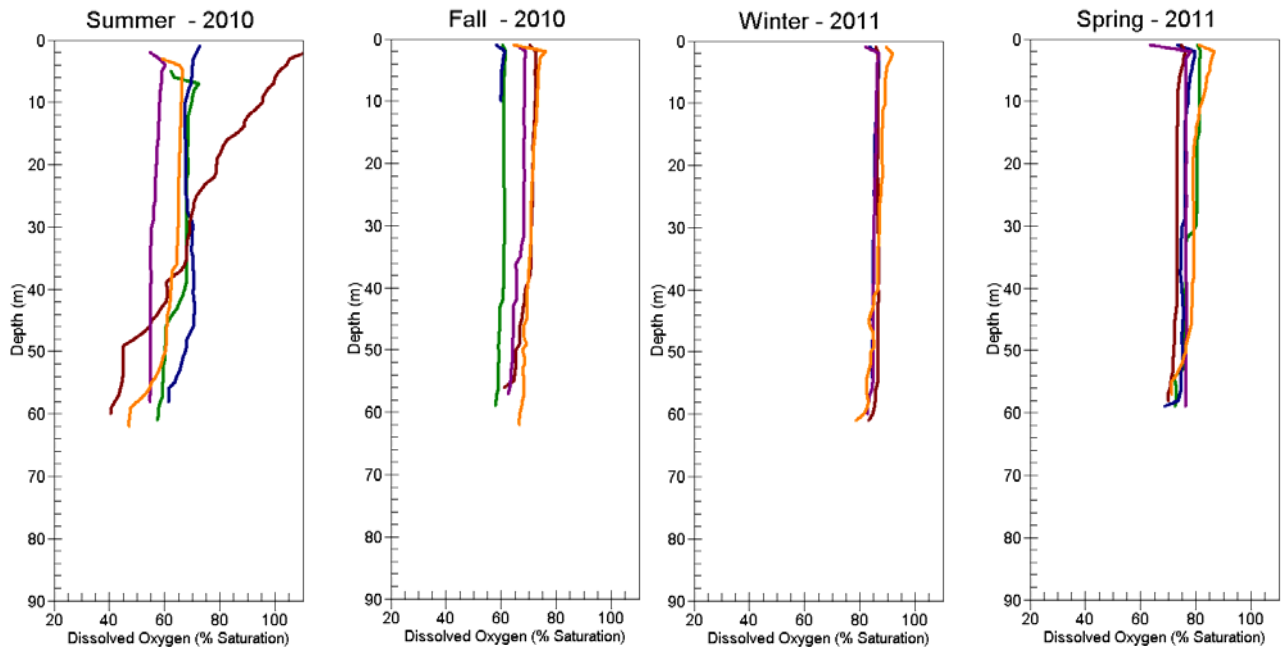
FIG No

REV






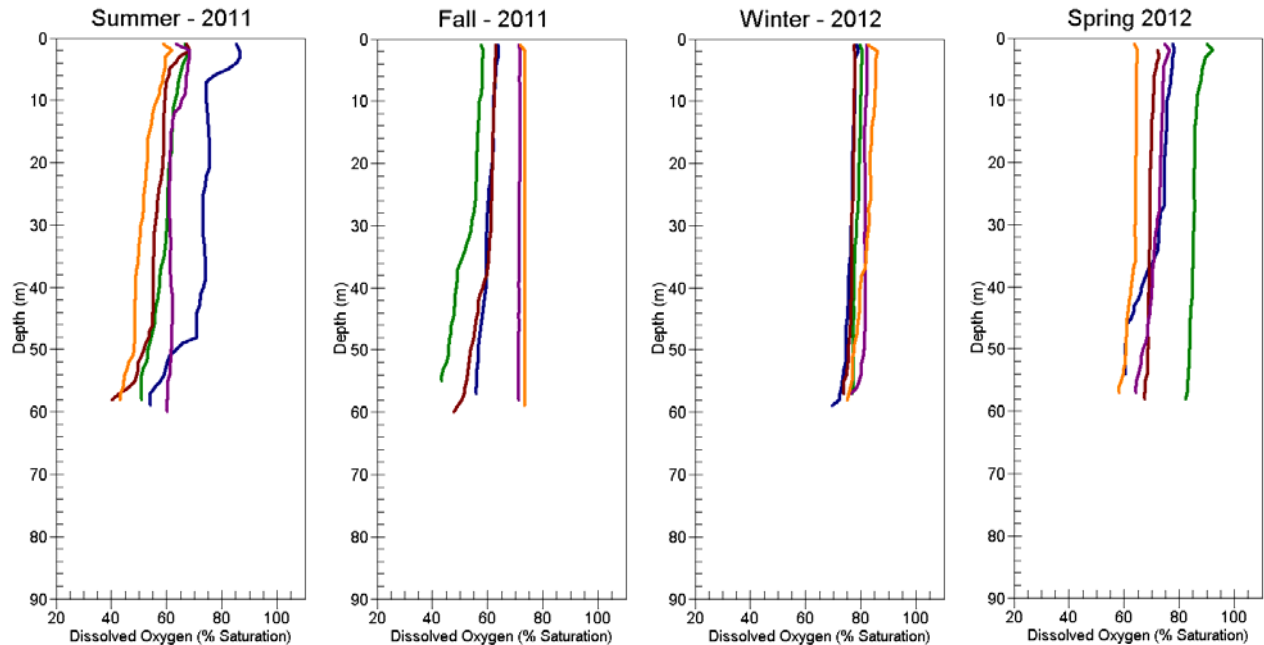
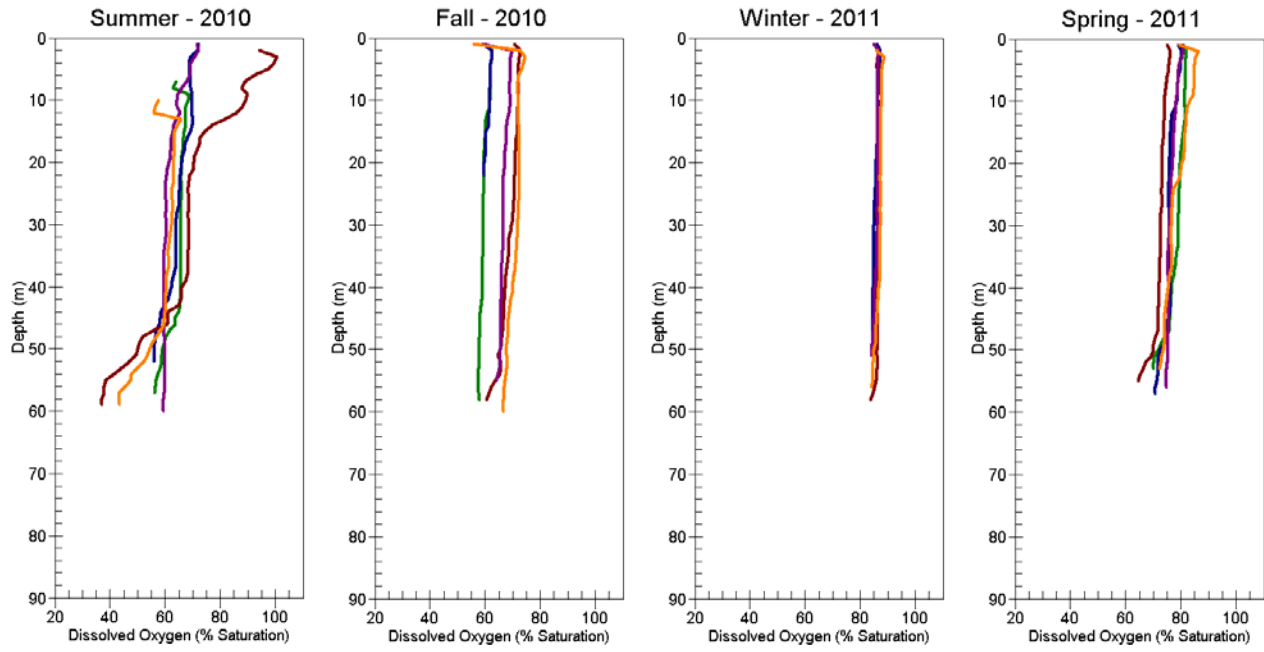
- Week 1
- Week 2
- Week 3
- Week 4
- Week 5

A SHEET		SCALE	NTS	CUSTOMER						
				<p>CAPITAL REGIONAL DISTRICT WATER QUALITY TECHNICAL VOLUME WATER COLUMN PROFILES STATION FC7 - DISSOLVED OXYGEN (% SATURATION)</p>						
						Date:	<p>WORLEYPARSONS PROJECT No.</p>	<p>FIG No</p>	<p>REV</p>	
						Drawn by:				<p>P-17</p>
						Edited by:				
App'd by:	<p>"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."</p>									






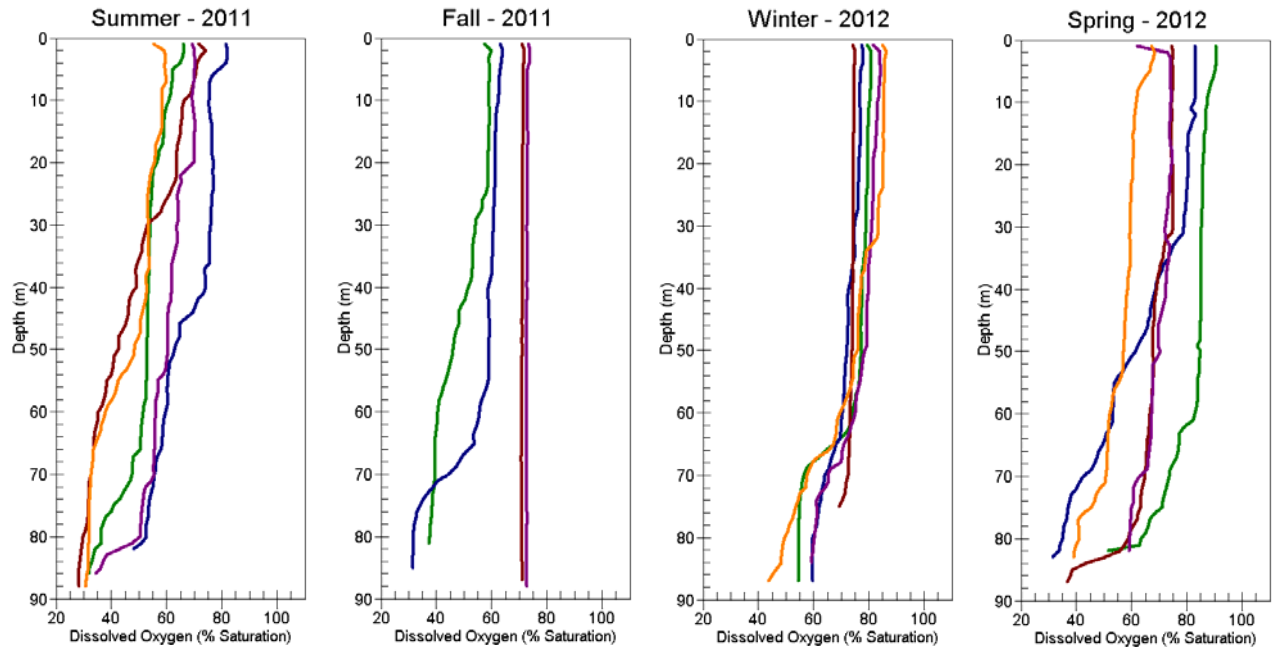
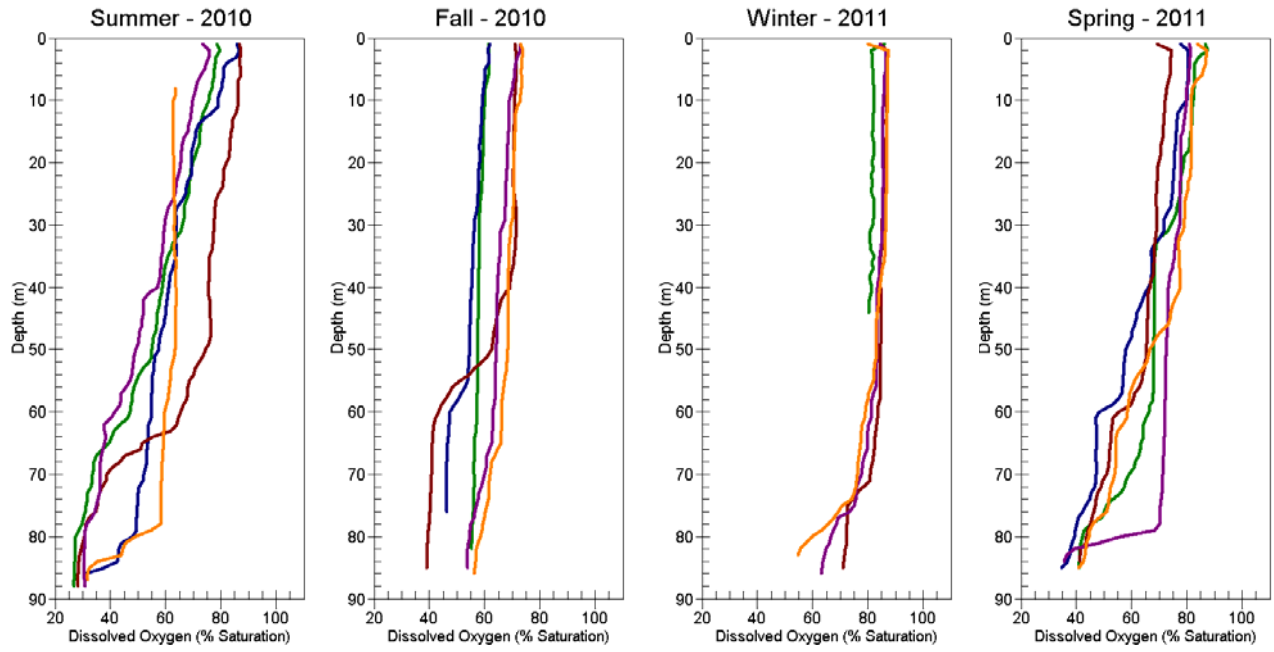
— Week 1 — Week 4
— Week 2 — Week 5
— Week 3

A SHEET	SCALE	NTS	CUSTOMER	 WorleyParsons resources & energy	
			 <i>Making a difference...together</i>		
Date:				CAPITAL REGIONAL DISTRICT WATER QUALITY TECHNICAL VOLUME WATER COLUMN PROFILES STATION MP4 - DISSOLVED OXYGEN (% SATURATION)	
Drawn by:					
Edited by:					
App'd by:			WORLEYPARSONS PROJECT No.	FIG No	REV
"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."				P-18	






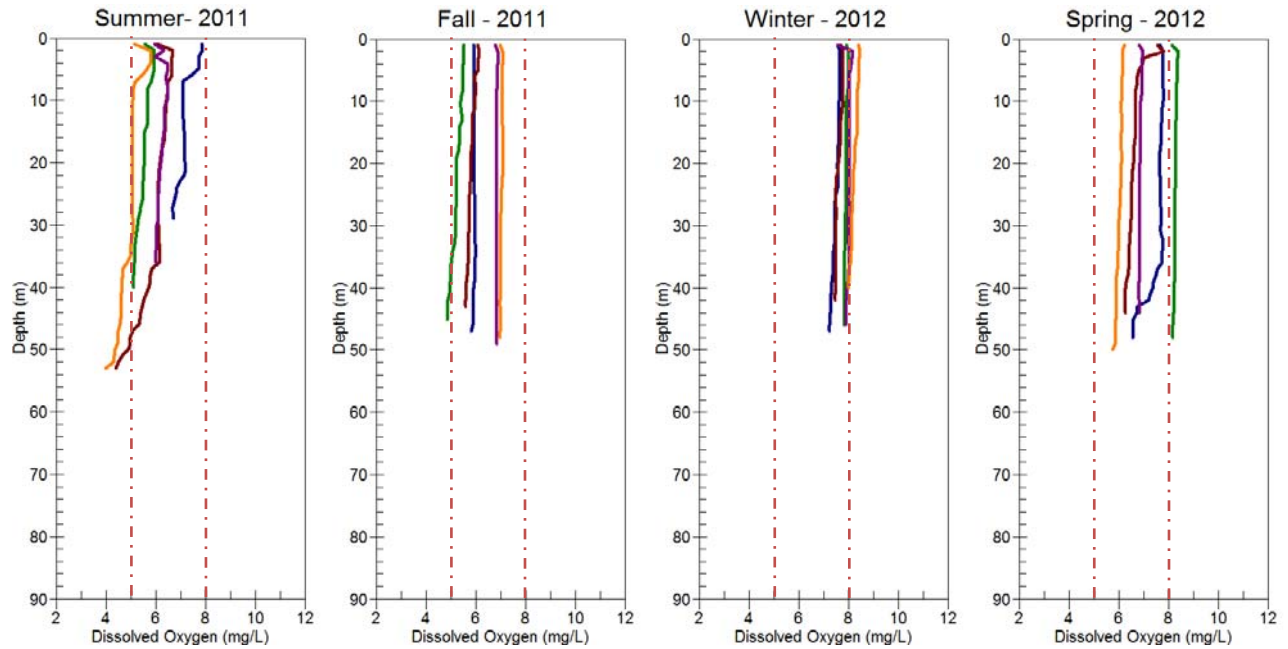
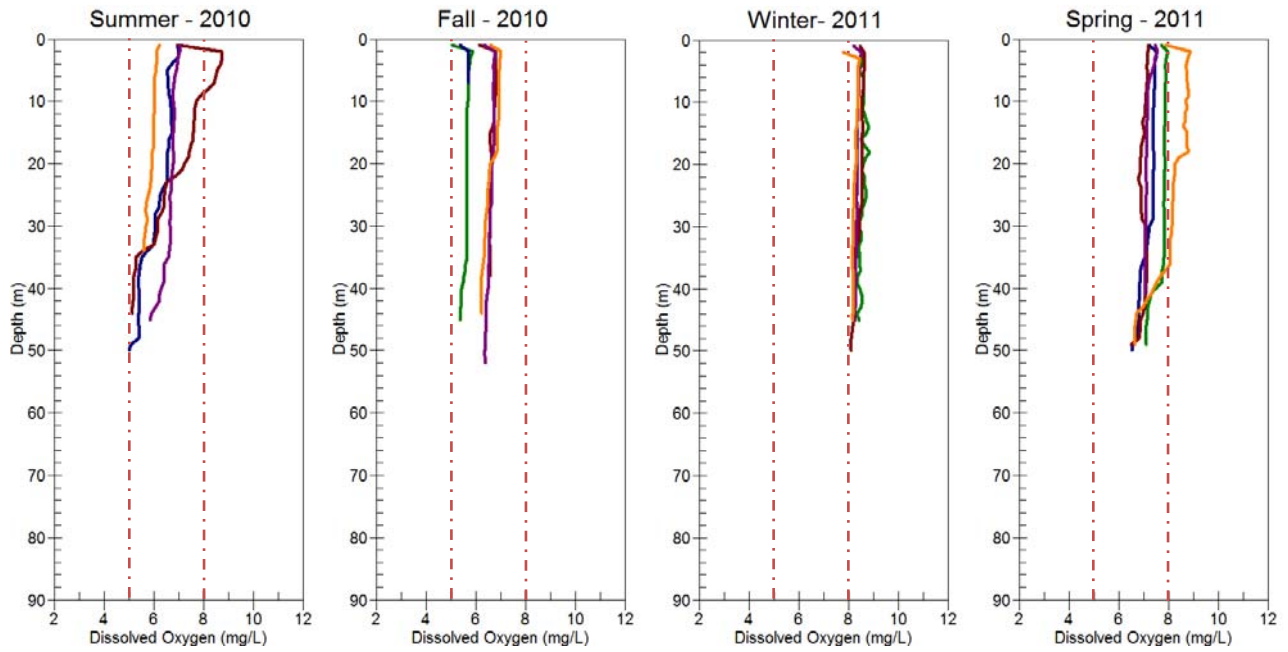
- Week 1
- Week 2
- Week 3
- Week 4
- Week 5

A SHEET	SCALE	NTS	CUSTOMER	 WorleyParsons resources & energy
			 <i>Making a difference...together</i>	
Date:				CAPITAL REGIONAL DISTRICT WATER QUALITY TECHNICAL VOLUME WATER COLUMN PROFILES STATION MP5 - DISSOLVED OXYGEN (% SATURATION)
Drawn by:				
Edited by:				
App'd by:			WORLEYPARSONS PROJECT No.	
<i>"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."</i>				FIG No P-19
				REV



- Week 1
- Week 2
- Week 3
- Week 4
- Week 5

A SHEET	SCALE	NTS	CUSTOMER	 WorleyParsons resources & energy	
			 <i>Making a difference...together</i>		
Date:				CAPITAL REGIONAL DISTRICT PRE-DISCHARGE MONITORING PROGRAM WATER COLUMN PROFILES STATION MP6 - DISSOLVED OXYGEN (% SATURATION)	
Drawn by:					
Edited by:					
App'd by:			WORLEYPARSONS PROJECT No.	FIG No	REV
<i>"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."</i>				P-20	



- Week 1 — Week 4
- Week 2 — Week 5
- Week 3

A SHEET | SCALE | NTS

CUSTOMER



WorleyParsons
resources & energy

CAPITAL REGIONAL DISTRICT
WATER QUALITY TECHNICAL VOLUME
WATER COLUMN PROFILES
STATION AH2 - DISSOLVED OXYGEN (mg/L)

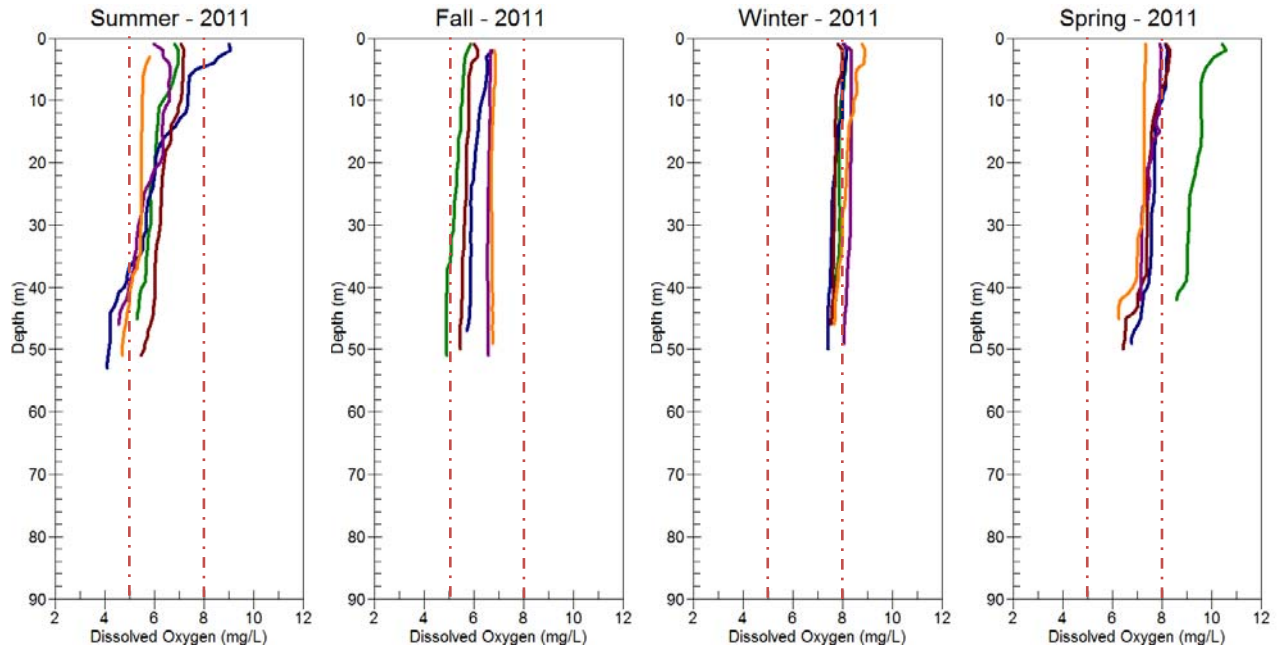
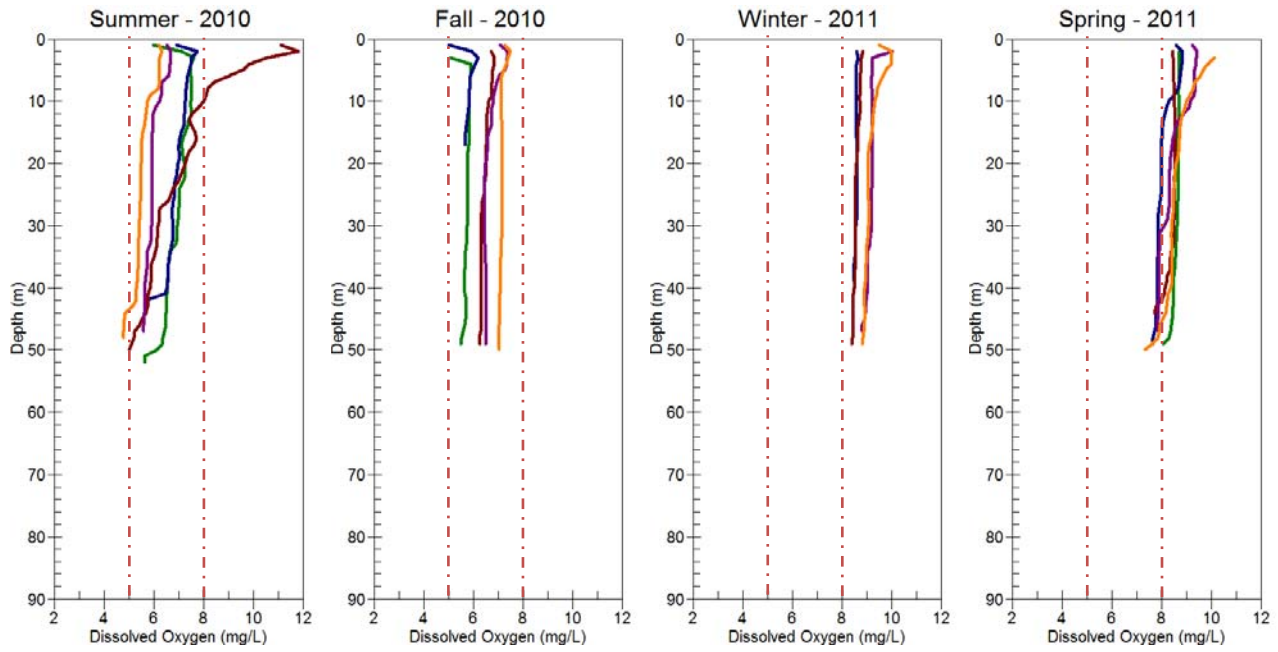
Date:
Drawn by:
Edited by:
App'd by:

"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."




WORLEYPARSONS PROJECT No.

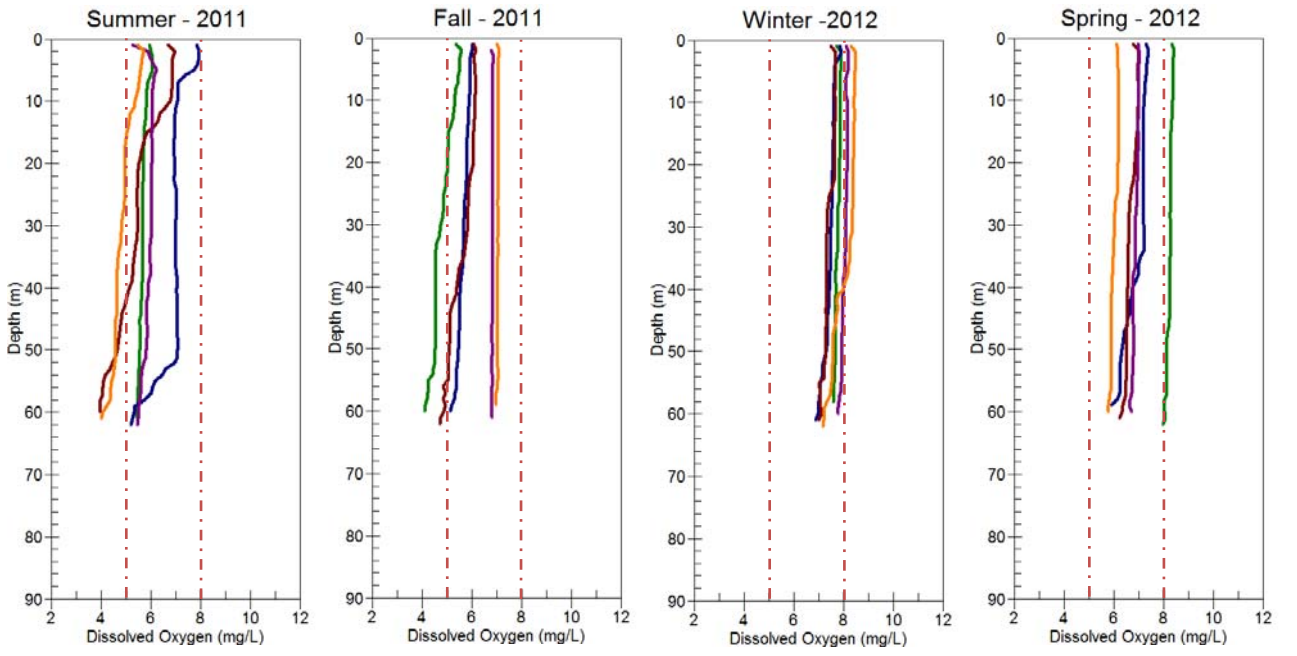
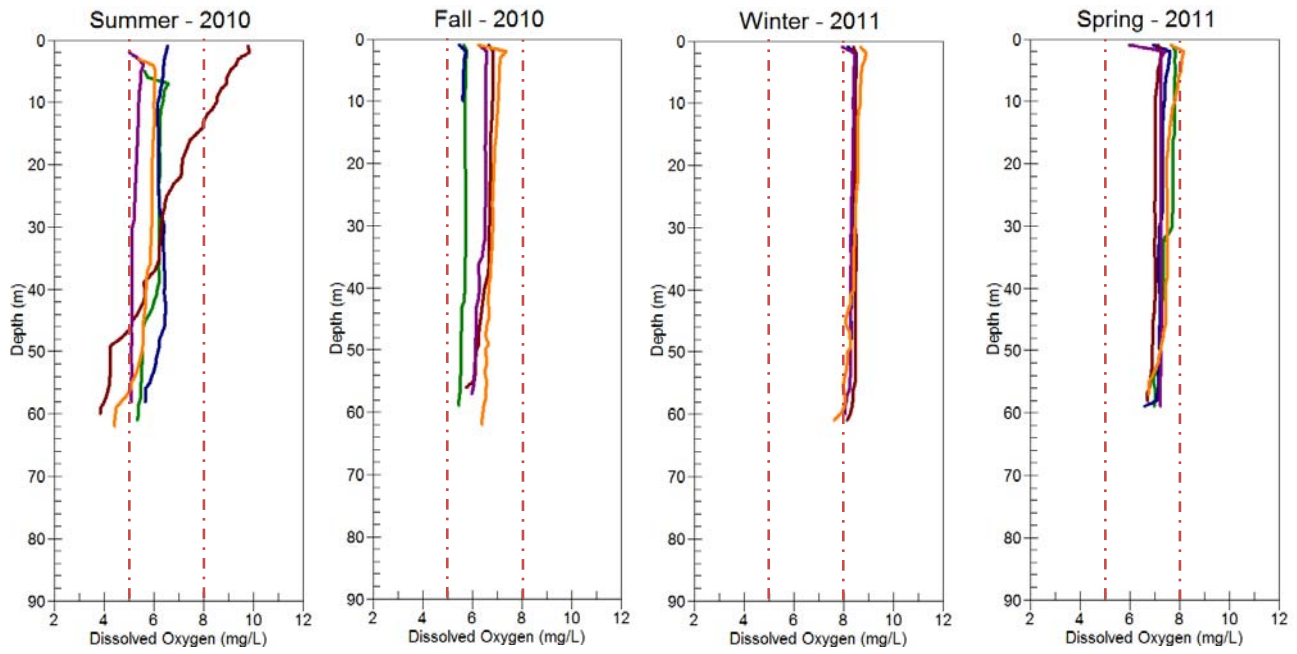
FIG No

REV






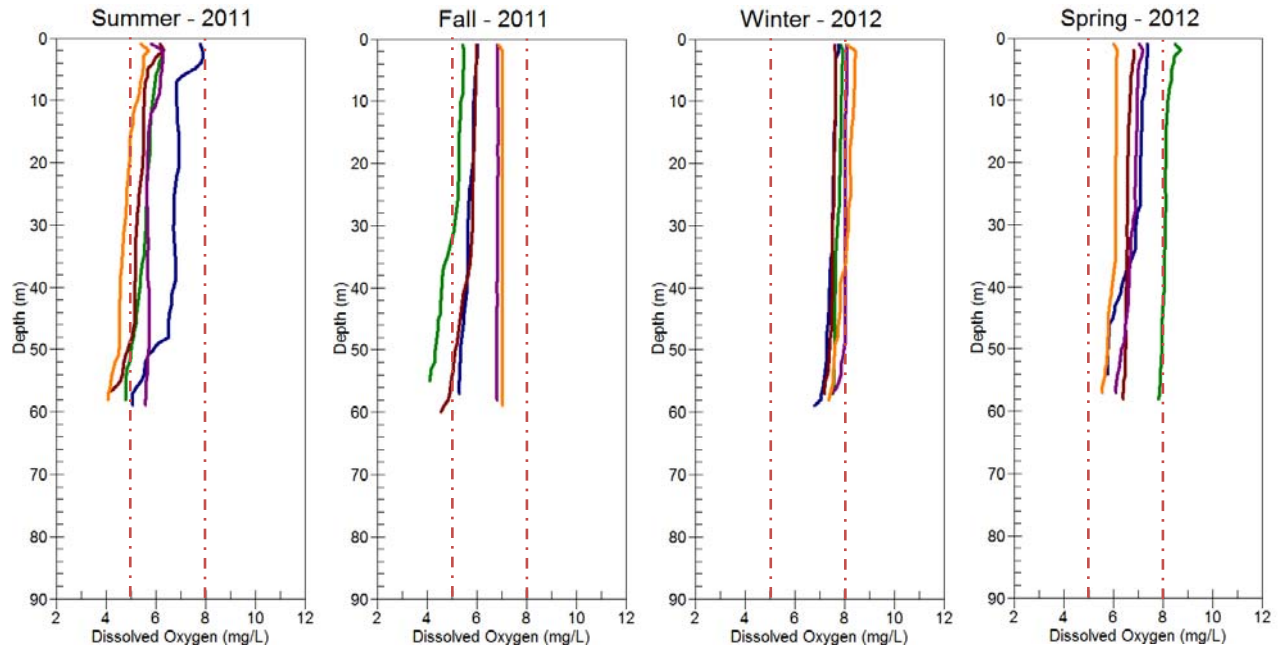
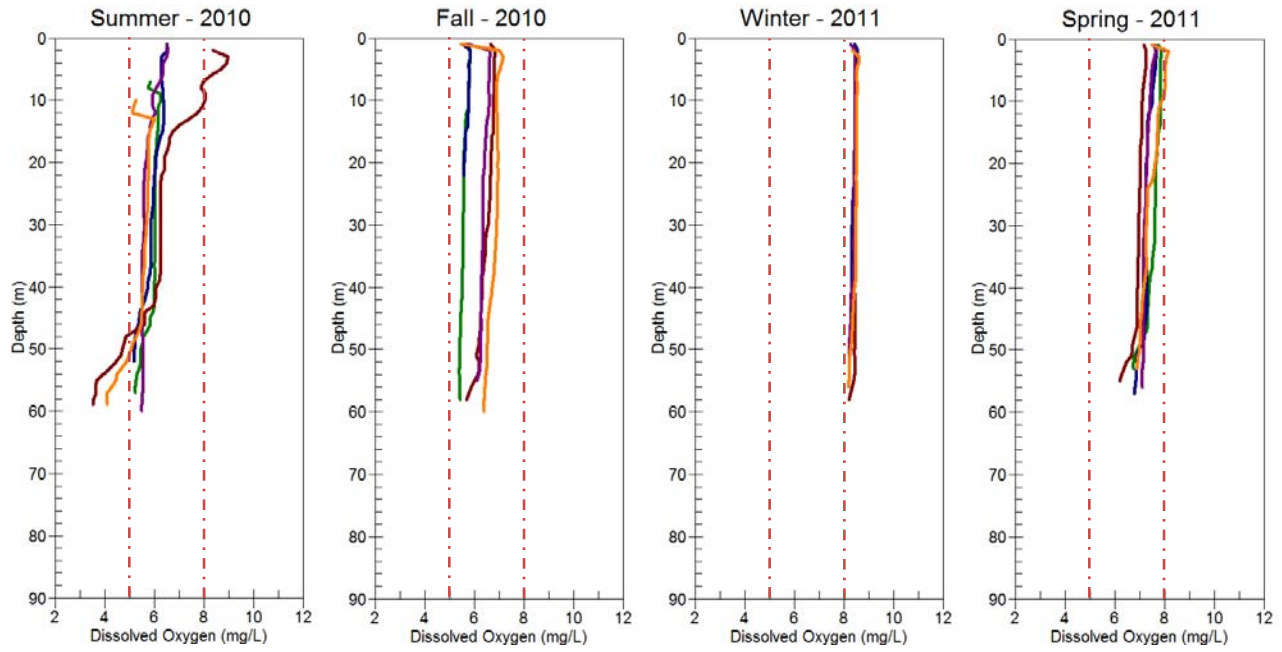
- Week 1
- Week 2
- Week 3
- Week 4
- Week 5

A SHEET	SCALE	NTS	CUSTOMER	 WorleyParsons resources & energy
			 <i>Making a difference...together</i>	
Date:				CAPITAL REGIONAL DISTRICT WATER QUALITY TECHNICAL VOLUME WATER COLUMN PROFILES STATION FC7 - DISSOLVED OXYGEN (mg/L)
Drawn by:				
Edited by:				
App'd by:			WORLEYPARSONS PROJECT No.	
<i>"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."</i>				FIG No P-22
				REV






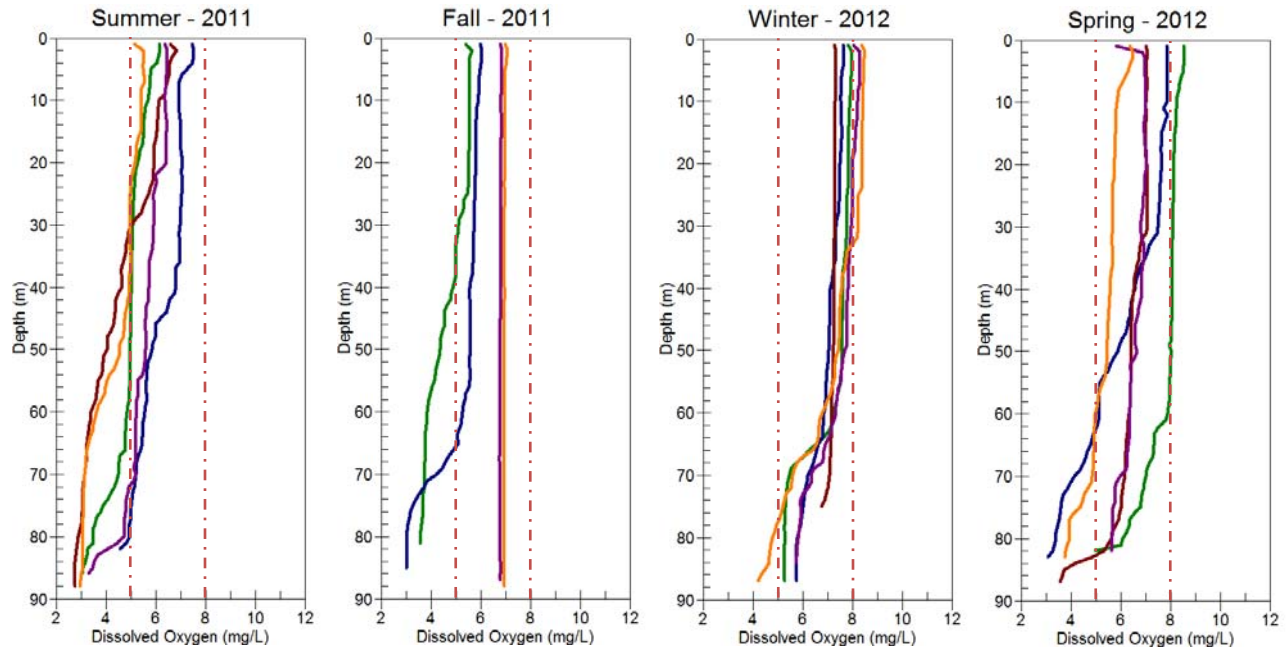
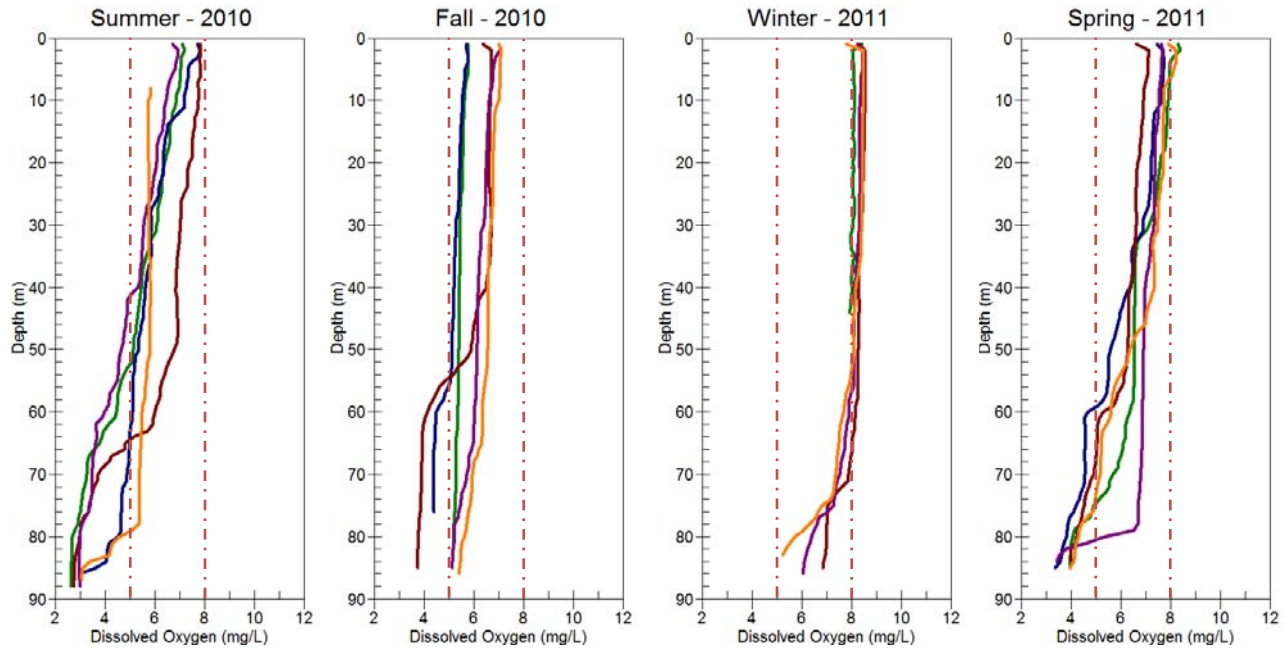
- Week 1
- Week 2
- Week 3
- Week 4
- Week 5

A SHEET	SCALE	NTS	CUSTOMER	 WorleyParsons resources & energy	
 OneWay to zero harm			 CRD <i>Making a difference...together</i>		
Date:			CAPITAL REGIONAL DISTRICT		
Drawn by:			WATER QUALITY TECHNICAL VOLUME		
Edited by:			WATER COLUMN PROFILES		
App'd by:			STATION MP4 - DISSOLVED OXYGEN (mg/L)		
"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."				WORLEYPARSONS PROJECT No.	FIG No
				P-23	REV



- Week 1
- Week 2
- Week 3
- Week 4
- Week 5

A SHEET	SCALE	NTS	CUSTOMER	 WorleyParsons resources & energy
 to zero harm			 <i>Making a difference...together</i>	CAPITAL REGIONAL DISTRICT WATER QUALITY TECHNICAL VOLUME WATER COLUMN PROFILES STATION MP5 - DISSOLVED OXYGEN (mg/L)
Date:			WORLEYPARSONS PROJECT No. FIG No REV	
Drawn by:				
Edited by:				
App'd by:			P-24	REV
<small>"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."</small>				



- Week 1 — Week 4
- Week 2 — Week 5
- Week 3

A SHEET | SCALE | NTS

CUSTOMER



WorleyParsons
resources & energy

Date:
Drawn by:
Edited by:
App'd by:

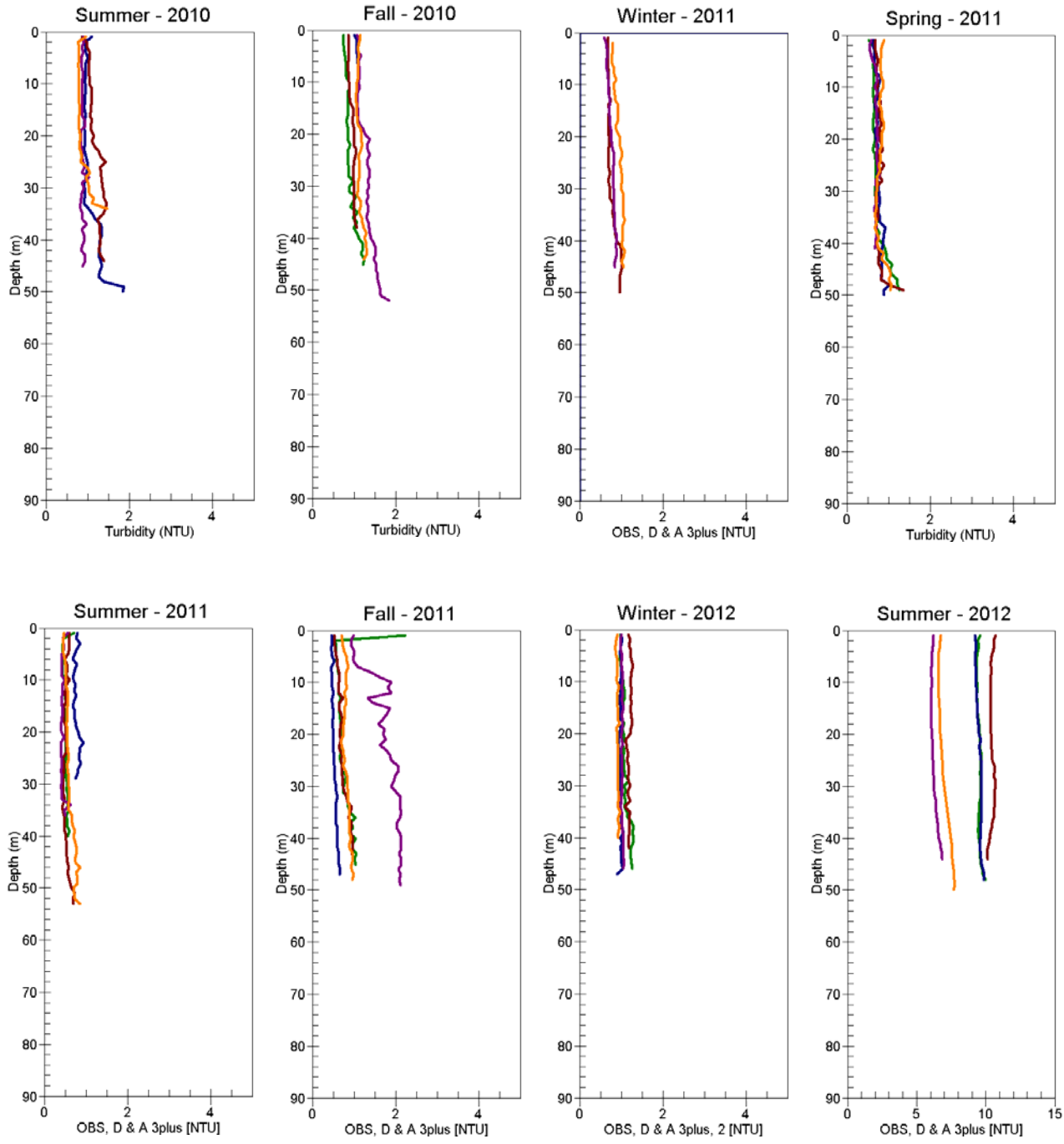
CAPITAL REGIONAL DISTRICT
PRE-DISCHARGE MONITORING PROGRAM
WATER COLUMN PROFILES
STATION MP6 - DISSOLVED OXYGEN (mg/L)

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WORLEYPARSONS PROJECT No.

FIG No

REV



A SHEET | SCALE | NTS

CUSTOMER



WorleyParsons
resources & energy

CAPITAL REGIONAL DISTRICT
WATER QUALITY TECHNICAL VOLUME
WATER COLUMN PROFILES
STATION AH2 - TURBIDITY (NTU)

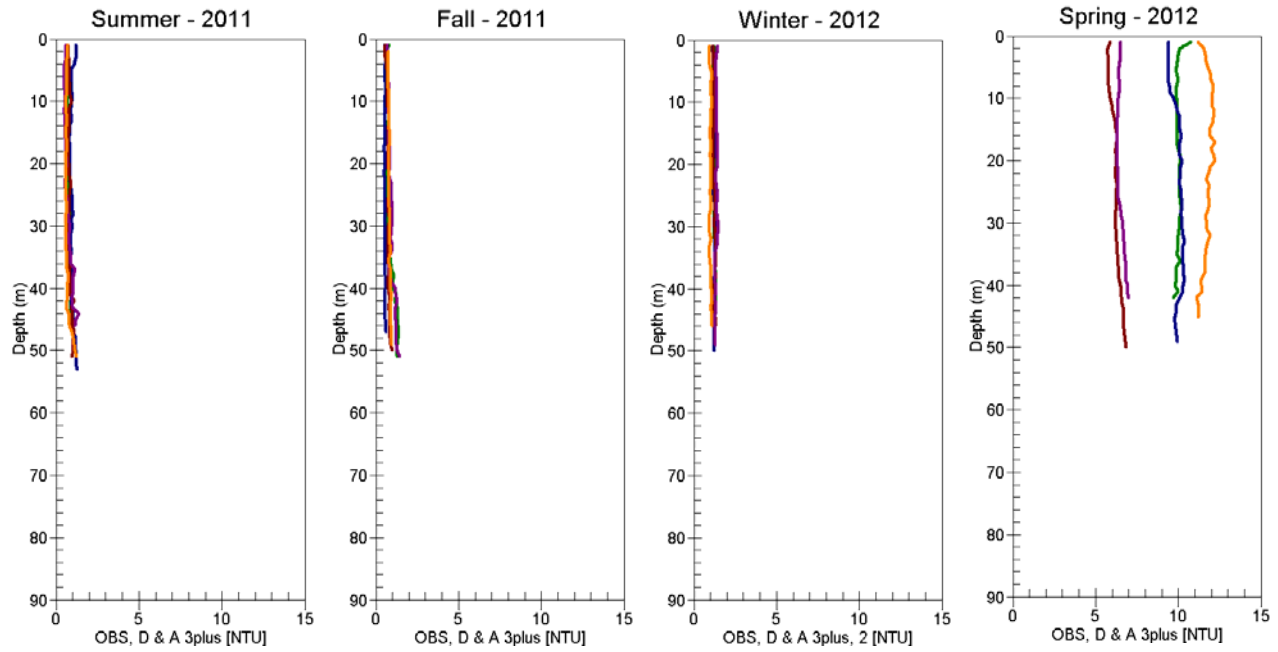
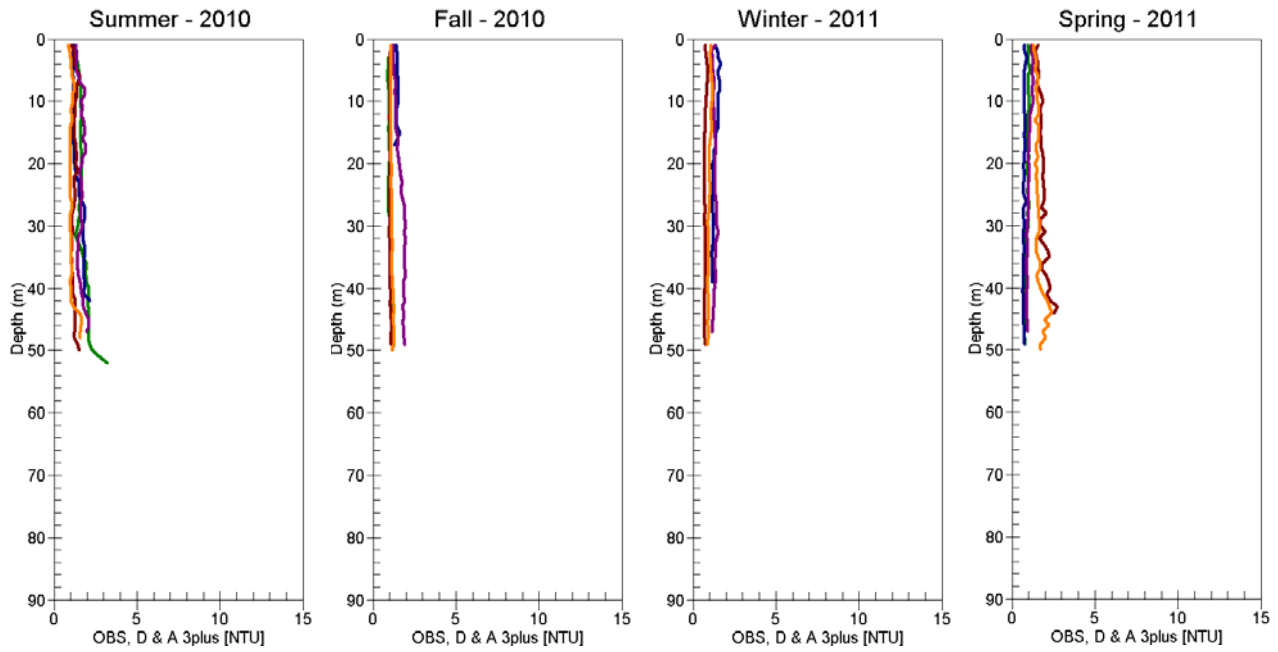
Date:
Drawn by:
Edited by:
App'd by:

"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."




WORLEYPARSONS PROJECT No.

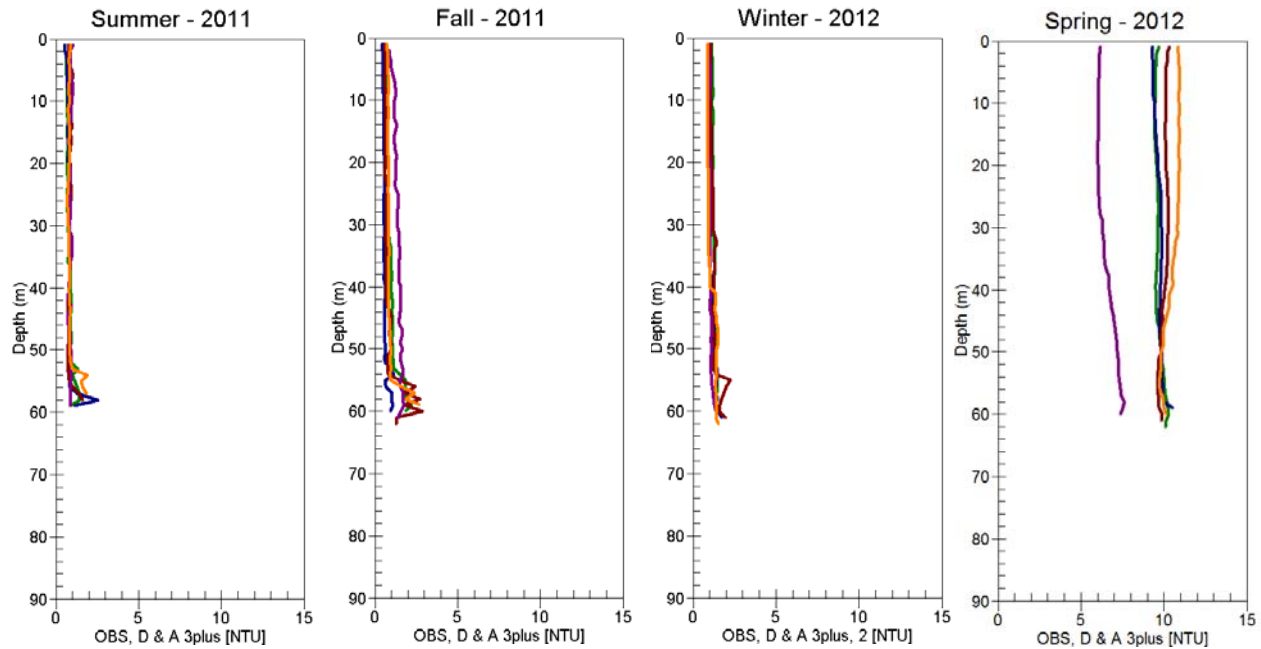
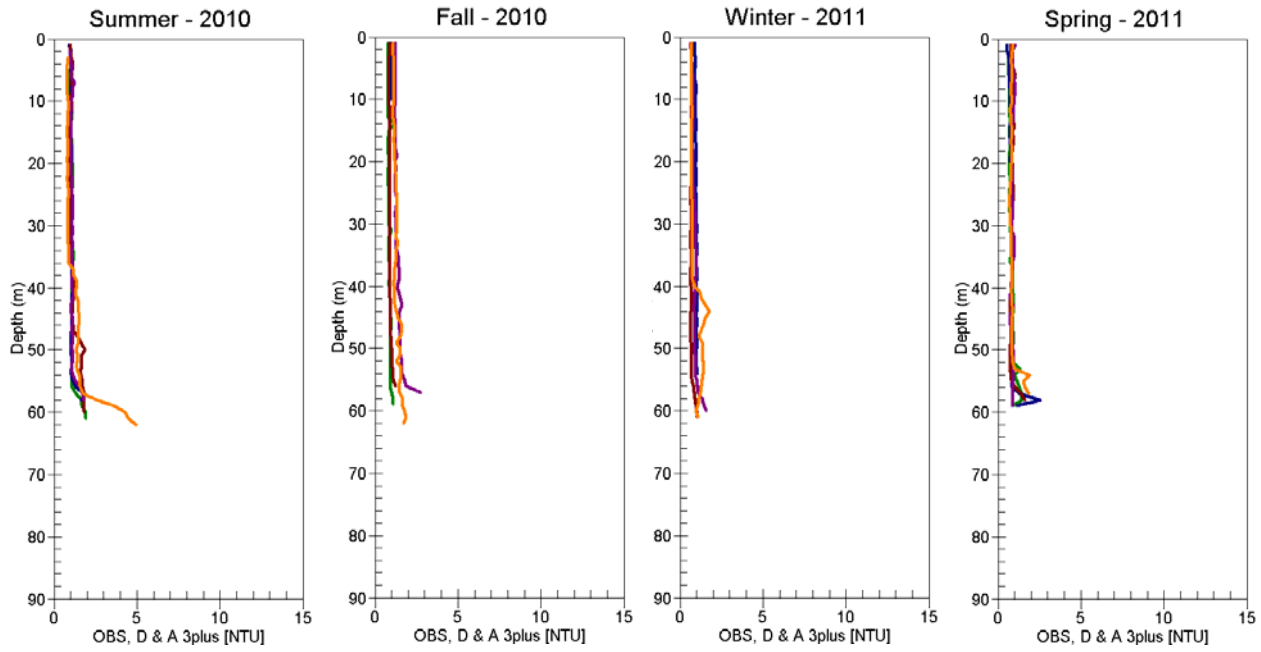
FIG No

REV






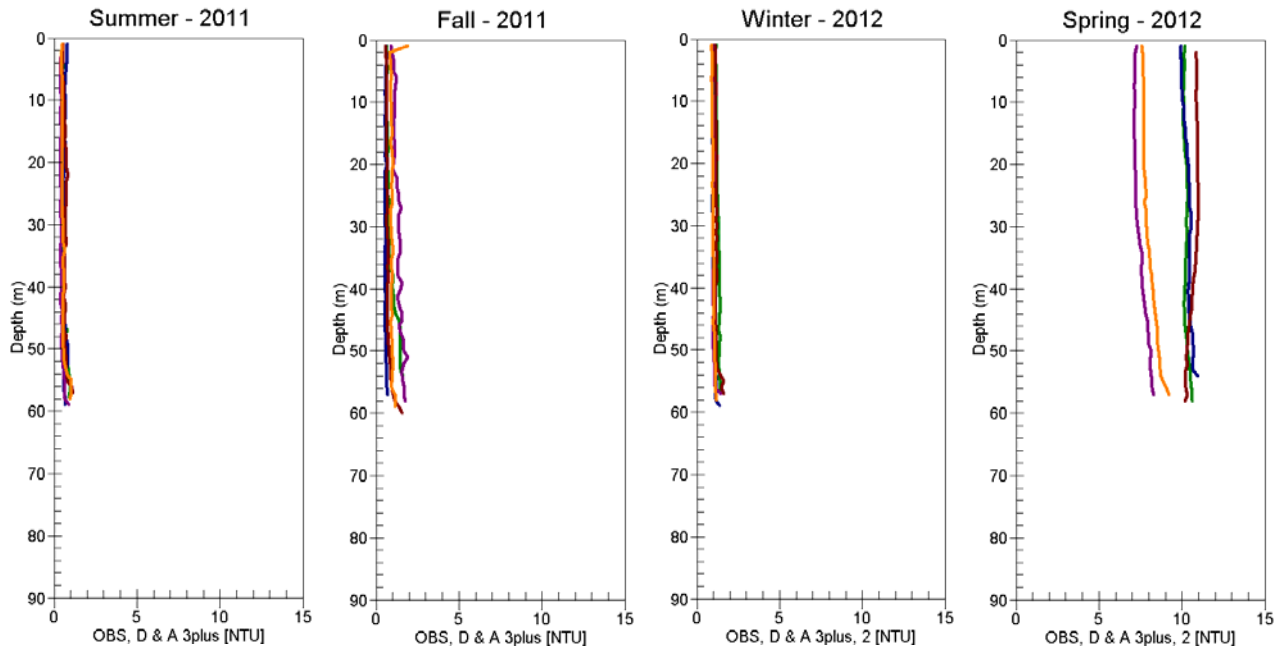
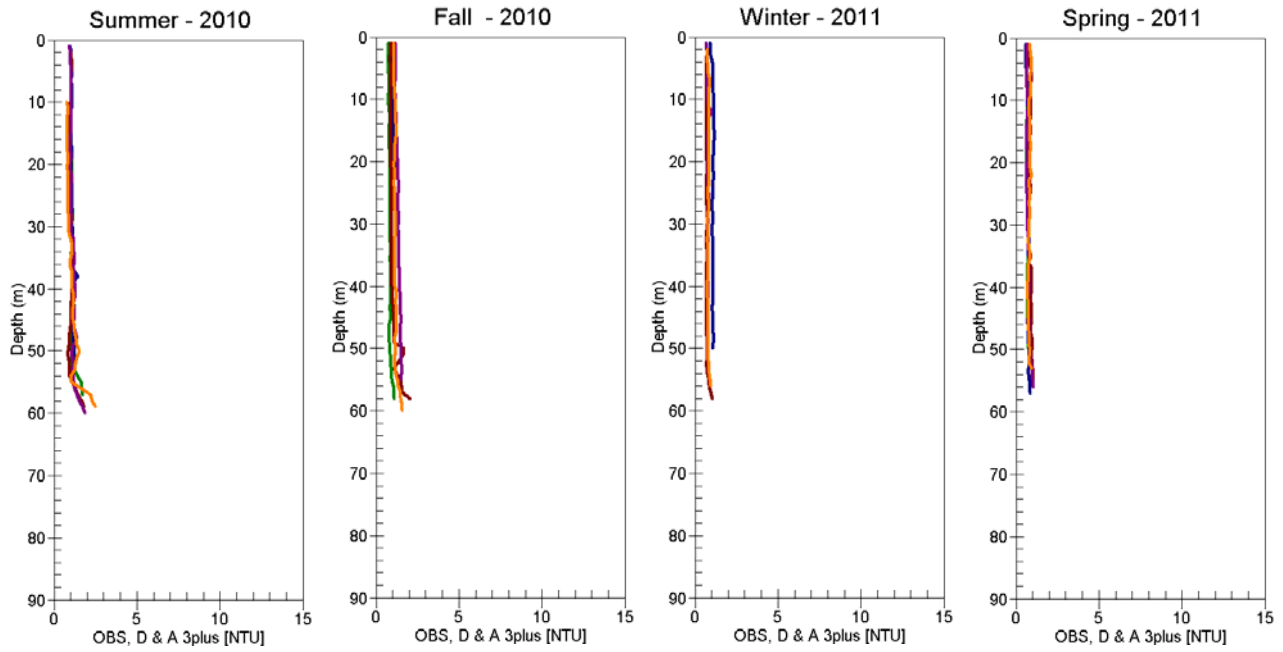
- Week 1
- Week 2
- Week 3
- Week 4
- Week 5

A SHEET	SCALE	NTS	CUSTOMER	 WorleyParsons resources & energy
			 <i>Making a difference...together</i>	CAPITAL REGIONAL DISTRICT WATER QUALITY TECHNICAL VOLUME WATER COLUMN PROFILES STATION FC7 - TURBIDITY (NTU)
Date:			WORLEYPARSONS PROJECT No. FIG No REV	
Drawn by:				
Edited by:				
App'd by:			P-27	REV
<small>"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."</small>				






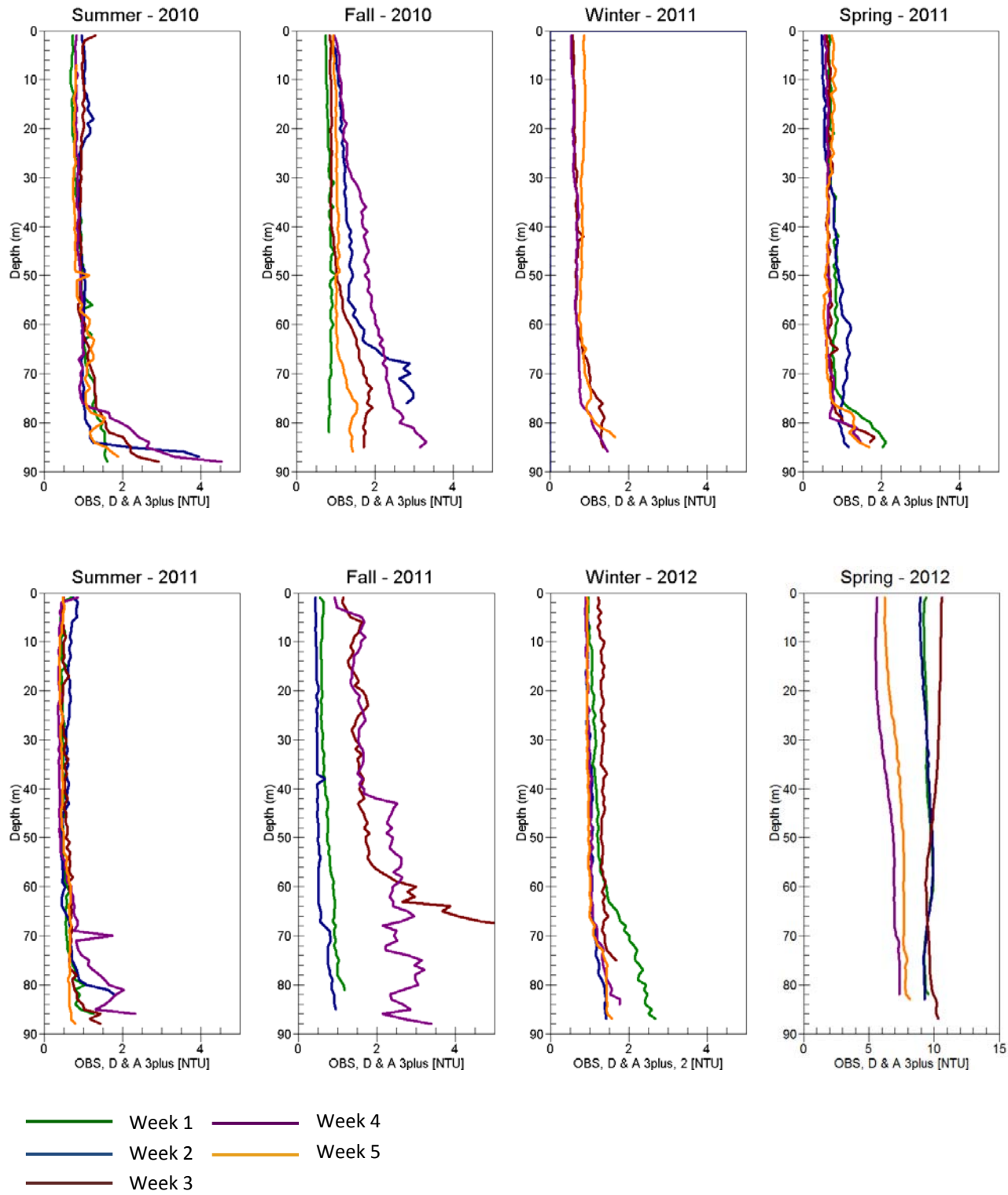
- Week 1
- Week 2
- Week 3
- Week 4
- Week 5




A SHEET	SCALE	NTS	CUSTOMER	 WorleyParsons resources & energy
 to zero harm			 <i>Making a difference...together</i>	CAPITAL REGIONAL DISTRICT WATER QUALITY TECHNICAL VOLUME WATER COLUMN PROFILES STATION MP4 - TURBIDITY (NTU)
Date:			WORLEYPARSONS PROJECT No. FIG No REV	
Drawn by:				
Edited by:				
App'd by:			P-28	REV
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- Week 1
- Week 2
- Week 3
- Week 4
- Week 5

A SHEET	SCALE	NTS	CUSTOMER	 WorleyParsons resources & energy	
			 <i>Making a difference...together</i>		
Date:				CAPITAL REGIONAL DISTRICT WATER QUALITY TECHNICAL VOLUME WATER COLUMN PROFILES STATION MP5 - TURBIDITY (NTU)	
Drawn by:					
Edited by:					
App'd by:			WORLEYPARSONS PROJECT No.	FIG No	REV
<i>"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."</i>				P-29	



A SHEET	SCALE	NTS	CUSTOMER	 WorleyParsons resources & energy
			 <i>Making a difference...together</i>	
Date:				CAPITAL REGIONAL DISTRICT PRE-DISCHARGE MONITORING PROGRAM WATER COLUMN PROFILES STATION MP6 - TURBIDITY (NTU)
Drawn by:				
Edited by:				
App'd by:			WORLEYPARSONS PROJECT No.	
<small>"This drawing is prepared solely for the use of our customer as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."</small>				FIG No P-30
				REV

Tables



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
BC Ministry of Environment				Recreational - Primary Contact	Median	200	20
				Recreational - Secondary Contact	Median	-	100
Canadian Recreational Guidelines				Recreational - Primary Contact	Geometric Mean	200	35
					Maximum	400	70
Albert Head							
AH-2		26-Jul-2010	09:52	AH2 BOTTOM		32	5
	Summer 2010	28-Jul-2010	10:01	AH2 BOTTOM		24	3
		03-Aug-2010	11:21	AH2 BOTTOM		55	12
		10-Aug-2010	10:06	AH2 BOTTOM		12	3
		17-Aug-2010	10:18	AH2 BOTTOM		3	< 1
					Median	24	3
				90th Percentile	46	9	
				Geometric Mean	17	3	
				Maximum	55	12	
	Fall 2010	02-Nov-2010	11:17	AH2 BOTTOM		15	3
		08-Nov-2010	12:28	AH2 BOTTOM		22	3
		18-Nov-2010	12:43	AH2 BOTTOM		49	23
		24-Nov-2010	10:06	AH2 BOTTOM		9	5
		01-Dec-2010	09:54	AH2 BOTTOM		13	6
				Median	15	5	
				90th Percentile	38	16	
				Geometric Mean	18	6	
				Maximum	49	23	
	Winter 2011	16-Mar-2011	09:59	AH2 BOTTOM		13	4
		22-Mar-2011	10:40	AH2 BOTTOM		12	5
		28-Mar-2011	10:01	AH2 BOTTOM		4	2
		07-Apr-2011	09:53	AH2 BOTTOM		49	18
		12-Apr-2011	09:42	AH2 BOTTOM		16	4
				Median	13	4	
				90th Percentile	36	13	
				Geometric Mean	14	5	
				Maximum	49	18	
	Spring 2011	04-May-2011	09:40	AH2 BOTTOM		41	11
		09-May-2011	09:17	AH2 BOTTOM		20	5
		17-May-2011	08:51	AH2 BOTTOM		44	8
		25-May-2011	08:33	AH2 BOTTOM		99	27
		30-May-2011	08:38	AH2 BOTTOM		79	20
				Median	44	11	
				90th Percentile	91	24	
				Geometric Mean	49	12	
				Maximum	99	27	
	Summer 2011	20-Jul-2011	09:12	AH2 BOTTOM		130	59
		26-Jul-2011	09:51	AH2 BOTTOM		49	23
		02-Aug-2011	09:07	AH2 BOTTOM		10	1
		09-Aug-2011	09:21	AH2 BOTTOM		17	4
		16-Aug-2011	08:35	AH2 BOTTOM		32	4
				Median	32	4	
				90th Percentile	98	45	
				Geometric Mean	32	7	
				Maximum	130	59	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Albert Head							
		31-Oct-2011	10:01	AH2 BOTTOM		12	3
		07-Nov-2011	09:58	AH2 BOTTOM		26	11
	Fall 2011	15-Nov-2011	10:08	AH2 BOTTOM		15	4
		28-Nov-2011	09:48	AH2 BOTTOM		45	15
		30-Nov-2011	09:59	AH2 BOTTOM		57	75
					Median	26	11
					90th Percentile	52	51
					Geometric Mean	26	11
					Maximum	57	75
		08-Feb-2012	10:47	AH2 BOTTOM		140	95
		15-Feb-2012	09:30	AH2 BOTTOM		7	4
	Winter 2012	21-Feb-2012	13:37	AH2 BOTTOM		68	11
		27-Feb-2012	11:25	AH2 BOTTOM		29	8
		04-Mar-2012	10:12	AH2 BOTTOM		30	7
					Median	30	8
					90th Percentile	111	61
					Geometric Mean	36	12
					Maximum	140	95
		15-May-2012	09:19	AH2 BOTTOM		34	16
		22-May-2012	09:22	AH2 BOTTOM		17	4
	Spring 2012	28-May-2012	09:23	AH2 BOTTOM		21	7
		31-May-2012	09:21	AH2 BOTTOM		36	16
		06-Jun-2012	10:32	AH2 BOTTOM		69	14
					Median	34	14
					90th Percentile	56	16
					Geometric Mean	31	10
					Maximum	69	16
		26-Jul-2010	09:59	AH2 MID		16	6
		28-Jul-2010	10:15	AH2 MID		15	4
	Summer 2010	03-Aug-2010	11:40	AH2 MID		16	3
		10-Aug-2010	10:17	AH2 MID		11	< 1
		17-Aug-2010	10:35	AH2 MID		4	1
					Median	15	3
					90th Percentile	16	5
					Geometric Mean	11	2
					Maximum	16	6
		02-Nov-2010	11:25	AH2 MID		23	8
		08-Nov-2010	10:41	AH2 MID		33	17
	Fall 2010	18-Nov-2010	12:57	AH2 MID		21	16
		24-Nov-2010	10:14	AH2 MID		86	37
		01-Dec-2010	10:01	AH2 MID		56	33
					Median	33	17
					90th Percentile	74	35
					Geometric Mean	38	19
					Maximum	86	37

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Albert Head							
		16-Mar-2011	10:30	AH2 MID		12	6
		22-Mar-2011	11:00	AH2 MID		7	1
	Winter 2011	28-Mar-2011	10:21	AH2 MID		17	2
		07-Apr-2011	10:26	AH2 MID		65	12
		12-Apr-2011	09:50	AH2 MID		11	2
					Median	12	2
					90th Percentile	46	10
					Geometric Mean	16	3
					Maximum	65	12
		04-May-2011	09:55	AH2 MID		30	17
		09-May-2011	09:23	AH2 MID		28	5
	Spring 2011	17-May-2011	09:05	AH2 MID		43	15
		25-May-2011	08:42	AH2 MID		42	8
		30-May-2011	08:46	AH2 MID		20	7
					Median	30	8
					90th Percentile	43	16
					Geometric Mean	31	9
					Maximum	43	17
		20-Jul-2011	09:35	AH2 MID		42	14
		26-Jul-2011	10:12	AH2 MID		23	8
	Summer 2011	02-Aug-2011	09:20	AH2 MID		1	2
		09-Aug-2011	09:40	AH2 MID		3	< 1
		16-Aug-2011	08:50	AH2 MID		47	13
					Median	23	8
					90th Percentile	45	14
					Geometric Mean	11	5
					Maximum	47	14
		31-Oct-2011	10:17	AH2 MID		7	3
		07-Nov-2011	10:07	AH2 MID		12	5
	Fall 2011	15-Nov-2011	10:29	AH2 MID		14	3
		28-Nov-2011	09:55	AH2 MID		16	9
		30-Nov-2011	10:09	AH2 MID		92	110
					Median	14	5
					90th Percentile	62	70
					Geometric Mean	18	9
					Maximum	92	110
		08-Feb-2012	11:04	AH2 MID		55	39
		15-Feb-2012	09:49	AH2 MID		13	4
	Winter 2012	21-Feb-2012	13:56	AH2 MID		33	3
		27-Feb-2012	11:40	AH2 MID		92	33
		04-Mar-2012	10:37	AH2 MID		18	6
					Median	33	6
					90th Percentile	77	37
					Geometric Mean	33	10
					Maximum	92	39

Notes: 1. NC - Not Calculated
2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Albert Head							
		15-May-2012	09:38	AH2 MID		29	12
		22-May-2012	09:30	AH2 MID		16	1
	Spring 2012	28-May-2012	09:43	AH2 MID		69	16
		31-May-2012	09:28	AH2 MID		23	5
		06-Jun-2012	10:41	AH2 MID		160	41
					Median	29	12
					90th Percentile	124	31
					Geometric Mean	41	8
					Maximum	160	41
		26-Jul-2010	10:06	AH2 SURFACE		6	1
		28-Jul-2010	10:23	AH2 SURFACE		4	1
	Summer 2010	03-Aug-2010	11:55	AH2 SURFACE		2	< 1
		10-Aug-2010	10:26	AH2 SURFACE		4	< 1
		17-Aug-2010	10:45	AH2 SURFACE		5	1
					Median	4	1
					90th Percentile	6	1
					Geometric Mean	4	1
					Maximum	6	1
		02-Nov-2010	11:34	AH2 SURFACE		18	6
		08-Nov-2010	10:50	AH2 SURFACE		13	3
	Fall 2010	18-Nov-2010	13:05	AH2 SURFACE		16	7
		24-Nov-2010	10:25	AH2 SURFACE		240	160
		01-Dec-2010	10:11	AH2 SURFACE		34	12
					Median	18	7
					90th Percentile	158	101
					Geometric Mean	31	12
					Maximum	240	160
		16-Mar-2011	10:45	AH2 SURFACE		10	7
		22-Mar-2011	11:08	AH2 SURFACE		57	11
	Winter 2011	28-Mar-2011	10:35	AH2 SURFACE		14	5
		07-Apr-2011	10:35	AH2 SURFACE		60	16
		12-Apr-2011	09:57	AH2 SURFACE		10	2
					Median	14	7
					90th Percentile	59	14
					Geometric Mean	22	7
					Maximum	60	16
		04-May-2011	10:11	AH2 SURFACE		1	< 1
		09-May-2011	09:30	AH2 SURFACE		28	4
	Spring 2011	17-May-2011	09:17	AH2 SURFACE		5	< 1
		25-May-2011	08:50	AH2 SURFACE		61	15
		30-May-2011	08:53	AH2 SURFACE		17	1
					Median	17	1
					90th Percentile	48	11
					Geometric Mean	11	2
					Maximum	61	15

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Albert Head							
		20-Jul-2011	09:55	AH2 SURFACE		45	6
		26-Jul-2011	10:25	AH2 SURFACE		1	< 1
	Summer 2011	02-Aug-2011	09:30	AH2 SURFACE		2	2
		09-Aug-2011	09:50	AH2 SURFACE		6	1
		16-Aug-2011	09:00	AH2 SURFACE		15	1
					Median	6	1
					90th Percentile	33	4
					Geometric Mean	6	1
					Maximum	45	6
		31-Oct-2011	10:36	AH2 SURFACE		9	2
		07-Nov-2011	10:20	AH2 SURFACE		62	29
	Fall 2011	15-Nov-2011	10:45	AH2 SURFACE		2	1
		28-Nov-2011	10:05	AH2 SURFACE		1	1
		30-Nov-2011	10:18	AH2 SURFACE		3	4
					Median	3	2
					90th Percentile	41	19
					Geometric Mean	5	3
					Maximum	62	29
		08-Feb-2012	11:21	AH2 SURFACE		30	8
		15-Feb-2012	09:56	AH2 SURFACE		7	6
	Winter 2012	21-Feb-2012	14:25	AH2 SURFACE		13	4
		27-Feb-2012	12:00	AH2 SURFACE		77	8
		04-Mar-2012	10:45	AH2 SURFACE		8	3
					Median	13	6
					90th Percentile	58	8
					Geometric Mean	18	5
					Maximum	77	8
		15-May-2012	09:53	AH2 SURFACE		18	6
		22-May-2012	09:36	AH2 SURFACE		5	5
	Spring 2012	28-May-2012	09:59	AH2 SURFACE		10	1
		31-May-2012	09:34	AH2 SURFACE		16	4
		06-Jun-2012	10:51	AH2 SURFACE		11	1
					Median	11	4
					90th Percentile	17	6
					Geometric Mean	11	3
					Maximum	18	6
Finnerty Cove							
FC-7							
		26-Jul-2010	12:58	FC7 BOTTOM		1	< 1
		28-Jul-2010	14:41	FC7 BOTTOM		< 1	< 1
	Summer 2010	03-Aug-2010	17:10	FC7 BOTTOM		< 1	< 1
		10-Aug-2010	13:26	FC7 BOTTOM		< 1	< 1
		17-Aug-2010	13:56	FC7 BOTTOM		2	< 1
					Median	NC	NC
					90th Percentile	NC	NC
					Geometric Mean	NC	NC
					Maximum	2	1

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Finnerty Cove							
		02-Nov-2010	14:32	FC7 BOTTOM	3	1	
		08-Nov-2010	14:05	FC7 BOTTOM	4	2	
	Fall 2010	18-Nov-2010	14:37	FC7 BOTTOM	7	< 1	
		24-Nov-2010	13:41	FC7 BOTTOM	5	< 1	
		01-Dec-2010	12:43	FC7 BOTTOM	9	5	
					Median	5	1
					90th Percentile	8	4
				Geometric Mean	5	1	
				Maximum	9	5	
		16-Mar-2011	13:45	FC7 BOTTOM	< 1	< 1	
	Winter 2011	22-Mar-2011	14:37	FC7 BOTTOM	2	< 1	
		28-Mar-2011	14:03	FC7 BOTTOM	3	< 1	
		07-Apr-2011	14:02	FC7 BOTTOM	2	1	
		12-Apr-2011	12:35	FC7 BOTTOM	2	< 1	
					Median	2	NC
				90th Percentile	3	NC	
				Geometric Mean	2	NC	
				Maximum	3	1	
		04-May-2011	12:40	FC7 BOTTOM	< 1	< 1	
	Spring 2011	09-May-2011	12:22	FC7 BOTTOM	2	< 1	
		17-May-2011	12:34	FC7 BOTTOM	2	< 1	
		25-May-2011	11:49	FC7 BOTTOM	1	< 1	
		30-May-2011	11:04	FC7 BOTTOM	< 1	< 1	
					Median	1	NC
				90th Percentile	2	NC	
				Geometric Mean	1	NC	
				Maximum	2	< 1	
		20-Jul-2011	12:28	FC7 BOTTOM	1	< 1	
	Summer 2011	26-Jul-2011	14:31	FC7 BOTTOM	1	< 1	
		02-Aug-2011	12:45	FC7 BOTTOM	< 1	< 1	
		09-Aug-2011	13:41	FC7 BOTTOM	< 1	< 1	
		16-Aug-2011	11:20	FC7 BOTTOM	< 1	< 1	
					Median	NC	NC
				90th Percentile	NC	NC	
				Geometric Mean	NC	NC	
				Maximum	1	< 1	
		31-Oct-2011	13:27	FC7 BOTTOM	3	2	
	Fall 2011	07-Nov-2011	13:00	FC7 BOTTOM	1	< 1	
		15-Nov-2011	13:45	FC7 BOTTOM	4	2	
		28-Nov-2011	12:21	FC7 BOTTOM	4	1	
		30-Nov-2011	13:35	FC7 BOTTOM	2	< 1	
					Median	3	1
				90th Percentile	4	2	
				Geometric Mean	2	1	
				Maximum	4	2	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Finnerty Cove							
		08-Feb-2012	14:05	FC7 BOTTOM	1	2	
		15-Feb-2012	13:41	FC7 BOTTOM	2	1	
	Winter 2012	21-Feb-2012	15:21	FC7 BOTTOM	1	2	
		27-Feb-2012	13:50	FC7 BOTTOM	< 1	< 1	
		04-Mar-2012	13:34	FC7 BOTTOM	4	< 1	
				Median	1	1	
				90th Percentile	3	2	
				Geometric Mean	1	1	
				Maximum	4	2	
		15-May-2012	12:31	FC7 BOTTOM	2	< 1	
		22-May-2012	12:29	FC7 BOTTOM	1	< 1	
	Spring 2012	28-May-2012	13:16	FC7 BOTTOM	< 1	< 1	
		31-May-2012	11:48	FC7 BOTTOM	2	1	
		06-Jun-2012	13:21	FC7 BOTTOM	2	< 1	
				Median	2	NC	
				90th Percentile	2	NC	
				Geometric Mean	1	NC	
				Maximum	2	1	
		26-Jul-2010	12:46	FC7 MID	< 1	< 1	
		28-Jul-2010	14:53	FC7 MID	< 1	< 1	
	Summer 2010	03-Aug-2010	17:00	FC7 MID	3	2	
		10-Aug-2010	13:40	FC7 MID	2	< 1	
		17-Aug-2010	14:13	FC7 MID	4	< 1	
				Median	2	NC	
				90th Percentile	4	NC	
				Geometric Mean	1	NC	
				Maximum	4	2	
		02-Nov-2010	14:42	FC7 MID	1	< 1	
		08-Nov-2010	14:14	FC7 MID	2	1	
	Fall 2010	18-Nov-2010	14:46	FC7 MID	< 1	< 1	
		24-Nov-2010	13:53	FC7 MID	1	< 1	
		01-Dec-2010	12:50	FC7 MID	1	1	
				Median	1	NC	
				90th Percentile	2	NC	
				Geometric Mean	1	NC	
				Maximum	2	1	
		16-Mar-2011	13:35	FC7 MID	1	< 1	
		22-Mar-2011	14:51	FC7 MID	4	< 1	
	Winter 2011	28-Mar-2011	14:19	FC7 MID	1	< 1	
		07-Apr-2011	14:31	FC7 MID	< 1	< 1	
		12-Apr-2011	12:47	FC7 MID	< 1	< 1	
				Median	1	NC	
				90th Percentile	3	NC	
				Geometric Mean	1	NC	
				Maximum	4	< 1	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Finnerty Cove							
		04-May-2011	12:48	FC7 MID	< 1	< 1	
		09-May-2011	12:32	FC7 MID	1	< 1	
	Spring 2011	17-May-2011	12:44	FC7 MID	< 1	< 1	
		25-May-2011	11:57	FC7 MID	< 1	< 1	
		30-May-2011	11:13	FC7 MID	< 1	< 1	
				Median	NC	NC	
				90th Percentile	NC	NC	
				Geometric Mean	NC	NC	
				Maximum	1	< 1	
		20-Jul-2011	12:36	FC7 MID	< 1	2	
		26-Jul-2011	14:55	FC7 MID	9	2	
	Summer 2011	02-Aug-2011	12:55	FC7 MID	< 1	< 1	
		09-Aug-2011	13:55	FC7 MID	3	1	
		16-Aug-2011	11:30	FC7 MID	< 1	< 1	
				Median	1	1	
				90th Percentile	7	2	
				Geometric Mean	1	1	
				Maximum	9	2	
		31-Oct-2011	13:36	FC7 MID	1	1	
		07-Nov-2011	13:15	FC7 MID	< 1	5	
	Fall 2011	15-Nov-2011	13:57	FC7 MID	1	< 1	
		28-Nov-2011	12:29	FC7 MID	1	< 1	
		30-Nov-2011	12:43	FC7 MID	1	1	
				Median	1	1	
				90th Percentile	1	3	
				Geometric Mean	1	1	
				Maximum	1	5	
		08-Feb-2012	14:15	FC7 MID	< 1	1	
		15-Feb-2012	14:00	FC7 MID	3	1	
	Winter 2012	21-Feb-2012	15:31	FC7 MID	2	1	
		27-Feb-2012	14:10	FC7 MID	< 1	< 1	
		04-Mar-2012	13:55	FC7 MID	3	< 1	
				Median	2	1	
				90th Percentile	3	1	
				Geometric Mean	1	1	
				Maximum	3	1	
		15-May-2012	12:40	FC7 MID	< 1	< 1	
		22-May-2012	12:38	FC7 MID	< 1	< 1	
	Spring 2012	28-May-2012	13:32	FC7 MID	< 1	< 1	
		31-May-2012	11:56	FC7 MID	6	< 1	
		06-Jun-2012	13:30	FC7 MID	< 1	< 1	
				Median	NC	NC	
				90th Percentile	NC	NC	
				Geometric Mean	NC	NC	
				Maximum	6	< 1	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines					Median	14	4
BC Ministry of Environment					90th Percentile	43	11
Recreational - Primary Contact					Median	200	20
Recreational - Secondary Contact					Median	-	100
Canadian Recreational Guidelines					Geometric Mean	200	35
Recreational - Primary Contact					Maximum	400	70
Finnerty Cove							
Summer 2010	26-Jul-2010	12:43	FC7 SURFACE		< 1	< 1	
	28-Jul-2010	14:59	FC7 SURFACE		< 1	< 1	
	03-Aug-2010	16:49	FC7 SURFACE		< 1	< 1	
	10-Aug-2010	13:47	FC7 SURFACE		< 1	< 1	
	17-Aug-2010	14:21	FC7 SURFACE		< 1	< 1	
				Median	NC	NC	
				90th Percentile	NC	NC	
				Geometric Mean	NC	NC	
				Maximum	< 1	< 1	
Fall 2010	02-Nov-2010	14:49	FC7 SURFACE		1	< 1	
	08-Nov-2010	14:25	FC7 SURFACE		< 1	< 1	
	18-Nov-2010	14:52	FC7 SURFACE		1	< 1	
	24-Nov-2010	14:02	FC7 SURFACE		2	< 1	
	01-Dec-2010	13:00	FC7 SURFACE		< 1	< 1	
				Median	1	NC	
				90th Percentile	2	NC	
				Geometric Mean	1	NC	
				Maximum	2	< 1	
Winter 2011	16-Mar-2011	13:15	FC7 SURFACE		< 1	< 1	
	22-Mar-2011	14:59	FC7 SURFACE		1	< 1	
	28-Mar-2011	14:35	FC7 SURFACE		< 1	< 1	
	07-Apr-2011	14:40	FC7 SURFACE		< 1	< 1	
	12-Apr-2011	12:52	FC7 SURFACE		< 1	< 1	
				Median	NC	NC	
				90th Percentile	NC	NC	
				Geometric Mean	NC	NC	
				Maximum	< 1	< 1	
Spring 2011	04-May-2011	12:52	FC7 SURFACE		< 1	< 1	
	09-May-2011	12:37	FC7 SURFACE		1	< 1	
	17-May-2011	12:52	FC7 SURFACE		1	< 1	
	25-May-2011	12:05	FC7 SURFACE		< 1	< 1	
	30-May-2011	11:20	FC7 SURFACE		< 1	2	
				Median	NC	NC	
				90th Percentile	NC	NC	
				Geometric Mean	NC	NC	
				Maximum	1	2	
Summer 2011	20-Jul-2011	12:45	FC7 SURFACE		< 1	< 1	
	26-Jul-2011	15:15	FC7 SURFACE		3	< 1	
	02-Aug-2011	13:05	FC7 SURFACE		1	< 1	
	09-Aug-2011	14:15	FC7 SURFACE		< 1	< 1	
	16-Aug-2011	11:40	FC7 SURFACE		< 1	< 1	
				Median	NC	NC	
				90th Percentile	NC	NC	
				Geometric Mean	NC	NC	
				Maximum	3	< 1	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Finnerty Cove							
		31-Oct-2011	13:43	FC7 SURFACE	1	< 1	
		07-Nov-2011	13:30	FC7 SURFACE	< 1	< 1	
	Fall 2011	15-Nov-2011	14:10	FC7 SURFACE	1	1	
		28-Nov-2011	12:37	FC7 SURFACE	2	< 1	
		30-Nov-2011	12:57	FC7 SURFACE	< 1	< 1	
				Median	1	NC	
				90th Percentile	2	NC	
				Geometric Mean	1	NC	
				Maximum	2	1	
		08-Feb-2012	14:23	FC7 SURFACE	2	1	
		15-Feb-2012	14:05	FC7 SURFACE	< 1	< 1	
	Winter 2012	21-Feb-2012	15:43	FC7 SURFACE	< 1	< 1	
		27-Feb-2012	14:20	FC7 SURFACE	< 1	1	
		04-Mar-2012	14:01	FC7 SURFACE	2	< 1	
				Median	NC	NC	
				90th Percentile	NC	NC	
				Geometric Mean	NC	NC	
				Maximum	2	1	
		15-May-2012	12:50	FC7 SURFACE	< 1	< 1	
		22-May-2012	12:45	FC7 SURFACE	< 1	< 1	
	Spring 2012	28-May-2012	13:37	FC7 SURFACE	< 1	< 1	
		31-May-2012	12:02	FC7 SURFACE	4	< 1	
		06-Jun-2012	13:39	FC7 SURFACE	< 1	< 1	
				Median	NC	NC	
				90th Percentile	NC	NC	
				Geometric Mean	NC	NC	
				Maximum	4	< 1	
Macaulay Point							
		26-Jul-2010	11:11	MP4 BOTTOM	42	4	
		28-Jul-2010	12:51	MP4 BOTTOM	58	6	
	Summer 2010	03-Aug-2010	15:39	MP4 BOTTOM	10000	5200	
		10-Aug-2010	12:20	MP4 BOTTOM	16000	1100	
		17-Aug-2010	12:35	MP4 BOTTOM	35	4	
				Median	58	6	
				90th Percentile	13600	3560	
				Geometric Mean	424	56	
				Maximum	16000	5200	
		02-Nov-2010	13:13	MP4 BOTTOM	4800	3000	
		08-Nov-2010	12:29	MP4 BOTTOM	550	130	
	Fall 2010	18-Nov-2010	10:13	MP4 BOTTOM	98	29	
		24-Nov-2010	12:05	MP4 BOTTOM	210	42	
		01-Dec-2010	11:25	MP4 BOTTOM	4300	1800	
				Median	550	130	
				90th Percentile	4600	2520	
				Geometric Mean	748	243	
				Maximum	4800	3000	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Macaulay Point							
		16-Mar-2011	12:10	MP4 BOTTOM	2200	810	
		22-Mar-2011	13:05	MP4 BOTTOM	8400	2100	
	Winter 2011	28-Mar-2011	12:08	MP4 BOTTOM	30	20	
		07-Apr-2011	12:00	MP4 BOTTOM	74	21	
		12-Apr-2011	11:02	MP4 BOTTOM	460	100	
				Median	460	100	
				90th Percentile	5920	1584	
				Geometric Mean	452	148	
				Maximum	8400	2100	
		04-May-2011	11:30	MP4 BOTTOM	11000	1400	
		09-May-2011	10:31	MP4 BOTTOM	50	13	
	Spring 2011	17-May-2011	10:45	MP4 BOTTOM	40	4	
		25-May-2011	10:42	MP4 BOTTOM	970	97	
		30-May-2011	09:58	MP4 BOTTOM	360	69	
				Median	360	69	
				90th Percentile	6988	879	
				Geometric Mean	378	55	
				Maximum	11000	1400	
		20-Jul-2011	10:36	MP4 BOTTOM	15000	5000	
		26-Jul-2011	12:07	MP4 BOTTOM	200	27	
	Summer 2011	02-Aug-2011	10:05	MP4 BOTTOM	18	1	
		09-Aug-2011	11:20	MP4 BOTTOM	2500	860	
		16-Aug-2011	09:23	MP4 BOTTOM	7400	2700	
				Median	2500	860	
				90th Percentile	11960	4080	
				Geometric Mean	1000	199	
				Maximum	15000	5000	
		31-Oct-2011	12:08	MP4 BOTTOM	5	21	
		07-Nov-2011	11:25	MP4 BOTTOM	180	69	
	Fall 2011	15-Nov-2011	11:50	MP4 BOTTOM	280	74	
		28-Nov-2011	11:11	MP4 BOTTOM	3	1	
		30-Nov-2011	11:23	MP4 BOTTOM	3200	1500	
				Median	180	69	
				90th Percentile	2032	930	
				Geometric Mean	75	44	
				Maximum	3200	1500	
		08-Feb-2012	12:51	MP4 BOTTOM	4300	940	
		15-Feb-2012	11:19	MP4 BOTTOM	68	20	
	Winter 2012	21-Feb-2012	10:19	MP4 BOTTOM	10000	2100	
		27-Feb-2012	09:14	MP4 BOTTOM	100	31	
		04-Mar-2012	11:53	MP4 BOTTOM	200	50	
				Median	200	50	
				90th Percentile	7720	1636	
				Geometric Mean	567	144	
				Maximum	10000	2100	

Notes: 1. NC - Not Calculated
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Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines					Median	14	4
BC Ministry of Environment				Shellfish Harvesting	90th Percentile	43	11
				Recreational - Primary Contact	Median	200	20
				Recreational - Secondary Contact	Median	-	100
Canadian Recreational Guidelines				Recreational - Primary Contact	Geometric Mean	200	35
					Maximum	400	70
Macaulay Point							
Spring 2012		15-May-2012	11:20	MP4 BOTTOM		3700	770
		22-May-2012	10:50	MP4 BOTTOM		86	32
		28-May-2012	11:10	MP4 BOTTOM		37	14
		31-May-2012	10:39	MP4 BOTTOM		17000	7100
		06-Jun-2012	12:14	MP4 BOTTOM		58	15
					Median	86	32
				90th Percentile	11680	4568	
				Geometric Mean	410	130	
				Maximum	17000	7100	
Summer 2010		26-Jul-2010	11:21	MP4 MID		11	< 1.0
		28-Jul-2010	13:23	MP4 MID		6	< 1.0
		03-Aug-2010	13:51	MP4 MID		81	23
		10-Aug-2010	12:35	MP4 MID		11	< 1.0
		17-Aug-2010	12:50	MP4 MID		36	6
					Median	11	1
				90th Percentile	63	16	
				Geometric Mean	18	2	
				Maximum	81	23	
Fall 2010		02-Nov-2010	13:23	MP4 MID		95	17
		08-Nov-2010	12:50	MP4 MID		12	6
		18-Nov-2010	10:39	MP4 MID		40	18
		24-Nov-2010	12:17	MP4 MID		150	100
		01-Dec-2010	11:32	MP4 MID		98	53
					Median	95	18
				90th Percentile	129	81	
				Geometric Mean	58	25	
				Maximum	150	100	
Winter 2011		16-Mar-2011	12:24	MP4 MID		24	9
		22-Mar-2011	12:57	MP4 MID		180	65
		28-Mar-2011	12:28	MP4 MID		24	9
		07-Apr-2011	12:51	MP4 MID		40	7
		12-Apr-2011	11:13	MP4 MID		68	22
					Median	40	9
				90th Percentile	135	48	
				Geometric Mean	49	15	
				Maximum	180	65	
Spring 2011		04-May-2011	11:39	MP4 MID		1200	190
		09-May-2011	10:47	MP4 MID		45	14
		17-May-2011	11:13	MP4 MID		7	< 1
		25-May-2011	10:51	MP4 MID		6800	710
		30-May-2011	10:07	MP4 MID		26	7
					Median	45	14
				90th Percentile	4560	502	
				Geometric Mean	146	23	
				Maximum	6800	710	

Notes: 1. NC - Not Calculated
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Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
	BC Ministry of Environment			Recreational - Primary Contact	Median	200	20
				Recreational - Secondary Contact	Median	-	100
	Canadian Recreational Guidelines			Recreational - Primary Contact	Geometric Mean	200	35
					Maximum	400	70
Macaulay Point							
		20-Jul-2011	10:50	MP4 MID		230	50
		26-Jul-2011	13:16	MP4 MID		2	1
Summer 2011		02-Aug-2011	10:20	MP4 MID		17	3
		09-Aug-2011	11:30	MP4 MID		26	11
		16-Aug-2011	09:40	MP4 MID		49	14
					Median	26	11
				90th Percentile	158	36	
				Geometric Mean	25	7	
				Maximum	230	50	
		31-Oct-2011	12:20	MP4 MID		18	7
		07-Nov-2011	11:40	MP4 MID		33	26
Fall 2011		15-Nov-2011	12:10	MP4 MID		20	6
		28-Nov-2011	11:19	MP4 MID		1	2
		30-Nov-2011	11:31	MP4 MID		33	27
					Median	20	7
				90th Percentile	33	27	
				Geometric Mean	13	9	
				Maximum	33	27	
		08-Feb-2012	12:59	MP4 MID		24	4
		15-Feb-2012	12:26	MP4 MID		89	39
Winter 2012		21-Feb-2012	10:47	MP4 MID		11	5
		27-Feb-2012	09:33	MP4 MID		20	14
		04-Mar-2012	12:34	MP4 MID		23	8
					Median	23	8
				90th Percentile	63	29	
				Geometric Mean	26	10	
				Maximum	89	39	
		15-May-2012	11:30	MP4 MID		84	23
		22-May-2012	11:10	MP4 MID		16	4
Spring 2012		28-May-2012	11:29	MP4 MID		17	6
		31-May-2012	10:50	MP4 MID		45	7
		06-Jun-2012	12:23	MP4 MID		6	1
					Median	17	6
				90th Percentile	68	17	
				Geometric Mean	23	5	
				Maximum	84	23	
		26-Jul-2010	11:28	MP4 SURFACE		2	< 1
		28-Jul-2010	13:42	MP4 SURFACE		2	< 1
Summer 2010		03-Aug-2010	13:33	MP4 SURFACE		< 1	< 1
		10-Aug-2010	12:38	MP4 SURFACE		6	1
		17-Aug-2010	11:58	MP4 SURFACE		13	< 1
					Median	2	NC
				90th Percentile	10	NC	
				Geometric Mean	3	NC	
				Maximum	13	1	

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Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Macaulay Point							
		02-Nov-2010	13:30	MP4 SURFACE	54	5	
		08-Nov-2010	13:05	MP4 SURFACE	1	< 1	
	Fall 2010	18-Nov-2010	10:52	MP4 SURFACE	27	11	
		24-Nov-2010	12:30	MP4 SURFACE	39	14	
		01-Dec-2010	11:42	MP4 SURFACE	37	10	
				Median	37	10	
				90th Percentile	48	13	
				Geometric Mean	18	5	
				Maximum	54	14	
		16-Mar-2011	12:35	MP4 SURFACE	37	6	
		22-Mar-2011	11:20	MP4 SURFACE	29	4	
	Winter 2011	28-Mar-2011	13:02	MP4 SURFACE	3500	1000	
		07-Apr-2011	13:00	MP4 SURFACE	3	1	
		12-Apr-2011	11:20	MP4 SURFACE	12	1	
				Median	29	4	
				90th Percentile	2115	602	
				Geometric Mean	42	8	
				Maximum	3500	1000	
		04-May-2011	11:50	MP4 SURFACE	4	< 1	
		09-May-2011	11:01	MP4 SURFACE	17	1	
	Spring 2011	17-May-2011	11:25	MP4 SURFACE	3	1	
		25-May-2011	10:59	MP4 SURFACE	5100	1100	
		30-May-2011	10:13	MP4 SURFACE	7	1	
				Median	7	1	
				90th Percentile	3067	660	
				Geometric Mean	24	4	
				Maximum	5100	1100	
		20-Jul-2011	11:02	MP4 SURFACE	300	120	
		26-Jul-2011	13:40	MP4 SURFACE	2	< 1	
	Summer 2011	02-Aug-2011	10:50	MP4 SURFACE	4	< 1	
		09-Aug-2011	11:40	MP4 SURFACE	1	< 1	
		16-Aug-2011	09:50	MP4 SURFACE	16	2	
				Median	4	1	
				90th Percentile	186	73	
				Geometric Mean	8	2	
				Maximum	300	120	
		31-Oct-2011	12:26	MP4 SURFACE	9	3	
		07-Nov-2011	11:55	MP4 SURFACE	4	4	
	Fall 2011	15-Nov-2011	12:30	MP4 SURFACE	8	1	
		28-Nov-2011	11:25	MP4 SURFACE	9	4	
		30-Nov-2011	11:40	MP4 SURFACE	27	19	
				Median	9	4	
				90th Percentile	20	13	
				Geometric Mean	9	4	
				Maximum	27	19	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Macaulay Point							
		08-Feb-2012	13:07	MP4 SURFACE	12	4	
		15-Feb-2012	12:43	MP4 SURFACE	7	2	
	Winter 2012	21-Feb-2012	11:09	MP4 SURFACE	37	14	
		27-Feb-2012	09:41	MP4 SURFACE	2	< 1	
		04-Mar-2012	12:41	MP4 SURFACE	8	2	
				Median	8	2	
				90th Percentile	27	10	
				Geometric Mean	9	3	
				Maximum	37	14	
		15-May-2012	11:40	MP4 SURFACE	20	4	
		22-May-2012	11:28	MP4 SURFACE	6	1	
	Spring 2012	28-May-2012	11:46	MP4 SURFACE	6	1	
		31-May-2012	10:57	MP4 SURFACE	26	3	
		06-Jun-2012	12:32	MP4 SURFACE	3	1	
				Median	6	1	
				90th Percentile	24	4	
				Geometric Mean	9	2	
				Maximum	26	4	
		26-Jul-2010	11:42	MP5 BOTTOM	14	3	
		28-Jul-2010	12:27	MP5 BOTTOM	84	14	
	Summer 2010	03-Aug-2010	13:33	MP5 BOTTOM	44	5	
		10-Aug-2010	11:22	MP5 BOTTOM	74	7	
		17-Aug-2010	11:28	MP5 BOTTOM	7000	3000	
				Median	74	7	
				90th Percentile	4234	1806	
				Geometric Mean	122	21	
				Maximum	7000	3000	
		02-Nov-2010	12:42	MP5 BOTTOM	20	4	
		08-Nov-2010	12:29	MP5 BOTTOM	6	2	
	Fall 2010	18-Nov-2010	11:13	MP5 BOTTOM	58	23	
		24-Nov-2010	11:57	MP5 BOTTOM	4	3	
		01-Dec-2010	10:59	MP5 BOTTOM	15	5	
				Median	15	4	
				90th Percentile	43	16	
				Geometric Mean	13	5	
				Maximum	58	23	
		16-Mar-2011	11:05	MP5 BOTTOM	6	< 1	
		22-Mar-2011	10:40	MP5 BOTTOM	15	3	
	Winter 2011	28-Mar-2011	11:04	MP5 BOTTOM	17	5	
		07-Apr-2011	11:10	MP5 BOTTOM	50	15	
		12-Apr-2011	10:30	MP5 BOTTOM	54	5	
				Median	17	5	
				90th Percentile	52	11	
				Geometric Mean	21	4	
				Maximum	54	15	

Notes: 1. NC - Not Calculated
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Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Macaulay Point							
		04-May-2011	10:48	MP5 BOTTOM	48	20	
		09-May-2011	10:05	MP5 BOTTOM	26	1	
	Spring 2011	17-May-2011	10:00	MP5 BOTTOM	170	21	
		25-May-2011	10:07	MP5 BOTTOM	70	7	
		30-May-2011	09:09	MP5 BOTTOM	130	39	
				Median	70	20	
				90th Percentile	154	32	
				Geometric Mean	72	10	
				Maximum	170	39	
		20-Jul-2011	11:23	MP5 BOTTOM	31	8	
		26-Jul-2011	10:53	MP5 BOTTOM	39	17	
	Summer 2011	02-Aug-2011	11:20	MP5 BOTTOM	66	23	
		09-Aug-2011	12:15	MP5 BOTTOM	34	13	
		16-Aug-2011	10:15	MP5 BOTTOM	56	1	
				Median	39	13	
				90th Percentile	62	21	
				Geometric Mean	43	8	
				Maximum	66	23	
		31-Oct-2011	11:20	MP5 BOTTOM	2	< 1	
		07-Nov-2011	11:47	MP5 BOTTOM	99	44	
	Fall 2011	15-Nov-2011	11:17	MP5 BOTTOM	18	5	
		28-Nov-2011	10:35	MP5 BOTTOM	4	1	
		30-Nov-2011	10:46	MP5 BOTTOM	52	55	
				Median	18	5	
				90th Percentile	80	51	
				Geometric Mean	15	6	
				Maximum	99	55	
		08-Feb-2012	12:14	MP5 BOTTOM	34	13	
		15-Feb-2012	10:29	MP5 BOTTOM	5	5	
	Winter 2012	21-Feb-2012	11:47	MP5 BOTTOM	1	4	
		27-Feb-2012	12:30	MP5 BOTTOM	170	76	
		04-Mar-2012	11:15	MP5 BOTTOM	71	46	
				Median	34	13	
				90th Percentile	130	64	
				Geometric Mean	18	16	
				Maximum	170	76	
		15-May-2012	10:35	MP5 BOTTOM	110	61	
		22-May-2012	10:12	MP5 BOTTOM	450	220	
	Spring 2012	28-May-2012	10:38	MP5 BOTTOM	110	33	
		31-May-2012	10:02	MP5 BOTTOM	38	19	
		06-Jun-2012	11:39	MP5 BOTTOM	660	320	
				Median	110	61	
				90th Percentile	576	280	
				Geometric Mean	169	77	
				Maximum	660	320	

Notes: 1. NC - Not Calculated

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Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Macaulay Point							
		26-Jul-2010	11:50	MP5 MID	8	< 1	
		28-Jul-2010	12:33	MP5 MID	4	1	
	Summer 2010	03-Aug-2010	13:51	MP5 MID	31	< 1	
		10-Aug-2010	11:32	MP5 MID	6	1	
		17-Aug-2010	11:45	MP5 MID	560	66	
				Median	8	1	
				90th Percentile	348	40	
				Geometric Mean	20	2	
				Maximum	560	66	
		02-Nov-2010	12:49	MP5 MID	38	11	
		08-Nov-2010	11:51	MP5 MID	9	1	
	Fall 2010	18-Nov-2010	11:23	MP5 MID	22	2	
		24-Nov-2010	11:47	MP5 MID	6	5	
		01-Dec-2010	11:07	MP5 MID	77	35	
				Median	22	5	
				90th Percentile	61	25	
				Geometric Mean	20	5	
				Maximum	77	35	
		16-Mar-2011	11:30	MP5 MID	14	3	
		22-Mar-2011	11:00	MP5 MID	26	2	
	Winter 2011	28-Mar-2011	11:23	MP5 MID	21	9	
		07-Apr-2011	11:35	MP5 MID	< 1	< 1	
		12-Apr-2011	10:44	MP5 MID	51	8	
				Median	21	3	
				90th Percentile	41	9	
				Geometric Mean	11	3	
				Maximum	51	9	
		20-Jul-2011	11:30	MP5 MID	17	7	
		26-Jul-2011	11:17	MP5 MID	1	1	
	Summer 2011	02-Aug-2011	11:35	MP5 MID	27	5	
		09-Aug-2011	12:30	MP5 MID	1	5	
		16-Aug-2011	10:30	MP5 MID	42	15	
				Median	17	5	
				90th Percentile	36	12	
				Geometric Mean	7	5	
				Maximum	42	15	
		04-May-2011	10:58	MP5 MID	12	4	
		09-May-2011	10:13	MP5 MID	26	4	
	Spring	17-May-2011	10:17	MP5 MID	11	3	
		25-May-2011	10:13	MP5 MID	38	5	
		30-May-2011	09:29	MP5 MID	24	5	
				Median	24	4	
				90th Percentile	33	5	
				Geometric Mean	20	4	
				Maximum	38	5	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Macaulay Point							
		31-Oct-2011	11:30	MP5 MID	13	7	
		07-Nov-2011	11:56	MP5 MID	28	8	
	Fall 2011	15-Nov-2011	11:29	MP5 MID	24	15	
		28-Nov-2011	10:44	MP5 MID	4	1	
		30-Nov-2011	10:54	MP5 MID	17	29	
				Median	17	8	
				90th Percentile	26	23	
				Geometric Mean	14	8	
				Maximum	28	29	
		08-Feb-2012	12:23	MP5 MID	24	9	
		15-Feb-2012	10:51	MP5 MID	18	5	
	Winter 2012	21-Feb-2012	11:58	MP5 MID	23	2	
		27-Feb-2012	12:50	MP5 MID	20	4	
		04-Mar-2012	11:25	MP5 MID	47	52	
				Median	23	5	
				90th Percentile	38	35	
				Geometric Mean	25	7	
				Maximum	47	52	
		15-May-2012	10:44	MP5 MID	46	16	
		22-May-2012	10:20	MP5 MID	15	2	
	Spring 2012	28-May-2012	10:48	MP5 MID	24	5	
		31-May-2012	10:10	MP5 MID	30	9	
		06-Jun-2012	11:48	MP5 MID	5	< 1	
				Median	24	5	
				90th Percentile	40	13	
				Geometric Mean	19	4	
				Maximum	46	16	
		26-Jul-2010	11:57	MP5 SURFACE	11	3	
		28-Jul-2010	12:41	MP5 SURFACE	< 1	< 1	
	Summer 2010	03-Aug-2010	14:00	MP5 SURFACE	2	< 1	
		10-Aug-2010	11:42	MP5 SURFACE	7	< 1	
		17-Aug-2010	11:55	MP5 SURFACE	7	1	
				Median	7	NC	
				90th Percentile	9	NC	
				Geometric Mean	4	NC	
				Maximum	11	3	
		02-Nov-2010	12:57	MP5 SURFACE	12	3	
		08-Nov-2010	11:58	MP5 SURFACE	13	5	
	Fall 2010	18-Nov-2010	11:35	MP5 SURFACE	13	8	
		24-Nov-2010	11:37	MP5 SURFACE	14	7	
		01-Dec-2010	11:17	MP5 SURFACE	54	25	
				Median	13	7	
				90th Percentile	38	18	
				Geometric Mean	17	7	
				Maximum	54	25	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Macaulay Point							
		16-Mar-2011	11:50	MP5 SURFACE	72	17	
		22-Mar-2011	11:08	MP5 SURFACE	20	1	
	Winter 2011	28-Mar-2011	11:35	MP5 SURFACE	17	1	
		07-Apr-2011	11:45	MP5 SURFACE	110	34	
		12-Apr-2011	10:50	MP5 SURFACE	9	< 1	
				Median	20	1	
				90th Percentile	95	27	
				Geometric Mean	30	3	
				Maximum	110	34	
		04-May-2011	11:06	MP5 SURFACE	7	1	
		09-May-2011	10:17	MP5 SURFACE	15	4	
	Spring 2011	17-May-2011	10:30	MP5 SURFACE	3	< 1	
		25-May-2011	10:20	MP5 SURFACE	5	1	
		30-May-2011	09:36	MP5 SURFACE	2	1	
				Median	5	1	
				90th Percentile	12	3	
				Geometric Mean	5	1	
				Maximum	15	4	
		20-Jul-2011	11:40	MP5 SURFACE	11	2	
		26-Jul-2011	11:25	MP5 SURFACE	< 1	< 1	
	Summer 2011	02-Aug-2011	11:50	MP5 SURFACE	< 1	< 1	
		09-Aug-2011	12:45	MP5 SURFACE	< 1	1	
		16-Aug-2011	10:40	MP5 SURFACE	34	7	
				Median	1	1	
				90th Percentile	25	5	
				Geometric Mean	2	1	
				Maximum	34	7	
		31-Oct-2011	11:46	MP5 SURFACE	9	4	
		07-Nov-2011	11:10	MP5 SURFACE	4	2	
	Fall 2011	15-Nov-2011	11:45	MP5 SURFACE	13	1	
		28-Nov-2011	10:52	MP5 SURFACE	5	< 1	
		30-Nov-2011	11:05	MP5 SURFACE	24	13	
				Median	9	2	
				90th Percentile	20	9	
				Geometric Mean	9	2	
				Maximum	24	13	
		08-Feb-2012	12:30	MP5 SURFACE	21	5	
		15-Feb-2012	11:00	MP5 SURFACE	180	71	
	Winter 2012	21-Feb-2012	12:06	MP5 SURFACE	14	5	
		27-Feb-2012	13:20	MP5 SURFACE	3	1	
		04-Mar-2012	11:34	MP5 SURFACE	< 1	< 1	
				Median	14	5	
				90th Percentile	116	45	
				Geometric Mean	10	4	
				Maximum	180	71	

Notes: 1. NC - Not Calculated

2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
BC Ministry of Environment				Recreational - Primary Contact	Median	200	20
				Recreational - Secondary Contact	Median	-	100
Canadian Recreational Guidelines				Recreational - Primary Contact	Geometric Mean	200	35
					Maximum	400	70
Macaulay Point							
Spring 2012		15-May-2012	10:52	MP5 SURFACE		22	8
		22-May-2012	10:27	MP5 SURFACE		7	< 1
		28-May-2012	10:56	MP5 SURFACE		5	< 1
		31-May-2012	10:15	MP5 SURFACE		15	3
		06-Jun-2012	11:58	MP5 SURFACE		4	< 1
					Median	7	1
					90th Percentile	19	6
				Geometric Mean	9	1	
				Maximum	22	8	
MP-6	Summer 2010	26-Jul-2010	08:26	MP6 BOTTOM		4	1
		28-Jul-2010	11:13	MP6 BOTTOM		3	< 1
		03-Aug-2010	07:57	MP6 BOTTOM		22	3
		10-Aug-2010	08:02	MP6 BOTTOM		4	< 1
		17-Aug-2010	08:00	MP6 BOTTOM		< 1	< 1
					Median	4	NC
					90th Percentile	15	NC
					Geometric Mean	4	NC
					Maximum	22	3
	Fall 2010		02-Nov-2010	09:36	MP6 BOTTOM		4
		08-Nov-2010	08:15	MP6 BOTTOM		< 1	< 1
		18-Nov-2010	08:23	MP6 BOTTOM		2	< 1
		24-Nov-2010	08:15	MP6 BOTTOM		1	1
		01-Dec-2010	08:13	MP6 BOTTOM		1	< 1
				Median	1	NC	
				90th Percentile	3	NC	
				Geometric Mean	1	NC	
				Maximum	4	1	
Winter 2011		16-Mar-2011	09:23	MP6 BOTTOM		< 1	1
		22-Mar-2011	09:08	MP6 BOTTOM		2	< 1
		28-Mar-2011	09:12	MP6 BOTTOM		< 1	< 1
		07-Apr-2011	09:04	MP6 BOTTOM		1	1
		12-Apr-2011	08:54	MP6 BOTTOM		2	< 1
				Median	1	NC	
				90th Percentile	2	NC	
				Geometric Mean	1	NC	
				Maximum	2	1	
Spring		04-May-2011	08:10	MP6 BOTTOM		1	< 1
		09-May-2011	08:30	MP6 BOTTOM		1	< 1
		17-May-2011	08:00	MP6 BOTTOM		7	< 1
		25-May-2011	08:33	MP6 BOTTOM		1	< 1
		30-May-2011	07:54	MP6 BOTTOM		82	29
				Median	1	1	
				90th Percentile	52	18	
				Geometric Mean	4	1	
				Maximum	82	29	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				Recreational - Primary Contact	Median	200	20
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
					Maximum	400	70
Macaulay Point							
		20-Jul-2011	08:16	MP6 BOTTOM	1	2	
		26-Jul-2011	08:50	MP6 BOTTOM	5	3	
Summer 2011		02-Aug-2011	08:05	MP6 BOTTOM	< 1	< 1	
		09-Aug-2011	08:00	MP6 BOTTOM	24	5	
		16-Aug-2011	07:50	MP6 BOTTOM	< 1	< 1	
					Median	1	2
				90th Percentile	16	4	
				Geometric Mean	2	1	
				Maximum	24	5	
Fall 2011		31-Oct-2011	15:04	MP6 BOTTOM	< 1	< 1	
		07-Nov-2011	09:08	MP6 BOTTOM	< 1	< 1	
		15-Nov-2011	09:32	MP6 BOTTOM	1	< 1	
		28-Nov-2011	09:04	MP6 BOTTOM	12	3	
		30-Nov-2011	09:12	MP6 BOTTOM	3	2	
				Median	1	NC	
				90th Percentile	8	NC	
				Geometric Mean	2	NC	
				Maximum	12	3	
Winter 2012		08-Feb-2012	10:20	MP6 BOTTOM	1	2	
		15-Feb-2012	08:47	MP6 BOTTOM	2	1	
		21-Feb-2012	12:47	MP6 BOTTOM	< 1	1	
		27-Feb-2012	10:30	MP6 BOTTOM	< 1	1	
		04-Mar-2012	09:38	MP6 BOTTOM	< 1	2	
				Median	NC	1	
				90th Percentile	NC	2	
				Geometric Mean	NC	1	
				Maximum	2	2	
Spring 2012		15-May-2012	08:36	MP6 BOTTOM	1	< 1	
		22-May-2012	08:32	MP6 BOTTOM	1	< 1	
		28-May-2012	08:35	MP6 BOTTOM	1	< 1	
		31-May-2012	08:40	MP6 BOTTOM	69	29	
		06-Jun-2012	09:38	MP6 BOTTOM	3	< 1	
				Median	1	1	
				90th Percentile	43	18	
				Geometric Mean	3	1	
				Maximum	69	29	
Summer 2010		26-Jul-2010	08:19	MP6 MID	1	< 1	
		28-Jul-2010	11:23	MP6 MID	6	< 1	
		03-Aug-2010	08:15	MP6 MID	8	< 1	
		10-Aug-2010	08:16	MP6 MID	1	< 1	
		17-Aug-2010	08:18	MP6 MID	3	< 1	
				Median	3	NC	
				90th Percentile	7	NC	
				Geometric Mean	3	NC	
				Maximum	8	1	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	200	35
				Canadian Recreational Guidelines	Geometric Mean	400	70
				Recreational - Primary Contact	Maximum		
Macaulay Point							
		02-Nov-2010	09:48	MP6 MID	14	3	
		08-Nov-2010	08:31	MP6 MID	4	< 1	
	Fall 2010	18-Nov-2010	08:35	MP6 MID	3	3	
		24-Nov-2010	08:29	MP6 MID	2	1	
		01-Dec-2010	08:23	MP6 MID	3	17	
				Median	3	3	
				90th Percentile	10	11	
				Geometric Mean	4	2	
				Maximum	14	17	
		16-Mar-2011	09:34	MP6 MID	2	< 1	
		22-Mar-2011	09:10	MP6 MID	< 1	< 1	
	Winter 2011	28-Mar-2011	09:21	MP6 MID	12	5	
		07-Apr-2011	09:14	MP6 MID	1	1	
		12-Apr-2011	09:03	MP6 MID	9	1	
				Median	2	1	
				90th Percentile	11	3	
				Geometric Mean	3	1	
				Maximum	12	5	
		04-May-2011	08:20	MP6 MID	10	1	
		09-May-2011	08:39	MP6 MID	10	6	
	Spring 2011	17-May-2011	08:12	MP6 MID	3	< 1	
		25-May-2011	08:42	MP6 MID	19	6	
		30-May-2011	08:04	MP6 MID	12	3	
				Median	10	3	
				90th Percentile	16	6	
				Geometric Mean	9	2	
				Maximum	19	6	
		20-Jul-2011	08:28	MP6 MID	18	15	
		26-Jul-2011	09:03	MP6 MID	1	< 1	
	Summer 2011	02-Aug-2011	08:23	MP6 MID	< 1	< 1	
		09-Aug-2011	08:15	MP6 MID	27	16	
		16-Aug-2011	08:00	MP6 MID	1	1	
				Median	1	1	
				90th Percentile	23	16	
				Geometric Mean	3	2	
				Maximum	27	16	
		31-Oct-2011	15:14	MP6 MID	3	1	
		07-Nov-2011	09:20	MP6 MID	9	12	
	Fall 2011	15-Nov-2011	09:24	MP6 MID	12	5	
		28-Nov-2011	09:13	MP6 MID	10	5	
		30-Nov-2011	09:20	MP6 MID	3	1	
				Median	9	5	
				90th Percentile	11	9	
				Geometric Mean	6	3	
				Maximum	12	12	

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Macaulay Point							
		08-Feb-2012	10:13	MP6 MID	5	6	
		15-Feb-2012	08:56	MP6 MID	2	1	
	Winter 2012	21-Feb-2012	12:58	MP6 MID	16	5	
		27-Feb-2012	10:45	MP6 MID	5	5	
		04-Mar-2012	09:25	MP6 MID	5	2	
				Median	5	5	
				90th Percentile	12	6	
				Geometric Mean	5	3	
				Maximum	16	6	
		15-May-2012	08:47	MP6 MID	11	2	
		22-May-2012	08:43	MP6 MID	1	< 1	
	Spring 2012	28-May-2012	08:45	MP6 MID	23	3	
		31-May-2012	08:51	MP6 MID	46	16	
		06-Jun-2012	09:52	MP6 MID	8	< 1	
				Median	11	2	
				90th Percentile	37	11	
				Geometric Mean	10	2	
				Maximum	46	16	
		26-Jul-2010	07:35	MP6 SURFACE	4	< 1	
		28-Jul-2010	11:30	MP6 SURFACE	< 1	< 1	
	Summer 2010	03-Aug-2010	08:20	MP6 SURFACE	1	< 1	
		10-Aug-2010	08:24	MP6 SURFACE	4	< 1	
		17-Aug-2010	08:28	MP6 SURFACE	2	< 1	
				Median	2	NC	
				90th Percentile	4	NC	
				Geometric Mean	2	NC	
				Maximum	4	1	
		02-Nov-2010	09:55	MP6 SURFACE	4	< 1	
		08-Nov-2010	08:40	MP6 SURFACE	11	2	
	Fall 2010	18-Nov-2010	08:45	MP6 SURFACE	22	11	
		24-Nov-2010	08:40	MP6 SURFACE	5	1	
		01-Dec-2010	08:30	MP6 SURFACE	26	2	
				Median	11	2	
				90th Percentile	24	7	
				Geometric Mean	10	2	
				Maximum	26	11	
		16-Mar-2011	09:45	MP6 SURFACE	2	< 1	
		22-Mar-2011	09:25	MP6 SURFACE	32	5	
	Winter 2011	28-Mar-2011	09:30	MP6 SURFACE	17	3	
		07-Apr-2011	09:30	MP6 SURFACE	15	3	
		12-Apr-2011	09:10	MP6 SURFACE	24	10	
				Median	17	3	
				90th Percentile	29	8	
				Geometric Mean	13	3	
				Maximum	32	10	

Notes: 1. NC - Not Calculated

2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters		
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)	
Water Quality Guidelines							
				Shellfish Harvesting	Median	14	4
					90th Percentile	43	11
				BC Ministry of Environment	Median	200	20
				Recreational - Primary Contact	Median	-	100
				Recreational - Secondary Contact	Median	-	100
				Canadian Recreational Guidelines	Geometric Mean	200	35
				Recreational - Primary Contact	Maximum	400	70
Macaulay Point							
		04-May-2011	08:29	MP6 SURFACE	30	2	
		09-May-2011	08:43	MP6 SURFACE	2	< 1	
	Spring 2011	17-May-2011	08:20	MP6 SURFACE	8	< 1	
		25-May-2011	08:50	MP6 SURFACE	13	3	
		30-May-2011	08:12	MP6 SURFACE	1	< 1	
				Median	8	NC	
				90th Percentile	23	NC	
				Geometric Mean	6	NC	
				Maximum	30	3	
		20-Jul-2011	08:38	MP6 SURFACE	1	5	
		26-Jul-2011	09:14	MP6 SURFACE	< 1	< 1	
	Summer 2011	02-Aug-2011	08:30	MP6 SURFACE	< 1	< 1	
		09-Aug-2011	08:30	MP6 SURFACE	1	< 1	
		16-Aug-2011	08:10	MP6 SURFACE	31	9	
				Median	1	NC	
				90th Percentile	19	NC	
				Geometric Mean	2	NC	
				Maximum	31	9	
		31-Oct-2011	15:22	MP6 SURFACE	2	< 1	
		07-Nov-2011	09:30	MP6 SURFACE	< 1	< 1	
	Fall 2011	15-Nov-2011	09:14	MP6 SURFACE	2	2	
				Geometric Mean	1	1	
				Maximum	3	2	
		08-Feb-2012	10:00	MP6 SURFACE	9	1	
		15-Feb-2012	09:02	MP6 SURFACE	1	1	
	Winter 2012	21-Feb-2012	13:08	MP6 SURFACE	10	8	
		27-Feb-2012	11:00	MP6 SURFACE	2	1	
		04-Mar-2012	09:45	MP6 SURFACE	< 1	< 1	
				Median	2	1	
				90th Percentile	10	5	
				Geometric Mean	2	1	
				Maximum	10	8	
		15-May-2012	08:55	MP6 SURFACE	2	< 1	
		22-May-2012	08:51	MP6 SURFACE	7	< 1	
	Spring 2012	28-May-2012	08:53	MP6 SURFACE	1	< 1	
		31-May-2012	08:57	MP6 SURFACE	10	3	
		06-Jun-2012	10:00	MP6 SURFACE	1	< 1	
				Median	2	NC	
				90th Percentile	9	NC	
				Geometric Mean	3	NC	
				Maximum	10	3	

NOTES:

Notes: 1. NC - Not Calculated
 2. Highlighting indicates parameters above applied guideline



Water Quality Analytical Results: Microbiology QA/QC

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters									
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Logarithms of Counts	Range of Logarithms (Samples - T1 or T2)	Acceptability	Enterococcus (cfu/100ml)	Logarithms of Counts	Range of Logarithms (Samples - T1 or T2)	Acceptability		
Quality Assurance / Quality Control					Precision Criterion¹		0.53		Precision Criteria				1.69	
	Sample	28-Jul-2010	12:51	MP4 BOTTOM	58	1.76			6	0.78				
	Triplicate	28-Jul-2010	12:51	4 BOTTOM TRIPLICATE 1	40	1.60	0.16	A	8	0.90	0.12	A		
	Triplicate	28-Jul-2010	12:51	4 BOTTOM TRIPLICATE 2	45	1.65	0.11	A	4	0.60	0.88	A		
	Sample	28-Jul-2010	13:23	MP4 MID	6	0.78			1	-0.30				
	Triplicate	28-Jul-2010	13:23	4 MID TRIPLICATE 1	5	0.70	0.08	A	1	-0.30	1.00	A		
	Triplicate	28-Jul-2010	13:23	4 MID TRIPLICATE 2	7	0.85	0.07	A	1	0.00	1.15	A		
	Sample	28-Jul-2010	13:42	MP4 SURFACE	2	0.30			1	-0.30				
	Triplicate	28-Jul-2010	13:42	4 SURFACE TRIPLICATE 1	4	0.60	0.30	A	1	-0.30	0.90	A		
	Triplicate	28-Jul-2010	13:42	4 SURFACE TRIPLICATE 2	< 1	0.00	0.30	A	1	-0.30	0.30	A		
	Sample	08-Nov-2010	12:29	MP4 BOTTOM	550	2.74			130	2.11				
	Triplicate	08-Nov-2010	12:29	4 BOTTOM TRIPLICATE 1	430	2.63	0.11	A	1100	3.04	0.52	A		
	Triplicate	08-Nov-2010	12:29	4 BOTTOM TRIPLICATE 2	290	2.46	0.28	A	140	2.15	0.35	A		
	Sample	08-Nov-2010	12:50	MP4 MID	12	1.08			6	0.78				
	Sample	08-Nov-2010	12:50	4 MID TRIPLICATE 1	9	0.95	0.12	A	5	0.70	0.18	A		
	Triplicate	08-Nov-2010	12:50	4 MID TRIPLICATE 2	7	0.85	0.23	A	4	0.60	0.07	A		
	Sample		13:05	MP4 SURFACE	1	0.00			1	-0.30				
	Triplicate	08-Nov-2010	13:05	4 SURFACE TRIPLICATE 1	5	0.70	0.70	U	< 1	0.00	1.00	A		
	Triplicate	08-Nov-2010	13:05	4 SURFACE TRIPLICATE 2	2	0.30	0.30	A	< 1	0.00	0.60	A		
	Sample	16-Mar-2011	09:59	AH2 BOTTOM	13	1.11			4	0.60				
	Triplicate	16-Mar-2011	09:59	AH2 BOTTOM TRIPLICATE 1	11	1.04	0.07	A	4	0.60	0.44	A		
	Triplicate	16-Mar-2011	09:59	AH2 BOTTOM TRIPLICATE 2	13	1.11	0.00	A	< 1	0.00	0.51	A		
	Sample	16-Mar-2011	10:30	AH2 MID	12	1.08			6	0.78				
	Triplicate	16-Mar-2011	10:30	AH2 MID TRIPLICATE 1	8	0.90	0.18	A	2	0.30	0.12	A		
	Triplicate	16-Mar-2011	10:30	AH2 MID TRIPLICATE 2	12	1.08	0.00	A	5	0.70	0.30	A		
	Sample	16-Mar-2011	10:45	AH2 SURFACE	10	1.00			7	0.85				
	Triplicate	16-Mar-2011	10:45	AH2 SURFACE TRIPLICATE 1	14	1.15	0.15	A	3	0.48	0.30	A		
	Triplicate	16-Mar-2011	10:45	AH2 SURFACE TRIPLICATE 2	14	1.15	0.15	A	4	0.60	0.30	A		
	Sample	22-Mar-2011	11:20	MP4 SURFACE	29	1.46			4	0.60				
	Triplicate	22-Mar-2011	13:05	MP4 SURFACE TRIPLICATE 1	22	1.34	0.12	A	7	0.85	0.74	A		
	Triplicate	22-Mar-2011	13:05	MP4 SURFACE TRIPLICATE 2	19	1.28	0.18	A	4	0.60	0.68	A		
	Sample	22-Mar-2011	13:05	MP4 BOTTOM	8400	3.92			2100	3.32				
	Triplicate	22-Mar-2011	11:20	MP4 BOTTOM TRIPLICATE 1	10000	4.00	0.08	A	1800	3.26	0.68	A		
	Triplicate	22-Mar-2011	11:20	MP4 BOTTOM TRIPLICATE 2	8100	3.91	0.02	A	1600	3.20	0.59	A		
	Sample	22-Mar-2011	12:57	MP4 MID	180	2.26			65	1.81				
	Triplicate	22-Mar-2011	12:57	MP4 MID TRIPLICATE 1	190	2.28	0.02	A	81	1.91	0.47	A		
	Triplicate	22-Mar-2011	12:57	MP4 MID TRIPLICATE 2	200	2.30	0.05	A	41	1.61	0.49	A		
	Sample	04-May-2011	09:40	AH2 BOTTOM	41	1.61			11	1.04				
	Triplicate	04-May-2011	09:40	AH2 BOTTOM TRIPLICATE 2	32	1.51	0.11	A	9	0.95	0.46	A		
	Triplicate	04-May-2011	09:40	AH2 BOTTOM TRIPLICATE 1	29	1.46	0.15	A	7	0.85	0.42	A		
	Sample	04-May-2011	09:55	AH2 MID	30	1.48			17	1.23				
	Triplicate	04-May-2011	09:55	AH2 MID TRIPLICATE 1	34	1.53	0.05	A	7	0.85	0.30	A		
	Triplicate	04-May-2011	09:55	AH2 MID TRIPLICATE 2	35	1.54	0.07	A	9	0.95	0.31	A		
	Sample	04-May-2011	10:11	AH2 SURFACE	1	0.00			1	-0.30				
	Triplicate	04-May-2011	10:11	AH2 SURFACE TRIPLICATE 1	< 1	0.00	0.00	A	< 1	0.00	0.30	A		
	Triplicate	04-May-2011	10:11	AH2 SURFACE TRIPLICATE 2	< 1	0.00	0.00	A	< 1	0.00	0.30	A		
	Sample	09-May-2011	11:01	MP4 SURFACE	17	1.23			1	0.00				
	Triplicate	09-May-2011	11:01	MP4 SURFACE TRIPLICATE 1	7	0.85	0.39	A	< 1	0.00	0.85	A		
	Triplicate	09-May-2011	11:01	MP4 SURFACE TRIPLICATE 2	14	1.15	0.08	A	< 1	0.00	1.15	A		



Water Quality Analytical Results: Microbiology QA/QC

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020					Microbiological Parameters							
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Logarithms of Counts	Range of Logarithms (Samples - T1 or T2)	Acceptability	Enterococcus (cfu/100ml)	Logarithms of Counts	Range of Logarithms (Samples - T1 or T2)	Acceptability
Quality Assurance / Quality Control					Precision Criterion¹		0.53		Precision Criteria		1.69	
	Sample	09-May-2011	10:31	MP4 BOTTOM	50	1.70			13	1.11		
	Triplicate	09-May-2011	10:31	MP4 BOTTOM TRIPLICATE 1	80	1.90	0.20	A	10	1.00	0.79	A
	Triplicate	09-May-2011	10:31	MP4 BOTTOM TRIPLICATE 2	30	1.48	0.22	A	15	1.18	0.36	A
	Sample	09-May-2011	10:47	MP4 MID	45	1.65			14	1.15		
	Triplicate	09-May-2011	10:47	MP4 MID TRIPLICATE 1	36	1.56	0.10	A	11	1.04	0.41	A
	Triplicate	09-May-2011	10:47	MP4 MID TRIPLICATE 2	32	1.51	0.15	A	5	0.70	0.36	A
	Sample	20-Jul-2011	09:12	AH2 BOTTOM	130	2.11			59	1.77		
	Triplicate	20-Jul-2011	09:12	AH2 BOTTOM TRIPLICATE 1	120	2.08	0.03	A	64	1.81	0.31	A
	Triplicate	20-Jul-2011	09:12	AH2 BOTTOM TRIPLICATE 2	140	2.15	0.03	A	67	1.83	0.38	A
	Sample	20-Jul-2011	09:35	AH2 MID	42	1.62			14	1.15		
	Triplicate	20-Jul-2011	09:35	AH2 MID TRIPLICATE 1	46	1.66	0.04	A	14	1.15	0.52	A
	Triplicate	20-Jul-2011	09:35	AH2 MID TRIPLICATE 2	36	1.56	0.07	A	12	1.08	0.41	A
	Sample	20-Jul-2011	09:55	AH2 SURFACE	45	1.65			6	0.78		
	Triplicate	20-Jul-2011	09:55	AH2 SURFACE TRIPLICATE 1	30	1.48	0.18	A	6	0.78	0.70	A
	Triplicate	20-Jul-2011	09:55	AH2 SURFACE TRIPLICATE 2	32	1.51	0.15	A	13	1.11	0.73	A
	Sample	26-Jul-2011	13:40	MP4 SURFACE	2	0.30			1	-0.30		
	Triplicate	26-Jul-2011	13:40	MP4 SURFACE TRIPLICATE 1	1	0.00	0.30	A	< 1	0.00	0.30	A
	Triplicate	26-Jul-2011	13:40	MP4 SURFACE TRIPLICATE 2	3	0.48	0.18	A	< 1	0.00	0.78	A
	Sample	26-Jul-2011	12:07	MP4 BOTTOM	200	2.30			27	1.43		
	Triplicate	26-Jul-2011	12:07	MP4 BOTTOM TRIPLICATE 1	100	2.00	0.30	A	31	1.49	0.57	A
	Triplicate	26-Jul-2011	12:07	MP4 BOTTOM TRIPLICATE 2	80	1.90	0.40	A	22	1.34	0.47	A
	Sample	26-Jul-2011	13:16	MP4 MID	2	0.30			1	0.00		
	Triplicate	26-Jul-2011	13:16	MP4 MID TRIPLICATE 1	4	0.60	0.30	A	4	0.60	0.60	A
	Triplicate	26-Jul-2011	13:16	MP4 MID TRIPLICATE 2	5	0.70	0.40	A	< 1	0.00	0.70	A
	Sample	31-Oct-2011	10:01	AH2 BOTTOM	12	1.08			3	0.48		
	Triplicate	31-Oct-2011	10:01	AH2 BOTTOM TRIPLICATE 1	10	1.00	0.08	A	2	0.30	0.52	A
	Triplicate	31-Oct-2011	10:01	AH2 BOTTOM TRIPLICATE 2	4	0.60	0.48	A	1	0.00	0.12	A
	Sample	31-Oct-2011	10:17	AH2 MID	7	0.85			3	0.48		
	Triplicate	31-Oct-2011	10:17	AH2 MID TRIPCATE 1	5	0.70	0.15	A	3	0.48	0.22	A
	Triplicate	31-Oct-2011	10:17	AH2 MID TRIPCATE 2	8	0.90	0.06	A	2	0.30	0.43	A
	Sample	31-Oct-2011	10:36	AH2 SURFACE	9	0.95			2	0.30		
	Triplicate	31-Oct-2011	10:36	AH2 SURFACE TRIPLICATE 1	8	0.90	0.05	A	2	0.30	0.60	A
	Triplicate	31-Oct-2011	10:36	AH2 SURFACE TRIPLICATE 2	7	0.85	0.11	A	1	0.00	0.54	A
	Sample	07-Nov-2011	11:55	MP4 SURFACE	4	0.60			4	0.60		
	Triplicate	07-Nov-2011	11:55	MP4 SURFACE TRIPLICATE 1	10	1.00	0.40	A	< 1	0.00	0.40	A
	Triplicate	07-Nov-2011	11:55	MP4 SURFACE TRIPLICATE 2	7	0.85	0.24	A	2	0.30	0.24	A
	Sample	07-Nov-2011	11:25	MP4 BOTTOM	180	2.26			69	1.84		
	Triplicate	07-Nov-2011	11:25	MP4 BOTTOM TRIPLICATE 1	180	2.26	0.00	A	100	2.00	0.42	A
	Triplicate	07-Nov-2011	11:25	MP4 BOTTOM TRIPLICATE 2	180	2.26	0.00	A	120	2.08	0.42	A



Water Quality Analytical Results: Microbiology QA/QC

PROJECT NO.: 307071-00020

					Microbiological Parameters							
Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Fecal Coliform (cfu/100ml)	Logarithms of Counts	Range of Logarithms (Samples - T1 or T2)	Acceptability	Enterococcus (cfu/100ml)	Logarithms of Counts	Range of Logarithms (Samples - T1 or T2)	Acceptability
Quality Assurance / Quality Control					Precision Criterion¹		0.53		Precision Criteria		1.69	
	Sample	07-Nov-2011	11:40	MP4 MID	33	1.52			26	1.41		
	Triplicate	07-Nov-2011	11:40	MP4 MID TRIPLICATE 1	40	1.60	0.08	A	22	1.34	0.19	A
	Triplicate	07-Nov-2011	11:40	MP4 MID TRIPLICATE 2	39	1.59	0.07	A	23	1.36	0.18	A
	Sample	08-Feb-2012	10:47	AH2 BOTTOM	140	2.15			95	1.98		
	Triplicate	08-Feb-2012	10:47	AH2 BOTTOM TRIPLICATE 2	140	2.15	0.00	A	85	1.93	0.17	A
	Triplicate	08-Feb-2012	10:47	AH2 BOTTOM TRIPLICATE 1	110	2.04	0.10	A	95	1.98	0.06	A
	Sample	08-Feb-2012	11:04	AH2 MID	55	1.74			39	1.59		
	Triplicate	08-Feb-2012	11:04	AH2 MID TRIPLICATE 1	60	1.78	0.04	A	17	1.23	0.19	A
	Triplicate	08-Feb-2012	11:04	AH2 MID TRIPLICATE 2	65	1.81	0.07	A	29	1.46	0.22	A
	Sample	08-Feb-2012	11:21	AH2 SURFACE	30	1.48			8	0.90		
	Triplicate	08-Feb-2012	11:21	AH2 SURFACE TRIPLICATE 1	29	1.46	0.01	A	20	1.30	0.56	A
	Triplicate	08-Feb-2012	11:21	AH2 SURFACE TRIPLICATE 2	26	1.41	0.06	A	5	0.70	0.51	A
	Sample	15-Feb-2012	12:43	MP4 SURFACE	7	0.85			2	0.30		
	Triplicate	15-Feb-2012	12:43	MP4 SURFACE TRIPLICATE 1	11	1.04	0.20	A	2	0.30	0.74	A
	Triplicate	15-Feb-2012	12:43	MP4 SURFACE TRIPLICATE 2	11	1.04	0.20	A	1	0.00	0.74	A
	Sample	15-Feb-2012	11:19	MP4 BOTTOM	68	1.83			20	1.30		
	Triplicate	15-Feb-2012	11:19	MP4 BOTTOM TRIPLICATE 1	86	1.93	0.10	A	27	1.43	0.63	A
	Triplicate	15-Feb-2012	11:19	MP4 BOTTOM TRIPLICATE 2	71	1.85	0.02	A	15	1.18	0.55	A
	Sample	15-Feb-2012	12:26	MP4 MID	89	1.95			39	1.59		
	Triplicate	15-Feb-2012	12:26	MP4 MID TRIPLICATE 1	82	1.91	0.04	A	56	1.75	0.32	A
	Triplicate	15-Feb-2012	12:26	MP4 MID TRIPLICATE 2	88	1.94	0.00	A	44	1.64	0.35	A
	Sample	15-May-2012	09:19	AH2 BOTTOM	34	1.53			16	1.20		
	Triplicate	15-May-2012	09:19	AH2 BOTTOM TRIPLICATE 1	43	1.63	0.10	A	14	1.15	0.43	A
	Triplicate	15-May-2012	09:19	AH2 BOTTOM TRIPLICATE 2	37	1.57	0.04	A	9	0.95	0.36	A
	Sample	15-May-2012	09:38	AH2 MID	29	1.46			12	1.08		
	Triplicate	15-May-2012	09:38	AH2 MID TRIPLICATE 1	32	1.51	0.04	A	13	1.11	0.43	A
	Triplicate	15-May-2012	09:38	AH2 MID TRIPLICATE 2	38	1.58	0.12	A	8	0.90	0.50	A
	Sample	15-May-2012	09:53	AH2 SURFACE	18	1.26			6	0.78		
	Triplicate	15-May-2012	09:53	AH2 SURFACE TRIPLICATE 1	18	1.26	0.00	A	2	0.30	0.48	A
	Triplicate	15-May-2012	09:53	AH2 SURFACE TRIPLICATE 2	16	1.20	0.05	A	4	0.60	0.43	A

NOTES: 1 - Precision Criterion = 3.27 * (Average(R)) where Average(R) is the average of the first 15 Range of Logarithms between (Samples and T1)

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General					Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Albert Head																							
AH-2	Spring 2010	28-Apr-2010	11:12	2 BOTTOM	46	T85108		47800	7.9	3	---	---	5480	18000	0.81	2800	0.003	0.224	0.227	0.14	---	---	---
		06-May-2010	11:07	2 BOTTOM	48	T97491		49500	7.9	< 2	---	---	5480	18000	0.80	2500	0.003	0.235	0.238	< 0.05	---	---	---
		12-May-2010	11:04	2 BOTTOM	40	U09666		50100	7.9	< 2	2.1	0.9	5600	19000	1.13	2800	0.004	0.196	0.2	0.057	0.5	0.06	0.055
		18-May-2010	14:37	2 BOTTOM	46	U21257		50900	7.9	10	---	---	5530	19000	0.80	2900	0.003	0.248	0.251	0.21	---	---	---
		25-May-2010	08:31	2 BOTTOM	39	U34668		53000	7.8	< 2	---	---	5030	17000	0.76	2800	0.005	0.189	0.194	0.12	---	---	---
				Minimum	39			47800	7.8	< 2			5030	17000	0.76	2500	0.003	0.189	0.194	0			
				Mean	44			50260	7.9	3			5424	18200	0.86	2760	0.004	0.218	0.222	0.132			
				Maximum	48			53000	7.9	10			5600	19000	1.13	2900	0.005	0.248	0.251	0.210			
				Standard Deviation				1909	0.0	4			226	837	0.15	152	0.001	0.025	0.024	0.063			
	Summer 2010	26-Jul-2010	09:52	2 BOTTOM	40	V71678		48600	7.9	2	---	---	5340	18000	1.03	2600	0.005	0.184	0.189	0.1	---	---	---
		28-Jul-2010	10:01	2 BOTTOM	41	V78516		47600	7.8	< 2	---	---	5610	19000	0.76	2500	0.005	UN	UN	0.11	---	---	---
		03-Aug-2010	11:21	2 BOTTOM	38	V93184		49300	7.9	11	0.8	0.7	5790	18000	0.74	2700	0.005	0.267	0.272	< 0.05	0.15	0.065	0.077
		10-Aug-2010	10:06	2 BOTTOM	42	W10965		50900	7.9	< 2	---	---	5740	20000	1.01	3000	0.005	0.246	0.251	0.14	---	---	---
		17-Aug-2010	10:18	2 BOTTOM	47	W29471		49100	7.9	4	---	---	5720	17000	0.63	2600	0.005	0.273	0.278	0.23	---	---	---
				Minimum	38			47600	7.8	< 2			5340	17000	0.6	2500	0.005	0.184	0.189	0			
				Mean	42			49100	7.9	4			5640	18400	0.8	2680	0.005	0.243	0.248	0.145			
				Maximum	47			50900	7.9	11			5790	20000	1.0	3000	0.005	0.273	0.278	0.230			
				Standard Deviation				1202	0.0	4			180	1140	0	192	0.000	0.041	0.041	0.059			
	Fall 2010	02-Nov-2010	11:17	2 BOTTOM	43	Y16476		51500	7.8	7	---	---	5620	19000	1.1	2800	0.005	0.415	0.42	0.085	---	---	---
		08-Nov-2010	12:28	2 BOTTOM	44	Y31442		50800	7.6	4	---	---	5230	17000	1.5	2600	0.005	0.427	0.432	0.064	---	---	---
		18-Nov-2010	12:43	2 BOTTOM	43	Y53949		47300	7.7	4	1	< 3	5330	18000	1.03	2700	0.007	0.371	0.378	0.086	< 0.04	0.071	0.074
		24-Nov-2010	10:06	2 BOTTOM	47	Y64505		50000	7.7	16	---	---	5400	17000	1.1	2500	< 0.002	0.434	0.434	0.071	---	---	---
		01-Dec-2010	09:54	2 BOTTOM	44	Y78813		51900	7.7	< 2	---	---	4850	16000	1.1	2800	< 0.002	0.437	0.437	0.15	---	---	---
				Minimum	43			47300	7.6	< 2			4850	16000	1.0	2500	0.005	0.371	0.378	0			
				Mean	44			50300	7.7	6			5286	17400	1.2	2680	0.006	0.417	0.420	0.091			
				Maximum	47			51900	7.8	16			5620	19000	1.5	2800	0.007	0.437	0.437	0.150			
				Standard Deviation				1826	0.1	6			283	1140	0	130	0.001	0.027	0.024	0.034			
	Winter 2011	16-Mar-2011	09:59	AH2 BOTTOM	42	AD7896		45500	7.8	6	---	---	5130	18000	0.86	2400	0.004	0.372	0.376	0.038	---	---	---
		22-Mar-2011	10:40	AH2 BOTTOM	48	AE7498		50600	7.8	< 2	---	---	5470	19000	1.2	2500	0.003	0.321	0.324	0.014	---	---	---
		28-Mar-2011	10:01	AH2 BOTTOM	46	AF6869		49900	7.8	< 2	1.1	1.4	5200	18000	1.1	2300	0.004	0.329	0.333	0.016	< 0.2	0.07	0.063
		07-Apr-2011	09:53	AH2 BOTTOM	42	AH3644		49900	7.8	3	---	---	5310	17000	1.1	2500	UN	0.347	0.353	0.014	---	---	---
		12-Apr-2011	09:42	AH2 BOTTOM	48	AI0206		50500	7.8	6	---	---	5140	17000	1.2	2800	0.005	0.360	0.365	< 0.005	---	---	---
				Minimum	42			45500	7.8	< 2			5130	17000	0.9	2300	0.003	0.321	0.324	< 0.005			
				Mean	45			49280	7.8	3			5250	17800	1.1	2500	0.004	0.346	0.350	0.017			
				Maximum	48			50600	7.8	6			5470	19000	1.2	2800	0.005	0.372	0.376	0.038			
				Standard Deviation				2138	0.0	3			142	837	0	187	0.001	0.021	0.022	0.012			
	Spring 2011	04-May-2011	09:40	AH2 BOTTOM	46	AL5079		47500	7.9	R	---	---	5360	16000	1	2500	0.003	0.303	0.306	0.028	---	---	---
		09-May-2011	09:17	AH2 BOTTOM	45	AM2498		48200	7.9	4	---	---	5490	19000	1	2700	0.003	0.327	0.33	0.034	---	---	---
		17-May-2011	08:51	AH2 BOTTOM	42	AN8359		47500	7.9	3	0.9	1.1	5420	19000	1.2	2400	0.003	0.357	0.36	0.027	< 0.2	0.063	0.066
		25-May-2011	08:33	AH2 BOTTOM	42	AP2244		46800	7.8	< 2	---	---	5200	18000	1.2	2800	0.004	0.342	0.346	0.064	---	---	---
		30-May-2011	08:38	AH2 BOTTOM	48	AP9785		47200	7.8	3	---	---	5650	16000	1.2	2800	0.004	0.324	0.328	0.037	---	---	---
				Minimum	42			46800	7.8	< 2			5200	16000	1.0	2400	0.003	0.303	0.306	0.027			
				Mean	45			47440	7.9	3			5424	17600	1.1	2640	0.003	0.331	0.334	0.038			
				Maximum	48			48200	7.9	4			5650	19000	1.2	2800	0.004	0.357	0.360	0.064			
				Standard Deviation				513	0.1	1			166	1517	0	182	0.001	0.020	0.020	0.015			

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Albert Head																							
Summer 2011		20-Jul-2011	09:12	AH2 BOTTOM	46	BB0181		47700	7.7	< 2	---	---	5240	18000	1.1	2300	0.006	0.41	0.416	0.062	---	---	
		26-Jul-2011	09:51	AH2 BOTTOM	42	BC3660		44800	7.8	9	---	---	5020	19000	0.83	2500	0.006	0.374	0.38	0.034	---	---	
		02-Aug-2011	09:07	AH2 BOTTOM	47	BD6258		48200	7.6	4	< 5	7	5430	18000	0.81	2600	0.005	0.384	0.389	0.021	< 0.2	0.057	0.065
		09-Aug-2011	09:21	AH2 BOTTOM	45	BF4977		46600	7.7	5	---	---	5520	18000	0.88	2400	0.004	0.364	0.368	0.041	---	---	
		16-Aug-2011	08:35	AH2 BOTTOM	46	BG7562		47500	7.6	16	---	---	5540	19000	0.86	2600	0.005	0.379	0.384	0.044	---	---	
				Minimum	42		44800	7.6	< 2			5020	18000	0.8	2300	0.004	0.364	0.368	0.021				
				Mean	45		46960	7.7	7			5350	18400	0.9	2480	0.005	0.382	0.387	0.040				
				Maximum	47		48200	7.8	16			5540	19000	1.1	2600	0.006	0.410	0.416	0.062				
				Standard Deviation			1339	0.1	6			219	548	0	130	0.001	0.017	0.018	0.015				
Fall 2011		31-Oct-2011	10:01	AH2 BOTTOM	42	BZ5087		47900	7.7	3	---	---	5600	18000	0.9	2440	0.004	0.418	0.422	0.100	---	---	
		07-Nov-2011	09:58	AH2 BOTTOM	47	CB4245		47300	7.7	3	---	---	5320	19000	0.84	2550	0.005	0.366	0.371	0.100	---	---	
		15-Nov-2011	10:08	AH2 BOTTOM	39	CD1925		48200	7.7	8	7.5	< 5.0	5470	19000	0.85	2550	0.003	0.44	0.443	0.021	0.81	0.069	0.077
		28-Nov-2011	09:48	AH2 BOTTOM	46	CF8402		46900	7.8	7	---	---	5240	19000	0.82	2530	0.003	0.354	0.357	0.018	---	---	
		30-Nov-2011	09:59	AH2 BOTTOM	44	CG3480		46300	7.8	< 2	---	---	5410	19000	0.83	2560	0.004	0.374	0.378	0.210	---	---	
				Minimum	39		46300	7.7	< 2			5240	18000	0.8	2440	0.003	0.354	0.357	0.018				
				Mean	44		47320	7.7	4			5408	18800	0.8	2526	0.004	0.390	0.394	0.090				
				Maximum	47		48200	7.8	8			5600	19000	0.9	2560	0.005	0.440	0.443	0.210				
				Standard Deviation			763	0.1	3			138	447	0	49	0.001	0.037	0.037	0.078				
Winter 2012		08-Feb-2012	10:47	AH2 BOTTOM	46	CR3972		46800	7.8	2	---	---	5320	18000	0.93	2520	0.002	0.367	0.369	0.025	---	---	
		15-Feb-2012	09:30	AH2 BOTTOM	46	CS7964		46700	7.8	< 2	---	---	5330	18000	0.89	2610	< 0.002	0.367	0.367	0.041	---	---	
		21-Feb-2012	13:37	AH2 BOTTOM	42	CT8285		46800	7.8	2	< 5.0 '6.7	---	5590	18000	0.9	2670	0.002	0.383	0.385	0.011	< 0.20	0.068	0.072
		27-Feb-2012	11:25	AH2 BOTTOM	45	CU8871		47100	7.8	3	---	---	5650	18000	0.83	2440	0.002	0.372	0.374	0.063	---	---	
		04-Mar-2012	10:12	AH2 BOTTOM	44	CW2987		46500	7.7	< 2	---	---	5490	18000	0.85	2590	0.002	0.311	0.313	0.015	---	---	
				Minimum	42		46500	7.7	< 2			5320	18000	0.8	2440	0.002	0.311	0.313	0.011				
				Mean	45		46780	7.8	2			5476	18000	0.9	2566	0.002	0.360	0.362	0.031				
				Maximum	46		47100	7.8	3			5650	18000	0.9	2670	0.002	0.383	0.385	0.063				
				Standard Deviation			217	0.0	1			149	0	0	88	0.000	0.028	0.028	0.021				
Spring 2012		15-May-2012	09:19	AH2 BOTTOM	42	DK6176		46600	7.9	6	---	---	5090	17000	0.8	2500	0.004	0.232	0.236	0.027	---	---	
		22-May-2012	09:22	AH2 BOTTOM	40	DL9772		46700	7.8	2	---	---	5370	19000	0.81	2630	0.003	0.224	0.227	0.038	---	---	
		28-May-2012	09:23	AH2 BOTTOM	44	DN2737		48000	7.8	< 2	< 5.0 '< 5.0	---	5780	17000	0.92	2350	0.004	0.281	0.285	0.025	0.126	0.057	0.063
		31-May-2012	09:21	AH2 BOTTOM	46	DO0725		47600	7.8	< 2	---	---	5480	18000	0.82	2590	0.005	0.241	0.246	0.031	---	---	
		06-Jun-2012	10:32	AH2 BOTTOM	46	DP4997		48400	7.8	14	---	---	5340	18000	0.87	2300	0.006	0.267	0.273	0.093	---	---	
				Minimum	40		46600	7.8	< 2			5090	17000	0.8	2300	0.003	0.224	0.227	0.025				
				Mean	44		47460	7.8	5			5412	17800	0.8	2474	0.004	0.249	0.253	0.043				
				Maximum	46		48400	7.9	14			5780	19000	0.9	2630	0.006	0.281	0.285	0.093				
				Standard Deviation			792	0.0	6			250	837	0	145	0.001	0.024	0.025	0.028				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Albert Head - Bottom QA/QC																							
	Sample	16-Mar-2011	09:59	AH2 BOTTOM		AD7896		45500	7.8	6	--	--	5130	18000	0.86	2400	0.004	0.372	0.376	0.038	--	--	--
	Triplicate	16-Mar-2011	09:59	AH2 BOTTOM TRIPLICATE 1		AD7897		44800	7.8	9	--	--	5220	19000	0.85	2500	0.004	0.402	0.406	0.027	--	--	--
	Triplicate	16-Mar-2011	09:59	AH2 BOTTOM TRIPLICATE 2		AD7898		46300	7.8	5	--	--	5320	18000	0.85	2400	0.004	0.373	0.377	0.01	--	--	--
								2%	0%	<5xDL			2%	3%	1%	2%	0%	4%	4%	0%			
	Sample	28-Mar-2011	10:01	AH2 BOTTOM		AF6869					1.1	1.4							0.333		< 0.2	0.07	0.063
	Triplicate	28-Mar-2011	10:01	AH2 BOTTOM TRIPLICATE 1		AF6872		--	--	--	0.9	0.8	--	--	--	--	--	--	0.339	--	< 0.2	0.071	0.065
	Triplicate	28-Mar-2011	10:01	AH2 BOTTOM TRIPLICATE 2		AF6875		--	--	--	1.4	1.5	--	--	--	--	--	--	0.334	--	< 0.2	0.067	0.064
											0.25	<5xDL							1%		<5xDL	3%	2%
	Sample	04-May-2011	09:40	AH2 BOTTOM		AL5079		47500	7.9	4	--	--	5360	16000	1	2500	0.003	0.303	0.306	0.028	--	--	--
	Triplicate	04-May-2011	09:40	AH2 BOTTOM TRIPLICATE 1		AL5080		47400	7.9	14	--	--	5440	18000	1.1	2500	0.003	0.327	0.33	0.033	--	--	--
	Triplicate	04-May-2011	09:40	AH2 BOTTOM TRIPLICATE 2		AL5081		47500	7.9	11	--	--	5380	18000	1	2500	0.003	0.303	0.306	0.034	--	--	--
								0%	0%	53%			1%	7%	6%	0%	0%	4%	4%	10%			
	Sample	17-May-2011		AH2 BOTTOM		AN8359		47500	7.9	3	0.9	1.1	5420	19000	1.2	2400	0.003	0.357	0.36	0.027	< 0.2	0.063	0.066
	Triplicate	17-May-2011	08:51	AH BOT T1		AN8362		--	--	--	1.5	1.1	--	--	--	--	--	--	0.326	--	0.5	0.063	0.068
	Triplicate	17-May-2011	08:51	AH BOT T2		AN8365		--	--	--	< 0.5	1.7	--	--	--	--	--	--	0.352	--	0.3	0.064	0.068
											<5xDL	<5xDL							5%		<5xDL	1%	2%
	Sample	20-Jul-2011	09:12	AH2 BOTTOM		BB0181		47700	7.7	< 2	--	--	5240	18000	1.1	2300	0.006	0.41	0.416	0.062	--	--	--
	Triplicate	20-Jul-2011	09:12	AH2 BOTTOM TRIPLICATE 1		BB0182		47600	7.7	< 2	--	--	5330	18000	1.1	2300	0.006	0.416	0.422	0.1	--	--	--
	Triplicate	20-Jul-2011	09:12	AH2 BOTTOM TRIPLICATE 2		BB0183		47600	7.7	< 2	--	--	5200	18000	1.1	2300	0.006	0.365	0.371	0.083	--	--	--
								0%	0%	<5xDL			1%	0%	0%	0%	0%	7%	7%	0%			
	Sample	02-Aug-2011	09:07	AH2 BOTTOM		BD6258		--	--	--	< 5	7	--	--	--	--	--	--	0.389	--	< 0.2	0.057	0.065
	Triplicate	02-Aug-2011	09:07	AH2 BOTTOM TRIPLICATE 1		BD6261		--	--	--	< 5	< 5	--	--	--	--	--	--	0.38	--	< 0.2	0.058	0.063
	Triplicate	02-Aug-2011	09:07	AH2 BOTTOM TRIPLICATE 2		BD6264		--	--	--	9	< 5	--	--	--	--	--	--	0.37	--	< 0.2	0.058	0.064
											<5xDL	<5xDL							0%		<5xDL	0%	0%
	Sample	31-Oct-2011	10:01	AH2 BOTTOM		BZ5087		47900	7.7	3	--	--	5600	18000	0.90	2440	0.004	0.418	0.422	0.1	--	--	--
	Triplicate	31-Oct-2011	10:01	AH2 BOTTOM TRIPLICATE 1		BZ5088		47900	7.7	2	--	--	5560	18000	0.90	2400	0.004	0.448	0.452	0.18	--	--	--
	Triplicate	31-Oct-2011	10:01	AH2 BOTTOM TRIPLICATE 2		BZ5089		48000	7.7	3	--	--	5520	19000	0.90	2700	0.003	0.402	0.405	0.13	--	--	--
								0%	0%	<5xDL			1%	3%	0%	6%	16%	6%	6%	0%			
	Sample	15-Nov-2011	10:08	AH2 BOTTOM		CD1925		--	--	--	7.50	< 5.0	--	--	--	--	--	--	0.443	--	0.81	0.069	0.077
	Triplicate	15-Nov-2011	10:08	AH2 BOTTOM TRIPLICATE 1		CD1928		--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	0.407	--	0.66	0.071	0.075
	Triplicate	15-Nov-2011	10:08	AH2 BOTTOM TRIPLICATE 2		CD1931		--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	0.421	--	0.75	0.071	0.077
											<5xDL	<5xDL							4%		10%	2%	2%
	Sample	08-Feb-2012	10:47	AH2 BOTTOM		CR3972		46800	7.8	2	--	--	5320	18000	0.93	2520	0.002	0.367	0.369	0.025	--	--	--
	Triplicate	08-Feb-2012	10:47	AH2 BOTTOM TRPLICATE 1		CR3973		46700	7.8	< 2	--	--	5370	18000	0.93	2470	0.002	0.371	0.373	0.029	--	--	--
	Triplicate	08-Feb-2012	10:47	AH2 BOTTOM TRIPLICATE 2		CR3974		46900	7.8	< 2	--	--	5340	18000	0.93	2470	0.002	0.363	0.365	0.053	--	--	--
								0%	0%	<5xDL			0%	0%	1%	0%	1%	1%	0%				
	Sample	21-Feb-2012	13:37	AH2 BOTTOM		CT8285		--	--	--	< 5.0	--	--	--	--	--	--	--	0.385	--	< 0.20	0.068	0.072
	Triplicate	21-Feb-2012	13:37	AH2 BOTTOM TRIPLICATE 1		CT8288		--	--	--	< 5.0	--	--	--	--	--	--	--	0.375	--	< 0.20	0.067	0.075
	Triplicate	21-Feb-2012	13:37	AH2 BOTTOM TRIPLICATE 2		CT8291		--	--	--	< 5.0	--	--	--	--	--	--	--	0.38	--	< 0.20	0.068	0.076
											<5xDL								1%		<5xDL	1%	3%
	Sample	15-May-2012	09:19	AH2 BOTTOM		DK6176		46600	7.9	6	--	--	5090	17000	0.80	2500	0.004	0.232	0.236	0.027	--	--	--
	Triplicate	15-May-2012	09:19	AH2 BOTTOM TRIPLICATE 1		DK6177		46600	7.9	3	--	--	5010	18000	0.80	2610	0.004	0.26	0.264	0.027	--	--	--
	Triplicate	15-May-2012	09:19	AH2 BOTTOM TRIPLICATE 2		DK6178		46400	7.9	4	--	--	5100	18000	0.80	2640	0.003	0.22	0.223	0.028	--	--	--
								0%	0%	35%			1%	3%	0%	3%	16%	9%	9%	0%			
	Sample	28-May-2012	09:23	AH2 BOTTOM		DN2737		--	--	--	< 5.0	--	--	--	--	--	--	--	0.285	--	0.126	0.06	0.063
	Triplicate	28-May-2012	09:23	AH2 BOTTOM TRIPLICATE 1		DN2738		--	--	--	< 5.0	--	--	--	--	--	--	--	0.307	--	0.141	0.057	0.063
	Triplicate	28-May-2012	09:23	AH2 BOTTOM TRIPLICATE 2		DN2739		--	--	--	< 5.0	--	--	--	--	--	--	--	0.291	--	0.153	0.057	0.067
											<5xDL								4%		10%	0%	4%

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Albert Head																							
Spring 2010		28-Apr-2010	11:21	2 MID	23	T85107		47400	7.9	2	--	--	5500	18000	0.79	2900	0.003	0.206	0.209	0.15	--	--	--
		06-May-2010	11:19	2 MID	23	T97490		50400	7.9	< 2	--	--	5530	18000	0.8	2500	0.003	0.213	0.216	< 0.05	--	--	--
		12-May-2010	11:24	2 MID	20	U09665		49400	7.9	< 2	1.4	1.2	5530	18000	1.15	2700	0.005	0.186	0.191	0.058	0.2	0.056	0.056
		18-May-2010	14:45	2 MID	23	U21256		50400	7.9	3	--	--	5500	19000	0.81	2800	0.004	0.248	0.252	0.21	--	--	--
		25-May-2010	08:46	2 MID	20	U34667		50200	7.8	2	--	--	5270	18000	0.75	2700	0.005	0.182	0.187	0.12	--	--	--
		Minimum		20			47400	7.8	< 2			5270	18000	0.8	2500	0.003	0.182	0.187	0.058				
		Mean		22			49560	7.9	2			5466	18200	0.9	2720	0.004	0.207	0.211	0.135				
		Maximum		23			50400	7.9	3			5530	19000	1.2	2900	0.005	0.248	0.252	0.210				
		Standard Deviation					1276	0.0	1			111	447	0	148	0.001	0.026	0.026	0.063				
Summer 2010		26-Jul-2010	09:59	2 MID	20	V71677		48000	7.9	< 2	--	--	5360	18000	0.73	2700	0.005	0.171	0.176	0.11	--	--	--
		28-Jul-2010	10:15	2 MID	20	V78515		47100	7.9	3	--	--	5360	18000	0.75	2500	0.005	UN	UN	< 0.05	--	--	--
		03-Aug-2010	11:40	2 MID	24	V93183		47600	8	6	1.2	2	5340	19000	1.21	2500	0.003	0.177	0.18	0.14	0.18	0.059	0.066
		10-Aug-2010	10:17	2 MID	21	W10964		50700	7.9	4	--	--	5850	20000	0.63	2800	0.005	0.204	0.209	0.14	--	--	--
		17-Aug-2010	10:35	2 MID	23	W29470		49100	8	2	--	--	5850	17000	0.62	2600	0.005	0.266	0.271	0.18	--	--	--
		Minimum		20			47100	7.9	< 2			5340	17000	0.6	2500	0.003	0.171	0.176	0.110				
		Mean		22			48500	7.9	3			5552	18400	0.8	2620	0.005	0.205	0.209	0.143				
		Maximum		24			50700	8.0	6			5850	20000	1.2	2800	0.005	0.266	0.271	0.180				
		Standard Deviation					1434	0.1	2			272	1140	0	130	0.001	0.043	0.044	0.029				
Fall 2010		02-Nov-2010	11:25	2 MID	21	Y16475		52200	7.7	< 2	--	--	5430	18000	0.9	2800	0.005	0.43	0.435	0.077	--	--	--
		08-Nov-2010	10:41	2 MID	22	Y31441		50900	7.7	3	--	--	5260	18000	1.5	2700	0.005	0.423	0.428	0.075	--	--	--
		18-Nov-2010	12:57	2 MID	27	Y53948		49700	7.7	< 2	1.1	1.1	5350	19000	1	2500	0.006	0.419	0.425	0.082	0.04	0.071	0.073
		24-Nov-2010	10:14	2 MID	23	Y64504		50900	7.7	17	--	--	5700	16000	1.2	2400	0.003	0.438	0.441	0.085	--	--	--
		01-Dec-2010	10:01	2 MID	22	Y78812		50500	7.7	< 2	--	--	5160	17000	0.8	2700	0.002	0.44	0.442	0.09	--	--	--
		Minimum		21			49700	7.7	< 2			5160	16000	0.8	2400	0.002	0.419	0.425	0.075				
		Mean		23			50840	7.7	5			5380	17600	1.1	2620	0.004	0.430	0.434	0.082				
		Maximum		27			52200	7.7	17			5700	19000	1.5	2800	0.006	0.440	0.442	0.090				
		Standard Deviation					904	0.0	7			205	1140	0	164	0.002	0.009	0.008	0.006				
Winter 2011		16-Mar-2011	10:30	AH2 MID	21	AD7893		46600	7.8	6	--	--	5170	17000	0.85	2500	0.003	0.374	0.377	0.008	--	--	--
		22-Mar-2011	11:00	AH2 MID	24	AE7497		49500	7.8	4	--	--	5360	18000	1.1	2500	0.003	0.31	0.313	0.011	--	--	--
		28-Mar-2011	10:21	AH2 MID	23	AF6868		48900	7.8	< 2	0.8	1.1	5120	16000	1.1	2200	0.004	0.334	0.338	0.019	< 0.2	0.072	0.061
		07-Apr-2011	10:26	AH2 MID	21	AH3643		49600	7.8	2	--	--	5200	19000	1.1	2800	UN	0.37	0.376	0.02	--	--	--
		12-Apr-2011	09:50	AH2 MID	24	AI0205		49600	7.8	5	--	--	5050	17000	1.1	3000	0.006	0.33	0.336	0.01	--	--	--
		Minimum		21			46600	7.8	< 2			5050	16000	0.9	2200	0.003	0.310	0.313	0.008				
		Mean		23			48840	7.8	4			5180	17400	1.1	2600	0.004	0.344	0.348	0.014				
		Maximum		24			49600	7.8	6			5360	19000	1.1	3000	0.006	0.374	0.377	0.020				
		Standard Deviation					1286	0.0	2			116	1140	0	308	0.001	0.028	0.028	0.006				
Spring 2011		04-May-2011	09:55	AH2 MID	23	AL5076		47000	7.9	R	--	--	5350	18000	1	2500	0.004	0.302	0.306	0.032	--	--	--
		09-May-2011	09:23	AH2 MID	23	AM2497		47400	7.7	< 2	--	--	5480	17000	1	2600	0.003	0.316	0.319	0.022	--	--	--
		17-May-2011	09:05	AH2 MID	21	AN8358		47500	7.9	2	1.2	1.4	5450	19000	1.2	2500	0.003	0.34	0.343	0.038	< 0.2	0.063	0.067
		25-May-2011	08:42	AH2 MID	26	AP2243		46800	7.8	7	--	--	5320	17000	1.2	2500	0.004	0.316	0.32	0.069	--	--	--
		30-May-2011	08:46	AH2 MID	24	AP9784		46300	7.9	3	--	--	5570	18000	1.2	2700	0.005	0.277	0.282	0.033	--	--	--
		Minimum		21			46300	7.7	< 2			5320	17000	1.0	2500	0.003	0.277	0.282	0.022				
		Mean		23			47000	7.8	3			5434	17800	1.1	2560	0.004	0.310	0.314	0.039				
		Maximum		26			47500	7.9	7			5570	19000	1.2	2700	0.005	0.340	0.343	0.069				
		Standard Deviation					485	0.1	3			101	837	0	89	0.001	0.023	0.022	0.018				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Albert Head																							
Summer 2011		20-Jul-2011	09:35	AH2 MID	23	BB0178		47600	7.7	< 2	---	---	5290	18000	1	2600	0.006	0.364	0.37	0.058	---	---	---
		26-Jul-2011	10:12	AH2 MID	22	BC3659		45000	7.7	9	---	---	5200	19000	0.89	2500	0.006	0.284	0.29	0.059	---	---	---
		02-Aug-2011	09:20	AH2 MID	27	BD6257		47200	7.7	5	< 5	< 5	5360	18000	0.81	2600	0.005	0.321	0.326	0.05	< 0.2	0.053	0.057
		09-Aug-2011	09:40	AH2 MID	23	BF4976		46600	7.8	5	---	---	5190	18000	0.87	2400	0.004	0.358	0.362	0.043	---	---	---
		16-Aug-2011	08:50	AH2 MID	23	BG7561		46400	7.6	10	---	---	5450	19000	0.85	2500	0.005	0.351	0.356	0.035	---	---	---
						Minimum	22	45000	7.6	< 2			5190	18000	0.8	2400	0.004	0.284	0.290	0.035			
					Mean	24	46560	7.7	6			5298	18400	0.9	2520	0.005	0.336	0.341	0.049				
					Maximum	27	47600	7.8	10			5450	19000	1.0	2600	0.006	0.364	0.370	0.059				
					Standard Deviation		994	0.1	4			110	548	0	84	0.001	0.033	0.033	0.010				
Fall 2011		31-Oct-2011	10:17	AH2 MID	21	BZ5084		47700	7.7	< 2	---	---	5550	19000	0.91	2540	0.004	0.427	0.431	0.16	---	---	---
		07-Nov-2011	10:07	AH2 MID	23	CB4244		47000	7.7	< 2	---	---	5340	18000	0.86	2580	0.005	0.363	0.368	0.095	---	---	---
		15-Nov-2011	10:29	AH2 MID	20	CD1924		47800	7.7	8	< 5.0	< 5.0	5440	19000	0.85	2530	0.003	0.396	0.399	0.01	0.75	0.07	0.074
		28-Nov-2011	09:55	AH2 MID	23	CF8401		46900	7.8	6	---	---	5240	19000	0.82	2590	0.003	0.354	0.357	0.01	---	---	---
		30-Nov-2011	10:09	AH2 MID	22	CG3479		46400	7.8	< 2	---	---	5520	19000	0.83	2690	0.003	0.342	0.345	0.13	---	---	---
						Minimum	20	46400	7.7	< 2			5240	18000	0.8	2530	0.003	0.342	0.345	0.010			
					Mean	22	47160	7.7	3			5418	18800	0.9	2586	0.004	0.376	0.380	0.081				
					Maximum	23	47800	7.8	8			5550	19000	0.9	2690	0.005	0.427	0.431	0.160				
					Standard Deviation		586	0.1	3			129	447	0	63	0.001	0.035	0.035	0.069				
Winter 2012		08-Feb-2012	11:04	AH2 MID	23	CR3969		46700	7.8	< 2	---	---	5370	17000	0.93	2320	< 0.002	0.366	0.366	< 0.0050	---	---	---
		15-Feb-2012	09:49	AH2 MID	23	CS7963		46500	7.8	2	---	---	5150	19000	0.87	2640	< 0.002	0.375	0.375	0.042	---	---	---
		21-Feb-2012	13:56	AH2 MID	21	CT8284		46800	7.7	3	< 5.0	< 5.0	5480	19000	0.91	2720	0.002	0.385	0.387	0.011	< 0.20	0.069	0.073
		27-Feb-2012	11:40	AH2 MID	23	CU8870		46800	7.8	3	---	---	5670	18000	0.82	2530	0.002	0.372	0.374	0.034	---	---	---
		04-Mar-2012	10:37	AH2 MID	23	CW2986		46400	7.7	< 2	---	---	5510	18000	0.85	2550	0.002	0.339	0.341	0.0064	---	---	---
						Minimum	21	46400	7.7	< 2			5150	17000	0.8	2320	0.002	0.339	0.341	0.006			
					Mean	23	46640	7.8	2			5436	18200	0.9	2552	0.002	0.367	0.369	0.023				
					Maximum	23	46800	7.8	3			5670	19000	0.9	2720	0.002	0.385	0.387	0.042				
					Standard Deviation		182	0.1	1			193	837	0	150	0.000	0.017	0.017	0.017				
Spring 2012		15-May-2012	09:38	AH2 MID	21	DK6173		46500	7.9	5	---	---	5320	18000	0.81	2660	0.004	0.237	0.241	0.027	---	---	---
		22-May-2012	09:30	AH2 MID	20	DL9771		46300	7.9	3	---	---	5380	18000	0.8	2480	0.003	0.245	0.248	0.029	---	---	---
		28-May-2012	09:43	AH2 MID	22	DN2734		47600	7.8	< 2	< 5.0	< 5.0	5460	16000	0.91	2290	0.004	0.278	0.282	0.026	0.161	0.056	0.064
		31-May-2012	09:28	AH2 MID	23	DO0726		47600	7.8	< 2	---	---	5470	18000	0.82	2570	0.005	0.278	0.283	0.048	---	---	---
		06-Jun-2012	10:41	AH2 MID	23	DP4998		48400	7.8	13	---	---	5450	18000	0.89	2310	0.006	0.28	0.286	0.035	---	---	---
						Minimum	20	46300	7.8	< 2			5320	16000	0.8	2290	0.003	0.237	0.241	0.026			
					Mean	22	47280	7.8	5			5416	17600	0.8	2462	0.004	0.264	0.268	0.033				
					Maximum	23	48400	7.9	13			5470	18000	0.9	2660	0.006	0.280	0.286	0.048				
					Standard Deviation		870	0.1	5			64	894	0	161	0.001	0.021	0.022	0.009				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Albert Head - Mid QA/QC																							
	Sample	16-Mar-2011	10:30	AH2 MID		AD7893		46600	7.8	6	--	--	5170	17000	0.85	2500	0.003	0.374	0.377	0.008	--	--	--
	Triplicate	16-Mar-2011	10:30	AH2 MID TRIPLICATE 1		AD7894		48700	7.8	9	--	--	5020	18000	0.84	2400	0.003	0.379	0.382	0.02	--	--	--
	Triplicate	16-Mar-2011	10:30	AH2 MID TRIPLICATE 2		AD7895		47300	7.8	8	--	--	5010	19000	0.85	2500	0.004	0.38	0.384	0.028	--	--	--
								2%	0%	20%			2%	6%	1%	2%	17%	1%	1%	0%			
	Sample	28-Mar-2011	10:21	AH2 MID		AF6868		--	--	--	0.80	1.1	--	--	--	--	--	--	0.338	--	< 0.2	0.072	0.061
	Triplicate	28-Mar-2011	10:21	AH2 MID TRIPLICATE 1		AF6871		--	--	--	< 1	1.5	--	--	--	--	--	--	0.358	--	< 0.2	0.069	0.065
	Triplicate	28-Mar-2011	10:21	AH2 MID TRIPLICATE 2		AF6874		--	--	--	1.2	1.6	--	--	--	--	--	--	0.358	--	< 0.2	0.065	0.063
											<5xDL	19%							3%		<5xDL	5%	3%
	Sample	04-May-2011	09:55	AH2 MID		AL5076		47000	7.9	12	--	--	5350	18000	1	2500	0.004	0.302	0.306	0.032	--	--	--
	Triplicate	04-May-2011	09:55	AH2 MID TRIPLICATE 1		AL5077		47200	7.9	22	--	--	5320	18000	1	2500	0.004	0.296	0.300	0.029	--	--	--
	Triplicate	04-May-2011	09:55	AH2 MID TRIPLICATE 2		AL5078		47300	7.9	13	--	--	5340	18000	1	2500	0.004	0.304	0.308	0.03	--	--	--
								0%	0%	36%			0%	0%	0%	0%	0%	1%	0%				
	Sample	17-May-2011	09:05	AH2 MID		AN8358		47500.00	7.90	2.00	1.2	1.4	5450.00	19000.00	1.20	2500.00	0.00	0.34	0.343	0.04	< 0.2	0.063	0.067
	Triplicate	17-May-2011	09:05	AH MID T1		AN8361		--	--	--	0.6	1.3	--	--	--	--	--	--	0.326	--	< 0.2	0.06	0.066
	Triplicate	17-May-2011	09:05	AH MID T2		AN8364		--	--	--	1.3	1.1	--	--	--	--	--	--	0.37	--	< 0.2	0.064	0.074
											<5xDL	12%							6%		<5xDL	3%	6%
	Sample	20-Jul-2011	09:35	AH2 MID		BB0178		47600	7.7	< 2	--	--	5290	18000	1	2600	0.006	0.364	0.370	0.058	--	--	--
	Triplicate	20-Jul-2011	09:35	AH2 MID TRIPLICATE 1		BB0179		47500	7.7	< 2	--	--	5280	18000	1.05	2300	0.006	0.409	0.415	0.055	--	--	--
	Triplicate	20-Jul-2011	09:35	AH2 MID TRIPLICATE 2		BB0180		47800	7.7	< 2	--	--	5190	18000	1.1	2300	0.006	0.288	0.294	0.023	--	--	--
								0%	0%	<5xDL			1%	0%	5%	7%	0%	17%	17%	0%			
	Sample	02-Aug-2011	09:20	AH2 MID		BD6257		--	--	--	< 5	< 5	--	--	--	--	--	--	0.326	--	< 0.2	0.053	0.057
	Triplicate	02-Aug-2011	09:20	AH2 MID TRIPLICATE 1		BD6260		--	--	--	< 5	< 5	--	--	--	--	--	--	0.330	--	< 0.2	0.053	0.057
	Triplicate	02-Aug-2011	09:20	AH2 MID TRIPLICATE 2		BD6263		--	--	--	6	< 5	--	--	--	--	--	--	0.330	--	< 0.2	0.053	0.057
											<5xDL	<5xDL							1%		<5xDL	0%	0%
	Sample	31-Oct-2011	10:17	AH2 MID		BZ5084		47700	7.7	< 2	--	--	5550	19000	0.91	2540	0.004	0.427	0.431	0.16	--	--	--
	Triplicate	31-Oct-2011	10:17	AH2 MID TRIPCATE 1		BZ5085		47700	7.7	2	--	--	5520	19000	0.91	2680	0.004	0.401	0.405	0.21	--	--	--
	Triplicate	31-Oct-2011	10:17	AH2 MID TRIPCATE 2		BZ5086		47700	7.7	< 2	--	--	5510	18000	0.91	2490	0.004	0.43	0.434	0.13	--	--	--
								0%	0%	<5xDL			0%	3%	0%	4%	0%	4%	4%	0%			
	Sample	15-Nov-2011	10:29	AH2 MID		CD1924		--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	0.399	--	0.75	0.070	0.074
	Triplicate	15-Nov-2011	10:29	AH2 MID TRIPLICATE 1		CD1927		--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	0.399	--	0.59	0.071	0.077
	Triplicate	15-Nov-2011	10:29	AH2 MID TRIPLICATE 2		CD1930		--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	0.416	--	0.54	0.070	0.074
											<5xDL	<5xDL							2%		18%	1%	2%
	Sample	08-Feb-2012	11:04	AH2 MID		CR3969		46700	7.8	< 2	--	--	5370	17000	0.93	2320	< 0.002	0.366	0.366	< 0.0050	--	--	--
	Triplicate	08-Feb-2012	11:04	AH2 MID TRIPLICATE 1		CR3970		46800	7.8	< 2	--	--	5280	18000	< 0.010	2390	< 0.002	0.361	0.361	0.015	--	--	--
	Triplicate	08-Feb-2012	11:04	AH2 MID TRIPLICATE 2		CR3971		46600	7.8	< 2	--	--	5290	17000	0.92	2310	0.002	0.348	0.35	0.022	--	--	--
								0%	0%	<5xDL			1%	3%	1%	2%	<5xDL	3%	2%	0%			
	Sample	21-Feb-2012	13:56	AH2 MID		CT8284		--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	0.387	--	< 0.20	0.069	0.073
	Triplicate	21-Feb-2012	13:56	AH2 MID TRIPLICATE 1		CT8287		--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	0.354	--	0.23	0.068	0.071
	Triplicate	21-Feb-2012	13:56	AH2 MID TRIPLICATE 2		CT8290		--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	0.38	--	< 0.20	0.069	0.075
											<5xDL								5%		<5xDL	1%	3%
	Sample	15-May-2012	09:38	AH2 MID		DK6173		46500	7.9	5	--	--	5320	18000	0.81	2660	0.004	0.237	0.241	0.027	--	--	--
	Triplicate	15-May-2012	09:38	AH2 MID TRIPLICATE 1		DK6174		46500	7.9	5	--	--	5370	17000	0.81	2580	0.004	0.223	0.227	0.027	--	--	--
	Triplicate	15-May-2012	09:38	AH2 MID TRIPLICATE 2		DK6175		46300	7.9	4	--	--	5240	18000	0.8	2590	0.004	0.231	0.235	0.027	--	--	--
								0%	0%	12%			1%	3%	1%	2%	0%	3%	3%	0%			
	Sample	28-May-2012	09:43	AH2 MID		DN2734		--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	0.282	--	0.161	0.056	0.064
	Triplicate	28-May-2012	09:43	AH2 MID TRIPLICATE 1		DN2735		--	--	--	5.0	5.0	--	--	--	--	--	--	0.275	--	0.206	0.056	0.062
	Triplicate	28-May-2012	09:43	AH2 MID TRIPLICATE 2		DN2736		--	--	--	5.0	5.0	--	--	--	--	--	--	0.284	--	0.161	0.055	0.061
											<5xDL								2%		15%	1%	2%

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)	
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--		
Albert Head																								
Spring 2010		28-Apr-2010	11:32	2 SURFACE	1	T85106		47200	7.9	< 2	--	--	5460	17000	0.8	2800	0.003	0.206	0.209	0.13	--	--	--	
		06-May-2010	11:29	2 SURFACE	1	T97489		44500	7.9	< 2	--	--	5480	18000	0.79	2500	0.003	0.206	0.209	< 0.05	--	--	--	
		12-May-2010	11:37	2 SURFACE	1	U09664		49000	7.9	2	1.2	1.2	5600	18000	1.15	2700	0.004	0.178	0.182	0.058	0.5	0.056	0.056	
		18-May-2010	14:52	2 SURFACE	1	U21255		49800	7.9	6	--	--	5510	17000	0.8	2600	0.004	0.23	0.234	0.18	--	--	--	
		25-May-2010	08:55	2 SURFACE	1	U34666		51800	7.8	< 2	--	--	5200	18000	0.75	2800	0.005	0.173	0.178	0.11	--	--	--	
								Minimum	44500	7.8	< 2			5200	17000	0.8	2500	0.003	0.173	0.178	0.058			
							Mean	48460	7.9	2			5450	17600	0.9	2680	0.004	0.199	0.202	0.120				
							Maximum	51800	7.9	6			5600	18000	1.2	2800	0.005	0.230	0.234	0.180				
							Standard Deviation	2762	0.0	2			150	548	0	130	0.001	0.023	0.023	0.050				
Summer 2010		26-Jul-2010	10:06	2 SURFACE	1	V71676		47600	8	< 2	--	--	5340	18000	0.73	2600	0.005	0.15	0.155	0.1	--	--	--	
		28-Jul-2010	10:23	2 SURFACE	1	V78514		47000	7.9	3	--	--	5360	18000	0.75	2000	0.005	UN	UN	0.08	--	--	--	
		03-Aug-2010	11:55	2 SURFACE	1	V93182		46800	8.2	12	1.4	3.1	5430	18000	0.73	1900	0.003	0.119	0.122	0.16	0.16	0.029	0.059	
		10-Aug-2010	10:26	2 SURFACE	1	W10963		50900	8	< 2	--	--	5690	19000	0.63	2800	0.005	0.181	0.186	0.15	--	--	--	
		17-Aug-2010	10:45	2 SURFACE	1	W29469		48800	7.9	< 2	--	--	5910	18000	0.62	2600	0.005	0.275	0.28	0.18	--	--	--	
								Minimum	46800	7.9	< 2			5340	18000	0.6	1900	0.003	0.119	0.122	0.080			
							Mean	48220	8.0	4			5546	18200	0.7	2380	0.005	0.181	0.186	0.134				
							Maximum	50900	8.2	12			5910	19000	0.8	2800	0.005	0.275	0.280	0.180				
							Standard Deviation	1689	0.1	5			247	447	0	402	0.001	0.067	0.068	0.042				
Fall 2010		02-Nov-2010	11:34	2 SURFACE	1	Y16474		51100	7.7	< 2	--	--	5450	18000	1	3000	0.005	0.425	0.43	0.087	--	--	--	
		08-Nov-2010	10:50	2 SURFACE	1	Y31440		51900	7.7	< 2	--	--	5320	16000	1	2500	0.005	0.43	0.435	0.087	--	--	--	
		18-Nov-2010	13:05	2 SURFACE	1	Y53947		47900	7.7	3	1.4	< 3	5290	16000	1	2600	0.006	0.421	0.427	0.076	< 0.04	0.073	0.08	
		24-Nov-2010	10:25	2 SURFACE	1	Y64503		50700	7.7	13	--	--	5700	16000	1.2	2500	0.003	0.425	0.428	0.085	--	--	--	
		01-Dec-2010	10:11	2 SURFACE	1	Y78811		50500	7.7	< 2	--	--	5210	16000	0.9	2500	0.002	0.43	0.432	< 0.05	--	--	--	
								Minimum	47900	7.7	< 2			5210	16000	0.9	2500	0.002	0.421	0.427	0.076			
							Mean	50420	7.7	4			5394	16400	1.0	2620	0.004	0.426	0.430	0.084				
							Maximum	51900	7.7	13			5700	18000	1.2	3000	0.006	0.430	0.435	0.087				
							Standard Deviation	1507	0.0	5			192	894	0	217	0.002	0.004	0.003	0.005				
Winter 2011		16-Mar-2011	10:45	AH2 SURFACE	1	AD7890		44000	7.5	6	--	--	5060	18000	0.84	2500	0.004	0.392	0.396	0.11	--	--	--	
		22-Mar-2011	11:08	AH2 SURFACE	1	AE7496		45800	7.8	< 2	--	--	5390	18000	1.1	2400	0.004	0.324	0.328	0.018	--	--	--	
		28-Mar-2011	10:35	AH2 SURFACE	1	AF6867		49400	7.8	< 2	1.2	1.7	5170	16000	1.1	2400	0.004	0.321	0.325	0.022	0.2	0.072	0.064	
		07-Apr-2011	10:35	AH2 SURFACE	1	AH3642		49500	7.8	< 2	--	--	5190	18000	1.1	2500	UN	0.342	0.348	0.013	--	--	--	
		12-Apr-2011	09:57	AH2 SURFACE	1	AI0204		50900	7.8	3	--	--	5130	18000	1.1	2800	0.006	0.328	0.334	0.013	--	--	--	
								Minimum	44000	7.5	< 2			5060	16000	0.8	2400	0.004	0.321	0.325	0.013			
							Mean	47920	7.7	2			5188	17600	1.0	2520	0.005	0.341	0.346	0.035				
							Maximum	50900	7.8	6			5390	18000	1.1	2800	0.006	0.392	0.396	0.110				
							Standard Deviation	2891	0.1	2			123	894	0	164	0.001	0.029	0.029	0.042				
Spring 2011		04-May-2011	10:11	AH2 SURFACE	1	AL5073		47500	7.8	R	--	--	5330	18000	1	2500	0.004	0.296	0.3	UN	--	--	--	
		09-May-2011	09:30	AH2 SURFACE	1	AM2496		47100	8	< 2	--	--	5640	19000	1	2800	0.004	0.292	0.296	0.023	--	--	--	
		17-May-2011	09:17	AH2 SURFACE	1	AN8357		47300	7.8	2	0.6	1.3	5500	17000	1.2	2400	0.003	0.357	0.36	0.045	< 0.2	0.064	0.068	
		25-May-2011	08:50	AH2 SURFACE	1	AP2242	Sample AP2242 was con		47100	7.8	< 2	--	--	5330	15000	1.2	2900	0.004	0.336	0.34	0.066	--	--	--
		30-May-2011	08:53	AH2 SURFACE	1	AP9783		45800	7.9	2	--	--	5400	19000	1.1	2800	0.004	0.268	0.272	0.046	--	--	--	
								Minimum	45800	7.8	< 2			5330	15000	1.0	2400	0.003	0.268	0.272	0.023			
							Mean	46960	7.9	2			5440	17600	1.1	2680	0.004	0.310	0.314	0.045				
							Maximum	47500	8.0	2			5640	19000	1.2	2900	0.004	0.357	0.360	0.066				
							Standard Deviation	669	0.1	1			132	1673	0	217	0.000	0.036	0.036	0.018				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General					Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Albert Head																							
	Summer 2011	20-Jul-2011	09:55	AH2 SURFACE	1	BB0175		47400	7.7	< 2	---	---	5260	17000	1	2500	0.006	0.421	0.427	UN	---	---	---
		26-Jul-2011	10:25	AH2 SURFACE	1	BC3658		43300	7.8	8	---	---	5130	18000	0.86	2300	0.005	0.263	0.268	0.042	---	---	---
		02-Aug-2011	09:30	AH2 SURFACE	1	BD6256		47200	7.6	4	< 5	< 5	5300	18000	0.81	2500	0.006	0.309	0.315	0.026	< 0.2	0.05	0.057
		09-Aug-2011	09:50	AH2 SURFACE	1	BF4975		46200	7.8	5	---	---	5240	18000	0.87	2400	0.004	0.347	0.351	0.025	---	---	---
		16-Aug-2011	09:00	AH2 SURFACE	1	BG7560		46100	7.6	13	---	---	5460	18000	0.87	2400	0.005	0.323	0.328	0.03	---	---	---
								Minimum	1	43300	7.6	< 2		5130	17000	0.8	2300	0.004	0.263	0.268	0.025		
							Mean	1	46040	7.7	6		5278	17800	0.9	2420	0.005	0.333	0.338	0.031			
							Maximum	1	47400	7.8	13		5460	18000	1.0	2500	0.006	0.421	0.427	0.042			
							Standard Deviation		1638	0.1	5		120	447	0	84	0.001	0.058	0.058	0.008			
	Fall 2011	31-Oct-2011	10:36	AH2 SURFACE	1	BZ5081		47600	7.7	3	---	---	5620	19000	0.94	2750	0.004	0.432	0.436	0.18	---	---	---
		07-Nov-2011	10:20	AH2 SURFACE	1	CB4243		47100	7.7	< 2	---	---	5310	18000	0.84	2400	0.005	0.386	0.391	0.18	---	---	---
		15-Nov-2011	10:45	AH2 SURFACE	1	CD1923		47700	7.7	8	6	< 5.0	5410	19000	0.83	2560	0.002	0.397	0.399	0.022	0.6	0.07	0.077
		28-Nov-2011	10:05	AH2 SURFACE	1	CF8400		46900	7.8	< 2	---	---	5280	18000	0.82	2590	0.003	0.357	0.36	0.013	---	---	---
		30-Nov-2011	10:18	AH2 SURFACE	1	CG3478		46200	7.8	< 2	---	---	5330	18000	0.82	2530	0.002	0.385	0.387	0.15	---	---	---
								Minimum	1	46200	7.7	< 2		5280	18000	0.8	2400	0.002	0.357	0.360	0.013		
							Mean	1	47100	7.7	3		5390	18400	0.9	2566	0.003	0.391	0.395	0.109			
							Maximum	1	47700	7.8	8		5620	19000	0.9	2750	0.005	0.432	0.436	0.180			
							Standard Deviation		604	0.1	3		137	548	0	126	0.001	0.027	0.027	0.084			
	Winter 2012	08-Feb-2012	11:21	AH2 SURFACE	1	CR3966		46700	7.8	< 2	---	---	5230	17000	0.93	2340	< 0.002	0.346	0.346	UN	---	---	---
		15-Feb-2012	09:56	AH2 SURFACE	1	CS7962		46600	7.8	< 2	---	---	5440	18000	0.87	2560	< 0.002	0.361	0.361	0.037	---	---	---
		21-Feb-2012	14:25	AH2 SURFACE	1	CT8283		46700	7.8	3	< 5.0 '5.8	---	5360	18000	0.95	2660	< 0.002	0.418	0.418	0.013	0.44	0.068	0.073
		27-Feb-2012	12:00	AH2 SURFACE	1	CU8869		46900	7.8	3	---	---	5810	18000	0.82	2490	0.002	0.396	0.398	0.031	---	---	---
		04-Mar-2012	10:45	AH2 SURFACE	1	CW2985		46100	7.7	< 2	---	---	5460	18000	0.84	2560	0.002	0.296	0.298	0.012	---	---	---
								Minimum	1	46100	7.7	< 2		5230	17000	0.8	2340	0.002	0.296	0.298	0.012		
							Mean	1	46600	7.8	2		5460	17800	0.9	2522	0.002	0.363	0.364	0.023			
							Maximum	1	46900	7.8	3		5810	18000	1.0	2660	0.002	0.418	0.418	0.037			
							Standard Deviation		300	0.0	1		216	447	0	118	0.000	0.047	0.047	0.013			
	Spring 2012	15-May-2012	09:53	AH2 SURFACE	1	DK6170		46500	7.9	9	---	---	5340	17000	0.8	2520	0.004	0.22	0.224	0.025	---	---	---
		22-May-2012	09:36	AH2 SURFACE	1	DL9770		46300	7.9	3	---	---	5460	18000	0.81	2430	0.003	0.215	0.218	0.029	---	---	---
		28-May-2012	09:59	AH2 SURFACE	1	DN2731		47300	7.8	< 2	< 5.0 '5.0	---	5380	18000	0.89	2490	0.004	0.256	0.26	0.021	0.198	0.053	0.059
		31-May-2012	09:34	AH2 SURFACE	1	DO0727		47200	7.9	< 2	---	---	5380	18000	0.81	2510	0.005	0.247	0.252	0.034	---	---	---
		06-Jun-2012	10:51	AH2 SURFACE	1	DP4999		48200	7.8	12	---	---	5440	18000	0.88	2400	0.006	0.298	0.304	0.035	---	---	---
								Minimum	1	46300	7.8	< 2		5340	17000	0.8	2400	0.003	0.215	0.218	0.021		
							Mean	1	47100	7.9	5		5400	17800	0.8	2470	0.004	0.247	0.252	0.029			
							Maximum	1	48200	7.9	12		5460	18000	0.9	2520	0.006	0.298	0.304	0.035			
							Standard Deviation		752	0.1	5		49	447	0	52	0.001	0.033	0.034	0.006			

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	--
Albert Head - Surface QA/QC																							
	Sample	16-Mar-2011	10:45	AH2 SURFACE		AD7890		44000	7.5	6	--	--	5060	18000	0.84	2500	0.004	0.392	0.396	0.110	--	--	--
	Triplicate	16-Mar-2011	10:45	AH2 SURFACE TRIPLICATE 1		AD7891		49400	7.8	8	--	--	5160	17000	0.85	2500	0.003	0.383	0.386	0.109	--	--	--
	Triplicate	16-Mar-2011	10:45	AH2 SURFACE TRIPLICATE 2		AD7892		46000	7.8	7	--	--	5100	19000	0.84	2500	0.004	0.398	0.402	0.027	--	--	--
								6%	2%	14%			1%	6%	1%	0%	<5xDL	2%	2%	<5xDL			
	Sample	28-Mar-2011	10:35	AH2 SURFACE		AF6867		--	--	--	1.2	1.7	--	--	--	--	--	--	0.325	--	0.2	0.072	0.064
	Triplicate	28-Mar-2011	10:35	AH2 SURFACE TRIPLICATE 1		AF6870		--	--	--	1.3	1.4	--	--	--	--	--	--	0.349	--	< 0.2	0.070	0.063
	Triplicate	28-Mar-2011	10:35	AH2 SURFACE TRIPLICATE 2		AF6873		--	--	--	1.1	1.5	--	--	--	--	--	--	0.346	--	< 0.2	0.066	0.063
										8%	10%							4%	<5xDL	4%	1%		
	Sample	04-May-2011	10:11	AH2 SURFACE		AL5073		47500	7.8	9	--	--	5330	18000	1	2500	0.004	0.296	0.3	0.053	--	--	--
	Triplicate	04-May-2011	10:11	AH2 SURFACE TRIPLICATE 1		AL5074		47000	7.9	17	--	--	5460	17000	1	2300	0.004	0.288	0.292	0.030	--	--	--
	Triplicate	04-May-2011	10:11	AH2 SURFACE TRIPLICATE 2		AL5075		47100	7.9	7	--	--	5440	18000	1	2500	0.004	0.281	0.285	0.028	--	--	--
								1%	0%	48%			1%	3%	0%	5%	0%	3%	3%	38%			
	Sample	17-May-2011	09:17	AH2 SURFACE		AN8357		47300.00	7.80	2.00	0.6	1.3	5500.00	17000.00	1.20	2400.00	0.00	0.36	0.36	0.05	< 0.2	0.064	0.068
	Triplicate	17-May-2011	09:17	AH SURF T1		AN8360		--	--	--	1.5	1.6	--	--	--	--	--	--	0.336	--	< 0.2	0.064	0.065
	Triplicate	17-May-2011	09:17	AH SURF T2		AN8363		--	--	--	1	0.6	--	--	--	--	--	--	0.336	--	< 0.2	0.068	0.068
										<5xDL	<5xDL							4%	<5xDL	4%	3%		
	Sample	20-Jul-2011	09:55	AH2 SURFACE		BB0175		47400	7.7	< 2	--	--	5260	17000	1	2500	0.006	0.421	0.427	0.110	--	--	--
	Triplicate	20-Jul-2011	09:55	AH2 SURFACE TRIPLICATE 1		BB0176		47600	7.7	< 2	--	--	5100	18000	1.05	2300	0.006	0.331	0.337	0.037	--	--	--
	Triplicate	20-Jul-2011	09:55	AH2 SURFACE TRIPLICATE 2		BB0177		47200	7.7	< 2	--	--	5120	18000	1	2300	0.005	0.417	0.422	0.061	--	--	--
								0%	0%	<5xDL			2%	3%	3%	5%	10%	13%	13%	54%			
	Sample	02-Aug-2011	09:30	AH2 SURFACE		BD6256		--	--	--	< 5	< 5	--	--	--	--	--	--	0.315	--	< 0.2	0.05	0.057
	Triplicate	02-Aug-2011	09:30	AH2 SURFACE TRIPLICATE 1		BD6259		--	--	--	< 5	< 5	--	--	--	--	--	--	0.31	--	< 0.2	0.044	0.059
	Triplicate	02-Aug-2011	09:30	AH2 SURFACE TRIPLICATE 2		BD6262		--	--	--	< 5	8	--	--	--	--	--	--	0.31	--	< 0.2	0.044	0.058
										<5xDL	<5xDL							1%	<5xDL	8%	2%		
	Sample	31-Oct-2011	10:36	AH2 SURFACE		BZ5081		47600	7.7	3	--	--	5620	19000	0.94	2750	0.004	0.432	0.436	0.18	--	--	--
	Triplicate	31-Oct-2011	10:36	AH2 SURFACE TRIPLICATE 1		BZ5082		47700	7.7	< 2	--	--	5550	18000	0.92	2460	0.004	0.438	0.442	0.20	--	--	--
	Triplicate	31-Oct-2011	10:36	AH2 SURFACE TRIPLICATE 2		BZ5083		47600	7.7	< 2	--	--	5530	18000	0.92	2490	0.004	0.42	0.424	0.17	--	--	--
								0%	0%	<5xDL			1%	3%	1%	6%	0%	2%	2%	8%			
	Sample	15-Nov-2011	10:45	AH2 SURFACE		CD1923		--	--	--	6	< 5.0	--	--	--	--	--	--	0.399	--	0.6	0.07	0.077
	Triplicate	15-Nov-2011	10:45	AH2 SURFACE TRIPLICATE 1		CD1926		--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	0.393	--	0.76	0.071	0.074
	Triplicate	15-Nov-2011	10:45	AH2 SURFACE TRIPLICATE 2		CD1929		--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	0.404	--	0.7	0.071	0.077
										<5xDL	<5xDL							1%	12%	1%	2%		
	Sample	08-Feb-2012	11:21	AH2 SURFACE		CR3966		46700	7.8	< 2	--	--	5230	17000	0.93	2340	< 0.002	0.346	0.346	0.040	--	--	--
	Triplicate	08-Feb-2012	11:21	AH2 SURFACE TRIPLICATE 1		CR3967		46600	7.8	< 2	--	--	5140	17000	0.95	2390	< 0.002	0.36	0.36	0.048	--	--	--
	Triplicate	08-Feb-2012	11:21	AH2 SURFACE TRIPLICATE 2		CR3968		47800	7.8	< 2	--	--	5200	17000	0.95	2380	< 0.002	0.376	0.376	0.014	--	--	--
								1%	0%	<5xDL			1%	0%	1%	1%	<5xDL	4%	4%	52%			
	Sample	21-Feb-2012	14:25	AH2 SURFACE		CT8283		--	--	--	< 5.0	< 5.8	--	--	--	--	--	--	0.418	--	0.44	0.068	0.073
	Triplicate	21-Feb-2012	14:25	AH2 SURFACE TRIPLICATE 1		CT8286		--	--	--	< 5.0	--	--	--	--	--	--	--	0.37	--	0.38	0.068	0.073
	Triplicate	21-Feb-2012	14:25	AH2 SURFACE TRIPLICATE 2		CT8289		--	--	--	< 5.0	--	--	--	--	--	--	--	0.374	--	< 0.20	0.067	0.075
										<5xDL								7%	10%	1%	2%		
	Sample	15-May-2012	09:53	AH2 SURFACE		DK6170		46500	7.9	9	--	--	5340	17000	0.8	2520	0.004	0.22	0.224	0.025	--	--	--
	Triplicate	15-May-2012	09:53	AH2 SURFACE TRIPLICATE 1		DK6171		46300	7.9	3	--	--	5350	18000	0.81	2510	0.004	0.231	0.235	0.023	--	--	--
	Triplicate	15-May-2012	09:53	AH2 SURFACE TRIPLICATE 2		DK6172		46300	7.9	7	--	--	5210	18000	0.81	2540	0.004	0.238	0.242	0.025	--	--	--
								0%	0%	<5xDL			1%	3%	1%	1%	0%	4%	4%	5%			
	Sample	28-May-2012	09:59	AH2 SURFACE		DN2731		--	--	--	< 5.0	< 5.0	--	--	--	2490	0.004	--	0.26	--	0.198	0.053	0.059
	Triplicate	28-May-2012	09:59	AH2 SURFACE TRIPLICATE 1		DN2732		--	--	--	< 5.0	--	--	--	--	--	--	--	0.254	--	0.164	0.051	0.058
	Triplicate	28-May-2012	09:59	AH2 SURFACE TRIPLICATE 2		DN2733		--	--	--	< 5.0	--	--	--	--	--	--	--	0.27	--	0.145	0.052	0.056
										<5xDL								3%	16%	2%	3%		

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General					Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Finnerty Cove																							
FC-7	Summer 2010	26-Jul-2010	12:58	7 BOTTOM	47	V71694		46800	7.8	7	---	---	5190	18000	0.73	2500	0.005	0.181	0.186	0.13	---	---	---
		28-Jul-2010	14:41	7 BOTTOM	43	V78543		46000	8	6	---	---	5500	17000	0.74	1900	0.004	UN	UN	0.09	---	---	---
		03-Aug-2010	17:10	7 BOTTOM	48	V93211		48200	7.9	9	1.3	1.7	5570	19000	0.75	2800	0.003	0.258	0.261	0.16	0.14	0.068	0.075
		10-Aug-2010	13:26	7 BOTTOM	44	W10993		50300	7.9	< 2	---	---	5170	19000	0.66	2700	0.005	0.244	0.249	0.15	---	---	---
		17-Aug-2010	13:56	7 BOTTOM	49	W29573		51000	7.8	4	---	---	5360	20000	0.66	3000	0.005	0.315	0.32	0.2	---	---	---
					Minimum	43		46000	7.8	< 2			5170	17000	0.7	1900	0.003	0.181	0.186	0.090			
					Mean	46		48460	7.9	5			5358	18600	0.7	2580	0.004	0.250	0.254	0.146			
					Maximum	49		51000	8.0	9			5570	20000	0.8	3000	0.005	0.315	0.320	0.200			
					Standard Deviation			2163	0.1	3			179	1140	0	421	0.001	0.055	0.055	0.040			
	Fall 2010		02-Nov-2010	14:32	7 BOTTOM	42	Y16495		49500	7.8	5	---	---	5470	18000	1.2	2800	0.005	0.422	0.427	0.084	---	---
		08-Nov-2010	14:05	7 BOTTOM	50	Y31467		52100	7.7	5	---	---	5400	16000	1.1	2500	0.007	0.442	0.449	0.08	---	---	---
		18-Nov-2010	14:37	7 BOTTOM	49	Y53966		47500	7.7	< 2	1	1	5230	18000	1.1	2400	0.006	0.415	0.421	0.07	< 0.04	0.071	0.077
		24-Nov-2010	13:41	7 BOTTOM	45	Y64521		48800	7.7	9	---	---	5010	17000	1	2600	< 0.002	0.451	0.451	0.069	---	---	---
		01-Dec-2010	12:43	7 BOTTOM	47	Y78841		50000	7.8	3	---	---	5220	18000	1.1	2600	< 0.002	0.441	0.441	0.15	---	---	---
				Minimum	42		47500	7.7	< 2			5010	16000	1.0	2400	0.005	0.415	0.421	0.069				
				Mean	47		49580	7.7	5			5266	17400	1.1	2580	0.006	0.434	0.438	0.091				
				Maximum	50		52100	7.8	9			5470	18000	1.2	2800	0.007	0.451	0.451	0.150				
				Standard Deviation			1693	0.1	3			179	894	0	148	0.001	0.015	0.013	0.034				
Winter 2011	MP-7	16-Mar-2011	13:45	FC7 BOTTOM	40	AD7942		41900	7.8	3	---	---	5130	17000	0.81	2400	0.003	0.388	0.391	0.01	---	---	---
		22-Mar-2011	14:37	FC7 BOTTOM	40	AE7527		50000	7.8	< 2	---	---	5310	19000	1.2	2600	0.003	0.373	0.376	0.014	---	---	---
		28-Mar-2011	14:03	MP7 BOTTOM	45	AF6957		48500	7.8	3	1	1	5070	17000	1.1	2200	0.004	0.335	0.339	0.019	< 0.2	0.072	0.062
		07-Apr-2011	14:02	FC7 BOTTOM	44	AH3684		48500	7.9	3	---	---	5100	17000	1.1	2400	UN	0.335	0.341	0.016	---	---	---
		12-Apr-2011	12:35	FC7 BOTTOM	44	AI0218		47000	7.9	8	---	---	5180	17000	1.1	2300	0.006	0.283	0.289	0.009	---	---	---
				Minimum	40		41900	7.8	< 2			5070	17000	0.8	2200	0.003	0.283	0.289	0.009				
				Mean	43		47180	7.8	4			5158	17400	1.1	2380	0.004	0.343	0.347	0.014				
				Maximum	45		50000	7.9	8			5310	19000	1.2	2600	0.006	0.388	0.391	0.019				
				Standard Deviation			3136	0.1	3			94	894	0	148	0.001	0.041	0.039	0.004				
Spring 2011		04-May-2011	12:40	FC7 BOTTOM	47	AL5094		46800	7.9	R	---	---	5560	17000	0.9	2400	0.004	0.265	0.269	0.025	---	---	---
		09-May-2011	12:22	FC7 BOTTOM	46	AM2516		46700	8	< 2	---	---	5440	18000	1	2600	0.004	0.253	0.257	0.032	---	---	---
		17-May-2011	12:34	FC7 BOTTOM	44	AN8383		46600	7.9	12	1.4	1.5	5360	19000	1.2	2300	0.003	0.3	0.303	0.06	0.4	0.063	0.078
		25-May-2011	11:49	FC7 BOTTOM	50	AP2257		46000	8	13	---	---	5430	19000	1.2	2600	0.004	0.277	0.281	0.069	---	---	---
		30-May-2011	11:04	FC7 BOTTOM	47	AP9797		45700	7.9	4	---	---	5350	15000	1.2	2400	0.005	0.24	0.245	0.048	---	---	---
				Minimum	44		45700	7.9	< 2			5350	15000	0.9	2300	0.003	0.240	0.245	0.025				
				Mean	47		46360	7.9	8			5428	17600	1.1	2460	0.004	0.267	0.271	0.047				
				Maximum	50		46800	8.0	13			5560	19000	1.2	2600	0.005	0.300	0.303	0.069				
				Standard Deviation			483	0.1	6			84	1673	0	134	0.001	0.023	0.022	0.018				
Summer 2011		20-Jul-2011	12:28	FC7 BOTTOM	50	BB0197		47700	7.7	< 2	---	---	5000	17000	1.1	2200	0.005	0.372	0.377	0.092	---	---	---
		26-Jul-2011	14:31	FC7 BOTTOM	50	BC3678		47600	7.6	13	---	---	5520	19000	0.9	2700	0.005	0.379	0.384	0.051	---	---	---
		02-Aug-2011	12:45	FC7 BOTTOM	49	BD6298		45300	7.7	< 2	< 5	< 5	5380	18000	0.76	2400	0.004	0.284	0.288	0.038	0.3	0.053	0.058
		09-Aug-2011	13:41	FC7 BOTTOM	49	BF4990		47500	7.7	7	---	---	5900	19000	0.86	2500	0.005	0.406	0.411	0.041	---	---	---
		16-Aug-2011	11:20	FC7 BOTTOM	51	BG7574		46400	7.7	11	---	---	5590	19000	0.84	2500	0.005	0.343	0.348	0.078	---	---	---
				Minimum	49		45300	7.6	< 2			5000	17000	0.8	2200	0.004	0.284	0.288	0.038				
				Mean	50		46900	7.7	7			5478	18250	0.9	2460	0.005	0.357	0.362	0.060				
				Maximum	51		47700	7.7	13			5900	19000	1.1	2700	0.005	0.406	0.411	0.092				
				Standard Deviation			1037	0.0	6			328	957	0	182	0.000	0.046	0.047	0.024				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Finnerty Cove																							
Fall 2011		31-Oct-2011	13:27	FC7 BOTTOM	50	BZ5101		47800	7.7	6	--	--	5640	18000	0.88	2530	0.004	0.409	0.413	0.14	--	--	--
		07-Nov-2011	13:00	FC7 BOTTOM	48	CB4269		46400	7.7	< 2	--	--	5290	18000	0.84	2400	0.004	0.371	0.375	0.1	--	--	--
		15-Nov-2011	13:45	FC7 BOTTOM	46	CD1949		47500	7.7	12	< 5.0	< 5.0	4810	20000	0.85	2670	0.003	0.431	0.434	0.034	0.74	0.073	0.080
		28-Nov-2011	12:21	FC7 BOTTOM	57	CF8414		46300	7.8	2	--	--	5410	19000	0.82	2590	< 0.002	0.402	0.402	0.032	--	--	--
		30-Nov-2011	13:35	FC7 BOTTOM	47	CG3492		46000	7.8	< 2	--	--	5390	19000	0.82	2750	< 0.002	0.385	0.385	0.14	--	--	--
					Minimum	46		46000	7.7	< 2			4810	18000	0.8	2400	0.003	0.371	0.375	0.032			
				Mean	50		46800	7.7	4			5308	18800	0.8	2588	0.004	0.400	0.402	0.089				
				Maximum	57		47800	7.8	12			5640	20000	0.9	2750	0.004	0.431	0.434	0.140				
				Standard Deviation			797	0.1	5			306	837	0	134	0.001	0.023	0.023	0.054				
Winter 2012		08-Feb-2012	14:05	FC7 BOTTOM	43	CR3986		46400	7.8	3	--	--	5560	18000	0.9	2580	< 0.002	0.3	0.3	0.11	--	--	--
		15-Feb-2012	13:41	FC7 BOTTOM	44	CS7982		46700	7.8	3	--	--	5350	18000	0.84	2590	< 0.002	0.38	0.38	0.026	--	--	--
		21-Feb-2012	15:21	FC7 BOTTOM	45	CT8309		46300	7.8	3	6.2 < 5.0	--	5550	19000	0.9	2740	0.002	0.37	0.372	0.0082	< 0.20	0.068	0.073
		27-Feb-2012	13:50	FC7 BOTTOM	46	CU8883		46100	7.8	2	--	--	5710	17000	0.83	2430	0.002	0.336	0.338	0.037	--	--	--
		04-Mar-2012	13:34	FC7 BOTTOM	45	CW3001		46300	7.7	< 2	--	--	5420	18000	0.84	2510	0.002	0.291	0.293	0.018	--	--	--
					Minimum	43		46100	7.7	< 2			5350	17000	0.8	2430	0.002	0.291	0.293	0.008			
				Mean	45		46360	7.8	2			5518	18000	0.9	2570	0.002	0.335	0.337	0.040				
				Maximum	46		46700	7.8	3			5710	19000	0.9	2740	0.002	0.380	0.380	0.110				
				Standard Deviation			219	0.0	1			139	707	0	115	0.000	0.040	0.040	0.041				
Spring 2012		15-May-2012	12:31	FC7 BOTTOM	47	DK6190		46500	7.9	17	--	--	5050	18000	0.82	2640	0.003	0.227	0.23	0.038	--	--	--
		22-May-2012	12:29	FC7 BOTTOM	44	DL9790		46500	7.9	3	--	--	5290	17000	0.82	2420	0.003	0.232	0.235	0.035	--	--	--
		28-May-2012	13:16	FC7 BOTTOM	46	DN2757		47300	7.8	3	< 5.0 < 5.0	--	4880	17000	0.88	2280	0.004	0.269	0.273	0.026	0.191	0.055	0.059
		31-May-2012	11:48	FC7 BOTTOM	46	DO0737		46800	7.9	4	--	--	5420	17000	0.81	2150	0.005	0.259	0.264	0.027	--	--	--
		06-Jun-2012	13:21	FC7 BOTTOM	47	DP5009		47500	7.8	9	--	--	5110	17000	0.87	2190	0.006	0.292	0.298	0.031	--	--	--
					Minimum	44		46500	7.8	3			4880	17000	0.8	2150	0.003	0.227	0.230	0.026			
				Mean	46		46920	7.9	7			5150	17200	0.8	2336	0.004	0.256	0.260	0.031				
				Maximum	47		47500	7.9	17			5420	18000	0.9	2640	0.006	0.292	0.298	0.038				
				Standard Deviation			460	0.1	6			210	447	0	199	0.001	0.027	0.028	0.005				
Summer 2010		26-Jul-2010	12:46	7 MID	23	V71693		45000	8	5	--	--	4880	18000	0.71	2000	0.004	0.117	0.121	0.1	--	--	--
		28-Jul-2010	14:53	7 MID	22	V78542		44800	8	3	--	--	5320	16000	0.72	1900	0.004	UN	UN	0.09	--	--	--
		03-Aug-2010	17:00	7 MID	23	V93210		47000	8.1	11	1.4	1.6	5320	17000	0.72	1900	0.003	0.168	0.171	0.14	0.12	0.049	0.060
		10-Aug-2010	13:40	7 MID	22	W10994		50000	8	4	--	--	5100	19000	0.65	2700	0.005	0.22	0.225	0.12	--	--	--
		17-Aug-2010	14:13	7 MID	24	W29572		47700	7.9	4	--	--	5050	19000	0.64	2900	0.005	0.255	0.26	0.19	--	--	--
					Minimum	22		44800	7.9	3			4880	16000	0.6	1900	0.003	0.117	0.121	0.090			
				Mean	23		46900	8.0	5			5134	17800	0.7	2280	0.004	0.190	0.194	0.128				
				Maximum	24		50000	8.1	11			5320	19000	0.7	2900	0.005	0.255	0.260	0.190				
				Standard Deviation			2138	0.1	3			188	1304	0	482	0.001	0.060	0.061	0.040				
Fall 2010		02-Nov-2010	14:42	7 MID	22	Y16494		50000	7.7	4	--	--	5240	17000	1.2	2900	0.005	0.415	0.42	0.078	--	--	--
		08-Nov-2010	14:14	7 MID	25	Y31466		50100	7.7	3	--	--	5130	17000	1.1	1800	0.005	0.434	0.439	0.074	--	--	--
		18-Nov-2010	14:46	7 MID	25	Y53965		47100	7.7	3	1.5	1.3	5250	17000	0.9	2500	0.005	0.415	0.42	0.097	0.14	0.07	0.078
		24-Nov-2010	13:53	7 MID	22	Y64520		48600	7.7	6	--	--	5330	16000	1.1	2400	< 0.002	0.437	0.437	0.063	--	--	--
		01-Dec-2010	12:50	7 MID	23	Y78840		51000	7.8	< 2	--	--	5190	18000	1.1	2400	< 0.002	0.442	0.442	0.21	--	--	--
					Minimum	22		47100	7.7	< 2			5130	16000	0.9	1800	0.005	0.415	0.420	0.063			
				Mean	23		49360	7.7	3			5228	17000	1.1	2400	0.005	0.429	0.432	0.104				
				Maximum	25		51000	7.8	6			5330	18000	1.2	2900	0.005	0.442	0.442	0.210				
				Standard Deviation			1527	0.0	2			74	707	0	394	0.000	0.013	0.011	0.060				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Finnerty Cove																							
Winter 2011		16-Mar-2011	13:35	FC7 MID	20	AD7941		43300	7.8	7	--	--	5190	17000	0.81	2300	0.003	0.396	0.399	0.046	--	--	--
		22-Mar-2011	14:51	FC7 MID	20	AE7526		49600	7.8	3	--	--	5310	18000	1.1	2500	0.003	0.368	0.371	0.013	--	--	--
		28-Mar-2011	14:19	MP7 MID	22	AF6956		49700	7.8	< 2	0.8	1	5290	17000	1.1	2300	0.004	0.365	0.369	0.011	< 0.2	0.075	0.073
		07-Apr-2011	14:31	FC7 MID	22	AH3683		48000	7.9	5	--	--	5120	17000	1	2300	UN	0.323	0.328	0.013	--	--	--
		12-Apr-2011	12:47	FC7 MID	22	AI0217		46000	8	6	--	--	4990	17000	1.1	2400	0.005	0.322	0.327	0.017	--	--	--
					Minimum	20	43300	7.8	< 2			4990	17000	0.8	2300	0.003	0.322	0.327	0.011				
					Mean	21	47320	7.9	4			5180	17200	1.0	2360	0.004	0.355	0.359	0.020				
					Maximum	22	49700	8.0	7			5310	18000	1.1	2500	0.005	0.396	0.399	0.046				
					Standard Deviation		2703	0.1	2			131	447	0	89	0.001	0.032	0.031	0.015				
Spring 2011		04-May-2011	12:48	FC7 MID	24	AL5093		46000	7.9	R	--	--	5410	17000	1	2300	0.004	0.236	0.24	0.033	--	--	--
		09-May-2011	12:32	FC7 MID	23	AM2515		45800	8	< 2	--	--	5190	18000	1.1	2500	0.004	0.26	0.264	0.034	--	--	--
		17-May-2011	12:44	FC7 MID	22	AN8382		45800	8	5	0.8	1.7	5270	18000	1.2	2300	0.003	0.244	0.247	0.055	0.4	0.057	0.066
		25-May-2011	11:57	FC7 MID	25	AP2256		45700	8	7	--	--	5410	18000	1.2	2600	0.004	0.251	0.255	0.052	--	--	--
		30-May-2011	11:13	FC7 MID	24	AP9796		45000	8.1	3	--	--	5260	16000	1.1	2700	0.004	0.195	0.199	0.045	--	--	--
					Minimum	22	45000	7.9	< 2			5190	16000	1.0	2300	0.003	0.195	0.199	0.033				
					Mean	24	45660	8.0	4			5308	17400	1.1	2480	0.004	0.237	0.241	0.044				
					Maximum	25	46000	8.1	7			5410	18000	1.2	2700	0.004	0.260	0.264	0.055				
					Standard Deviation		385	0.1	3			98	894	0.1	179	0.000	0.025	0.025	0.010				
Summer 2011		20-Jul-2011	12:36	FC7 MID	25	BB0196		46100	7.7	< 2	--	--	4730	17000	1.05	2300	0.005	0.289	0.294	0.034	--	--	--
		26-Jul-2011	14:55	FC7 MID	25	BC3677		44200	7.7	13	--	--	5220	18000	0.79	2400	0.005	0.256	0.261	0.038	--	--	--
		02-Aug-2011	12:55	FC7 MID	25	BD6297		45600	7.8	5	< 5	< 5	5200	17000	0.75	2300	0.004	0.283	0.287	0.024	0.3	0.044	0.049
		09-Aug-2011	13:55	FC7 MID	25	BF4989		46000	7.8	6	--	--	5760	18000	0.83	2400	0.004	0.339	0.343	0.029	--	--	--
		16-Aug-2011	11:30	FC7 MID	25	BG7573		44900	7.8	16	--	--	5280	17000	0.83	2300	0.004	0.301	0.305	0.026	--	--	--
					Minimum	25	44200	7.7	< 2			4730	17000	0.8	2300	0.004	0.256	0.261	0.024				
					Mean	25	45360	7.8	8			5238	17400	0.9	2340	0.004	0.294	0.298	0.030				
					Maximum	25	46100	7.8	16			5760	18000	1.1	2400	0.005	0.339	0.343	0.038				
					Standard Deviation		802	0.1	6			365	548	0.1	55	0.001	0.030	0.030	0.006				
Fall 2011		31-Oct-2011	13:36	FC7 MID	25	BZ5100		46700	7.7	4	--	--	5360	18000	0.87	2480	0.004	0.399	0.403	0.06	--	--	--
		07-Nov-2011	13:15	FC7 MID	24	CB4268		46400	7.7	< 2	--	--	5320	18000	0.84	2370	0.004	0.349	0.353	0.17	--	--	--
		15-Nov-2011	13:57	FC7 MID	23	CD1948		46800	7.7	9	< 5.0	< 5.0	4790	19000	0.83	2640	0.003	0.421	0.424	0.0094	0.76	0.07	0.079
		28-Nov-2011	12:29	FC7 MID	28	CF8413		46400	7.8	< 2	--	--	5340	19000	0.81	2500	< 0.002	0.402	0.402	0.017	--	--	--
		30-Nov-2011	12:43	FC7 MID	23	CG3491		46000	7.8	< 2	--	--	5440	18000	0.82	2550	< 0.002	0.381	0.381	0.13	--	--	--
					Minimum	23	46000	7.7	< 2			4790	18000	0.8	2370	0.003	0.349	0.353	0.009				
					Mean	25	46460	7.7	3			5250	18400	0.8	2508	0.004	0.390	0.393	0.077				
					Maximum	28	46800	7.8	9			5440	19000	0.9	2640	0.004	0.421	0.424	0.170				
					Standard Deviation		313	0.1	3			261	548	0.0	99	0.001	0.027	0.027	0.071				
Winter 2012		08-Feb-2012	14:15	FC7 MID	22	CR3985		46300	7.8	3	--	--	5600	18000	0.89	2480	< 0.002	0.333	0.333	0.1	--	--	--
		15-Feb-2012	14:00	FC7 MID	22	CS7981		46100	7.8	3	--	--	5170	18000	0.84	2440	0.003	0.39	0.393	0.02	--	--	--
		21-Feb-2012	15:31	FC7 MID	23	CT8308		46000	7.8	3	< 0.50	< 5.0	5430	18000	0.9	2560	< 0.002	0.352	0.352	0.012	< 0.20	0.069	0.073
		27-Feb-2012	14:10	FC7 MID	23	CU8882		45800	7.8	2	--	--	5720	18000	0.83	2480	0.003	0.345	0.348	0.03	--	--	--
		04-Mar-2012	13:55	FC7 MID	22	CW3000		45600	7.7	< 2	--	--	5420	18000	0.84	2590	0.002	0.349	0.351	0.0094	--	--	--
					Minimum	22	45600	7.7	< 2			5170	18000	0.8	2440	0.002	0.333	0.333	0.009				
					Mean	22	45960	7.8	2			5468	18000	0.9	2510	0.003	0.354	0.355	0.034				
					Maximum	23	46300	7.8	3			5720	18000	0.9	2590	0.003	0.390	0.393	0.100				
					Standard Deviation		270	0.0	1			208	0	0.0	62	0.001	0.021	0.022	0.038				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General					Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Finnerty Cove																							
Spring 2012		15-May-2012	12:40	FC7 MID	23	DK6189		45500	8	14	--	--	5290	17000	0.79	2200	0.004	0.228	0.232	0.022	--	--	--
		22-May-2012	12:38	FC7 MID	22	DL9789		45400	7.9	6	--	--	5080	18000	0.8	2390	0.003	0.238	0.241	0.043	--	--	--
		28-May-2012	13:32	FC7 MID	23	DN2756		46400	7.9	2	9.1 '6.4	--	4740	16000	0.87	2240	0.004	0.241	0.245	0.024	0.215	0.050	0.058
		31-May-2012	11:56	FC7 MID	23	DO0738		46700	7.9	7	--	--	5330	17000	0.82	2220	0.005	0.215	0.22	0.031	--	--	--
		06-Jun-2012	13:30	FC7 MID	24	DP5010		46700	7.9	10	--	--	5000	17000	0.86	2240	0.006	0.208	0.214	0.035	--	--	--
		Minimum		22			45400	7.9	2			4740	16000	0.8	2200	0.003	0.208	0.214	0.022				
		Mean		23			46140	7.9	8			5088	17000	0.8	2258	0.004	0.226	0.230	0.031				
		Maximum		24			46700	8.0	14			5330	18000	0.9	2390	0.006	0.241	0.245	0.043				
		Standard Deviation					643	0.0	4			239	707	0.0	76	0.001	0.014	0.013	0.009				
Summer 2010		26-Jul-2010	12:43	7 SURFACE	1	V71692		44600	8	< 2	--	--	4590	17000	0.7	2400	0.004	0.109	0.113	0.12	--	--	--
		28-Jul-2010	14:59	7 SURFACE	1	V78541		44400	8.1	2	--	--	5160	16000	1.02	1900	0.004	UN	UN	0.09	--	--	--
		03-Aug-2010	16:49	7 SURFACE	1	V93209		47000	8.2	8	1.2	2.5	5300	18000	0.7	1900	< 0.002	0.014	0.014	0.15	0.2	0.018	0.046
		10-Aug-2010	13:47	7 SURFACE	1	W10995		49800	8	5	--	--	5520	19000	0.65	2000	0.004	0.219	0.223	0.12	--	--	--
		17-Aug-2010	14:21	7 SURFACE	1	W29571		48000	7.9	< 2	--	--	4910	19000	0.62	2900	0.005	0.214	0.219	0.17	--	--	--
		Minimum		1			44400	7.9	< 2			4590	16000	0.6	1900	0.004	0.014	0.014	0.090				
		Mean		1			46760	8.0	3			5096	17800	0.7	2220	0.004	0.139	0.142	0.130				
		Maximum		1			49800	8.2	8			5520	19000	1.0	2900	0.005	0.219	0.223	0.170				
		Standard Deviation					2295	0.1	3			359	1304	0.2	432	0.001	0.098	0.100	0.031				
Fall 2010		02-Nov-2010	14:49	7 SURFACE	1	Y16493		50300	7.7	< 2	--	--	5300	17000	1.2	2800	0.005	0.411	0.416	0.069	--	--	--
		08-Nov-2010	14:25	7 SURFACE	1	Y31465		49700	7.7	2	--	--	5010	12000	1	2400	0.006	0.408	0.414	0.057	--	--	--
		18-Nov-2010	14:52	7 SURFACE	1	Y53964		46500	7.7	3	1.5	1.7	5160	16000	1.3	2200	0.007	0.393	0.4	0.075	0.16	0.071	0.080
		24-Nov-2010	14:02	7 SURFACE	1	Y64519		48500	7.7	7	--	--	5320	16000	1.1	2400	0.003	0.425	0.428	0.067	--	--	--
		01-Dec-2010	13:00	7 SURFACE	1	Y78839		50300	7.7	< 2	--	--	4830	17000	0.9	2400	0.002	0.437	0.439	0.13	--	--	--
		Minimum		1			46500	7.7	< 2			4830	12000	0.9	2200	0.002	0.393	0.400	0.057				
		Mean		1			49060	7.7	3			5124	15600	1.1	2440	0.005	0.415	0.419	0.080				
		Maximum		1			50300	7.7	7			5320	17000	1.3	2800	0.007	0.437	0.439	0.130				
		Standard Deviation					1609	0.0	2			206	2074	0.2	219	0.002	0.017	0.015	0.029				
Winter 2011		16-Mar-2011	13:15	FC7 SURFACE	1	AD7940		42800	7.8	6	--	--	5120	16000	0.81	2200	0.003	0.389	0.392	0.013	--	--	--
		22-Mar-2011	14:59	FC7 SURFACE	1	AE7525		49600	7.8	3	--	--	5280	17000	1.1	2400	0.003	0.379	0.382	0.015	--	--	--
		28-Mar-2011	14:35	MP7 SURFACE	1	AF6955		47900	7.8	2	1.1	1	5190	17000	1.1	2300	0.004	0.339	0.343	0.007	< 0.2	0.07	0.068
		07-Apr-2011	14:40	FC7 SURFACE	1	AH3682		48300	7.9	4	--	--	5090	19000	1.1	2300	UN	0.319	0.324	0.012	--	--	--
		12-Apr-2011	12:52	FC7 SURFACE	1	AI0216		45000	8	10	--	--	4980	16000	1.1	2300	0.004	0.234	0.238	0.021	--	--	--
		Minimum		1			42800	7.8	2			4980	16000	0.8	2200	0.003	0.234	0.238	0.007				
		Mean		1			46720	7.9	5			5132	17000	1.0	2300	0.004	0.332	0.336	0.014				
		Maximum		1			49600	8.0	10			5280	19000	1.1	2400	0.004	0.389	0.392	0.021				
		Standard Deviation					2762	0.1	3			112	1225	0.1	71	0.001	0.062	0.061	0.005				
Spring 2011		04-May-2011	12:52	FC7 SURFACE	1	AL5092		45400	7.9	R	--	--	5420	17000	0.9	2200	0.004	0.244	0.248	0.034	--	--	--
		09-May-2011	12:37	FC7 SURFACE	1	AM2514		45200	7.8	5	--	--	5290	17000	1	2500	0.003	0.201	0.204	0.02	--	--	--
		17-May-2011	12:52	FC7 SURFACE	1	AN8381		45900	8	2	1	1.5	5430	17000	1.2	2300	0.003	0.278	0.281	0.058	< 0.2	0.062	0.065
		25-May-2011	12:05	FC7 SURFACE	1	AP2255		44800	8.1	5	--	--	5470	18000	1.2	2700	0.004	0.297	0.301	0.078	--	--	--
		30-May-2011	11:20	FC7 SURFACE	1	AP9795		45000	8.2	6	--	--	5160	18000	1.1	2700	0.004	0.106	0.11	0.044	--	--	--
		Minimum		1			44800	7.8	2			5160	17000	0.9	2200	0.003	0.106	0.110	0.020				
		Mean		1			45260	8.0	5			5354	17400	1.1	2480	0.004	0.225	0.229	0.047				
		Maximum		1			45900	8.2	6			5470	18000	1.2	2700	0.004	0.297	0.301	0.078				
		Standard Deviation					422	0.2	2			128	548	0.1	228	0.001	0.076	0.076	0.022				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Finnerty Cove																							
Summer 2011		20-Jul-2011	12:45	FC7 SURFACE	1	BB0195		46000	7.8	< 2	---	---	4750	17000	1.05	2200	0.005	0.31	0.315	0.06	---	---	---
		26-Jul-2011	15:15	FC7 SURFACE	1	BC3676		41900	7.9	12	---	---	4510	19000	0.77	2400	0.003	0.168	0.171	0.041	---	---	---
		02-Aug-2011	13:05	FC7 SURFACE	1	BD6296		44200	7.8	5	< 5	< 5	4740	17000	0.75	2300	0.003	0.341	0.344	0.027	< 0.2	0.044	0.051
		09-Aug-2011	14:15	FC7 SURFACE	1	BF4988		43700	7.9	9	---	---	5430	---	0.79	2200	0.004	0.293	0.297	0.033	---	---	---
		16-Aug-2011	11:40	FC7 SURFACE	1	BG7572		43900	7.8	15	---	---	5140	18000	0.82	2300	0.004	0.289	0.293	0.076	---	---	---
					Minimum	1		41900	7.8	< 2			4510	17000	0.8	2200	0.003	0.168	0.171	0.027			
					Mean	1		43940	7.8	8			4914	17750	0.8	2280	0.004	0.280	0.284	0.047			
					Maximum	1		46000	7.9	15			5430	19000	1.1	2400	0.005	0.341	0.344	0.076			
					Standard Deviation			1460	0.1	6			367	957	0.1	84	0.001	0.066	0.066	0.020			
	Fall 2011		31-Oct-2011	13:43	FC7 SURFACE	1	BZ5099		46300	7.7	3	---	---	5460	17000	0.88	2130	0.004	0.369	0.373	0.17	---	---
		07-Nov-2011	13:30	FC7 SURFACE	1	CB4267		45800	7.7	< 2	---	---	5210	18000	0.82	2350	0.005	0.344	0.349	0.23	---	---	---
		15-Nov-2011	14:10	FC7 SURFACE	1	CD1947		46600	7.7	6	< 5.0	< 5.0	4760	18000	0.83	2410	0.004	0.39	0.394	0.028	0.71	0.071	0.078
		28-Nov-2011	12:37	FC7 SURFACE	1	CF8412		45900	7.8	< 2	---	---	5190	18000	0.82	2510	0.003	0.395	0.398	0.041	---	---	---
		30-Nov-2011	12:57	FC7 SURFACE	1	CG3490		45800	7.8	< 2	---	---	5340	18000	0.81	2500	< 0.002	0.391	0.391	0.091	---	---	---
					Minimum	1		45800	7.7	< 2			4760	17000	0.8	2130	0.003	0.344	0.349	0.028			
				Mean	1		46080	7.7	2			5192	17800	0.8	2380	0.004	0.378	0.381	0.112				
				Maximum	1		46600	7.8	6			5460	18000	0.9	2510	0.005	0.395	0.398	0.230				
				Standard Deviation			356	0.1	2			265	447	0.0	155	0.001	0.021	0.020	0.086				
Winter 2012		08-Feb-2012	14:23	FC7 SURFACE	1	CR3984		45800	7.8	2	---	---	5600	17000	0.88	2450	< 0.002	0.322	0.322	0.1	---	---	---
		15-Feb-2012	14:05	FC7 SURFACE	1	CS7980		45200	7.8	< 2	---	---	5060	17000	0.85	2330	0.003	0.369	0.372	0.018	---	---	---
		21-Feb-2012	15:43	FC7 SURFACE	1	CT8307		46000	7.8	3	< 5.0 '6.7	---	5490	19000	0.89	2790	0.002	0.35	0.352	0.0099	< 0.20	0.068	0.068
		27-Feb-2012	14:20	FC7 SURFACE	1	CU8881		45900	7.8	5	---	---	5650	17000	0.84	2400	0.003	0.355	0.358	0.029	---	---	---
		04-Mar-2012	14:01	FC7 SURFACE	1	CW2999		44900	7.7	< 2	---	---	5310	18000	0.82	2480	0.002	0.314	0.316	0.0088	---	---	---
					Minimum	1		44900	7.7	< 2			5060	17000	0.8	2330	0.002	0.314	0.316	0.009			
				Mean	1		45560	7.8	2			5422	17600	0.9	2490	0.003	0.342	0.344	0.033				
				Maximum	1		46000	7.8	5			5650	19000	0.9	2790	0.003	0.369	0.372	0.100				
				Standard Deviation			483	0.0	2			241	894	0.0	177	0.001	0.023	0.024	0.038				
Spring 2012		15-May-2012	12:50	FC7 SURFACE	1	DK6188		44500	8	10	---	---	4770	17000	0.78	2380	0.004	0.128	0.132	0.013	---	---	---
		22-May-2012	12:45	FC7 SURFACE	1	DL9788		44800	7.9	< 2	---	---	5260	18000	0.81	2410	0.003	0.187	0.19	0.038	---	---	---
		28-May-2012	13:37	FC7 SURFACE	1	DN2755		45400	7.9	4	< 5.0 '5.0	---	4800	17000	0.84	2190	0.004	0.219	0.223	0.023	0.196	0.045	0.056
		31-May-2012	12:02	FC7 SURFACE	1	DO0739		46400	7.9	4	---	---	5280	16000	0.82	2140	0.005	0.233	0.238	0.038	---	---	---
		06-Jun-2012	13:39	FC7 SURFACE	1	DP5011		46400	7.9	6	---	---	4980	17000	0.85	2200	0.006	0.237	0.243	0.035	---	---	---
					Minimum	1		44500	7.9	< 2			4770	16000	0.8	2140	0.003	0.128	0.132	0.013			
				Mean	1		45500	7.9	5			5018	17000	0.8	2264	0.004	0.201	0.205	0.029				
				Maximum	1		46400	8.0	10			5280	18000	0.9	2410	0.006	0.237	0.243	0.038				
				Standard Deviation			883	0.0	3			244	707	0.0	122	0.001	0.045	0.046	0.011				
Macaulay Point																							
MP-4	Summer 2010	26-Jul-2010	11:11	4 BOTTOM	61	V71684		48500	7.8	7	---	---	5610	18000	0.74	2700	0.005	0.231	0.236	0.11	---	---	---
		28-Jul-2010	12:51	4 BOTTOM	60	V78534		47800	7.9	2	---	---	5840	18000	0.76	2600	0.005	UN	UN	0.1	---	---	---
		03-Aug-2010	15:39	4 BOTTOM	62	V93201	late with an estimate	49000	8	11	1.1	2.2	5880	20000	0.77	2700	0.003	0.308	0.311	0.18	0.28	0.084	0.100
		10-Aug-2010	12:20	4 BOTTOM	62	W10986		50900	7.9	6	---	---	5830	19000	0.65	2900	0.005	0.254	0.259	0.27	---	---	---
		17-Aug-2010	12:35	4 BOTTOM	62	W29563		49300	8	10	---	---	5270	17000	0.64	2600	0.005	0.301	0.306	0.16	---	---	---
						Minimum	60		47800	7.8	2			5270	17000	0.6	2600	0.003	0.231	0.236	0.100		
				Mean	61		49100	7.9	7			5686	18400	0.7	2700	0.005	0.274	0.278	0.164				
				Maximum	62		50900	8.0	11			5880	20000	0.8	2900	0.005	0.308	0.311	0.270				
				Standard Deviation			1155	0.1	4			255	1140	0.1	122	0.001	0.037	0.037	0.068				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)	
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--		
Macaulay Point																								
Fall 2010		02-Nov-2010	13:13	4 BOTTOM	58	Y16486		51800	7.7	5	--	--	5480	18000	1.1	3000	0.005	0.458	0.463	0.15	--	--	--	--
		08-Nov-2010	12:29	4 BOTTOM	60	Y31458		51800	7.7	4	--	--	5470	18000	1.4	2500	0.005	0.451	0.456	0.09	--	--	--	--
		18-Nov-2010	10:13	4 BOTTOM	60	Y53956		49600	7.7	3	0.5	0.7	5300	18000	1.42	2600	0.007	0.408	0.415	0.074	< 0.04	0.072	0.074	--
		24-Nov-2010	12:05	4 BOTTOM	61	Y64512		50600	7.7	7	--	--	5810	17000	1.2	2600	0.002	0.451	0.453	0.067	--	--	--	--
		01-Dec-2010	11:25	4 BOTTOM	60	Y78831		51600	7.7	8	--	--	5010	17000	1.1	2600	0.003	0.429	0.432	0.25	--	--	--	--
						Minimum	58	49600	7.7	3			5010	17000	1.1	2500	0.002	0.408	0.415	0.067				
					Mean	60	51080	7.7	5			5414	17600	1.2	2660	0.004	0.439	0.444	0.126					
					Maximum	61	51800	7.7	8			5810	18000	1.4	3000	0.007	0.458	0.463	0.250					
					Standard Deviation		965	0.0	2			292	548	0.2	195	0.002	0.021	0.020	0.077					
Winter 2011		16-Mar-2011	12:10	MP4 BOTTOM	60	AD7933		47000	7.8	9	--	--	5150	18000	0.84	2500	0.004	0.387	0.391	0.079	--	--	--	--
		22-Mar-2011	13:05	MP4 BOTTOM	58	AE7501		48200	7.8	< 2	--	--	5420	18000	1.1	2500	0.004	0.306	0.31	0.16	--	--	--	--
		28-Mar-2011	12:08	MP4 BOTTOM	60	AF6936		49000	7.8	2	1.1	1.5	5400	18000	1.2	2400	0.004	0.34	0.344	0.012	< 0.2	UN	0.069	--
		07-Apr-2011	12:00	MP4 BOTTOM	59	AH3647		50300	7.8	2	--	--	5320	18000	1.1	2400	UN	0.355	0.361	0.015	--	--	--	--
		12-Apr-2011	11:02	MP4 BOTTOM	59	AI0209		50600	7.8	5	--	--	5060	18000	1.3	2600	0.005	0.327	0.332	0.015	--	--	--	--
						Minimum	58	47000	7.8	< 2			5060	18000	0.8	2400	0.004	0.306	0.310	0.012				
					Mean	59	49020	7.8	4			5270	18000	1.1	2480	0.004	0.343	0.348	0.056					
					Maximum	60	50600	7.8	9			5420	18000	1.3	2600	0.005	0.387	0.391	0.160					
					Standard Deviation		1491	0.0	3			158	0	0.2	84	0.001	0.030	0.031	0.065					
Spring 2011		04-May-2011	11:30	MP4 BOTTOM	58	AL5085		47700	7.8	R	--	--	5430	18000	1	2500	0.004	0.322	0.326	0.12	--	--	--	--
		09-May-2011	10:31	MP4 BOTTOM	59	AM2501		47500	7.7	2	--	--	5450	19000	1.2	2700	0.003	0.314	0.317	0.033	--	--	--	--
		17-May-2011	10:45	MP4 BOTTOM	58	AN8368		47800	7.9	5	0.9	0.7	5450	17000	1.2	2500	0.003	0.35	0.353	0.046	0.3	0.065	0.073	--
		25-May-2011	10:42	MP4 BOTTOM	60	AP2247		46800	7.9	< 2	--	--	5290	19000	1.2	2600	0.004	0.314	0.318	0.079	--	--	--	--
		30-May-2011	09:58	MP4 BOTTOM	59	AP9788		46600	7.9	3	--	--	5640	16000	1.1	2700	0.004	0.302	0.306	0.045	--	--	--	--
						Minimum	58	46600	7.7	< 2			5290	16000	1.0	2500	0.003	0.302	0.306	0.033				
					Mean	59	47280	7.8	3			5452	17800	1.1	2600	0.004	0.320	0.324	0.065					
					Maximum	60	47800	7.9	5			5640	19000	1.2	2700	0.004	0.350	0.353	0.120					
					Standard Deviation		545	0.1	2			125	1304	0.1	100	0.001	0.018	0.018	0.035					
Summer 2011		20-Jul-2011	10:36	MP4 BOTTOM	62	BB0188		47800	7.7	< 2	--	--	5160	18000	1.1	2300	0.006	0.374	0.38	0.14	--	--	--	--
		26-Jul-2011	12:07	MP4 BOTTOM	62	BC3667		44800	7.8	8	--	--	5630	20000	0.87	2700	0.006	0.257	0.263	UN	--	--	--	--
		02-Aug-2011	10:05	MP4 BOTTOM	64	BD6278		49500	7.6	7	< 5	< 5	5620	19000	0.81	2800	0.004	0.416	0.42	0.019	< 0.2	0.06	0.068	--
		09-Aug-2011	11:20	MP4 BOTTOM	66	BF4980		47000	7.8	6	--	--	5310	18000	0.85	2400	0.004	0.342	0.346	0.052	--	--	--	--
		16-Aug-2011	09:23	MP4 BOTTOM	60	BG7565		47700	7.6	13	--	--	5540	19000	0.86	2500	0.005	0.372	0.377	0.14	--	--	--	--
						Minimum	60	44800	7.6	< 2			5160	18000	0.8	2300	0.004	0.257	0.263	0.019				
					Mean	63	47360	7.7	7			5452	18800	0.9	2540	0.005	0.352	0.357	0.088					
					Maximum	66	49500	7.8	13			5630	20000	1.1	2800	0.006	0.416	0.420	0.140					
					Standard Deviation		1701	0.1	4			208	837	0.1	207	0.001	0.059	0.059	0.062					
Fall 2011		31-Oct-2011	12:08	MP4 BOTTOM	59	BZ5092		49100	7.7	6	--	--	5800	18000	0.9	2550	0.002	0.441	0.443	0.18	--	--	--	--
		07-Nov-2011	11:25	MP4 BOTTOM	60	CB4248		47900	7.7	< 2	--	--	5450	19000	0.85	2650	0.004	0.384	0.388	UN	--	--	--	--
		15-Nov-2011	11:50	MP4 BOTTOM	60	CD1934		48800	7.7	8	< 5.0	< 5.0	5580	19000	0.86	2610	0.002	0.423	0.425	0.007	0.55	0.073	0.077	--
		28-Nov-2011	11:11	MP4 BOTTOM	60	CF8405		46800	7.8	4	--	--	5200	19000	0.81	2620	0.003	0.354	0.357	0.015	--	--	--	--
		30-Nov-2011	11:23	MP4 BOTTOM	60	CG3483		47400	7.8	< 2	--	--	5330	18000	0.82	2620	0.003	0.361	0.364	0.09	--	--	--	--
						Minimum	59	46800	7.7	< 2			5200	18000	0.8	2550	0.002	0.354	0.357	0.007				
					Mean	60	48000	7.7	4			5472	18600	0.8	2610	0.003	0.393	0.395	0.073					
					Maximum	60	49100	7.8	8			5800	19000	0.9	2650	0.004	0.441	0.443	0.180					
					Standard Deviation		957	0.1	3			231	548	0.0	37	0.001	0.038	0.038	0.081					

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
	Winter 2012	08-Feb-2012	12:51	MP4 BOTTOM	60	CR3977		47300	7.8	4	--	--	5470	17000	0.91	2320	< 0.002	0.348	0.348	0.067	--	--	--
		15-Feb-2012	11:19	MP4 BOTTOM	60	CS7971		47300	7.8	2	--	--	5470	19000	0.9	2590	0.002	0.378	0.38	0.049	--	--	--
		21-Feb-2012	10:19	MP4 BOTTOM	61	CT8294		47300	7.8	5	< 5.0	--	5450	19000	0.92	2780	0.002	0.385	0.387	0.17	0.26	0.079	0.082
		27-Feb-2012	09:14	MP4 BOTTOM	59	CU8874		47200	7.8	5	< 5.0	--	5680	18000	0.85	2460	0.002	0.356	0.358	0.036	--	--	--
		04-Mar-2012	11:53	MP4 BOTTOM	61	CW2990		46900	7.7	2	--	--	5590	19000	0.86	2750	0.002	0.299	0.301	0.016	--	--	--
					Minimum	59		46900	7.7	2			5450	17000	0.9	2320	0.002	0.299	0.301	0.016			
					Mean	60		47200	7.8	4			5532	18400	0.9	2580	0.002	0.353	0.355	0.068			
					Maximum	61		47300	7.8	5			5680	19000	0.9	2780	0.002	0.385	0.387	0.170			
					Standard Deviation			173	0.0	2			100	894	0.0	194	0.000	0.034	0.034	0.060			
	Spring 2012	15-May-2012	11:20	MP4 BOTTOM	59	DK6181		46600	7.9	4	--	--	5370	18000	0.82	2640	0.003	0.244	0.247	0.083	--	--	--
		22-May-2012	10:50	MP4 BOTTOM	59	DL9779		47600	7.8	< 2	--	--	5400	18000	0.82	2410	0.003	UN	UN	UN	--	--	--
		28-May-2012	11:10	MP4 BOTTOM	60	DN2746		47600	7.8	2	< 5.0	--	5630	17000	0.88	2300	0.004	0.278	0.282	0.024	0.205	0.055	0.063
		31-May-2012	10:39	MP4 BOTTOM	58	DO0731		47600	7.8	3	--	--	5390	17000	0.82	2190	0.005	0.252	0.257	0.17	--	--	--
		06-Jun-2012	12:14	MP4 BOTTOM	58	DP5003		48400	7.8	13	--	--	5390	17000	0.88	2350	0.006	0.28	0.286	0.04	--	--	--
					Minimum	58		46600	7.8	< 2			5370	17000	0.8	2190	0.003	0.244	0.247	0.024			
					Mean	59		47560	7.8	5			5436	17400	0.8	2378	0.004	0.264	0.268	0.079			
					Maximum	60		48400	7.9	13			5630	18000	0.9	2640	0.006	0.280	0.286	0.170			
					Standard Deviation			639	0.0	5			109	548	0.0	167	0.001	0.018	0.019	0.065			

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point - Bottom QA/QC																							
	Sample	28-Jul-2010	12:51	4 BOTTOM		V78534		47800	7.9	2	--	--	5840	18000	0.76	2600	0.005	0.326	0.331	0.1	--	--	--
	Triplicate	28-Jul-2010	12:51	4 BOTTOM TRIPLICATE 1		V78556		47500	7.9	< 2	--	--	5590	18000	0.75	2600	0.004	0.299	0.303	0.1	--	--	--
	Triplicate	28-Jul-2010	12:51	4 BOTTOM TRIPLICATE 2		V78594		47200	7.9	2	--	--	5470	18000	0.75	2400	0.004	0.285	0.289	0.1	--	--	--
								1%	0%	<5xDL			3%	0%	1%	5%	13%	7%	7%	0%			
	Sample	03-Aug-2010	15:39	4 BOTTOM		V93201		49000	8	11	1.1	2.2	5880	20000	0.77	2700	0.003	0.308	0.311	0.18	0.28	0.084	0.1
	Triplicate	03-Aug-2010	15:39	4 BOTTOM TRIPLICATE 1		V93258		--	--	--	0.9	1.4	--	--	--	--	--	--	0.223	--	0.3	0.084	0.091
	Triplicate	03-Aug-2010	15:39	4 BOTTOM TRIPLICATE 2		V93320		--	--	--	1.5	1.5	--	--	--	--	--	--	0.304	--	0.23	0.083	0.094
										<5xDL	<5xDL							18%		13%	1%	5%	
	Sample	08-Nov-2010	12:29	4 BOTTOM		Y31458		51800	7.7	4	--	--	5470	18000	1.4	2500	0.005	0.451	0.456	0.090	--	--	--
	Triplicate	08-Nov-2010	12:29	4 BOTTOM TRIPLICATE 1		Y31497		50900	7.7	< 2	--	--	6090	18000	1.1	2500	0.006	0.443	0.449	0.082	--	--	--
	Triplicate	08-Nov-2010	12:29	4 BOTTOM TRIPLICATE 2		Y31502		52300	7.7	< 2	--	--	5800	18000	1	3000	0.006	0.442	0.448	0.077	--	--	--
								1%	0%	<5xDL			5%	0%	18%	11%	10%	1%	1%	8%			
	Sample	18-Nov-2010	10:13	4 BOTTOM		Y53956		49600	7.7	3	0.5	0.7	5300	18000	1.42	2600	0.007	0.408	0.415	0.074	< 0.04	0.072	0.074
	Triplicate	18-Nov-2010	10:13	4 BOTTOM TRIPLICATE 1		Y53989		--	--	--	1.1	1.2	5520	--	--	--	--	--	0.421	--	< 0.04	0.070	0.079
	Triplicate	18-Nov-2010	10:13	4 BOTTOM TRIPLICATE 2		Y53992		--	--	--	1.2	< 3	5170	--	--	--	--	--	0.408	--	< 0.02	0.073	0.079
										<5xDL		3%							2%		2%	4%	
	Sample	22-Mar-2011	13:05	MP4 BOTTOM		AE7501		48200	7.8	< 2	--	--	5420	18000	1.1	2500	0.004	0.306	0.31	0.160	--	--	--
	Triplicate	22-Mar-2011	11:20	MP4 BOTTOM TRIPLICATE 1		AE7504		48500	7.8	< 2	--	--	5310	18000	1.1	2600	0.003	0.321	0.324	0.160	--	--	--
	Triplicate	22-Mar-2011	11:20	MP4 BOTTOM TRIPLICATE 2		AE7518		51100	7.8	2	--	--	5260	18000	1.2	2600	0.003	0.32	0.323	0.160	--	--	--
								3%	0%	<5xDL			2%	0%	5%	2%	<5xDL	3%	2%	0%			
	Sample	28-Mar-2011	12:08	MP4 BOTTOM		AF6936		49000	7.8	2	1.1	1.5	5400	18000	1.2	2400	0.004	0.34	0.344	0.012	< 0.2	UN	0.069
	Triplicate	28-Mar-2011	12:08	MP4 BOTTOM TRIPLICATE 1		AF6939		--	--	--	1.1	2	5210	--	--	--	--	--	0.331	--	< 0.2	0.064	0.070
	Triplicate	28-Mar-2011	12:08	MP4 BOTTOM TRIPLICATE 2		AF6942		--	--	--	1.1	2.2	5190	--	--	--	--	--	0.389	--	< 0.2	0.024	0.068
										0%	19%	2%							9%		64%	1%	
	Sample	09-May-2011	10:31	MP4 BOTTOM		AM2501		47500	7.7	2	--	--	5450	19000	1.2	2700	0.003	0.314	0.317	0.033	--	--	--
	Triplicate	09-May-2011	10:31	MP4 BOTTOM TRIPLICATE 1		AM2504		46700	8	3	--	--	5770	18000	1.1	2600	0.004	0.302	0.306	0.046	--	--	--
	Triplicate	09-May-2011	10:31	MP4 BOTTOM TRIPLICATE 2		AM2507		47300	7.9	< 2	--	--	5520	20000	1.1	2600	0.004	0.304	0.308	0.042	--	--	--
								1%	2%	<5xDL			3%	5%	5%	2%	<5xDL	2%	2%	17%			
	Sample	17-May-2011	10:45	MP4 BOTTOM		AN8368		47800	7.9	5	0.9	0.7	5450	17000	1.2	2500	0.003	0.35	0.353	0.046	0.3	0.065	0.073
	Triplicate	17-May-2011	10:45	MP4 BOT T1		AN8371		--	--	--	0.7	1.1	5430	--	--	--	--	--	0.346	--	0.3	0.066	0.072
	Triplicate	17-May-2011	10:45	MP4 BOT T2		AN8374		--	--	--	0.8	1.1	5450	--	--	--	--	--	0.389	--	0.4	0.067	0.077
										12%	<5xDL	0%							6%	<5xDL	2%	4%	
	Sample	26-Jul-2011	12:07	MP4 BOTTOM		BC3667		44800	7.8	8	--	--	5630	20000	0.87	2700	0.006	0.257	0.263	0.015	--	--	--
	Triplicate	26-Jul-2011	12:07	MP4 BOTTOM TRIPLICATE 1		BC3668		44000	7.8	17	--	--	5290	18000	0.8	2300	0.006	0.286	0.292	0.039	--	--	--
	Triplicate	26-Jul-2011	12:07	MP4 BOTTOM TRIPLICATE 2		BC3669		45400	7.8	11	--	--	5590	18000	0.87	2300	0.006	0.268	0.274	0.050	--	--	--
								2%	0%	<5xDL			3%	6%	5%	9%	0%	5%	5%	52%			
	Sample	02-Aug-2011	10:05	MP4 BOTTOM		BD6278		49500	7.6	7	< 5	< 5	5620	19000	0.81	2800	0.004	0.416	0.42	0.019	< 0.2	0.06	0.068
	Triplicate	02-Aug-2011	10:05	MP4 BOTTOM TRIPLICATE 1		BD6281		--	--	--	< 5	< 5	5700	--	--	--	--	--	0.42	--	< 0.2	0.059	0.069
	Triplicate	02-Aug-2011	10:05	MP4 BOTTOM TRIPLICATE 2		BD6284		--	--	--	< 5	< 5	5780	--	--	--	--	--	0.43	--	0.2	0.059	0.069
										<5xDL	<5xDL	1%						1%	<5xDL	1%	1%		
	Sample	07-Nov-2011	11:25	MP4 BOTTOM		CB4248		47900	7.7	< 2	--	--	5450	19000	0.85	2650	0.004	0.384	0.388	0.100	--	--	--
	Triplicate	07-Nov-2011	11:25	MP4 BOTTOM TRIPLICATE 1		CB4251		47900	7.7	< 2	--	--	5430	18000	0.85	2540	0.004	0.372	0.376	0.060	--	--	--
	Triplicate	07-Nov-2011	11:25	MP4 BOTTOM TRIPLICATE 2		CB4260		48000	7.7	2	--	--	5450	19000	0.86	2500	0.004	0.376	0.38	0.170	--	--	--
								0%	0%	<5xDL			0%	3%	1%	3%	0%	2%	2%	51%			

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General					Anions			Nitrogen Parameters					Phosphorous				
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)		
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--			
Macaulay Point - Bottom QA/QC																									
		Sample	15-Nov-2011	11:50	MP4 BOTTOM	CD1934		48800	7.7	8	< 5.0	< 5.0	5580	19000	0.86	2610	0.002	0.423	0.425	0.007	0.55	0.073	0.077		
		Triplicate	15-Nov-2011	11:50	MP4 BOTTOM TRIPLICATE 1	CD1937		---	---	---	< 5.0	< 5.0	5530	---	---	---	---	---	0.407	---	0.84	0.071	0.078		
		Triplicate	15-Nov-2011	11:50	MP4 BOTTOM TRIPLICATE 2	CD1940		---	---	---	< 5.0	< 5.0	5590	---	---	---	---	---	0.42	---	0.77	0.073	0.076		
											<5xDL	<5xDL	1%						2%		21%	2%	1%		
		Sample	15-Feb-2012	11:19	MP4 BOTTOM	CS7971		47300	7.8	2	---	---	5470	19000	0.9	2590	0.002	0.378	0.38	0.049	---	---	---		
		Triplicate	15-Feb-2012	11:19	MP4 BOTTOM TRIPLICATE 1	CS7972		47200	7.8	2	---	---	5550	19000	0.88	2700	< 0.002	0.383	0.383	0.041	---	---	---		
		Triplicate	15-Feb-2012	11:19	MP4 BOTTOM TRIPLICATE 2	CS7973		47100	7.8	3	---	---	5460	18000	0.88	2580	< 0.002	0.382	0.382	0.045	---	---	---		
								0%	0%	<5xDL			1%	3%	1%	3%	<5xDL	1%	0%	9%					
		Sample	21-Feb-2012	10:19	MP4 BOTTOM	CT8294		47300	7.8	5	< 5.0	< 5.0	5450	19000	0.92	2780	0.002	0.385	0.387	0.17	0.26	0.079	0.082		
		Triplicate	21-Feb-2012	10:19	MP4 BOTTOM TRIPLICATE 1	CT8297		---	---	---	< 5.0	< 5.0	5480	---	---	---	---	---	0.37	---	0.24	0.078	0.081		
		Triplicate	21-Feb-2012	10:19	MP4 BOTTOM TRIPLICATE 2	CT8300		---	---	---	< 5.0	< 5.0	5590	---	---	---	---	---	0.375	---	< 0.20	0.073	0.083		
											<5xDL		1%						2%		<5xDL	4%	1%		
		Sample	22-May-2012	10:50	MP4 BOTTOM	DL9779		47600	7.8	< 2	---	---	5400	18000	0.82	2410	0.003	UN	UN	0.045	---	---	---		
		Triplicate	22-May-2012	10:50	MP4 BOTTOM TRIPLICATE 1	DL9780		47800	7.8	< 2	---	---	5420	18000	0.82	2490	0.004	0.229	0.233	0.029	---	---	---		
		Triplicate	22-May-2012	10:50	MP4 BOTTOM TRIPLICATE 2	DL9781		47700	7.8	5	---	---	5420	17000	0.83	2370	0.003	0.317	0.32	0.029	---	---	---		
								0%	0%	<5xDL			0%	3%	1%	3%	<5xDL	23%	22%	27%					
		Sample	28-May-2012	11:10	MP4 BOTTOM	DN2746		47600	7.8	2	< 5.0	< 5.0	5630	17000	0.88	2300	0.004	0.278	0.282	0.024	0.205	0.055	0.063		
		Triplicate	28-May-2012	11:10	MP4 BOTTOM TRIPLICATE 1	DN2747		---	---	---	< 5.0	< 5.0	5860	---	---	---	---	---	0.272	---	0.194	0.056	0.062		
		Triplicate	28-May-2012	11:10	MP4 BOTTOM TRIPLICATE 2	DN2748		---	---	---	< 5.0	< 5.0	5670	---	---	---	---	---	0.274	---	0.238	0.055	0.064		
											<5xDL		2%						2%		11%	1%	2%		
Macaulay Point																									
	Summer 2010		26-Jul-2010	11:21	4 MID	30	V71683	47300	7.9	4	---	---	5460	18000	0.73	2600	0.005	0.185	0.19	0.11	---	---	---		
				28-Jul-2010	13:23	4 MID	30	V78521	47000	7.9	3	---	---	5330	18000	0.75	1900	0.005	UN	UN	UN	---	---	---	
				03-Aug-2010	13:51	4 MID	31	V93189	48000	7.9	6	1	1.9	5730	18000	0.75	2600	0.003	0.212	0.215	0.12	0.17	0.057	0.069	
				10-Aug-2010	12:35	4 MID	30	W10970	50900	7.9	3	---	---	5560	17000	0.66	3000	0.005	0.251	0.256	0.17	---	---	---	
				17-Aug-2010	12:50	4 MID	31	W29476	50300	8	6	---	---	5450	19000	0.63	2600	0.005	0.278	0.283	0.16	---	---	---	
									Minimum	30				47000	7.9	3			5330	17000	0.6	1900	0.003	0.185	0.190
								Mean	30				48700	7.9	4			5506	18000	0.7	2540	0.005	0.232	0.236	0.140
								Maximum	31				50900	8.0	6			5730	19000	0.8	3000	0.005	0.278	0.283	0.170
								Standard Deviation					1785	0.0	2			149	707	0.1	397	0.001	0.041	0.041	0.029
	Fall 2010		02-Nov-2010	13:23	4 MID	28	Y16481	51800	7.7	< 2	---	---	5470	17000	1.1	2800	0.005	0.423	0.428	0.08	---	---	---		
				08-Nov-2010	12:50	4 MID	30	Y31447	50700	7.7	< 2	---	---	5290	17000	1.4	2400	0.005	0.439	0.444	0.089	---	---	---	
				18-Nov-2010	10:39	4 MID	30	Y53954	47900	7.8	6	< 0.5	0.7	5090	19000	1.4	2600	0.006	0.37	0.376	0.07	< 0.04	0.07	0.075	
				24-Nov-2010	12:17	4 MID	30	Y64510	49800	7.7	10	---	---	5810	18000	1.1	2700	0.003	0.441	0.444	0.081	---	---	---	
				01-Dec-2010	11:32	4 MID	30	Y78818	50800	7.8	< 2	---	---	4790	16000	1	2500	0.003	0.45	0.453	0.17	---	---	---	
									Minimum	28				47900	7.7	< 2			4790	16000	1.0	2400	0.003	0.370	0.376
								Mean	30				50200	7.7	4			5290	17400	1.2	2600	0.004	0.425	0.429	0.098
								Maximum	30				51800	7.8	10			5810	19000	1.4	2800	0.006	0.450	0.453	0.170
								Standard Deviation					1468	0.1	4			385	1140	0.2	158	0.001	0.032	0.031	0.041
	Winter 2011		16-Mar-2011	12:24	MP4 MID	30	AD7900	43100	7.8	4	---	---	5220	19000	0.84	2600	0.004	0.383	0.387	0.059	---	---	---		
				22-Mar-2011	12:57	MP4 MID	29	AE7500	49100	7.8	< 2	---	---	5390	18000	1.1	2500	0.003	0.323	0.326	UN	---	---	---	
				28-Mar-2011	12:28	MP4 MID	30	AF6877	49000	7.8	6	1.2	0.9	5240	17000	1.1	2400	0.004	0.321	0.325	0.015	0.2	0.069	0.064	
				07-Apr-2011	12:51	MP4 MID	29	AH3646	49200	7.8	< 2	---	---	5280	18000	1.1	2500	UN	0.348	0.354	0.008	---	---	---	
				12-Apr-2011	11:13	MP4 MID	28	AI0208	48600	7.8	4	---	---	5010	16000	1.2	2500	0.006	0.341	0.347	0.006	---	---	---	
									Minimum	28				43100	7.8	< 2			5010	16000	0.8	2400	0.003	0.321	0.325
								Mean	29				47800	7.8	3			5228	17600	1.1	2500	0.004	0.343	0.348	0.022
								Maximum	30				49200	7.8	6			5390	19000	1.2	2600	0.006	0.383	0.387	0.059
								Standard Deviation					2637	0.0	2			138	1140	0.1	71	0.001	0.025	0.025	0.025

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
Spring 2011		04-May-2011	11:39	MP4 MID	29	AL5083		46700	7.9	R	---	---	5270	18000	1	2500	0.004	0.292	0.296	0.037	---	---	---
		09-May-2011	10:47	MP4 MID	30	AM2500		48100	7.9	< 2	---	---	5510	18000	1.1	2700	0.003	0.294	0.297	0.034	---	---	---
		17-May-2011	11:13	MP4 MID	29	AN8367		47200	7.9	2	0.8	1.5	5480	19000	1.2	2400	0.003	0.322	0.325	0.072	0.4	0.063	0.073
		25-May-2011	10:51	MP4 MID	30	AP2246		46800	7.9	< 2	---	---	5390	17000	1.2	2600	0.005	0.318	0.323	0.097	---	---	---
		30-May-2011	10:07	MP4 MID	29	AP9787		46300	7.9	2	---	---	5550	18000	1.2	2700	0.005	0.262	0.267	0.049	---	---	---
						Minimum	29	46300	7.9	< 2			5270	17000	1.0	2400	0.003	0.262	0.267	0.034			
					Mean	29	47020	7.9	2			5440	18000	1.1	2580	0.004	0.298	0.302	0.058				
					Maximum	30	48100	7.9	2			5550	19000	1.2	2700	0.005	0.322	0.325	0.097				
					Standard Deviation		683	0.0	1			112	707	0.1	130	0.001	0.024	0.024	0.027				
Summer 2011		20-Jul-2011	10:50	MP4 MID	31	BB0185		47600	7.7	< 2	---	---	5100	17000	1.1	2200	0.006	0.313	0.319	0.037	---	---	---
		26-Jul-2011	13:16	MP4 MID	31	BC3664		43700	7.8	UN	---	---	5340	18000	0.87	2300	0.006	0.248	0.254	0.045	---	---	---
		02-Aug-2011	10:20	MP4 MID	33	BD6266		47500	7.6	5	7	< 5	5420	19000	0.81	2600	0.005	0.374	0.379	0.024	< 0.2	0.054	0.06
		09-Aug-2011	11:30	MP4 MID	32	BF4979		46500	7.8	2	---	---	5350	17000	0.84	2400	0.005	0.354	0.359	0.029	---	---	---
		16-Aug-2011	09:40	MP4 MID	30	BG7564		47500	7.7	8	---	---	5370	18000	0.86	2400	0.005	0.349	0.354	0.028	---	---	---
						Minimum	30	43700	7.6	< 2			5100	17000	0.8	2200	0.005	0.248	0.254	0.024			
					Mean	31	46560	7.7	4			5316	17800	0.9	2380	0.005	0.328	0.333	0.033				
					Maximum	33	47600	7.8	8			5420	19000	1.1	2600	0.006	0.374	0.379	0.045				
					Standard Deviation		1661	0.1	3			125	837	0.1	148	0.001	0.050	0.049	0.008				
Fall 2011		31-Oct-2011	12:20	MP4 MID	29	BZ5091		48200	7.7	4	---	---	5650	19000	0.9	2590	0.004	0.416	0.42	0.16	---	---	---
		07-Nov-2011	11:40	MP4 MID	30	CB4247		47100	7.7	< 2	---	---	5320	19000	0.84	2570	0.005	0.38	0.385	UN	---	---	---
		15-Nov-2011	12:10	MP4 MID	30	CD1933		48100	7.7	6	< 5.0	< 5.0	5390	19000	0.85	2680	0.003	0.381	0.384	0.027	0.63	0.072	0.077
		28-Nov-2011	11:19	MP4 MID	30	CF8404		46800	7.9	3	---	---	5240	14000	0.83	2790	0.003	0.344	0.347	0.034	---	---	---
		30-Nov-2011	11:31	MP4 MID	30	CG3482		46100	7.8	< 2	---	---	5390	18000	0.83	2490	0.003	0.359	0.362	0.13	---	---	---
						Minimum	29	46100	7.7	< 2			5240	14000	0.8	2490	0.003	0.344	0.347	0.027			
					Mean	30	47260	7.8	3			5398	17800	0.9	2624	0.004	0.376	0.380	0.088				
					Maximum	30	48200	7.9	6			5650	19000	0.9	2790	0.005	0.416	0.420	0.160				
					Standard Deviation		891	0.1	2			154	2168	0.0	115	0.001	0.027	0.028	0.067				
Winter 2012		08-Feb-2012	12:59	MP4 MID	30	CR3976		46800	7.8	< 2	---	---	5570	17000	< 0.010	2240	< 0.002	0.357	0.357	0.027	---	---	---
		15-Feb-2012	12:26	MP4 MID	30	CS7968		46600	7.8	< 2	---	---	5440	18000	0.87	2480	0.002	0.368	0.37	UN	---	---	---
		21-Feb-2012	10:47	MP4 MID	30	CT8293		47100	7.8	2	< 5.0	< 5.0	5430	19000	0.92	2700	< 0.002	0.342	0.342	0.01	< 0.20	0.068	0.068
		27-Feb-2012	09:33	MP4 MID	29	CU8873		46800	7.8	6	---	---	5700	18000	0.84	2500	0.002	0.369	0.371	0.017	---	---	---
		04-Mar-2012	12:34	MP4 MID	30	CW2989		45900	7.7	< 2	---	---	5520	18000	0.85	2550	0.002	0.291	0.293	0.008	---	---	---
						Minimum	29	45900	7.7	< 2			5430	17000	0.8	2240	0.002	0.291	0.293	0.008			
					Mean	30	46640	7.8	2			5532	18000	0.9	2494	0.002	0.345	0.347	0.016				
					Maximum	30	47100	7.8	6			5700	19000	0.9	2700	0.002	0.369	0.371	0.027				
					Standard Deviation		451	0.0	2			110	707	0.0	166	0.000	0.032	0.032	0.009				
Spring 2012		15-May-2012	11:30	MP4 MID	30	DK6180		46300	7.9	6	---	---	5090	18000	0.82	2560	0.003	0.228	0.231	0.029	---	---	---
		22-May-2012	11:10	MP4 MID	30	DL9776		46800	7.9	4	---	---	5320	17000	0.81	2370	0.003	0.187	0.19	0.028	---	---	---
		28-May-2012	11:29	MP4 MID	30	DN2743		47500	7.8	< 2	< 5.0	< 5.0	5700		0.88	2280	0.004	0.29	0.294	0.023	0.193	0.056	0.060
		31-May-2012	10:50	MP4 MID	29	DO0732		47400	7.9	< 2	---	---	5370	18000	0.82	2590	0.005	0.273	0.278	0.054	---	---	---
		06-Jun-2012	12:23	MP4 MID	29	DP5004		48000	7.8	13	---	---	5360	17000	0.88	2270	0.006	0.253	0.259	0.065	---	---	---
						Minimum	29	46300	7.8	< 2			5090	17000	0.8	2270	0.003	0.187	0.190	0.023			
					Mean	30	47200	7.9	5			5368	17500	0.8	2414	0.004	0.246	0.250	0.040				
					Maximum	30	48000	7.9	13			5700	18000	0.9	2590	0.006	0.290	0.294	0.065				
					Standard Deviation		660	0.1	5			218	577	0.0	152	0.001	0.040	0.041	0.019				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)	
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--		
Macaulay Point - Mid QA/QC																								
	Sample	28-Jul-2010	13:23	4 MID		V78521		47000	7.9	3	--	--	5330	18000	0.75	1900	0.005	0.295	0.3	0.11	--	--	--	--
	Triplicate	28-Jul-2010	13:23	4 MID TRIPLICATE 1		V78555		46900	7.9	< 2	--	--	5580	18000	0.74	2500	0.004	0.273	0.277	0.07	--	--	--	--
	Triplicate	28-Jul-2010	13:23	4 MID TRIPLICATE 2		V78558		47100	7.9	2	--	--	5040	17000	0.74	2400	0.004	0.285	0.289	0.08	--	--	--	--
								0%	0%	<5xDL			5%	3%	1%	14%	<5xDL	4%	4%	24%				
	Sample	03-Aug-2010	13:51	4 MID		V93189		48000	7.9	6	1	1.9	5730	18000	0.75	2600	0.003	0.212	0.215	0.12	0.17		0.057	0.069
	Triplicate	03-Aug-2010	13:51	4 MID TRIPLICATE 1		V93257		--	--	--	0.7	1.6	--	--	--	--	--	--	0.211	--	0.14		0.057	0.064
	Triplicate	03-Aug-2010	13:51	4 MID TRIPLICATE 2		V93260		--	--	--	1.5	1.1	--	--	--	--	--	--	0.211	--	0.15		0.059	0.059
											<5xDL	<5xDL							1%	10%		2%	8%	
	Sample	08-Nov-2010	12:50	4 MID		Y31447		50700	7.7	< 2	--	--	5290	17000	1.4	2400	0.005	0.439	0.444	0.089	--		--	--
	Triplicate	08-Nov-2010	12:50	4 MID TRIPLICATE 1		Y31496		51300	7.7	< 2	--	--	6020	16000	0.9	2300	0.008	0.433	0.441	0.068	--		--	--
	Triplicate	08-Nov-2010	12:50	4 MID TRIPLICATE 2		Y31499		51400	7.7	< 2	--	--	5720	19000	1.1	3300	0.006	0.456	0.462	0.077	--		--	--
								1%	0%	<5xDL			6%	9%	22%	21%	<5xDL	3%	3%	14%				
	Sample	18-Nov-2010	10:39	4 MID		Y53954		47900	7.8	6	< 0.5	0.7	5090	19000	1.4	2600	0.006	0.37	0.376	0.07	< 0.04		0.07	0.075
	Triplicate	18-Nov-2010	10:39	4 MID TRIPLICATE 1		Y53988		--	--	--	1.1	1.2	5270	--	--	--	--	--	0.427	--	< 0.04		0.071	0.078
	Triplicate	18-Nov-2010	10:39	4 MID TRIPLICATE 2		Y53991		--	--	--	1.5	1.4	5230	--	--	--	--	--	0.437	--	< 0.04		0.071	0.077
											<5xDL	<5xDL	2%						8%	<5xDL		1%	2%	
	Sample	22-Mar-2011	12:57	MP4 MID		AE7500		49100	7.8	< 2	--	--	5390	18000	1.1	2500	0.003	0.323	0.326	0.016	--		--	--
	Triplicate	22-Mar-2011	12:57	MP4 MID TRIPLICATE 1		AE7503		49300	7.8	< 2	--	--	5430	18000	1.1	2600	0.004	0.337	0.341	0.017	--		--	--
	Triplicate	22-Mar-2011	12:57	MP4 MID TRIPLICATE 2		AE7506		49700	7.8	3	--	--	5330	18000	1.2	2500	0.003	0.333	0.336	0.029	--		--	--
								1%	0%	<5xDL			1%	0%	5%	2%	<5xDL	2%	2%	35%				
	Sample	28-Mar-2011	12:28	MP4 MID		AF6877		49000	7.8	6	1.2	0.9	5240	17000	1.1	2400	0.004	0.321	0.325	0.015	0.2		0.069	0.064
	Triplicate	28-Mar-2011	12:28	MP4 MID TRIPLICATE 1		AF6938		--	--	--	1	1	5180	--	--	--	--	--	0.331	--	< 0.2		0.068	0.069
	Triplicate	28-Mar-2011	12:28	MP4 MID TRIPLICATE 2		AF6941		--	--	--	1.9	1.9	5050	--	--	--	--	--	0.308	--	< 0.2		0.066	0.068
											<5xDL	<5xDL	2%						4%	<5xDL		2%	4%	
	Sample	09-May-2011	10:47	MP4 MID		AM2500		48100	7.9	< 2	--	--	5510	18000	1.1	2700	0.003	0.294	0.297	0.034	--		--	--
	Triplicate	09-May-2011	10:47	MP4 MID TRIPLICATE 1		AM2503		47000	7.9	< 2	--	--	5590	19000	1.1	2700	0.003	0.306	0.309	0.037	--		--	--
	Triplicate	09-May-2011	10:47	MP4 MID TRIPLICATE 2		AM2506	TSS: Duplicate failed	47000	7.9	< 2	--	--	5800	17000	1.1	2600	0.003	0.286	0.289	0.039	--		--	--
								1%	0%	<5xDL			3%	6%	0%	2%	0%	3%	3%	7%				
	Sample	17-May-2011	11:13	MP4 MID		AN8367		47200	7.9	2	0.8	1.5	5480	19000	1.2	2400	0.003	0.322	0.325	0.072	0.4		0.063	0.073
	Triplicate	17-May-2011	11:13	MP4 MID T1		AN8370		--	--	--	< 0.5	1.1	5330	--	--	--	--	--	0.338	--	0.4		0.065	0.074
	Triplicate	17-May-2011	11:13	MP4 MID T2		AN8373		--	--	--	0.8	1.4	5250	--	--	--	--	--	0.353	--	0.3		0.065	0.083
											0%	16%	2%						4%	16%		2%	7%	
	Sample	26-Jul-2011	13:16	MP4 MID		BC3664		43700	7.8	4	--	--	5340	18000	0.87	2300	0.006	0.248	0.254	0.045	--		--	--
	Triplicate	26-Jul-2011	13:16	MP4 MID TRIPLICATE 1		BC3665		44100	7.8	12	--	--	5370	16000	0.8	2000	0.006	0.232	0.238	0.035	--		--	--
	Triplicate	26-Jul-2011	13:16	MP4 MID TRIPLICATE 2		BC3666		44100	7.8	12	--	--	5400	18000	0.8	2400	0.006	0.259	0.265	0.035	--		--	--
								1%	0%	49%			1%	7%	5%	9%	0%	6%	5%	15%				
	Sample	02-Aug-2011	10:20	MP4 MID		BD6266		47500	7.6	5	7	< 5	5420	19000	0.81	2600	0.005	0.374	0.379	0.024	< 0.2		0.054	0.06
	Triplicate	02-Aug-2011	10:20	MP4 MID TRIPLICATE 1		BD6280		--	--	--	< 5	< 5	5510	--	--	--	--	--	0.35	--	0.2		0.053	0.061
	Triplicate	02-Aug-2011	10:20	MP4 MID TRIPLICATE 2		BD6283		--	--	--	< 5	< 5	5700	--	--	--	--	--	0.36	--	0.2		0.054	0.06
											<5xDL	<5xDL	3%						4%	0%		1%	1%	
	Sample	07-Nov-2011	11:40	MP4 MID		CB4247		47100	7.7	< 2	--	--	5320	19000	0.84	2570	0.005	0.38	0.385	0.13	--		--	--
	Triplicate	07-Nov-2011	11:40	MP4 MID TRIPLICATE 1		CB4250		47300	7.7	< 2	--	--	5240	18000	0.86	2480	0.005	0.375	0.38	0.22	--		--	--
	Triplicate	07-Nov-2011	11:40	MP4 MID TRIPLICATE 2		CB4253		47000	7.7	< 2	--	--	5360	19000	0.84	2540	0.005	0.391	0.396	0.22	--		--	--
								0%	0%	<5xDL			1%	3%	1%	2%	0%	2%	2%	27%				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General					Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point - Mid QA/QC																							
		Sample	15-Nov-2011	12:10	MP4 MID		CD1933	48100	7.7	6	< 5.0	< 5.0	5390	19000	0.85	2680	0.003	0.381	0.384	0.027	0.63	0.072	0.077
		Triplicate	15-Nov-2011	12:10	MP4 MID TRIPLICATE 1		CD1936	---	---	---	5.3	< 5.0	5310	---	---	---	---	---	0.409	---	0.84	0.072	0.075
		Triplicate	15-Nov-2011	12:10	MP4 MID TRIPLICATE 2		CD1939	---	---	---	< 5.0	< 5.0	5340	---	---	---	---	---	0.435	---	0.79	0.071	0.073
											<5xDL	<5xDL	1%						6%		15%	1%	3%
		Sample	15-Feb-2012	12:26	MP4 MID		CS7968	46600	7.8	< 2	---	---	5440	18000	0.87	2480	0.002	0.368	0.37	0.017	---	---	---
		Triplicate	15-Feb-2012	12:26	MP4 MID TRIPLICATE 1		CS7969	46800	7.8	< 2	---	---	5440	19000	0.87	2520	0.002	0.391	0.393	0.037	---	---	---
		Triplicate	15-Feb-2012	12:26	MP4 MID TRIPLICATE 2		CS7970	46800	7.8	< 2	---	---	5400	19000	0.87	2600	0.002	0.372	0.374	0.028	---	---	---
								0%	0%	<5xDL			0%	3%	0%	2%	0%	3%	3%	37%			
		Sample	21-Feb-2012	10:47	MP4 MID		CT8293	47100	7.8	2	< 5.0	< 5.0	5430	19000	0.92	2700	< 0.002	0.342	0.342	0.01	< 0.20	0.068	0.068
		Triplicate	21-Feb-2012	10:47	MP4 MID TRIPLICATE 1		CT8296	---	---	---	< 5.0	---	5310	---	---	---	---	---	0.374	---	< 0.20	0.067	0.066
		Triplicate	21-Feb-2012	10:47	MP4 MID TRIPLICATE 2		CT8299	---	---	---	< 5.0	---	5590	---	---	---	---	---	0.367	---	< 0.20	0.065	0.067
											<5xDL		3%						5%		<5xDL	2%	1%
		Sample	22-May-2012	11:10	MP4 MID		DL9776	46800	7.9	4	---	---	5320	17000	0.81	2370	0.003	0.187	0.19	0.028	---	---	---
		Triplicate	22-May-2012	11:10	MP4 MID TRIPLICATE 1		DL9777	46600	7.9	3	---	---	5290	18000	0.81	2410	0.003	0.184	0.187	0.028	---	---	---
		Triplicate	22-May-2012	11:10	MP4 MID TRIPLICATE 2		DL9778	46700	7.9	< 2	---	---	5270	18000	0.8	2450	0.003	0.269	0.272	0.033	---	---	---
								0%	0%	<5xDL			0%	3%	1%	2%	0%	23%	22%	10%			
		Sample	28-May-2012	11:29	MP4 MID		DN2743	47500	7.8	< 2	< 5.0	< 5.0	5700	0	0.88	2280	0.004	0.29	0.294	0.023	0.193	0.056	0.060
		Triplicate	28-May-2012	11:29	MP4 MID TRIPLICATE 1		DN2744	---	---	---	< 5.0	---	5570	---	---	---	---	---	0.277	---	0.198	0.055	0.062
		Triplicate	28-May-2012	11:29	MP4 MID TRIPLICATE 2		DN2745	---	---	---	< 5.0	---	5590	---	---	---	---	---	0.274	---	0.19	0.055	0.059
											<5xDL		1%						4%		2%	1%	3%
Macaulay Point																							
	Summer 2010		26-Jul-2010	11:28	4 SURFACE	1	V71682	47200	7.9	3	---	---	5360	18000	0.73	2500	0.005	0.171	0.176	0.13	---	---	---
			28-Jul-2010	13:42	4 SURFACE	1	V78520	46500	8	3	---	---	5160	18000	0.75	1900	0.005	UN	UN	< 0.05	---	---	---
			03-Aug-2010	13:33	4 SURFACE	1	V93188	46700	8.2	13	1.9	2.7	5400	18000	0.76	1900	0.003	0.079	0.082	0.15	0.22	0.024	0.05
			10-Aug-2010	12:38	4 SURFACE	1	W10969	50700	7.9	2	---	---	5740	19000	0.65	2900	0.005	0.251	0.256	0.12	---	---	---
			17-Aug-2010	11:58	4 SURFACE	1	W29475	49600	7.9	2	---	---	5410	17000	0.63	2500	0.005	0.273	0.278	0.18	---	---	---
		Minimum				1		46500	7.9	2			5160	17000	0.6	1900	0.003	0.079	0.082	0.120			
		Mean				1		48140	8.0	5			5414	18000	0.7	2340	0.005	0.194	0.198	0.145			
		Maximum				1		50700	8.2	13			5740	19000	0.8	2900	0.005	0.273	0.278	0.180			
		Standard Deviation						1893	0.1	5			209	707	0.1	434	0.001	0.088	0.089	0.026			
	Fall 2010		02-Nov-2010	13:30	4 SURFACE	1	Y16480	49900	7.7	< 2	---	---	5400	17000	1.1	2800	0.005	0.416	0.421	0.13	---	---	---
			08-Nov-2010	13:05	4 SURFACE	1	Y31446	50800	7.7	< 2	---	---	5230	18000	1.5	2500	0.006	0.426	0.432	0.075	---	---	---
			18-Nov-2010	10:52	4 SURFACE	1	Y53953	47700	7.7	2	2.5	0.8	5480	18000	1.3	2400	0.006	0.428	0.434	0.075	< 0.04	0.071	0.074
			24-Nov-2010	12:30	4 SURFACE	1	Y64509	50100	7.7	5	---	---	5780	16000	1.2	2500	0.002	0.425	0.427	0.069	---	---	---
			01-Dec-2010	11:42	4 SURFACE	1	Y78817	50900	7.7	2	---	---	5260	16000	1.2	2600	0.003	0.443	0.446	0.11	---	---	---
		Minimum				1		47700	7.7	< 2			5230	16000	1.1	2400	0.002	0.416	0.421	0.069			
		Mean				1		49880	7.7	2			5430	17000	1.3	2560	0.004	0.428	0.432	0.092			
		Maximum				1		50900	7.7	5			5780	18000	1.5	2800	0.006	0.443	0.446	0.130			
		Standard Deviation						1293	0.0	2			221	1000	0.2	152	0.002	0.010	0.009	0.027			
	Winter 2011		16-Mar-2011	12:35	MP4 SURFACE	1	AD7899	44000	7.8	10	---	---	5280	18000	0.85	2400	0.004	0.372	0.376	0.028	---	---	---
			22-Mar-2011	11:20	MP4 SURFACE	1	AE7499	49500	7.8	< 2	---	---	5450	18000	1.2	2500	0.004	0.322	0.326	0.014	---	---	---
			28-Mar-2011	13:02	MP4 SURFACE	1	AF6876	49200	7.8	3	1.8	2.3	5180	17000	1.1	2400	0.004	0.335	0.339	0.086	0.3	0.072	0.072
			07-Apr-2011	13:00	MP4 SURFACE	1	AH3645	49400	7.8	< 2	---	---	5230	18000	1.1	2400	UN	0.347	0.353	0.006	---	---	---
			12-Apr-2011	11:20	MP4 SURFACE	1	AI0207	48000	7.9	4	---	---	4970	16000	1.2	2600	0.006	0.31	0.316	0.008	---	---	---
		Minimum				1		44000	7.8	< 2			4970	16000	0.9	2400	0.004	0.310	0.316	0.006			
		Mean				1		48020	7.8	4			5222	17400	1.1	2460	0.005	0.337	0.342	0.028			
		Maximum				1		49500	7.9	10			5450	18000	1.2	2600	0.006	0.372	0.376	0.086			
		Standard Deviation						2326	0.0	4			174	894	0.1	89	0.001	0.024	0.024	0.033			

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
Spring 2011		04-May-2011	11:50	MP4 SURFACE	1	AL5082		46800	7.9	R	---	---	5330	18000	1	2500	0.003	0.277	0.28	0.023	---	---	---
		09-May-2011	11:01	MP4 SURFACE	1	AM2499		47100	7.9	< 2	---	---	5420	17000	1.1	2600	0.004	0.292	0.296	0.023	---	---	---
		17-May-2011	11:25	MP4 SURFACE	1	AN8366		47300	7.9	2	0.9	1.4	5390	16000	1.2	2600	0.003	0.337	0.34	0.074	0.2	0.065	0.068
		25-May-2011	10:59	MP4 SURFACE	1	AP2245		46600	7.9	< 2	---	---	5310	18000	1.2	2600	0.006	0.312	0.318	0.17	---	---	---
		30-May-2011	10:13	MP4 SURFACE	1	AP9786		46600	7.9	2	---	---	5620	17000	1.2	2700	0.004	0.246	0.25	0.039	---	---	---
								Minimum	1	46600	7.9	< 2		5310	16000	1.0	2500	0.003	0.246	0.250	0.023		
							Mean	1	46880	7.9	2		5414	17200	1.1	2600	0.004	0.293	0.297	0.066			
							Maximum	1	47300	7.9	2		5620	18000	1.2	2700	0.006	0.337	0.340	0.170			
							Standard Deviation		311	0.0	1		123	837	0.1	71	0.001	0.035	0.035	0.062			
Summer 2011		20-Jul-2011	11:02	MP4 SURFACE	1	BB0184		47200	7.7	< 2	---	---	5030	18000	1.1	2300	0.006	0.317	0.323	0.077	---	---	---
		26-Jul-2011	13:40	MP4 SURFACE	1	BC3661		41200	7.8	8	---	---	5320	19000	0.88	2500	0.006	UN	0.249	UN	---	---	---
		02-Aug-2011	10:50	MP4 SURFACE	1	BD6265		46400	7.7	5	< 5	5	5260	18000	0.81	2600	0.005	0.296	0.301	0.037	< 0.2	0.044	0.059
		09-Aug-2011	11:40	MP4 SURFACE	1	BF4978		46000	7.8	5	---	---	5470	18000	0.86	2500	0.005	0.334	0.339	0.034	---	---	---
		16-Aug-2011	09:50	MP4 SURFACE	1	BG7563		47200	7.6	5	---	---	5350	19000	0.85	2500	0.005	0.336	0.341	0.035	---	---	---
								Minimum	1	41200	7.6	< 2		5030	18000	0.8	2300	0.005	0.296	0.249	0.034		
							Mean	1	45600	7.7	5		5286	18400	0.9	2480	0.005	0.321	0.311	0.046			
							Maximum	1	47200	7.8	8		5470	19000	1.1	2600	0.006	0.336	0.341	0.077			
							Standard Deviation		2514	0.1	2		162	548	0.1	110	0.001	0.019	0.038	0.021			
Fall 2011		31-Oct-2011	12:26	MP4 SURFACE	1	BZ5090		47700	7.7	4	---	---	5610	18000	0.89	2460	0.004	0.418	0.422	0.12	---	---	---
		07-Nov-2011	11:55	MP4 SURFACE	1	CB4246		46800	7.7	< 2	---	---	5280	18000	0.82	2490	0.005	0.362	0.367	0.17	---	---	---
		15-Nov-2011	12:30	MP4 SURFACE	1	CD1932		47800	7.7	6	< 5.0	< 5.0	5380	19000	0.84	2810	0.002	0.409	0.411	0.01	0.75	0.07	0.075
		28-Nov-2011	11:25	MP4 SURFACE	1	CF8403		46900	7.9	2	---	---	5150	19000	0.83	2640	0.003	0.367	0.37	0.02	---	---	---
		30-Nov-2011	11:40	MP4 SURFACE	1	CG3481		46300	7.8	< 2	---	---	5330	19000	0.84	2670	0.003	0.333	0.336	0.12	---	---	---
								Minimum	1	46300	7.7	< 2		5150	18000	0.8	2460	0.002	0.333	0.336	0.010		
							Mean	1	47100	7.8	3		5350	18600	0.8	2614	0.003	0.378	0.381	0.088			
							Maximum	1	47800	7.9	6		5610	19000	0.9	2810	0.005	0.418	0.422	0.170			
							Standard Deviation		636	0.1	2		169	548	0.0	143	0.001	0.035	0.035	0.070			
Winter 2012		08-Feb-2012	13:07	MP4 SURFACE	1	CR3975		46600	7.8	2	---	---	5450	18000	0.94	2480	< 0.002	0.359	0.359	0.034	---	---	---
		15-Feb-2012	12:43	MP4 SURFACE	1	CS7965		46300	7.8	2	---	---	5390	18000	0.86	2470	< 0.002	0.388	0.388	UN	---	---	---
		21-Feb-2012	11:09	MP4 SURFACE	1	CT8292		46600	7.8	2	< 5.0	---	5440	19000	0.88	2710	0.002	0.385	0.387	0.0097	< 0.20	0.069	0.075
		27-Feb-2012	09:41	MP4 SURFACE	1	CU8872		46700	7.8	2	< 5.0	---	5660	18000	0.84	2430	0.002	0.365	0.367	0.022	---	---	---
		04-Mar-2012	12:41	MP4 SURFACE	1	CW2988		46100	7.7	< 2	---	---	5510	18000	0.85	2580	0.002	0.349	0.351	0.007	---	---	---
								Minimum	1	46100	7.7	< 2		5390	18000	0.8	2430	0.002	0.349	0.351	0.007		
							Mean	1	46460	7.8	2		5490	18200	0.9	2534	0.002	0.369	0.370	0.018			
							Maximum	1	46700	7.8	2		5660	19000	0.9	2710	0.002	0.388	0.388	0.034			
							Standard Deviation		251	0.0	0		104	447	0.0	113	0.000	0.017	0.017	0.012			
Spring 2012		15-May-2012	11:40	MP4 SURFACE	1	DK6179		46200	7.9	5	---	---	5030	17000	0.8	2620	0.004	0.242	0.246	0.024	---	---	---
		22-May-2012	11:28	MP4 SURFACE	1	DL9773		46300	7.9	2	---	---	5370	18000	0.81	2510	0.003	0.28	0.283	0.029	---	---	---
		28-May-2012	11:46	MP4 SURFACE	1	DN2740		47300	7.8	< 2	6.0	---	5550	18000	0.92	2430	0.004	0.278	0.282	0.026	0.174	0.056	0.061
		31-May-2012	10:57	MP4 SURFACE	1	DO0733		47300	7.9	< 2	---	---	5360	17000	0.82	2180	0.005	0.288	0.293	0.035	---	---	---
		06-Jun-2012	12:32	MP4 SURFACE	1	DP5005		47900	7.8	12	---	---	5360	17000	0.88	2270	0.006	0.284	0.29	0.026	---	---	---
								Minimum	1	46200	7.8	< 2		5030	17000	0.8	2180	0.003	0.242	0.246	0.024		
							Mean	1	47000	7.9	4		5334	17400	0.8	2402	0.004	0.274	0.279	0.028			
							Maximum	1	47900	7.9	12		5550	18000	0.9	2620	0.006	0.288	0.293	0.035			
							Standard Deviation		728	0.1	5		188	548	0.1	178	0.001	0.019	0.019	0.004			

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point - Surface QA/QC																							
	Sample	28-Jul-2010	13:42	4 SURFACE		V78520		46500	8	3	--	--	5160	18000	0.75	1900	0.005	0.279	0.284	< 0.05	--	--	--
	Triplicate	28-Jul-2010	13:42	4 SURFACE TRIPLICATE 1		V78554		46500	8	2	--	--	5830	17000	0.74	2400	0.004	0.258	0.262	< 0.05	--	--	--
	Triplicate	28-Jul-2010	13:42	4 SURFACE TRIPLICATE 2		V78557		46400	8	< 2	--	--	5340	17000	0.74	2300	0.004	0.258	0.262	< 0.05	--	--	--
								0%	0%	<5xDL			6%	3%	1%	12%	<5xDL	5%	5%	<5xDL			
	Sample	03-Aug-2010	13:33	4 SURFACE		V93188		46700	8.2	13	1.9	2.7	5400	18000	0.76	1900	0.003	0.079	0.082	0.15	0.22	0.024	0.05
	Triplicate	03-Aug-2010	13:33	4 SURFACE TRIPLICATE 1		V93256		--	--	--	1	2.1	--	--	--	--	--	--	0.081	--	0.17	0.029	0.051
	Triplicate	03-Aug-2010	13:33	4 SURFACE TRIPLICATE 2		V93259		--	--	--	1.1	1.9	--	--	--	--	--	--	0.089	--	0.24	0.029	0.055
											<5xDL	19%						5%		<5xDL	11%	5%	
	Sample	08-Nov-2010	13:05	4 SURFACE		Y31446		50800	7.7	< 2	--	--	5230	18000	1.5	2500	0.006	0.426	0.432	0.075	--	--	--
	Triplicate	08-Nov-2010	13:05	4 SURFACE TRIPLICATE 1		Y31495		51300	7.7	< 2	--	--	5880	17000	1.1	2400	0.006	0.428	0.434	0.049	--	--	--
	Triplicate	08-Nov-2010	13:05	4 SURFACE TRIPLICATE 2		Y31498		51200	7.7	< 2	--	--	6110	18000	1.1	2500	0.006	0.428	0.434	0.066	--	--	--
								1%	0%	<5xDL			8%	3%	19%	2%	0%	0%	0%	21%			
	Sample	18-Nov-2010	10:52	4 SURFACE		Y53953		47700	7.7	2	2.5	0.8	5480	18000	1.3	2400	0.006	0.428	0.434	0.075	< 0.04	0.071	0.074
	Triplicate	18-Nov-2010	10:52	4 SURFACE TRIPLICATE 1		Y53987		--	--	--	1.1	1.9	5160	--	--	--	--	--	0.411	--	< 0.04	0.07	0.077
	Triplicate	18-Nov-2010	10:52	4 SURFACE TRIPLICATE 2		Y53990		--	--	--	1	1.3	5300	--	--	--	--	--	0.410	--	< 0.02	0.069	0.072
											<5xDL	<5xDL	3%					3%		<5xDL	1%	3%	
	Sample	22-Mar-2011	11:20	MP4 SURFACE		AE7499		49500	7.8	< 2	--	--	5450	18000	1.2	2500	0.004	0.322	0.326	0.014	--	--	--
	Triplicate	22-Mar-2011	13:05	MP4 SURFACE TRIPLICATE 1		AE7502		48200	7.8	< 2	--	--	5420	17000	1.2	2500	0.004	0.332	0.336	0.016	--	--	--
	Triplicate	22-Mar-2011	13:05	MP4 SURFACE TRIPLICATE 2		AE7505		51100	7.8	< 2	--	--	5380	18000	1.1	2600	0.004	0.306	0.31	0.021	--	--	--
								3%	0%	<5xDL			1%	3%	5%	2%	0%	4%	4%	<5xDL			
	Sample	28-Mar-2011	13:02	MP4 SURFACE		AF6876	Sample MP4 surface	49200	7.8	3	1.8	2.3	5180	17000	1.1	2400	0.004	0.335	0.339	0.086	0.3	0.072	0.072
	Triplicate	28-Mar-2011	13:02	MP4 SURFACE TRIPLICATE 1		AF6937		--	--	--	0.9	1.1	5260	--	--	--	--	--	0.298	--	< 0.2	0.074	0.077
	Triplicate	28-Mar-2011	13:02	MP4 SURFACE TRIPLICATE 2		AF6940		--	--	--	1.8	2.4	5200	--	--	--	--	--	0.351	--	< 0.2	0.074	0.087
											<5xDL	<5xDL	1%					8%			2%	10%	
	Sample	09-May-2011	11:01	MP4 SURFACE		AM2499		47100	7.9	< 2	--	--	5420	17000	1.1	2600	0.004	0.292	0.296	0.023	--	--	--
	Triplicate	09-May-2011	11:01	MP4 SURFACE TRIPLICATE 1		AM2502		47300	7.9	< 2	--	--	5590	19000	1.1	2600	0.004	0.284	0.288	0.034	--	--	--
	Triplicate	09-May-2011	11:01	MP4 SURFACE TRIPLICATE 2		AM2505		46300	8	< 2	--	--	5710	17000	1.1	2600	0.004	0.274	0.278	0.039	--	--	--
								1%	1%	<5xDL			3%	7%	0%	0%	0%	3%	3%	26%			
	Sample	17-May-2011	11:25	MP4 SURFACE		AN8366		47300	7.9	2	0.9	1.4	5390	16000	1.2	2600	0.003	0.337	0.34	0.074	0.2	0.065	0.068
	Triplicate	17-May-2011	11:25	MP4 SURF T1		AN8369		--	--	--	1	0.8	5450	--	--	--	--	--	0.35	--	< 0.2	0.067	0.069
	Triplicate	17-May-2011	11:25	MP4 SURF T2		AN8372		--	--	--	1.5	1.3	5300	--	--	--	--	--	0.318	--	< 0.2	0.066	0.069
											<5xDL	<5xDL	1%					5%			2%	1%	
	Sample	26-Jul-2011	13:40	MP4 SURFACE		BC3661		41200	7.8	8	--	--	5320	19000	0.88	2500	0.006	0.243	0.249	0.032	--	--	--
	Triplicate	26-Jul-2011	13:40	MP4 SURFACE TRIPLICATE 1		BC3662		43800	7.8	7	--	--	5030	18000	0.88	2400	0.006	0.291	0.297	0.042	--	--	--
	Triplicate	26-Jul-2011	13:40	MP4 SURFACE TRIPLICATE 2		BC3663		43600	7.8	8	--	--	5250	18000	0.81	2000	0.006	0.214	0.22	0.032	--	--	--
								3%	0%	8%			3%	3%	5%	12%	0%	16%	15%	16%			
	Sample	02-Aug-2011	10:50	MP4 SURFACE		BD6265		46400	7.7	5	< 5	5	5260	18000	0.81	2600	0.005	0.296	0.301	0.037	< 0.2	0.044	0.059
	Triplicate	02-Aug-2011	10:50	MP4 SURFACE TRIPLICATE 1		BD6279		--	--	--	< 5	5	5630	--	--	--	--	--	0.3	--	< 0.2	0.044	0.058
	Triplicate	02-Aug-2011	10:50	MP4 SURFACE TRIPLICATE 2		BD6282		--	--	--	< 5	< 5	5200	--	--	--	--	--	0.31	--	0.2	0.045	0.058
													4%					2%		<5xDL	1%	1%	
	Sample	07-Nov-2011	11:55	MP4 SURFACE		CB4246		46800	7.7	< 2	--	--	5280	18000	0.82	2490	0.005	0.362	0.367	0.17	--	--	--
	Triplicate	07-Nov-2011	11:55	MP4 SURFACE TRIPLICATE 1		CB4249		46800	7.7	< 2	--	--	5340	18000	0.83	2390	0.005	0.368	0.373	0.18	--	--	--
	Triplicate	07-Nov-2011	11:55	MP4 SURFACE TRIPLICATE 2		CB4252		46900	7.7	< 2	--	--	5300	19000	0.84	2540	0.005	0.363	0.368	0.18	--	--	--
								0%	0%	<5xDL			1%	3%	1%	3%	0%	1%	1%	3%			

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General					Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point - Surface QA/QC																							
		Sample	15-Nov-2011	12:30	MP4 SURFACE		CD1932	47800	7.7	6	< 5.0	< 5.0	5380	19000	0.84	2810	0.002	0.409	0.411	0.01	0.75	0.07	0.075
		Triplicate	15-Nov-2011	12:30	MP4 SURFACE TRIPLICATE 1		CD1935	---	---	---	< 5.0	< 5.0	5510	---	---	---	---	---	0.411	---	0.96	0.071	0.074
		Triplicate	15-Nov-2011	12:30	MP4 SURFACE TRIPLICATE 2		CD1938	---	---	---	< 5.0	< 5.0	5450	---	---	---	---	---	0.442	---	0.78	0.07	0.077
											<5xDL	<5xDL	1%					4%		<5xDL	1%	2%	
		Sample	15-Feb-2012	12:43	MP4 SURFACE		CS7965	46300	7.8	2	---	---	5390	18000	0.86	2470	< 0.002	0.388	0.388	0.038	---	---	---
		Triplicate	15-Feb-2012	12:43	MP4 SURFACE TRIPLICATE 1		CS7966	46200	7.8	< 2	---	---	5400	20000	0.87	2740	0.003	0.398	0.401	0.041	---	---	---
		Triplicate	15-Feb-2012	12:43	MP4 SURFACE TRIPLICATE 2		CS7967	46400	7.8	< 2	---	---	5420	19000	0.87	2570	0.002	0.385	0.387	0.075	---	---	---
								0%	0%	<5xDL			0%	5%	1%	5%	<5xDL	2%	2%	40%			
		Sample	21-Feb-2012	11:09	MP4 SURFACE		CT8292	46600	7.8	2	< 5.0	< 5.0	5440	19000	0.88	2710	0.002	0.385	0.387	0.0097	< 0.20	0.069	0.075
		Triplicate	21-Feb-2012	11:09	MP4 SURFACE TRIPLICATE 1		CT8295	---	---	---	< 5.0	< 5.0	5380	---	---	---	---	---	0.398	---	< 0.20	0.068	0.066
		Triplicate	21-Feb-2012	11:09	MP4 SURFACE TRIPLICATE 2		CT8298	---	---	---	< 5.0	< 5.0	5520	---	---	---	---	---	0.379	---	< 0.20	0.068	0.068
											<5xDL		1%					2%		<5xDL	1%	7%	
		Sample	28-May-2012	11:46	MP4 SURFACE		DN2740	47300	7.8	< 2	6.0	< 5.0	5550	18000	0.92	2430	0.004	0.278	0.282	0.026	0.174	0.056	0.061
		Triplicate	28-May-2012	11:46	MP4 SURFACE TRIPLICATE 1			---	---	---	< 5.0	< 5.0	5600	---	---	---	---	---	0.281	---	0.175	0.055	0.063
		Triplicate	28-May-2012	11:46	MP4 SURFACE TRIPLICATE 2		DN2742	---	---	---	< 5.0	< 5.0	5250	---	---	---	---	---	0.277	---	0.227	0.055	0.063
											<5xDL		4%					1%		<5xDL	1%	2%	
		MP-5	26-Jul-2010	11:42	5 BOTTOM	58	V71687	48300	7.8	2	---	---	5850	18000	0.74	2600	0.005	0.214	0.219	0.12	---	---	---
			28-Jul-2010	12:27	5 BOTTOM	56	V78537	48100	7.8	2	---	---	5540	19000	0.76	2500	0.005	UN	UN	0.09	---	---	---
		Summer 2010	03-Aug-2010	13:33	5 BOTTOM	60	V93204	50400	7.8	8	1.8	1.7	5750	19000	0.78	2500	0.003	0.33	0.333	0.25	0.14	0.078	0.084
			10-Aug-2010	11:22	5 BOTTOM	56	W10989	51800	7.9	4	---	---	5440	20000	0.68	2900	0.005	0.269	0.274	0.17	---	---	---
			17-Aug-2010	11:28	5 BOTTOM	60	W29566	53000	7.9	16	---	---	5430	18000	0.64	2800	0.005	0.313	0.318	0.35	---	---	---
					Minimum	56		48100	7.8	2			5430	18000	0.6	2500	0.003	0.214	0.219	0.090			
					Mean	58		50320	7.8	6			5602	18800	0.7	2660	0.005	0.282	0.286	0.196			
					Maximum	60		53000	7.9	16			5850	20000	0.8	2900	0.005	0.330	0.333	0.350			
					Standard Deviation			2144	0.1	6			189	837	0.1	182	0.001	0.052	0.051	0.105			
			02-Nov-2010	12:42	5 BOTTOM	57	Y16489	50900	7.7	4	---	---	5150	18000	1.1	2800	0.005	0.422	0.427	0.076	---	---	---
			08-Nov-2010	12:29	5 BOTTOM	57	Y31461	52200	7.7	4	---	---	5440	17000	1.1	3100	0.005	0.427	0.432	0.078	---	---	---
		Fall 2010	18-Nov-2010	11:13	5 BOTTOM	57	Y53959	48400	7.7	3	< 0.5	< 0.5	5360	17000	1.3	2700	0.008	0.415	0.423	0.07	< 0.04	0.07	0.077
			24-Nov-2010	11:57	5 BOTTOM	57	Y64515	51000	7.7	11	---	---	5490	17000	1.1	2600	< 0.002	0.434	0.434	0.063	---	---	---
			01-Dec-2010	10:59	5 BOTTOM	57	Y78834	52000	7.7	3	---	---	4840	18000	1.2	2800	< 0.002	0.451	0.451	0.11	---	---	---
					Minimum	57		48400	7.7	3			4840	17000	1.1	2600	0.005	0.415	0.423	0.063			
					Mean	57		50900	7.7	5			5256	17400	1.2	2800	0.006	0.430	0.433	0.079			
					Maximum	57		52200	7.7	11			5490	18000	1.3	3100	0.008	0.451	0.451	0.110			
					Standard Deviation			1513	0.0	3			266	548	0.1	187	0.002	0.014	0.011	0.018			

Water Quality Analytical Results: Routine Parameters

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
Winter 2011		16-Mar-2011	11:05	MP5 BOTTOM	56	AD7936		46500	7.8	14	--	--	5160	18000	0.83	2400	0.003	0.371	0.374	0.032	--	--	--
		22-Mar-2011	10:40	MP5 BOTTOM	55	AE7521		51400	7.9	< 2	--	--	5330	18000	1.1	2600	0.003	0.318	0.321	0.011	--	--	--
		28-Mar-2011	11:04	MP5 BOTTOM	46	AF6945		49100	7.8	4	0.6	0.7	5050	17000	1.2	2200	0.004	0.318	0.322	0.009	0.2	0.067	0.066
		07-Apr-2011	11:10	MP5 BOTTOM	56	AH3650		49500	7.8	< 2	--	--	5210	18000	1.1	2400	UN	0.342	0.348	0.009	--	--	--
		12-Apr-2011	10:30	MP5 BOTTOM	57	AI0212		47500	7.9	7	--	--	4950	18000	1.16	2400	0.005	0.34	0.345	0.008	--	--	--
					Minimum	46		46500	7.8	< 2			4950	17000	0.8	2200	0.003	0.318	0.321	0.008			
				Mean	54		48800	7.8	5			5140	17800	1.1	2400	0.004	0.338	0.342	0.014				
				Maximum	57		51400	7.9	14			5330	18000	1.2	2600	0.005	0.371	0.374	0.032				
				Standard Deviation			1892	0.1	5			146	447	0.1	141	0.001	0.022	0.022	0.010				
Spring 2011		04-May-2011	10:48	MP5 BOTTOM	55	AL5088		47700	7.9	R	--	--	5790	18000	1	2600	0.003	0.313	0.316	0.027	--	--	--
		09-May-2011	10:05	MP5 BOTTOM	56	AM2510		47600	7.9	3	--	--	5600	18000	1.1	2500	0.003	0.303	0.306	0.034	--	--	--
		17-May-2011	10:00	MP5 BOTTOM	55	AN8377		48000	7.9	2	1.3	< 0.5	5530	18000	1.2	2400	0.003	0.347	0.35	0.039	< 0.2	0.07	0.073
		25-May-2011	10:07	MP5 BOTTOM	55	AP2250		46800	7.9	2	--	--	5500	20000	1.2	2900	0.004	0.31	0.314	0.054	--	--	--
		30-May-2011	09:09	MP5 BOTTOM	56	AP9791		47000	7.9	3	--	--	5720	18000	1.2	2800	0.004	0.309	0.313	0.043	--	--	--
					Minimum	55		46800	7.9	2			5500	18000	1.0	2400	0.003	0.303	0.306	0.027			
				Mean	55		47420	7.9	3			5628	18400	1.1	2640	0.003	0.316	0.320	0.039				
				Maximum	56		48000	7.9	3			5790	20000	1.2	2900	0.004	0.347	0.350	0.054				
				Standard Deviation			502	0.0	1			124	894	0.1	207	0.001	0.017	0.017	0.010				
Summer 2011		20-Jul-2011	11:23	MP5 BOTTOM	59	BB0191		47800	7.6	2	--	--	5320	18000	1.1	2400	0.006	0.336	0.342	0.11	--	--	--
		26-Jul-2011	10:53	MP5 BOTTOM	58	BC3672		45000	7.7	12	--	--	5180	19000	0.89	2400	0.006	0.338	0.344	0.072	--	--	--
		02-Aug-2011	11:20	MP5 BOTTOM	56	BD6287		48400	7.6	4	6	< 5	5710	18000	0.81	2600	0.004	0.402	0.406	0.031	< 0.2	0.063	0.063
		09-Aug-2011	12:15	MP5 BOTTOM	59	BF4984		46800	7.7	3	--	--	5500	18000	0.84	2500	0.004	0.369	0.373	0.03	--	--	--
		16-Aug-2011	10:15	MP5 BOTTOM	60	BG7568		49700	7.6	11	--	--	5650	20000	0.87	2600	0.005	0.379	0.384	0.043	--	--	--
					Minimum	56		45000	7.6	2			5180	18000	0.8	2400	0.004	0.336	0.342	0.030			
				Mean	58		47540	7.6	6			5472	18600	0.9	2500	0.005	0.365	0.370	0.057				
				Maximum	60		49700	7.7	12			5710	20000	1.1	2600	0.006	0.402	0.406	0.110				
				Standard Deviation			1766	0.1	5			222	894	0.1	100	0.001	0.028	0.027	0.034				
Fall 2011		31-Oct-2011	11:20	MP5 BOTTOM	57	BZ5095		49500	7.7	9	--	--	5790	20000	0.93	2860	0.002	0.441	0.443	0.13	--	--	--
		07-Nov-2011	11:47	MP5 BOTTOM	57	CB4263		47900	7.7	< 2	--	--	5380	19000	0.85	2840	0.004	0.384	0.388	0.1	--	--	--
		15-Nov-2011	11:17	MP5 BOTTOM	57	CD1943		48900	7.7	6	< 5.0	< 5.0	5300	19000	0.87	2600	< 0.002	0.429	0.429	0.046	0.8	0.072	0.085
		28-Nov-2011	10:35	MP5 BOTTOM	57	CF8408		46900	7.9	5	--	--	5210	19000	0.83	2530	0.003	0.339	0.342	0.029	--	--	--
		30-Nov-2011	10:46	MP5 BOTTOM	44	CG3486		46400	7.8	< 2	--	--	5370	19000	0.82	2550	0.003	0.357	0.36	0.18	--	--	--
					Minimum	44		46400	7.7	< 2			5210	19000	0.8	2530	0.002	0.339	0.342	0.029			
				Mean	54		47920	7.8	4			5410	19200	0.9	2676	0.003	0.390	0.392	0.097				
				Maximum	57		49500	7.9	9			5790	20000	0.9	2860	0.004	0.441	0.443	0.180				
				Standard Deviation			1305	0.1	3			223	447	0.0	161	0.001	0.044	0.043	0.062				
Winter 2012		08-Feb-2012	12:14	MP5 BOTTOM	57	CR3980		47000	7.8	3	--	--	5440	17000	0.92	2360	< 0.002	0.365	0.365	0.087	--	--	--
		15-Feb-2012	10:29	MP5 BOTTOM	56	CS7976		47200	7.8	2	--	--	5290	18000	0.87	2390	< 0.002	0.377	0.377	0.059	--	--	--
		21-Feb-2012	11:47	MP5 BOTTOM	57	CT8303		47100	7.8	5	5.2 9.5	--	5580	18000	0.91	2660	< 0.002	0.369	0.369	0.0099	< 0.20	0.067	0.067
		27-Feb-2012	12:30	MP5 BOTTOM	56	CU8877		47200	7.8	4	--	--	5700	18000	0.83	2510	0.002	0.351	0.353	0.028	--	--	--
		04-Mar-2012	11:15	MP5 BOTTOM	57	CW2995		46800	7.7	< 2	--	--	5450	18000	0.86	2600	0.002	0.345	0.347	0.016	--	--	--
					Minimum	56		46800	7.7	< 2			5290	17000	0.8	2360	0.002	0.345	0.347	0.010			
				Mean	57		47060	7.8	3			5492	17800	0.9	2504	0.002	0.361	0.362	0.040				
				Maximum	57		47200	7.8	5			5700	18000	0.9	2660	0.002	0.377	0.377	0.087				
				Standard Deviation			167	0.0	2			155	447	0.0	130	0.000	0.013	0.012	0.032				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General					Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
Spring 2012		15-May-2012	10:35	MP5 BOTTOM	56	DK6184		46900	7.9	5	--	--	5080	18000	0.82	2630	0.003	0.268	0.271	0.028	--	--	--
		22-May-2012	10:12	MP5 BOTTOM	56	DL9784		48400	7.8	2	--	--	5480	18000	0.83	2570	0.003	0.238	0.241	0.042	--	--	--
		28-May-2012	10:38	MP5 BOTTOM	56	DN2751		47700	7.8	< 2	< 5.0	--	5120	16000	0.88	2300	0.004	0.297	0.301	0.025	0.177	0.053	0.065
		31-May-2012	10:02	MP5 BOTTOM	56	DO0734		48100	7.8	3	--	--	5470	19000	0.83	2570	0.005	0.213	0.218	0.033	--	--	--
		06-Jun-2012	11:39	MP5 BOTTOM	56	DP5006	old time due to insuff	48600	7.8	15	--	--	5300	18000	0.88	2410	0.006	0.275	0.281	0.054	--	--	--
						Minimum	56	46900	7.8	< 2			5080	16000	0.8	2300	0.003	0.213	0.218	0.025			
					Mean	56	47940	7.8	5			5290	17800	0.8	2496	0.004	0.258	0.262	0.036				
					Maximum	56	48600	7.9	15			5480	19000	0.9	2630	0.006	0.297	0.301	0.054				
					Standard Deviation		673	0.0	6			188	1095	0.0	137	0.001	0.033	0.033	0.012				
Summer 2010		26-Jul-2010	11:50	5 MID	29	V71686		47400	7.9	5	--	--	5520	18000	0.74	2600	0.005	0.196	0.201	0.11	--	--	--
		28-Jul-2010	12:33	5 MID	28	V78536		47300	7.9	2	--	--	5300	18000	0.74	2600	0.005	UN	UN	0.09	--	--	--
		03-Aug-2010	13:51	5 MID	30	V93203		47600	8	14	1	1.9	5140	19000	0.75	2000	0.003	0.216	0.219	0.29	0.16	0.058	0.066
		10-Aug-2010	11:32	5 MID	27	W10988		51000	7.9	3	--	--	5280	20000	0.68	2900	0.005	0.263	0.268	0.14	--	--	--
		17-Aug-2010	11:45	5 MID	30	W29565		50200	8	4	--	--	4970	17000	0.64	2600	0.005	0.261	0.266	0.16	--	--	--
						Minimum	27	47300	7.9	2			4970	17000	0.6	2000	0.003	0.196	0.201	0.090			
					Mean	29	48700	7.9	6			5242	18400	0.7	2540	0.005	0.234	0.239	0.158				
					Maximum	30	51000	8.0	14			5520	20000	0.8	2900	0.005	0.263	0.268	0.290				
					Standard Deviation		1761	0.1	5			204	1140	0.0	329	0.001	0.033	0.034	0.079				
Fall 2010		02-Nov-2010	12:49	5 MID	28	Y16488		52200	7.7	< 2	--	--	5220	18000	1.1	2700	0.005	0.409	0.414	0.078	--	--	--
		08-Nov-2010	11:51	5 MID	28	Y31460		52000	7.8	3	--	--	5610	17000	1.4	2400	0.005	0.432	0.437	0.071	--	--	--
		18-Nov-2010	11:23	5 MID	28	Y53958		48100	7.7	3	0.6	< 0.5	4860	19000	1.4	2700	0.006	0.405	0.411	0.079	< 0.04	0.071	0.073
		24-Nov-2010	11:47	5 MID	28	Y64514		51100	7.6	8	--	--	5480	17000	1.1	2600	< 0.002	0.441	0.441	0.074	--	--	--
		01-Dec-2010	11:07	5 MID	29	Y78833		49800	7.8	4	--	--	4810	18000	1.2	2700	0.003	0.464	0.467	0.18	--	--	--
						Minimum	28	48100	7.6	< 2			4810	17000	1.1	2400	0.003	0.405	0.411	0.071			
					Mean	28	50640	7.7	4			5196	17800	1.2	2620	0.005	0.430	0.434	0.096				
					Maximum	29	52200	7.8	8			5610	19000	1.4	2700	0.006	0.464	0.467	0.180				
					Standard Deviation		1707	0.1	3			359	837	0.2	130	0.001	0.024	0.023	0.047				
Winter 2011		16-Mar-2011	11:30	MP5 MID	28	AD7935		44300	7.8	9	--	--	5080	18000	0.84	2400	0.004	0.377	0.381	0.016	--	--	--
		22-Mar-2011	11:00	MP5 MID	28	AE7520		50300	7.8	< 2	--	--	5300	17000	1.1	2500	0.003	0.328	0.331	0.013	--	--	--
		28-Mar-2011	11:23	MP5 MID	28	AF6944		48800	7.8	4	0.9	1.6	5220	18000	1.2	2400	0.004	0.337	0.341	0.01	< 0.2	0.068	0.072
		07-Apr-2011	11:35	MP5 MID	28	AH3649		49300	7.8	< 2	--	--	5180	17000	1.1	2500	UN	0.343	0.349	0.011	--	--	--
		12-Apr-2011	10:44	MP5 MID	28	AI0211		46700	7.9	9	--	--	4980	17000	1.2	2500	0.006	0.333	0.339	0.009	--	--	--
						Minimum	28	44300	7.8	< 2			4980	17000	0.8	2400	0.003	0.328	0.331	0.009			
					Mean	28	47880	7.8	5			5152	17400	1.1	2460	0.004	0.344	0.348	0.012				
					Maximum	28	50300	7.9	9			5300	18000	1.2	2500	0.006	0.377	0.381	0.016				
					Standard Deviation		2394	0.0	4			125	548	0.1	55	0.001	0.019	0.019	0.003				
Spring 2011		04-May-2011	10:58	MP5 MID	28	AL5087		47100	7.9	R	--	--	5510	19000	1	2500	0.003	0.297	0.3	0.029	--	--	--
		09-May-2011	10:13	MP5 MID	28	AM2509		47800	8	< 2	--	--	5610	19000	1.1	2600	0.004	0.292	0.296	0.025	--	--	--
		17-May-2011	10:17	MP5 MID	28	AN8376		48000	7.9	2	0.8	2.1	5430	18000	1.2	2700	0.003	0.333	0.336	0.042	< 0.2	0.066	0.068
		25-May-2011	10:13	MP5 MID	27	AP2249		46700	7.9	2	--	--	5480	19000	1.2	2900	0.004	0.322	0.326	0.079	--	--	--
		30-May-2011	09:29	MP5 MID	28	AP9790		46000	7.9	5	--	--	5650	15000	1.2	2500	0.004	0.3	0.304	0.044	--	--	--
						Minimum	27	46000	7.9	< 2			5430	15000	1.0	2500	0.003	0.292	0.296	0.025			
					Mean	28	47120	7.9	3			5536	18000	1.1	2640	0.004	0.309	0.312	0.044				
					Maximum	28	48000	8.0	5			5650	19000	1.2	2900	0.004	0.333	0.336	0.079				
					Standard Deviation		817	0.0	2			92	1732	0.1	167	0.001	0.018	0.018	0.021				

Water Quality Analytical Results: Routine Parameters

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General					Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
Summer 2011		20-Jul-2011	11:30	MP5 MID	30	BB0190		47200	7.7	< 2	--	--	5190	17000	1.05	2200	0.006	0.396	0.402	0.034	--	--	--
		26-Jul-2011	11:17	MP5 MID	29	BC3671		44200	7.8	13	--	--	5030	19000	0.8	2400	0.006	0.252	0.258	0.048	--	--	--
		02-Aug-2011	11:35	MP5 MID	29	BD6286		47200	7.7	5	< 5	< 5	5080	18000	0.8	2600	0.005	0.375	0.38	0.019	0.3	0.058	0.06
		09-Aug-2011	12:30	MP5 MID	28	BF4983		46500	7.8	5	--	--	4880	18000	0.85	2400	0.004	0.355	0.359	0.027	--	--	--
		16-Aug-2011	10:30	MP5 MID	30	BG7567		47600	7.4	16	--	--	5430	19000	0.86	2500	0.005	0.364	0.369	0.064	--	--	--
								Minimum	28	44200	7.4	< 2		4880	17000	0.8	2200	0.004	0.252	0.258	0.019		
							Mean	29	46540	7.7	8		5122	18200	0.9	2420	0.005	0.348	0.354	0.038			
							Maximum	30	47600	7.8	16		5430	19000	1.1	2600	0.006	0.396	0.402	0.064			
							Standard Deviation		1367	0.2	6		205	837	0.1	148	0.001	0.056	0.056	0.018			
Fall 2011		31-Oct-2011	11:30	MP5 MID	23	BZ5094		48000	7.7	3	--	--	5570	19000	0.89	2590	0.004	0.431	0.435	0.14	--	--	--
		07-Nov-2011	11:56	MP5 MID	29	CB4262		47200	7.7	2	--	--	5340	18000	0.84	2590	0.005	0.368	0.373	0.11	--	--	--
		15-Nov-2011	11:29	MP5 MID	29	CD1942		480000	7.7	17	< 5.0	< 5.0	5460	20000	0.84	2700	0.002	0.405	0.407	0.013	0.45	0.07	0.071
		28-Nov-2011	10:44	MP5 MID	28	CF8407		46900	7.8	8	--	--	5260	19000	0.83	2510	0.003	0.365	0.368	0.017	--	--	--
		30-Nov-2011	10:54	MP5 MID	22	CG3485		46200	7.8	2	--	--	5340	19000	0.8	2570	0.003	0.357	0.36	0.2	--	--	--
								Minimum	22	46200	7.7	2		5260	18000	0.8	2510	0.002	0.357	0.360	0.013		
							Mean	26	133660	7.7	6		5394	19000	0.8	2592	0.003	0.385	0.389	0.096			
							Maximum	29	480000	7.8	17		5570	20000	0.9	2700	0.005	0.431	0.435	0.200			
							Standard Deviation		193611	0.1	6		122	707	0.0	69	0.001	0.032	0.032	0.081			
Winter 2012		08-Feb-2012	12:23	MP5 MID	29	CR3979		46800	7.8	3	--	--	5430	18000	0.92	2370	< 0.002	0.357	0.357	0.11	--	--	--
		15-Feb-2012	10:51	MP5 MID	28	CS7975		46500	7.8	< 2	--	--	5250	18000	0.86	2450	< 0.002	0.379	0.379	0.043	--	--	--
		21-Feb-2012	11:58	MP5 MID	29	CT8302		46800	7.8	2	< 5.0 '8.9	--	5460	19000	0.91	2710	< 0.002	0.374	0.374	0.011	< 0.20	0.064	0.069
		27-Feb-2012	12:50	MP5 MID	28	CU8876		46700	7.8	3	--	--	5810	18000	0.83	2480	0.002	0.376	0.378	0.014	--	--	--
		04-Mar-2012	11:25	MP5 MID	28	CW2994		46000	7.7	< 2	--	--	5350	18000	0.85	2580	0.002	0.306	0.308	0.013	--	--	--
								Minimum	28	46000	7.7	< 2		5250	18000	0.8	2370	0.002	0.306	0.308	0.011		
							Mean	28	46560	7.8	2		5460	18200	0.9	2518	0.002	0.358	0.359	0.038			
							Maximum	29	46800	7.8	3		5810	19000	0.9	2710	0.002	0.379	0.379	0.110			
							Standard Deviation		336	0.0	1		212	447	0.0	131	0.000	0.031	0.030	0.042			
Spring 2012		15-May-2012	10:44	MP5 MID	28	DK6183		46600	7.9	8	--	--	5060	18000	0.81	2560	0.003	0.227	0.23	0.027	--	--	--
		22-May-2012	10:20	MP5 MID	28	DL9783		46800	7.9	< 2	--	--	5360	18000	0.81	2460	0.003	0.287	0.29	0.032	--	--	--
		28-May-2012	10:48	MP5 MID	28	DN2750		47600	7.8	< 2	< 5.0 '5.0	--	5170	18000	0.89	2380	0.004	0.282	0.286	0.025	0.172	0.055	0.063
		31-May-2012	10:10	MP5 MID	28	DO0735		47300	7.9	< 2	--	--	5390	18000	0.82	2580	0.004	0.244	0.248	0.028	--	--	--
		06-Jun-2012	11:48	MP5 MID	28	DP5007		48000	7.8	5	--	--	5250	17000	0.88	2280	0.006	0.28	0.286	0.038	--	--	--
								Minimum	28	46600	7.8	< 2		5060	17000	0.8	2280	0.003	0.227	0.230	0.025		
							Mean	28	47260	7.9	3		5246	17800	0.8	2452	0.004	0.264	0.268	0.030			
							Maximum	28	48000	7.9	8		5390	18000	0.9	2580	0.006	0.287	0.290	0.038			
							Standard Deviation		573	0.1	3		136	447	0.0	125	0.001	0.027	0.027	0.005			
Summer 2010		26-Jul-2010	11:57	5 SURFACE	1	V71685		47200	7.9	3	--	--	5690	18000	0.73	2600	0.005	0.187	0.192	0.14	--	--	--
		28-Jul-2010	12:41	5 SURFACE	1	V78535		46500	8	< 2	--	--	5570	18000	0.74	1900	0.005	UN	UN	0.09	--	--	--
		03-Aug-2010	14:00	5 SURFACE	1	V93202		46300	8.1	12	1.6	1.7	5400	18000	0.74	1900	0.003	0.105	0.108	0.09	0.2	0.034	0.056
		10-Aug-2010	11:42	5 SURFACE	1	W10987		50600	7.9	7	--	--	5040	20000	0.48	NP	0.005	0.256	0.261	< 0.05	--	--	--
		17-Aug-2010	11:55	5 SURFACE	1	W29564		49200	8	5	--	--	5070	18000	0.64	2700	0.005	0.261	0.266	0.16	--	--	--
								Minimum	1	46300	7.9	< 2		5040	18000	0.5	1900	0.003	0.105	0.108	0.090		
							Mean	1	47960	8.0	6		5354	18400	0.7	2275	0.005	0.202	0.207	0.120			
							Maximum	1	50600	8.1	12		5690	20000	0.7	2700	0.005	0.261	0.266	0.160			
							Standard Deviation		1869	0.1	4		292	894	0.1	435	0.001	0.073	0.074	0.036			

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
	Fall 2010	02-Nov-2010	12:57	5 SURFACE	1	Y16487		52200	7.1	< 2	--	--	5300	17000	1	2800	0.005	0.408	0.413	0.079	--	--	--
		08-Nov-2010	11:58	5 SURFACE	1	Y31459		51000	7.7	2	--	--	5500	17000	1.4	2400	0.005	0.448	0.453	0.091	--	--	--
		18-Nov-2010	11:35	5 SURFACE	1	Y53957		48000	7.7	2	0.6	1.2	4950	19000	1.38	2600	0.006	0.407	0.413	0.072	< 0.04	0.07	0.077
		24-Nov-2010	11:37	5 SURFACE	1	Y64513		50000	7.7	7	--	--	5030	17000	1.1	2600	< 0.002	0.448	0.448	0.074	--	--	--
		01-Dec-2010	11:17	5 SURFACE	1	Y78832		48900	7.7	3	--	--	4960	18000	1.2	2600	0.003	0.455	0.458	0.19	--	--	--
		Minimum	1				48000	7.1	< 2			4950	17000	1.0	2400	0.003	0.407	0.413	0.072				
		Mean	1				50020	7.6	3			5148	17600	1.2	2600	0.005	0.433	0.437	0.101				
		Maximum	1				52200	7.7	7			5500	19000	1.4	2800	0.006	0.455	0.458	0.190				
		Standard Deviation					1662	0.3	2			243	894	0.2	141	0.001	0.024	0.022	0.050				
	Winter 2011	16-Mar-2011	11:50	MP5 SURFACE	1	AD7934		45400	7.8	2	--	--	4930	18000	0.84	2400	0.004	0.375	0.379	0.037	--	--	--
		22-Mar-2011	11:08	MP5 SURFACE	1	AE7519		49000	7.8	< 2	--	--	5260	18000	1.5	2600	0.004	0.344	0.348	0.017	--	--	--
		28-Mar-2011	11:35	MP5 SURFACE	1	AF6943		48800	7.8	< 2	1.2	1.6	5090	18000	1.2	2400	0.004	0.312	0.316	0.01	< 0.2	0.068	0.068
		07-Apr-2011	11:45	MP5 SURFACE	1	AH3648		50400	7.8	< 2	--	--	5090	18000	1.1	2500	UN	0.362	0.368	0.014	--	--	--
		12-Apr-2011	10:50	MP5 SURFACE	1	AI0210		47300	7.9	6	--	--	4970	17000	1.2	2400	0.006	0.33	0.336	0.013	--	--	--
		Minimum	1				45400	7.8	< 2			4930	17000	0.8	2400	0.004	0.312	0.316	0.010				
		Mean	1				48180	7.8	2			5068	17800	1.2	2460	0.005	0.345	0.349	0.018				
		Maximum	1				50400	7.9	6			5260	18000	1.5	2600	0.006	0.375	0.379	0.037				
		Standard Deviation					1903	0.0	2			129	447	0.2	89	0.001	0.025	0.025	0.011				
	Spring 2011	04-May-2011	11:06	MP5 SURFACE	1	AL5086		46700	7.9	R	--	--	5340	19000	1	2400	0.004	0.292	0.296	0.034	--	--	--
		09-May-2011	10:17	MP5 SURFACE	1	AM2508		47200	8	< 2	--	--	5540	19000	1.1	2600	0.004	0.292	0.296	0.037	--	--	--
		17-May-2011	10:30	MP5 SURFACE	1	AN8375		48200	7.9	3	0.6	0.8	5320	17000	1.2	2600	0.003	0.327	0.33	0.048	0.3	0.067	0.072
		25-May-2011	10:20	MP5 SURFACE	1	AP2248		46800	7.9	< 2	--	--	5330	16000	1.2	2100	0.004	0.326	0.33	0.038	--	--	--
		30-May-2011	09:36	MP5 SURFACE	1	AP9789		46000	8	2	--	--	5590	17000	1.2	2700	0.004	0.238	0.242	0.031	--	--	--
		Minimum	1				46000	7.9	< 2			5320	16000	1.0	2100	0.003	0.238	0.242	0.031				
		Mean	1				46980	7.9	2			5424	17600	1.1	2480	0.004	0.295	0.299	0.038				
		Maximum	1				48200	8.0	3			5590	19000	1.2	2700	0.004	0.327	0.330	0.048				
		Standard Deviation					807	0.1	1			130	1342	0.1	239	0.000	0.036	0.036	0.006				
	Summer 2011	20-Jul-2011	11:40	MP5 SURFACE	1	BB0189		47100	7.7	< 2	--	--	5130	17000	1.1	2300	0.006	0.322	0.328	0.045	--	--	--
		26-Jul-2011	11:25	MP5 SURFACE	1	BC3670		43300	7.8	13	--	--	5300	13000	0.79	1600	0.006	0.248	0.254	0.032	--	--	--
		02-Aug-2011	11:50	MP5 SURFACE	1	BD6285		47100	7.7	< 2	< 5	< 5	5070	18000	0.79	2500	0.005	0.332	0.337	0.019	< 0.2	0.048	0.06
		09-Aug-2011	12:45	MP5 SURFACE	1	BF4982		47000	7.8	8	--	--	5060	17000	0.86	2400	0.004	0.349	0.353	0.025	--	--	--
		16-Aug-2011	10:40	MP5 SURFACE	1	BG7566		47200	7.7	11	--	--	5390	19000	0.85	2500	0.005	0.338	0.343	0.032	--	--	--
		Minimum	1				43300	7.7	< 2			5060	13000	0.8	1600	0.004	0.248	0.254	0.019				
		Mean	1				46340	7.7	7			5190	16800	0.9	2260	0.005	0.318	0.323	0.031				
		Maximum	1				47200	7.8	13			5390	19000	1.1	2500	0.006	0.349	0.353	0.045				
		Standard Deviation					1701	0.1	6			147	2280	0.1	378	0.001	0.040	0.040	0.010				
	Fall 2011	31-Oct-2011	11:46	MP5 SURFACE	1	BZ5093		47600	7.7	3	--	--	5560	19000	0.89	2580	0.004	0.424	0.428	0.12	--	--	--
		07-Nov-2011	11:10	MP5 SURFACE	1	CB4261		47000	7.7	< 2	--	--	5280	18000	0.83	2410	0.005	0.386	0.391	0.013	--	--	--
		15-Nov-2011	11:45	MP5 SURFACE	1	CD1941		47800	7.7	8	< 5.0	< 5.0	5610	19000	0.85	2500	0.003	0.403	0.406	0.015	0.81	0.072	0.072
		28-Nov-2011	10:52	MP5 SURFACE	1	CF8406		46800	7.9	< 2	--	--	5170	19000	0.83	2570	0.003	0.349	0.352	0.019	--	--	--
		30-Nov-2011	11:05	MP5 SURFACE	1	CG3484		46100	7.8	< 2	--	--	5440	18000	0.82	2550	0.004	0.35	0.354	0.081	--	--	--
		Minimum	1				46100	7.7	< 2			5170	18000	0.8	2410	0.003	0.349	0.352	0.013				
		Mean	1				47060	7.8	3			5412	18600	0.8	2522	0.004	0.382	0.386	0.050				
		Maximum	1				47800	7.9	8			5610	19000	0.9	2580	0.005	0.424	0.428	0.120				
		Standard Deviation					677	0.1	3			186	548	0.0	70	0.001	0.033	0.033	0.049				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
	Winter 2012	08-Feb-2012	12:30	MP5 SURFACE	1	CR3978		46600	7.8	3	--	--	5380	17000	0.92	2360	< 0.002	0.375	0.375	0.086	--	--	--
		15-Feb-2012	11:00	MP5 SURFACE	1	CS7974		46400	7.8	< 2	--	--	5360	18000	0.86	2410	0.002	0.398	0.4	0.051	--	--	--
		21-Feb-2012	12:06	MP5 SURFACE	1	CT8301		46600	7.8	2	< 5.0	--	5470	18000	0.91	2570	< 0.002	0.367	0.367	0.01	0.34	0.068	0.068
		27-Feb-2012	13:20	MP5 SURFACE	1	CU8875		46400	7.8	10	< 5.0	--	5680	17000	0.83	2380	0.002	0.342	0.344	0.01	--	--	--
		04-Mar-2012	11:34	MP5 SURFACE	1	CW2993		46000	7.7	< 2	--	--	5320	19000	0.84	2610	0.002	0.344	0.346	0.011	--	--	--
		Minimum	1				46000	7.7	< 2			5320	17000	0.8	2360	0.002	0.342	0.344	0.010				
		Mean	1				46400	7.8	3			5442	17800	0.9	2466	0.002	0.365	0.366	0.034				
		Maximum	1				46600	7.8	10			5680	19000	0.9	2610	0.002	0.398	0.400	0.086				
		Standard Deviation					245	0.0	4			144	837	0.0	115	0.000	0.023	0.023	0.034				
	Spring 2012	15-May-2012	10:52	MP5 SURFACE	1	DK6182		46300	7.9	5	--	--	5190	18000	0.81	2600	0.004	0.252	0.256	0.04	--	--	--
		22-May-2012	10:27	MP5 SURFACE	1	DL9782		46300	7.9	< 2	--	--	5280	18000	0.81	2490	0.003	0.186	0.189	0.041	--	--	--
		28-May-2012	10:56	MP5 SURFACE	1	DN2749		47200	7.8	< 2	--	--	5470	17000	0.89	2310	0.004	0.273	0.277	0.026	0.207	0.054	0.061
		31-May-2012	10:15	MP5 SURFACE	1	DO0736		47300	7.9	< 2	--	--	5440	18000	0.82	2550	0.004	0.246	0.25	0.03	--	--	--
		06-Jun-2012	11:58	MP5 SURFACE	1	DP5008		47900	7.8	4	--	--	5270	17000	0.88	2310	0.006	0.258	0.264	0.038	--	--	--
		Minimum	1				46300	7.8	< 2			5190	17000	0.8	2310	0.003	0.186	0.189	0.026				
		Mean	1				47000	7.9	2			5330	17600	0.8	2452	0.004	0.243	0.247	0.035				
		Maximum	1				47900	7.9	5			5470	18000	0.9	2600	0.006	0.273	0.277	0.041				
		Standard Deviation					693	0.1	2			120	548	0.0	135	0.001	0.033	0.034	0.007				
	MP-6	26-Jul-2010	08:26	6 BOTTOM	92	V71690		49100	7.7	2	--	--	5520	19000	0.75	2700	0.005	0.248	0.253	0.16	--	--	--
		28-Jul-2010	11:13	6 BOTTOM	85	V78540		51000	7.7	4	--	--	6270	18000	0.79	2700	0.004	UN	UN	0.08	--	--	--
		03-Aug-2010	07:57	6 BOTTOM	90	V93207		51400	7.7	5	1.1	1.9	6170	18000	0.79	2700	0.004	0.363	0.367	0.14	0.17	0.084	0.089
		10-Aug-2010	08:02	6 BOTTOM	87	W10992		54100	7.8	8	--	--	5620	19000	0.7	2900	0.005	0.395	0.4	0.11	--	--	--
		17-Aug-2010	08:00	6 BOTTOM	90	W29569		50800	7.7	3	--	--	5360	17000	0.65	2700	0.005	0.313	0.318	0.19	--	--	--
		Minimum	85				49100	7.7	2			5360	17000	0.7	2700	0.004	0.248	0.253	0.080				
		Mean	89				51280	7.7	4			5788	18200	0.7	2740	0.005	0.330	0.335	0.136				
		Maximum	92				54100	7.8	8			6270	19000	0.8	2900	0.005	0.395	0.400	0.190				
		Standard Deviation					1805	0.0	2			407	837	0.1	89	0.001	0.064	0.064	0.043				
	Fall 2010	02-Nov-2010	09:36	6 BOTTOM	87	Y16492		53000	7.7	20	--	--	5510	19000	1.8	2700	0.004	0.43	0.434	0.075	--	--	--
		08-Nov-2010	08:15	6 BOTTOM	80	Y31464		53200	7.7	10	--	--	5370	18000	1.1	2700	0.004	0.456	0.46	0.068	--	--	--
		18-Nov-2010	08:23	6 BOTTOM	87	Y53962		51200	7.7	3	1.2	1.3	6050	19000	1.5	2800	< 0.002	0.463	0.463	0.085	< 0.04	0.07	0.078
		24-Nov-2010	08:15	6 BOTTOM	86	Y64518		51600	7.6	14	--	--	5540	17000	1.1	2600	< 0.002	0.448	0.448	0.072	--	--	--
		01-Dec-2010	08:13	6 BOTTOM	84	Y78837		51600	7.7	2	--	--	5450	17000	1.2	2400	< 0.002	0.472	0.472	0.23	--	--	--
		Minimum	80				51200	7.6	2			5370	17000	1.1	2400	0.004	0.430	0.434	0.068				
		Mean	85				52120	7.7	10			5584	18000	1.3	2640	0.004	0.454	0.455	0.106				
		Maximum	87				53200	7.7	20			6050	19000	1.8	2800	0.004	0.472	0.472	0.230				
		Standard Deviation					912	0.0	8			268	1000	0.3	152	0.000	0.016	0.015	0.070				
	Winter 2011	16-Mar-2011	09:23	MP6 BOTTOM	86	AD7939		45900	7.8	8	--	--	5380	18000	0.83	2500	0.002	0.399	0.401	0.14	--	--	--
		22-Mar-2011	09:08	MP6 BOTTOM	86	AE7524		51900	7.8	3	--	--	5480	18000	1.2	2500	0.003	0.355	0.358	0.011	--	--	--
		28-Mar-2011	09:12	MP6 BOTTOM	86	AF6954		52000	7.8	3	< 0.5	0.5	5580	18000	1.2	2300	0.002	0.326	0.328	< 0.005	< 0.2	0.064	0.064
		07-Apr-2011	09:04	MP6 BOTTOM	86	AH3681		51900	7.2	12	--	--	5500	16000	1.2	2700	UN	0.346	0.346	0.016	--	--	--
		12-Apr-2011	08:54	MP6 BOTTOM	86	AI0215		50300	7.8	7	--	--	5460	18000	1.3	2600	< 0.002	0.342	0.342	< 0.005	--	--	--
		Minimum	86				45900	7.2	3			5380	16000	0.8	2300	0.002	0.326	0.328	< 0.005				
		Mean	86				50400	7.7	7			5480	17600	1.1	2520	0.002	0.354	0.355	0.034				
		Maximum	86				52000	7.8	12			5580	18000	1.3	2700	0.003	0.399	0.401	0.140				
		Standard Deviation					2613	0.3	4			72	894	0.2	148	0.001	0.027	0.028	0.073				

Water Quality Analytical Results: Routine Parameters

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
Spring 2011		04-May-2011	08:10	MP6 BOTTOM	85	AL5091		50000	7.8	R	--	--	6000	19000	1	2700	< 0.002	0.399	0.399	0.025	--	--	--
		09-May-2011	08:30	MP6 BOTTOM	86	AM2513		50100	7.8	3	--	--	5980	20000	1.1	2800	< 0.002	0.354	0.354	0.014	--	--	--
		17-May-2011	08:00	MP6 BOTTOM	85	AN8380		50000	7.8	< 2	0.5	< 0.5	6020	18000	1.3	2500	0.003	0.42	0.423	0.029	< 0.2	0.075	0.08
		25-May-2011	08:33	MP6 BOTTOM	85	AP2254		50000	7.8	3	--	--	6120	20000	1.3	2900	0.004	0.441	0.445	0.024	--	--	--
		30-May-2011	07:54	MP6 BOTTOM	86	AP9794		49300	7.8	5	--	--	5780	18000	1.3	2900	0.004	0.408	0.412	0.028	--	--	--
								Minimum	85	49300	7.8	< 2		5780	18000	1.0	2500	0.003	0.354	0.354	0.014		
							Mean	85	49880	7.8	3		5980	19000	1.2	2760	0.004	0.404	0.407	0.024			
							Maximum	86	50100	7.8	5		6120	20000	1.3	2900	0.004	0.441	0.445	0.029			
							Standard Deviation	327	0.0	2		124	1000	0.1	167	0.001	0.032	0.034	0.006				
Summer 2011		20-Jul-2011	08:16	MP6 BOTTOM	89	BB0194		50800	7.6	5	--	--	5260	20000	1.15	3900	0.003	0.435	0.438	0.015	--	--	--
		26-Jul-2011	08:50	MP6 BOTTOM	49	BC3675		50000	7.5	16	--	--	5500	21000	0.94	2800	0.003	0.368	0.371	0.038	--	--	--
		02-Aug-2011	08:05	MP6 BOTTOM	87	BD6295		50400	7.5	6	7	< 5	5730	19000	0.83	2800	0.003	0.499	0.502	0.024	< 0.2	0.068	0.075
		09-Aug-2011	08:00	MP6 BOTTOM	95	BF4987		50900	7.6	12	--	--	6220	19000	0.89	2700	0.005	0.469	0.474	0.038	--	--	--
		16-Aug-2011	07:50	MP6 BOTTOM	88	BG7571		50200	7.6	12	--	--	6040	20000	0.89	2600	0.006	0.435	0.441	0.038	--	--	--
								Minimum	49	50000	7.5	5		5260	19000	0.8	2600	0.003	0.368	0.371	0.015		
							Mean	82	50460	7.6	10		5750	19800	0.9	2960	0.004	0.441	0.445	0.031			
							Maximum	95	50900	7.6	16		6220	21000	1.2	3900	0.006	0.499	0.502	0.038			
							Standard Deviation	385	0.1	5		390	837	0.1	532	0.001	0.049	0.049	0.011				
Fall 2011		31-Oct-2011	15:04	MP6 BOTTOM	85	BZ5098		50200	7.7	6	--	--	5880	20000	0.93	2790	0.004	0.468	0.472	0.17	--	--	--
		07-Nov-2011	09:08	MP6 BOTTOM	87	CB4266		50800	7.7	3	--	--	5900	21000	0.88	2910	< 0.002	0.447	0.447	0.14	--	--	--
		15-Nov-2011	09:32	MP6 BOTTOM	87	CD1946		50200	7.7	8	< 5.0	< 5.0	5220	20000	0.87	2740	< 0.002	0.434	0.434	0.026	0.78	0.072	0.081
		28-Nov-2011	09:04	MP6 BOTTOM	86	CF8411		47000	7.8	30	--	--	5380	19000	0.83	2630	0.003	0.362	0.365	0.014	--	--	--
		30-Nov-2011	09:12	MP6 BOTTOM	86	CG3489		46300	7.8	19	--	--	5300	19000	0.83	2610	0.003	0.329	0.332	0.1	--	--	--
								Minimum	85	46300	7.7	3		5220	19000	0.8	2610	0.003	0.329	0.332	0.014		
							Mean	86	48900	7.7	13		5536	19800	0.9	2736	0.003	0.408	0.410	0.090			
							Maximum	87	50800	7.8	30		5900	21000	0.9	2910	0.004	0.468	0.472	0.170			
							Standard Deviation	2083	0.1	11		328	837	0.0	123	0.001	0.059	0.059	0.069				
Winter 2012		08-Feb-2012	10:20	MP6 BOTTOM	86	CR3983		49500	7.8	8	--	--	5980	18000	0.93	2650	< 0.002	0.34	0.34	0.1	--	--	--
		15-Feb-2012	08:47	MP6 BOTTOM	86	CS7979		48600	7.8	3	--	--	5620	19000	0.91	2680	< 0.002	0.39	0.39	0.041	--	--	--
		21-Feb-2012	12:47	MP6 BOTTOM	87	CT8306		48500	7.8	11	< 5.0	< 5.0	6010	20000	0.94	2860	< 0.002	0.354	0.354	0.0091	< 0.20	0.065	0.068
		27-Feb-2012	10:30	MP6 BOTTOM	86	CU8880		48800	7.8	3	--	--	6090	19000	0.84	2630	< 0.002	0.364	0.364	0.02	--	--	--
		04-Mar-2012	09:38	MP6 BOTTOM	87	CW2998		49700	7.7	2	--	--	5800	20000	0.89	2850	< 0.002	0.366	0.366	0.014	--	--	--
								Minimum	86	48500	7.7	2		5620	18000	0.8	2630	0.000	0.340	0.340	0.009		
							Mean	86	49020	7.8	5		5900	19200	0.9	2734	#DIV/0!	0.363	0.363	0.037			
							Maximum	87	49700	7.8	11		6090	20000	0.9	2860	0.000	0.390	0.390	0.100			
							Standard Deviation	545	0.0	4		189	837	0.0	112	#DIV/0!	0.018	0.018	0.037				
Spring 2012		15-May-2012	08:36	MP6 BOTTOM	86	DK6187		50500	7.8	12	--	--	5720	18000	0.85	2960	0.002	0.423	0.425	0.015	--	--	--
		22-May-2012	08:32	MP6 BOTTOM	86	DL9787		51400	7.7	3	--	--	5850	19000	0.88	2560	0.004	0.325	0.329	0.011	--	--	--
		28-May-2012	08:35	MP6 BOTTOM	86	DN2754		50800	7.8	4	< 5.0	< 5.0	5270	17000	0.92	2430	0.005	0.385	0.39	0.0096	0.203	0.068	0.078
		31-May-2012	08:40	MP6 BOTTOM	86	DO0728		49700	7.8	8	--	--	5770	19000	0.84	2680	0.005	0.354	0.359	0.022	--	--	--
		06-Jun-2012	09:38	MP6 BOTTOM	88	DP5000		50900	7.7	13	--	--	5680	18000	0.9	2410	0.006	0.33	0.336	0.026	--	--	--
								Minimum	86	49700	7.7	3		5270	17000	0.8	2410	0.002	0.325	0.329	0.010		
							Mean	86	50660	7.8	8		5658	18200	0.9	2608	0.004	0.363	0.368	0.017			
							Maximum	88	51400	7.8	13		5850	19000	0.9	2960	0.006	0.423	0.425	0.026			
							Standard Deviation	627	0.1	5		226	837	0.0	225	0.002	0.041	0.040	0.007				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
Summer 2010		26-Jul-2010	08:19	6 MID	46	V71689		48300	7.9	4	---	---	5550	17000	0.74	2400	0.005	0.22	0.225	0.66	---	---	---
		28-Jul-2010	11:23	6 MID	42	V78539		47000	7.9	3	---	---	6170	17000	0.76	2500	0.004	UN	UN	0.11	---	---	---
		03-Aug-2010	08:15	6 MID	45	V93206		48100	8	9	1	1.7	5630	19000	0.75	2400	0.004	0.2	0.204	0.14	0.17	0.057	0.066
		10-Aug-2010	08:16	6 MID	45	W10991		51200	8	3	---	---	5530	18000	0.67	3000	0.005	0.268	0.273	0.13	---	---	---
		17-Aug-2010	08:18	6 MID	45	W29568		49700	8	2	---	---	5030	17000	0.63	2500	0.005	0.3	0.305	0.17	---	---	---
					Minimum		47000	7.9	2			5030	17000	0.6	2400	0.004	0.200	0.204	0.110				
					Mean		48860	8.0	4			5582	17600	0.7	2560	0.005	0.247	0.252	0.242				
					Maximum		51200	8.0	9			6170	19000	0.8	3000	0.005	0.300	0.305	0.660				
					Standard Deviation		1623	0.1	3			405	894	0.1	251	0.001	0.045	0.046	0.235				
Fall 2010		02-Nov-2010	09:48	6 MID	43	Y16491		51800	7.7	2	---	---	5360	18000	1.2	2900	0.005	0.423	0.428	0.068	---	---	---
		08-Nov-2010	08:31	6 MID	40	Y31463		52300	7.7	2	---	---	5240	19000	1.1	2900	0.004	0.458	0.462	0.063	---	---	---
		18-Nov-2010	08:35	6 MID	45	Y53961		48500	7.8	< 2	1.5	0.6	5800	23000	1.3	2800	0.006	0.41	0.416	0.06	< 0.04	0.07	0.075
		24-Nov-2010	08:29	6 MID	44	Y64517		50700	7.7	10	---	---	5070	17000	1.1	2600	< 0.002	0.437	0.437	0.071	---	---	---
		01-Dec-2010	08:23	6 MID	42	Y78836		52400	7.7	< 2	---	---	4750	17000	1.1	2700	< 0.002	0.449	0.449	0.22	---	---	---
					Minimum		48500	7.7	< 2			4750	17000	1.1	2600	0.004	0.410	0.416	0.060				
					Mean		51140	7.7	3			5244	18800	1.2	2780	0.005	0.435	0.438	0.096				
					Maximum		52400	7.8	10			5800	23000	1.3	2900	0.006	0.458	0.462	0.220				
					Standard Deviation		1623	0.0	4			386	2490	0.1	130	0.001	0.019	0.018	0.069				
Winter 2011		16-Mar-2011	09:34	MP6 MID	43	AD7938		48500	7.8	4	---	---	5260	18000	0.83	2500	0.004	0.362	0.366	0.016	---	---	---
		22-Mar-2011	09:10	MP6 MID	44	AE7523		52400	7.8	< 2	---	---	5520	17000	1.2	2500	0.003	0.331	0.334	0.011	---	---	---
		28-Mar-2011	09:21	MP6 MID	43	AF6953		49200	7.8	2	< 0.5	1.4	5370	17000	1.2	2200	0.004	0.324	0.328	0.008	< 0.2	0.07	0.065
		07-Apr-2011	09:14	MP6 MID	43	AH3680		50700	7.9	< 2	---	---	5280	17000	1.1	2500	UN	0.331	0.336	0.008	---	---	---
		12-Apr-2011	09:03	MP6 MID	43	AI0214		46700	7.9	4	---	---	5100	16000	1.3	2400	0.006	0.341	0.347	0.016	---	---	---
					Minimum		46700	7.8	< 2			5100	16000	0.8	2200	0.003	0.324	0.328	0.008				
					Mean		49500	7.8	2			5306	17000	1.1	2420	0.004	0.338	0.342	0.012				
					Maximum		52400	7.9	4			5520	18000	1.3	2500	0.006	0.362	0.366	0.016				
					Standard Deviation		2167	0.1	2			154	707	0.2	130	0.001	0.015	0.015	0.004				
Spring 2011		04-May-2011	08:20	MP6 MID	43	AL5090		46800	7.9	R	---	---	5750	18000	1	2500	0.003	0.325	0.328	0.03	---	---	---
		09-May-2011	08:39	MP6 MID	43	AM2512		47800	7.9	2	---	---	5610	17000	1.1	2800	0.003	0.32	0.323	0.037	---	---	---
		17-May-2011	08:12	MP6 MID	43	AN8379		48000	7.9	3	1	1	5740	18000	1.2	2400	0.003	0.364	0.367	0.034	< 0.2	0.067	0.075
		25-May-2011	08:42	MP6 MID	43	AP2253		46800	7.9	2	---	---	5650	18000	1.1	2700	0.004	0.324	0.328	0.01	---	---	---
		30-May-2011	08:04	MP6 MID	43	AP9793		47700	7.9	< 2	---	---	5370	17000	1.2	2700	0.004	0.309	0.313	0.043	---	---	---
					Minimum		46800	7.9	< 2			5370	17000	1.0	2400	0.003	0.309	0.313	0.010				
					Mean		47420	7.9	2			5624	17600	1.1	2620	0.003	0.328	0.332	0.031				
					Maximum		48000	7.9	3			5750	18000	1.2	2800	0.004	0.364	0.367	0.043				
					Standard Deviation		576	0.0	1			154	548	0.1	164	0.001	0.021	0.021	0.013				
Summer 2011		20-Jul-2011	08:28	MP6 MID	45	BB0193		48000	7.7	< 2	---	---	4990	18000	1.1	2300	0.006	0.412	0.418	0.063	---	---	---
		26-Jul-2011	09:03	MP6 MID	45	BC3674		44700	7.7	12	---	---	5080	19000	0.88	2500	0.007	0.301	0.308	0.025	---	---	---
		02-Aug-2011	08:23	MP6 MID	45	BD6294		49200	7.6	< 2	8	< 5	5540	19000	0.81	2700	0.004	0.421	0.425	0.015	< 0.2	0.064	0.066
		09-Aug-2011	08:15	MP6 MID	47	BF4986		45800	7.8	5	---	---	5580	18000	0.85	2500	0.005	0.366	0.371	0.038	---	---	---
		16-Aug-2011	08:00	MP6 MID	44	BG7570		47500	7.6	6	---	---	5440	19000	0.85	2600	0.005	0.354	0.359	0.045	---	---	---
					Minimum		44700	7.6	< 2			4990	18000	0.8	2300	0.004	0.301	0.308	0.015				
					Mean		47040	7.7	5			5326	18600	0.9	2520	0.005	0.371	0.376	0.037				
					Maximum		49200	7.8	12			5580	19000	1.1	2700	0.007	0.421	0.425	0.063				
					Standard Deviation		1790	0.1	5			272	548	0.1	148	0.001	0.048	0.048	0.018				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General					Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
Fall 2011		31-Oct-2011	15:14	MP6 MID	42	BZ5097		48500	7.7	3	--	--	5630	19000	0.9	2520	0.004	0.418	0.422	0.07	--	--	--
		07-Nov-2011	09:20	MP6 MID	43	CB4265		47600	7.7	< 2	--	--	5340	19000	0.84	2650	0.004	0.392	0.396	0.24	--	--	--
		15-Nov-2011	09:24	MP6 MID	43	CD1945		48300	7.7	4	< 5.0	< 5.0	4930	20000	0.85	2730	0.002	0.402	0.404	0.034	0.54	0.071	0.077
		28-Nov-2011	09:13	MP6 MID	43	CF8410		47000	7.8	9	--	--	5350	19000	0.84	2580	0.003	0.357	0.36	0.034	--	--	--
		30-Nov-2011	09:20	MP6 MID	43	CG3488		46400	7.8	7	--	--	5370	18000	0.83	2530	0.003	0.331	0.334	0.046	--	--	--
				Minimum	42			46400	7.7	< 2			4930	18000	0.8	2520	0.002	0.331	0.334	0.034			
				Mean	43			47560	7.7	5			5324	19000	0.9	2602	0.003	0.380	0.383	0.085			
				Maximum	43			48500	7.8	9			5630	20000	0.9	2730	0.004	0.418	0.422	0.240			
				Standard Deviation				879	0.1	3			251	707	0.0	88	0.001	0.035	0.036	0.088			
Winter 2012		08-Feb-2012	10:13	MP6 MID	43	CR3982		47400	7.8	3	--	--	5520	18000	0.91	2560	< 0.002	0.318	0.318	0.11	--	--	--
		15-Feb-2012	08:56	MP6 MID	43	CS7978		47200	7.8	2	--	--	5460	19000	0.86	2620	< 0.002	0.378	0.378	0.0096	--	--	--
		21-Feb-2012	12:58	MP6 MID	44	CT8305		47200	7.8	3	< 5.0	--	5910	20000	0.92	2810	< 0.002	0.398	0.398	0.0095	< 0.20	0.067	0.071
		27-Feb-2012	10:45	MP6 MID	43	CU8879		47200	7.8	2	--	--	5830	18000	0.82	2510	< 0.002	0.327	0.327	0.018	--	--	--
		04-Mar-2012	09:25	MP6 MID	43	CW2997		47000	7.7	< 2	--	--	5500	19000	0.85	2580	< 0.002	0.295	0.295	0.016	--	--	--
				Minimum	43			47000	7.7	< 2			5460	18000	0.8	2510	0.000	0.295	0.295	0.010			
				Mean	43			47200	7.8	2			5644	18800	0.9	2616	#DIV/0!	0.343	0.343	0.033			
				Maximum	44			47400	7.8	3			5910	20000	0.9	2810	0.000	0.398	0.398	0.110			
				Standard Deviation				141	0.0	1			209	837	0.0	115	#DIV/0!	0.043	0.043	0.043			
Spring 2012		15-May-2012	08:47	MP6 MID	43	DK6186		46700	7.9	11	--	--	4940	18000	0.81	2590	0.003	0.242	0.245	0.028	--	--	--
		22-May-2012	08:43	MP6 MID	43	DL9786		47800	7.9	< 2	--	--	5430	18000	0.82	2480	0.004	0.287	0.291	0.031	--	--	--
		28-May-2012	08:45	MP6 MID	43	DN2753		47600	7.8	< 2	6.3	--	4810	17000	0.89	2200	0.004	0.305	0.309	0.025	0.177	0.055	0.062
		31-May-2012	08:51	MP6 MID	43	DO0729		47400	7.9	< 2	< 5.0	--	5440	17000	0.83	2210	0.005	0.25	0.255	0.035	--	--	--
		06-Jun-2012	09:52	MP6 MID	44	DP5001		48400	7.8	14	--	--	5470	17000	0.88	2290	0.006	0.313	0.319	0.033	--	--	--
				Minimum	43			46700	7.8	< 2			4810	17000	0.8	2200	0.003	0.242	0.245	0.025			
				Mean	43			47580	7.9	6			5218	17400	0.8	2354	0.004	0.279	0.284	0.030			
				Maximum	44			48400	7.9	14			5470	18000	0.9	2590	0.006	0.313	0.319	0.035			
				Standard Deviation				618	0.1	6			317	548	0.0	173	0.001	0.032	0.033	0.004			
Summer 2010		26-Jul-2010	07:35	6 SURFACE	1	V71688		47200	7.9	2	--	--	5590	18000	0.73	2700	0.005	0.169	0.174	0.13	--	--	--
		28-Jul-2010	11:30	6 SURFACE	1	V78538		46500	7.9	2	--	--	5670	17000	0.74	2400	0.004	UN	UN	0.1	--	--	--
		03-Aug-2010	08:20	6 SURFACE	1	V93205		46900	8.1	8	1.5	0.9	5240	18000	0.74	1900	0.005	0.156	0.161	0.24	0.16	0.053	0.058
		10-Aug-2010	08:24	6 SURFACE	1	W10990		50400	8	< 2	--	--	5180	19000	0.67	2800	0.005	0.214	0.219	0.18	--	--	--
		17-Aug-2010	08:28	6 SURFACE	1	W29567		49500	8	3	--	--	5350	18000	0.64	2700	0.005	0.263	0.268	0.17	--	--	--
				Minimum	1			46500	7.9	< 2			5180	17000	0.6	1900	0.004	0.156	0.161	0.100			
				Mean	1			48100	8.0	3			5406	18000	0.7	2500	0.005	0.201	0.206	0.164			
				Maximum	1			50400	8.1	8			5670	19000	0.7	2800	0.005	0.263	0.268	0.240			
				Standard Deviation				1736	0.1	3			215	707	0.0	367	0.000	0.049	0.049	0.053			
Fall 2010		02-Nov-2010	09:55	6 SURFACE	1	Y16490		50900	7.7	3	--	--	5190	17000	1.2	2600	0.004	0.421	0.425	< 0.05	--	--	--
		08-Nov-2010	08:40	6 SURFACE	1	Y31462		53300	7.7	3	--	--	5490	17000	1		0.006	0.428	0.434	0.14	--	--	--
		18-Nov-2010	08:45	6 SURFACE	1	Y53960		48200	7.7	2	< 3	< 0.5	5590	18000	1.4	2800	0.007	0.396	0.403	0.06	< 0.04	0.069	0.078
		24-Nov-2010	08:40	6 SURFACE	1	Y64516		50200	7.7	< 2	--	--	5610	15000	1	2300	0.002	0.435	0.437	0.075	--	--	--
		01-Dec-2010	08:30	6 SURFACE	1	Y78835		50400	7.8	4	--	--	4860	18000	1.1	2400	< 0.002	0.42	0.42	0.22	--	--	--
				Minimum	1			48200	7.7	< 2			4860	15000	1.0	2300	0.002	0.396	0.403	0.060			
				Mean	1			50600	7.7	3			5348	17000	1.1	2525	0.005	0.420	0.424	0.124			
				Maximum	1			53300	7.8	4			5610	18000	1.4	2800	0.007	0.435	0.437	0.220			
				Standard Deviation				1826	0.0	1			320	1225	0.2	222	0.002	0.015	0.013	0.073			

Water Quality Analytical Results: Routine Parameters

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General						Anions			Nitrogen Parameters					Phosphorous	
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO ₃ (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								--	7.0-8.7	--	--	--	--	±10%	1.5 (max)	--	--	3.7 (30 Mean)	--	Table	--	--	
Macaulay Point																							
Winter 2011		16-Mar-2011	09:45	MP6 SURFACE	1	AD7937		46200	7.8	9	--	--	5220	18000	0.83	2500	0.004	0.367	0.371	0.025	--	--	--
		22-Mar-2011	09:25	MP6 SURFACE	1	AE7522		50200	7.9	< 2	--	--	5280	18000	1.2	2500	0.003	0.307	0.31	0.016	--	--	--
		28-Mar-2011	09:30	MP6 SURFACE	1	AF6952		49200	7.8	< 2	0.6	1.7	5320	18000	1.2	2400	0.004	0.337	0.341	0.007	< 0.2	0.066	0.064
		07-Apr-2011	09:30	MP6 SURFACE	1	AH3679		50000	7.8	< 2	--	--	5160	18000	1.1	2400	UN	0.327	0.333	0.006	--	--	--
		12-Apr-2011	09:10	MP6 SURFACE	1	AI0213		47400	7.9	5	--	--	5050	16000	1.2	2400	0.006	0.311	0.317	0.008	--	--	--
				Minimum	1		46200	7.8	< 2			5050	16000	0.8	2400	0.003	0.307	0.310	0.006				
				Mean	1		48600	7.8	3			5206	17600	1.1	2440	0.004	0.330	0.334	0.012				
				Maximum	1		50200	7.9	9			5320	18000	1.2	2500	0.006	0.367	0.371	0.025				
				Standard Deviation			1738	0.1	4			106	894	0.2	55	0.001	0.024	0.024	0.008				
Spring 2011		04-May-2011	08:29	MP6 SURFACE	1	AL5089		46900	7.9	R	--	--	5600	18000	1	2500	0.004	0.256	0.26	0.027	--	--	--
		09-May-2011	08:43	MP6 SURFACE	1	AM2511		47000	7.9	2	--	--	5440	17000	1.1	2600	0.004	0.322	0.326	0.029	--	--	--
		17-May-2011	08:20	MP6 SURFACE	1	AN8378		47800	7.9	3	1.2	0.8	5530	19000	1.3	2400	0.003	0.328	0.331	0.039	< 0.2	0.068	0.07
		25-May-2011	08:50	MP6 SURFACE	1	AP2252		46600	7.9	2	--	--	5510	15000	1.2	2800	0.004	0.3	0.304	0.043	--	--	--
		30-May-2011	08:12	MP6 SURFACE	1	AP9792		46000	8	2	--	--	5300	17000	1.2	2500	0.005	0.23	0.235	0.028	--	--	--
				Minimum	1		46000	7.9	2			5300	15000	1.0	2400	0.003	0.230	0.235	0.027				
				Mean	1		46860	7.9	2			5476	17200	1.2	2560	0.004	0.287	0.291	0.033				
				Maximum	1		47800	8.0	3			5600	19000	1.3	2800	0.005	0.328	0.331	0.043				
				Standard Deviation			654	0.0	1			114	1483	0.1	152	0.001	0.043	0.042	0.007				
Summer 2011		20-Jul-2011	08:38	MP6 SURFACE	1	BB0192		47900	7.7	< 2	--	--	4970	18000	1.05	2300	0.006	0.331	0.337	0.047	--	--	--
		26-Jul-2011	09:14	MP6 SURFACE	1	BC3673		43100	7.8	11	--	--	4860	18000	0.79	2300	0.005	0.206	0.211	0.053	--	--	--
		02-Aug-2011	08:30	MP6 SURFACE	1	BD6293		46900	7.7	4	< 5	5	5350	18000	0.78	2500	0.006	0.317	0.323	0.031	0.2	0.048	0.055
		09-Aug-2011	08:30	MP6 SURFACE	1	BF4985		46100	7.8	3	--	--	5460	18000	0.83	2400	0.004	0.317	0.321	0.034	--	--	--
		16-Aug-2011	08:10	MP6 SURFACE	1	BG7569		46600	7.7	15	--	--	5330	18000	0.85	2400	0.005	0.329	0.334	0.031	--	--	--
				Minimum	1		43100	7.7	< 2			4860	18000	0.8	2300	0.004	0.206	0.211	0.031				
				Mean	1		5194	7.7	7			5194	18000	0.9	2380	0.005	0.300	0.305	0.039				
				Maximum	1		47900	7.8	15			5460	18000	1.1	2500	0.006	0.331	0.337	0.053				
				Standard Deviation			1812	0.1	6			262	0	0.1	84	0.001	0.053	0.053	0.010				
Fall 2011		31-Oct-2011	15:22	MP6 SURFACE	1	BZ5096		47600	7.7	3	--	--	5590	19000	0.88	2530	0.004	0.42	0.424	0.062	--	--	--
		07-Nov-2011	09:30	MP6 SURFACE	1	CB4264		46800	7.7	< 2	--	--	5220	19000	0.84	2630	0.005	0.363	0.368	0.064	--	--	--
		15-Nov-2011	09:14	MP6 SURFACE	1	CD1944		47900	7.7	7	< 5.0	< 5.0	5310	19000	0.85	2610	0.002	0.43	0.432	0.044	0.65	0.072	0.081
		28-Nov-2011	09:21	MP6 SURFACE	1	CF8409		47000	7.9	2	--	--	5190	18000	0.82	2490	0.003	0.332	0.335	0.023	--	--	--
		30-Nov-2011	09:27	MP6 SURFACE	1	CG3487		46400	7.8	< 2	--	--	5340	18000	0.83	2580	0.004	0.326	0.33	0.11	--	--	--
				Minimum	1		46400	7.7	< 2			5190	18000	0.8	2490	0.002	0.326	0.330	0.023				
				Mean	1		47140	7.8	3			5330	18600	0.8	2568	0.004	0.374	0.378	0.061				
				Maximum	1		47900	7.9	7			5590	19000	0.9	2630	0.005	0.430	0.432	0.110				
				Standard Deviation			607	0.1	2			158	548	0.0	58	0.001	0.049	0.048	0.032				
Winter 2012		08-Feb-2012	10:00	MP6 SURFACE	1	CR3981		46900	7.8	3	--	--	5560	17000	0.9	2330	< 0.002	0.318	0.318	0.1	--	--	--
		15-Feb-2012	09:02	MP6 SURFACE	1	CS7977		46600	7.8	< 2	--	--	5670	18000	0.85	2500	< 0.002	0.387	0.387	0.05	--	--	--
		21-Feb-2012	13:08	MP6 SURFACE	1	CT8304		47000	7.8	2	< 5.0 10.0	--	5760	18000	0.89	2580	< 0.002	0.374	0.374	0.0052	< 0.20	0.067	0.069
		27-Feb-2012	11:00	MP6 SURFACE	1	CU8878		46800	7.8	< 2	--	--	5710	18000	0.82	2440	0.002	0.364	0.366	0.023	--	--	--
		04-Mar-2012	09:45	MP6 SURFACE	1	CW2996		46300	7.7	< 2	--	--	5390	18000	0.85	2560	0.002	0.289	0.291	0.0074	--	--	--
				Minimum	1		46300	7.7	< 2			5390	17000	0.8	2330	0.002	0.289	0.291	0.005				
				Mean	1		46720	7.8	2			5618	17800	0.9	2482	0.002	0.346	0.347	0.037				
				Maximum	1		47000	7.8	3			5760	18000	0.9	2580	0.002	0.387	0.387	0.100				
				Standard Deviation			277	0.0	1			147	447	0.0	101	0.000	0.041	0.041	0.039				

Monitoring Station	Season	Date (d-m-y)	Time (hh:mm)	Sample Name	Depth	Sample Code	Sample Comment	General					Anions			Nitrogen Parameters					Phosphorous		
								Electrical Conductivity (µS/cm)	pH (ph units)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (DOC) (mg/L)	Total Organic Carbon (mg/L)	Total Hardness as CaCO3 (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulphate (Dissolved) (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Nitrate plus nitrite as N (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)
Water Quality Guideline								---	7.0-8.7	---	---	---	---	±10%	1.5 (max)	---	---	3.7 (30 Mean)	---	Table	---	---	---
Macaulay Point																							
	Spring 2012	15-May-2012	08:55	MP6 SURFACE	1	DK6185		46200	7.9	9	---	---	5280	18000	0.8	2600	0.003	0.251	0.254	0.022	---	---	---
		22-May-2012	08:51	MP6 SURFACE	1	DL9785		46300	7.9	< 2	---	---	5310	18000	0.81	2510	0.003	0.198	0.201	0.031	---	---	---
		28-May-2012	08:53	MP6 SURFACE	1	DN2752		47100	7.8	< 2	< 5.0 '9.2	---	4720	17000	0.88	2290	0.004	0.26	0.264	0.033	0.206	0.053	0.061
		31-May-2012	08:57	MP6 SURFACE	1	DO0730		47300	7.9	< 2	---	---	5380	18000	0.82	2310	0.005	0.271	0.276	0.033	---	---	---
		06-Jun-2012	10:00	MP6 SURFACE	1	DP5002		48300	7.8	12	---	---	5410	17000	0.9	2330	0.006	0.266	0.272	0.037	---	---	---
					Minimum	1		46200	7.8	< 2			4720	17000	0.8	2290	0.003	0.198	0.201	0.022			
					Mean	1		47040	7.9	5			5220	17600	0.8	2408	0.004	0.249	0.253	0.031			
					Maximum	1		48300	7.9	12			5410	18000	0.9	2600	0.006	0.271	0.276	0.037			
					Standard Deviation			853	0.1	5			284	548	0.0	139	0.001	0.030	0.030	0.006			

NOTES:

QA/QC

1. --- in guideline row(s) denotes no criteria for that parameter.
2. --- in detail data row(s) denotes parameter not analyzed.
3. Highlighting indicates parameters above applied guideline/criteria.
4. Highlighting indicates parameters above QA/QC data quality objective. (According to Report on Wastewater and Marine Environment Programs QA/QC Analytical program review)
5. Highlighting indicates parameters above QA/QC data quality objective. (According to Report on Wastewater and Marine Environment Programs QA/QC Analytical program review)

Marginal Failure
Severe Failure



Water Quality Analytical Results: Ammonia

Station	Season	Sample Depth (m)	Ammonia as N Measured Value		Ammonia as N Water Quality Guideline		Ambient Conditions (30 Day Mean)			
			30 Day Mean (mg/L)	Maximum (mg/L)	30 Day Mean (mg/L)	Maximum (mg/L)	Salinity (PSU)	Temp (°C)	pH	
Albert Head										
AH-2	AH2 Bottom	Spring 2010	44	0.132	0.210	1.4	9.6	30	10	8.2
		Summer 2010	42	0.145	0.230	2.2	15.0	30	10	8.0
		Fall 2010	44	0.091	0.150	1.4	9.6	30	10	8.2
		Winter 2011	45	0.017	0.038	2.2	15.0	30	10	8.0
		Spring 2011	45	0.038	0.064	3.4	23.0	30	10	7.8
		Summer 2011	45	0.040	0.062	3.4	23.0	30	10	7.8
		Fall 2011	44	0.090	0.210	3.4	23.0	30	10	7.8
		Winter 2012	45	0.031	0.063	2.2	15.0	30	10	8.0
	Spring 2012	44	0.043	0.093	2.2	15.0	30	10	8.0	
	AH2 Mid	Summer 2010	22	0.143	0.180	1.6	10.0	30	15	8.0
		Fall 2010	23	0.082	0.090	1.4	9.6	30	10	8.2
		Winter 2011	23	0.014	0.020	2.2	15.0	30	10	8.0
		Spring 2011	23	0.039	0.069	3.4	23.0	30	10	7.8
		Summer 2011	24	0.049	0.059	2.4	16.0	30	15	7.8
Fall 2011		22	0.081	0.160	3.4	23.0	30	10	7.8	
AH2 Surface	Winter 2012	23	0.023	0.042	3.4	23.0	30	10	7.8	
	Spring 2012	22	0.033	0.048	2.2	15.0	30	10	8.0	
	Summer 2010	1	0.134	0.180	1.6	10.0	30	15	8.0	
	Fall 2010	1	0.084	0.087	2.2	15.0	30	10	8.0	
	Winter 2011	1	0.035	0.110	2.2	15.0	30	10	8.0	
	Spring 2011	1	0.047	0.066	3.4	23.0	30	10	7.8	
	Summer 2011	1	0.047	0.110	2.4	16.0	30	15	7.8	
Fall 2011	1	0.109	0.180	3.4	23.0	30	10	7.8		
Winter 2012	1	0.027	0.040	3.4	23.0	30	10	7.8		
Spring 2012	1	0.029	0.035	3.4	23.0	30	10	7.8		
Finnerty Cove										
FC-7	FC7 Bottom	Summer 2010	46	0.146	0.200	1.6	10.0	30	15	8.0
		Fall 2010	47	0.091	0.150	1.4	9.6	30	10	8.2
		Winter 2011	43	0.014	0.019	2.2	15.0	20	10	8.0
		Spring 2011	47	0.047	0.069	2.2	15.0	30	10	8.0
		Summer 2011	50	0.060	0.092	3.4	23.0	30	10	7.8
		Fall 2011	50	0.089	0.140	2.2	15.0	30	10	8.0
		Winter 2012	45	0.040	0.110	2.2	15.0	30	10	8.0
		Spring 2012	46	0.031	0.038	1.4	9.6	30	10	8.2
	FC7 Mid	Summer 2010	23	0.128	0.190	1.6	10.0	20	15	8.0
		Fall 2010	23	0.104	0.210	1.4	9.6	30	10	8.2
		Winter 2011	21	0.020	0.046	2.2	15.0	20	10	8.0
		Spring 2011	24	0.044	0.055	2.2	15.0	20	10	8.0
		Summer 2011	25	0.030	0.038	2.4	16.0	20	15	7.8
		Fall 2011	25	0.077	0.170	3.4	23.0	30	10	7.8
	FC7 Surface	Winter 2012	22	0.034	0.100	2.2	15.0	30	10	8.0
		Spring 2012	23	0.031	0.043	1.4	9.6	20	10	8.2
		Summer 2010	1	0.130	0.170	1.0	6.7	20	15	8.2
		Fall 2010	1	0.080	0.130	1.4	9.6	30	10	8.2
Winter 2011		1	0.014	0.021	2.2	15.0	20	10	8.0	
Spring 2011		1	0.047	0.078	2.2	15.0	20	10	8.0	
Summer 2011		1	0.047	0.076	1.6	10.0	20	15	8.0	
Fall 2011	1	0.112	0.230	3.4	23.0	30	10	7.8		
Winter 2012	1	0.033	0.100	3.4	23.0	30	10	7.8		
Spring 2012	1	0.029	0.038	2.2	15.0	20	10	8.0		



Water Quality Analytical Results: Ammonia

Station	Season	Sample Depth (m)	Ammonia as N Measured Value		Ammonia as N Water Quality Guideline		Ambient Conditions (30 Day Mean)			
			30 Day Mean (mg/L)	Maximum (mg/L)	30 Day Mean (mg/L)	Maximum (mg/L)	Salinity (PSU)	Temp (°C)	pH	
Macaulay Point										
MP-4	MP4 Bottom	Summer 2010	61	0.164	0.270	3.4	23.0	30	10	7.8
		Fall 2010	60	0.126	0.250	1.4	9.6	30	10	8.2
		Winter 2011	59	0.056	0.160	2.2	15.0	30	10	8.0
		Spring 2011	59	0.065	0.120	3.4	23.0	30	10	7.8
		Summer 2011	63	0.073	0.140	3.4	23.0	30	10	7.8
		Fall 2011	60	0.078	0.180	2.2	15.0	30	10	8.0
		Winter 2012	60	0.068	0.170	2.2	15.0	30	10	8.0
		Spring 2012	59	0.072	0.170	1.4	9.6	30	10	8.2
	MP4 Mid	Summer 2010	30	0.134	0.170	1.6	10.0	30	15	8.0
		Fall 2010	30	0.098	0.170	1.4	9.6	30	10	8.2
		Winter 2011	29	0.021	0.059	2.2	15.0	30	10	8.0
		Spring 2011	29	0.058	0.097	3.4	23.0	30	10	7.8
		Summer 2011	31	0.033	0.045	3.4	23.0	30	10	7.8
		Fall 2011	30	0.096	0.160	3.4	23.0	30	10	7.8
		Winter 2012	30	0.016	0.027	3.4	23.0	30	10	7.8
		Spring 2012	30	0.040	0.065	1.4	9.6	30	10	8.2
	MP4 Surface	Summer 2010	1	0.145	0.180	1.6	10.0	30	15	8.0
		Fall 2010	1	0.092	0.130	1.4	9.6	30	10	8.2
		Winter 2011	1	0.028	0.086	2.2	15.0	30	10	8.0
		Spring 2011	1	0.066	0.170	3.4	23.0	30	10	7.8
		Summer 2011	1	0.043	0.077	2.4	16.0	30	15	7.8
		Fall 2011	1	0.088	0.170	3.4	23.0	30	10	7.8
		Winter 2012	1	0.022	0.038	3.4	23.0	30	10	7.8
		Spring 2012	1	0.028	0.035	2.2	15.0	30	10	8.0
MP-5	MP5 Bottom	Summer 2010	58	0.196	0.350	3.4	23.0	30	10	7.8
		Fall 2010	57	0.079	0.110	1.4	9.6	30	10	8.2
		Winter 2011	54	0.014	0.032	2.2	15.0	30	10	8.0
		Spring 2011	55	0.039	0.054	3.4	23.0	30	10	7.8
		Summer 2011	58	0.057	0.110	3.4	23.0	30	10	7.8
		Fall 2011	54	0.097	0.180	3.4	23.0	30	10	7.8
		Winter 2012	57	0.040	0.087	2.2	15.0	30	10	8.0
		Spring 2012	56	0.036	0.054	1.4	9.6	30	10	8.2
	MP5 Mid	Summer 2010	29	0.158	0.290	1.6	10.0	30	15	8.0
		Fall 2010	28	0.096	0.180	1.4	9.6	30	10	8.2
		Winter 2011	28	0.012	0.016	2.2	15.0	30	10	8.0
		Spring 2011	28	0.044	0.079	3.4	23.0	30	10	7.8
		Summer 2011	29	0.038	0.064	3.4	23.0	30	10	7.8
		Fall 2011	26	0.096	0.200	3.4	23.0	30	10	7.8
		Winter 2012	28	0.038	0.110	2.2	15.0	30	10	8.0
		Spring 2012	28	0.030	0.038	1.4	9.6	30	10	8.2
	MP5 Surface	Summer 2010	1	0.120	0.160	1.6	10.0	30	15	8.0
		Fall 2010	1	0.101	0.190	2.2	15.0	30	10	8.0
		Winter 2011	1	0.018	0.037	2.2	15.0	30	10	8.0
		Spring 2011	1	0.038	0.048	3.4	23.0	30	10	7.8
		Summer 2011	1	0.031	0.045	2.4	16.0	30	15	7.8
		Fall 2011	1	0.050	0.120	3.4	23.0	30	10	7.8
		Winter 2012	1	0.034	0.086	5.6	37.0	30	10	7.6
		Spring 2012	1	0.035	0.041	2.2	15.0	30	10	8.0



Water Quality Analytical Results: Ammonia

Station	Season	Sample Depth (m)	Ammonia as N Measured Value		Ammonia as N Water Quality Guideline		Ambient Conditions (30 Day Mean)			
			30 Day Mean (mg/L)	Maximum (mg/L)	30 Day Mean (mg/L)	Maximum (mg/L)	Salinity (PSU)	Temp (°C)	pH	
Macaulay Point										
MP-6	MP6 Bottom	Summer 2010	89	0.136	0.190	3.4	23.0	30	10	7.8
		Fall 2010	85	0.106	0.230	2.2	15.0	30	10	8.0
		Winter 2011	86	0.034	0.140	2.2	15.0	30	10	8.0
		Spring 2011	85	0.024	0.029	5.6	37.0	30	10	7.6
		Summer 2011	82	0.031	0.038	3.4	23.0	30	10	7.8
		Fall 2011	86	0.090	0.170	2.2	15.0	30	10	8.0
		Winter 2012	86	0.037	0.100	2.2	15.0	30	10	8.0
		Spring 2012	86	0.017	0.026	3.4	23.0	30	10	7.8
	MP6 Mid	Summer 2010	45	0.242	0.660	2.2	15.0	30	10	8.0
		Fall 2010	43	0.096	0.220	2.2	15.0	30	10	8.0
		Winter 2011	43	0.012	0.016	2.2	15.0	30	10	8.0
		Spring 2011	43	0.031	0.043	3.4	23.0	30	10	7.8
Summer 2011		45	0.037	0.063	3.4	23.0	30	10	7.8	
Fall 2011		43	0.085	0.240	3.4	23.0	30	10	7.8	
MP6 Surface	Winter 2012	43	0.033	0.110	2.2	15.0	30	10	8.0	
	Spring 2012	43	0.030	0.035	3.4	23.0	30	10	7.8	
	Summer 2010	1	0.164	0.240	1.6	10.0	30	15	8.0	
	Fall 2010	1	0.124	0.220	2.2	15.0	30	10	8.0	
	Winter 2011	1	0.012	0.025	2.2	15.0	30	10	8.0	
	Spring 2011	1	0.033	0.043	3.4	23.0	30	10	7.8	
	Summer 2011	1	0.039	0.053	2.4	16.0	30	15	7.8	
	Fall 2011	1	0.061	0.110	3.4	23.0	30	10	7.8	
Winter 2012	1	0.037	0.100	3.4	23.0	30	10	7.8		
Spring 2012	1	0.031	0.037	2.2	15.0	30	10	8.6		



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

Station	Season	Date (d-m-y)	Lab File	Sample Name	pH and Hardness		Dissolved Metals and Trace Elements							
					pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)
Water Quality Guidelines:					7 - 8.7	n/a	0.12	n/a	3	n/a	140	100	75	10
Albert Head														
AH-2	Winter 2011	16-Mar-2011	B121043	AH2 BOTTOM	7.8	5130	0.08	< 0.05	0.2	< 1	< 0.05	0.5	0.38	0.7
		22-Mar-2011	B122666	AH2 BOTTOM	7.8	5470	0.05	< 0.05	0.29	2	< 0.05	0.5	0.49	0.6
28-Mar-2011		B124352	AH2 BOTTOM	7.8	5200	0.07	< 0.05	0.21	< 1	< 0.05	0.4	0.37	0.8	
07-Apr-2011		B127749	AH2 BOTTOM	7.8	5310	0.06	< 0.05	0.21	< 1	< 0.05	0.4	0.29	< 0.5	
12-Apr-2011		B128938	AH2 BOTTOM	7.8	5140	0.07	< 0.05	0.32	1	< 0.05	0.5	0.44	0.6	
Spring 2011	04-May-2011	B135916	AH2 BOTTOM	7.9	5360	0.07	< 0.05	0.25	2	< 0.05	0.8	0.4	0.8	
	09-May-2011	B137304	AH2 BOTTOM	7.9	5490	0.08	< 0.05	0.24	< 1	< 0.05	0.8	0.35	0.6	
	17-May-2011	B140372	AH2 BOTTOM	7.9	5420	0.07	< 0.05	0.29	1	< 0.05	0.8	0.37	1.5	
	25-May-2011	B143055	AH2 BOTTOM	7.8	5200	0.09	< 0.05	0.25	2	< 0.05	0.9	0.37	1.2	
	30-May-2011	B144562	AH2 BOTTOM	7.8	5650	0.07	< 0.05	0.29	3	< 0.05	0.6	0.43	1.4	
Summer 2011	20-Jul-2011	B165469	AH2 BOTTOM	7.7	5240	0.08	< 0.05	0.24	2	< 0.05	1.4	0.38	1.2	
	26-Jul-2011	B167823	AH2 BOTTOM	7.8	5020	0.09	< 0.05	0.28	1	< 0.05	1.2	0.58	2.0	
	02-Aug-2011	B169888	AH2 BOTTOM	7.6	5430	0.08	< 0.05	0.19	2	< 0.05	0.9	0.35	< 0.5	
	09-Aug-2011	B173361	AH2 BOTTOM	7.7	5520	0.07	< 0.05	0.23	2	< 0.05	1.3	0.36	0.9	
	16-Aug-2011	B175552	AH2 BOTTOM	7.6	5540	0.08	< 0.05	0.21	3	< 0.05	1.8	0.36	0.7	
Fall 2011	31-Oct-2011	B1A5294	AH2 BOTTOM	7.7	5600	0.08	< 0.05	0.32	2	< 0.05	1.2	0.35	0.9	
	07-Nov-2011	B1A8247	AH2 BOTTOM	7.7	5320	0.08	< 0.05	0.35	1	< 0.05	1.6	0.38	0.6	
	15-Nov-2011	B1B1047	AH2 BOTTOM	7.7	5470	0.07	< 0.05	0.28	4	< 0.05	1.0	0.35	< 0.5	
	28-Nov-2011	B1B5372	AH2 BOTTOM	7.8	5240	0.07	< 0.05	0.38	4	< 0.05	0.6	0.36	< 0.5	
	30-Nov-2011	B1B6322	AH2 BOTTOM	7.8	5410	0.07	< 0.05	0.34	2	0.05	0.9	0.31	0.8	
Winter 2012	08-Feb-2012	B210733	AH2 BOTTOM	7.8	5320	0.08	< 0.05	1.36	1	< 0.05	0.7	0.36	0.7	
	15-Feb-2012	B212982	AH2 BOTTOM	7.8	5330	0.07	< 0.05	0.44	2	< 0.05	0.5	0.60	1.1	
	21-Feb-2012	B214515	AH2 BOTTOM	7.8	5590	0.07	< 0.05	0.48	4	< 0.05	0.6	0.39	0.6	
	27-Feb-2012	B216209	AH2 BOTTOM	7.8	5650	0.07	< 0.05	0.53	1	< 0.05	0.7	0.36	0.7	
	04-Mar-2012	B218224	AH2 BOTTOM	7.7	5490	0.07	< 0.05	0.30	< 1	< 0.05	0.6	0.39	0.6	
Spring 2012	15-May-2012	B239924	AH2 BOTTOM	7.9	5090	0.097	< 0.050	0.375	< 1.0	< 0.050	0.54	0.441	0.88	
	22-May-2012	B241909	AH2 BOTTOM	7.8	5370	0.076	< 0.050	0.423	1.0	< 0.050	0.98	0.446	0.54	
	28-May-2012	B243848	AH2 BOTTOM	7.8	5780	0.076	< 0.050	0.412	< 1.0	< 0.050	0.86	0.354	< 0.50	
	31-May-2012	B245213	AH2 BOTTOM	7.8	5480	0.065	< 0.050	0.337	2.0	< 0.050	0.33	0.340	0.51	
	06-Jun-2012	B247308	AH2 BOTTOM	7.8	5340	0.070	< 0.050	0.382	< 1.0	< 0.050	0.23	0.321	0.76	



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

Station	Season	Date (d-m-y)	Lab File	Sample Name	pH and Hardness		Dissolved Metals and Trace Elements										
					pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)			
					Water Quality Guidelines:		0.12	n/a	3	n/a	140	100	75	10			
Albert Head																	
	Winter 2011	16-Mar-2011	B121043	AH2 MID	7.8	5170	0.07	< 0.05	0.2	< 1	< 0.05	0.5	2.16	0.7			
		22-Mar-2011	B122666	AH2 MID	7.8	5360	0.05	< 0.05	0.27	1	< 0.05	0.4	0.44	0.9			
		28-Mar-2011	B124352	AH2 MID	7.8	5120	0.07	< 0.05	0.21	< 1	< 0.05	0.5	0.41	0.6			
		07-Apr-2011	B127749	AH2 MID	7.8	5200	0.06	< 0.05	0.24	< 1	< 0.05	0.4	0.38	0.7			
		12-Apr-2011	B128938	AH2 MID	7.8	5050	0.08	< 0.05	0.38	5	< 0.05	0.5	0.40	1.2			
	Spring 2011	04-May-2011	B135916	AH2 MID	7.9	5350	0.07	< 0.05	0.39	1	< 0.05	0.8	0.42	0.9			
		09-May-2011	B137304	AH2 MID	7.7	5480	0.07	< 0.05	0.25	1	< 0.05	0.9	0.37	0.6			
		17-May-2011	B140372	AH2 MID	7.9	5450	0.08	< 0.05	0.27	2	< 0.05	0.7	0.37	1.6			
		25-May-2011	B143055	AH2 MID	7.8	5320	0.07	< 0.05	0.32	3	< 0.05	0.8	0.42	1.5			
		30-May-2011	B144562	AH2 MID	7.9	5570	0.07	< 0.05	0.25	< 1	< 0.05	0.4	0.40	1.4			
	Summer 2011	20-Jul-2011	B165469	AH2 MID	7.7	5290	0.08	< 0.05	0.28	2	< 0.05	1.3	0.38	2.2			
		26-Jul-2011	B167823	AH2 MID	7.7	5200	0.08	< 0.05	0.26	1	< 0.05	1.0	0.39	< 0.5			
		02-Aug-2011	B169888	AH2 MID	7.7	5360	0.07	< 0.05	0.21	< 1	< 0.05	0.7	0.37	< 0.5			
		09-Aug-2011	B173361	AH2 MID	7.8	5190	0.08	< 0.05	0.30	< 1	< 0.05	1.1	0.32	0.9			
		16-Aug-2011	B175552	AH2 MID	7.6	5450	0.07	< 0.05	0.22	2	< 0.05	1.7	0.35	0.7			
	Fall 2011	31-Oct-2011	B1A5294	AH2 MID	7.7	5550	0.08	< 0.05	0.27	< 1	< 0.05	< 0.2	0.4	0.6			
		07-Nov-2011	B1A8247	AH2 MID	7.7	5340	0.08	< 0.05	0.23	< 1	< 0.05	1.1	0.37	< 0.5			
		15-Nov-2011	B1B1047	AH2 MID	7.7	5440	0.07	< 0.05	0.41	2	< 0.05	0.9	0.32	< 0.5			
		28-Nov-2011	B1B5372	AH2 MID	7.8	5240	0.07	< 0.05	0.58	1	< 0.05	0.6	0.34	0.5			
		30-Nov-2011	B1B6322	AH2 MID	7.8	5520	0.07	< 0.05	0.43	< 1	< 0.05	0.6	0.33	< 0.5			
	Winter 2012	08-Feb-2012	B210733	AH2 MID	7.8	5370	0.07	< 0.05	0.77	< 1	0.1	0.6	0.42	0.8			
		15-Feb-2012	B212982	AH2 MID	7.8	5150	0.07	< 0.05	0.31	1	< 0.05	0.6	0.45	0.7			
		21-Feb-2012	B214515	AH2 MID	7.7	5480	0.08	< 0.05	1.33	2	< 0.05	0.7	0.35	0.6			
		27-Feb-2012	B216209	AH2 MID	7.8	5670	0.07	< 0.05	0.19	< 1	< 0.05	0.7	0.39	0.7			
		04-Mar-2012	B218224	AH2 MID	7.7	5510	0.07	< 0.05	0.36	8	< 0.05	0.7	0.39	1.6			
	Spring 2012	15-May-2012	B239924	AH2 MID	7.9	5320	0.07	< 0.050	0.439	< 1.0	< 0.050	0.59	0.604	0.63			
		22-May-2012	B241909	AH2 MID	7.9	5380	0.07	< 0.050	0.475	1.2	< 0.050	0.95	0.461	1.11			
		28-May-2012	B243848	AH2 MID	7.8	5460	0.07	< 0.050	0.432	1.1	< 0.050	0.72	0.389	< 0.50			
		31-May-2012	B245213	AH2 MID	7.8	5470	0.07	< 0.050	0.283	< 1.0	< 0.050	0.25	0.378	0.65			
		06-Jun-2012	B247308	AH2 MID	7.8	5450	0.08	< 0.050	0.265	< 1.0	< 0.050	0.24	0.302	< 0.50			



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

Station	Season	Date (d-m-y)	Lab File	Sample Name	pH and Hardness		Dissolved Metals and Trace Elements										
					pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)			
					Water Quality Guidelines:		0.12	n/a	3	n/a	140	100	75	10			
Albert Head																	
	Winter 2011	16-Mar-2011	B121043	AH2 SURFACE	7.5	5060	0.07	< 0.05	0.21	1	< 0.05	0.6	0.36	0.6			
		22-Mar-2011	B122666	AH2 SURFACE	7.8	5390	0.07	< 0.05	0.24	2	< 0.05	0.5	0.44	0.9			
		28-Mar-2011	B124352	AH2 SURFACE	7.8	5170	0.08	< 0.05	0.17	< 1	< 0.05	0.5	0.35	0.6			
		07-Apr-2011	B127749	AH2 SURFACE	7.8	5190	0.06	< 0.05	0.27	1	< 0.05	0.5	0.31	0.6			
		12-Apr-2011	B128938	AH2 SURFACE	7.8	5130	0.08	< 0.05	0.36	1	< 0.05	0.6	0.38	0.7			
	Spring 2011	04-May-2011	B135916	AH2 SURFACE	7.8	5330	0.07	< 0.05	0.36	1	< 0.05	0.9	0.41	0.9			
		09-May-2011	B137304	AH2 SURFACE	8.0	5640	0.07	< 0.05	0.29	< 1	< 0.05	0.9	0.35	0.9			
		17-May-2011	B140372	AH2 SURFACE	7.8	5500	0.07	< 0.05	0.25	3	< 0.05	0.8	0.38	1.5			
		25-May-2011	B143055	AH2 SURFACE	7.8	5330	0.08	< 0.05	0.30	2	< 0.05	0.7	0.65	1.2			
		30-May-2011	B144562	AH2 SURFACE	7.9	5400	0.07	< 0.05	0.28	1	< 0.05	0.4	0.40	1.0			
	Summer 2011	20-Jul-2011	B165469	AH2 SURFACE	7.7	5260	0.08	< 0.05	0.36	2	< 0.05	1.2	0.39	1.1			
		26-Jul-2011	B167823	AH2 SURFACE	7.8	5130	0.08	< 0.05	0.35	2	< 0.05	1.1	0.43	0.7			
		02-Aug-2011	B169888	AH2 SURFACE	7.6	5300	0.08	< 0.05	0.26	1	< 0.05	0.6	0.37	0.6			
		09-Aug-2011	B173361	AH2 SURFACE	7.8	5240	0.07	< 0.05	0.23	1	< 0.05	1.2	0.34	0.9			
		16-Aug-2011	B175552	AH2 SURFACE	7.6	5460	0.07	< 0.05	0.26	1	< 0.05	1.7	0.38	0.8			
	Fall 2011	31-Oct-2011	B1A5294	AH2 SURFACE	7.7	5620	0.07	< 0.05	< 0.05	2	< 0.05	1.3	0.39	1			
		07-Nov-2011	B1A8247	AH2 SURFACE	7.7	5310	0.08	< 0.05	0.29	1	< 0.05	1.1	0.41	0.6			
		15-Nov-2011	B1B1047	AH2 SURFACE	7.7	5410	0.08	< 0.05	0.31	2	< 0.05	1.2	0.38	1.4			
		28-Nov-2011	B1B5372	AH2 SURFACE	7.8	5280	0.07	< 0.05	0.44	2	< 0.05	0.5	0.39	15.8			
		30-Nov-2011	B1B6322	AH2 SURFACE	7.8	5330	0.07	< 0.05	0.41	< 1	< 0.05	0.8	0.42	0.6			
	Winter 2012	08-Feb-2012	B210733	AH2 SURFACE	7.8	5230	0.07	< 0.05	1.3	14	< 0.05	1.5	0.4	1.1			
		15-Feb-2012	B212982	AH2 SURFACE	7.8	5440	0.07	< 0.05	0.41	3	< 0.05	0.7	0.36	1.2			
		21-Feb-2012	B214515	AH2 SURFACE	7.8	5360	0.07	< 0.05	1.52	3	0.07	0.8	0.38	1.1			
		27-Feb-2012	B216209	AH2 SURFACE	7.8	5810	0.07	< 0.05	0.36	1	< 0.05	0.8	0.39	0.8			
		04-Mar-2012	B218224	AH2 SURFACE	7.7	5460	0.08	< 0.05	0.23	< 1	< 0.05	0.6	0.39	1.4			
	Spring 2012	15-May-2012	B239924	AH2 SURFACE	7.9	5340	0.067	< 0.050	0.436	1.5	< 0.050	0.50	0.497	1.60			
		22-May-2012	B241909	AH2 SURFACE	7.9	5460	0.08	< 0.050	0.420	1.8	< 0.050	0.96	0.425	< 0.50			
		28-May-2012	B243848	AH2 SURFACE	7.8	5380	0.07	< 0.050	0.497	1.5	< 0.050	0.99	0.402	0.69			
		31-May-2012	B245213	AH2 SURFACE	7.9	5380	0.07	< 0.050	0.473	1.1	< 0.050	0.25	0.336	< 0.50			
		06-Jun-2012	B247308	AH2 SURFACE	7.8	5440	0.08	< 0.050	0.453	< 1.0	< 0.050	0.49	0.384	< 0.50			



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

Station	Season	Date (d-m-y)	Lab File	Sample Name	pH and Hardness		Dissolved Metals and Trace Elements											
					pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)				
															Water Quality Guidelines:	7 - 8.7	n/a	0.12
Finnerty Cove																		
FC-7	Summer 2010	26-Jul-2010	B062668	FC7 BOTTOM	7.8	5190	0.07	< 0.05	0.35	3	< 0.05	2.1	0.62	0.9				
		28-Jul-2010	B063834	FC7 BOTTOM	8.0	5500	0.08	< 0.05	0.23	3	< 0.05	1.7	0.48	0.9				
		03-Aug-2010	B066176	FC7 BOTTOM	7.9	5570	0.08	< 0.05	0.18	1	< 0.05	1.2	0.44	0.9				
		10-Aug-2010	B069347	FC7 BOTTOM	7.9	5170	0.07	< 0.05	0.50	2	0.07	1.7	0.44	0.5				
		17-Aug-2010	B072723	FC7 BOTTOM	7.8	5360	0.08	< 0.05	0.17	1	< 0.05	1.0	0.39	0.5				
Fall 2010	02-Nov-2010	B0A7047	FC7 BOTTOM	7.8	5470	0.07	< 0.05	0.22	2	< 0.05	1.2	0.58	0.6					
	08-Nov-2010	B0A9355	FC7 BOTTOM	7.7	5400	0.08	< 0.05	0.29	1	< 0.05	1.3	0.58	0.7					
	18-Nov-2010	B0B3065	FC7 BOTTOM	7.7	5230	0.08	< 0.05	0.38	1	< 0.05	1.1	0.56	1.9					
	24-Nov-2010	B0B4832	FC7 BOTTOM	7.7	5010	0.08	< 0.05	0.22	1	< 0.05	0.9	0.51	0.6					
	01-Dec-2010	B0B7266	FC7 BOTTOM	7.8	5220	0.08	< 0.05	0.33	1	< 0.05	1.1	0.39	0.8					
Winter 2011	16-Mar-2011	B121043	FC7 BOTTOM	7.8	5130	0.07	< 0.05	0.25	< 1	< 0.05	0.6	0.39	0.7					
	22-Mar-2011	B122666	FC7 BOTTOM	7.8	5310	0.08	< 0.05	0.41	2	< 0.05	0.7	0.51	1.6					
	28-Mar-2011	B124352	MP7* BOTTOM	7.8	5070	0.07	< 0.05	0.24	< 1	< 0.05	0.5	0.45	1.0					
	07-Apr-2011	B127749	FC7 BOTTOM	7.9	5100	0.06	< 0.05	0.23	< 1	< 0.05	0.6	0.48	< 0.5					
	12-Apr-2011	B128938	FC7 BOTTOM	7.9	5180	0.07	< 0.05	0.35	4	< 0.05	0.5	0.38	0.6					
Spring 2011	04-May-2011	B135916	FC7 BOTTOM	7.9	5560	0.07	< 0.05	0.27	3	< 0.05	1.5	0.43	0.8					
	09-May-2011	B137304	FC7 BOTTOM	8.0	5440	0.08	< 0.05	0.25	< 1	< 0.05	1.1	0.32	0.5					
	17-May-2011	B140372	FC7 BOTTOM	7.9	5360	0.08	< 0.05	0.33	1	< 0.05	1.2	0.39	1.4					
	25-May-2011	B143055	FC7 BOTTOM	8.0	5430	0.08	< 0.05	0.36	1	< 0.05	1.1	0.39	1.3					
	30-May-2011	B144562	FC7 BOTTOM	7.9	5350	0.07	< 0.05	0.31	1	< 0.05	0.7	0.43	1.2					
Summer 2011	20-Jul-2011	B165469	FC7 BOTTOM	7.7	5000	0.08	< 0.05	0.27	3	< 0.05	2.0	0.42	0.9					
	26-Jul-2011	B167823	FC7 BOTTOM	7.6	5520	0.09	< 0.05	0.26	2	< 0.05	1.4	0.42	1.5					
	02-Aug-2011	B169888	FC7 BOTTOM	7.7	5380	0.07	< 0.05	0.30	2	< 0.05	1.6	0.34	0.8					
	09-Aug-2011	B173361	FC7 BOTTOM	7.7	5900	0.07	< 0.05	0.22	2	< 0.05	1.6	0.35	0.9					
	16-Aug-2011	B175552	FC7 BOTTOM	7.7	5590	0.07	< 0.05	0.26	3	< 0.05	2.1	0.36	0.6					
Fall 2011	31-Oct-2011	B1A5294	FC7 BOTTOM	7.7	5640	0.09	< 0.05	0.27	2	< 0.05	1.4	0.49	< 0.5					
	07-Nov-2011	B1A8247	FC7 BOTTOM	7.7	5290	0.08	< 0.05	0.35	1	< 0.05	1.6	0.43	< 0.5					
	15-Nov-2011	B1B1047	FC7 BOTTOM	7.7	4810	0.08	< 0.05	0.23	< 1	< 0.05	1.0	0.38	< 0.5					
	28-Nov-2011	B1B5372	FC7 BOTTOM	7.8	5410	0.07	< 0.05	0.46	< 1	< 0.05	0.8	0.35	< 0.5					
	30-Nov-2011	B1B6322	FC7 BOTTOM	7.8	5390	0.08	< 0.05	0.48	3	< 0.05	0.9	0.39	0.9					



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020					pH and Hardness		Dissolved Metals and Trace Elements							
Station	Season	Date (d-m-y)	Lab File	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)
Water Quality Guidelines:					7 - 8.7	n/a	0.12	n/a	3	n/a	140	100	75	10
Finnerty Cove														
	Winter 2012	08-Feb-2012	B210733	FC7 BOTTOM	7.8	5560	0.07	< 0.05	0.47	< 1	< 0.05	0.7	0.44	0.6
		15-Feb-2012	B212982	FC7 BOTTOM	7.8	5350	0.07	< 0.05	0.43	< 1	< 0.05	0.7	0.44	0.7
		21-Feb-2012	B214515	FC7 BOTTOM	7.8	5550	0.07	< 0.05	0.36	2	< 0.05	0.8	0.38	0.8
		27-Feb-2012	B216209	FC7 BOTTOM	7.8	5710	0.07	< 0.05	0.24	< 1	< 0.05	0.9	0.45	0.7
		04-Mar-2012	B218224	FC7 BOTTOM	7.7	5420	0.07	< 0.05	0.25	< 1	< 0.05	0.7	0.40	0.7
	Spring 2012	15-May-2012	B239924	FC7 BOTTOM	7.9	5050	0.075	< 0.050	0.399	< 1.0	< 0.050	0.93	0.483	< 0.50
		22-May-2012	B241909	FC7 BOTTOM	7.9	5290	0.069	< 0.050	0.441	2.8	< 0.050	1.47	0.456	0.51
		28-May-2012	B243848	FC7 BOTTOM	7.8	4880	0.070	< 0.050	0.445	1.3	< 0.050	0.92	0.388	0.62
		31-May-2012	B245213	FC7 BOTTOM	7.9	5420	0.069	< 0.050	0.357	1.2	< 0.050	0.32	0.306	< 0.50
		06-Jun-2012	B247308	FC7 BOTTOM	7.8	5110	0.066	< 0.050	1.120	< 1.0	0.072	< 0.20	0.268	2.60
	Summer 2010	26-Jul-2010	B062668	FC7 MID	8.0	4880	0.06	< 0.05	0.29	1	< 0.05	1.8	0.46	1.6
		28-Jul-2010	B063834	FC7 MID	8.0	5320	0.07	< 0.05	0.26	1	< 0.05	1.3	0.48	1.0
		03-Aug-2010	B066176	FC7 MID	8.1	5320	0.08	< 0.05	0.21	2	< 0.05	1.4	0.41	0.6
		10-Aug-2010	B069347	FC7 MID	8.0	5100	0.07	< 0.05	0.26	< 1	< 0.05	1.8	0.41	0.5
		17-Aug-2010	B072723	FC7 MID	7.9	5050	0.08	< 0.05	0.17	1	< 0.05	0.9	0.38	0.5
	Fall 2010	02-Nov-2010	B0A7047	FC7 MID	7.7	5240	0.07	< 0.05	0.24	3	< 0.05	1.1	0.95	1.3
		08-Nov-2010	B0A9355	FC7 MID	7.7	5130	0.08	< 0.05	0.28	1	< 0.05	1.2	0.57	1.0
		18-Nov-2010	B0B3065	FC7 MID	7.7	5250	0.08	< 0.05	0.27	3	< 0.05	1.2	0.61	4.5
		24-Nov-2010	B0B4832	FC7 MID	7.7	5330	0.08	< 0.05	0.22	1	< 0.05	1.1	0.43	0.8
		01-Dec-2010	B0B7266	FC7 MID	7.8	5190	0.08	< 0.05	0.28	1	< 0.05	1.0	0.37	0.6
	Winter 2011	16-Mar-2011	B121043	FC7 MID	7.8	5190	0.08	< 0.05	0.22	< 1	< 0.05	0.6	0.39	0.7
		22-Mar-2011	B122666	FC7 MID	7.8	5310	0.07	< 0.05	0.37	2	< 0.05	0.7	0.45	0.9
		28-Mar-2011	B124352	MP7* MID	7.8	5290	0.08	< 0.05	0.27	1	< 0.05	0.7	0.58	1.0
		07-Apr-2011	B127749	FC7 MID	7.9	5120	0.06	< 0.05	0.26	< 1	< 0.05	0.7	0.34	< 0.5
		12-Apr-2011	B128938	FC7 MID	8.0	4990	0.06	< 0.05	0.34	1	< 0.05	0.5	0.36	0.5
	Spring 2011	04-May-2011	B135916	FC7 MID	7.9	5410	0.08	< 0.05	0.40	2	0.06	1.6	0.51	1.8
		09-May-2011	B137304	FC7 MID	8.0	5190	0.07	< 0.05	0.41	< 1	< 0.05	1.2	0.33	0.6
		17-May-2011	B140372	FC7 MID	8.0	5270	0.07	< 0.05	0.33	2	< 0.05	1.2	0.43	1.9
		25-May-2011	B143055	FC7 MID	8.0	5410	0.07	< 0.05	0.34	2	< 0.05	1.0	0.41	1.3
		30-May-2011	B144562	FC7 MID	8.1	5260	0.07	< 0.05	0.42	< 1	< 0.05	0.6	0.43	1.3



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

Station	Season	Date (d-m-y)	Lab File	Sample Name	pH and Hardness		Dissolved Metals and Trace Elements											
					pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)				
															Water Quality Guidelines:	7 - 8.7	n/a	0.12
Finnerty Cove																		
	Summer 2011	20-Jul-2011	B165469	FC7 MID	7.7	4730	0.07	< 0.05	0.32	2	< 0.05	1.9	0.46	1.0				
		26-Jul-2011	B167823	FC7 MID	7.7	5220	0.07	< 0.05	0.30	2	< 0.05	1.4	0.43	1.0				
		02-Aug-2011	B169888	FC7 MID	7.8	5200	0.07	< 0.05	0.29	1	< 0.05	1.8	0.34	0.5				
		09-Aug-2011	B173361	FC7 MID	7.8	5760	0.08	< 0.05	0.21	1	< 0.05	1.6	0.36	0.9				
		16-Aug-2011	B175552	FC7 MID	7.8	5280	0.07	< 0.05	0.44	2	0.06	2.1	0.41	0.6				
	Fall 2011	31-Oct-2011	B1A5294	FC7 MID	7.7	5360	0.07	< 0.05	0.18	2	< 0.05	1.4	0.42	< 0.5				
		07-Nov-2011	B1A8247	FC7 MID	7.7	5320	0.08	< 0.05	0.34	2	< 0.05	1.5	0.35	< 0.5				
		15-Nov-2011	B1B1047	FC7 MID	7.7	4790	0.06	< 0.05	0.36	2	< 0.05	1.2	0.40	0.7				
		28-Nov-2011	B1B5372	FC7 MID	7.8	5340	0.08	< 0.05	0.51	< 1	< 0.05	0.9	0.34	0.6				
		30-Nov-2011	B1B6322	FC7 MID	7.8	5440	0.08	< 0.05	0.49	4	< 0.05	0.9	0.46	0.8				
	Winter 2012	08-Feb-2012	B210733	FC7 MID	7.8	5600	0.07	< 0.05	0.52	1	< 0.05	0.8	0.35	0.7				
		15-Feb-2012	B212982	FC7 MID	7.8	5170	0.07	< 0.05	0.47	1	< 0.05	0.9	0.38	0.8				
		21-Feb-2012	B214515	FC7 MID	7.8	5430	0.07	< 0.05	2.96	7	0.16	1.1	0.39	0.9				
		27-Feb-2012	B216209	FC7 MID	7.8	5720	0.07	< 0.05	0.53	1	< 0.05	1.0	0.43	0.8				
		04-Mar-2012	B218224	FC7 MID	7.7	5420	0.08	< 0.05	0.27	< 1	< 0.05	0.6	0.42	< 0.5				
	Spring 2012	15-May-2012	B239924	FC7 MID	8.0	5290	0.075	< 0.050	0.503	1.1	< 0.050	0.88	0.455	0.67				
		22-May-2012	B241909	FC7 MID	7.9	5080	0.065	< 0.050	0.855	1.6	< 0.050	1.82	0.463	0.68				
		28-May-2012	B243848	FC7 MID	7.9	4740	0.065	< 0.050	0.381	< 1.0	< 0.050	0.71	0.417	0.50				
		31-May-2012	B245213	FC7 MID	7.9	5330	0.068	< 0.050	1.390	1.3	< 0.050	0.31	0.359	1.27				
		06-Jun-2012	B247308	FC7 MID	7.9	5000	0.069	< 0.050	0.580	< 1.0	0.055	< 0.20	0.348	0.50				
	Summer 2010	26-Jul-2010	B062668	FC7 SURFACE	8.0	4590	0.07	< 0.05	0.38	3	< 0.05	1.7	0.48	0.7				
		28-Jul-2010	B063834	FC7 SURFACE	8.1	5160	0.07	< 0.05	0.35	3	< 0.05	1.3	0.47	0.7				
		03-Aug-2010	B066176	FC7 SURFACE	8.2	5300	0.08	< 0.05	0.37	12	< 0.05	2.3	0.61	0.9				
		10-Aug-2010	B069347	FC7 SURFACE	8.0	5520	0.07	< 0.05	0.24	2	< 0.05	1.9	0.42	< 0.5				
		17-Aug-2010	B072723	FC7 SURFACE	7.9	4910	0.08	< 0.05	0.23	< 1	< 0.05	1.2	0.33	0.8				
	Fall 2010	02-Nov-2010	B0A7047	FC7 SURFACE	7.7	5300	0.07	< 0.05	0.22	1	< 0.05	1.2	0.56	0.6				
		08-Nov-2010	B0A9355	FC7 SURFACE	7.7	5010	0.07	< 0.05	0.32	3	< 0.05	1.7	1.16	0.8				
		18-Nov-2010	B0B3065	FC7 SURFACE	7.7	5160	0.07	< 0.05	0.35	2	< 0.05	1.5	0.39	0.9				
		24-Nov-2010	B0B4832	FC7 SURFACE	7.7	5320	0.08	< 0.05	0.35	2	< 0.05	1.5	0.37	0.9				
		01-Dec-2010	B0B7266	FC7 SURFACE	7.7	4830	0.07	< 0.05	0.25	1	< 0.05	1.2	0.37	0.5				



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

Station	Season	Date (d-m-y)	Lab File	Sample Name	pH and Hardness		Dissolved Metals and Trace Elements										
					pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)			
					Water Quality Guidelines:		0.12	n/a	3	n/a	140	100	75	10			
Finnerty Cove																	
	Winter 2011	16-Mar-2011	B121043	FC7 SURFACE	7.8	5120	0.06	< 0.05	0.28	< 1	< 0.05	0.9	0.44	0.7			
		22-Mar-2011	B122666	FC7 SURFACE	7.8	5280	0.08	< 0.05	0.53	2	< 0.05	0.8	0.63	1.5			
		28-Mar-2011	B124352	MP7* SURFACE	7.8	5190	0.07	< 0.05	0.25	< 1	< 0.05	1.0	0.41	0.6			
		07-Apr-2011	B127749	FC7 SURFACE	7.9	5090	0.06	< 0.05	0.26	1	< 0.05	0.7	0.39	0.5			
		12-Apr-2011	B128938	FC7 SURFACE	8.0	4980	0.08	< 0.05	0.36	5	< 0.05	0.9	0.50	0.7			
	Spring 2011	04-May-2011	B135916	FC7 SURFACE	7.9	5420	0.08	< 0.05	0.29	2	< 0.05	1.8	0.41	0.6			
		09-May-2011	B137304	FC7 SURFACE	7.8	5290	0.07	< 0.05	0.27	< 1	< 0.05	1.7	0.37	< 0.5			
		17-May-2011	B140372	FC7 SURFACE	8.0	5430	0.07	< 0.05	0.31	1	< 0.05	1.2	0.36	1.3			
		25-May-2011	B143055	FC7 SURFACE	8.1	5470	0.07	< 0.05	0.33	2	< 0.05	1.3	0.45	1.3			
		30-May-2011	B144562	FC7 SURFACE	8.2	5160	0.07	< 0.05	0.36	< 1	< 0.05	0.5	0.43	1.2			
	Summer 2011	20-Jul-2011	B165469	FC7 SURFACE	7.8	4750	0.06	< 0.05	0.35	2	< 0.05	1.8	0.41	0.8			
		26-Jul-2011	B167823	FC7 SURFACE	7.9	4510	0.07	< 0.05	0.34	< 1	< 0.05	1.6	0.42	< 0.5			
		02-Aug-2011	B169888	FC7 SURFACE	7.8	4740	0.07	< 0.05	0.28	1	< 0.05	1.4	0.39	0.6			
		09-Aug-2011	B173361	FC7 SURFACE	7.9	5430	0.06	< 0.05	0.37	1	< 0.05	1.9	0.32	0.8			
		16-Aug-2011	B175552	FC7 SURFACE	7.8	5140	0.06	< 0.05	0.31	3	< 0.05	2.8	0.37	0.6			
	Fall 2011	31-Oct-2011	B1A5294	FC7 SURFACE	7.7	5460	0.08	< 0.05	0.54	2	< 0.05	1.8	0.50	0.8			
		07-Nov-2011	B1A8247	FC7 SURFACE	7.7	5210	0.08	< 0.05	0.32	2	< 0.05	1.9	0.42	0.8			
		15-Nov-2011	B1B1047	FC7 SURFACE	7.7	4760	0.07	< 0.05	0.36	1	< 0.05	1.4	0.34	< 0.5			
		28-Nov-2011	B1B5372	FC7 SURFACE	7.8	5190	0.07	< 0.05	0.45	2	< 0.05	1.1	0.35	0.6			
		30-Nov-2011	B1B6322	FC7 SURFACE	7.8	5340	0.07	< 0.05	0.53	2	< 0.05	1.0	0.44	0.7			
	Winter 2012	08-Feb-2012	B210733	FC7 SURFACE	7.8	5600	0.07	< 0.05	0.39	2	< 0.05	0.9	0.40	0.7			
		15-Feb-2012	B212982	FC7 SURFACE	7.8	5060	0.08	< 0.05	0.40	1	0.06	1.1	0.45	0.8			
		21-Feb-2012	B214515	FC7 SURFACE	7.8	5490	0.08	< 0.05	0.53	2	< 0.05	0.9	0.43	0.8			
		27-Feb-2012	B216209	FC7 SURFACE	7.8	5650	0.07	< 0.05	0.31	< 1	< 0.05	1.0	0.40	0.8			
		04-Mar-2012	B218224	FC7 SURFACE	7.7	5310	0.07	< 0.05	0.30	< 1	< 0.05	0.8	0.38	0.6			
	Spring 2012	15-May-2012	B239924	FC7 SURFACE	8.0	4770	0.076	< 0.050	0.517	1.0	< 0.050	1.17	0.388	0.53			
		22-May-2012	B241909	FC7 SURFACE	7.9	5260	0.075	< 0.050	0.927	280.0	0.052	2.85	0.564	6.89			
		28-May-2012	B243848	FC7 SURFACE	7.9	4800	0.070	< 0.050	0.560	1.0	< 0.050	0.96	0.445	< 0.50			
		31-May-2012	B245213	FC7 SURFACE	7.9	5280	0.072	< 0.050	0.378	1.2	< 0.050	0.26	0.329	0.56			
		06-Jun-2012	B247308	FC7 SURFACE	7.9	4980	0.070	< 0.050	0.373	< 1.0	< 0.050	< 0.20	0.364	0.54			



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

Station	Season	Date (d-m-y)	Lab File	Sample Name	pH and Hardness		Dissolved Metals and Trace Elements											
					pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)				
															Water Quality Guidelines:	7 - 8.7	n/a	0.12
Macauley Point																		
MP-4	Summer 2010	26-Jul-2010	B062668	MP4 BOTTOM	7.8	5610	0.08	< 0.05	0.30	1	< 0.05	1.2	0.47	0.7				
		28-Jul-2010	B063834	4 BOTTOM	7.9	5840	0.08	< 0.05	0.19	3	< 0.05	0.9	0.54	1.4				
		03-Aug-2010	B066176	MP4 BOTTOM	8.0	5880	0.11	< 0.05	0.66	40	0.08	2.5	0.52	2.3				
		10-Aug-2010	B069347	MP4 BOTTOM	7.9	5830	0.08	< 0.05	0.35	1	< 0.05	1.6	0.51	0.8				
		17-Aug-2010	B072723	MP4 BOTTOM	8.0	5270	0.09	< 0.05	0.49	2	< 0.05	1.1	0.34	1.0				
	Fall 2010	02-Nov-2010	B0A7047	MP4 BOTTOM	7.7	5480	0.08	< 0.05	0.32	1	< 0.05	1.4	0.62	0.5				
		08-Nov-2010	B0A9355	4 BOTTOM	7.7	5470	0.09	< 0.05	0.32	4	< 0.05	1.6	0.59	1				
		18-Nov-2010	B0B3065	4 BOTTOM	7.7	5300	0.08	< 0.05	0.26	2	< 0.05	1.1	0.35	0.7				
		24-Nov-2010	B0B4832	MP4 BOTTOM	7.7	5810	0.08	< 0.05	0.23	3	< 0.05	0.9	0.45	1.0				
		01-Dec-2010	B0B7266	MP4 BOTTOM	7.7	5010	0.08	< 0.05	0.31	1	< 0.05	1.2	0.40	0.6				
	Winter 2011	16-Mar-2011	B121043	MP4 BOTTOM	7.8	5150	0.08	< 0.05	0.41	< 1	< 0.05	0.6	0.37	0.8				
		22-Mar-2011	B122666	MP4 BOTTOM	7.8	5420	0.06	< 0.05	0.35	11	< 0.05	0.7	0.42	0.7				
		28-Mar-2011	B124352	MP4 BOTTOM	7.8	5400	0.08	< 0.05	0.31	1	< 0.05	0.6	0.39	0.7				
		07-Apr-2011	B127749	MP4 BOTTOM	7.8	5320	0.06	< 0.05	0.26	1	< 0.05	0.5	0.33	0.5				
		12-Apr-2011	B128938	MP4 BOTTOM	7.8	5060	0.06	< 0.05	0.47	< 1	< 0.05	0.7	0.36	0.8				
	Spring 2011	04-May-2011	B135916	MP4 BOTTOM	7.8	5430	0.08	< 0.05	0.33	1	< 0.05	1.0	0.42	0.6				
		09-May-2011	B137304	MP4 BOTTOM	7.7	5450	0.07	< 0.05	0.26	< 1	< 0.05	1	0.36	< 0.5				
		17-May-2011	B140372	MP4 BOTTOM	7.9	5450	0.08	< 0.05	0.35	1	< 0.05	0.9	0.37	1.2				
		25-May-2011	B143055	MP4 BOTTOM	7.9	5290	0.07	< 0.05	0.32	3	< 0.05	0.9	0.41	1.5				
		30-May-2011	B144562	MP4 BOTTOM	7.9	5640	0.08	< 0.05	0.25	< 1	< 0.05	0.6	0.40	1.4				
Summer 2011	20-Jul-2011	B165469	MP4 BOTTOM	7.7	5160	0.07	< 0.05	0.34	2	< 0.05	1.4	0.43	1.1					
	26-Jul-2011	B167823	MP4 BOTTOM	7.8	5630	0.08	< 0.05	0.43	4	< 0.05	1.3	0.54	0.6					
	02-Aug-2011	B169888	MP4 BOTTOM	7.6	5620	0.08	< 0.05	0.22	2	< 0.05	1.1	0.38	0.7					
	09-Aug-2011	B173361	MP4 BOTTOM	7.8	5310	0.07	< 0.05	0.26	1	< 0.05	1.7	0.32	0.9					
	16-Aug-2011	B175552	MP4 BOTTOM	7.6	5540	0.08	< 0.05	0.37	2	< 0.05	1.6	0.38	0.7					
Fall 2011	31-Oct-2011	B1A5294	MP4 BOTTOM	7.7	5800	0.08	< 0.05	0.49	2	< 0.05	1.2	0.40	< 0.5					
	07-Nov-2011	B1A8247	MP4 BOTTOM	7.7	5450	0.07	< 0.05	0.68	2	0.65	1.5	0.39	< 0.5					
	15-Nov-2011	B1B1047	MP4 BOTTOM	7.7	5580	0.07	< 0.05	0.25	2	< 0.05	1	0.98	< 0.5					
	28-Nov-2011	B1B5372	MP4 BOTTOM	7.8	5200	0.07	< 0.05	0.53	4	< 0.05	0.7	0.37	0.7					
	30-Nov-2011	B1B6322	MP4 BOTTOM	7.8	5330	0.07	< 0.05	0.54	< 1	< 0.05	0.8	0.37	0.5					



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

Station	Season	Date (d-m-y)	Lab File	Sample Name	pH and Hardness		Dissolved Metals and Trace Elements							
					pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)
Water Quality Guidelines:					7 - 8.7	n/a	0.12	n/a	3	n/a	140	100	75	10
Macauley Point														
	Winter 2012	08-Feb-2012	B210733	MP4 BOTTOM	7.8	5470	0.08	< 0.05	1.08	< 1	< 0.05	0.7	0.39	0.8
		15-Feb-2012	B212982	MP4 BOTTOM	7.8	5470	0.07	< 0.05	0.35	< 1	< 0.05	0.6	0.41	0.6
		21-Feb-2012	B214515	MP4 BOTTOM	7.8	5450	0.09	< 0.05	0.62	2	< 0.05	1	0.41	1.5
		27-Feb-2012	B216209	MP4 BOTTOM	7.8	5680	0.07	< 0.05	0.40	< 1	< 0.05	0.8	0.36	0.6
		04-Mar-2012	B218224	MP4 BOTTOM	7.7	5590	0.07	< 0.05	0.28	< 1	< 0.05	0.8	0.36	0.6
	Spring 2012	15-May-2012	B239924	MP4 BOTTOM	7.9	5370	0.075	< 0.050	0.493	37.9	< 0.050	1.02	0.497	1.58
		22-May-2012	B241909	MP4 BOTTOM	7.8	5400	0.076	< 0.050	0.364	2.8	< 0.050	0.79	0.491	0.50
		28-May-2012	B243848	MP4 BOTTOM	7.8	5630	0.070	< 0.050	0.402	1.7	< 0.050	0.91	0.416	0.67
		31-May-2012	B245213	MP4 BOTTOM	7.8	5390	0.072	< 0.050	0.849	1.5	< 0.050	0.62	0.356	1.41
		06-Jun-2012	B247308	MP4 BOTTOM	7.8	5390	0.071	< 0.050	0.251	< 1.0	< 0.050	< 0.20	0.319	< 0.50
	Summer 2010	26-Jul-2010	B062668	MP4 MID	7.9	5460	0.07	< 0.05	0.32	4	< 0.05	1.0	0.56	0.7
		28-Jul-2010	B063834	4 MID	7.9	5330	0.07	< 0.05	0.23	2	< 0.05	0.9	0.52	1.5
		03-Aug-2010	B066176	MP4 MID	7.9	5730	0.08	< 0.05	0.25	< 1	< 0.05	0.7	0.41	0.8
		10-Aug-2010	B069347	MP4 MID	7.9	5560	0.07	< 0.05	0.22	4	< 0.05	1.3	0.50	0.6
		17-Aug-2010	B072723	MP4 MID	8.0	5450	0.10	< 0.05	0.22	< 1	< 0.05	0.8	0.40	< 0.5
	Fall 2010	02-Nov-2010	B0A7047	MP4 MID	7.7	5470	0.08	< 0.05	0.20	2	< 0.05	1.5	0.58	< 0.5
		08-Nov-2010	B0A9355	4 MID	7.7	5290	0.07	< 0.05	0.26	2	< 0.05	1.5	0.62	0.8
		18-Nov-2010	B0B3065	4 MID	7.8	5090	0.08	< 0.05	0.29	1	< 0.05	0.8	0.33	1.1
		24-Nov-2010	B0B4832	MP4 MID	7.7	5810	0.07	< 0.05	0.24	1	< 0.05	0.9	0.43	0.8
		01-Dec-2010	B0B7266	MP4 MID	7.8	4790	0.08	< 0.05	0.26	1	< 0.05	1.1	0.37	1.0
	Winter 2011	16-Mar-2011	B121043	MP4 MID	7.8	5220	0.07	< 0.05	0.18	1	< 0.05	0.5	0.38	0.6
		22-Mar-2011	B122666	MP4 MID	7.8	5390	0.06	< 0.05	0.22	2	< 0.05	0.4	0.4	0.6
		28-Mar-2011	B124352	MP4 MID	7.8	5240	0.07	< 0.05	0.2	< 1	< 0.05	0.5	0.4	0.6
		07-Apr-2011	B127749	MP4 MID	7.8	5280	0.06	< 0.05	0.23	< 1	< 0.05	0.4	0.32	< 0.5
		12-Apr-2011	B128938	MP4 MID	7.8	5010	0.09	< 0.05	0.35	1	< 0.05	0.5	0.38	0.6
	Spring 2011	04-May-2011	B135916	MP4 MID	7.9	5270	0.07	< 0.05	0.28	1	< 0.05	0.9	0.49	0.9
		09-May-2011	B137304	MP4 MID	7.9	5510	0.08	< 0.05	0.24	< 1	< 0.05	0.9	0.35	0.5
		17-May-2011	B140372	MP4 MID	7.9	5480	0.07	< 0.05	0.51	< 1	< 0.05	1	0.71	1.5
		25-May-2011	B143055	MP4 MID	7.9	5390	0.08	< 0.05	0.32	1	< 0.05	0.9	0.44	1.7
		30-May-2011	B144562	MP4 MID	7.9	5550	0.07	< 0.05	0.27	< 1	< 0.05	0.4	0.43	1.3



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

Station	Season	Date (d-m-y)	Lab File	Sample Name	pH and Hardness		Dissolved Metals and Trace Elements							
					pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)
Water Quality Guidelines:					7 - 8.7	n/a	0.12	n/a	3	n/a	140	100	75	10
Macauley Point														
	Summer 2011	20-Jul-2011	B165469	MP4 MID	7.7	5100	0.07	< 0.05	0.18	2	< 0.05	1.1	0.41	1.0
		26-Jul-2011	B167823	MP4 MID	7.8	5340	0.07	< 0.05	0.28	2	< 0.05	1	0.41	0.5
		02-Aug-2011	B169888	MP4 MID	7.6	5420	0.07	< 0.05	0.25	1	< 0.05	0.8	0.35	< 0.5
		09-Aug-2011	B173361	MP4 MID	7.8	5350	0.07	< 0.05	0.23	2	< 0.05	1.3	0.31	0.8
		16-Aug-2011	B175552	MP4 MID	7.7	5370	0.08	< 0.05	0.20	2	< 0.05	1.5	0.39	0.6
	Fall 2011	31-Oct-2011	B1A5294	MP4 MID	7.7	5650	0.07	< 0.05	0.31	2	< 0.05	1.3	0.46	0.7
		07-Nov-2011	B1A8247	MP4 MID	7.7	5320	0.08	< 0.05	0.41	< 1	< 0.05	1.1	0.37	< 0.5
		15-Nov-2011	B1B1047	MP4 MID	7.7	5390	0.07	< 0.05	0.32	1	< 0.05	1.1	0.39	< 0.5
		28-Nov-2011	B1B5372	MP4 MID	7.9	5240	0.07	< 0.05	0.23	2	< 0.05	0.6	0.33	0.5
		30-Nov-2011	B1B6322	MP4 MID	7.8	5390	0.07	< 0.05	0.30	3	< 0.05	0.7	0.34	0.9
	Winter 2012	08-Feb-2012	B210733	MP4 MID	7.8	5570	0.07	< 0.05	0.31	2	< 0.05	0.7	0.41	1.0
		15-Feb-2012	B212982	MP4 MID	7.8	5440	0.08	< 0.05	0.36	1	< 0.05	0.7	0.4	1
		21-Feb-2012	B214515	MP4 MID	7.8	5430	0.07	< 0.05	0.63	3	< 0.05	0.6	0.36	1
		27-Feb-2012	B216209	MP4 MID	7.8	5700	0.07	< 0.05	0.21	< 1	< 0.05	0.5	0.36	0.6
		04-Mar-2012	B218224	MP4 MID	7.7	5520	0.07	< 0.05	0.20	< 1	< 0.05	< 0.2	0.36	0.6
	Spring 2012	15-May-2012	B239924	MP4 MID	7.9	5090	0.070	< 0.050	0.366	1.2	< 0.050	0.62	0.426	1.22
		22-May-2012	B241909	MP4 MID	7.9	5320	0.079	< 0.050	0.352	< 1.0	< 0.050	1.01	0.447	< 0.50
		28-May-2012	B243848	MP4 MID	7.8	5700	0.066	< 0.050	0.329	< 1.0	< 0.050	< 0.20	0.404	< 0.50
		31-May-2012	B245213	MP4 MID	7.9	5370	0.067	< 0.050	0.336	< 1.0	< 0.050	0.26	0.303	0.57
		06-Jun-2012	B247308	MP4 MID	7.8	5360	0.074	< 0.050	0.303	< 1.0	< 0.050	< 0.20	0.335	0.60
	Summer 2010	26-Jul-2010	B062668	MP4 SURFACE	7.9	5360	0.07	< 0.05	0.31	2	< 0.05	1.0	0.56	0.7
		28-Jul-2010	B063834	4 SURFACE	8	5160	0.07	< 0.05	0.18	1	< 0.05	0.8	0.5	1.2
		03-Aug-2010	B066176	MP4 SURFACE	8.2	5400	0.08	< 0.05	0.27	< 1	< 0.05	0.9	0.40	0.6
		10-Aug-2010	B069347	MP4 SURFACE	7.9	5740	0.08	< 0.05	0.16	1	< 0.05	1.3	0.43	< 0.5
		17-Aug-2010	B072723	MP4 SURFACE	7.9	5410	0.08	< 0.05	0.20	1	< 0.05	0.8	0.41	0.6
	Fall 2010	02-Nov-2010	B0A7047	MP4 SURFACE	7.7	5400	0.09	< 0.05	0.23	3	< 0.05	1.4	0.59	0.6
		08-Nov-2010	B0A9355	4 SURFACE	7.7	5230	0.09	< 0.05	0.24	1	< 0.05	1.3	0.73	0.7
		18-Nov-2010	B0B3065	4 SURFACE	7.7	5480	0.07	< 0.05	0.36	3	< 0.05	0.8	0.36	1
		24-Nov-2010	B0B4832	MP4 SURFACE	7.7	5780	0.08	< 0.05	0.33	1	< 0.05	0.9	0.33	0.9
		01-Dec-2010	B0B7266	MP4 SURFACE	7.7	5260	0.08	< 0.05	0.27	1	< 0.05	1.1	0.38	0.6



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

Station	Season	Date (d-m-y)	Lab File	Sample Name	pH and Hardness		Dissolved Metals and Trace Elements							
					pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)
Water Quality Guidelines:					7 - 8.7	n/a	0.12	n/a	3	n/a	140	100	75	10
Macauley Point														
	Winter 2011	16-Mar-2011	B121043	MP4 SURFACE	7.8	5280	0.08	< 0.05	0.37	2	< 0.05	0.6	0.46	0.8
		22-Mar-2011	B122666	MP4 SURFACE	7.8	5450	0.06	< 0.05	0.25	2	< 0.05	0.5	0.45	0.6
		28-Mar-2011	B124352	MP4 SURFACE	7.8	5180	0.08	< 0.05	0.37	1	< 0.05	0.6	0.39	0.8
		07-Apr-2011	B127749	MP4 SURFACE	7.8	5230	0.06	< 0.05	0.33	1	< 0.05	0.5	0.31	0.7
		12-Apr-2011	B128938	MP4 SURFACE	7.9	4970	0.08	< 0.05	0.36	1	< 0.05	0.8	0.38	0.9
	Spring 2011	04-May-2011	B135916	MP4 SURFACE	7.9	5330	0.06	< 0.05	0.28	3	< 0.05	1.0	0.44	0.6
		09-May-2011	B137304	MP4 SURFACE	7.9	5420	0.07	< 0.05	0.25	< 1	< 0.05	1	0.37	< 0.5
		17-May-2011	B140372	MP4 SURFACE	7.9	5390	0.07	< 0.05	0.27	1	< 0.05	0.9	0.38	1.3
		25-May-2011	B143055	MP4 SURFACE	7.9	5310	0.07	< 0.05	0.53	3	< 0.05	1.0	0.46	1.7
		30-May-2011	B144562	MP4 SURFACE	7.9	5620	0.07	< 0.05	0.30	1	< 0.05	0.5	1.36	1.3
	Summer 2011	20-Jul-2011	B165469	MP4 SURFACE	7.7	5030	0.07	< 0.05	0.37	2	< 0.05	1.2	0.41	0.9
		26-Jul-2011	B167823	MP4 SURFACE	7.8	5320	0.07	< 0.05	0.42	2	< 0.05	1	0.5	0.7
		02-Aug-2011	B169888	MP4 SURFACE	7.7	5260	0.07	< 0.05	0.22	< 1	< 0.05	0.8	0.35	< 0.5
		09-Aug-2011	B173361	MP4 SURFACE	7.8	5470	0.07	< 0.05	0.28	3	0.08	1.3	0.38	1.4
		16-Aug-2011	B175552	MP4 SURFACE	7.6	5350	0.08	< 0.05	0.36	2	0.06	1.7	0.38	1.1
	Fall 2011	31-Oct-2011	B1A5294	MP4 SURFACE	7.7	5610	0.08	< 0.05	0.30	2	< 0.05	1.4	0.45	< 0.5
		07-Nov-2011	B1A8247	MP4 SURFACE	7.7	5280	0.08	< 0.05	0.32	2	< 0.05	1.2	0.4	< 0.5
		15-Nov-2011	B1B1047	MP4 SURFACE	7.7	5380	0.08	< 0.05	0.34	2	< 0.05	1.1	0.42	0.8
		28-Nov-2011	B1B5372	MP4 SURFACE	7.9	5150	0.06	< 0.05	0.35	1	< 0.05	0.6	0.35	< 0.5
		30-Nov-2011	B1B6322	MP4 SURFACE	7.8	5330	0.07	< 0.05	0.36	< 1	< 0.05	0.7	0.38	< 0.5
	Winter 2012	08-Feb-2012	B210733	MP4 SURFACE	7.8	5450	0.08	< 0.05	0.39	2	< 0.05	0.7	0.35	0.7
		15-Feb-2012	B212982	MP4 SURFACE	7.8	5390	0.08	< 0.05	0.64	1	< 0.05	0.8	0.43	1
		21-Feb-2012	B214515	MP4 SURFACE	7.8	5440	0.07	< 0.05	0.51	2	< 0.05	0.7	0.49	0.9
		27-Feb-2012	B216209	MP4 SURFACE	7.8	5660	0.07	< 0.05	0.36	2	< 0.05	0.6	0.38	0.7
		04-Mar-2012	B218224	MP4 SURFACE	7.7	5510	0.07	< 0.05	0.43	< 1	< 0.05	0.6	0.34	0.6
	Spring 2012	15-May-2012	B239924	MP4 SURFACE	7.9	5030	0.071	< 0.050	0.388	1.5	< 0.050	0.70	0.554	1.21
		22-May-2012	B241909	MP4 SURFACE	7.9	5370	0.077	< 0.050	0.351	< 1.0	< 0.050	1.05	0.463	< 0.50
		28-May-2012	B243848	MP4 SURFACE	7.8	5550	0.066	< 0.050	0.413	1.0	< 0.050	0.66	0.410	< 0.50
		31-May-2012	B245213	MP4 SURFACE	7.9	5360	0.076	< 0.050	0.340	< 1.0	< 0.050	0.27	0.351	< 0.50
		06-Jun-2012	B247308	MP4 SURFACE	7.8	5360	0.069	< 0.050	0.267	< 1.0	< 0.050	< 0.20	0.317	< 0.50

- NOTES:** 1. * MP-7 = FC-7
 2. Highlighting indicates parameters above applied guideline/criteria.



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020			pH and Hardness		Dissolved Metals and Trace Elements								
Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - D	Cobalt - D	Copper - D	Iron - D	Lead - D	Manganese - D	Nickel - D	Zinc - D	
Macaulay Point - MP-4 Quality Assurance													
(Sample)	17-May-2011	B140372	MP4 BOTTOM	7.9	5450	0.08	< 0.05	0.35	1	< 0.05	0.9	0.37	1.2
(TriPLICATE)	17-May-2011	B140372	MP4 BOT T1	---	5430	0.07	< 0.05	0.27	< 1	< 0.05	0.9	0.4	1.8
(TriPLICATE)	17-May-2011	B140372	MP4 BOT T2	---	5450	0.06	< 0.05	0.25	1	< 0.05	0.8	0.37	1.4
					0%	14%	<5xDL	18%	0%	<5xDL	7%	5%	<5xDL
(Sample)	22-Mar-2011	B122666	MP4 BOTTOM	7.8	5420	0.06	< 0.05	0.35	11	< 0.05	0.7	0.42	0.7
(TriPLICATE)	22-Mar-2011	B122666	MP4 BOTTOM TRIPLICATE 1	7.8	5310	---	---	---	---	---	---	---	---
(TriPLICATE)	22-Mar-2011	B122666	MP4 BOTTOM TRIPLICATE 2	7.8	5260	---	---	---	---	---	---	---	---
					0%								2%
(Sample)	28-Mar-2011	B124352	MP4 BOTTOM	7.8	5400	0.08	< 0.05	0.31	1	< 0.05	0.6	0.39	0.7
(TriPLICATE)	28-Mar-2011	B124352	MP4 BOTTOM TRIPLICATE 1	---	5210	0.06	< 0.05	0.17	1	< 0.05	0.5	0.47	0.8
(TriPLICATE)	28-Mar-2011	B124352	MP4 BOTTOM TRIPLICATE 2	---	5190	0.08	< 0.05	0.23	1	< 0.05	0.6	0.39	0.9
					2%	16%	<5xDL	<5xDL	0%	<5xDL	10%	11%	<5xDL
(Sample)	09-May-2011	B137304	MP4 BOTTOM	7.7	5450	0.07	< 0.05	0.26	< 1	< 0.05	1	0.36	< 0.5
(TriPLICATE)	09-May-2011	B137304	MP4 BOTTOM TRIPLICATE 1	8	5770	---	---	---	---	---	---	---	---
(TriPLICATE)	09-May-2011	B137304	MP4 BOTTOM TRIPLICATE 2	7.9	5520	---	---	---	---	---	---	---	---
					2%								3%
(Sample)	26-Jul-2011	B167823	MP4 BOTTOM	7.8	5630	0.08	< 0.05	0.43	4	< 0.05	1.3	0.54	0.6
(TriPLICATE)	26-Jul-2011	B167823	MP4 BOTTOM TRIPLICATE 1	7.8	5290	---	---	---	---	---	---	---	---
(TriPLICATE)	26-Jul-2011	B167823	MP4 BOTTOM TRIPLICATE 2	7.8	5590	---	---	---	---	---	---	---	---
					0%								3%
(Sample)	02-Aug-2011	B169888	MP4 BOTTOM	7.6	5620	0.08	< 0.05	0.22	2	< 0.05	1.1	0.38	0.7
(TriPLICATE)	02-Aug-2011	B169888	MP4 BOTTOM TRIPLICATE 1	---	5700	0.09	< 0.05	0.19	< 1	< 0.05	1	0.36	0.7
(TriPLICATE)	02-Aug-2011	B169888	MP4 BOTTOM TRIPLICATE 2	---	5780	0.07	< 0.05	0.17	1	< 0.05	1	0.34	< 0.5
					1%	13%	<5xDL	13%	<5xDL	<5xDL	6%	6%	<5xDL
(Sample)	07-Nov-2011	B1A8247	MP4 BOTTOM	7.7	5450	0.07	< 0.05	0.68	2	0.65	1.5	0.39	< 0.5
(TriPLICATE)	07-Nov-2011	B1A8247	MP4 BOTTOM TRIPLICATE 1	7.7	5430	---	---	---	---	---	---	---	---
(TriPLICATE)	07-Nov-2011	B1A8247	MP4 BOTTOM TRIPLICATE 2	7.7	5450	---	---	---	---	---	---	---	---
					0%								0%
(Sample)	15-Nov-2011	B1B1047	MP4 BOTTOM	7.7	5580	0.07	< 0.05	0.25	2	< 0.05	1	0.98	< 0.5
(TriPLICATE)	15-Nov-2011	B1B1047	MP4 BOTTOM TRIPLICATE 1	---	5530	0.07	< 0.05	0.32	2	< 0.05	1.1	0.42	0.7
(TriPLICATE)	15-Nov-2011	B1B1047	MP4 BOTTOM TRIPLICATE 2	---	5590	0.08	< 0.05	0.3	2	< 0.05	1	0.37	< 0.5
					1%	8%	<5xDL	12%	0%	<5xDL	6%	57%	<5xDL
(Sample)	15-Feb-2012	B212982	MP4 BOTTOM	7.8	5470	0.07	< 0.05	0.35	< 1	< 0.05	0.6	0.41	0.6
(TriPLICATE)	15-Feb-2012	B212982	MP4 BOTTOM TRIPLICATE 1	7.8	5550	---	---	---	---	---	---	---	---
(TriPLICATE)	15-Feb-2012	B212982	MP4 BOTTOM TRIPLICATE 2	7.8	5460	---	---	---	---	---	---	---	---
					0%								1%
(Sample)	21-Feb-2012	B214515	MP4 BOTTOM	7.8	5450	0.09	< 0.05	0.62	2	< 0.05	1	0.41	1.5
(TriPLICATE)	21-Feb-2012	B214515	MP4 BOTTOM TRIPLICATE 1	---	5480	0.07	< 0.05	0.45	2	< 0.05	1	0.36	1.5
(TriPLICATE)	21-Feb-2012	B214515	MP4 BOTTOM TRIPLICATE 2	---	5590	0.07	< 0.05	0.58	1	0.15	1	0.39	1.1
					1%	15%	<5xDL	16%	<5xDL	<5xDL	0%	7%	17%
(Sample)	22-May-2012	B241909	MP4 BOTTOM	7.8	5400	0.076	< 0.050	0.364	2.8	< 0.050	0.79	0.491	0.5
(TriPLICATE)	22-May-2012	B241909	MP4 BOTTOM TRIPLICATE 1	7.8	5420	---	---	---	---	---	---	---	---
(TriPLICATE)	22-May-2012	B241909	MP4 BOTTOM TRIPLICATE 2	7.8	5420	---	---	---	---	---	---	---	---
					0%								0%
(Sample)	28-May-2012	B243848	MP4 BOTTOM	7.8	5630	0.07	< 0.050	0.402	1.7	< 0.050	0.91	0.416	0.67
(TriPLICATE)	28-May-2012	B243848	MP4 BOTTOM TRIPLICATE 1	---	5860	0.078	< 0.050	0.481	1.9	< 0.050	0.85	0.697	< 0.50
(TriPLICATE)	28-May-2012	B243848	MP4 BOTTOM TRIPLICATE 2	---	5670	0.075	< 0.050	0.339	< 1.0	< 0.050	0.8	0.414	< 0.50
					2%	5%	<5xDL	17%	<5xDL	<5xDL	6%	32%	<5xDL



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020			pH and Hardness		Dissolved Metals and Trace Elements								
Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - D	Cobalt - D	Copper - D	Iron - D	Lead - D	Manganese - D	Nickel - D	Zinc - D	
Macaulay Point - MP-4 Quality Assurance													
(Sample)	22-Mar-2011	B122666	MP4 MID	7.8	5390	0.06	< 0.05	0.22	2	< 0.05	0.4	0.4	0.6
(TriPLICATE)	22-Mar-2011	B122666	MP4 MID TRIPLICATE 1	7.8	5430	---	---	---	---	---	---	---	---
(TriPLICATE)	22-Mar-2011	B122666	MP4 MID TRIPLICATE 2	7.8	5330	---	---	---	---	---	---	---	---
				0%	1%								
(Sample)	28-Mar-2011	B124352	MP4 MID	7.8	5240	0.07	< 0.05	0.2	< 1	< 0.05	0.5	0.4	0.6
(TriPLICATE)	28-Mar-2011	B124352	MP4 MID TRIPLICATE 1	---	5180	0.07	< 0.05	0.24	< 1	< 0.05	0.4	0.4	3.2
(TriPLICATE)	28-Mar-2011	B124352	MP4 MID TRIPLICATE 2	---	5050	0.07	< 0.05	0.21	1	< 0.05	0.4	0.41	0.5
					2%	0%	<5xDL	10%	<5xDL	<5xDL	13%	1%	<5xDL
(Sample)	09-May-2011	B137304	MP4 MID	7.9	5510	0.08	< 0.05	0.24	< 1	< 0.05	0.9	0.35	0.5
(TriPLICATE)	09-May-2011	B137304	MP4 MID TRIPLICATE 1	7.9	5590	---	---	---	---	---	---	---	---
(TriPLICATE)	09-May-2011	B137304	MP4 MID TRIPLICATE 2	7.9	5800	---	---	---	---	---	---	---	---
				0%	3%								
(Sample)	17-May-2011	B140372	MP4 MID	7.9	5480	0.07	< 0.05	0.51	< 1	< 0.05	1	0.71	1.5
(TriPLICATE)	17-May-2011	B140372	MP4 MID T1	---	5330	0.07	< 0.05	0.27	< 1	< 0.05	0.7	0.39	1.3
(TriPLICATE)	17-May-2011	B140372	MP4 MID T2	---	5250	0.08	< 0.05	0.33	< 1	< 0.05	0.7	0.38	1.3
					2%	8%	<5xDL	34%	<5xDL	<5xDL	<5xDL	38%	8%
(Sample)	26-Jul-2011	B167823	MP4 MID	7.8	5340	0.07	< 0.05	0.28	2	< 0.05	1	0.41	0.5
(TriPLICATE)	26-Jul-2011	B167823	MP4 MID TRIPLICATE 1	7.8	5370	---	---	---	---	---	---	---	---
(TriPLICATE)	26-Jul-2011	B167823	MP4 MID TRIPLICATE 2	7.8	5400	---	---	---	---	---	---	---	---
				0%	1%								
(Sample)	02-Aug-2011	B169888	MP4 MID	7.6	5420	0.07	< 0.05	0.25	1	< 0.05	0.8	0.35	< 0.5
(TriPLICATE)	02-Aug-2011	B169888	MP4 MID TRIPLICATE 1	---	5510	0.06	< 0.05	0.2	1	< 0.05	0.8	0.29	0.7
(TriPLICATE)	02-Aug-2011	B169888	MP4 MID TRIPLICATE 2	---	5700	0.06	< 0.05	0.18	1	< 0.05	0.9	0.35	< 0.5
					3%	9%	<5xDL	17%	0%	<5xDL	7%	10%	<5xDL
(Sample)	07-Nov-2011	B1A8247	MP4 MID	7.7	5320	0.08	< 0.05	0.41	< 1	< 0.05	1.1	0.37	< 0.5
(TriPLICATE)	07-Nov-2011	B1A8247	MP4 MID TRIPLICATE 1	7.7	5240	---	---	---	---	---	---	---	---
(TriPLICATE)	07-Nov-2011	B1A8247	MP4 MID TRIPLICATE 2	7.7	5360	---	---	---	---	---	---	---	---
				0%	1%								
(Sample)	15-Nov-2011	B1B1047	MP4 MID	7.7	5390	0.07	< 0.05	0.32	1	< 0.05	1.1	0.39	< 0.5
(TriPLICATE)	15-Nov-2011	B1B1047	MP4 MID TRIPLICATE 1	---	5310	0.07	< 0.05	0.21	1	< 0.05	1.1	0.35	0.5
(TriPLICATE)	15-Nov-2011	B1B1047	MP4 MID TRIPLICATE 2	---	5340	0.08	< 0.05	0.3	2	< 0.05	1.1	0.37	0.5
					1%	8%	<5xDL	21%	<5xDL	<5xDL	0%	5%	0%
(Sample)	15-Feb-2012	B212982	MP4 MID	7.8	5440	0.08	< 0.05	0.36	1	< 0.05	0.7	0.4	1
(TriPLICATE)	15-Feb-2012	B212982	MP4 MID TRIPLICATE 1	7.8	5440	---	---	---	---	---	---	---	---
(TriPLICATE)	15-Feb-2012	B212982	MP4 MID TRIPLICATE 2	7.8	5400	---	---	---	---	---	---	---	---
				0%	0%								
(Sample)	21-Feb-2012	B214515	MP4 MID	7.8	5430	0.07	< 0.05	0.63	3	< 0.05	0.6	0.36	1
(TriPLICATE)	21-Feb-2012	B214515	MP4 MID TRIPLICATE 1	---	5310	0.07	< 0.05	0.48	1	< 0.05	0.6	0.43	0.8
(TriPLICATE)	21-Feb-2012	B214515	MP4 MID TRIPLICATE 2	---	5590	0.07	< 0.05	0.49	2	< 0.05	0.7	0.35	1
					3%	0%	<5xDL	16%	<5xDL	<5xDL	9%	11%	12%
(Sample)	22-May-2012	B241909	MP4 MID	7.9	5320	0.079	< 0.050	0.352	< 1.0	< 0.050	1.01	0.447	< 0.50
(TriPLICATE)	22-May-2012	B241909	MP4 MID TRIPLICATE 1	7.9	5290	---	---	---	---	---	---	---	---
(TriPLICATE)	22-May-2012	B241909	MP4 MID TRIPLICATE 2	7.9	5270	---	---	---	---	---	---	---	---
				0%	0%								
(Sample)	28-May-2012	B243848	MP4 MID	7.8	5700	0.066	< 0.050	0.329	< 1.0	< 0.050	< 0.20	0.404	< 0.50
(TriPLICATE)	28-May-2012	B243848	MP4 MID TRIPLICATE 1	---	5570	0.083	< 0.050	0.399	< 1.0	< 0.050	0.69	0.49	0.6
(TriPLICATE)	28-May-2012	B243848	MP4 MID TRIPLICATE 2	---	5590	0.076	< 0.050	0.38	1.1	< 0.050	0.73	0.518	< 0.50
					1%	11%	<5xDL	10%	<5xDL	<5xDL	4%	13%	<5xDL



Water Quality Analytical Results: Dissolved Metals and Trace Elements

PROJECT NO.: 307071-00020

Date	Lab File	Sample Name	pH and Hardness		Dissolved Metals and Trace Elements								
			pH	Total Hardness as CaCO3	Cadmium - D	Cobalt - D	Copper - D	Iron - D	Lead - D	Manganese - D	Nickel - D	Zinc - D	
Macaulay Point - MP-4 Quality Assurance													
(Sample)	22-Mar-2011	B122666	MP4 SURFACE	7.8	5450	0.06	< 0.05	0.25	2	< 0.05	0.5	0.45	0.6
(TriPLICATE)	22-Mar-2011	B122666	MP4 SURFACE TRIPLICATE 1	7.8	5420	---	---	---	---	---	---	---	---
(TriPLICATE)	22-Mar-2011	B122666	MP4 SURFACE TRIPLICATE 2	7.8	5380	---	---	---	---	---	---	---	---
				0%	1%								
(Sample)	28-Mar-2011	B124352	MP4 SURFACE	7.8	5180	0.08	< 0.05	0.37	1	< 0.05	0.6	0.39	0.8
(TriPLICATE)	28-Mar-2011	B124352	MP4 SURFACE TRIPLICATE 1	---	5260	0.07	< 0.05	0.42	< 1	< 0.05	0.5	0.51	0.9
(TriPLICATE)	28-Mar-2011	B124352	MP4 SURFACE TRIPLICATE 2	---	5200	0.08	< 0.05	0.36	1	< 0.05	0.5	0.47	0.7
					1%	8%	<5xDL	8%	0%	<5xDL	11%	13%	12%
(Sample)	09-May-2011	B137304	MP4 SURFACE	7.9	5420	0.07	< 0.05	0.25	< 1	< 0.05	1	0.37	< 0.5
(TriPLICATE)	09-May-2011	B137304	MP4 SURFACE TRIPLICATE 1	7.9	5590	---	---	---	---	---	---	---	---
(TriPLICATE)	09-May-2011	B137304	MP4 SURFACE TRIPLICATE 2	8	5710	---	---	---	---	---	---	---	---
				1%	3%								
(Sample)	17-May-2011	B140372	MP4 SURFACE	7.9	5390	0.07	< 0.05	0.27	1	< 0.05	0.9	0.38	1.3
(TriPLICATE)	17-May-2011	B140372	MP4 SURF T1	---	5450	0.07	< 0.05	0.39	1	< 0.05	0.9	0.44	1.6
(TriPLICATE)	17-May-2011	B140372	MP4 SURF T2	---	5300	0.07	< 0.05	0.66	3	< 0.05	1.1	0.44	1.9
					1%	0%	<5xDL	45%	<5xDL	<5xDL	12%	8%	19%
(Sample)	26-Jul-2011	B167823	MP4 SURFACE	7.8	5320	0.07	< 0.05	0.42	2	< 0.05	1	0.5	0.7
(TriPLICATE)	26-Jul-2011	B167823	MP4 SURFACE TRIPLICATE 1	7.8	5030	---	---	---	---	---	---	---	---
(TriPLICATE)	26-Jul-2011	B167823	MP4 SURFACE TRIPLICATE 2	7.8	5250	---	---	---	---	---	---	---	---
				0%	3%								
(Sample)	02-Aug-2011	B169888	MP4 SURFACE	7.7	5260	0.07	< 0.05	0.22	< 1	< 0.05	0.8	0.35	< 0.5
(TriPLICATE)	02-Aug-2011	B169888	MP4 SURFACE TRIPLICATE 1	---	5630	0.07	< 0.05	0.17	1	0.06	0.8	0.38	0.7
(TriPLICATE)	02-Aug-2011	B169888	MP4 SURFACE TRIPLICATE 2	---	5200	0.07	< 0.05	0.19	1	< 0.05	0.8	0.34	0.7
					4%	0%	<5xDL	13%	0%	<5xDL	0%	6%	0%
(Sample)	07-Nov-2011	B1A8247	MP4 SURFACE	7.7	5280	0.08	< 0.05	0.32	2	< 0.05	1.2	0.4	< 0.5
(TriPLICATE)	07-Nov-2011	B1A8247	MP4 SURFACE TRIPLICATE 1	7.7	5340	---	---	---	---	---	---	---	---
(TriPLICATE)	07-Nov-2011	B1A8247	MP4 SURFACE TRIPLICATE 2	7.7	5300	---	---	---	---	---	---	---	---
				0%	1%								
(Sample)	15-Nov-2011	B1B1047	MP4 SURFACE	7.7	5380	0.08	< 0.05	0.34	2	< 0.05	1.1	0.42	0.8
(TriPLICATE)	15-Nov-2011	B1B1047	MP4 SURFACE TRIPLICATE 1	---	5510	0.07	< 0.05	0.28	1	< 0.05	1	0.32	0.7
(TriPLICATE)	15-Nov-2011	B1B1047	MP4 SURFACE TRIPLICATE 2	---	5450	0.07	< 0.05	0.31	1	< 0.05	1.1	0.38	0.6
					1%	8%	<5xDL	10%	<5xDL	<5xDL	5%	13%	14%
(Sample)	15-Feb-2012	B212982	MP4 SURFACE	7.8	5390	0.08	< 0.05	0.64	1	< 0.05	0.8	0.43	1
(TriPLICATE)	15-Feb-2012	B212982	MP4 SURFACE TRIPLICATE 1	7.8	5400	---	---	---	---	---	---	---	---
(TriPLICATE)	15-Feb-2012	B212982	MP4 SURFACE TRIPLICATE 2	7.8	5420	---	---	---	---	---	---	---	---
				0%	0%								
(Sample)	21-Feb-2012	B214515	MP4 SURFACE	7.8	5440	0.07	< 0.05	0.51	2	< 0.05	0.7	0.49	0.9
(TriPLICATE)	21-Feb-2012	B214515	MP4 SURFACE TRIPLICATE 1	---	5380	0.07	< 0.05	0.63	3	< 0.05	0.7	0.36	0.8
(TriPLICATE)	21-Feb-2012	B214515	MP4 SURFACE TRIPLICATE 2	---	5520	0.08	< 0.05	0.23	1	< 0.05	0.7	0.41	0.9
					1%	8%	<5xDL	45%	<5xDL	<5xDL	0%	16%	7%
(Sample)	22-May-2012	B241909	MP4 SURFACE	7.9	5370	0.077	< 0.050	0.351	< 1.0	< 0.050	1.05	0.463	< 0.50
(TriPLICATE)	22-May-2012	B241909	MP4 SURFACE TRIPLICATE 1	7.9	5260	---	---	---	---	---	---	---	---
(TriPLICATE)	22-May-2012	B241909	MP4 SURFACE TRIPLICATE 2	7.9	5280	---	---	---	---	---	---	---	---
				0%	1%								
(Sample)	28-May-2012	B243848	MP4 SURFACE	7.8	5550	0.066	< 0.050	0.413	1	< 0.050	0.66	0.41	< 0.50
(TriPLICATE)	28-May-2012	B243848	MP4 SURFACE TRIPLICATE 1	---	5600	0.073	< 0.050	0.524	< 1.0	< 0.050	0.71	0.449	0.56
(TriPLICATE)	28-May-2012	B243848	MP4 SURFACE TRIPLICATE 2	---	5250	0.073	< 0.050	0.449	1.1	< 0.050	0.74	0.449	0.5
					3%	6%	<5xDL	12%	7%	<5xDL	6%	5%	8%

NOTES:

- 1. --- in detail data row(s) denotes parameter not analyzed.
- 2. Highlighting indicates parameters above QA/QC data quality objective.
- 3. Highlighting indicates parameters above QA/QC data quality objective.



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Albert Head																	
AH-1	Spring 2010	28-Apr-2010	AH1 BOTTOM	7.8	5520	0.07	349000	< 0.05	0.38	27	0.05	1130000	1.6	< 0.02	0.6	---	0.8
		06-May-2010	AH1 BOTTOM	7.9	5590	0.07	352000	---	0.29	37.00	0.06	1140000	---	< 0.02	0.43	---	2.20
		12-May-2010	AH1 BOTTOM	7.9	5750	0.07	364000	---	0.27	11.00	< 0.05	1180000	---	< 0.02	0.63	66	0.70
		18-May-2010	AH1 BOTTOM	7.9	5530	0.08	353000	---	0.23	8	0.05	1130000	---	< 0.02	0.5	---	0.5
		25-May-2010	AH1 BOTTOM	7.9	5210	0.07	336000	---	0.39	34	< 0.05	1060000	---	< 0.02	0.46	---	0.9
			Minimum			0.07	336000	N/A	0.23	8.00	0.03	1060000	N/A	N/A	0.43	66	0.50
			Mean			0.07	350800	N/A	0.31	23.40	0.04	1128000	N/A	N/A	0.52	N/A	1.02
			Maximum			0.08	364000	N/A	0.39	37.00	0.06	1180000	N/A	N/A	0.63	66	2.20
			Standard Deviation			0.00	10034.9	N/A	0.07	13.24	0.02	43243.5	N/A	N/A	0.09	N/A	0.68
AH-1	Summer 2010	26-Jul-2010	AH1 BOTTOM	7.9	5380	0.06	346000	---	0.29	40.00	< 0.05	1100000	---	< 0.02	0.56	---	< 0.5
		28-Jul-2010	AH1 BOTTOM	7.8	5520	0.09	348000	---	0.17	25.00	< 0.05	1130000	---	< 0.02	0.46	---	0.80
		03-Aug-2010	AH1 BOTTOM	8	5170	0.09	328000	---	0.27	27.00	< 0.05	1060000	---	< 0.02	0.59	45	1.00
		10-Aug-2010	AH1 BOTTOM	7.9	5550	0.08	355000	---	0.31	32.00	< 0.05	1130000	---	< 0.02	0.48	---	0.70
		17-Aug-2010	AH1 BOTTOM	7.9	6100	0.09	379000	---	0.32	38.00	< 0.05	1250000	---	< 0.02	0.43	---	0.80
			Minimum			0.06	328000	N/A	0.17	25.00	N/A	1060000	N/A	N/A	0.43	45	0.25
			Mean			0.08	351200	N/A	0.27	32.40	N/A	1134000	N/A	N/A	0.50	N/A	0.71
			Maximum			0.09	379000	N/A	0.32	40.00	N/A	1250000	N/A	N/A	0.59	45	1.00
			Standard Deviation			0.01	18458.1	N/A	0.06	6.58	N/A	70922.49	N/A	N/A	0.07	N/A	0.28
AH-1	Fall 2010	02-Nov-2010	AH1 BOTTOM	7.7	5590	0.08	354000	---	0.36	31.00	< 0.05	1140000	---	< 0.02	0.66	---	< 0.5
		08-Nov-2010	AH1 BOTTOM	7.7	5280	0.07	341000	---	0.37	25.00	0.06	1080000	---	< 0.02	0.61	---	0.80
		18-Nov-2010	AH1 BOTTOM	7.7	5450	0.09	351000	---	0.35	19.00	< 0.05	1110000	---	< 0.02	0.41	76	1.40
		24-Nov-2010	AH1 BOTTOM	7.7	5440	0.07	351000	---	0.33	32.00	< 0.05	1110000	---	< 0.02	0.38	---	0.70
		01-Dec-2010	AH1 BOTTOM	7.7	5380	0.09	346000	---	0.30	67.00	0.43	1100000	---	< 0.02	0.44	---	1.10
			Minimum			0.07	341000	N/A	0.30	19.00	N/A	1080000	N/A	N/A	0.38	76	0.25
			Mean			0.08	348600	N/A	0.34	34.80	N/A	1108000	N/A	N/A	0.50	N/A	0.85
			Maximum			0.09	354000	N/A	0.37	67.00	N/A	1140000	N/A	N/A	0.66	76	1.40
			Standard Deviation			0.01	5128.35	N/A	0.03	18.74	N/A	21679.48	N/A	N/A	0.13	N/A	0.43
AH-1	Spring 2010	28-Apr-2010	AH1 MID	7.9	5490	0.08	346000	< 0.05	4.34	25.00	0.14	1120000	1.50	< 0.02	0.71	---	1.00
		06-May-2010	AH1 MID	7.9	5560	0.09	351000	---	0.34	20.00	< 0.05	1140000	---	< 0.02	0.49	---	0.90
		12-May-2010	AH1 MID	7.9	5610	0.08	355000	---	0.30	12.00	< 0.05	1150000	---	< 0.02	0.51	57	0.70
		18-May-2010	AH1 MID	7.9	5530	0.08	354000	---	0.21	2.00	0.06	1130000	---	< 0.02	0.54	---	0.90
		25-May-2010	AH1 MID	7.8	5140	0.07	332000	---	0.36	18.00	< 0.05	1050000	---	< 0.02	0.42	---	1.30
			Minimum			0.07	332000	N/A	0.21	2.00	N/A	1050000	N/A	N/A	0.42	57	0.70
			Mean			0.08	347600	N/A	1.11	15.40	N/A	1118000	N/A	N/A	0.53	N/A	0.96
			Maximum			0.09	355000	N/A	4.34	25.00	0.14	1150000	N/A	N/A	0.71	57	1.30
			Standard Deviation			0.01	9396.81	N/A	1.81	8.82	N/A	39623.23	N/A	N/A	0.11	N/A	0.22
AH-1	Summer 2010	26-Jul-2010	AH1 MID	7.9	5120	0.06	331000	---	0.24	17.00	< 0.05	1040000	---	< 0.02	0.53	---	< 0.5
		28-Jul-2010	AH1 MID	7.9	5290	0.08	337000	---	0.21	21.00	< 0.05	1080000	---	< 0.02	0.45	---	0.80
		03-Aug-2010	AH1 MID	8	5200	0.08	329000	---	0.31	32.00	< 0.05	1060000	---	< 0.02	0.51	70	1.60
		10-Aug-2010	AH1 MID	7.9	5570	0.08	359000	---	0.25	12.00	< 0.05	1140000	---	< 0.02	0.48	---	< 0.5
		17-Aug-2010	AH1 MID	7.9	5990	0.09	373000	---	0.28	31.00	< 0.05	1230000	---	< 0.02	0.46	---	0.80
			Minimum			0.06	329000	N/A	0.21	12.00	N/A	1040000	N/A	N/A	0.45	70	0.25
			Mean			0.08	345800	N/A	0.26	22.60	N/A	1110000	N/A	N/A	0.49	N/A	0.74
			Maximum			0.09	373000	N/A	0.31	32.00	N/A	1230000	N/A	N/A	0.53	70	1.60
			Standard Deviation			0.01	19318.4	N/A	0.04	8.73	N/A	76811.46	N/A	N/A	0.03	N/A	0.55
AH-1	Fall 2010	02-Nov-2010	AH1 MID	7.7	5640	0.08	356000	---	0.35	14.00	< 0.05	1150000	---	< 0.02	0.56	---	0.60
		08-Nov-2010	AH1 MID	7.7	5110	0.07	331000	---	0.28	17.00	< 0.05	1040000	---	< 0.02	0.75	---	0.50
		18-Nov-2010	AH1 MID	7.7	5490	0.09	352000	---	0.31	14.00	< 0.05	1120000	---	< 0.02	0.52	76	0.60
		24-Nov-2010	AH1 MID	7.6	5320	0.09	345000	---	0.29	34.00	0.27	1080000	---	< 0.02	0.35	---	0.90
		01-Dec-2010	AH1 MID	7.7	5250	0.08	337000	---	0.37	31.00	0.06	1070000	---	< 0.02	0.49	---	1.00
			Minimum			0.07	331000	N/A	0.28	14.00	N/A	1040000	N/A	N/A	0.35	76	0.50
			Mean			0.08	344200	N/A	0.32	22.00	N/A	1092000	N/A	N/A	0.53	N/A	0.72
			Maximum			0.09	356000	N/A	0.37	34.00	N/A	1150000	N/A	N/A	0.75	76	1.00
			Standard Deviation			0.01	10329.6	N/A	0.04	9.72	N/A	43243.5	N/A	N/A	0.14	N/A	0.22



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Albert Head			Water Quality Guidelines:														
Spring 2010		28-Apr-2010	AH1 SURFACE	7.8	5420	0.08	341000	< 0.05	0.50	25.00	0.08	1110000	1.70	< 0.02	0.77	---	1.70
		06-May-2010	AH1 SURFACE	7.9	5490	0.08	346000	---	0.33	26.00	< 0.05	1120000	---	< 0.02	0.45	---	1.20
		12-May-2010	AH1 SURFACE	7.9	5570	0.08	352000	---	0.34	20.00	< 0.05	1140000	---	< 0.02	0.52	56	0.60
		18-May-2010	AH1 SURFACE	7.8	5490	0.08	350000	---	0.23	7.00	< 0.05	1120000	---	< 0.02	0.49	---	0.60
		25-May-2010	AH1 SURFACE	7.9	5400	0.07	344000	---	0.46	17.00	< 0.05	1100000	---	< 0.02	0.43	---	1.10
			Minimum			0.07	341000	N/A	0.23	7.00	N/A	1100000	1.70	N/A	0.43	56	0.60
			Mean			0.08	346600	N/A	0.37	19.00	N/A	1118000	N/A	N/A	0.53	N/A	1.04
			Maximum			0.08	352000	N/A	0.50	26.00	N/A	1140000	1.70	N/A	0.77	56	1.70
			Standard Deviation			0.00	4449.72	N/A	0.11	7.65	N/A	14832.4	N/A	N/A	0.14	N/A	0.46
Summer 2010		26-Jul-2010	AH1 SURFACE	7.9	5410	0.08	346000	---	0.26	24.00	< 0.05	1100000	---	< 0.02	0.53	---	0.60
		28-Jul-2010	AH1 SURFACE	7.9	5330	0.08	340000	---	0.27	14.00	< 0.05	1090000	---	< 0.02	0.45	---	0.80
		03-Aug-2010	AH1 SURFACE	8.1	5010	0.07	320000	---	0.41	12.00	< 0.05	1020000	---	< 0.02	0.58	52	1.60
		10-Aug-2010	AH1 SURFACE	7.9	5710	0.08	383000	---	0.29	9.00	< 0.05	1160000	---	< 0.02	0.43	---	0.60
		17-Aug-2010	AH1 SURFACE	7.9	5640	0.09	356000	---	0.24	8.00	< 0.05	1150000	---	< 0.02	0.38	---	< 0.5
			Minimum			0.07	320000	N/A	0.24	8.00	N/A	1020000	N/A	N/A	0.38	52	0.25
			Mean			0.08	349000	N/A	0.29	13.40	N/A	1104000	N/A	N/A	0.47	N/A	0.77
			Maximum			0.09	383000	N/A	0.41	24.00	N/A	1160000	N/A	N/A	0.58	52	1.60
			Standard Deviation			0.01	23108.4	N/A	0.07	6.39	N/A	55946.4	N/A	N/A	0.08	N/A	0.50
Fall 2010		02-Nov-2010	AH1 SURFACE	7.7	5620	0.08	354000	---	0.26	6.00	< 0.05	1150000	---	< 0.02	0.52	---	0.60
		08-Nov-2010	AH1 SURFACE	7.6	5110	0.07	331000	---	0.32	15.00	< 0.05	1040000	---	< 0.02	0.52	---	0.80
		18-Nov-2010	AH1 SURFACE	7.7	5430	0.08	349000	---	0.31	10.00	< 0.05	1110000	---	< 0.02	0.40	75	0.70
		24-Nov-2010	AH1 SURFACE	7.6	5660	0.08	361000	---	0.49	25.00	0.72	1160000	---	< 0.02	0.39	---	0.90
		01-Dec-2010	AH1 SURFACE	7.6	5260	0.08	338000	---	0.38	29.00	< 0.05	1070000	---	< 0.02	0.37	---	0.90
			Minimum			0.07	331000	N/A	0.26	6.00	N/A	1040000	N/A	N/A	0.37	75	0.60
			Mean			0.08	346600	N/A	0.35	17.00	N/A	1106000	N/A	N/A	0.44	N/A	0.78
			Maximum			0.08	361000	N/A	0.49	29.00	0.72	1160000	N/A	N/A	0.52	75	0.90
			Standard Deviation			0.00	12095.5	N/A	0.09	9.77	N/A	51283.53	N/A	N/A	0.07	N/A	0.13
AH-2	Spring 2010	28-Apr-2010	AH2 BOTTOM	7.9	5480	---	345000	---	---	---	---	1120000	---	---	---	---	---
		06-May-2010	AH2 BOTTOM	7.9	5480	---	345000	---	---	---	---	1120000	---	---	---	---	---
		12-May-2010	AH2 BOTTOM	7.9	5600	---	355000	---	---	---	---	1140000	---	---	---	55	---
		18-May-2010	AH2 BOTTOM	7.9	5530	---	353000	---	---	---	---	1130000	---	---	---	---	---
		25-May-2010	AH2 BOTTOM	7.8	5030	---	325000	---	---	---	---	1020000	---	---	---	---	---
			Minimum			N/A	325000	N/A	N/A	N/A	N/A	1020000	N/A	N/A	N/A	55	N/A
			Mean			N/A	344600	N/A	N/A	N/A	N/A	1106000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	355000	N/A	N/A	N/A	N/A	1140000	N/A	N/A	N/A	55	N/A
			Standard Deviation			N/A	11865.9	N/A	N/A	N/A	N/A	48785.24	N/A	N/A	N/A	N/A	N/A
Summer 2010		26-Jul-2010	AH2 BOTTOM	7.9	5340	---	344000	---	---	---	---	1090000	---	---	---	---	---
		28-Jul-2010	AH2 BOTTOM	7.8	5610	---	352000	---	---	---	---	1150000	---	---	---	---	---
		03-Aug-2010	AH2 BOTTOM	7.9	5790	---	358000	---	---	---	---	1190000	---	---	---	77	---
		10-Aug-2010	AH2 BOTTOM	7.9	5740	---	362000	---	---	---	---	1180000	---	---	---	---	---
		17-Aug-2010	AH2 BOTTOM	7.9	5720	---	358000	---	---	---	---	1170000	---	---	---	---	---
			Minimum			N/A	344000	N/A	N/A	N/A	N/A	1090000	N/A	N/A	N/A	77	N/A
			Mean			N/A	354800	N/A	N/A	N/A	N/A	1156000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	362000	N/A	N/A	N/A	N/A	1190000	N/A	N/A	N/A	77	N/A
			Standard Deviation			N/A	7014.27	N/A	N/A	N/A	N/A	39749.21	N/A	N/A	N/A	N/A	N/A
Fall 2010		02-Nov-2010	AH2 BOTTOM	7.8	5620	---	354000	---	---	---	---	1150000	---	---	---	---	---
		08-Nov-2010	AH2 BOTTOM	7.6	5230	---	339000	---	---	---	---	1070000	---	---	---	---	---
		18-Nov-2010	AH2 BOTTOM	7.7	5330	---	342000	---	---	---	---	1090000	---	---	---	74	---
		24-Nov-2010	AH2 BOTTOM	7.7	5400	---	348000	---	---	---	---	1100000	---	---	---	---	---
		01-Dec-2010	AH2 BOTTOM	7.7	4850	---	310000	---	---	---	---	989000	---	---	---	---	---
			Minimum			N/A	310000	N/A	N/A	N/A	N/A	989000	N/A	N/A	N/A	74	N/A
			Mean			N/A	338600	N/A	N/A	N/A	N/A	1079800	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	354000	N/A	N/A	N/A	N/A	1150000	N/A	N/A	N/A	74	N/A
			Standard Deviation			N/A	16994.1	N/A	N/A	N/A	N/A	58695.83	N/A	N/A	N/A	N/A	N/A



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements													
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)	
																		7 - 8.7
Albert Head			Water Quality Guidelines:															
Winter 2011		16-Mar-2011	AH2 BOTTOM	7.8	5130	0.08	345000	---	0.36	32.00	< 0.05	1040000	---	< 0.02	0.51	---	0.80	
		22-Mar-2011	AH2 BOTTOM	7.8	5470	0.07	369000	---	0.29	39.00	< 0.05	1100000	---	< 0.02	0.44	---	0.60	
		28-Mar-2011	AH2 BOTTOM	7.8	5200	0.08	343000	---	0.33	41.00	< 0.05	1050000	---	< 0.02	0.46	63	0.70	
		07-Apr-2011	AH2 BOTTOM	7.8	5310	0.06	360000	---	0.32	34.00	< 0.05	1070000	---	< 0.02	0.38	---	0.70	
		12-Apr-2011	AH2 BOTTOM	7.8	5140	0.07	343000	---	0.42	51.00	0.05	1040000	---	< 0.02	0.46	---	0.90	
			Minimum			0.06	343000	N/A	0.29	32.00	N/A	1040000	N/A	N/A	N/A	0.38	63	0.60
			Mean			0.07	352000	N/A	0.34	39.40	N/A	1060000	N/A	N/A	0.45	N/A	0.74	
			Maximum			0.08	369000	N/A	0.42	51.00	0.05	1100000	N/A	N/A	0.51	63	0.90	
			Standard Deviation			0.01	11874.3	N/A	0.05	7.44	N/A	25495.1	N/A	N/A	0.05	N/A	0.11	
Spring 2011		04-May-2011	AH2 BOTTOM	7.9	5360	0.07	360000	---	0.25	28.00	< 0.05	1080000	---	< 0.02	0.47	---	0.60	
		09-May-2011	AH2 BOTTOM	7.9	5490	0.08	368000	---	0.66	33.00	0.06	1110000	---	< 0.02	0.36	---	0.90	
		17-May-2011	AH2 BOTTOM	7.9	5420	0.07	363000	---	0.41	38.00	< 0.05	1100000	---	< 0.02	0.48	66	0.80	
		25-May-2011	AH2 BOTTOM	7.8	5200	0.08	351000	---	0.36	26.00	0.05	1050000	---	< 0.02	0.54	---	0.90	
		30-May-2011	AH2 BOTTOM	7.8	5650	0.08	380000	---	0.32	44.00	0.06	1140000	---	< 0.02	R	---	---	
			Minimum			0.07	351000	N/A	0.25	26.00	0.03	1050000	N/A	N/A	0.36	66	0.60	
			Mean			0.08	364400	N/A	0.40	33.80	0.04	1096000	N/A	N/A	0.46	N/A	0.80	
			Maximum			0.08	380000	N/A	0.66	44.00	0.06	1140000	N/A	N/A	0.54	66	0.90	
			Standard Deviation			0.01	10691.1	N/A	0.16	7.36	0.02	33615.47	N/A	N/A	0.07	N/A	0.14	
Summer 2011		20-Jul-2011	AH2 BOTTOM	7.7	5240	0.08	347000	---	0.28	11.00	< 0.05	1060000	---	< 0.02	0.39	---	< 0.5	
		26-Jul-2011	AH2 BOTTOM	7.8	5020	0.09	337000	---	0.38	14.00	0.06	1020000	---	< 0.02	0.51	---	1.60	
		02-Aug-2011	AH2 BOTTOM	7.6	5430	0.08	359000	---	0.27	17.00	< 0.05	1100000	---	< 0.02	0.39	65	1.10	
		09-Aug-2011	AH2 BOTTOM	7.7	5520	0.07	368000	---	0.28	8.00	0.06	1120000	---	< 0.02	0.35	---	0.60	
		16-Aug-2011	AH2 BOTTOM	7.6	5540	0.08	371000	---	0.26	28.00	< 0.05	1120000	---	< 0.02	0.38	---	0.90	
			Minimum			0.07	337000	N/A	0.26	8.00	N/A	1020000	N/A	N/A	0.35	65	0.03	
			Mean			0.08	356400	N/A	0.29	15.60	N/A	1084000	N/A	N/A	0.40	N/A	0.85	
			Maximum			0.09	371000	N/A	0.38	28.00	0.06	1120000	N/A	N/A	0.51	65	1.60	
			Standard Deviation			0.01	14310.8	N/A	0.05	7.70	N/A	43358.97	N/A	N/A	0.06	N/A	0.59	
Fall 2011		31-Oct-2011	AH2 BOTTOM	7.7	5600	0.08	366000	---	0.36	48.00	< 0.05	1140000	---	< 0.020	0.41	---	0.80	
		07-Nov-2011	AH2 BOTTOM	7.7	5320	0.08	353000	---	0.31	29.00	< 0.05	1080000	---	< 0.020	0.41	---	< 0.50	
		15-Nov-2011	AH2 BOTTOM	7.7	5470	0.08	363000	---	0.32	31.00	< 0.05	1110000	---	< 0.020	0.42	77	0.70	
		28-Nov-2011	AH2 BOTTOM	7.8	5240	0.07	346000	---	0.40	143.00	0.08	1060000	---	< 0.020	0.51	---	0.80	
		30-Nov-2011	AH2 BOTTOM	7.8	5410	0.08	360000	---	0.30	48.00	0.05	1100000	---	< 0.020	0.37	---	0.50	
			Minimum			0.07	346000	N/A	0.30	29.00	N/A	1060000	N/A	N/A	0.37	77	0.25	
			Mean			0.08	357600	N/A	0.34	59.80	N/A	1098000	N/A	N/A	0.42	N/A	0.61	
			Maximum			0.08	366000	N/A	0.40	143.00	0.08	1140000	N/A	N/A	0.51	77	0.80	
			Standard Deviation			0.00	8080.84	N/A	0.04	47.38	N/A	30331.5	N/A	N/A	0.05	N/A	0.24	
Winter 2012		08-Feb-2012	AH2 BOTTOM	7.8	5320	0.07	350000	---	0.40	33.00	< 0.05	1080000	---	< 0.010	0.39	---	0.60	
		15-Feb-2012	AH2 BOTTOM	7.8	5330	0.07	354000	---	0.40	22.00	0.05	1080000	---	< 0.010	0.38	---	0.80	
		21-Feb-2012	AH2 BOTTOM	7.8	5590	0.08	367000	---	0.28	40.00	< 0.05	1130000	---	< 0.010	0.37	72	0.60	
		27-Feb-2012	AH2 BOTTOM	7.8	5650	0.08	372000	---	0.23	20.00	< 0.05	1150000	---	< 0.010	0.44	---	0.60	
		04-Mar-2012	AH2 BOTTOM	7.7	5490	0.08	357000	---	0.36	16.70	< 0.05	1120000	---	< 0.010	0.42	---	0.91	
			Minimum			0.07	350000	N/A	0.23	16.70	N/A	1080000	N/A	N/A	0.37	72	0.60	
			Mean			0.08	360000	N/A	0.33	26.34	N/A	1112000	N/A	N/A	0.40	N/A	0.70	
			Maximum			0.08	372000	N/A	0.40	40.00	0.05	1150000	N/A	N/A	0.44	72	0.91	
			Standard Deviation			0.01	9192.39	N/A	0.08	9.78	N/A	31144.82	N/A	N/A	0.03	N/A	0.14	
Spring 2012		15-May-2012	AH2 BOTTOM	7.9	5090	0.08	336000	---	0.519	14.6	< 0.050	1030000	---	< 0.010	0.50	---	0.62	
		22-May-2012	AH2 BOTTOM	7.8	5370	0.08	354000	---	1.070	13.6	0.051	1090000	---	< 0.010	0.51	---	0.63	
		28-May-2012	AH2 BOTTOM	7.8	5780	0.08	382000	---	1.730	29.9	0.096	1170000	---	< 0.010	0.42	---	0.96	
		31-May-2012	AH2 BOTTOM	7.8	5480	0.08	360000	---	0.319	23.6	< 0.050	1110000	---	< 0.010	0.68	---	< 0.50	
		06-Jun-2012	AH2 BOTTOM	7.8	5340	0.07	351000	---	0.384	31.5	< 0.050	1080000	---	< 0.010	0.36	---	< 0.50	
			Minimum			0.07	336000	N/A	0.32	13.60	N/A	1030000	N/A	N/A	0.36	N/A	0.25	
			Mean			0.08	356600	N/A	0.80	22.64	N/A	1096000	N/A	N/A	0.49	N/A	0.54	
			Maximum			0.08	382000	N/A	1.73	31.50	0.10	1170000	N/A	N/A	0.68	N/A	0.96	
			Standard Deviation			0.00	16727.2	N/A	0.60	8.34	N/A	50793.7	N/A	N/A	0.12	N/A	0.30	



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Albert Head																	
Spring 2010		28-Apr-2010	AH2 MID	7.9	5500	---	347000	---	---	---	---	1130000	---	---	---	---	---
		06-May-2010	AH2 MID	7.9	5530	---	350000	---	---	---	---	1130000	---	---	---	---	---
		12-May-2010	AH2 MID	7.9	5530	---	351000	---	---	---	---	1130000	---	---	---	56	---
		18-May-2010	AH2 MID	7.9	5500	---	352000	---	---	---	---	1120000	---	---	---	---	---
		25-May-2010	AH2 MID	7.8	5270	---	336000	---	---	---	---	1070000	---	---	---	---	---
				Minimum			N/A	336000	N/A	N/A	N/A	N/A	1070000	N/A	N/A	N/A	56
			Mean			N/A	347200	N/A	N/A	N/A	N/A	1116000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	352000	N/A	N/A	N/A	N/A	1130000	N/A	N/A	N/A	56	N/A
			Standard Deviation			N/A	6534.52	N/A	N/A	N/A	N/A	26076.81	N/A	N/A	N/A	N/A	N/A
Summer 2010		26-Jul-2010	AH2 MID	7.9	5360	---	344000	---	---	---	---	1090000	---	---	---	---	---
		28-Jul-2010	AH2 MID	7.9	5360	---	340000	---	---	---	---	1100000	---	---	---	---	---
		03-Aug-2010	AH2 MID	8	5340	---	338000	---	---	---	---	1090000	---	---	---	66	---
		10-Aug-2010	AH2 MID	7.9	5850	---	364000	---	---	---	---	1200000	---	---	---	---	---
		17-Aug-2010	AH2 MID	8	5850	---	364000	---	---	---	---	1200000	---	---	---	---	---
				Minimum			N/A	338000	N/A	N/A	N/A	N/A	1090000	N/A	N/A	N/A	66
			Mean			N/A	350000	N/A	N/A	N/A	N/A	1136000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	364000	N/A	N/A	N/A	N/A	1200000	N/A	N/A	N/A	66	N/A
			Standard Deviation			N/A	12961.5	N/A	N/A	N/A	N/A	58566.2	N/A	N/A	N/A	N/A	N/A
Fall 2010		02-Nov-2010	AH2 MID	7.7	5430	---	346000	---	---	---	---	1110000	---	---	---	---	---
		08-Nov-2010	AH2 MID	7.7	5260	---	340000	---	---	---	---	1070000	---	---	---	---	---
		18-Nov-2010	AH2 MID	7.7	5350	---	342000	---	---	---	---	1090000	---	---	---	73	---
		24-Nov-2010	AH2 MID	7.7	5700	---	360000	---	---	---	---	1170000	---	---	---	---	---
		01-Dec-2010	AH2 MID	7.7	5160	---	331000	---	---	---	---	1050000	---	---	---	---	---
				Minimum			N/A	331000	N/A	N/A	N/A	N/A	1050000	N/A	N/A	N/A	73
			Mean			N/A	343800	N/A	N/A	N/A	N/A	1098000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	360000	N/A	N/A	N/A	N/A	1170000	N/A	N/A	N/A	73	N/A
			Standard Deviation			N/A	10592.5	N/A	N/A	N/A	N/A	46043.46	N/A	N/A	N/A	N/A	N/A
Winter 2011		16-Mar-2011	AH2 MID	7.8	5170	0.07	344000	---	0.31	29.00	0.07	1050000	---	< 0.02	0.50	---	0.70
		22-Mar-2011	AH2 MID	7.8	5360	0.06	360000	---	0.26	42.00	< 0.05	1080000	---	< 0.02	0.46	---	0.50
		28-Mar-2011	AH2 MID	7.8	5120	0.06	339000	---	0.27	25.00	< 0.05	1040000	---	< 0.02	0.39	61	0.80
		07-Apr-2011	AH2 MID	7.8	5200	0.06	349000	---	0.31	34.00	< 0.05	1050000	---	< 0.02	0.36	---	0.60
		12-Apr-2011	AH2 MID	7.8	5050	0.07	337000	---	0.41	52.00	< 0.05	1020000	---	< 0.02	0.45	---	0.90
				Minimum			0.06	337000	N/A	0.26	25.00	N/A	1020000	N/A	N/A	0.36	61
			Mean			0.06	345800	N/A	0.31	36.40	N/A	1048000	N/A	N/A	0.43	N/A	0.70
			Maximum			0.07	360000	N/A	0.41	52.00	0.07	1080000	N/A	N/A	0.50	61	0.90
			Standard Deviation			0.01	9203.26	N/A	0.06	10.78	N/A	21679.48	N/A	N/A	0.06	N/A	0.16
Spring 2011		04-May-2011	AH2 MID	7.9	5350	0.07	359000	---	0.25	22.00	< 0.05	1080000	---	< 0.02	0.45	---	0.90
		09-May-2011	AH2 MID	7.7	5480	0.09	368000	---	0.26	23.00	< 0.05	1110000	---	< 0.02	0.36	---	0.60
		17-May-2011	AH2 MID	7.9	5450	0.07	364000	---	0.32	29.00	< 0.05	1100000	---	< 0.02	0.40	67	0.80
		25-May-2011	AH2 MID	7.8	5320	0.08	360000	---	0.35	25.00	< 0.05	1070000	---	< 0.02	0.49	---	0.80
		30-May-2011	AH2 MID	7.9	5570	0.07	374000	---	0.33	19.00	0.05	1130000	---	< 0.02	R	---	---
				Minimum			0.07	359000	N/A	0.25	19.00	N/A	1070000	N/A	N/A	0.36	67
			Mean			0.08	365000	N/A	0.30	23.60	N/A	1098000	N/A	N/A	0.43	N/A	0.78
			Maximum			0.09	374000	N/A	0.35	29.00	0.05	1130000	N/A	N/A	0.49	67	0.90
			Standard Deviation			0.01	6164.41	N/A	0.04	3.71	N/A	23874.67	N/A	N/A	0.06	N/A	0.13
Summer 2011		20-Jul-2011	AH2 MID	7.7	5290	0.08	351000	---	0.28	11.00	< 0.05	1070000	---	< 0.02	0.38	---	0.50
		26-Jul-2011	AH2 MID	7.7	5200	0.07	350000	---	0.38	14.00	< 0.05	1050000	---	< 0.02	0.40	---	0.80
		02-Aug-2011	AH2 MID	7.7	5360	0.09	352000	---	0.46	7.00	0.07	1090000	---	< 0.02	0.42	57	1.00
		09-Aug-2011	AH2 MID	7.8	5190	0.07	347000	---	0.27	6.00	0.12	1050000	---	< 0.02	0.34	---	1.00
		16-Aug-2011	AH2 MID	7.6	5450	0.07	363000	---	0.29	20.00	< 0.05	1100000	---	< 0.02	0.38	---	0.70
				Minimum			0.07	347000	N/A	0.27	6.00	N/A	1050000	N/A	N/A	0.34	57
			Mean			0.08	352600	N/A	0.34	11.60	N/A	1072000	N/A	N/A	0.38	N/A	0.80
			Maximum			0.09	363000	N/A	0.46	20.00	0.12	1100000	N/A	N/A	0.42	57	1.00
			Standard Deviation			0.01	6107.37	N/A	0.08	5.68	N/A	22803.51	N/A	N/A	0.03	N/A	0.21



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Albert Head			Water Quality Guidelines:														
Fall 2011		31-Oct-2011	AH2 MID	7.7	5550	0.08	366000	---	0.33	20.00	< 0.05	1130000	---	< 0.020	0.37	---	0.60
		07-Nov-2011	AH2 MID	7.7	5340	0.08	356000	---	0.29	13.00	< 0.05	1080000	---	< 0.020	0.41	---	< 0.5
		15-Nov-2011	AH2 MID	7.7	5440	0.08	360000	---	0.36	27.00	< 0.05	1100000	---	< 0.020	0.44	74	0.50
		28-Nov-2011	AH2 MID	7.8	5240	0.07	343000	---	0.42	177.00	0.09	1060000	---	< 0.020	0.56	---	0.90
		30-Nov-2011	AH2 MID	7.8	5520	0.07	368000	---	0.28	33.00	< 0.05	1120000	---	< 0.020	0.37	---	< 0.5
			Minimum			0.07	343000	N/A	0.28	13.00	N/A	1060000	N/A	N/A	0.37	74	0.25
			Mean			0.08	358600	N/A	0.34	54.00	N/A	1098000	N/A	N/A	0.43	N/A	0.50
			Maximum			0.08	368000	N/A	0.42	177.00	0.09	1130000	N/A	N/A	0.56	74	0.90
			Standard Deviation			0.01	9939.82	N/A	0.06	69.17	N/A	28635.64	N/A	N/A	0.08	N/A	0.27
Winter 2012		08-Feb-2012	AH2 MID	7.8	5370	0.08	354000	---	0.65	24.00	0.05	1090000	---	< 0.010	0.40	---	0.70
		15-Feb-2012	AH2 MID	7.8	5150	0.07	341000	---	0.96	23.00	0.06	1040000	---	< 0.010	0.59	---	1.20
		21-Feb-2012	AH2 MID	7.7	5480	0.07	359000	---	0.32	31.00	0.06	1110000	---	< 0.010	0.37	73	0.90
		27-Feb-2012	AH2 MID	7.8	5670	0.07	371000	---	6.32	46.00	0.56	1150000	---	< 0.010	0.43	---	12.20
		04-Mar-2012	AH2 MID	7.7	5510	0.07	360000	---	0.30	15.60	< 0.05	1120000	---	< 0.010	0.38	---	0.54
			Minimum			0.07	341000	N/A	0.30	15.60	N/A	1040000	N/A	N/A	0.37	73	0.54
			Mean			0.07	357000	N/A	1.71	27.92	N/A	1102000	N/A	N/A	0.43	N/A	3.11
			Maximum			0.08	371000	N/A	6.32	46.00	0.56	1150000	N/A	N/A	0.59	73	12.20
			Standard Deviation			0.00	10885.8	N/A	2.59	11.49	N/A	40865.63	N/A	N/A	0.09	N/A	5.09
Spring 2012		15-May-2012	AH2 MID	7.9	5320	0.07	352000	---	0.696	15.0	< 0.050	1080000	---	< 0.010	0.50	---	< 0.50
		22-May-2012	AH2 MID	7.9	5380	0.08	357000	---	0.504	12.9	< 0.050	1090000	---	< 0.010	0.48	---	0.51
		28-May-2012	AH2 MID	7.8	5460	0.08	360000	---	0.423	14.6	< 0.050	1110000	---	< 0.010	0.36	---	0.73
		31-May-2012	AH2 MID	7.8	5470	0.08	362000	---	0.341	13.7	< 0.050	1110000	---	< 0.010	0.41	---	< 0.50
		06-Jun-2012	AH2 MID	7.8	5450	0.07	361000	---	0.529	33.0	< 0.050	1100000	---	< 0.010	0.37	---	< 0.50
			Minimum			0.07	352000	N/A	0.34	12.90	N/A	1080000	N/A	N/A	0.36	N/A	0.25
			Mean			0.07	358400	N/A	0.50	17.84	N/A	1098000	N/A	N/A	0.42	N/A	0.40
			Maximum			0.08	362000	N/A	0.70	33.00	N/A	1110000	N/A	N/A	0.50	N/A	0.73
			Standard Deviation			0.00	4037.33	N/A	0.13	8.51	N/A	13038.4	N/A	N/A	0.06	N/A	0.22
Spring 2010		28-Apr-2010	AH2 SURFACE	7.9	5460	---	345000	---	---	---	---	1120000	---	---	---	---	---
		06-May-2010	AH2 SURFACE	7.9	5480	---	346000	---	---	---	---	1120000	---	---	---	---	---
		12-May-2010	AH2 SURFACE	7.9	5600	---	355000	---	---	---	---	1140000	---	---	---	56	---
		18-May-2010	AH2 SURFACE	7.9	5510	---	352000	---	---	---	---	1130000	---	---	---	---	---
		25-May-2010	AH2 SURFACE	7.8	5200	---	335000	---	---	---	---	1060000	---	---	---	---	---
			Minimum			N/A	335000	N/A	N/A	N/A	N/A	1060000	N/A	N/A	N/A	56	N/A
			Mean			N/A	346600	N/A	N/A	N/A	N/A	1114000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	355000	N/A	N/A	N/A	N/A	1140000	N/A	N/A	N/A	56	N/A
			Standard Deviation			N/A	7700.65	N/A	N/A	N/A	N/A	31304.95	N/A	N/A	N/A	N/A	N/A
Summer 2010		26-Jul-2010	AH2 SURFACE	8	5340	---	341000	---	---	---	---	1090000	---	---	---	---	---
		28-Jul-2010	AH2 SURFACE	7.9	5360	---	341000	---	---	---	---	1090000	---	---	---	---	---
		03-Aug-2010	AH2 SURFACE	8.2	5430	---	339000	---	---	---	---	1110000	---	---	---	59	---
		10-Aug-2010	AH2 SURFACE	8	5690	---	359000	---	---	---	---	1160000	---	---	---	---	---
		17-Aug-2010	AH2 SURFACE	7.9	5910	---	367000	---	---	---	---	1210000	---	---	---	---	---
			Minimum			N/A	339000	N/A	N/A	N/A	N/A	1090000	N/A	N/A	N/A	59	N/A
			Mean			N/A	349400	N/A	N/A	N/A	N/A	1132000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	367000	N/A	N/A	N/A	N/A	1210000	N/A	N/A	N/A	59	N/A
			Standard Deviation			N/A	12759.3	N/A	N/A	N/A	N/A	52153.62	N/A	N/A	N/A	N/A	N/A
Fall 2010		02-Nov-2010	AH2 SURFACE	7.7	5450	---	348000	---	---	---	---	1110000	---	---	---	---	---
		08-Nov-2010	AH2 SURFACE	7.7	5320	---	345000	---	---	---	---	1080000	---	---	---	---	---
		18-Nov-2010	AH2 SURFACE	7.7	5290	---	340000	---	---	---	---	1080000	---	---	---	80	---
		24-Nov-2010	AH2 SURFACE	7.7	5700	---	362000	---	---	---	---	1170000	---	---	---	---	---
		01-Dec-2010	AH2 SURFACE	7.7	5210	---	334000	---	---	---	---	1060000	---	---	---	---	---
			Minimum			N/A	334000	N/A	N/A	N/A	N/A	1060000	N/A	N/A	N/A	80	N/A
			Mean			N/A	345800	N/A	N/A	N/A	N/A	1100000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	362000	N/A	N/A	N/A	N/A	1170000	N/A	N/A	N/A	80	N/A
			Standard Deviation			N/A	10497.6	N/A	N/A	N/A	N/A	43011.63	N/A	N/A	N/A	N/A	N/A



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Albert Head			Water Quality Guidelines:														
Winter 2011		16-Mar-2011	AH2 SURFACE	7.5	5060	0.08	339000	---	0.28	27.00	< 0.05	1020000	---	< 0.02	0.48	---	0.70
		22-Mar-2011	AH2 SURFACE	7.8	5390	0.05	361000	---	0.30	35.00	< 0.05	1090000	---	< 0.02	0.48	---	0.80
		28-Mar-2011	AH2 SURFACE	7.8	5170	0.07	343000	---	0.32	22.00	< 0.05	1050000	---	< 0.02	0.42	64	0.90
		07-Apr-2011	AH2 SURFACE	7.8	5190	0.07	349000	---	0.29	22.00	0.05	1050000	---	< 0.02	0.41	---	0.70
		12-Apr-2011	AH2 SURFACE	7.8	5130	0.08	342000	---	0.42	38.00	0.05	1040000	---	< 0.02	0.45	---	0.80
			Minimum			0.05	339000	N/A	0.28	22.00	N/A	1020000	N/A	N/A	0.41	64	0.70
			Mean			0.07	346800	N/A	0.32	28.80	N/A	1050000	N/A	N/A	0.45	N/A	0.78
			Maximum			0.08	361000	N/A	0.42	38.00	0.05	1090000	N/A	N/A	0.48	64	0.90
			Standard Deviation			0.01	8729.26	N/A	0.06	7.40	N/A	25495.1	N/A	N/A	0.03	N/A	0.08
Spring 2011		04-May-2011	AH2 SURFACE	7.8	5330	0.08	358000	---	0.29	12.00	< 0.05	1080000	---	< 0.02	0.44	---	0.90
		09-May-2011	AH2 SURFACE	8	5640	0.08	377000	---	0.49	20.00	< 0.05	1140000	---	< 0.02	0.32	---	0.80
		17-May-2011	AH2 SURFACE	7.8	5500	0.08	371000	---	0.28	23.00	< 0.05	1110000	---	< 0.02	0.39	68	0.70
		25-May-2011	AH2 SURFACE	7.8	5330	0.08	360000	---	0.38	18.00	0.11	1080000	---	< 0.02	0.44	---	0.90
		30-May-2011	AH2 SURFACE	7.9	5400	0.07	362000	---	0.63	22.00	< 0.05	1090000	---	< 0.02	R	---	---
			Minimum			0.07	358000	N/A	0.28	12.00	N/A	1080000	N/A	N/A	0.32	68	0.70
			Mean			0.08	365600	N/A	0.41	19.00	N/A	1100000	N/A	N/A	0.40	N/A	0.83
			Maximum			0.08	377000	N/A	0.63	23.00	0.11	1140000	N/A	N/A	0.44	68	0.90
			Standard Deviation			0.00	8080.84	N/A	0.15	4.36	N/A	25495.1	N/A	N/A	0.06	N/A	0.10
Summer 2011		20-Jul-2011	AH2 SURFACE	7.7	5260	0.07	351000	---	0.31	9.00	< 0.05	1060000	---	< 0.02	0.41	---	0.70
		26-Jul-2011	AH2 SURFACE	7.8	5130	0.08	343000	---	0.41	7.00	< 0.05	1040000	---	< 0.02	0.39	---	0.80
		02-Aug-2011	AH2 SURFACE	7.6	5300	0.08	351000	---	0.30	7.00	< 0.05	1070000	---	< 0.02	0.36	57	0.60
		09-Aug-2011	AH2 SURFACE	7.8	5240	0.07	348000	---	0.27	5.00	< 0.05	1060000	---	< 0.02	0.33	---	< 0.50
		16-Aug-2011	AH2 SURFACE	7.6	5460	0.08	366000	---	0.26	10.00	< 0.05	1110000	---	< 0.02	0.40	---	0.70
			Minimum			0.07	343000	N/A	0.26	5.00	N/A	1040000	N/A	N/A	0.33	57	0.25
			Mean			0.08	351800	N/A	0.31	7.60	N/A	1068000	N/A	N/A	0.38	N/A	0.61
			Maximum			0.08	366000	N/A	0.41	10.00	N/A	1110000	N/A	N/A	0.41	57	0.80
			Standard Deviation			0.01	8584.87	N/A	0.06	1.95	N/A	25884.36	N/A	N/A	0.03	N/A	0.21
Fall 2011		31-Oct-2011	AH2 SURFACE	7.7	5620	0.08	370000	---	0.28	18.00	< 0.05	1140000	---	< 0.020	0.36	---	0.70
		07-Nov-2011	AH2 SURFACE	7.7	5310	0.08	353000	---	0.40	11.00	< 0.05	1080000	---	< 0.020	0.38	---	< 0.5
		15-Nov-2011	AH2 SURFACE	7.7	5410	0.08	358000	---	0.30	17.00	< 0.05	1100000	---	< 0.020	0.34	77	0.50
		28-Nov-2011	AH2 SURFACE	7.8	5280	0.07	346000	---	0.31	68.00	< 0.05	1070000	---	< 0.020	0.39	---	< 0.5
		30-Nov-2011	AH2 SURFACE	7.8	5330	0.07	355000	---	0.46	28.00	< 0.05	1080000	---	< 0.020	0.41	---	< 0.5
			Minimum			0.07	346000	N/A	0.28	11.00	N/A	1070000	N/A	N/A	0.34	77	0.25
			Mean			0.08	356400	N/A	0.35	28.40	N/A	1094000	N/A	N/A	0.38	N/A	0.39
			Maximum			0.08	370000	N/A	0.46	68.00	N/A	1140000	N/A	N/A	0.41	77	0.70
			Standard Deviation			0.01	8792.04	N/A	0.08	22.96	N/A	27928.48	N/A	N/A	0.03	N/A	0.20
Winter 2012		08-Feb-2012	AH2 SURFACE	7.8	5230	0.07	342000	---	0.49	22.00	0.08	1060000	---	< 0.010	0.45	---	0.70
		15-Feb-2012	AH2 SURFACE	7.8	5440	0.08	360000	---	0.35	23.00	< 0.05	1100000	---	< 0.010	0.38	---	0.80
		21-Feb-2012	AH2 SURFACE	7.8	5360	0.07	351000	---	0.37	29.00	< 0.05	1090000	---	< 0.010	0.36	73	0.80
		27-Feb-2012	AH2 SURFACE	7.8	5810	0.08	381000	---	0.27	21.00	0.05	1180000	---	< 0.010	0.39	---	0.70
		04-Mar-2012	AH2 SURFACE	7.7	5460	0.08	357000	---	0.30	12.70	< 0.05	1110000	---	< 0.010	0.37	---	0.80
			Minimum			0.07	342000	N/A	0.27	12.70	N/A	1060000	N/A	N/A	0.36	73	0.70
			Mean			0.08	358200	N/A	0.36	21.54	N/A	1108000	N/A	N/A	0.39	N/A	0.76
			Maximum			0.08	381000	N/A	0.49	29.00	0.08	1180000	N/A	N/A	0.45	73	0.80
			Standard Deviation			0.01	14481	N/A	0.09	5.84	N/A	44384.68	N/A	N/A	0.04	N/A	0.05
Spring 2012		15-May-2012	AH2 SURFACE	7.9	5340	0.08	354000	---	0.415	15.4	< 0.050	1080000	---	< 0.010	0.51	---	0.60
		22-May-2012	AH2 SURFACE	7.9	5460	0.08	360000	---	0.455	9.8	< 0.050	1110000	---	< 0.010	0.48	---	< 0.50
		28-May-2012	AH2 SURFACE	7.8	5380	0.07	353000	---	0.461	10.8	< 0.050	1090000	---	< 0.010	0.45	---	0.53
		31-May-2012	AH2 SURFACE	7.9	5380	0.07	355000	---	0.850	11.1	< 0.050	1090000	---	< 0.010	0.84	---	0.51
		06-Jun-2012	AH2 SURFACE	7.8	5440	0.07	358000	---	0.511	24.1	< 0.050	1100000	---	< 0.010	0.39	---	< 0.50
			Minimum			0.07	353000	N/A	0.42	9.80	N/A	1080000	N/A	N/A	0.39	N/A	0.25
			Mean			0.07	356000	N/A	0.54	14.24	N/A	1094000	N/A	N/A	0.53	N/A	0.43
			Maximum			0.08	360000	N/A	0.85	24.10	N/A	1110000	N/A	N/A	0.84	N/A	0.60
			Standard Deviation			0.00	2915.48	N/A	0.18	5.92	N/A	11401.75	N/A	N/A	0.18	N/A	0.17



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Finnerty Cove																	
FC-7	Summer 2010	26-Jul-2010	FC7 BOTTOM	7.8	5190	0.08	341000	---	0.42	131	0.08	1050000	---	< 0.02	0.76	---	0.9
		28-Jul-2010	FC7 BOTTOM	8	5500	0.08	344000	---	0.31	63	0.05	1130000	---	< 0.02	0.61	---	1.1
		03-Aug-2010	FC7 BOTTOM	7.9	5570	0.10	353000	---	0.28	54	0.06	1140000	---	0.04	0.53	75	1.7
		10-Aug-2010	FC7 BOTTOM	7.9	5170	0.07	336000	---	0.40	31	0.06	1050000	---	< 0.02	0.48	---	0.6
		17-Aug-2010	FC7 BOTTOM	7.8	5360	0.09	339000	---	0.28	41	< 0.05	1100000	---	< 0.02	0.48	---	0.5
			Minimum			0.07	321000	N/A	0.28	31.00	0.03	1050000	N/A	N/A	0.48	75	0.50
			Mean			0.08	342600	N/A	0.34	64.00	0.06	1094000	N/A	N/A	0.57	N/A	0.96
			Maximum			0.10	353000	N/A	0.42	131.00	0.08	1140000	N/A	0.04	0.76	75	1.70
			Standard Deviation			0.01	6503.85	N/A	0.07	39.40	0.02	42778.5	N/A	N/A	0.12	N/A	0.48
FC-7	Fall 2010	02-Nov-2010	FC7 BOTTOM	7.8	5470	0.07	349000	---	0.28	23	< 0.05	1120000	---	< 0.02	0.65	---	1.1
		08-Nov-2010	FC7 BOTTOM	7.7	5400	0.07	342000	---	0.35	33	< 0.05	1100000	---	< 0.02	0.65	---	1
		18-Nov-2010	FC7 BOTTOM	7.7	5230	0.09	337000	---	0.57	22	0.08	1060000	---	< 0.02	0.39	77	1.3
		24-Nov-2010	FC7 BOTTOM	7.7	5010	0.08	321000	---	0.51	66	0.08	1020000	---	< 0.02	0.46	---	1.2
		01-Dec-2010	FC7 BOTTOM	7.8	5220	0.09	334000	---	0.27	25	< 0.05	1060000	---	< 0.02	0.51	---	< 0.5
			Minimum			0.07	321000	N/A	0.27	22.00	N/A	1020000	N/A	N/A	0.39	77	0.25
			Mean			0.08	336600	N/A	0.40	33.80	N/A	1072000	N/A	N/A	0.53	N/A	0.97
			Maximum			0.09	349000	N/A	0.57	66.00	0.08	1120000	N/A	N/A	0.65	77	1.30
			Standard Deviation			0.01	10406.7	N/A	0.14	18.51	N/A	38987.18	N/A	N/A	0.12	N/A	0.42
FC-7	Winter 2011	16-Mar-2011	FC7 BOTTOM	7.8	5130	0.08	344000	---	0.28	22	< 0.05	1040000	---	< 0.02	0.45	---	0.8
		22-Mar-2011	FC7 BOTTOM	7.8	5310	0.07	354000	---	0.43	52	< 0.05	1080000	---	< 0.02	0.5	---	0.9
		28-Mar-2011	FC7 BOTTOM	7.8	5070	0.07	334000	---	0.34	25	< 0.05	1030000	---	< 0.02	0.44	62	0.8
		07-Apr-2011	FC7 BOTTOM	7.9	5100	0.06	344000	---	0.35	43	< 0.05	1030000	---	< 0.02	0.4	---	0.7
		12-Apr-2011	FC7 BOTTOM	7.9	5180	0.08	345000	---	0.42	31	< 0.05	1050000	---	< 0.02	0.46	---	0.8
			Minimum			0.06	334000	N/A	0.28	22.00	N/A	1030000	N/A	N/A	0.40	62	0.70
			Mean			0.07	344200	N/A	0.36	34.60	N/A	1046000	N/A	N/A	0.45	N/A	0.80
			Maximum			0.08	354000	N/A	0.43	52.00	N/A	1080000	N/A	N/A	0.50	62	0.90
			Standard Deviation			0.01	7085.2	N/A	0.06	12.62	N/A	20736.44	N/A	N/A	0.04	N/A	0.07
FC-7	Spring 2011	04-May-2011	FC7 BOTTOM	7.9	5560	0.07	374000	---	0.31	30	< 0.05	1120000	---	< 0.02	0.47	---	1
		09-May-2011	FC7 BOTTOM	8	5440	0.08	363000	---	0.47	29	< 0.05	1100000	---	< 0.02	0.57	---	0.7
		17-May-2011	FC7 BOTTOM	7.9	5360	0.08	360000	---	0.50	207	0.14	1080000	---	< 0.02	0.72	78	1.6
		25-May-2011	FC7 BOTTOM	8	5430	0.08	367000	---	0.51	26	0.06	1100000	---	< 0.02	0.48	---	1.3
		30-May-2011	FC7 BOTTOM	7.9	5350	0.07	361000	---	0.46	82	0.07	1080000	---	< 0.02	R	---	---
			Minimum			0.07	360000	N/A	0.31	26.00	0.03	1080000	N/A	N/A	0.47	78	0.70
			Mean			0.08	365000	N/A	0.45	74.80	0.06	1096000	N/A	N/A	0.56	N/A	1.15
			Maximum			0.08	374000	N/A	0.51	207.00	0.14	1120000	N/A	N/A	0.72	78	1.60
			Standard Deviation			0.01	5700.88	N/A	0.08	77.48	0.05	16733.2	N/A	N/A	0.12	N/A	0.39
FC-7	Summer 2011	20-Jul-2011	FC7 BOTTOM	7.7	5000	0.08	333000	---	0.43	34	< 0.05	1010000	---	< 0.02	0.5	---	0.7
		26-Jul-2011	FC7 BOTTOM	7.6	5520	0.08	372000	---	0.26	21	< 0.05	1110000	---	< 0.02	0.41	---	0.9
		02-Aug-2011	FC7 BOTTOM	7.7	5380	0.09	356000	---	0.44	37	< 0.05	1090000	---	< 0.02	0.52	58	0.8
		09-Aug-2011	FC7 BOTTOM	7.7	5900	0.08	392000	---	0.24	34	< 0.05	1200000	---	< 0.02	0.4	---	0.7
		16-Aug-2011	FC7 BOTTOM	7.7	5590	0.08	375000	---	0.31	44	0.11	1130000	---	< 0.02	0.48	---	1
			Minimum			0.08	333000	N/A	0.24	21.00	N/A	1010000	N/A	N/A	0.40	58	0.70
			Mean			0.08	365600	N/A	0.34	34.00	N/A	1108000	N/A	N/A	0.46	N/A	0.82
			Maximum			0.09	392000	N/A	0.44	44.00	0.11	1200000	N/A	N/A	0.52	58	1.00
			Standard Deviation			0.00	22255.3	N/A	0.09	8.34	N/A	68702.26	N/A	N/A	0.05	N/A	0.13
FC-7	Fall 2011	31-Oct-2011	FC7 BOTTOM	7.7	5640	0.09	370000	---	0.47	70	0.06	1150000	---	< 0.020	0.47	---	0.6
		07-Nov-2011	FC7 BOTTOM	7.7	5290	0.08	351000	---	0.31	16	< 0.05	1070000	---	< 0.020	0.35	---	< 0.5
		15-Nov-2011	FC7 BOTTOM	7.7	4810	0.08	317000	---	0.35	47	< 0.05	976000	---	< 0.020	0.44	80	< 0.5
		28-Nov-2011	FC7 BOTTOM	7.8	5410	0.08	355000	---	0.40	43	0.05	1100000	---	< 0.020	0.49	---	0.9
		30-Nov-2011	FC7 BOTTOM	7.8	5390	0.08	362000	---	0.38	53	< 0.05	1090000	---	< 0.020	0.43	---	0.6
			Minimum			0.08	317000	N/A	0.31	16.00	N/A	976000	N/A	N/A	0.35	80	0.50
			Mean			0.08	351000	N/A	0.38	45.80	N/A	1077200	N/A	N/A	0.44	N/A	0.62
			Maximum			0.09	370000	N/A	0.47	70.00	0.06	1150000	N/A	N/A	0.49	80	0.90
			Standard Deviation			0.00	20334.7	N/A	0.06	19.59	N/A	63790.28	N/A	N/A	0.05	N/A	0.16



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Finnerty Cove			Water Quality Guidelines:	7 - 8.7	n/a	0.12	n/a	n/a	3	n/a	140	n/a	100	0.016	75	n/a	10
Winter 2012		08-Feb-2012	FC7 BOTTOM	7.8	5560	0.08	365000	---	0.60	31	< 0.05	1130000	---	< 0.010	0.41	---	2
		15-Feb-2012	FC7 BOTTOM	7.8	5350	0.07	352000	---	0.39	28	< 0.05	1090000	---	< 0.010	0.41	---	0.6
		21-Feb-2012	FC7 BOTTOM	7.8	5550	0.07	365000	---	0.34	35	< 0.05	1130000	---	< 0.010	0.58	73	0.7
		27-Feb-2012	FC7 BOTTOM	7.8	5710	0.08	377000	---	0.32	26	< 0.05	1160000	---	< 0.010	0.42	---	0.7
		04-Mar-2012	FC7 BOTTOM	7.7	5420	0.07	355000	---	0.27	20.6	< 0.05	1100000	---	< 0.010	0.387	---	0.63
			Minimum			0.07	352000	N/A	0.27	20.60	N/A	1090000	N/A	N/A	0.39	73	0.60
			Mean			0.07	362800	N/A	0.38	28.12	N/A	1122000	N/A	N/A	0.44	N/A	0.93
			Maximum			0.08	377000	N/A	0.60	35.00	N/A	1160000	N/A	N/A	0.58	73	2.00
			Standard Deviation			0.01	9859.01	N/A	0.13	5.40	N/A	27748.87	N/A	N/A	0.08	N/A	0.60
Spring 2012		15-May-2012	FC7 BOTTOM	7.9	5050	0.07	331000	---	0.473	35.4	< 0.050	1030000	---	< 0.010	0.54	---	0.54
		22-May-2012	FC7 BOTTOM	7.9	5290	0.08	347000	---	0.375	38.1	< 0.050	1070000	---	< 0.010	0.50	---	< 0.50
		28-May-2012	FC7 BOTTOM	7.8	4880	0.08	320000	---	0.455	21.7	< 0.050	991000	---	< 0.010	0.38	---	< 0.50
		31-May-2012	FC7 BOTTOM	7.9	5420	0.07	358000	---	0.330	33.6	< 0.050	1100000	---	< 0.010	0.42	---	< 0.50
		06-Jun-2012	FC7 BOTTOM	7.8	5110	0.08	337000	---	0.401	111.0	0.085	1040000	---	< 0.010	0.67	---	0.67
			Minimum			0.07	320000	N/A	0.33	21.70	N/A	991000	N/A	N/A	0.38	N/A	N/A
			Mean			0.08	338600	N/A	0.41	47.96	N/A	1046200	N/A	N/A	0.50	N/A	N/A
			Maximum			0.08	358000	N/A	0.47	111.00	0.09	1100000	N/A	N/A	0.67	N/A	0.67
			Standard Deviation			0.01	14604.8	N/A	0.06	35.79	N/A	41257.73	N/A	N/A	0.11	N/A	N/A
Summer 2010		26-Jul-2010	FC7 MID	8	4880	0.06	318000	---	0.42	61	0.08	991000	---	< 0.02	0.72	---	1.8
		28-Jul-2010	FC7 MID	8	5320	0.08	333000	---	0.43	54	0.08	1090000	---	< 0.02	0.55	---	1.6
		03-Aug-2010	FC7 MID	8.1	5320	0.08	332000	---	0.30	23	< 0.05	1090000	---	< 0.02	0.5	60	1.1
		10-Aug-2010	FC7 MID	8	5100	0.08	329000	---	0.35	39	0.06	1040000	---	< 0.02	0.48	---	0.7
		17-Aug-2010	FC7 MID	7.9	5050	0.08	323000	---	0.25	18	< 0.05	1030000	---	< 0.02	0.41	---	< 0.5
			Minimum			0.06	318000	N/A	0.25	18.00	0.03	991000	N/A	N/A	0.41	60	0.25
			Mean			0.08	327000	N/A	0.35	39.00	0.05	1048200	N/A	N/A	0.53	N/A	1.09
			Maximum			0.08	333000	N/A	0.43	61.00	0.08	1090000	N/A	N/A	0.72	60	1.80
			Standard Deviation			0.01	6363.96	N/A	0.08	18.75	0.03	42322.57	N/A	N/A	0.12	N/A	0.64
Fall 2010		02-Nov-2010	FC7 MID	7.7	5240	0.07	340000	---	0.28	12	< 0.05	1070000	---	< 0.02	0.56	---	1.9
		08-Nov-2010	FC7 MID	7.7	5130	0.07	331000	---	0.38	32	< 0.05	1050000	---	< 0.02	0.6	---	0.6
		18-Nov-2010	FC7 MID	7.7	5250	0.08	338000	---	0.37	19	< 0.05	1070000	---	< 0.02	0.42	78	0.9
		24-Nov-2010	FC7 MID	7.7	5330	0.08	342000	---	0.38	50	0.05	1090000	---	< 0.02	0.43	---	1
		01-Dec-2010	FC7 MID	7.8	5190	0.07	333000	---	0.27	20	< 0.05	1060000	---	< 0.02	0.38	---	< 0.5
			Minimum			0.07	331000	N/A	0.27	12.00	N/A	1050000	N/A	N/A	0.38	78	0.25
			Mean			0.07	336800	N/A	0.34	26.60	N/A	1068000	N/A	N/A	0.48	N/A	0.93
			Maximum			0.08	342000	N/A	0.38	50.00	0.05	1090000	N/A	N/A	0.60	78	1.90
			Standard Deviation			0.01	4658.33	N/A	0.06	14.93	N/A	14832.4	N/A	N/A	0.10	N/A	0.62
Winter 2011		16-Mar-2011	FC7 MID	7.8	5190	0.08	348000	---	0.36	29	< 0.05	1050000	---	< 0.02	0.47	---	1
		22-Mar-2011	FC7 MID	7.8	5310	0.06	356000	---	0.74	55	0.05	1070000	---	< 0.02	0.56	---	0.9
		28-Mar-2011	FC7 MID	7.8	5290	0.07	348000	---	0.31	23	< 0.05	1070000	---	< 0.02	0.43	73	0.5
		07-Apr-2011	FC7 MID	7.9	5120	0.06	344000	---	0.41	49	0.06	1030000	---	< 0.02	0.46	---	1
		12-Apr-2011	FC7 MID	8	4990	0.09	333000	---	0.41	36	0.06	1010000	---	< 0.02	0.44	---	0.9
			Minimum			0.06	333000	N/A	0.31	23.00	0.03	1010000	N/A	N/A	0.43	73	0.50
			Mean			0.07	345800	N/A	0.45	38.40	0.04	1046000	N/A	N/A	0.47	N/A	0.86
			Maximum			0.09	356000	N/A	0.74	55.00	0.06	1070000	N/A	N/A	0.56	73	1.00
			Standard Deviation			0.01	8378.54	N/A	0.17	13.41	0.02	26076.81	N/A	N/A	0.05	N/A	0.21
Spring 2011		04-May-2011	FC7 MID	7.9	5410	0.06	362000	---	0.32	46	< 0.05	1090000	---	< 0.02	0.55	---	1.1
		09-May-2011	FC7 MID	8	5190	0.08	347000	---	0.34	26	< 0.05	1050000	---	< 0.02	0.43	---	0.6
		17-May-2011	FC7 MID	8	5270	0.07	352000	---	0.42	77	0.09	1070000	---	< 0.02	0.51	66	1.1
		25-May-2011	FC7 MID	8	5410	0.08	364000	---	0.42	30	< 0.05	1090000	---	< 0.02	0.51	---	1.1
		30-May-2011	FC7 MID	8.1	5260	0.07	355000	---	0.48	52	0.08	1060000	---	< 0.02	R	---	---
			Minimum			0.06	347000	N/A	0.32	26.00	N/A	1050000	N/A	N/A	0.43	66	0.60
			Mean			0.07	356000	N/A	0.40	46.20	N/A	1072000	N/A	N/A	0.50	N/A	0.98
			Maximum			0.08	364000	N/A	0.48	77.00	0.09	1090000	N/A	N/A	0.55	66	1.10
			Standard Deviation			0.01	7035.62	N/A	0.07	20.33	N/A	17888.54	N/A	N/A	0.05	N/A	0.25



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Finnerty Cove			Water Quality Guidelines:	7 - 8.7	n/a	0.12	n/a	n/a	3	n/a	140	n/a	100	0.016	75	n/a	10
Summer 2011		20-Jul-2011	FC7 MID	7.7	4730	0.07	315000	---	0.35	13	< 0.05	957000	---	< 0.02	0.44	---	< 0.5
		26-Jul-2011	FC7 MID	7.7	5220	0.08	348000	---	0.31	18	< 0.05	1060000	---	< 0.02	0.41	---	0.8
		02-Aug-2011	FC7 MID	7.8	5200	0.07	343000	---	0.64	39	0.06	1050000	---	< 0.02	0.44	49	0.9
		09-Aug-2011	FC7 MID	7.8	5760	0.08	385000	---	0.27	13	< 0.05	1170000	---	< 0.02	0.37	---	0.6
		16-Aug-2011	FC7 MID	7.8	5280	0.07	353000	---	0.31	16	< 0.05	1070000	---	< 0.02	0.42	---	0.6
				Minimum		0.07	315000	N/A	0.27	13.00	N/A	957000	N/A	N/A	0.37	49	0.25
			Mean		0.07	348800	N/A	0.38	19.80	N/A	1061400	N/A	N/A	0.42	N/A	0.63	
			Maximum		0.08	385000	N/A	0.64	39.00	0.06	1170000	N/A	N/A	0.44	49	0.90	
			Standard Deviation		0.01	25024	N/A	0.15	10.94	N/A	75662.41	N/A	N/A	0.03	N/A	0.25	
Fall 2011		31-Oct-2011	FC7 MID	7.7	5360	0.08	356000	---	0.35	35	< 0.05	1090000	---	< 0.020	0.45	---	0.5
		07-Nov-2011	FC7 MID	7.7	5320	0.08	355000	---	0.42	17	< 0.05	1080000	---	< 0.020	0.42	---	0.6
		15-Nov-2011	FC7 MID	7.7	4790	0.07	317000	---	0.36	25	< 0.05	970000	---	< 0.020	0.42	79	0.5
		28-Nov-2011	FC7 MID	7.8	5340	0.08	351000	---	0.47	37	0.06	1080000	---	< 0.020	0.48	---	1.1
		30-Nov-2011	FC7 MID	7.8	5440	0.08	364000	---	0.43	28	< 0.05	1100000	---	< 0.020	0.41	---	0.5
				Minimum		0.07	317000	N/A	0.35	17.00	N/A	970000	N/A	N/A	0.41	79	0.50
			Mean		0.08	348600	N/A	0.41	28.40	N/A	1064000	N/A	N/A	0.44	N/A	0.64	
			Maximum		0.08	364000	N/A	0.47	37.00	0.06	1100000	N/A	N/A	0.48	79	1.10	
			Standard Deviation		0.00	18283.9	N/A	0.05	8.05	N/A	53197.74	N/A	N/A	0.03	N/A	0.26	
Winter 2012		08-Feb-2012	FC7 MID	7.8	5600	0.08	370000	---	0.47	35	0.06	1140000	---	< 0.010	0.45	---	0.9
		15-Feb-2012	FC7 MID	7.8	5170	0.07	341000	---	0.38	37	< 0.05	1050000	---	< 0.010	0.42	---	0.8
		21-Feb-2012	FC7 MID	7.8	5430	0.08	358000	---	0.36	33	< 0.05	1100000	---	< 0.010	0.4	73	0.9
		27-Feb-2012	FC7 MID	7.8	5720	0.07	378000	---	0.28	52	0.05	1160000	---	< 0.010	0.43	---	0.8
		04-Mar-2012	FC7 MID	7.7	5420	0.08	354000	---	0.27	17.9	< 0.05	1100000	---	< 0.010	0.41	---	0.53
				Minimum		0.07	341000	N/A	0.27	17.90	N/A	1050000	N/A	N/A	0.40	73	0.53
			Mean		0.08	360200	N/A	0.35	34.98	N/A	1110000	N/A	N/A	0.42	N/A	0.79	
			Maximum		0.08	378000	N/A	0.47	52.00	0.06	1160000	N/A	N/A	0.45	73	0.90	
			Standard Deviation		0.01	14359.7	N/A	0.08	12.14	N/A	42426.41	N/A	N/A	0.02	N/A	0.15	
Spring 2012		15-May-2012	FC7 MID	8	5290	0.07	350000	---	0.501	26.6	< 0.050	1070000	---	< 0.010	0.59	---	0.73
		22-May-2012	FC7 MID	7.9	5080	0.08	335000	---	0.524	15.8	< 0.050	1030000	---	< 0.010	0.73	---	0.53
		28-May-2012	FC7 MID	7.9	4740	0.07	312000	---	0.517	17.7	< 0.050	963000	---	< 0.010	0.47	---	0.59
		31-May-2012	FC7 MID	7.9	5330	0.07	352000	---	0.339	16.2	< 0.050	1080000	---	< 0.010	0.38	---	< 0.50
		06-Jun-2012	FC7 MID	7.9	5000	0.08	331000	---	0.413	91.6	0.068	1010000	---	< 0.010	0.46	---	0.70
				Minimum		0.07	312000	N/A	0.34	15.80	N/A	963000	N/A	N/A	0.38	N/A	0.25
			Mean		0.07	336000	N/A	0.46	33.58	N/A	1030600	N/A	N/A	0.53	N/A	0.56	
			Maximum		0.08	352000	N/A	0.52	91.60	0.068	1080000	N/A	N/A	0.73	N/A	0.73	
			Standard Deviation		0.00	16232.7	N/A	0.08	32.73	N/A	47400.42	N/A	N/A	0.13	N/A	0.19	
Summer 2010		26-Jul-2010	FC7 SURFACE	8	4590	0.07	302000	---	0.32	31	< 0.05	931000	---	< 0.02	0.51	---	0.7
		28-Jul-2010	FC7 SURFACE	8.1	5160	0.07	325000	---	0.30	29	< 0.05	1060000	---	< 0.02	0.46	---	1.6
		03-Aug-2010	FC7 SURFACE	8.2	5300	0.08	330000	---	0.38	19	0.1	1090000	---	< 0.02	0.54	46	0.9
		10-Aug-2010	FC7 SURFACE	8	5520	0.06	346000	---	0.31	42	0.07	1130000	---	< 0.02	0.51	---	0.6
		17-Aug-2010	FC7 SURFACE	7.9	4910	0.08	315000	---	0.27	15	< 0.05	1000000	---	< 0.02	0.41	---	< 0.5
				Minimum		0.06	302000	N/A	0.27	15.00	N/A	931000	N/A	N/A	0.41	46	0.25
			Mean		0.07	323600	N/A	0.32	27.20	N/A	1042200	N/A	N/A	0.49	N/A	0.81	
			Maximum		0.08	346000	N/A	0.38	42.00	0.10	1130000	N/A	N/A	0.54	46	1.60	
			Standard Deviation		0.01	16471.2	N/A	0.04	10.64	N/A	78193.35	N/A	N/A	0.05	N/A	0.50	
Fall 2010		02-Nov-2010	FC7 SURFACE	7.7	5300	0.07	343000	---	0.27	10	< 0.05	1080000	---	< 0.02	0.57	---	0.7
		08-Nov-2010	FC7 SURFACE	7.7	5010	0.07	327000	---	0.33	31	< 0.05	1020000	---	< 0.02	0.82	---	0.7
		18-Nov-2010	FC7 SURFACE	7.7	5160	0.08	332000	---	0.42	19	< 0.05	1050000	---	< 0.02	0.55	80	10.3
		24-Nov-2010	FC7 SURFACE	7.7	5320	0.07	341000	---	0.37	30	< 0.05	1090000	---	< 0.02	0.44	---	0.9
		01-Dec-2010	FC7 SURFACE	7.7	4830	0.08	310000	---	0.28	20	< 0.05	984000	---	< 0.02	0.35	---	0.6
				Minimum		0.07	310000	N/A	0.27	10.00	N/A	984000	N/A	N/A	0.35	80	0.60
			Mean		0.07	330600	N/A	0.33	22.00	N/A	1044800	N/A	N/A	0.55	N/A	2.64	
			Maximum		0.08	343000	N/A	0.42	31.00	N/A	1090000	N/A	N/A	0.82	80	10.30	
			Standard Deviation		0.01	13240.1	N/A	0.06	8.69	N/A	43648.6	N/A	N/A	0.18	N/A	4.28	



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements													
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)	
																		7 - 8.7
Finnerty Cove			Water Quality Guidelines:		7 - 8.7	n/a	0.12	n/a	n/a	3	n/a	140	n/a	100	0.016	75	n/a	10
Winter 2011		16-Mar-2011	FC7 SURFACE	7.8	5120	0.08	345000	---	0.47	32	< 0.05	1040000	---	< 0.02	0.48	---	1.3	
		22-Mar-2011	FC7 SURFACE	7.8	5280	0.07	352000	---	0.46	59	0.05	1070000	---	< 0.02	0.56	---	1.8	
		28-Mar-2011	FC7 SURFACE	7.8	5190	0.08	344000	---	0.38	24	< 0.05	1050000	---	< 0.02	0.39	68	0.8	
		07-Apr-2011	FC7 SURFACE	7.9	5090	0.07	343000	---	0.39	52	0.06	1030000	---	< 0.02	0.47	---	5.4	
		12-Apr-2011	FC7 SURFACE	8	4980	0.08	331000	---	0.44	36	0.05	1010000	---	< 0.02	0.43	---	1	
				Minimum			0.07	331000	N/A	0.38	24.00	0.03	1010000	N/A	N/A	0.39	68	0.80
			Mean			0.08	343000	N/A	0.43	40.60	0.04	1040000	N/A	N/A	0.47	N/A	2.06	
			Maximum			0.08	352000	N/A	0.47	59.00	0.06	1070000	N/A	N/A	0.56	68	5.40	
			Standard Deviation			0.01	7582.88	N/A	0.04	14.48	0.02	22360.68	N/A	N/A	0.06	N/A	1.90	
Spring 2011		04-May-2011	FC7 SURFACE	7.9	5420	0.07	363000	---	0.43	28	< 0.05	1100000	---	< 0.02	0.55	---	0.7	
		09-May-2011	FC7 SURFACE	7.8	5290	0.07	356000	---	0.45	27	< 0.05	1070000	---	< 0.02	0.4	---	1	
		17-May-2011	FC7 SURFACE	8	5430	0.07	362000	---	0.47	49	< 0.05	1100000	---	< 0.02	0.48	65	1	
		25-May-2011	FC7 SURFACE	8.1	5470	0.08	370000	---	0.62	47	0.07	1100000	---	< 0.02	0.67	---	2.4	
		30-May-2011	FC7 SURFACE	8.2	5160	0.07	347000	---	0.44	33	< 0.05	1040000	---	< 0.02	R	---		
				Minimum			0.07	347000	N/A	0.43	27.00	N/A	1040000	N/A	N/A	0.40	65	0.70
			Mean			0.07	359600	N/A	0.48	36.80	N/A	1082000	N/A	N/A	0.53	N/A	1.28	
			Maximum			0.08	370000	N/A	0.62	49.00	0.07	1100000	N/A	N/A	0.67	65	2.40	
			Standard Deviation			0.00	8619.74	N/A	0.08	10.50	N/A	26832.82	N/A	N/A	0.11	N/A	0.76	
Summer 2011		20-Jul-2011	FC7 SURFACE	7.8	4750	0.07	318000	---	0.68	12	0.3	961000	---	< 0.02	0.43	---	3.5	
		26-Jul-2011	FC7 SURFACE	7.9	4510	0.07	303000	---	0.40	17	0.16	910000	---	< 0.02	0.44	---	0.9	
		02-Aug-2011	FC7 SURFACE	7.8	4740	0.08	314000	---	0.41	16	< 0.05	961000	---	< 0.02	0.49	51	1	
		09-Aug-2011	FC7 SURFACE	7.9	5430	0.06	363000	---	0.42	23	< 0.05	1100000	---	< 0.02	0.5	---	0.5	
		16-Aug-2011	FC7 SURFACE	7.8	5140	0.07	342000	---	0.67	20	< 0.05	1040000	---	< 0.02	0.73	---	0.7	
				Minimum			0.06	303000	N/A	0.40	12.00	N/A	910000	N/A	N/A	0.43	51	0.50
			Mean			0.07	328000	N/A	0.52	17.60	N/A	994400	N/A	N/A	0.52	N/A	1.32	
			Maximum			0.08	363000	N/A	0.68	23.00	N/A	1100000	N/A	N/A	0.73	51	3.50	
			Standard Deviation			0.01	24197.1	N/A	0.15	4.16	N/A	75141.87	N/A	N/A	0.12	N/A	1.23	
Fall 2011		31-Oct-2011	FC7 SURFACE	7.7	5460	0.09	361000	---	0.96	23	< 0.05	1110000	---	< 0.020	0.4	---	0.6	
		07-Nov-2011	FC7 SURFACE	7.7	5210	0.08	346000	---	0.45	15	< 0.05	1050000	---	< 0.020	0.59	---	0.5	
		15-Nov-2011	FC7 SURFACE	7.7	4760	0.07	313000	---	0.39	21	< 0.05	965000	---	< 0.020	0.46	78	0.7	
		28-Nov-2011	FC7 SURFACE	7.8	5190	0.08	341000	---	0.32	31	< 0.05	1050000	---	< 0.020	0.43	---	0.6	
		30-Nov-2011	FC7 SURFACE	7.8	5340	0.08	358000	---	0.37	28	< 0.05	1080000	---	< 0.020	0.39	---	0.5	
				Minimum			0.07	313000	N/A	0.32	15.00	N/A	965000	N/A	N/A	0.39	78	0.50
			Mean			0.08	343800	N/A	0.50	23.60	N/A	1051000	N/A	N/A	0.45	N/A	0.58	
			Maximum			0.09	361000	N/A	0.96	31.00	N/A	1110000	N/A	N/A	0.59	78	0.70	
			Standard Deviation			0.01	19097.1	N/A	0.26	6.23	N/A	54129.47	N/A	N/A	0.08	N/A	0.08	
Winter 2012		08-Feb-2012	FC7 SURFACE	7.8	5600	0.08	372000	---	0.48	26	< 0.05	1140000	---	< 0.010	0.44	---	0.6	
		15-Feb-2012	FC7 SURFACE	7.8	5060	0.08	333000	---	0.34	28	< 0.05	1030000	---	< 0.010	0.44	---	0.8	
		21-Feb-2012	FC7 SURFACE	7.8	5490	0.07	361000	---	0.34	31	< 0.05	1110000	---	< 0.010	0.42	68	0.9	
		27-Feb-2012	FC7 SURFACE	7.8	5650	0.08	372000	---	0.32	48	< 0.05	1150000	---	< 0.010	0.43	---	1	
		04-Mar-2012	FC7 SURFACE	7.7	5310	0.08	348000	---	0.30	14.1	< 0.05	1080000	---	< 0.010	0.412	---	1.82	
				Minimum			0.07	333000	N/A	0.30	14.10	N/A	1030000	N/A	N/A	0.41	68	0.60
			Mean			0.08	357200	N/A	0.36	29.42	N/A	1102000	N/A	N/A	0.43	N/A	1.02	
			Maximum			0.08	372000	N/A	0.48	48.00	N/A	1150000	N/A	N/A	0.44	68	1.82	
			Standard Deviation			0.00	16754.1	N/A	0.07	12.21	N/A	48682.65	N/A	N/A	0.01	N/A	0.47	
Spring 2012		15-May-2012	FC7 SURFACE	8	4770	0.08	314000	---	0.604	17.1	< 0.050	968000	---	< 0.010	0.63	---	0.60	
		22-May-2012	FC7 SURFACE	7.9	5260	0.07	345000	---	0.432	49.9	0.065	1070000	---	< 0.010	0.55	---	0.57	
		28-May-2012	FC7 SURFACE	7.9	4800	0.08	315000	---	0.518	13.8	< 0.050	973000	---	< 0.010	0.42	---	0.74	
		31-May-2012	FC7 SURFACE	7.9	5280	0.07	348000	---	0.287	14.4	< 0.050	1070000	---	< 0.010	0.53	---	< 0.50	
		06-Jun-2012	FC7 SURFACE	7.9	4980	0.07	329000	---	0.453	58.1	0.074	1010000	---	< 0.010	0.44	---	0.69	
				Minimum			0.07	314000	N/A	0.29	13.80	N/A	968000	N/A	N/A	0.42	N/A	0.25
			Mean			0.07	330200	N/A	0.46	30.66	N/A	1018200	N/A	N/A	0.51	N/A	0.57	
			Maximum			0.08	348000	N/A	0.60	58.10	0.07	1070000	N/A	N/A	0.63	N/A	0.74	
			Standard Deviation			0.00	16053	N/A	0.12	21.54	N/A	49992	N/A	N/A	0.09	N/A	0.19	



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Macaulay Point																	
MP-4	Summer 2010	26-Jul-2010	MP4 BOTTOM	7.8	5610	0.08	353000	---	0.28	59	0.05	1150000	---	< 0.02	0.67	---	0.9
		28-Jul-2010	4 BOTTOM	7.9	5840	0.08	363000	---	0.18	28	< 0.05	1200000	---	< 0.02	0.52	---	0.7
		03-Aug-2010	4 BOTTOM	8	5880	0.08	368000	---	0.48	2	< 0.05	1200000	---	< 0.02	0.38	100	1
		10-Aug-2010	MP4 BOTTOM	7.9	5830	0.08	364000	---	0.70	46	0.05	1190000	---	< 0.02	0.46	---	0.7
		17-Aug-2010	MP4 BOTTOM	8	5270	---	336000	---	---	---	---	1080000	---	---	---	---	---
			Minimum			0.08	336000	N/A	0.18	2.00	N/A	1080000	N/A	N/A	0.38	100	0.70
			Mean			0.08	356800	N/A	0.41	33.75	N/A	1164000	N/A	N/A	0.51	N/A	0.83
			Maximum			0.08	368000	N/A	0.70	59.00	0.05	1200000	N/A	N/A	0.67	100	1.00
			Standard Deviation			0.00	12872.5	N/A	0.23	24.69	N/A	51283.53	N/A	N/A	0.12	N/A	0.15
MP-4	Fall 2010	02-Nov-2010	MP4 BOTTOM	7.7	5480	0.07	349000	---	0.41	34	< 0.05	1120000	---	< 0.02	0.56	---	0.7
		08-Nov-2010	4 BOTTOM	7.7	5470	0.07	352000	---	0.25	28	< 0.05	1110000	---	< 0.02	0.59	---	0.7
		18-Nov-2010	4 BOTTOM	7.7	5300	0.08	341000	---	0.33	28	< 0.05	1080000	---	< 0.02	0.4	74	1
		24-Nov-2010	MP4 BOTTOM	7.7	5810	0.08	362000	---	0.47	56	0.07	1190000	---	< 0.02	0.44	---	1
		01-Dec-2010	MP4 BOTTOM	7.7	5010	0.08	322000	---	0.44	65	0.08	1020000	---	< 0.02	0.46	---	1
			Minimum			0.07	322000	N/A	0.25	28.00	N/A	1020000	N/A	N/A	0.40	74	0.70
			Mean			0.08	345200	N/A	0.38	42.20	N/A	1104000	N/A	N/A	0.49	N/A	0.88
			Maximum			0.08	362000	N/A	0.47	65.00	0.08	1190000	N/A	N/A	0.59	74	1.00
			Standard Deviation			0.01	14990	N/A	0.09	17.18	N/A	61886.99	N/A	N/A	0.08	N/A	0.16
MP-4	Winter 2011	16-Mar-2011	MP4 BOTTOM	7.8	5150	0.07	346000	---	0.61	43	0.05	1040000	---	< 0.02	0.48	---	1.1
		22-Mar-2011	MP4 BOTTOM	7.8	5420	0.05	363000	---	0.55	45	< 0.05	1100000	---	< 0.02	0.53	---	1
		28-Mar-2011	MP4 BOTTOM	7.8	5400	0.07	360000	---	0.33	37	0.05	1090000	---	< 0.02	0.42	69	0.6
		07-Apr-2011	MP4 BOTTOM	7.8	5320	0.06	360000	---	0.35	39	0.06	1070000	---	< 0.02	0.37	---	0.6
		12-Apr-2011	MP4 BOTTOM	7.8	5060	0.07	338000	---	0.50	79	0.09	1030000	---	< 0.02	0.49	---	1.5
			Minimum			0.05	338000	N/A	0.33	37.00	0.03	1030000	N/A	N/A	0.37	69	0.60
			Mean			0.06	353400	N/A	0.47	48.60	0.06	1066000	N/A	N/A	0.46	N/A	0.96
			Maximum			0.07	363000	N/A	0.61	79.00	0.09	1100000	N/A	N/A	0.53	69	1.50
			Standard Deviation			0.01	10853.6	N/A	0.12	17.29	0.02	30495.9	N/A	N/A	0.06	N/A	0.38
MP-4	Spring 2011	04-May-2011	MP4 BOTTOM	7.8	5430	0.08	364000	---	0.48	40	< 0.05	1100000	---	< 0.02	0.52	---	1.2
		09-May-2011	MP4 BOTTOM	7.7	5450	0.08	365000	---	0.32	37	< 0.05	1100000	---	< 0.02	0.41	---	0.8
		17-May-2011	MP4 BOTTOM	7.9	5450	0.08	365000	---	0.4	82	0.08	1100000	---	< 0.02	0.53	73	1.4
		25-May-2011	MP4 BOTTOM	7.9	5290	0.08	356000	---	0.38	32	0.07	1070000	---	< 0.02	0.44	---	1
		30-May-2011	MP4 BOTTOM	7.9	5640	0.07	382000	---	0.37	49	0.14	1140000	---	< 0.02	R	---	---
			Minimum			0.07	356000	N/A	0.32	32.00	0.03	1070000	N/A	N/A	0.41	73	0.80
			Mean			0.08	366400	N/A	0.39	48.00	0.07	1102000	N/A	N/A	0.48	N/A	1.10
			Maximum			0.08	382000	N/A	0.48	82.00	0.14	1140000	N/A	N/A	0.53	73	1.40
			Standard Deviation			0.00	9502.63	N/A	0.06	19.99	0.05	24899.8	N/A	N/A	0.06	N/A	0.26
MP-4	Summer 2011	20-Jul-2011	MP4 BOTTOM	7.7	5160	0.08	346000	---	0.57	14	< 0.05	1040000	---	< 0.02	0.41	---	1
		26-Jul-2011	MP4 BOTTOM	7.8	5630	0.08	377000	---	0.37	13	< 0.05	1140000	---	< 0.02	0.58	---	1.2
		02-Aug-2011	MP4 BOTTOM	7.6	5620	0.10	372000	---	0.28	53	< 0.05	1140000	---	< 0.02	0.47	68	0.8
		09-Aug-2011	MP4 BOTTOM	7.8	5310	0.07	354000	---	0.34	39	< 0.05	1080000	---	< 0.02	0.38	---	0.8
		16-Aug-2011	MP4 BOTTOM	7.6	5540	0.07	371000	---	0.54	54	0.12	1120000	---	< 0.02	0.41	---	1.4
			Minimum			0.07	346000	N/A	0.28	13.00	N/A	1040000	N/A	N/A	0.38	68	0.80
			Mean			0.08	364000	N/A	0.42	34.60	N/A	1104000	N/A	N/A	0.45	N/A	1.04
			Maximum			0.10	377000	N/A	0.57	54.00	0.12	1140000	N/A	N/A	0.58	68	1.40
			Standard Deviation			0.01	13285.3	N/A	0.13	20.16	N/A	43358.97	N/A	N/A	0.08	N/A	0.26
MP-4	Fall 2011	31-Oct-2011	MP4 BOTTOM	7.7	5800	0.10	384000	---	0.34	69	0.06	1180000	---	< 0.020	0.47	---	0.8
		07-Nov-2011	MP4 BOTTOM	7.7	5450	0.09	361000	---	0.64	33	0.06	1110000	---	< 0.020	0.59	---	2.3
		15-Nov-2011	MP4 BOTTOM	7.7	5580	0.08	371000	---	0.34	49	0.05	1130000	---	< 0.020	0.34	77	0.8
		28-Nov-2011	MP4 BOTTOM	7.8	5200	0.07	341000	---	0.43	88	0.06	1060000	---	< 0.020	0.48	---	0.7
		30-Nov-2011	MP4 BOTTOM	7.8	5330	0.08	357000	---	0.44	47	0.05	1080000	---	< 0.020	0.36	---	0.6
			Minimum			0.07	341000	N/A	0.34	33.00	0.05	1060000	N/A	N/A	0.34	77	0.60
			Mean			0.08	362800	N/A	0.44	57.20	0.06	1112000	N/A	N/A	0.45	N/A	1.04
			Maximum			0.10	384000	N/A	0.64	88.00	0.06	1180000	N/A	N/A	0.59	77	2.30
			Standard Deviation			0.01	16037.5	N/A	0.12	21.48	0.01	46583.26	N/A	N/A	0.10	N/A	0.71



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Macaulay Point			Water Quality Guidelines:	7 - 8.7	n/a	0.12	n/a	n/a	3	n/a	140	n/a	100	0.016	75	n/a	10
Winter 2012		08-Feb-2012	MP4 BOTTOM	7.8	5470	0.08	360000	---	0.47	53	< 0.05	1110000	---	< 0.010	0.5	---	0.8
		15-Feb-2012	MP4 BOTTOM	7.8	5470	0.07	364000	---	0.36	41	0.06	1110000	---	< 0.010	0.44	---	1
		21-Feb-2012	MP4 BOTTOM	7.8	5450	0.08	358000	---	0.67	54	0.05	1110000	---	< 0.010	0.42	82	1.2
		27-Feb-2012	MP4 BOTTOM	7.8	5680	0.07	373000	---	0.36	33	0.06	1150000	---	< 0.010	0.39	---	0.9
		04-Mar-2012	MP4 BOTTOM	7.7	5590	0.08	365000	---	0.32	37.5	< 0.05	1140000	---	< 0.010	0.442	---	1.05
			Minimum		0.07	358000	N/A	0.32	33.00	0.03	1110000	N/A	N/A	0.39	82	0.80	
			Mean		0.08	364000	N/A	0.44	43.70	0.04	1124000	N/A	N/A	0.44	N/A	0.99	
			Maximum		0.08	373000	N/A	0.67	54.00	0.06	1150000	N/A	N/A	0.50	82	1.20	
			Standard Deviation		0.01	5787.92	N/A	0.14	9.39	0.02	19493.59	N/A	N/A	0.04	N/A	0.15	
Spring 2012		15-May-2012	MP4 BOTTOM	7.9	5370	0.08	355000	---	0.532	28.3	< 0.050	1090000	---	< 0.010	0.52	---	0.61
		22-May-2012	MP4 BOTTOM	7.8	5400	0.09	355000	---	0.400	16.5	< 0.050	1100000	---	< 0.010	0.47	---	< 0.50
		28-May-2012	MP4 BOTTOM	7.8	5630	0.08	371000	---	0.528	18.4	0.070	1140000	---	< 0.010	0.42	---	0.57
		31-May-2012	MP4 BOTTOM	7.8	5390	0.08	358000	---	0.848	35.9	< 0.050	1090000	---	< 0.010	0.57	---	1.14
		06-Jun-2012	MP4 BOTTOM	7.8	5390	0.08	355000	---	0.305	35.2	< 0.050	1090000	---	< 0.010	0.47	---	0.52
			Minimum		0.08	355000	N/A	0.31	16.50	N/A	1090000	N/A	N/A	0.42	N/A	0.25	
			Mean		0.08	358800	N/A	0.52	26.86	N/A	1102000	N/A	N/A	0.49	N/A	0.62	
			Maximum		0.09	371000	N/A	0.85	35.90	0.07	1140000	N/A	N/A	0.57	N/A	1.14	
			Standard Deviation		0.01	6942.62	N/A	0.21	9.11	N/A	21679.48	N/A	N/A	0.05	N/A	0.32	
Summer 2010		26-Jul-2010	MP4 MID	7.9	5460	0.08	345000	---	0.25	24	< 0.05	1120000	---	< 0.02	0.55	---	< 0.5
		28-Jul-2010	4 MID	7.9	5330	0.09	338000	---	0.19	22	< 0.05	1090000	---	< 0.02	0.51	---	1
		03-Aug-2010	4 MID	7.9	5730	0.10	355000	---	0.25	16	< 0.05	1180000	---	< 0.02	0.44	69	0.8
		10-Aug-2010	MP4 MID	7.9	5560	0.07	353000	---	0.34	26	< 0.05	1140000	---	< 0.02	0.46	---	0.6
		17-Aug-2010	MP4 MID	8	5450	---	346000	---	---	---	---	1110000	---	---	---	---	---
			Minimum		0.07	338000	N/A	0.19	16.00	N/A	1090000	N/A	N/A	0.44	69	0.25	
			Mean		0.09	347400	N/A	0.26	22.00	N/A	1128000	N/A	N/A	0.49	N/A	0.66	
			Maximum		0.10	355000	N/A	0.34	26.00	N/A	1180000	N/A	N/A	0.55	69	1.00	
			Standard Deviation		0.01	6804.41	N/A	0.06	4.32	N/A	34205.26	N/A	N/A	0.05	N/A	0.32	
Fall 2010		02-Nov-2010	MP4 MID	7.7	5470	0.07	350000	---	0.26	10	< 0.05	1120000	---	< 0.02	0.57	---	< 0.5
		08-Nov-2010	4 MID	7.7	5290	0.07	341000	---	0.42	14	< 0.05	1080000	---	< 0.02	0.42	---	0.8
		18-Nov-2010	4 MID	7.8	5090	0.08	326000	---	0.26	14	< 0.05	1040000	---	< 0.02	0.39	75	< 0.5
		24-Nov-2010	MP4 MID	7.7	5810	0.08	365000	---	0.29	27	< 0.05	1190000	---	< 0.02	0.38	---	0.6
		01-Dec-2010	MP4 MID	7.8	4790	0.08	307000	---	0.39	31	0.09	977000	---	< 0.02	0.39	---	0.6
			Minimum		0.07	307000	N/A	0.26	10.00	N/A	977000	N/A	N/A	0.38	75	0.25	
			Mean		0.08	337800	N/A	0.32	19.20	N/A	1081400	N/A	N/A	0.43	N/A	0.50	
			Maximum		0.08	365000	N/A	0.42	31.00	N/A	1190000	N/A	N/A	0.57	75	0.80	
			Standard Deviation		0.01	22286.8	N/A	0.08	9.20	N/A	80466.14	N/A	N/A	0.08	N/A	0.24	
Winter 2011		16-Mar-2011	MP4 MID	7.8	5220	0.07	350000	---	0.29	23	0.35	1060000	---	< 0.02	0.43	---	0.9
		22-Mar-2011	MP4 MID	7.8	5390	0.06	361000	---	0.31	41	< 0.05	1090000	---	< 0.02	0.52	---	0.7
		28-Mar-2011	MP4 MID	7.8	5240	0.08	347000	---	0.3	27	< 0.05	1060000	---	< 0.02	0.43	64	0.8
		07-Apr-2011	MP4 MID	7.8	5280	0.06	356000	---	1.43	33	0.14	1070000	---	< 0.02	0.35	---	0.8
		12-Apr-2011	MP4 MID	7.8	5010	0.07	334000	---	0.41	40	< 0.05	1010000	---	< 0.02	0.43	---	0.9
			Minimum		0.06	334000	N/A	0.29	23.00	N/A	1010000	N/A	N/A	0.35	64	0.70	
			Mean		0.07	349600	N/A	0.55	32.80	N/A	1058000	N/A	N/A	0.43	N/A	0.82	
			Maximum		0.08	361000	N/A	1.43	41.00	0.35	1090000	N/A	N/A	0.52	64	0.90	
			Standard Deviation		0.01	10261.6	N/A	0.50	7.89	N/A	29495.76	N/A	N/A	0.06	N/A	0.08	
Spring 2011		04-May-2011	MP4 MID	7.9	5270	0.07	355000	---	0.35	26	< 0.05	1060000	---	< 0.02	0.41	---	0.6
		09-May-2011	MP4 MID	7.9	5510	0.07	369000	---	0.32	23	< 0.05	1110000	---	< 0.02	0.39	---	0.8
		17-May-2011	MP4 MID	7.9	5480	0.07	368000	---	0.34	29	< 0.05	1110000	---	< 0.02	0.4	73	1.1
		25-May-2011	MP4 MID	7.9	5390	0.08	364000	---	0.59	24	0.06	1090000	---	< 0.02	0.38	---	1.2
		30-May-2011	MP4 MID	7.9	5550	0.07	372000	---	0.31	21	< 0.05	1120000	---	< 0.02	R	---	---
			Minimum		0.07	355000	N/A	0.31	21.00	N/A	1060000	N/A	N/A	0.38	73	0.60	
			Mean		0.07	365600	N/A	0.38	24.60	N/A	1098000	N/A	N/A	0.40	N/A	0.93	
			Maximum		0.08	372000	N/A	0.59	29.00	0.06	1120000	N/A	N/A	0.41	73	1.20	
			Standard Deviation		0.00	6580.27	N/A	0.12	3.05	N/A	23874.67	N/A	N/A	0.01	N/A	0.28	



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements													
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T	
						(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Macaulay Point			Water Quality Guidelines:		7 - 8.7	n/a	0.12	n/a	n/a	3	n/a	140	n/a	100	0.016	75	n/a	10
Summer 2011		20-Jul-2011	MP4 MID	7.7	5100	0.08	339000	---	0.27	11	< 0.05	1030000	---	< 0.02	0.37	---	< 0.5	
		26-Jul-2011	MP4 MID	7.8	5340	0.08	359000	---	0.34	11	< 0.05	1080000	---	< 0.02	0.45	---	1.6	
		02-Aug-2011	MP4 MID	7.6	5420	0.08	361000	---	0.23	13	< 0.05	1100000	---	< 0.02	0.4	60	0.6	
		09-Aug-2011	MP4 MID	7.8	5350	0.08	355000	---	0.32	17	0.05	1080000	---	< 0.02	0.46	---	0.9	
		16-Aug-2011	MP4 MID	7.7	5370	0.07	359000	---	0.26	17	0.11	1090000	---	< 0.02	0.35	---	1	
			Minimum			0.07	339000	N/A	0.23	11.00	N/A	1030000	N/A	N/A	0.35	60	0.25	
			Mean			0.08	354600	N/A	0.28	13.80	N/A	1076000	N/A	N/A	0.41	N/A	0.87	
			Maximum			0.08	361000	N/A	0.34	17.00	0.11	1100000	N/A	N/A	0.46	60	1.60	
			Standard Deviation			0.00	8988.88	N/A	0.05	3.03	N/A	27018.51	N/A	N/A	0.05	N/A	0.50	
Fall 2011		31-Oct-2011	MP4 MID	7.7	5650	0.07	372000	---	0.27	28	< 0.05	1150000	---	< 0.020	0.43	---	< 0.5	
		07-Nov-2011	MP4 MID	7.7	5320	0.09	353000	---	0.26	12	< 0.05	1080000	---	< 0.020	0.42	---	0.5	
		15-Nov-2011	MP4 MID	7.7	5390	0.08	356000	---	0.33	24	< 0.05	1090000	---	< 0.020	0.36	77	< 0.5	
		28-Nov-2011	MP4 MID	7.9	5240	0.08	345000	---	0.33	66	0.05	1060000	---	< 0.020	0.42	---	0.7	
		30-Nov-2011	MP4 MID	7.8	5390	0.07	361000	---	0.31	36	< 0.05	1090000	---	< 0.020	0.35	---	< 0.5	
			Minimum			0.07	345000	N/A	0.26	12.00	N/A	1060000	N/A	N/A	0.35	77	N/A	
			Mean			0.08	357400	N/A	0.30	33.20	N/A	1094000	N/A	N/A	0.40	N/A	N/A	
			Maximum			0.09	372000	N/A	0.33	66.00	0.05	1150000	N/A	N/A	0.43	77	0.70	
			Standard Deviation			0.01	10015	N/A	0.03	20.28	N/A	33615.47	N/A	N/A	0.04	N/A	N/A	
Winter 2012		08-Feb-2012	MP4 MID	7.8	5570	0.07	366000	---	0.30	37	< 0.05	1130000	---	< 0.010	0.41	---	0.5	
		15-Feb-2012	MP4 MID	7.8	5440	0.07	362000	---	0.42	27	0.06	1100000	---	< 0.010	0.47	---	1.2	
		21-Feb-2012	MP4 MID	7.8	5430	0.08	358000	---	0.9	33	< 0.05	1100000	---	< 0.010	0.36	68	0.7	
		27-Feb-2012	MP4 MID	7.8	5700	0.07	378000	---	0.23	18	< 0.05	1160000	---	< 0.010	0.42	---	0.7	
		04-Mar-2012	MP4 MID	7.7	5520	0.07	359000	---	0.30	14.2	< 0.05	1120000	---	< 0.010	0.402	---	0.81	
			Minimum			0.07	358000	N/A	0.23	14.20	N/A	1100000	N/A	N/A	0.36	68	0.50	
			Mean			0.07	364600	N/A	0.43	25.84	N/A	1122000	N/A	N/A	0.41	N/A	0.78	
			Maximum			0.08	378000	N/A	0.90	37.00	0.06	1160000	N/A	N/A	0.47	68	1.20	
			Standard Deviation			0.00	8111.72	N/A	0.27	9.67	N/A	24899.8	N/A	N/A	0.04	N/A	0.26	
Spring 2012		15-May-2012	MP4 MID	7.9	5090	0.07	336000	---	0.448	16.4	0.061	1030000	---	< 0.010	0.44	---	0.62	
		22-May-2012	MP4 MID	7.9	5320	0.08	351000	---	0.416	15.1	< 0.050	1080000	---	< 0.010	0.43	---	< 0.5	
		28-May-2012	MP4 MID	7.8	5700	0.08	374000	---	0.390	13.9	< 0.050	1160000	---	< 0.010	0.37	---	0.50	
		31-May-2012	MP4 MID	7.9	5370	0.07	354000	---	0.378	12.6	< 0.050	1090000	---	< 0.010	1.24	---	< 0.5	
		06-Jun-2012	MP4 MID	7.8	5360	0.08	354000	---	1.870	26.4	0.098	1090000	---	< 0.010	0.53	---	0.73	
			Minimum			0.07	336000	N/A	0.38	12.60	N/A	1030000	N/A	N/A	0.37	N/A	0.25	
			Mean			0.07	353800	N/A	0.70	16.88	N/A	1090000	N/A	N/A	0.60	N/A	0.47	
			Maximum			0.08	374000	N/A	1.87	26.40	0.10	1160000	N/A	N/A	1.24	N/A	0.73	
			Standard Deviation			0.01	13535.1	N/A	0.65	5.51	N/A	46368.09	N/A	N/A	0.36	N/A	0.22	
Summer 2010		26-Jul-2010	MP4 SURFACE	7.9	5360	0.08	343000	---	0.31	18	< 0.05	1090000	---	< 0.02	0.49	---	0.8	
		28-Jul-2010	4 SURFACE	8	5160	0.07	332000	---	0.22	18	< 0.05	1050000	---	< 0.02	1.81	---	0.7	
		03-Aug-2010	4 SURFACE	8.2	5400	0.08	334000	---	0.34	8	< 0.05	1110000	---	< 0.02	0.42	50	1.7	
		10-Aug-2010	MP4 SURFACE	7.9	5740	0.08	361000	---	0.34	17	< 0.05	1170000	---	< 0.02	0.42	---	0.6	
		17-Aug-2010	MP4 SURFACE	7.9	5410	---	343000	---	---	---	---	1110000	---	---	---	---	---	
			Minimum			0.07	332000	N/A	0.22	8.00	N/A	1050000	N/A	N/A	0.42	50	0.60	
			Mean			0.08	342600	N/A	0.30	15.25	N/A	1106000	N/A	N/A	0.79	N/A	0.95	
			Maximum			0.08	361000	N/A	0.34	18.00	N/A	1170000	N/A	N/A	1.81	50	1.70	
			Standard Deviation			0.01	11458.6	N/A	0.06	4.86	N/A	43358.97	N/A	N/A	0.68	N/A	0.51	
Fall 2010		02-Nov-2010	MP4 SURFACE	7.7	5400	0.07	347000	---	0.31	7	< 0.05	1100000	---	< 0.02	0.58	---	1	
		08-Nov-2010	4 SURFACE	7.7	5230	0.07	336000	---	0.26	11	< 0.05	1070000	---	< 0.02	0.66	---	0.6	
		18-Nov-2010	4 SURFACE	7.7	5480	0.08	348000	---	0.36	13	0.08	1120000	---	< 0.02	0.38	74	1.1	
		24-Nov-2010	MP4 SURFACE	7.7	5780	0.09	360000	---	0.38	31	0.09	1180000	---	< 0.02	0.41	---	1.1	
		01-Dec-2010	MP4 SURFACE	7.7	5260	0.09	338000	---	0.30	22	< 0.05	1070000	---	< 0.02	0.38	---	0.6	
			Minimum			0.07	336000	N/A	0.26	7.00	N/A	1070000	N/A	N/A	0.38	74	0.60	
			Mean			0.08	345800	N/A	0.32	16.80	N/A	1108000	N/A	N/A	0.48	N/A	0.88	
			Maximum			0.09	360000	N/A	0.38	31.00	0.09	1180000	N/A	N/A	0.66	74	1.10	
			Standard Deviation			0.01	9549.87	N/A	0.05	9.65	N/A	45497.25	N/A	N/A	0.13	N/A	0.26	



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Macaulay Point																	
Winter 2011		16-Mar-2011	MP4 SURFACE	7.8	5280	0.07	354000	---	0.41	17	< 0.05	1070000	---	< 0.02	0.4	---	1
		22-Mar-2011	MP4 SURFACE	7.8	5450	0.05	366000	---	0.35	31	< 0.05	1100000	---	< 0.02	0.46	---	0.6
		28-Mar-2011	MP4 SURFACE	7.8	5180	0.07	342000	---	0.49	26	< 0.05	1050000	---	< 0.02	0.41	72	1.1
		07-Apr-2011	MP4 SURFACE	7.8	5230	0.07	353000	---	0.34	30	< 0.05	1060000	---	< 0.02	0.36	---	1.2
		12-Apr-2011	MP4 SURFACE	7.9	4970	0.09	333000	---	0.46	27	< 0.05	1010000	---	< 0.02	0.39	---	1
			Minimum			0.05	333000	N/A	0.34	17.00	N/A	1010000	N/A	N/A	0.36	72	0.60
			Mean			0.07	349600	N/A	0.41	26.20	N/A	1058000	N/A	N/A	0.40	N/A	0.98
			Maximum			0.09	366000	N/A	0.49	31.00	N/A	1100000	N/A	N/A	0.46	72	1.20
			Standard Deviation			0.01	12581.7	N/A	0.07	5.54	N/A	32710.85	N/A	N/A	0.04	N/A	0.23
Spring 2011		04-May-2011	MP4 SURFACE	7.9	5330	0.07	358000	---	0.31	19	< 0.05	1080000	---	< 0.02	0.5	---	0.7
		09-May-2011	MP4 SURFACE	7.9	5420	0.08	363000	---	0.33	14	< 0.05	1100000	---	< 0.02	0.36	---	0.8
		17-May-2011	MP4 SURFACE	7.9	5390	0.07	360000	---	2.94	28	0.11	1090000	---	< 0.02	0.45	68	2.5
		25-May-2011	MP4 SURFACE	7.9	5310	0.15	358000	---	0.88	28	0.18	1070000	---	< 0.02	0.73	---	2.8
		30-May-2011	MP4 SURFACE	7.9	5620	0.08	378000	---	0.33	18	< 0.05	1130000	---	< 0.02	R	---	---
			Minimum			0.07	358000	N/A	0.31	14.00	N/A	1070000	N/A	N/A	0.36	68	0.70
			Mean			0.09	363400	N/A	0.96	21.40	N/A	1094000	N/A	N/A	0.51	N/A	1.70
			Maximum			0.15	378000	N/A	2.94	28.00	0.18	1130000	N/A	N/A	0.73	68	2.80
			Standard Deviation			0.03	8414.27	N/A	1.13	6.31	N/A	23021.73	N/A	N/A	0.16	N/A	1.10
Summer 2011		20-Jul-2011	MP4 SURFACE	7.7	5030	0.07	336000	---	0.36	10	0.05	1020000	---	< 0.02	0.41	---	0.6
		26-Jul-2011	MP4 SURFACE	7.8	5320	0.08	357000	---	0.38	8	< 0.05	1080000	---	< 0.02	0.46	---	1.1
		02-Aug-2011	MP4 SURFACE	7.7	5260	0.08	347000	---	0.32	7	< 0.05	1070000	---	< 0.02	0.39	59	0.6
		09-Aug-2011	MP4 SURFACE	7.8	5470	0.07	364000	---	0.27	5	0.07	1110000	---	< 0.02	0.34	---	0.8
		16-Aug-2011	MP4 SURFACE	7.6	5350	0.08	357000	---	0.26	10	< 0.05	1080000	---	< 0.02	0.38	---	< 0.5
			Minimum			0.07	336000	N/A	0.26	5.00	N/A	1020000	N/A	N/A	0.34	59	0.25
			Mean			0.08	352200	N/A	0.32	8.00	N/A	1072000	N/A	N/A	0.40	N/A	0.67
			Maximum			0.08	364000	N/A	0.38	10.00	0.07	1110000	N/A	N/A	0.46	59	1.10
			Standard Deviation			0.01	10895	N/A	0.05	2.12	N/A	32710.85	N/A	N/A	0.04	N/A	0.31
Fall 2011		31-Oct-2011	MP4 SURFACE	7.7	5610	0.08	369000	---	0.32	19	< 0.05	1140000	---	< 0.020	0.42	---	< 0.5
		07-Nov-2011	MP4 SURFACE	7.7	5280	0.08	352000	---	0.31	9	< 0.05	1070000	---	< 0.020	0.39	---	< 0.5
		15-Nov-2011	MP4 SURFACE	7.7	5380	0.08	357000	---	0.34	20	< 0.05	1090000	---	< 0.020	0.38	75	0.5
		28-Nov-2011	MP4 SURFACE	7.9	5150	0.07	338000	---	0.40	37	< 0.05	1050000	---	< 0.020	0.42	---	0.7
		30-Nov-2011	MP4 SURFACE	7.8	5330	0.08	357000	---	0.33	25	< 0.05	1080000	---	< 0.020	0.37	---	1.3
			Minimum			0.07	338000	N/A	0.31	9.00	N/A	1050000	N/A	N/A	0.37	75	0.25
			Mean			0.08	354600	N/A	0.34	22.00	N/A	1086000	N/A	N/A	0.40	N/A	0.60
			Maximum			0.08	369000	N/A	0.40	37.00	N/A	1140000	N/A	N/A	0.42	75	1.30
			Standard Deviation			0.00	11193.7	N/A	0.04	10.20	N/A	33615.47	N/A	N/A	0.02	N/A	0.43
Winter 2012		08-Feb-2012	MP4 SURFACE	7.8	5450	0.08	357000	---	0.41	28	0.06	1110000	---	< 0.010	0.44	---	1.3
		15-Feb-2012	MP4 SURFACE	7.8	5390	0.08	356000	---	0.94	18	< 0.05	1090000	---	< 0.010	0.4	---	1.1
		21-Feb-2012	MP4 SURFACE	7.8	5440	0.07	359000	---	0.35	22	< 0.05	1100000	---	< 0.010	0.41	75	0.7
		27-Feb-2012	MP4 SURFACE	7.8	5660	0.08	373000	---	0.36	17	< 0.05	1150000	---	< 0.010	0.45	---	0.9
		04-Mar-2012	MP4 SURFACE	7.7	5510	0.08	359000	---	0.30	10.9	< 0.05	1120000	---	< 0.010	0.405	---	0.61
			Minimum			0.07	356000	N/A	0.30	10.90	N/A	1090000	N/A	N/A	0.40	75	0.61
			Mean			0.08	360800	N/A	0.47	19.18	N/A	1114000	N/A	N/A	0.42	N/A	0.92
			Maximum			0.08	373000	N/A	0.94	28.00	0.06	1150000	N/A	N/A	0.45	75	1.30
			Standard Deviation			0.00	6942.62	N/A	0.26	6.33	N/A	23021.73	N/A	N/A	0.02	N/A	0.28
Spring 2012		15-May-2012	MP4 SURFACE	7.9	5030	0.07	332000	---	0.477	13.4	< 0.050	1020000	---	< 0.010	0.54	---	0.52
		22-May-2012	MP4 SURFACE	7.9	5370	0.08	355000	---	0.320	11.6	< 0.050	1090000	---	< 0.010	0.47	---	0.64
		28-May-2012	MP4 SURFACE	7.8	5550	0.07	365000	---	0.678	14.0	< 0.050	1130000	---	< 0.010	0.43	---	0.50
		31-May-2012	MP4 SURFACE	7.9	5360	0.07	353000	---	0.827	11.4	< 0.050	1090000	---	< 0.010	0.40	---	0.69
		06-Jun-2012	MP4 SURFACE	7.8	5360	0.07	354000	---	0.464	24.8	< 0.050	1090000	---	< 0.010	0.36	---	< 0.50
			Minimum			0.07	332000	N/A	0.32	11.40	N/A	1020000	N/A	N/A	0.36	N/A	0.25
			Mean			0.07	351800	N/A	0.55	15.04	N/A	1084000	N/A	N/A	0.44	N/A	0.52
			Maximum			0.08	365000	N/A	0.83	24.80	N/A	1130000	N/A	N/A	0.54	N/A	0.69
			Standard Deviation			0.00	12070.6	N/A	0.20	5.57	N/A	39749.21	N/A	N/A	0.07	N/A	0.17



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Macaulay Point			Water Quality Guidelines:	7 - 8.7	n/a	0.12	n/a	n/a	3	n/a	140	n/a	100	0.016	75	n/a	10
MP-5	Summer 2010	26-Jul-2010	MP5 BOTTOM	7.8	5850	---	365000	---	---	---	---	1200000	---	---	---	---	---
		28-Jul-2010	MP5 BOTTOM	7.8	5540	---	359000	---	---	---	---	1130000	---	---	---	---	---
		03-Aug-2010	MP5 BOTTOM	7.8	5750	---	363000	---	---	---	---	1180000	---	---	---	84	---
		10-Aug-2010	MP5 BOTTOM	7.9	5440	---	350000	---	---	---	---	1110000	---	---	---	---	---
		17-Aug-2010	MP5 BOTTOM	7.9	5430	0.10	346000	---	0.83	102	0.09	1110000	---	< 0.02	0.5	---	0.9
			Minimum			0.10	346000	N/A	0.83	102.00	0.09	1110000	N/A	N/A	0.50	84	0.90
			Mean			N/A	356600	N/A	N/A	N/A	N/A	1146000	N/A	N/A	N/A	N/A	N/A
			Maximum			0.10	365000	N/A	0.83	102.00	0.09	1200000	N/A	N/A	0.50	84	0.90
			Standard Deviation			N/A	8264.38	N/A	N/A	N/A	N/A	41593.27	N/A	N/A	N/A	N/A	N/A
MP-5	Fall 2010	02-Nov-2010	MP5 BOTTOM	7.7	5150	---	334000	---	---	---	---	1050000	---	---	---	---	---
		08-Nov-2010	MP5 BOTTOM	7.7	5440	---	349000	---	---	---	---	1110000	---	---	---	---	---
		18-Nov-2010	MP5 BOTTOM	7.7	5360	---	344000	---	---	---	---	1090000	---	---	---	77	---
		24-Nov-2010	MP5 BOTTOM	7.7	5490	---	344000	---	---	---	---	1130000	---	---	---	---	---
		01-Dec-2010	MP5 BOTTOM	7.7	4840	---	310000	---	---	---	---	988000	---	---	---	---	---
			Minimum			N/A	310000	N/A	N/A	N/A	N/A	988000	N/A	N/A	N/A	77	N/A
			Mean			N/A	336200	N/A	N/A	N/A	N/A	1073600	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	349000	N/A	N/A	N/A	N/A	1130000	N/A	N/A	N/A	77	N/A
			Standard Deviation			N/A	15626.9	N/A	N/A	N/A	N/A	56256.56	N/A	N/A	N/A	N/A	N/A
MP-5	Winter 2011	16-Mar-2011	MP5 BOTTOM	7.8	5160	---	347000	---	---	---	---	1040000	---	---	---	---	---
		22-Mar-2011	MP5 BOTTOM	7.9	5330	---	355000	---	---	---	---	1080000	---	---	---	---	---
		28-Mar-2011	MP5 BOTTOM	7.8	5050	---	334000	---	---	---	---	1020000	---	---	---	66	---
		07-Apr-2011	MP5 BOTTOM	7.8	5210	---	350000	---	---	---	---	1050000	---	---	---	---	---
		12-Apr-2011	MP5 BOTTOM	7.9	4950	---	331000	---	---	---	---	1000000	---	---	---	---	---
			Minimum			N/A	331000	N/A	N/A	N/A	N/A	1000000	N/A	N/A	N/A	66	N/A
			Mean			N/A	343400	N/A	N/A	N/A	N/A	1038000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	355000	N/A	N/A	N/A	N/A	1080000	N/A	N/A	N/A	66	N/A
			Standard Deviation			N/A	10406.7	N/A	N/A	N/A	N/A	30331.5	N/A	N/A	N/A	N/A	N/A
MP-5	Spring 2011	04-May-2011	MP5 BOTTOM	7.9	5790	---	389000	---	---	---	---	1170000	---	---	---	---	---
		09-May-2011	MP5 BOTTOM	7.9	5600	---	377000	---	---	---	---	1130000	---	---	---	---	---
		17-May-2011	MP5 BOTTOM	7.9	5530	---	368000	---	---	---	---	1120000	---	---	---	73	---
		25-May-2011	MP5 BOTTOM	7.9	5500	---	369000	---	---	---	---	1110000	---	---	---	---	---
		30-May-2011	MP5 BOTTOM	7.9	5720	---	387000	---	---	---	---	1160000	---	---	---	---	---
			Minimum			N/A	368000	N/A	N/A	N/A	N/A	1110000	N/A	N/A	N/A	73	N/A
			Mean			N/A	378000	N/A	N/A	N/A	N/A	1138000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	389000	N/A	N/A	N/A	N/A	1170000	N/A	N/A	N/A	73	N/A
			Standard Deviation			N/A	9797.96	N/A	N/A	N/A	N/A	25884.36	N/A	N/A	N/A	N/A	N/A
MP-5	Summer 2011	20-Jul-2011	MP5 BOTTOM	7.6	5320	---	355000	---	---	---	---	1080000	---	---	---	---	---
		26-Jul-2011	MP5 BOTTOM	7.7	5180	---	346000	---	---	---	---	1050000	---	---	---	---	---
		02-Aug-2011	MP5 BOTTOM	7.6	5710	---	377000	---	---	---	---	1160000	---	---	---	63	---
		09-Aug-2011	MP5 BOTTOM	7.7	5500	---	365000	---	---	---	---	1110000	---	---	---	---	---
		16-Aug-2011	MP5 BOTTOM	7.6	5650	---	378000	---	---	---	---	1140000	---	---	---	---	---
			Minimum			N/A	346000	N/A	N/A	N/A	N/A	1050000	N/A	N/A	N/A	63	N/A
			Mean			N/A	364200	N/A	N/A	N/A	N/A	1108000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	378000	N/A	N/A	N/A	N/A	1160000	N/A	N/A	N/A	63	N/A
			Standard Deviation			N/A	13881.6	N/A	N/A	N/A	N/A	44384.68	N/A	N/A	N/A	N/A	N/A
MP-5	Fall 2011	31-Oct-2011	MP5 BOTTOM	7.7	5790	---	380000	---	---	---	---	1180000	---	---	---	---	---
		07-Nov-2011	MP5 BOTTOM	7.7	5380	---	356000	---	---	---	---	1090000	---	---	---	---	---
		15-Nov-2011	MP5 BOTTOM	7.7	5300	---	349000	---	---	---	---	1080000	---	---	---	85	---
		28-Nov-2011	MP5 BOTTOM	7.9	5210	---	343000	---	---	---	---	1060000	---	---	---	---	---
		30-Nov-2011	MP5 BOTTOM	7.8	5370	---	358000	---	---	---	---	1090000	---	---	---	---	---
			Minimum			N/A	343000	N/A	N/A	N/A	N/A	1060000	N/A	N/A	N/A	85	N/A
			Mean			N/A	357200	N/A	N/A	N/A	N/A	1100000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	380000	N/A	N/A	N/A	N/A	1180000	N/A	N/A	N/A	85	N/A
			Standard Deviation			N/A	14060.6	N/A	N/A	N/A	N/A	46368.09	N/A	N/A	N/A	N/A	N/A



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Macaulay Point																	
Winter 2012		08-Feb-2012	MP5 BOTTOM	7.8	5440	---	358000	---	---	---	---	1100000	---	---	---	---	---
		15-Feb-2012	MP5 BOTTOM	7.8	5290	---	353000	---	---	---	---	1070000	---	---	---	---	---
		21-Feb-2012	MP5 BOTTOM	7.8	5580	---	363000	---	---	---	---	1130000	---	---	---	67	---
		27-Feb-2012	MP5 BOTTOM	7.8	5700	---	377000	---	---	---	---	1160000	---	---	---	---	---
		04-Mar-2012	MP5 BOTTOM	7.7	5450	---	355000	---	---	---	---	1110000	---	---	---	---	---
			Minimum			N/A	353000	N/A	N/A	N/A	N/A	1070000	N/A	N/A	N/A	67	N/A
			Mean			N/A	361200	N/A	N/A	N/A	N/A	1114000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	377000	N/A	N/A	N/A	N/A	1160000	N/A	N/A	N/A	67	N/A
			Standard Deviation			N/A	9602.08	N/A	N/A	N/A	N/A	33615.47	N/A	N/A	N/A	N/A	N/A
Spring 2012		15-May-2012	MP5 BOTTOM	7.9	5080	---	335000	---	---	---	---	1030000	---	---	---	---	---
		22-May-2012	MP5 BOTTOM	7.8	5480	---	360000	---	---	---	---	1110000	---	---	---	---	---
		28-May-2012	MP5 BOTTOM	7.8	5120	---	336000	---	---	---	---	1040000	---	---	---	---	---
		31-May-2012	MP5 BOTTOM	7.8	5470	---	361000	---	---	---	---	1110000	---	---	---	---	---
		06-Jun-2012	MP5 BOTTOM	7.8	5300	---	349000	---	---	---	---	1080000	---	---	---	---	---
			Minimum			N/A	335000	N/A	N/A	N/A	N/A	1030000	N/A	N/A	N/A	N/A	N/A
			Mean			N/A	348200	N/A	N/A	N/A	N/A	1074000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	361000	N/A	N/A	N/A	N/A	1110000	N/A	N/A	N/A	N/A	N/A
			Standard Deviation			N/A	12518	N/A	N/A	N/A	N/A	37815.34	N/A	N/A	N/A	N/A	N/A
Summer 2010		26-Jul-2010	MP5 MID	7.9	5520	---	348000	---	---	---	---	1130000	---	---	---	---	---
		28-Jul-2010	MP5 MID	7.9	5300	---	340000	---	---	---	---	1080000	---	---	---	---	---
		03-Aug-2010	MP5 MID	8	5140	---	330000	---	---	---	---	1050000	---	---	---	66	---
		10-Aug-2010	MP5 MID	7.9	5280	---	342000	---	---	---	---	1080000	---	---	---	---	---
		17-Aug-2010	MP5 MID	8	4970	0.08	320000	---	0.24	26	< 0.05	1010000	---	< 0.02	0.39	---	< 0.5
			Minimum			0.08	320000	N/A	0.24	26.00	N/A	1010000	N/A	N/A	0.39	66	N/A
			Mean			N/A	336000	N/A	N/A	N/A	N/A	1070000	N/A	N/A	N/A	N/A	N/A
			Maximum			0.08	348000	N/A	0.24	26.00	N/A	1130000	N/A	N/A	0.39	66	N/A
			Standard Deviation			N/A	11045.4	N/A	N/A	N/A	N/A	44158.8	N/A	N/A	N/A	N/A	N/A
Fall 2010		02-Nov-2010	MP5 MID	7.7	5220	---	338000	---	---	---	---	1060000	---	---	---	---	---
		08-Nov-2010	MP5 MID	7.8	5610	---	358000	---	---	---	---	1150000	---	---	---	---	---
		18-Nov-2010	MP5 MID	7.7	4860	---	315000	---	---	---	---	989000	---	---	---	73	---
		24-Nov-2010	MP5 MID	7.6	5480	---	342000	---	---	---	---	1120000	---	---	---	---	---
		01-Dec-2010	MP5 MID	7.8	4810	---	308000	---	---	---	---	981000	---	---	---	---	---
			Minimum			N/A	308000	N/A	N/A	N/A	N/A	981000	N/A	N/A	N/A	73	N/A
			Mean			N/A	332200	N/A	N/A	N/A	N/A	1060000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	358000	N/A	N/A	N/A	N/A	1150000	N/A	N/A	N/A	73	N/A
			Standard Deviation			N/A	20474.4	N/A	N/A	N/A	N/A	75799.08	N/A	N/A	N/A	N/A	N/A
Winter 2011		16-Mar-2011	MP5 MID	7.8	5080	---	340000	---	---	---	---	1030000	---	---	---	---	---
		22-Mar-2011	MP5 MID	7.8	5300	---	354000	---	---	---	---	1070000	---	---	---	---	---
		28-Mar-2011	MP5 MID	7.8	5220	---	345000	---	---	---	---	1060000	---	---	---	72	---
		07-Apr-2011	MP5 MID	7.8	5180	---	349000	---	---	---	---	1050000	---	---	---	---	---
		12-Apr-2011	MP5 MID	7.9	4980	---	331000	---	---	---	---	1010000	---	---	---	---	---
			Minimum			N/A	331000	N/A	N/A	N/A	N/A	1010000	N/A	N/A	N/A	72	N/A
			Mean			N/A	343800	N/A	N/A	N/A	N/A	1044000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	354000	N/A	N/A	N/A	N/A	1070000	N/A	N/A	N/A	72	N/A
			Standard Deviation			N/A	8814.76	N/A	N/A	N/A	N/A	24083.19	N/A	N/A	N/A	N/A	N/A
Spring 2011		04-May-2011	MP5 MID	7.9	5510	---	369000	---	---	---	---	1110000	---	---	---	---	---
		09-May-2011	MP5 MID	8	5610	---	378000	---	---	---	---	1130000	---	---	---	---	---
		17-May-2011	MP5 MID	7.9	5430	---	366000	---	---	---	---	1100000	---	---	---	68	---
		25-May-2011	MP5 MID	7.9	5480	---	369000	---	---	---	---	1110000	---	---	---	---	---
		30-May-2011	MP5 MID	7.9	5650	---	382000	---	---	---	---	1140000	---	---	---	---	---
			Minimum			N/A	366000	N/A	N/A	N/A	N/A	1100000	N/A	N/A	N/A	68	N/A
			Mean			N/A	372800	N/A	N/A	N/A	N/A	1118000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	382000	N/A	N/A	N/A	N/A	1140000	N/A	N/A	N/A	68	N/A
			Standard Deviation			N/A	6833.74	N/A	N/A	N/A	N/A	16431.68	N/A	N/A	N/A	N/A	N/A



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Macaulay Point			Water Quality Guidelines:	7 - 8.7	n/a	0.12	n/a	n/a	3	n/a	140	n/a	100	0.016	75	n/a	10
Summer 2011		20-Jul-2011	MP5 MID	7.7	5190	---	346000	---	---	---	---	1050000	---	---	---	---	---
		26-Jul-2011	MP5 MID	7.8	5030	---	336000	---	---	---	---	1020000	---	---	---	---	---
		02-Aug-2011	MP5 MID	7.7	5080	---	336000	---	---	---	---	1030000	---	---	---	60	---
		09-Aug-2011	MP5 MID	7.8	4880	---	323000	---	---	---	---	989000	---	---	---	---	---
		16-Aug-2011	MP5 MID	7.4	5430	---	363000	---	---	---	---	1100000	---	---	---	---	---
			Minimum			N/A	323000	N/A	N/A	N/A	N/A	989000	N/A	N/A	N/A	60	N/A
			Mean			N/A	340800	N/A	N/A	N/A	N/A	1037800	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	363000	N/A	N/A	N/A	N/A	1100000	N/A	N/A	N/A	60	N/A
			Standard Deviation			N/A	14856	N/A	N/A	N/A	N/A	41160.66	N/A	N/A	N/A	N/A	N/A
Fall 2011		31-Oct-2011	MP5 MID	7.7	5570	---	364000	---	---	---	---	1130000	---	---	---	---	---
		07-Nov-2011	MP5 MID	7.7	5340	---	355000	---	---	---	---	1080000	---	---	---	---	---
		15-Nov-2011	MP5 MID	7.7	5460	---	360000	---	---	---	---	1110000	---	---	---	71	---
		28-Nov-2011	MP5 MID	7.8	5260	---	347000	---	---	---	---	1070000	---	---	---	---	---
		30-Nov-2011	MP5 MID	7.8	5340	---	356000	---	---	---	---	1080000	---	---	---	---	---
			Minimum			N/A	347000	N/A	N/A	N/A	N/A	1070000	N/A	N/A	N/A	71	N/A
			Mean			N/A	356400	N/A	N/A	N/A	N/A	1094000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	364000	N/A	N/A	N/A	N/A	1130000	N/A	N/A	N/A	71	N/A
			Standard Deviation			N/A	6348.23	N/A	N/A	N/A	N/A	25099.8	N/A	N/A	N/A	N/A	N/A
Winter 2012		08-Feb-2012	MP5 MID	7.8	5430	---	357000	---	---	---	---	1100000	---	---	---	---	---
		15-Feb-2012	MP5 MID	7.8	5250	---	350000	---	---	---	---	1060000	---	---	---	---	---
		21-Feb-2012	MP5 MID	7.8	5460	---	356000	---	---	---	---	1110000	---	---	---	69	---
		27-Feb-2012	MP5 MID	7.8	5810	---	383000	---	---	---	---	1180000	---	---	---	---	---
		04-Mar-2012	MP5 MID	7.7	5350	---	348000	---	---	---	---	1090000	---	---	---	---	---
			Minimum			N/A	348000	N/A	N/A	N/A	N/A	1060000	N/A	N/A	N/A	69	N/A
			Mean			N/A	358800	N/A	N/A	N/A	N/A	1108000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	383000	N/A	N/A	N/A	N/A	1180000	N/A	N/A	N/A	69	N/A
			Standard Deviation			N/A	14060.6	N/A	N/A	N/A	N/A	44384.68	N/A	N/A	N/A	N/A	N/A
Spring 2012		15-May-2012	MP5 MID	7.9	5060	---	333000	---	---	---	---	1030000	---	---	---	---	---
		22-May-2012	MP5 MID	7.9	5360	---	353000	---	---	---	---	1090000	---	---	---	---	---
		28-May-2012	MP5 MID	7.8	5170	---	338000	---	---	---	---	1050000	---	---	---	---	---
		31-May-2012	MP5 MID	7.9	5390	---	356000	---	---	---	---	1090000	---	---	---	---	---
		06-Jun-2012	MP5 MID	7.8	5250	---	347000	---	---	---	---	1070000	---	---	---	---	---
			Minimum			N/A	333000	N/A	N/A	N/A	N/A	1030000	N/A	N/A	N/A	N/A	N/A
			Mean			N/A	345400	N/A	N/A	N/A	N/A	1066000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	356000	N/A	N/A	N/A	N/A	1090000	N/A	N/A	N/A	N/A	N/A
			Standard Deviation			N/A	9762.17	N/A	N/A	N/A	N/A	26076.81	N/A	N/A	N/A	N/A	N/A
Summer 2010		26-Jul-2010	MP5 SURFACE	7.9	5690	---	357000	---	---	---	---	1170000	---	---	---	---	---
		28-Jul-2010	MP5 SURFACE	8	5570	---	349000	---	---	---	---	1140000	---	---	---	---	---
		03-Aug-2010	MP5 SURFACE	8.1	5400	---	340000	---	---	---	---	1110000	---	---	---	56	---
		10-Aug-2010	MP5 SURFACE	7.9	5040	---	331000	---	---	---	---	1020000	---	---	---	---	---
		17-Aug-2010	MP5 SURFACE	8	5070	0.09	325000	---	0.25	9	< 0.05	1030000	---	< 0.02	0.4	---	< 0.5
			Minimum			0.09	325000	N/A	0.25	9.00	N/A	1020000	N/A	N/A	0.40	56	N/A
			Mean			N/A	340400	N/A	N/A	N/A	N/A	1094000	N/A	N/A	N/A	N/A	N/A
			Maximum			0.09	357000	N/A	0.25	9.00	N/A	1170000	N/A	N/A	0.40	56	N/A
			Standard Deviation			N/A	12992.3	N/A	N/A	N/A	N/A	66558.25	N/A	N/A	N/A	N/A	N/A
Fall 2010		02-Nov-2010	MP5 SURFACE	7.1	5300	---	342000	---	---	---	---	1080000	---	---	---	---	---
		08-Nov-2010	MP5 SURFACE	7.7	5500	---	352000	---	---	---	---	1120000	---	---	---	---	---
		18-Nov-2010	MP5 SURFACE	7.7	4950	---	319000	---	---	---	---	1010000	---	---	---	77	---
		24-Nov-2010	MP5 SURFACE	7.7	5030	---	322000	---	---	---	---	1030000	---	---	---	---	---
		01-Dec-2010	MP5 SURFACE	7.7	4960	---	318000	---	---	---	---	1010000	---	---	---	---	---
			Minimum			N/A	318000	N/A	N/A	N/A	N/A	1010000	N/A	N/A	N/A	77	N/A
			Mean			N/A	330600	N/A	N/A	N/A	N/A	1050000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	352000	N/A	N/A	N/A	N/A	1120000	N/A	N/A	N/A	77	N/A
			Standard Deviation			N/A	15453.2	N/A	N/A	N/A	N/A	48476.8	N/A	N/A	N/A	N/A	N/A



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Macaulay Point			Water Quality Guidelines:														
Winter 2011		16-Mar-2011	MP5 SURFACE	7.8	4930	---	329000	---	---	---	---	997000	---	---	---	---	---
		22-Mar-2011	MP5 SURFACE	7.8	5260	---	351000	---	---	---	---	1060000	---	---	---	---	---
		28-Mar-2011	MP5 SURFACE	7.8	5090	---	338000	---	---	---	---	1030000	---	---	---	68	---
		07-Apr-2011	MP5 SURFACE	7.8	5090	---	342000	---	---	---	---	1030000	---	---	---	---	---
		12-Apr-2011	MP5 SURFACE	7.9	4970	---	331000	---	---	---	---	1010000	---	---	---	---	---
			Minimum			N/A	329000	N/A	N/A	N/A	N/A	997000	N/A	N/A	N/A	68	N/A
			Mean			N/A	338200	N/A	N/A	N/A	N/A	1025400	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	351000	N/A	N/A	N/A	N/A	1060000	N/A	N/A	N/A	68	N/A
			Standard Deviation			N/A	8871.3	N/A	N/A	N/A	N/A	23891.42	N/A	N/A	N/A	N/A	N/A
Spring 2011		04-May-2011	MP5 SURFACE	7.9	5340	---	358000	---	---	---	---	1080000	---	---	---	---	---
		09-May-2011	MP5 SURFACE	8	5540	---	370000	---	---	---	---	1120000	---	---	---	---	---
		17-May-2011	MP5 SURFACE	7.9	5320	---	356000	---	---	---	---	1080000	---	---	---	72	---
		25-May-2011	MP5 SURFACE	7.9	5330	---	360000	---	---	---	---	1080000	---	---	---	---	---
		30-May-2011	MP5 SURFACE	8	5590	---	376000	---	---	---	---	1130000	---	---	---	---	---
			Minimum			N/A	356000	N/A	N/A	N/A	N/A	1080000	N/A	N/A	N/A	72	N/A
			Mean			N/A	364000	N/A	N/A	N/A	N/A	1098000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	376000	N/A	N/A	N/A	N/A	1130000	N/A	N/A	N/A	72	N/A
			Standard Deviation			N/A	8602.33	N/A	N/A	N/A	N/A	24899.8	N/A	N/A	N/A	N/A	N/A
Summer 2011		20-Jul-2011	MP5 SURFACE	7.7	5130	---	342000	---	---	---	---	1040000	---	---	---	---	---
		26-Jul-2011	MP5 SURFACE	7.8	5300	---	356000	---	---	---	---	1070000	---	---	---	---	---
		02-Aug-2011	MP5 SURFACE	7.7	5070	---	334000	---	---	---	---	1030000	---	---	---	60	---
		09-Aug-2011	MP5 SURFACE	7.8	5060	---	337000	---	---	---	---	1020000	---	---	---	---	---
		16-Aug-2011	MP5 SURFACE	7.7	5390	---	359000	---	---	---	---	1090000	---	---	---	---	---
			Minimum			N/A	334000	N/A	N/A	N/A	N/A	1020000	N/A	N/A	N/A	60	N/A
			Mean			N/A	345600	N/A	N/A	N/A	N/A	1050000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	359000	N/A	N/A	N/A	N/A	1090000	N/A	N/A	N/A	60	N/A
			Standard Deviation			N/A	11282.7	N/A	N/A	N/A	N/A	29154.76	N/A	N/A	N/A	N/A	N/A
Fall 2011		31-Oct-2011	MP5 SURFACE	7.7	5560	---	365000	---	---	---	---	1130000	---	---	---	---	---
		07-Nov-2011	MP5 SURFACE	7.7	5280	---	352000	---	---	---	---	1070000	---	---	---	---	---
		15-Nov-2011	MP5 SURFACE	7.7	5610	---	370000	---	---	---	---	1140000	---	---	---	72	---
		28-Nov-2011	MP5 SURFACE	7.9	5170	---	337000	---	---	---	---	1050000	---	---	---	---	---
		30-Nov-2011	MP5 SURFACE	7.8	5440	---	362000	---	---	---	---	1100000	---	---	---	---	---
			Minimum			N/A	337000	N/A	N/A	N/A	N/A	1050000	N/A	N/A	N/A	72	N/A
			Mean			N/A	357200	N/A	N/A	N/A	N/A	1098000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	370000	N/A	N/A	N/A	N/A	1140000	N/A	N/A	N/A	72	N/A
			Standard Deviation			N/A	13065.2	N/A	N/A	N/A	N/A	38340.58	N/A	N/A	N/A	N/A	N/A
Winter 2012		08-Feb-2012	MP5 SURFACE	7.8	5380	---	353000	---	---	---	---	1090000	---	---	---	---	---
		15-Feb-2012	MP5 SURFACE	7.8	5360	---	357000	---	---	---	---	1080000	---	---	---	---	---
		21-Feb-2012	MP5 SURFACE	7.8	5470	---	357000	---	---	---	---	1110000	---	---	---	68	---
		27-Feb-2012	MP5 SURFACE	7.8	5680	---	375000	---	---	---	---	1150000	---	---	---	---	---
		04-Mar-2012	MP5 SURFACE	7.7	5320	---	346000	---	---	---	---	1080000	---	---	---	---	---
			Minimum			N/A	346000	N/A	N/A	N/A	N/A	1080000	N/A	N/A	N/A	68	N/A
			Mean			N/A	357600	N/A	N/A	N/A	N/A	1102000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	375000	N/A	N/A	N/A	N/A	1150000	N/A	N/A	N/A	68	N/A
			Standard Deviation			N/A	10714.5	N/A	N/A	N/A	N/A	29495.76	N/A	N/A	N/A	N/A	N/A
Spring 2012		15-May-2012	MP5 SURFACE	7.9	5190	---	341000	---	---	---	---	1050000	---	---	---	---	---
		22-May-2012	MP5 SURFACE	7.9	5280	---	348000	---	---	---	---	1070000	---	---	---	---	---
		28-May-2012	MP5 SURFACE	7.8	5470	---	359000	---	---	---	---	1110000	---	---	---	---	---
		31-May-2012	MP5 SURFACE	7.9	5440	---	358000	---	---	---	---	1100000	---	---	---	---	---
		06-Jun-2012	MP5 SURFACE	7.8	5270	---	347000	---	---	---	---	1070000	---	---	---	---	---
			Minimum			N/A	341000	N/A	N/A	N/A	N/A	1050000	N/A	N/A	N/A	N/A	N/A
			Mean			N/A	350600	N/A	N/A	N/A	N/A	1080000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	359000	N/A	N/A	N/A	N/A	1110000	N/A	N/A	N/A	N/A	N/A
			Standard Deviation			N/A	7700.65	N/A	N/A	N/A	N/A	24494.9	N/A	N/A	N/A	N/A	N/A



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements													
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)	
Macaulay Point			Water Quality Guidelines:	7 - 8.7	n/a	0.12	n/a	n/a	3	n/a	140	n/a	100	0.016	75	n/a	10	
MP-6	Summer 2010	26-Jul-2010	MP6 BOTTOM	7.7	5520	---	353000	---	---	---	---	1130000	---	---	---	---	---	
		28-Jul-2010	MP6 BOTTOM	7.7	6270	---	389000	---	---	---	---	1290000	---	---	---	---	---	
		03-Aug-2010	MP6 BOTTOM	7.7	6170	---	386000	---	---	---	---	1260000	---	---	---	89	---	
		10-Aug-2010	MP6 BOTTOM	7.8	5620	---	362000	---	---	---	---	1150000	---	---	---	---	---	
		17-Aug-2010	MP6 BOTTOM	7.7	5360	---	343000	---	---	---	---	1090000	---	---	---	---	---	
			Minimum			N/A	343000	N/A	N/A	N/A	N/A	1090000	N/A	N/A	N/A	N/A	89	N/A
			Mean			N/A	366600	N/A	N/A	N/A	N/A	1184000	N/A	N/A	N/A	N/A	N/A	
			Maximum			N/A	389000	N/A	N/A	N/A	N/A	1290000	N/A	N/A	N/A	N/A	89	N/A
			Standard Deviation			N/A	20255.9	N/A	N/A	N/A	N/A	86486.99	N/A	N/A	N/A	N/A	N/A	
MP-6	Fall 2010	02-Nov-2010	MP6 BOTTOM	7.7	5510	---	352000	---	---	---	---	1130000	---	---	---	---	---	
		08-Nov-2010	MP6 BOTTOM	7.7	5370	---	348000	---	---	---	---	1090000	---	---	---	---	---	
		18-Nov-2010	MP6 BOTTOM	7.7	6050	---	385000	---	---	---	---	1240000	---	---	---	78	---	
		24-Nov-2010	MP6 BOTTOM	7.6	5540	---	354000	---	---	---	---	1130000	---	---	---	---	---	
		01-Dec-2010	MP6 BOTTOM	7.7	5450	---	349000	---	---	---	---	1110000	---	---	---	---	---	
			Minimum			N/A	348000	N/A	N/A	N/A	N/A	1090000	N/A	N/A	N/A	N/A	78	N/A
			Mean			N/A	357600	N/A	N/A	N/A	N/A	1140000	N/A	N/A	N/A	N/A	N/A	
			Maximum			N/A	385000	N/A	N/A	N/A	N/A	1240000	N/A	N/A	N/A	N/A	78	N/A
			Standard Deviation			N/A	15501.6	N/A	N/A	N/A	N/A	58309.52	N/A	N/A	N/A	N/A	N/A	
MP-6	Winter 2011	16-Mar-2011	MP6 BOTTOM	7.8	5380	---	361000	---	---	---	---	1090000	---	---	---	---	---	
		22-Mar-2011	MP6 BOTTOM	7.8	5480	---	365000	---	---	---	---	1110000	---	---	---	---	---	
		28-Mar-2011	MP6 BOTTOM	7.8	5580	---	370000	---	---	---	---	1130000	---	---	---	64	---	
		07-Apr-2011	MP6 BOTTOM	7.2	5500	---	371000	---	---	---	---	1110000	---	---	---	---	---	
		12-Apr-2011	MP6 BOTTOM	7.8	5460	---	365000	---	---	---	---	1110000	---	---	---	---	---	
			Minimum			N/A	361000	N/A	N/A	N/A	N/A	1090000	N/A	N/A	N/A	N/A	64	N/A
			Mean			N/A	366400	N/A	N/A	N/A	N/A	1110000	N/A	N/A	N/A	N/A	N/A	
			Maximum			N/A	371000	N/A	N/A	N/A	N/A	1130000	N/A	N/A	N/A	N/A	64	N/A
			Standard Deviation			N/A	4098.78	N/A	N/A	N/A	N/A	14142.14	N/A	N/A	N/A	N/A	N/A	
MP-6	Spring 2011	04-May-2011	MP6 BOTTOM	7.8	6000	---	404000	---	---	---	---	1210000	---	---	---	---	---	
		09-May-2011	MP6 BOTTOM	7.8	5980	---	401000	---	---	---	---	1210000	---	---	---	---	---	
		17-May-2011	MP6 BOTTOM	7.8	6020	---	403000	---	---	---	---	1220000	---	---	---	80	---	
		25-May-2011	MP6 BOTTOM	7.8	6120	---	413000	---	---	---	---	1240000	---	---	---	---	---	
		30-May-2011	MP6 BOTTOM	7.8	5780	---	391000	---	---	---	---	1170000	---	---	---	---	---	
			Minimum			N/A	391000	N/A	N/A	N/A	N/A	1170000	N/A	N/A	N/A	N/A	80	N/A
			Mean			N/A	402400	N/A	N/A	N/A	N/A	1210000	N/A	N/A	N/A	N/A	N/A	
			Maximum			N/A	413000	N/A	N/A	N/A	N/A	1240000	N/A	N/A	N/A	N/A	80	N/A
			Standard Deviation			N/A	7861.3	N/A	N/A	N/A	N/A	25495.1	N/A	N/A	N/A	N/A	N/A	
MP-6	Summer 2011	20-Jul-2011	MP6 BOTTOM	7.6	5260	---	349000	---	---	---	---	1070000	---	---	---	---	---	
		26-Jul-2011	MP6 BOTTOM	7.5	5500	---	368000	---	---	---	---	1110000	---	---	---	---	---	
		02-Aug-2011	MP6 BOTTOM	7.5	5730	---	377000	---	---	---	---	1160000	---	---	---	75	---	
		09-Aug-2011	MP6 BOTTOM	7.6	6220	---	412000	---	---	---	---	1260000	---	---	---	---	---	
		16-Aug-2011	MP6 BOTTOM	7.6	6040	---	402000	---	---	---	---	1220000	---	---	---	---	---	
			Minimum			N/A	349000	N/A	N/A	N/A	N/A	1070000	N/A	N/A	N/A	N/A	75	N/A
			Mean			N/A	381600	N/A	N/A	N/A	N/A	1164000	N/A	N/A	N/A	N/A	N/A	
			Maximum			N/A	412000	N/A	N/A	N/A	N/A	1260000	N/A	N/A	N/A	N/A	75	N/A
			Standard Deviation			N/A	25540.2	N/A	N/A	N/A	N/A	77653.07	N/A	N/A	N/A	N/A	N/A	
MP-6	Fall 2011	31-Oct-2011	MP6 BOTTOM	7.7	5880	---	387000	---	---	---	---	1190000	---	---	---	---	---	
		07-Nov-2011	MP6 BOTTOM	7.7	5900	---	391000	---	---	---	---	1190000	---	---	---	---	---	
		15-Nov-2011	MP6 BOTTOM	7.7	5220	---	342000	---	---	---	---	1060000	---	---	---	81	---	
		28-Nov-2011	MP6 BOTTOM	7.8	5380	---	354000	---	---	---	---	1090000	---	---	---	---	---	
		30-Nov-2011	MP6 BOTTOM	7.8	5300	---	355000	---	---	---	---	1070000	---	---	---	---	---	
			Minimum			N/A	342000	N/A	N/A	N/A	N/A	1060000	N/A	N/A	N/A	N/A	81	N/A
			Mean			N/A	365800	N/A	N/A	N/A	N/A	1120000	N/A	N/A	N/A	N/A	N/A	
			Maximum			N/A	391000	N/A	N/A	N/A	N/A	1190000	N/A	N/A	N/A	N/A	81	N/A
			Standard Deviation			N/A	21833.5	N/A	N/A	N/A	N/A	64807.41	N/A	N/A	N/A	N/A	N/A	



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Macaulay Point																	
Winter 2012		08-Feb-2012	MP6 BOTTOM	7.8	5980	---	393000	---	---	---	---	1210000	---	---	---	---	---
		15-Feb-2012	MP6 BOTTOM	7.8	5620	---	371000	---	---	---	---	1140000	---	---	---	---	---
		21-Feb-2012	MP6 BOTTOM	7.8	6010	---	393000	---	---	---	---	1220000	---	---	---	68	---
		27-Feb-2012	MP6 BOTTOM	7.8	6090	---	401000	---	---	---	---	1230000	---	---	---	---	---
		04-Mar-2012	MP6 BOTTOM	7.7	5800	---	377000	---	---	---	---	1180000	---	---	---	---	---
			Minimum			N/A	371000	N/A	N/A	N/A	N/A	1140000	N/A	N/A	N/A	68	N/A
			Mean			N/A	387000	N/A	N/A	N/A	N/A	1196000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	401000	N/A	N/A	N/A	N/A	1230000	N/A	N/A	N/A	68	N/A
			Standard Deviation			N/A	12490	N/A	N/A	N/A	N/A	36469.17	N/A	N/A	N/A	N/A	N/A
Spring 2012		15-May-2012	MP6 BOTTOM	7.8	5720	---	376000	---	---	---	---	1160000	---	---	---	---	---
		22-May-2012	MP6 BOTTOM	7.7	5850	---	385000	---	---	---	---	1190000	---	---	---	---	---
		28-May-2012	MP6 BOTTOM	7.8	5270	---	345000	---	---	---	---	1070000	---	---	---	---	---
		31-May-2012	MP6 BOTTOM	7.8	5770	---	380000	---	---	---	---	1170000	---	---	---	---	---
		06-Jun-2012	MP6 BOTTOM	7.7	5680	---	375000	---	---	---	---	1150000	---	---	---	---	---
			Minimum			N/A	345000	N/A	N/A	N/A	N/A	1070000	N/A	N/A	N/A	N/A	N/A
			Mean			N/A	372200	N/A	N/A	N/A	N/A	1148000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	385000	N/A	N/A	N/A	N/A	1190000	N/A	N/A	N/A	N/A	N/A
			Standard Deviation			N/A	15706.7	N/A	N/A	N/A	N/A	46043.46	N/A	N/A	N/A	N/A	N/A
Summer 2010		26-Jul-2010	MP6 MID	7.9	5550	---	355000	---	---	---	---	1130000	---	---	---	---	---
		28-Jul-2010	MP6 MID	7.9	6170	---	377000	---	---	---	---	1270000	---	---	---	---	---
		03-Aug-2010	MP6 MID	8	5630	---	353000	---	---	---	---	1150000	---	---	---	66	---
		10-Aug-2010	MP6 MID	8	5530	---	351000	---	---	---	---	1130000	---	---	---	---	---
		17-Aug-2010	MP6 MID	8	5030	---	323000	---	---	---	---	1030000	---	---	---	---	---
			Minimum			N/A	323000	N/A	N/A	N/A	N/A	1030000	N/A	N/A	N/A	66	N/A
			Mean			N/A	351800	N/A	N/A	N/A	N/A	1142000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	377000	N/A	N/A	N/A	N/A	1270000	N/A	N/A	N/A	66	N/A
			Standard Deviation			N/A	19214.6	N/A	N/A	N/A	N/A	85557	N/A	N/A	N/A	N/A	N/A
Fall 2010		02-Nov-2010	MP6 MID	7.7	5360	---	346000	---	---	---	---	1090000	---	---	---	---	---
		08-Nov-2010	MP6 MID	7.7	5240	---	339000	---	---	---	---	1070000	---	---	---	---	---
		18-Nov-2010	MP6 MID	7.8	5800	---	369000	---	---	---	---	1190000	---	---	---	75	---
		24-Nov-2010	MP6 MID	7.7	5070	---	323000	---	---	---	---	1030000	---	---	---	---	---
		01-Dec-2010	MP6 MID	7.7	4750	---	304000	---	---	---	---	969000	---	---	---	---	---
			Minimum			N/A	304000	N/A	N/A	N/A	N/A	969000	N/A	N/A	N/A	75	N/A
			Mean			N/A	336200	N/A	N/A	N/A	N/A	1069800	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	369000	N/A	N/A	N/A	N/A	1190000	N/A	N/A	N/A	75	N/A
			Standard Deviation			N/A	24447.9	N/A	N/A	N/A	N/A	81548.76	N/A	N/A	N/A	N/A	N/A
Winter 2011		16-Mar-2011	MP6 MID	7.8	5260	---	352000	---	---	---	---	1060000	---	---	---	---	---
		22-Mar-2011	MP6 MID	7.8	5520	---	368000	---	---	---	---	1120000	---	---	---	---	---
		28-Mar-2011	MP6 MID	7.8	5370	---	357000	---	---	---	---	1090000	---	---	---	65	---
		07-Apr-2011	MP6 MID	7.9	5280	---	356000	---	---	---	---	1070000	---	---	---	---	---
		12-Apr-2011	MP6 MID	7.9	5100	---	341000	---	---	---	---	1030000	---	---	---	---	---
			Minimum			N/A	341000	N/A	N/A	N/A	N/A	1030000	N/A	N/A	N/A	65	N/A
			Mean			N/A	354800	N/A	N/A	N/A	N/A	1074000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	368000	N/A	N/A	N/A	N/A	1120000	N/A	N/A	N/A	65	N/A
			Standard Deviation			N/A	9731.39	N/A	N/A	N/A	N/A	33615.47	N/A	N/A	N/A	N/A	N/A
Spring 2011		04-May-2011	MP6 MID	7.9	5750	---	387000	---	---	---	---	1160000	---	---	---	---	---
		09-May-2011	MP6 MID	7.9	5610	---	376000	---	---	---	---	1130000	---	---	---	---	---
		17-May-2011	MP6 MID	7.9	5740	---	383000	---	---	---	---	1160000	---	---	---	75	---
		25-May-2011	MP6 MID	7.9	5650	---	383000	---	---	---	---	1140000	---	---	---	---	---
		30-May-2011	MP6 MID	7.9	5370	---	362000	---	---	---	---	1080000	---	---	---	---	---
			Minimum			N/A	362000	N/A	N/A	N/A	N/A	1080000	N/A	N/A	N/A	75	N/A
			Mean			N/A	378200	N/A	N/A	N/A	N/A	1134000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	387000	N/A	N/A	N/A	N/A	1160000	N/A	N/A	N/A	75	N/A
			Standard Deviation			N/A	9884.33	N/A	N/A	N/A	N/A	32863.35	N/A	N/A	N/A	N/A	N/A



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Macaulay Point			Water Quality Guidelines:														
Summer 2011		20-Jul-2011	MP6 MID	7.7	4990	---	333000	---	---	---	---	1010000	---	---	---	---	---
		26-Jul-2011	MP6 MID	7.7	5080	---	339000	---	---	---	---	1030000	---	---	---	---	---
		02-Aug-2011	MP6 MID	7.6	5540	---	367000	---	---	---	---	1120000	---	---	---	66	---
		09-Aug-2011	MP6 MID	7.8	5580	---	375000	---	---	---	---	1130000	---	---	---	---	---
		16-Aug-2011	MP6 MID	7.6	5440	---	363000	---	---	---	---	1100000	---	---	---	---	---
			Minimum			N/A	333000	N/A	N/A	N/A	N/A	1010000	N/A	N/A	N/A	66	N/A
			Mean			N/A	355400	N/A	N/A	N/A	N/A	1078000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	375000	N/A	N/A	N/A	N/A	1130000	N/A	N/A	N/A	66	N/A
			Standard Deviation			N/A	18352.1	N/A	N/A	N/A	N/A	54497.71	N/A	N/A	N/A	N/A	N/A
Fall 2011		31-Oct-2011	MP6 MID	7.7	5630	---	369000	---	---	---	---	1140000	---	---	---	---	---
		07-Nov-2011	MP6 MID	7.7	5340	---	354000	---	---	---	---	1080000	---	---	---	---	---
		15-Nov-2011	MP6 MID	7.7	4930	---	323000	---	---	---	---	1000000	---	---	---	77	---
		28-Nov-2011	MP6 MID	7.8	5350	---	353000	---	---	---	---	1080000	---	---	---	---	---
		30-Nov-2011	MP6 MID	7.8	5370	---	357000	---	---	---	---	1090000	---	---	---	---	---
			Minimum			N/A	323000	N/A	N/A	N/A	N/A	1000000	N/A	N/A	N/A	77	N/A
			Mean			N/A	351200	N/A	N/A	N/A	N/A	1078000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	369000	N/A	N/A	N/A	N/A	1140000	N/A	N/A	N/A	77	N/A
			Standard Deviation			N/A	17005.9	N/A	N/A	N/A	N/A	50199.6	N/A	N/A	N/A	N/A	N/A
Winter 2012		08-Feb-2012	MP6 MID	7.8	5520	---	362000	---	---	---	---	1120000	---	---	---	---	---
		15-Feb-2012	MP6 MID	7.8	5460	---	361000	---	---	---	---	1110000	---	---	---	---	---
		21-Feb-2012	MP6 MID	7.8	5910	---	384000	---	---	---	---	1200000	---	---	---	71	---
		27-Feb-2012	MP6 MID	7.8	5830	---	387000	---	---	---	---	1180000	---	---	---	---	---
		04-Mar-2012	MP6 MID	7.7	5500	---	359000	---	---	---	---	1120000	---	---	---	---	---
			Minimum			N/A	359000	N/A	N/A	N/A	N/A	1110000	N/A	N/A	N/A	71	N/A
			Mean			N/A	370600	N/A	N/A	N/A	N/A	1146000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	387000	N/A	N/A	N/A	N/A	1200000	N/A	N/A	N/A	71	N/A
			Standard Deviation			N/A	13685.8	N/A	N/A	N/A	N/A	40987.8	N/A	N/A	N/A	N/A	N/A
Spring 2012		15-May-2012	MP6 MID	7.9	4940	---	324000	---	---	---	---	1000000	---	---	---	---	---
		22-May-2012	MP6 MID	7.9	5430	---	360000	---	---	---	---	1100000	---	---	---	---	---
		28-May-2012	MP6 MID	7.8	4810	---	314000	---	---	---	---	978000	---	---	---	---	---
		31-May-2012	MP6 MID	7.9	5440	---	360000	---	---	---	---	1100000	---	---	---	---	---
		06-Jun-2012	MP6 MID	7.8	5470	---	359000	---	---	---	---	1110000	---	---	---	---	---
			Minimum			N/A	314000	N/A	N/A	N/A	N/A	978000	N/A	N/A	N/A	N/A	N/A
			Mean			N/A	343400	N/A	N/A	N/A	N/A	1057600	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	360000	N/A	N/A	N/A	N/A	1110000	N/A	N/A	N/A	N/A	N/A
			Standard Deviation			N/A	22556.6	N/A	N/A	N/A	N/A	63236.07	N/A	N/A	N/A	N/A	N/A
Summer 2010		26-Jul-2010	MP6 SURFACE	7.9	5590	---	352000	---	---	---	---	1140000	---	---	---	---	---
		28-Jul-2010	MP6 SURFACE	7.9	5670	---	355000	---	---	---	---	1160000	---	---	---	---	---
		03-Aug-2010	MP6 SURFACE	8.1	5240	---	331000	---	---	---	---	1070000	---	---	---	58	---
		10-Aug-2010	MP6 SURFACE	8	5180	---	337000	---	---	---	---	1050000	---	---	---	---	---
		17-Aug-2010	MP6 SURFACE	8	5350	---	338000	---	---	---	---	1090000	---	---	---	---	---
			Minimum			N/A	331000	N/A	N/A	N/A	N/A	1050000	N/A	N/A	N/A	58	N/A
			Mean			N/A	342600	N/A	N/A	N/A	N/A	1102000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	355000	N/A	N/A	N/A	N/A	1160000	N/A	N/A	N/A	58	N/A
			Standard Deviation			N/A	10358.6	N/A	N/A	N/A	N/A	46583.26	N/A	N/A	N/A	N/A	N/A
Fall 2010		02-Nov-2010	MP6 SURFACE	7.7	5190	---	337000	---	---	---	---	1060000	---	---	---	---	---
		08-Nov-2010	MP6 SURFACE	7.7	5490	---	352000	---	---	---	---	1120000	---	---	---	---	---
		18-Nov-2010	MP6 SURFACE	7.7	5590	---	356000	---	---	---	---	1140000	---	---	---	78	---
		24-Nov-2010	MP6 SURFACE	7.7	5610	---	347000	---	---	---	---	1150000	---	---	---	---	---
		01-Dec-2010	MP6 SURFACE	7.8	4860	---	311000	---	---	---	---	992000	---	---	---	---	---
			Minimum			N/A	311000	N/A	N/A	N/A	N/A	992000	N/A	N/A	N/A	78	N/A
			Mean			N/A	340600	N/A	N/A	N/A	N/A	1092400	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	356000	N/A	N/A	N/A	N/A	1150000	N/A	N/A	N/A	78	N/A
			Standard Deviation			N/A	18008.3	N/A	N/A	N/A	N/A	66096.9	N/A	N/A	N/A	N/A	N/A



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Season	Date (d-m-y)	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)
Macaulay Point																	
Winter 2011		16-Mar-2011	MP6 SURFACE	7.8	5220	---	349000	---	---	---	---	1050000	---	---	---	---	---
		22-Mar-2011	MP6 SURFACE	7.9	5280	---	352000	---	---	---	---	1070000	---	---	---	---	---
		28-Mar-2011	MP6 SURFACE	7.8	5320	---	353000	---	---	---	---	1080000	---	---	---	64	---
		07-Apr-2011	MP6 SURFACE	7.8	5160	---	347000	---	---	---	---	1040000	---	---	---	---	---
		12-Apr-2011	MP6 SURFACE	7.9	5050	---	337000	---	---	---	---	1020000	---	---	---	---	---
			Minimum			N/A	337000	N/A	N/A	N/A	N/A	1020000	N/A	N/A	N/A	64	N/A
			Mean			N/A	347600	N/A	N/A	N/A	N/A	1052000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	353000	N/A	N/A	N/A	N/A	1080000	N/A	N/A	N/A	64	N/A
			Standard Deviation			N/A	6387.49	N/A	N/A	N/A	N/A	23874.67	N/A	N/A	N/A	N/A	N/A
Spring 2011		04-May-2011	MP6 SURFACE	7.9	5600	---	375000	---	---	---	---	1130000	---	---	---	---	---
		09-May-2011	MP6 SURFACE	7.9	5440	---	363000	---	---	---	---	1100000	---	---	---	---	---
		17-May-2011	MP6 SURFACE	7.9	5530	---	368000	---	---	---	---	1120000	---	---	---	70	---
		25-May-2011	MP6 SURFACE	7.9	5510	---	373000	---	---	---	---	1110000	---	---	---	---	---
		30-May-2011	MP6 SURFACE	8	5300	---	357000	---	---	---	---	1070000	---	---	---	---	---
			Minimum			N/A	357000	N/A	N/A	N/A	N/A	1070000	N/A	N/A	N/A	70	N/A
			Mean			N/A	367200	N/A	N/A	N/A	N/A	1106000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	375000	N/A	N/A	N/A	N/A	1130000	N/A	N/A	N/A	70	N/A
			Standard Deviation			N/A	7362.06	N/A	N/A	N/A	N/A	23021.73	N/A	N/A	N/A	N/A	N/A
Summer 2011		20-Jul-2011	MP6 SURFACE	7.7	4970	---	328000	---	---	---	---	1010000	---	---	---	---	---
		26-Jul-2011	MP6 SURFACE	7.8	4860	---	324000	---	---	---	---	983000	---	---	---	---	---
		02-Aug-2011	MP6 SURFACE	7.7	5350	---	355000	---	---	---	---	1080000	---	---	---	55	---
		09-Aug-2011	MP6 SURFACE	7.8	5460	---	365000	---	---	---	---	1100000	---	---	---	---	---
		16-Aug-2011	MP6 SURFACE	7.7	5330	---	357000	---	---	---	---	1080000	---	---	---	---	---
			Minimum			N/A	324000	N/A	N/A	N/A	N/A	983000	N/A	N/A	N/A	55	N/A
			Mean			N/A	345800	N/A	N/A	N/A	N/A	1050600	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	365000	N/A	N/A	N/A	N/A	1100000	N/A	N/A	N/A	55	N/A
			Standard Deviation			N/A	18512.2	N/A	N/A	N/A	N/A	50958.81	N/A	N/A	N/A	N/A	N/A
Fall 2011		31-Oct-2011	MP6 SURFACE	7.7	5590	---	368000	---	---	---	---	1130000	---	---	---	---	---
		07-Nov-2011	MP6 SURFACE	7.7	5220	---	347000	---	---	---	---	1060000	---	---	---	---	---
		15-Nov-2011	MP6 SURFACE	7.7	5310	---	351000	---	---	---	---	1080000	---	---	---	81	---
		28-Nov-2011	MP6 SURFACE	7.9	5190	---	339000	---	---	---	---	1050000	---	---	---	---	---
		30-Nov-2011	MP6 SURFACE	7.8	5340	---	354000	---	---	---	---	1080000	---	---	---	---	---
			Minimum			N/A	339000	N/A	N/A	N/A	N/A	1050000	N/A	N/A	N/A	81	N/A
			Mean			N/A	351800	N/A	N/A	N/A	N/A	1080000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	368000	N/A	N/A	N/A	N/A	1130000	N/A	N/A	N/A	81	N/A
			Standard Deviation			N/A	10663	N/A	N/A	N/A	N/A	30822.07	N/A	N/A	N/A	N/A	N/A
Winter 2012		08-Feb-2012	MP6 SURFACE	7.8	5560	---	365000	---	---	---	---	1130000	---	---	---	---	---
		15-Feb-2012	MP6 SURFACE	7.8	5670	---	373000	---	---	---	---	1150000	---	---	---	---	---
		21-Feb-2012	MP6 SURFACE	7.8	5760	---	375000	---	---	---	---	1170000	---	---	---	69	---
		27-Feb-2012	MP6 SURFACE	7.8	5710	---	380000	---	---	---	---	1160000	---	---	---	---	---
		04-Mar-2012	MP6 SURFACE	7.7	5390	---	350000	---	---	---	---	1100000	---	---	---	---	---
			Minimum			N/A	350000	N/A	N/A	N/A	N/A	1100000	N/A	N/A	N/A	69	N/A
			Mean			N/A	368600	N/A	N/A	N/A	N/A	1142000	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	380000	N/A	N/A	N/A	N/A	1170000	N/A	N/A	N/A	69	N/A
			Standard Deviation			N/A	11717.5	N/A	N/A	N/A	N/A	27748.87	N/A	N/A	N/A	N/A	N/A
Spring 2012		15-May-2012	MP6 SURFACE	7.9	5280	---	346000	---	---	---	---	1070000	---	---	---	---	---
		22-May-2012	MP6 SURFACE	7.9	5310	---	350000	---	---	---	---	1080000	---	---	---	---	---
		28-May-2012	MP6 SURFACE	7.8	4720	---	308000	---	---	---	---	959000	---	---	---	---	---
		31-May-2012	MP6 SURFACE	7.9	5380	---	356000	---	---	---	---	1090000	---	---	---	---	---
		06-Jun-2012	MP6 SURFACE	7.8	5410	---	356000	---	---	---	---	1100000	---	---	---	---	---
			Minimum			N/A	308000	N/A	N/A	N/A	N/A	959000	N/A	N/A	N/A	N/A	N/A
			Mean			N/A	343200	N/A	N/A	N/A	N/A	1059800	N/A	N/A	N/A	N/A	N/A
			Maximum			N/A	356000	N/A	N/A	N/A	N/A	1100000	N/A	N/A	N/A	N/A	N/A
			Standard Deviation			N/A	20129.6	N/A	N/A	N/A	N/A	57447.37	N/A	N/A	N/A	N/A	N/A



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements													
Monitoring Station	Date (d-m-y)	Lab File	Sample Name	pH (ph units)	Total Hardness as CaCO3 (mg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)	
AH-2 Quality Assurance																		
Sample	16-Mar-2011	B121043	AH2 BOTTOM	7.8	5130	0.08	345000	---	0.36	32	< 0.05	1040000	---	< 0.02	0.51	---	0.8	
Triplicate	16-Mar-2011	B121043	AH2 BOTTOM TRIPLICATE 1	7.8	5220	---	351000	---	---	---	---	1060000	---	---	---	---	---	
Triplicate	16-Mar-2011	B121043	AH2 BOTTOM TRIPLICATE 2	7.8	5320	---	356000	---	---	---	---	1080000	---	---	---	---	---	
				0%	2%	2%		2%										
Sample	28-Mar-2011	B124352	AH2 BOTTOM	7.8	5200	0.08	343000	---	0.33	41	< 0.05	1050000	---	< 0.02	0.46	63	0.7	
Triplicate	28-Mar-2011	B124352	AH2 BOTTOM TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	65	---	
Triplicate	28-Mar-2011	B124352	AH2 BOTTOM TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	64	---	
																2%		
Sample	04-May-2011	B135916	AH2 BOTTOM	7.9	5360	0.07	360000	---	0.25	28	< 0.05	1080000	---	< 0.02	0.47	---	0.6	
Triplicate	04-May-2011	B135916	AH2 BOTTOM TRIPLICATE 2	7.9	5380	---	361000	---	---	---	---	1090000	---	---	---	---	---	
Triplicate	04-May-2011	B135916	AH2 BOTTOM TRIPLICATE 1	7.9	5440	---	365000	---	---	---	---	1100000	---	---	---	---	---	
				0%	1%	1%		1%										
Sample	17-May-2011	B140372	AH2 BOTTOM	7.9	5420	0.07	363000	---	0.41	38	< 0.05	1100000	---	< 0.02	0.48	66	0.8	
Triplicate	17-May-2011	B140372	AH2 BOT T1	---	---	---	---	---	---	---	---	---	---	---	---	68	---	
Triplicate	17-May-2011	B140372	AH2 BOT T2	---	---	---	---	---	---	---	---	---	---	---	---	68	---	
																2%		
Sample	20-Jul-2011	B165469	AH2 BOTTOM	7.7	5240	0.08	347000	---	0.28	11	< 0.05	1060000	---	< 0.02	0.39	---	< 0.5	
Triplicate	20-Jul-2011	B165469	AH2 BOTTOM TRIPLICATE 1	7.7	5330	---	352000	---	---	---	---	1080000	---	---	---	---	---	
Triplicate	20-Jul-2011	B165469	AH2 BOTTOM TRIPLICATE 2	7.7	5200	---	348000	---	---	---	---	1050000	---	---	---	---	---	
				0%	1%	1%		1%										
Sample	02-Aug-2011	B169888	AH2 BOTTOM	7.6	5430	0.08	359000	---	0.27	17	< 0.05	1100000	---	< 0.02	0.39	65	1.1	
Triplicate	02-Aug-2011	B169888	AH2 BOTTOM TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	63	---	
Triplicate	02-Aug-2011	B169888	AH2 BOTTOM TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	64	---	
																2%		
Sample	31-Oct-2011	B1A5294	AH2 BOTTOM	7.7	5600	0.08	366000	---	0.36	48	< 0.05	1140000	---	< 0.020	0.41	---	0.8	
Triplicate	31-Oct-2011	B1A5294	AH2 BOTTOM TRIPLICATE 1	7.7	5560	---	364000	---	---	---	---	1130000	---	---	---	---	---	
Triplicate	31-Oct-2011	B1A5294	AH2 BOTTOM TRIPLICATE 2	7.7	5520	---	362000	---	---	---	---	1120000	---	---	---	---	---	
				0%	1%	1%		1%										



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T
AH-2 Quality Assurance																	
Sample	15-Nov-2011	B1B1047	AH2 BOTTOM	7.7	5470	0.08	363000	---	0.32	31	< 0.05	1110000	---	< 0.020	0.42	77	0.7
TriPLICATE	15-Nov-2011	B1B1047	AH2 BOTTOM TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	75	---
TriPLICATE	15-Nov-2011	B1B1047	AH2 BOTTOM TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	77	---
																	2%
Sample	08-Feb-2012	B210733	AH2 BOTTOM	7.8	5320	0.07	350000	---	0.4	33	< 0.05	1080000	---	< 0.010	0.39	---	0.6
TriPLICATE	08-Feb-2012	B210733	AH2 BOTTOM TRIPLICATE 2	7.8	5340	---	348000	---	---	---	---	1080000	---	---	---	---	---
TriPLICATE	08-Feb-2012	B210733	AH2 BOTTOM TRIPILICATE 1	7.8	5370	---	351000	---	---	---	---	1090000	---	---	---	---	---
				0%	0%	0%		1%									
Sample	21-Feb-2012	B214515	AH2 BOTTOM	7.8	5590	0.08	367000	---	0.28	40	< 0.05	1130000	---	< 0.010	0.37	72	0.6
TriPLICATE	21-Feb-2012	B214515	AH2 BOTTOM TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	75	---
TriPLICATE	21-Feb-2012	B214515	AH2 BOTTOM TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	76	---
																	3%
Sample	15-May-2012	B239924	AH2 BOTTOM	7.9	5090	0.076	336000	---	0.519	14.6	< 0.050	1030000	---	< 0.010	0.495	---	0.62
TriPLICATE	15-May-2012	B239924	AH2 BOTTOM TRIPLICATE 1	7.9	5010	---	329000	---	---	---	---	1020000	---	---	---	---	---
TriPLICATE	15-May-2012	B239924	AH2 BOTTOM TRIPLICATE 2	7.9	5100	---	337000	---	---	---	---	1030000	---	---	---	---	---
				0%	1%	1%		1%									
Sample	16-Mar-2011	B121043	AH2 MID	7.8	5170	0.07	344000	---	0.31	29	0.07	1050000	---	< 0.02	0.5	---	0.7
TriPLICATE	16-Mar-2011	B121043	AH2 MID TRIPLICATE 1	7.8	5020	---	335000	---	---	---	---	1020000	---	---	---	---	---
TriPLICATE	16-Mar-2011	B121043	AH2 MID TRIPLICATE 2	7.8	5010	---	337000	---	---	---	---	1010000	---	---	---	---	---
				0%	2%	1%		2%									
Sample	28-Mar-2011	B124352	AH2 MID	7.8	5120	0.06	339000	---	0.27	25	< 0.05	1040000	---	< 0.02	0.39	61	0.8
TriPLICATE	28-Mar-2011	B124352	AH2 MID TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	65	---
TriPLICATE	28-Mar-2011	B124352	AH2 MID TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	63	---
																	3%
Sample	04-May-2011	B135916	AH2 MID	7.9	5350	0.07	359000	---	0.25	22	< 0.05	1080000	---	< 0.02	0.45	---	0.9
TriPLICATE	04-May-2011	B135916	AH2 MID TRIPLICATE 1	7.9	5320	---	356000	---	---	---	---	1080000	---	---	---	---	---
TriPLICATE	04-May-2011	B135916	AH2 MID TRIPLICATE 2	7.9	5340	---	358000	---	---	---	---	1080000	---	---	---	---	---
				0%	0%	0%		0%									
Sample	17-May-2011	B140372	AH2 MID	7.9	5450	0.07	364000	---	0.32	29	< 0.05	1100000	---	< 0.02	0.4	67	0.8
TriPLICATE	17-May-2011	B140372	AH2 MID T1	---	---	---	---	---	---	---	---	---	---	---	---	66	---
TriPLICATE	17-May-2011	B140372	AH2 MID T2	---	---	---	---	---	---	---	---	---	---	---	---	74	---
																	6%



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020				pH and Hardness		Total Metals and Trace Elements											
Monitoring Station	Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T
AH-2 Quality Assurance																	
Sample	20-Jul-2011	B165469	AH2 MID	7.7	5290	0.08	351000	---	0.28	11	< 0.05	1070000	---	< 0.02	0.38	---	0.5
Triplicate	20-Jul-2011	B165469	AH2 MID TRIPLICATE 1	7.7	5280	---	350000	---	---	---	---	1070000	---	---	---	---	---
Triplicate	20-Jul-2011	B165469	AH2 MID TRIPLICATE 2	7.7	5190	---	344000	---	---	---	---	1050000	---	---	---	---	---
				0%	1%		1%					1%					
Sample	02-Aug-2011	B169888	AH2 MID	7.7	5360	0.09	352000	---	0.46	7	0.07	1090000	---	< 0.02	0.42	57	1
Triplicate	02-Aug-2011	B169888	AH2 MID TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	57	---
Triplicate	02-Aug-2011	B169888	AH2 MID TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	57	---
																0%	
Sample	31-Oct-2011	B1A5294	AH2 MID	7.7	5550	0.08	366000	---	0.33	20	< 0.05	1130000	---	< 0.020	0.37	---	0.6
Triplicate	31-Oct-2011	B1A5294	AH2 MID TRIPCATE 1	7.7	5520	---	362000	---	---	---	---	1120000	---	---	---	---	---
Triplicate	31-Oct-2011	B1A5294	AH2 MID TRIPCATE 2	7.7	5510	---	361000	---	---	---	---	1120000	---	---	---	---	---
				0%	0%		1%					1%					
Sample	15-Nov-2011	B1B1047	AH2 MID	7.7	5440	0.08	360000	---	0.36	27	< 0.05	1100000	---	< 0.020	0.44	74	0.5
Triplicate	15-Nov-2011	B1B1047	AH2 MID TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	77	---
Triplicate	15-Nov-2011	B1B1047	AH2 MID TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	74	---
																2%	
Sample	08-Feb-2012	B210733	AH2 MID	7.8	5370	0.08	354000	---	0.65	24	0.05	1090000	---	< 0.010	0.4	---	0.7
Triplicate	08-Feb-2012	B210733	AH2 MID TRIPLICATE 1	7.8	5280	---	345000	---	---	---	---	1070000	---	---	---	---	---
Triplicate	08-Feb-2012	B210733	AH2 MID TRIPLICATE 2	7.8	5290	---	347000	---	---	---	---	1070000	---	---	---	---	---
				0%	1%		1%					1%					
Sample	21-Feb-2012	B214515	AH2 MID	7.7	5480	0.07	359000	---	0.32	31	0.06	1110000	---	< 0.010	0.37	73	0.9
Triplicate	21-Feb-2012	B214515	AH2 MID TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	71	---
Triplicate	21-Feb-2012	B214515	AH2 MID TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	75	---
																3%	
Sample	15-May-2012	B239924	AH2 MID	7.9	5320	0.071	352000	---	0.696	15	< 0.050	1080000	---	< 0.010	0.497	---	< 0.50
Triplicate	15-May-2012	B239924	AH2 MID TRIPLICATE 1	7.9	5370	---	356000	---	---	---	---	1090000	---	---	---	---	---
Triplicate	15-May-2012	B239924	AH2 MID TRIPLICATE 2	7.9	5240	---	347000	---	---	---	---	1060000	---	---	---	---	---
				0%	1%		1%					1%					



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements													
Monitoring Station	Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T	
AH-2 Quality Assurance																		
Sample	16-Mar-2011	B121043	AH2 SURFACE	7.5	5060	0.08	339000	---	0.28	27	< 0.05	1020000	---	< 0.02	0.48	---	0.7	
Triplicate	16-Mar-2011	B121043	AH2 SURFACE TRIPLICATE 1	7.8	5160	---	345000	---	---	---	---	1040000	---	---	---	---	---	
Triplicate	16-Mar-2011	B121043	AH2 SURFACE TRIPLICATE 2	7.8	5100	---	341000	---	---	---	---	1030000	---	---	---	---	---	
				2%	1%		1%					1%						
Sample	28-Mar-2011	B124352	AH2 SURFACE	7.8	5170	0.07	343000	---	0.32	22	< 0.05	1050000	---	< 0.02	0.42	64	0.9	
Triplicate	28-Mar-2011	B124352	AH2 SURFACE TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	63	---	
Triplicate	28-Mar-2011	B124352	AH2 SURFACE TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	63	---	
																1%		
Sample	04-May-2011	B135916	AH2 SURFACE	7.8	5330	0.08	358000	---	0.29	12	< 0.05	1080000	---	< 0.02	0.44	---	0.9	
Triplicate	04-May-2011	B135916	AH2 SURFACE TRIPLICATE 1	7.9	5460	---	366000	---	---	---	---	1100000	---	---	---	---	---	
Triplicate	04-May-2011	B135916	AH2 SURFACE TRIPLICATE 2	7.9	5440	---	364000	---	---	---	---	1100000	---	---	---	---	---	
				1%	1%		1%					1%						
Sample	17-May-2011	B140372	AH2 SURFACE	7.8	5500	0.08	371000	---	0.28	23	< 0.05	1110000	---	< 0.02	0.39	68	0.7	
Triplicate	17-May-2011	B140372	AH2 SURF T1	---	---	---	---	---	---	---	---	---	---	---	---	65	---	
Triplicate	17-May-2011	B140372	AH2 SURF T2	---	---	---	---	---	---	---	---	---	---	---	---	68	---	
																3%		
Sample	20-Jul-2011	B165469	AH2 SURFACE	7.7	5260	0.07	351000	---	0.31	9	< 0.05	1060000	---	< 0.02	0.41	---	0.7	
Triplicate	20-Jul-2011	B165469	AH2 SURFACE TRIPLICATE 1	7.7	5100	---	338000	---	---	---	---	1030000	---	---	---	---	---	
Triplicate	20-Jul-2011	B165469	AH2 SURFACE TRIPLICATE 2	7.7	5120	---	340000	---	---	---	---	1040000	---	---	---	---	---	
				0%	2%		2%					1%						
Sample	02-Aug-2011	B169888	AH2 SURFACE	7.6	5300	0.08	351000	---	0.3	7	< 0.05	1070000	---	< 0.02	0.36	57	0.6	
Triplicate	02-Aug-2011	B169888	AH2 SURFACE TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	59	---	
Triplicate	02-Aug-2011	B169888	AH2 SURFACE TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	58	---	
																2%		
Sample	31-Oct-2011	B1A5294	AH2 SURFACE	7.7	5620	0.08	370000	---	0.28	18	< 0.05	1140000	---	< 0.020	0.36	---	0.7	
Triplicate	31-Oct-2011	B1A5294	AH2 SURFACE TRIPLICATE 1	7.7	5550	---	365000	---	---	---	---	1130000	---	---	---	---	---	
Triplicate	31-Oct-2011	B1A5294	AH2 SURFACE TRIPLICATE 2	7.7	5530	---	364000	---	---	---	---	1120000	---	---	---	---	---	
				0%	1%		1%					1%						
Sample	15-Nov-2011	B1B1047	AH2 SURFACE	7.7	5410	0.08	358000	---	0.3	17	< 0.05	1100000	---	< 0.020	0.34	77	0.5	
Triplicate	15-Nov-2011	B1B1047	AH2 SURFACE TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	74	---	
Triplicate	15-Nov-2011	B1B1047	AH2 SURFACE TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	77	---	
																2%		



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T
FC-4 Quality Assurance																	
Sample	08-Feb-2012	B210733	AH2 SURFACE	7.8	5230	0.07	342000	---	0.49	22	0.08	1060000	---	< 0.010	0.45	---	0.7
Triplicate	08-Feb-2012	B210733	AH2 SURFACE TRIPLICATE 1	7.8	5140	---	337000	---	---	---	---	1040000	---	---	---	---	---
Triplicate	08-Feb-2012	B210733	AH2 SURFACE TRIPLICATE 2	7.8	5200	---	339000	---	---	---	---	1060000	---	---	---	---	---
				0%	1%		1%					1%					
Sample	21-Feb-2012	B214515	AH2 SURFACE	7.8	5360	0.07	351000	---	0.37	29	< 0.05	1090000	---	< 0.010	0.36	73	0.8
Triplicate	21-Feb-2012	B214515	AH2 SURFACE TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	73	---
Triplicate	21-Feb-2012	B214515	AH2 SURFACE TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	75	---
																2%	
Sample	15-May-2012	B239924	AH2 SURFACE	7.9	5340	0.077	354000	---	0.415	15.4	< 0.050	1080000	---	< 0.010	0.509	---	0.6
Triplicate	15-May-2012	B239924	AH2 SURFACE TRIPLICATE 1	7.9	5350	---	354000	---	---	---	---	1090000	---	---	---	---	---
Triplicate	15-May-2012	B239924	AH2 SURFACE TRIPLICATE 2	7.9	5210	---	344000	---	---	---	---	1060000	---	---	---	---	---
				0%	1%		2%					1%					
Sample	06-May-2010	B029749	4 BOTTOM	7.9	5330	0.08	336000	---	0.42	34	0.05	1090000	---	< 0.02	0.41	---	1.6
Triplicate	06-May-2010	B029749	4 BOTTOM TRIPLICATE 1	8	5330	---	336000	---	---	---	---	1090000	---	---	---	---	---
Triplicate	06-May-2010	B029749	4 BOTTOM TRIPLICATE 2	8	5250	---	331000	---	---	---	---	1070000	---	---	---	---	---
				1%	1%		1%					1%					
Sample	12-May-2010	B032251	4 BOTTOM	8	5580	0.08	354000	---	0.25	21	0.06	1140000	---	< 0.02	0.49	56	0.7
Triplicate	12-May-2010	B032251	4 BOTTOM TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	65	---
Triplicate	12-May-2010	B032251	4 BOTTOM TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	62	---
																8%	
Sample	06-May-2010	B029749	4 MID	7.9	5350	0.06	338000	---	0.33	33	< 0.05	1090000	---	< 0.02	0.45	---	1.2
Triplicate	06-May-2010	B029749	4 MID TRIPLICATE 1	7.9	5320	---	336000	---	---	---	---	1090000	---	---	---	---	---
Triplicate	06-May-2010	B029749	4 MID TRIPLICATE 2	8	5310	---	336000	---	---	---	---	1090000	---	---	---	---	---
				1%	0%		0%					0%					
Sample	12-May-2010	B032251	4 MID	8	5540	0.07	351000	---	0.31	12	< 0.05	1130000	---	< 0.02	0.59	54	0.7
Triplicate	12-May-2010	B032251	4 MID TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	57	---
Triplicate	12-May-2010	B032251	4 MID TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	56	---
																3%	
Sample	06-May-2010	B029749	4 SURFACE	7.9	5310	0.08	336000	---	0.41	21	< 0.05	1090000	---	< 0.02	0.42	---	1.2
Triplicate	06-May-2010	B029749	4 SURFACE TRIPLICATE 1	8	5260	---	332000	---	---	---	---	1070000	---	---	---	---	---
Triplicate	06-May-2010	B029749	4 SURFACE TRIPLICATE 2	8	5190	---	328000	---	---	---	---	1060000	---	---	---	---	---
				1%	1%		1%					1%					



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020				pH and Hardness		Total Metals and Trace Elements											
Monitoring Station	Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T
FC-4 Quality Assurance																	
Sample	12-May-2010	B032251	4 SURFACE	8	5430	0.07	345000	---	0.36	18	< 0.05	1110000	---	< 0.02	0.58	52	0.7
Triplicate	12-May-2010	B032251	4 SURFACE TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	54	---
Triplicate	12-May-2010	B032251	4 SURFACE TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	54	---
																2%	
MP-4 Quality Assurance																	
Sample	28-Jul-2010	B063834	4 BOTTOM	7.9	5840	0.08	363000	---	0.18	28	< 0.05	1200000	---	< 0.02	0.52	---	0.7
Triplicate	28-Jul-2010	B063834	4 BOTTOM TRIPLICATE 1	7.9	5590	---	355000	---	---	---	---	1140000	---	---	---	---	---
Triplicate	28-Jul-2010	B063834	4 BOTTOM TRIPLICATE 2	7.9	5470	---	347000	---	---	---	---	1120000	---	---	---	---	---
				0%	3%		2%					4%					
Sample	03-Aug-2010	B066176	4 BOTTOM	8	5880	0.08	368000	---	0.48	2	< 0.05	1200000	---	< 0.02	0.38	100	1
Triplicate	03-Aug-2010	B066176	4 BOTTOM TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	91	---
Triplicate	03-Aug-2010	B066176	4 BOTTOM TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	94	---
																5%	
Sample	08-Nov-2010	B0A9355	4 BOTTOM	7.7	5470	0.07	352000	---	0.25	28	< 0.05	1110000	---	< 0.02	0.59	---	0.7
Triplicate	08-Nov-2010	B0A9355	4 BOTTOM TRIPLICATE 1	7.7	6090	---	370000	---	---	---	---	1250000	---	---	---	---	---
Triplicate	08-Nov-2010	B0A9355	4 BOTTOM TRIPLICATE 2	7.7	5800	---	362000	---	---	---	---	1190000	---	---	---	---	---
				0%	5%		2%					6%					
Sample	18-Nov-2010	B0B3065	4 BOTTOM	7.7	5300	0.08	341000	---	0.33	28	< 0.05	1080000	---	< 0.02	0.4	74	1
Triplicate	18-Nov-2010	B0B3065	4 BOTTOM TRIPLICATE 1	---	5520	---	353000	---	---	---	---	1130000	---	---	---	79	---
Triplicate	18-Nov-2010	B0B3065	4 BOTTOM TRIPLICATE 2	---	5170	---	333000	---	---	---	---	1050000	---	---	---	79	---
					3%		3%					4%				4%	
Sample	22-Mar-2011	B122666	MP4 BOTTOM	7.8	5420	0.05	363000	---	0.55	45	< 0.05	1100000	---	< 0.02	0.53	---	1
Triplicate	22-Mar-2011	B122666	MP4 BOTTOM TRIPLICATE 1	7.8	5310	---	355000	---	---	---	---	1070000	---	---	---	---	---
Triplicate	22-Mar-2011	B122666	MP4 BOTTOM TRIPLICATE 2	7.8	5260	---	351000	---	---	---	---	1070000	---	---	---	---	---
				0%	2%		2%					2%					
Sample	28-Mar-2011	B124352	MP4 BOTTOM	7.8	5400	0.07	360000	---	0.33	37	0.05	1090000	---	< 0.02	0.42	69	0.6
Triplicate	28-Mar-2011	B124352	MP4 BOTTOM TRIPLICATE 1	---	5210	0.06	343000	---	0.29	35	< 0.05	1060000	---	< 0.02	0.42	70	0.6
Triplicate	28-Mar-2011	B124352	MP4 BOTTOM TRIPLICATE 2	---	5190	0.07	344000	---	0.35	32	< 0.05	1050000	---	< 0.02	0.48	68	0.6
					2%		9%	3%	9%	7%	<5xDL	2%		<5xDL	8%	1%	0%



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T
MP-4 Quality Assurance																	
Sample	09-May-2011	B137304	MP4 BOTTOM	7.7	5450	0.08	365000	---	0.32	37	< 0.05	1100000	---	< 0.02	0.41	---	0.8
TriPLICATE	09-May-2011	B137304	MP4 BOTTOM TRIPLICATE 1	8	5770	---	390000	---	---	---	---	1170000	---	---	---	---	---
TriPLICATE	09-May-2011	B137304	MP4 BOTTOM TRIPLICATE 2	7.9	5520	---	371000	---	---	---	---	1120000	---	---	---	---	---
				2%	3%		3%					3%					
Sample	17-May-2011	B140372	MP4 BOTTOM	7.9	5450	0.08	365000	---	0.4	82	0.08	1100000	---	< 0.02	0.53	73	1.4
TriPLICATE	17-May-2011	B140372	MP4 BOT T1	---	5430	0.08	364000	---	0.37	59	0.06	1100000	---	< 0.02	0.48	72	1
TriPLICATE	17-May-2011	B140372	MP4 BOT T2	---	5450	0.08	366000	---	0.39	66	0.06	1100000	---	< 0.02	0.46	77	0.9
					0%	0%	0%		4%	17%	<5xDL	0%		<5xDL	7%	4%	<5xDL
Sample	26-Jul-2011	B167823	MP4 BOTTOM	7.8	5630	0.08	377000	---	0.37	13	< 0.05	1140000	---	< 0.02	0.58	---	1.2
TriPLICATE	26-Jul-2011	B167823	MP4 BOTTOM TRIPLICATE 1	7.8	5290	---	356000	---	---	---	---	1070000	---	---	---	---	---
TriPLICATE	26-Jul-2011	B167823	MP4 BOTTOM TRIPLICATE 2	7.8	5590	---	376000	---	---	---	---	1130000	---	---	---	---	---
					0%	3%	3%					3%					
Sample	02-Aug-2011	B169888	MP4 BOTTOM	7.6	5620	0.1	372000	---	0.28	53	< 0.05	1140000	---	< 0.02	0.47	68	0.8
TriPLICATE	02-Aug-2011	B169888	MP4 BOTTOM TRIPLICATE 1	---	5700	0.09	376000	---	0.31	55	0.21	1160000	---	< 0.02	0.38	69	0.9
TriPLICATE	02-Aug-2011	B169888	MP4 BOTTOM TRIPLICATE 2	---	5780	0.08	382000	---	0.28	66	0.05	1170000	---	< 0.02	0.42	69	1.2
					1%	11%	1%		6%	12%	<5xDL	1%		<5xDL	11%	1%	<5xDL
Sample	07-Nov-2011	B1A8247	MP4 BOTTOM	7.7	5450	0.09	361000	---	0.64	33	0.06	1110000	---	< 0.020	0.59	---	2.3
TriPLICATE	07-Nov-2011	B1A8247	MP4 BOTTOM TRIPLICATE 1	7.7	5430	---	360000	---	---	---	---	1100000	---	---	---	---	---
TriPLICATE	07-Nov-2011	B1A8247	MP4 BOTTOM TRIPLICATE 2	7.7	5450	---	361000	---	---	---	---	1110000	---	---	---	---	---
					0%	0%	0%					1%					
Sample	15-Nov-2011	B1B1047	MP4 BOTTOM	7.7	5580	0.08	371000	---	0.34	49	0.05	1130000	---	< 0.020	0.34	77	0.8
TriPLICATE	15-Nov-2011	B1B1047	MP4 BOTTOM TRIPLICATE 1	---	5530	0.08	366000	---	0.6	44	0.05	1120000	---	< 0.020	0.42	78	0.8
TriPLICATE	15-Nov-2011	B1B1047	MP4 BOTTOM TRIPLICATE 2	---	5590	0.07	371000	---	0.4	37	< 0.05	1130000	---	< 0.020	0.43	76	0.6
					1%	8%	1%		30%	14%	0%	1%		<5xDL	12%	1%	16%
Sample	15-Feb-2012	B212982	MP4 BOTTOM	7.8	5470	0.07	364000	---	0.36	41	0.06	1110000	---	< 0.010	0.44	---	1
TriPLICATE	15-Feb-2012	B212982	MP4 BOTTOM TRIPLICATE 1	7.8	5550	---	370000	---	---	---	---	1120000	---	---	---	---	---
TriPLICATE	15-Feb-2012	B212982	MP4 BOTTOM TRIPLICATE 2	7.8	5460	---	362000	---	---	---	---	1110000	---	---	---	---	---
					0%	1%	1%					1%					
Sample	21-Feb-2012	B214515	MP4 BOTTOM	7.8	5450	0.08	358000	---	0.67	54	0.05	1110000	---	< 0.010	0.42	82	1.2
TriPLICATE	21-Feb-2012	B214515	MP4 BOTTOM TRIPLICATE 1	---	5480	0.07	363000	---	0.73	58	0.06	1110000	---	< 0.010	0.45	81	1
TriPLICATE	21-Feb-2012	B214515	MP4 BOTTOM TRIPLICATE 2	---	5590	0.07	367000	---	0.63	51	0.06	1130000	---	< 0.010	0.44	83	1
					1%	8%	1%		7%	6%	10%	1%		<5xDL	3%	1%	11%



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements													
Monitoring Station	Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T	
MP-4 Quality Assurance																		
Sample	22-May-2012	B241909	MP4 BOTTOM	7.8	5400	0.089	355000	---	0.4	16.5	< 0.050	1100000	---	< 0.010	0.47	---	< 0.50	
TriPLICATE	22-May-2012	B241909	MP4 BOTTOM TRIPLICATE 1	7.8	5420	---	356000	---	---	---	---	1100000	---	---	---	---	---	
TriPLICATE	22-May-2012	B241909	MP4 BOTTOM TRIPLICATE 2	7.8	5420	---	358000	---	---	---	---	1100000	---	---	---	---	---	
				0%	0%		0%					0%						
Sample	28-May-2012	B243848	MP4 BOTTOM	7.8	5630	0.076	371000	---	0.528	18.4	0.07	1140000	---	< 0.010	0.423	---	0.57	
TriPLICATE	28-May-2012	B243848	MP4 BOTTOM TRIPLICATE 1	---	5860	0.079	386000	---	0.446	17.1	< 0.050	1190000	---	< 0.010	0.524	---	0.51	
TriPLICATE	28-May-2012	B243848	MP4 BOTTOM TRIPLICATE 2	---	5670	0.078	374000	---	0.968	18	0.065	1150000	---	< 0.010	0.448	---	0.91	
					2%		2%	2%	43%	4%	5%	2%		<5xDL	11%		<5xDL	
Sample	28-Jul-2010	B063834	4 MID	7.9	5330	0.09	338000	---	0.19	22	< 0.05	1090000	---	< 0.02	0.51	---	1	
TriPLICATE	28-Jul-2010	B063834	4 MID TRIPLICATE 1	7.9	5580	---	349000	---	---	---	---	1140000	---	---	---	---	---	
TriPLICATE	28-Jul-2010	B063834	4 MID TRIPLICATE 2	7.9	5040	---	327000	---	---	---	---	1030000	---	---	---	---	---	
				0%	5%		3%					5%						
Sample	03-Aug-2010	B066176	4 MID	7.9	5730	0.1	355000	---	0.25	16	< 0.05	1180000	---	< 0.02	0.44	69	0.8	
TriPLICATE	03-Aug-2010	B066176	4 MID TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	64	---	
TriPLICATE	03-Aug-2010	B066176	4 MID TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	59	---	
																8%		
Sample	08-Nov-2010	B0A9355	4 MID	7.7	5290	0.07	341000	---	0.42	14	< 0.05	1080000	---	< 0.02	0.42	---	0.8	
TriPLICATE	08-Nov-2010	B0A9355	4 MID TRIPLICATE 1	7.7	6020	---	369000	---	---	---	---	1240000	---	---	---	---	---	
TriPLICATE	08-Nov-2010	B0A9355	4 MID TRIPLICATE 2	7.7	5720	---	359000	---	---	---	---	1170000	---	---	---	---	---	
				0%	6%		4%					7%						
Sample	18-Nov-2010	B0B3065	4 MID	7.8	5090	0.08	326000	---	0.26	14	< 0.05	1040000	---	< 0.02	0.39	75	< 0.5	
TriPLICATE	18-Nov-2010	B0B3065	4 MID TRIPLICATE 1	---	5270	---	338000	---	---	---	---	1070000	---	---	---	78	---	
TriPLICATE	18-Nov-2010	B0B3065	4 MID TRIPLICATE 2	---	5230	---	336000	---	---	---	---	1070000	---	---	---	77	---	
					2%		2%					2%				2%		
Sample	22-Mar-2011	B122666	MP4 MID	7.8	5390	0.06	361000	---	0.31	41	< 0.05	1090000	---	< 0.02	0.52	---	0.7	
TriPLICATE	22-Mar-2011	B122666	MP4 MID TRIPLICATE 1	7.8	5430	---	364000	---	---	---	---	1100000	---	---	---	---	---	
TriPLICATE	22-Mar-2011	B122666	MP4 MID TRIPLICATE 2	7.8	5330	---	357000	---	---	---	---	1080000	---	---	---	---	---	
				0%	1%		1%					1%						



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Date	Lab File	Sample Name	pH	Total Hardness as CaCO ₃	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T
MP-4 Quality Assurance																	
Sample	28-Mar-2011	B124352	MP4 MID	7.8	5240	0.08	347000	---	0.3	27	< 0.05	1060000	---	< 0.02	0.43	64	0.8
Triplicate	28-Mar-2011	B124352	MP4 MID TRIPLICATE 1	---	5180	0.07	342000	---	0.31	21	< 0.05	1050000	---	< 0.02	0.41	69	0.7
Triplicate	28-Mar-2011	B124352	MP4 MID TRIPLICATE 2	---	5050	0.08	334000	---	0.27	21	< 0.05	1020000	---	< 0.02	0.39	68	0.5
					2%	8%	2%		7%	15%	<5xDL	2%		<5xDL	5%	4%	<5xDL
Sample	09-May-2011	B137304	MP4 MID	7.9	5510	0.07	369000	---	0.32	23	< 0.05	1110000	---	< 0.02	0.39	---	0.8
Triplicate	09-May-2011	B137304	MP4 MID TRIPLICATE 1	7.9	5590	---	376000	---	---	---	---	1130000	---	---	---	---	---
Triplicate	09-May-2011	B137304	MP4 MID TRIPLICATE 2	7.9	5800	---	390000	---	---	---	---	1170000	---	---	---	---	---
				0%	3%		3%					3%					
Sample	17-May-2011	B140372	MP4 MID	7.9	5480	0.07	368000	---	0.34	29	< 0.05	1110000	---	< 0.02	0.4	73	1.1
Triplicate	17-May-2011	B140372	MP4 MID T1	---	5330	0.08	356000	---	0.37	36	0.05	1080000	---	< 0.02	0.43	74	1.1
Triplicate	17-May-2011	B140372	MP4 MID T2	---	5250	0.07	352000	---	0.37	23	< 0.05	1060000	---	< 0.02	0.49	83	0.7
					2%	8%	2%		5%	22%	<5xDL	2%		<5xDL	10%	7%	<5xDL
Sample	26-Jul-2011	B167823	MP4 MID	7.8	5340	0.08	359000	---	0.34	11	< 0.05	1080000	---	< 0.02	0.45	---	1.6
Triplicate	26-Jul-2011	B167823	MP4 MID TRIPLICATE 1	7.8	5370	---	359000	---	---	---	---	1090000	---	---	---	---	---
Triplicate	26-Jul-2011	B167823	MP4 MID TRIPLICATE 2	7.8	5400	---	363000	---	---	---	---	1090000	---	---	---	---	---
				0%	1%		1%					1%					
Sample	02-Aug-2011	B169888	MP4 MID	7.6	5420	0.08	361000	---	0.23	13	< 0.05	1100000	---	< 0.02	0.4	60	0.6
Triplicate	02-Aug-2011	B169888	MP4 MID TRIPLICATE 1	---	5510	0.08	366000	---	0.26	16	< 0.05	1120000	---	< 0.02	0.41	61	0.6
Triplicate	02-Aug-2011	B169888	MP4 MID TRIPLICATE 2	---	5700	0.09	377000	---	0.28	17	< 0.05	1160000	---	< 0.02	0.4	60	0.6
					3%	7%	2%		10%	14%	<5xDL	3%		<5xDL	1%	1%	0%
Sample	07-Nov-2011	B1A8247	MP4 MID	7.7	5320	0.09	353000	---	0.26	12	< 0.05	1080000	---	< 0.020	0.42	---	0.5
Triplicate	07-Nov-2011	B1A8247	MP4 MID TRIPLICATE 1	7.7	5240	---	346000	---	---	---	---	1060000	---	---	---	---	---
Triplicate	07-Nov-2011	B1A8247	MP4 MID TRIPLICATE 2	7.7	5360	---	355000	---	---	---	---	1090000	---	---	---	---	---
				0%	1%		1%					1%					
Sample	15-Nov-2011	B1B1047	MP4 MID	7.7	5390	0.08	356000	---	0.33	24	< 0.05	1090000	---	< 0.020	0.36	77	< 0.5
Triplicate	15-Nov-2011	B1B1047	MP4 MID TRIPLICATE 1	---	5310	0.08	349000	---	0.38	22	< 0.05	1080000	---	< 0.020	0.36	75	< 0.5
Triplicate	15-Nov-2011	B1B1047	MP4 MID TRIPLICATE 2	---	5340	0.07	354000	---	0.31	20	< 0.05	1080000	---	< 0.020	0.37	73	< 0.5
					1%	8%	1%		11%	9%	<5xDL	1%		<5xDL	2%	3%	<5xDL
Sample	15-Feb-2012	B212982	MP4 MID	7.8	5440	0.07	362000	---	0.42	27	0.06	1100000	---	< 0.010	0.47	---	1.2
Triplicate	15-Feb-2012	B212982	MP4 MID TRIPLICATE 1	7.8	5440	---	363000	---	---	---	---	1100000	---	---	---	---	---
Triplicate	15-Feb-2012	B212982	MP4 MID TRIPLICATE 2	7.8	5400	---	359000	---	---	---	---	1090000	---	---	---	---	---
				0%	0%		1%					1%					



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020				pH and Hardness		Total Metals and Trace Elements											
Monitoring Station	Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T
MP-4 Quality Assurance																	
Sample	21-Feb-2012	B214515	MP4 MID	7.8	5430	0.08	358000	---	0.9	33	< 0.05	1100000	---	< 0.010	0.36	68	0.7
TriPLICATE	21-Feb-2012	B214515	MP4 MID TRIPLICATE 1	---	5310	0.08	349000	---	0.4	49	< 0.05	1080000	---	< 0.010	0.8	66	1.4
TriPLICATE	21-Feb-2012	B214515	MP4 MID TRIPLICATE 2	---	5590	0.08	370000	---	0.35	32	< 0.05	1130000	---	< 0.010	0.43	67	1.4
					3%	0%	3%		55%	25%	<5xDL	2%		<5xDL	45%	1%	<5xDL
Sample	22-May-2012	B241909	MP4 MID	7.9	5320	0.082	351000	---	0.416	15.1	< 0.050	1080000	---	< 0.010	0.426	---	< 0.50
TriPLICATE	22-May-2012	B241909	MP4 MID TRIPLICATE 1	7.9	5290	---	350000	---	---	---	---	1070000	---	---	---	---	---
TriPLICATE	22-May-2012	B241909	MP4 MID TRIPLICATE 2	7.9	5270	---	346000	---	---	---	---	1070000	---	---	---	---	---
					0%	0%	1%					1%					
Sample	28-May-2012	B243848	MP4 MID	7.8	5700	0.076	374000	---	0.39	13.9	< 0.050	1160000	---	< 0.010	0.369	---	0.5
TriPLICATE	28-May-2012	B243848	MP4 MID TRIPLICATE 1	---	5570	0.072	366000	---	6.05	13.4	< 0.050	1130000	---	< 0.010	0.498	---	< 0.50
TriPLICATE	28-May-2012	B243848	MP4 MID TRIPLICATE 2	---	5590	0.077	369000	---	0.43	14	< 0.050	1130000	---	< 0.010	0.434	---	0.53
					1%	4%	1%		142%	2%	<5xDL	2%		<5xDL	15%		4%
Sample	28-Jul-2010	B063834	4 SURFACE	8	5160	0.07	332000	---	0.22	18	< 0.05	1050000	---	< 0.02	1.81	---	0.7
TriPLICATE	28-Jul-2010	B063834	4 SURFACE TRIPLICATE 1	8	5830	---	361000	---	---	---	---	1200000	---	---	---	---	---
TriPLICATE	28-Jul-2010	B063834	4 SURFACE TRIPLICATE 2	8	5340	---	337000	---	---	---	---	1090000	---	---	---	---	---
					0%	6%	5%					7%					
Sample	03-Aug-2010	B066176	4 SURFACE	8.2	5400	0.08	334000	---	0.34	8	< 0.05	1110000	---	< 0.02	0.42	50	1.7
TriPLICATE	03-Aug-2010	B066176	4 SURFACE TRIPLICATE 1	---	---	---	---	---	---	---	---	---	---	---	---	51	---
TriPLICATE	03-Aug-2010	B066176	4 SURFACE TRIPLICATE 2	---	---	---	---	---	---	---	---	---	---	---	---	55	---
																5%	
Sample	08-Nov-2010	B0A9355	4 SURFACE	7.7	5230	0.07	336000	---	0.26	11	< 0.05	1070000	---	< 0.02	0.66	---	0.6
TriPLICATE	08-Nov-2010	B0A9355	4 SURFACE TRIPLICATE 1	7.7	5880	---	363000	---	---	---	---	1210000	---	---	---	---	---
TriPLICATE	08-Nov-2010	B0A9355	4 SURFACE TRIPLICATE 2	7.7	6110	---	370000	---	---	---	---	1260000	---	---	---	---	---
					0%	8%	5%					8%					
Sample	18-Nov-2010	B0B3065	4 SURFACE	7.7	5480	0.08	348000	---	0.36	13	0.08	1120000	---	< 0.02	0.38	74	1.1
TriPLICATE	18-Nov-2010	B0B3065	4 SURFACE TRIPLICATE 1	---	5160	---	333000	---	---	---	---	1050000	---	---	---	77	---
TriPLICATE	18-Nov-2010	B0B3065	4 SURFACE TRIPLICATE 2	---	5300	---	339000	---	---	---	---	1080000	---	---	---	72	---
					3%		2%					3%				3%	
Sample	22-Mar-2011	B122666	MP4 SURFACE	7.8	5450	0.05	366000	---	0.35	31	< 0.05	1100000	---	< 0.02	0.46	---	0.6
TriPLICATE	22-Mar-2011	B122666	MP4 SURFACE TRIPLICATE 1	7.8	5420	---	363000	---	---	---	---	1100000	---	---	---	---	---
TriPLICATE	22-Mar-2011	B122666	MP4 SURFACE TRIPLICATE 2	7.8	5380	---	359000	---	---	---	---	1090000	---	---	---	---	---
				0%	1%		1%					1%					



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T
MP-4 Quality Assurance																	
Sample	28-Mar-2011	B124352	MP4 SURFACE	7.8	5180	0.07	342000	---	0.49	26	< 0.05	1050000	---	< 0.02	0.41	72	1.1
Triplicate	28-Mar-2011	B124352	MP4 SURFACE TRIPLICATE 1	---	5260	0.08	349000	---	0.58	26	0.21	1070000	---	< 0.02	0.43	77	0.9
Triplicate	28-Mar-2011	B124352	MP4 SURFACE TRIPLICATE 2	---	5200	0.07	345000	---	0.47	29	0.06	1050000	---	< 0.02	0.41	87	1
					1%	8%	1%		11%	6%	<5xDL	1%		<5xDL	3%	10%	10%
Sample	09-May-2011	B137304	MP4 SURFACE	7.9	5420	0.08	363000	---	0.33	14	< 0.05	1100000	---	< 0.02	0.36	---	0.8
Triplicate	09-May-2011	B137304	MP4 SURFACE TRIPLICATE 1	7.9	5590	---	375000	---	---	---	---	1130000	---	---	---	---	---
Triplicate	09-May-2011	B137304	MP4 SURFACE TRIPLICATE 2	8	5710	---	383000	---	---	---	---	1150000	---	---	---	---	---
				1%	3%		3%					2%					
Sample	17-May-2011	B140372	MP4 SURFACE	7.9	5390	0.07	360000	---	2.94	28	0.11	1090000	---	< 0.02	0.45	68	2.5
Triplicate	17-May-2011	B140372	MP4 SURF T1	---	5450	0.07	365000	---	0.43	20	< 0.05	1100000	---	< 0.02	0.41	69	0.8
Triplicate	17-May-2011	B140372	MP4 SURF T2	---	5300	0.07	357000	---	0.47	20	< 0.05	1070000	---	< 0.02	0.54	69	0.8
					1%	0%	1%		112%	20%	<5xDL	1%		<5xDL	14%	1%	<5xDL
Sample	26-Jul-2011	B167823	MP4 SURFACE	7.8	5320	0.08	357000	---	0.38	8	< 0.05	1080000	---	< 0.02	0.46	---	1.1
Triplicate	26-Jul-2011	B167823	MP4 SURFACE TRIPLICATE 1	7.8	5030	---	337000	---	---	---	---	1020000	---	---	---	---	---
Triplicate	26-Jul-2011	B167823	MP4 SURFACE TRIPLICATE 2	7.8	5250	---	351000	---	---	---	---	1060000	---	---	---	---	---
				0%	3%		3%					3%					
Sample	02-Aug-2011	B169888	MP4 SURFACE	7.7	5260	0.08	347000	---	0.32	7	< 0.05	1070000	---	< 0.02	0.39	59	0.6
Triplicate	02-Aug-2011	B169888	MP4 SURFACE TRIPLICATE 1	---	5630	0.09	373000	---	0.31	7	< 0.05	1140000	---	< 0.02	0.38	58	1.4
Triplicate	02-Aug-2011	B169888	MP4 SURFACE TRIPLICATE 2	---	5200	0.08	344000	---	0.28	7	< 0.05	1050000	---	< 0.02	0.42	58	0.6
					4%	7%	4%		7%	0%	<5xDL	4%		<5xDL	5%	1%	<5xDL
Sample	07-Nov-2011	B1A8247	MP4 SURFACE	7.7	5280	0.08	352000	---	0.31	9	< 0.05	1070000	---	< 0.020	0.39	---	< 0.5
Triplicate	07-Nov-2011	B1A8247	MP4 SURFACE TRIPLICATE 1	7.7	5340	---	354000	---	---	---	---	1080000	---	---	---	---	---
Triplicate	07-Nov-2011	B1A8247	MP4 SURFACE TRIPLICATE 2	7.7	5300	---	352000	---	---	---	---	1070000	---	---	---	---	---
				0%	1%		0%					1%					
Sample	15-Nov-2011	B1B1047	MP4 SURFACE	7.7	5380	0.08	357000	---	0.34	20	< 0.05	1090000	---	< 0.020	0.38	75	0.5
Triplicate	15-Nov-2011	B1B1047	MP4 SURFACE TRIPLICATE 1	---	5510	0.08	367000	---	0.35	18	< 0.05	1120000	---	< 0.020	0.43	74	< 0.5
Triplicate	15-Nov-2011	B1B1047	MP4 SURFACE TRIPLICATE 2	---	5450	0.08	361000	---	0.4	17	0.07	1100000	---	< 0.020	0.38	77	0.9
					1%	0%	1%		9%	8%	<5xDL	1%		<5xDL	7%	2%	<5xDL



Water Quality Analytical Results: Total Metals and Trace Elements

PROJECT NO.: 307071-00020			pH and Hardness		Total Metals and Trace Elements												
Monitoring Station	Date	Lab File	Sample Name	pH	Total Hardness as CaCO3	Cadmium - T	Calcium - T	Cobalt - T	Copper - T	Iron - T	Lead - T	Magnesium - T	Manganese - T	Mercury - T	Nickel - T	Phosphorus - T	Zinc - T
MP-4 Quality Assurance																	
Sample	15-Feb-2012	B212982	MP4 SURFACE	7.8	5390	0.08	356000	---	0.94	18	< 0.05	1090000	---	< 0.010	0.4	---	1.1
TriPLICATE	15-Feb-2012	B212982	MP4 SURFACE TRIPLICATE 1	7.8	5400	---	359000	---	---	---	---	1090000	---	---	---	---	---
TriPLICATE	15-Feb-2012	B212982	MP4 SURFACE TRIPLICATE 2	7.8	5420	---	359000	---	---	---	---	1100000	---	---	---	---	---
				0%	0%	0%						1%					
Sample	21-Feb-2012	B214515	MP4 SURFACE	7.8	5440	0.07	359000	---	0.35	22	< 0.05	1100000	---	< 0.010	0.41	75	0.7
TriPLICATE	21-Feb-2012	B214515	MP4 SURFACE TRIPLICATE 1	---	5380	0.07	355000	---	0.36	24	< 0.05	1090000	---	< 0.010	0.43	66	0.7
TriPLICATE	21-Feb-2012	B214515	MP4 SURFACE TRIPLICATE 2	---	5520	0.07	365000	---	0.36	20	< 0.05	1120000	---	< 0.010	0.42	68	0.7
					1%	0%	1%		2%	9%	<5xDL	1%		<5xDL	2%	7%	0%
Sample	22-May-2012	B241909	MP4 SURFACE	7.9	5370	0.082	355000	---	0.32	11.6	< 0.050	1090000	---	< 0.010	0.465	---	0.64
TriPLICATE	22-May-2012	B241909	MP4 SURFACE TRIPLICATE 1	7.9	5260	---	345000	---	---	---	---	1070000	---	---	---	---	---
TriPLICATE	22-May-2012	B241909	MP4 SURFACE TRIPLICATE 2	7.9	5280	---	347000	---	---	---	---	1070000	---	---	---	---	---
				0%	1%	2%						1%					
Sample	28-May-2012	B243848	MP4 SURFACE	7.8	5550	0.074	365000	---	0.678	14	< 0.050	1130000	---	< 0.010	0.434	---	0.5
TriPLICATE	28-May-2012	B243848	MP4 SURFACE TRIPLICATE 1	---	5600	0.069	369000	---	0.374	10.3	< 0.050	1140000	---	< 0.010	0.486	---	< 0.50
TriPLICATE	28-May-2012	B243848	MP4 SURFACE TRIPLICATE 2	---	5250	0.076	346000	---	0.549	11.7	< 0.050	1070000	---	< 0.010	0.549	---	0.56
					3%	5%	3%		29%	16%	<5xDL	3%		<5xDL	12%		8%

NOTES:

1. --- in detail data row(s) denotes parameter not analyzed.
2. Highlighting indicates parameters above QA/QC data quality objective.
3. Highlighting indicates parameters above QA/QC data quality objective.

Marginal Failure
Severe Failure

Water Quality Analytical Results: Polycyclic Aromatic Hydrocarbons

PROJECT NO.: 307071-00020

Monitoring Station	Date (d-m-y)	Lab File	Sample Name	PAHs																						
				2-Methylnaphthalene (µg/L)	Acenaphthylene (µg/L)	Acenaphthene (µg/L)	Acridine (µg/L)	Anthracene (µg/L)	Benzo[a]anthracene (µg/L)	Benzo[a]pyrene (µg/L)	Benzo[b&f]fluoranthene (µg/L)	Benzo[g,h,i]perylene (µg/L)	Benzo[k]fluoranthene (µg/L)	Chrysene (µg/L)	Dibenzof[a,h]anthracene (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Indeno[1,2,3-cd]pyrene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)	Quinoline (µg/L)	Light PAHs (µg/L)	Heavy PAHs (µg/L)	Total PAHs (µg/L)	
Water Quality Guideline				6						0.01					0.1			1								
Macaulay Point																										
MP-5	03-Aug-2010	B066176	MP5 BOTTOM	< 0.05	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.05	< 0.05	< 0.02	< 0.05	
	17-Aug-2010	B072723	MP5 BOTTOM	< 0.05	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.05	< 0.05	< 0.02	< 0.05	
	22-Mar-2011	B122666	MP5 BOTTOM	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.5	< 0.5	< 0.05	< 0.5
	07-Apr-2011	B127749	MP5 BOTTOM	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.5	< 0.5	< 0.05	< 0.5
	26-Jul-2011	B167823	MP5 BOTTOM	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.5	< 0.5	< 0.05	< 0.5
	09-Aug-2011	B173361	MP5 BOTTOM	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.009	< 0.009	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.5	< 0.5	< 0.05	< 0.5
	16-Aug-2011	B175552	MP5 BOTTOM	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.009	< 0.009	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.5	< 0.5	< 0.05	< 0.5
	15-Feb-2012	B212982	MP5 BOTTOM	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.009	< 0.009	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	UN	< 0.5	< 0.05	< 0.5
	27-Feb-2012	B216209	MP5 BOTTOM	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.009	< 0.009	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.5	< 0.5	< 0.05	< 0.5

NOTES:



Water Quality Analytical Results: Hydrocarbons

PROJECT NO.: 307071-00020

Monitoring Station	Date (d-m-y)	Lab File	Sample Name	Monocyclic Aromatic Hydrocarbons							Hydrocarbon Mixtures				
				Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	o-Xylene (µg/L)	m&p-Xylene (µg/L)	Total Xylenes (µg/L)	Styrene (µg/L)	VHw (C6-C10) (µg/L)	Methyl-t-butyl-ether (MTBE) (µg/L)	VPHW (µg/L)	LEPHW (µg/L)	HEPHW (µg/L)
Water Quality Guideline				110		25						44			
Albert Head															
AH-1	25-May-2010	B036570	1 BOTTOM	< 0.50	1.0	< 0.50	< 0.50	< 1.0	< 1.0	< 0.5	< 300	< 4.0	< 300	< 0.05	< 0.02
	17-Aug-2010	B072723	1 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.5	< 300	< 4.0	< 300	---	---
AH-2	12-May-2010	B032251	2 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.5	< 300	< 4.0	< 300	< 0.05	< 0.02
	25-May-2010	B036570	2 BOTTOM	< 0.50	0.8	< 0.50	< 0.50	< 1.0	< 1.0	< 0.5	< 300	< 4.0	< 300	< 0.05	< 0.02
	03-Aug-2010	B066176	2 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.5	< 300	< 4.0	< 300	---	---
	17-Aug-2010	B072723	2 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.5	< 300	< 4.0	< 300	---	---
	22-Mar-2011	B122666	AH2 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.5	< 300	< 4.0	< 300	---	---
	07-Apr-2011	B127749	AH2 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.5	< 300	< 4.0	< 300	---	---
	26-Jul-2011	B167823	AH2 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.5	< 300	< 4.0	< 300	---	---
	09-Aug-2011	B173361	AH2 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.5	< 300	< 4.0	< 300	---	---
15-Feb-2012	B212982	AH2 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---	
27-Feb-2012	B216209	AH2 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---	
Finnerty Cove															
FC-4	12-May-2010	B032251	4 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	< 0.05	< 0.02
	25-May-2010	B036570	4 BOTTOM	< 0.50	0.7	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	< 0.05	< 0.02
FC-7	12-May-2010	B032251	5 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	0.06	0.02
	25-May-2010	B036570	5 BOTTOM	< 0.50	0.5	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	< 0.05	< 0.02
	03-Aug-2010	B066176	7 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	17-Aug-2010	B072723	7 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	22-Mar-2011	B122666	FC7 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	07-Apr-2011	B127749	FC7 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	26-Jul-2011	B167823	FC7 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	09-Aug-2011	B173361	FC7 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
15-Feb-2012	B212982	FC7 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---	
27-Feb-2012	B216209	FC7 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---	
Macaulay Point															
MP-4	03-Aug-2010	B066176	4 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	17-Aug-2010	B072723	4 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	07-Apr-2011	B127749	MP4 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	09-Aug-2011	B173361	MP4 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	15-Feb-2012	B212982	MP4 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
27-Feb-2012	B216209	MP4 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---	
MP-5	03-Aug-2010	B066176	5 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	17-Aug-2010	B072723	5 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	22-Mar-2011	B122666	MP5 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	07-Apr-2011	B127749	MP5 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	26-Jul-2011	B167823	MP5 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	09-Aug-2011	B173361	MP5 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	15-Feb-2012	B212982	MP5 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
	27-Feb-2012	B216209	MP5 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---



Water Quality Analytical Results: Hydrocarbons

PROJECT NO.: 307071-00020

Monitoring Station	Date	Lab File	Sample Name	Monocyclic Aromatic Hydrocarbons							Hydrocarbon Mixtures				
				Benzene	Toluene	Ethylbenzene	o-Xylene	m&p-Xylene	Total Xylenes	Styrene	VHw (C6-C10)	Methyl-t-butyl-ether (MTBE)	VPHW	LEPHw	HEPHw
Quality Assurance															
AH-1															
Sample	12-May-2010	B032251	1 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	0.05	0.05
TriPLICATE	12-May-2010	B032251	1 BOTTOM TRIPLICATE 1	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	< 0.05	< 0.02
TriPLICATE	12-May-2010	B032251	1 BOTTOM TRIPLICATE 2	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	< 0.05	< 0.02
														<5xDL	<5xDL
Sample	03-Aug-2010	B066176	1 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
TriPLICATE	03-Aug-2010	B066176	1 BOTTOM TRIPLICATE 1	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
TriPLICATE	03-Aug-2010	B066176	1 BOTTOM TRIPLICATE 2	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
MP-4															
Sample	22-Mar-2011	B122666	MP4 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
TriPLICATE	22-Mar-2011	B122666	MP4 BOTTOM TRIPLICATE 1	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
TriPLICATE	22-Mar-2011	B122666	MP4 BOTTOM TRIPLICATE 2	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
Sample	26-Jul-2011	B167823	MP4 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
TriPLICATE	26-Jul-2011	B167823	MP4 BOTTOM TRIPLICATE 1	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
TriPLICATE	26-Jul-2011	B167823	MP4 BOTTOM TRIPLICATE 2	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
Sample	15-Feb-2012	B212982	MP4 BOTTOM	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
TriPLICATE	15-Feb-2012	B212982	MP4 BOTTOM TRIPLICATE 1	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---
TriPLICATE	15-Feb-2012	B212982	MP4 BOTTOM TRIPLICATE 2	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 300	< 4.0	< 300	---	---

NOTES: 1. --- in detail data row(s) denotes parameter not analyzed.



Water Quality Analytical Results: Phthalates

PROJECT NO.: 307071-00020

Monitoring Station	Sample Depth	Date (d-m-y)	Sample Name	Phthalates					
				Bis(2-ethylhexyl)phthalate	Butyl benzyl phthalate	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate
				(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Albert Head									
AH-2	3-Aug-10	2 BOTTOM	<1	<5	<3	<3	<1	<1	
	17-Aug-10	2 BOTTOM	<1	<5	<3	<3	<1	<1	
	22-Mar-11	AH2 BOTTOM	<1	<5	<3	<3	<1	<1	
	7-Apr-11	AH2 BOTTOM	1	<5	<3	<3	<1	<1	
	26-Jul-11	AH2 BOTTOM	1	<5	<3	<3	<1	<1	
	9-Aug-11	AH2 BOTTOM	<1	<5	<3	<3	<1	<1	
	15-Feb-12	AH2 BOTTOM	7	<5	<3	<3	<1	<1	
	4-Mar-12	AH2 BOTTOM	<1	<5	<3	<3	<1	<1	
Finnerty Cove									
FC-7	3-Aug-10	7 BOTTOM	<1	<5	<3	<3	<1	<1	
	17-Aug-10	7 BOTTOM	<1	<5	<3	<3	<1	<1	
	22-Mar-11	FC7 BOTTOM	2	<5	<3	<3	<1	<1	
	7-Apr-11	FC7 BOTTOM	<1	<5	<3	<3	<1	<1	
	26-Jul-11	FC7 BOTTOM	2	<5	<3	<3	<1	<1	
	9-Aug-11	FC7 BOTTOM	<1	<5	<3	<3	<1	<1	
	15-Feb-12	FC7 BOTTOM	<1	<5	<3	<3	<1	<1	
	4-Mar-12	FC7 BOTTOM	<1	<5	<3	<3	<1	<1	
Macaulay Point									
MP-4	3-Aug-10	4 BOTTOM	<1	<5	<3	<3	<1	<1	
	17-Aug-10	4 BOTTOM	<1	<5	<3	<3	<1	<1	
	22-Mar-11	MP4 BOTTOM	<1	<5	<3	<3	<1	<1	
	7-Apr-11	MP4 BOTTOM	<1	<5	<3	<3	<1	<1	
	26-Jul-11	MP4 BOTTOM	1	<5	<3	<3	<1	<1	
	9-Aug-11	MP4 BOTTOM	<1	<5	<3	<3	<1	<1	
	15-Feb-12	MP4 BOTTOM	<1	<5	<3	<3	<1	<1	
	4-Mar-12	MP4 BOTTOM	<1	<5	<3	<3	<1	<1	
MP-4 Quality Assurance	22-Mar-11	MP4 BOTTOM TRIPLICATE 1	<1	<5	<3	<3	<1	<1	
	22-Mar-11	MP4 BOTTOM TRIPLICATE 2	<1	<5	<3	<3	<1	<1	
	26-Jul-11	MP4 BOTTOM TRIPLICATE 1	<1	<5	<3	<3	<1	<1	
	26-Jul-11	MP4 BOTTOM TRIPLICATE 2	<1	<5	<3	<3	<1	<1	
	15-Feb-12	MP4 BOTTOM TRIPLICATE 1	<1	<5	<3	<3	<1	<1	
	15-Feb-12	MP4 BOTTOM TRIPLICATE 2	<1	<5	<3	<3	<1	<1	
MP-5	3-Aug-10	5 BOTTOM	<1	<5	<3	<3	<1	<1	
	17-Aug-10	5 BOTTOM	<1	<5	<3	<3	<1	<1	
	22-Mar-11	MP5 BOTTOM	<1	<5	<3	<3	<1	<1	
	7-Apr-11	MP5 BOTTOM	<1	<5	<3	<3	<1	<1	
	26-Jul-11	MP5 BOTTOM	1	<5	<3	<3	<1	<1	
	9-Aug-11	MP5 BOTTOM	<1	<5	<3	<3	<1	<1	
	15-Feb-12	MP5 BOTTOM	<1	<5	<3	<3	<1	<1	
	4-Mar-12	MP5 BOTTOM	<1	<5	<3	<3	<1	<1	
Equipment Blank									
Blank	3-Aug-10	BLANK	<1	<5	<3	<3	<1	<1	
	22-Mar-11	BLANK	<1	<5	<3	<3	<1	<1	
	7-Apr-11	BLANK	<1	<5	<3	<3	<1	<1	
	26-Jul-11	BLANK	1	<5	<3	<3	<1	<1	
	9-Aug-11	BLANK	<1	<5	<3	<3	<1	<1	
	15-Feb-12	BLANK	<1	<5	<3	<3	<1	<1	
	4-Mar-12	BLANK	<1	<5	<3	<3	<1	<1	

NOTES:

Water Quality Analytical Results: Polybrominated Diphenyl Ethers

PROJECT NO.: 307071-00020

Polybrominated Diphenyl Ethers

Table with columns: Monitoring Station, Date, Sample Name, and 28 columns of analytical results (Bi2-DPE-7 to Bi10-DPE-209). Rows include data for Albert Head, Finnerty Cove, Macaulay Point, and Quality Assurance / Quality Control.

Water Quality Analytical Results: Polybrominated Diphenyl Ethers

PROJECT NO.: 307071-00020

Polybrominated Diphenyl Ethers

Monitoring Station	Date (d-m-y)	Sample Name	Polybrominated Diphenyl Ethers																																							
			Bi2-DPE-7 (pg/L)	Bi2-DPE-8/11 (pg/L)	Bi2-DPE-10 (pg/L)	Bi2-DPE-12/13 (pg/L)	Bi2-DPE-15 (pg/L)	Bi3-DPE-17/25 (pg/L)	Bi3-DPE-28/33 (pg/L)	Bi3-DPE-30 (pg/L)	Bi3-DPE-32 (pg/L)	Bi3-DPE-35 (pg/L)	Bi3-DPE-37 (pg/L)	Bi4-DPE-47 (pg/L)	Bi4-DPE-49 (pg/L)	Bi4-DPE-51 (pg/L)	Bi4-DPE-66 (pg/L)	Bi4-DPE-71 (pg/L)	Bi4-DPE-75 (pg/L)	Bi4-DPE-77 (pg/L)	Bi4-DPE-79 (pg/L)	Bi5-DPE-85 (pg/L)	Bi5-DPE-99 (pg/L)	Bi5-DPE-100 (pg/L)	Bi5-DPE-105 (pg/L)	Bi5-DPE-116 (pg/L)	Bi5-DPE-119/120 (pg/L)	Bi5-DPE-126 (pg/L)	Bi6-DPE-128 (pg/L)	Bi6-DPE-138/166 (pg/L)	Bi6-DPE-140 (pg/L)	Bi6-DPE-153 (pg/L)	Bi6-DPE-154 (pg/L)	Bi6-DPE-155 (pg/L)	Bi7-DPE-181 (pg/L)	Bi7-DPE-183 (pg/L)	Bi7-DPE-190 (pg/L)	Bi8-DPE-203 (pg/L)	Bi9-DPE-206 (pg/L)	Bi9-DPE-207 (pg/L)	Bi9-DPE-208 (pg/L)	Bi10-DPE-209 (pg/L)
Blanks																																										
Equipment	03-Aug-2010	EQUIPMENT BLANK	< 1.15	< 0.952	< 1.10	< 0.952	< 0.952	NDR 3.73	NDR 3.50	< 1.28	< 0.952	< 0.952	< 0.952	67.10	< 0.952	< 0.952	< 1.83	< 1.30	< 0.952	< 0.952	< 0.952	3.06	50.90	11.80	< 0.952	< 0.952	< 0.952	< 0.952	< 1.31	NDR 4.25	< 0.952	NDR 7.53	3.86	NDR 1.12	< 1.14	7.33	< 2.44	9.72	NDR 23.1	NDR 63.8	39.60	NDR 525
	17-Aug-2010	EQUIPMENT BLANK	< 1.64	< 1.26	< 1.54	< 1.15	< 0.970	< 0.989	NDR 4.24	< 0.949	< 0.949	< 0.949	< 0.949	60.40	< 1.76	< 1.07	< 2.45	< 1.75	< 1.46	< 1.41	< 1.55	< 2.41	NDR 41.2	11.10	< 2.49	< 3.19	< 2.04	< 1.15	NDR 3.93	< 3.06	< 1.94	NDR 6.40	NDR 2.37	< 1.64	< 2.46	< 1.58	< 4.23	< 4.91	17.90	36.00	NDR 23.2	316.00
	22-Mar-2011	EQUIPMENT BLANK	< 1.24	< 1.00	< 1.35	< 1.00	< 1.00	NDR 1.94	NDR 3.22	< 1.53	< 1.24	< 1.05	< 1.01	62.70	3.57	< 1.00	NDR 1.29	< 1.00	< 1.00	< 1.00	< 1.00	3.13	62.10	12.10	< 1.60	< 2.14	< 1.21	< 1.00	< 1.85	< 2.05	< 1.23	6.49	5.02	< 1.00	< 1.02	NDR 4.17	< 1.85	NDR 7.93	41.60	95.80	53.80	480.00
	07-Apr-2011	EQUIPMENT BLANK	< 1.38	< 1.04	< 1.33	< 1.02	< 1.02	< 2.35	< 2.32	< 2.41	< 1.95	< 1.99	< 1.99	30.30	NDR 1.43	< 1.02	NDR 1.34	< 1.02	< 1.02	< 1.02	< 1.02	< 1.36	26.30	6.09	< 1.97	< 2.62	< 1.29	< 1.02	NDR 1.51	< 1.60	< 1.02	NDR 4.91	2.26	< 1.02	< 1.02	NDR 3.17	< 1.09	NDR 3.21	34.80	NDR 54.9	NDR 38.1	498.00
	26-Jul-2011	EQUIPMENT BLANK	< 1.59	< 1.20	< 1.80	< 1.04	< 1.01	NDR 2.16	< 1.01	< 1.15	< 1.01	< 1.01	< 1.01	64.40	NDR 1.70	< 1.01	1.84	< 1.01	< 1.01	< 1.01	< 1.01	4.18	56.00	12.00	< 1.94	< 2.37	< 1.64	< 1.02	< 2.03	< 2.85	< 1.94	5.12	NDR 4.15	NDR 1.49	< 1.01	< 1.01	< 1.57	NDR 4.78	< 7.63	NDR 34.4	NDR 23.5	NDR 190
	09-Aug-2011	EQUIPMENT BLANK	< 2.97	< 2.21	< 3.23	< 1.88	< 1.52	< 3.01	< 2.55	< 3.03	< 2.43	< 2.11	< 1.97	34.90	NDR 4.55	< 1.23	NDR 1.23	< 1.03	< 1.03	< 1.03	< 1.09	< 2.73	31.50	6.10	< 3.60	< 4.21	< 2.73	< 1.84	< 4.55	< 4.84	NDR 2.99	NDR 6.14	4.92	NDR 2.02	< 2.10	< 1.22	< 5.32	NDR 1.68	NDR 32.1	NDR 103	NDR 49.8	NDR 277
	15-Feb-2012	EQUIPMENT BLANK	< 1.01	< 1.01	< 1.01	< 1.01	< 1.01	NDR 2.15	NDR 2.27	< 1.01	< 1.01	< 1.01	< 1.01	83.60	NDR 3.65	< 1.01	NDR 1.94	< 1.01	< 1.01	< 1.01	< 1.01	NDR 4.40	77.90	NDR 15.0	< 1.41	< 1.78	< 1.16	< 1.01	< 10.0	< 3.81	< 2.55	NDR 8.04	NDR 6.89	< 1.76	< 1.01	5.60	NDR 1.33	NDR 5.17	19.20	NDR 1.13	NDR 3.28	NDR 448
	27-Feb-2012	EQUIPMENT BLANK	< 1.29	< 1.04	< 1.44	< 1.04	< 1.04	NDR 1.97	1.78	< 1.04	< 1.04	< 1.04	< 1.04	62.80	1.42	< 1.04	NDR 1.20	< 1.04	< 1.04	< 1.04	< 1.04	NDR 3.42	62.50	14.10	< 1.04	NDR 1.61	< 1.04	< 1.04	< 1.11	< 1.96	< 1.16	7.74	4.00	NDR 1.49	NDR 2.44	NDR 2.39	< 4.11	NDR 6.88	< 8.29	< 10.8	NDR 26.1	< 202
Lab	03-Aug-2010	Lab Blank	3.29	NDR 1.88	< 1.30	< 1.00	4.95	81.20	249.00	< 1.00	< 1.00	NDR 3.53	< 1.00	2800.00	213.00	NDR 8.72	6.39	2.69	NDR 1.37	< 1.00	NDR 13.8	NDR 1.51	21.80	107.00	< 1.22	< 1.57	NDR 3.22	< 1.00	< 2.05	NDR 2.79	< 1.62	5.30	11.70	NDR 4.63	< 2.54	< 3.44	< 4.36	< 3.54	23.60	NDR 39.9	NDR 39.0	NDR 228
	22-Mar-2011	Lab Blank	< 2.17	< 1.65	< 2.53	< 1.42	< 1.22	NDR 2.94	NDR 2.41	< 1.60	< 1.29	< 1.09	< 1.00	86.60	NDR 3.83	NDR 1.26	NDR 2.93	< 1.00	< 1.00	< 1.00	< 1.00	4.98	97.30	21.30	< 3.51	< 4.52	< 2.52	< 1.63	< 5.98	< 2.91	< 1.67	NDR 6.60	8.89	NDR 1.88	< 5.51	NDR 11.0	NDR 11.2	NDR 14.9	34.50	89.10	NDR 49.7	NDR 489
	07-Apr-2011	Lab Blank	< 2.48	< 1.86	< 2.39	< 1.65	< 1.43	< 3.17	< 3.12	< 3.24	< 2.63	< 2.69	< 2.68	17.90	< 0.999	< 0.999	NDR 3.48	< 0.999	< 0.999	< 0.999	< 0.999	NDR 2.15	17.60	3.84	< 1.77	< 2.36	< 1.16	< 0.999	< 1.43	< 2.44	< 1.24	NDR 4.27	NDR 2.17	< 0.999	NDR 4.01	NDR 3.36	NDR 1.82	NDR 8.96	NDR 24.0	NDR 44.9	NDR 45.2	467.00
	26-Jul-2011	Lab Blank	< 1.43	< 1.09	< 1.62	< 1.00	< 1.00	< 1.96	< 1.67	< 2.01	< 1.65	< 1.31	< 1.20	24.40	1.08	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	NDR 2.24	20.40	4.05	< 2.10	< 2.57	< 1.77	< 1.05	< 3.81	< 3.56	< 2.43	3.38	1.64	< 1.77	NDR 1.91	NDR 4.37	NDR 5.32	4.46	< 19.9	NDR 28.6	< 27.7	< 135
	09-Aug-2011	Lab Blank	< 2.91	< 2.16	< 3.17	< 1.84	< 1.49	< 3.29	< 2.79	< 3.31	< 2.66	< 2.30	< 2.15	NDR 25.6	< 1.00	NDR 1.03	< 1.00	< 1.00	NDR 1.79	< 1.00	< 1.00	NDR 5.07	NDR 30.5	6.87	< 3.92	< 4.58	3.77	< 2.05	< 6.65	< 5.99	< 3.77	NDR 4.86	3.47	NDR 3.92	NDR 2.84	< 1.07	NDR 7.14	< 1.09	< 42.4	NDR 67.3	NDR 135	NDR 361
	15-Feb-2012	Lab Blank	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	NDR 2.01	NDR 1.67	NDR 2.32	< 1.00	< 1.00	< 1.00	21.70	NDR 1.27	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	NDR 2.11	12.00	2.81	< 1.73	< 2.18	< 1.42	< 1.00	< 10.2	< 5.86	< 3.92	< 4.12	< 2.66	< 2.71	< 1.00	NDR 1.71	NDR 3.36	< 1.00	< 1.36	NDR 8.55	NDR 20.3	< 854
	27-Feb-2012	Lab Blank	< 2.10	< 1.61	< 2.33	< 1.30	< 1.18	NDR 1.67	1.81	< 1.07	< 1.00	< 1.00	< 1.00	107.00	NDR 3.01	< 1.00	NDR 2.95	< 1.00	< 1.00	< 1.00	< 1.00	NDR 6.06	134.00	23.90	< 1.05	< 1.21	NDR 1.74	< 1.00	1.22	4.44	< 1.43	9.27	7.58	< 1.00	< 1.84	NDR 3.97	< 3.25	< 3.36	NDR 19.5	NDR 78.2	NDR 18.6	NDR 372

- NOTES:**
1. NDR = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration
 2. R - Severe Failure of Data Quality Objectives, Datum Rejected
 3. UN - Data Quality Objectives Not Achieved, datum undetected and uncertain value data qualifier
 4. Highlighting indicates parameters above QA/QC data quality objective.



Water Quality Analytical Results: PCB's

PROJECT NO.: 307071-00020				Polychlorinated Biphenyls			
Monitoring Station	Date (d-m-y)	Lab File	Sample Name	Aroclor 1242 (µg/L)	Aroclor 1248 (µg/L)	Aroclor 1254 (µg/L)	Aroclor 1260 (µg/L)
Albert Head							
AH-1 Quality Assurance							
Sample	12-May-2010	B032251	1 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
Triplicate	12-May-2010	B032251	1 BOTTOM TRIPLICATE 1	< 0.10	< 0.10	< 0.10	< 0.10
Triplicate	12-May-2010	B032251	1 BOTTOM TRIPLICATE 2	< 0.10	< 0.10	< 0.10	< 0.10
Sample	10-Aug-2010	B069347	1 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
Triplicate	10-Aug-2010	B069347	1 BOTTOM TRIPLICATE 1	< 0.10	< 0.10	< 0.10	< 0.10
Triplicate	10-Aug-2010	B069347	1 BOTTOM TRIPLICATE 2	< 0.10	< 0.10	< 0.10	< 0.10
AH-2	07-Apr-2011	B127749	AH2 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
	09-Aug-2011	B173361	AH2 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
	04-Mar-2012	B218224	AH2 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
Finnerty Cove							
FC-7	10-Aug-2010	B069347	7 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
	07-Apr-2011	B127749	FC7 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
	09-Aug-2011	B173361	FC7 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
	04-Mar-2012	B218224	FC7 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
Macaulay Point							
MP-4	10-Aug-2010	B069347	4 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
MP-4 Quality Assurance							
Sample	07-Apr-2011	B127749	MP4 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
Triplicate	07-Apr-2011	B127749	MP4 BOTTOM TRIPLICATE 1	< 0.10	< 0.10	< 0.10	< 0.10
Triplicate	07-Apr-2011	B127749	MP4 BOTTOM TRIPLICATE 2	< 0.10	< 0.10	< 0.10	< 0.10
Sample	09-Aug-2011	B173361	MP4 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
Triplicate	09-Aug-2011	B173361	MP4 BOTTOM TRIPLICATE 1	< 0.10	< 0.10	< 0.10	< 0.10
Triplicate	09-Aug-2011	B173361	MP4 BOTTOM TRIPLICATE 2	< 0.10	< 0.10	< 0.10	< 0.10
Sample	04-Mar-2012	B218224	MP4 BOTTOM	< 0.10	< 0.10	< 0.10	< 0.10
Triplicate	04-Mar-2012	B218224	MP4 BOTTOM TRIPLICATE 1	< 0.10	< 0.10	< 0.10	< 0.10
Triplicate	04-Mar-2012	B218224	MP4 BOTTOM TRIPLICATE 2	< 0.10	< 0.10	< 0.10	< 0.10

NOTES:



Water Quality Analytical Results: Nonylphenol and its Ethoxylates

PROJECT NO.: 307071-00020			Nonylphenol and its Ethoxylates			
Monitoring Station	Date (d-m-y)	Sample Name	4-Nonylphenols (ng/L)	4-Nonylphenol monoethoxylates (ng/L)	4-Nonylphenol diethoxylates (ng/L)	Octylphenol (ng/L)
Albert Head						
	10-Aug-2010	AH-1 Bottom	< 3.05	< 4.37	< 11.7	< 1.47
	07-Apr-2011	AH-2 Bottom	< 2.16	< 3.75	< 1.91	< 0.644
	09-Aug-2011	AH-2 Bottom	< 1.55	< 3.16	< 3.73	< 0.857
	04-Mar-2012	AH-2 Bottom	< 7.12	< 5.06	< 7.89	< 2.28
Finnerty Cove						
FC-7	10-Aug-2010	FC-7 Bottom	< 2.41	< 2.92	< 4.79	< 0.986
	07-Apr-2011	FC-7 Bottom	< 1.75	< 2.33	< 4.45	< 0.903
	09-Aug-2011	FC-7 Bottom	< 1.11	< 2.49	< 2.99	< 0.639
	04-Mar-2012	FC-7 Bottom	< 5.94	< 9.70	< 11.8	< 1.95
Macaulay Point						
MP-4	10-Aug-2010	MP-4 Bottom	21.40	< 4.59	< 7.21	< 0.714
	07-Apr-2011	MP-4 Bottom	2.37	< 3.98	< 3.83	< 0.997
	09-Aug-2011	MP-4 Bottom	< 0.488	< 1.86	< 6.18	< 0.621
	04-Mar-2012	MP-4 Bottom	< 4.14	< 7.66	< 8.54	< 3.11
Quality Assurance / Quality Control						
Sample	10-Aug-2010	AH-1 Bottom	< 3.05	< 4.37	< 11.7	< 1.47
Triplicate	10-Aug-2010	AH1 Bottom T1	35.80	< 6.27	< 8.56	< 2.11
Triplicate	10-Aug-2010	AH1 Bottom T2	53.20	< 6.03	< 6.53	< 1.22
Sample	07-Apr-2011	MP-4 Bottom	2.37	< 3.98	< 3.83	< 0.997
Triplicate	07-Apr-2011	MP-4 Bottom T1	< 0.981	< 3.22	< 3.68	< 0.886
Triplicate	07-Apr-2011	MP-4 Bottom T2	< 1.64	< 3.02	< 4.73	< 0.665
Sample	09-Aug-2011	MP-4 Bottom	< 0.488	< 1.86	< 6.18	< 0.621
Triplicate	09-Aug-2011	MP-4 Bottom T1	< 2.20	< 3.76	< 4.47	< 0.591
Triplicate	09-Aug-2011	MP-4 Bottom T2	< 2.49	< 4.27	< 5.16	< 0.950
Sample	04-Mar-2012	MP-4 Bottom	< 4.14	< 7.66	< 8.54	< 3.11
Triplicate	04-Mar-2012	MP-4 Bottom T1	< 4.45	< 6.67	< 10.9	< 2.83
Triplicate	04-Mar-2012	MP-4 Bottom T2	< 2.90	< 7.25	< 5.67	< 1.79
Blanks						
Equipment Blank	10-Aug-2010	Equipment Blank	2.55	< 3.60	< 5.35	< 1.04
	07-Apr-2011	Equipment Blank	< 2.51	< 3.09	< 3.67	< 1.18
	09-Aug-2011	Equipment Blank	< 3.62	< 3.56	< 3.97	< 0.659
	04-Mar-2012	Equipment Blank	< 7.75	< 7.61	< 5.68	< 2.27
Laboratory Blank	10-Aug-2010	Lab Blank	10.50	< 5.80	< 9.26	< 0.824
	10-Aug-2010	Lab Blank	22.00	< 2.99	< 5.25	< 0.841
	10-Aug-2010	Lab Blank	11.40	< 4.16	< 5.94	< 1.40
	07-Apr-2011	Lab Blank	< 1.25	< 2.71	< 5.48	< 1.11
	09-Aug-2011	Lab Blank	< 1.00	< 2.60	< 3.72	< 0.868
	04-Mar-2012	Lab Blank	< 5.14	< 6.82	< 10.6	< 1.55

NOTES:

Water Quality Analytical Results: Hormones and Sterols

PROJECT NO.: 307071-00020

PROJECT NO.: 307071-00020		Hormones and Sterols																												
Monitoring Station	Date (d-m-y)	Sample Name	Androsterone	Desogestrel	17 alpha-Estradiol	Estrone	Equilin	Androstenedione	17 alpha-Dihydroequilin	17 beta-Estradiol	Testosterone	Equilenin	Mestranol	Norethindrone	17 alpha-Ethinyl-Estradiol	Progesterone	Norgestrel	Estrifol	beta-Estradiol 3-benzoate	Coprostanol	Epicooprostanol	Cholesterol	Cholestanol	Desmosterol	Ergosterol	Campesterol	Stigmasterol	beta-Sitosterol	beta Stigmastanol	
Albert Head																														
AH-2	28-Jul-2010	AH-1 Bottom	< 1.36	< 3.70	< 0.986	< 2.09	< 1.61	< 4.23	< 1.05	< 1.00	< 3.07	< 0.479	< 2.31	< 3.48	6.62	< 12.8	< 9.69	< 1.95	< 1.05	9.38	< 6.80	374.00	< 15.4	78.60	< 5.33	25.10	< 38.5	120.00	< 34.0	
	07-Apr-2011	AH-2 Bottom	< 2.22	< 3.18	< 2.28	< 2.55	< 1.87	< 9.33	< 1.27	< 1.94	< 8.66	< 1.52	< 6.55	< 6.21	< 6.50	< 38.6	< 12.9	< 3.15	< 0.595	< 12.2	< 15.8	194	< 19.7	< 50.7	< 12.4	< 18.6	< 96.3	146	< 91.5	
	09-Aug-2011	AH-2 Bottom	< 2.27	< 5.47	< 2.72	< 1.75	< 2.61	< 7.33	< 1.61	< 2.70	< 8.58	< 1.26	< 4.10	< 3.69	17	< 24.9	< 12.9	< 8.56	< 0.599	< 10.7	< 13.5	136	< 32.9	< 35.5	< 20.9	< 30.2	< 91.2	85	< 117	
	05-Mar-2012	AH-2 Bottom	< 3.44	< 5.89	< 7.66	< 3.58	< 9.37	< 9.97	< 3.62	< 6.07	< 25.8	< 1.81	< 10.4	< 6.73	27	< 60.7	< 17.4	< 6.90	< 1.24	NDR 32.6	< 39.2	222	< 54.9	< 50.6	< 32.4	< 62.4	< 253	NDR 191	< 413	
Finnerty Cove																														
FC-7	28-Jul-2010	FC-7 Bottom	< 2.44	< 4.10	< 1.37	< 1.31	< 1.33	< 5.71	< 1.39	< 1.17	< 6.38	< 0.624	< 3.24	< 3.59	9.25	< 16.0	< 8.62	< 1.98	< 0.502	< 5.86	< 7.29	233.00	< 8.38	< 20.3	< 8.22	22.40	< 56.3	191.00	< 36.2	
	07-Apr-2011	FC-7 Bottom	< 4.27	< 2.65	< 2.02	< 1.84	< 2.63	< 8.36	< 1.70	< 1.88	< 10.4	< 0.940	< 2.92	< 2.77	< 6.07	< 17.0	< 7.43	< 2.35	< 0.428	< 7.75	< 10.0	291.00	< 14.5	< 39.4	< 11.3	< 33.9	< 52.1	178.00	< 59.3	
	09-Aug-2011	FC-7 Bottom	< 3.52	< 5.27	< 2.83	< 2.35	< 2.55	NDR 12.6	< 1.27	< 3.04	< 10.4	< 1.70	< 6.88	< 5.58	28	< 32.2	< 12.1	< 8.33	< 0.476	< 7.72	< 9.77	193	< 31.0	< 33.3	< 16.4	< 22.4	< 89.0	< 72.4	< 96.9	
	05-Mar-2012	FC-7 Bottom	< 6.66	< 17.6	< 6.40	< 2.63	< 4.66	< 25.0	< 3.93	< 5.22	< 13.7	< 1.39	< 9.88	< 10.1	NDR 14.1	< 103	< 25.4	< 7.86	< 1.02	NDR 22.3	< 13.5	218	< 34.9	< 29.8	< 12.7	< 25.9	< 184	< 156	< 167	
Macaulay Point																														
MP-4	28-Jul-2010	MP-4 Bottom	< 1.91	< 5.14	< 0.736	< 2.65	< 2.26	NDR 10.1	< 1.93	< 1.06	< 3.07	< 0.824	< 1.82	< 4.20	NDR 3.06	< 20.6	< 11.0	< 3.92	< 0.872	15.10	19.60	301.00	< 14.3	< 22.1	< 2.91	42.50	362.00	1530.00	NDR 740	
	07-Apr-2011	MP-4 Bottom	< 2.97	< 4.47	< 2.44	< 2.08	< 2.97	< 13.6	< 1.51	< 2.39	< 2.86	< 0.809	< 3.09	< 4.82	< 3.83	< 12.4	< 8.92	< 2.57	< 0.437	23.60	< 10.3	172.00	< 25.3	< 34.6	< 9.25	< 19.0	< 60.1	153.00	< 65.6	
	09-Aug-2011	MP-4 Bottom	< 2.32	< 4.53	< 3.42	< 1.73	< 2.38	NDR 7.43	< 1.51	< 3.24	< 9.67	< 1.65	< 4.73	< 5.15	31.10	< 29.2	< 12.8	< 7.26	< 0.440	168.00	< 9.81	320.00	< 28.6	< 37.5	< 17.0	< 28.5	< 96.6	94.60	< 101	
	05-Mar-2012	MP-4 Bottom	< 3.58	< 6.53	< 3.52	< 2.60	< 4.45	< 12.5	< 3.23	< 5.24	< 21.2	< 2.08	< 10.1	< 7.29	13.80	< 90.2	< 32.1	< 6.92	< 0.934	NDR 65.2	< 10.8	206.00	< 25.7	< 39.0	< 20.0	< 23.7	< 152	< 149	< 180	
Quality Assurance / Quality Control																														
Sample	28-Jul-2010	AH-1 Bottom	< 1.36	< 3.70	< 0.986	< 2.09	< 1.61	< 4.23	< 1.05	< 1.00	< 3.07	< 0.479	< 2.31	< 3.48	6.62	< 12.8	< 9.69	< 1.95	< 1.05	9.38	< 6.80	374.00	< 15.4	78.60	< 5.33	25.10	< 38.5	120.00	< 34.0	
Triplicate	28-Jul-2010	AH1 Bottom T1	< 1.61	< 7.62	< 1.97	< 2.29	< 2.65	NDR 10.1	< 2.24	< 1.29	< 3.08	< 1.17	< 1.33	< 3.38	NDR 7.37	< 26.7	< 9.66	< 2.98	< 1.08	NDR 11.3	13.40	339.00	14.50	58.80	< 6.16	49.60	281.00	1260.00	< 39.5	
Triplicate	28-Jul-2010	AH1 Bottom T2	< 1.41	< 5.68	< 2.04	< 1.00	< 2.23	< 2.90	< 2.01	< 1.74	< 4.58	< 0.868	< 3.37	< 3.37	7.53	< 23.0	< 9.39	< 2.82	< 0.667	< 9.47	< 11.8	335.00	< 16.7	50.20	< 4.93	24.90	< 45.2	130.00	< 46.7	
Sample	07-Apr-2011	MP-4 Bottom	< 2.97	< 4.47	< 2.44	< 2.08	< 2.97	< 13.6	< 1.51	< 2.39	< 2.86	< 0.809	< 3.09	< 4.82	< 3.83	< 12.4	< 8.92	< 2.57	< 0.437	23.60	< 10.3	172.00	< 25.3	< 34.6	< 9.25	< 19.0	< 60.1	153.00	< 65.6	
Triplicate	07-Apr-2011	MP-4 Bottom T1	< 3.40	< 4.39	< 1.76	< 1.91	< 2.93	< 8.01	< 1.32	< 2.70	< 6.31	< 1.06	< 3.16	< 6.39	< 3.55	< 15.9	< 8.00	< 2.28	< 0.854	20.3	< 11.6	129	< 19.6	< 25.0	< 16.4	< 28.6	< 34.4	171	< 74.3	
Triplicate	07-Apr-2011	MP-4 Bottom T2	< 2.48	< 5.25	< 1.99	< 1.27	< 2.57	< 9.96	< 1.54	< 2.05	< 7.90	< 1.21	< 5.42	< 3.70	< 3.49	< 16.6	< 6.01	< 2.75	< 0.545	23.90	< 12.9	149.00	< 21.7	< 25.5	< 13.4	< 27.3	< 86.8	147.00	< 57.3	
Sample	09-Aug-2011	MP-4 Bottom	< 2.32	< 4.53	< 3.42	< 1.73	< 2.38	NDR 7.43	< 1.51	< 3.24	< 9.67	< 1.65	< 4.73	< 5.15	31.10	< 29.2	< 12.8	< 7.26	< 0.440	168.00	< 9.81	320.00	< 28.6	< 37.5	< 17.0	< 28.5	< 96.6	94.60	< 101	
Triplicate	09-Aug-2011	MP-4 Bottom T1	< 2.35	< 5.20	< 3.01	< 2.72	< 2.37	NDR 13.4	< 1.57	< 2.36	< 11.8	< 1.56	< 3.81	< 4.64	34.80	< 26.0	< 9.05	< 5.74	< 0.461	159.00	< 11.8	334.00	< 28.9	< 30.8	< 13.9	29.80	< 61.4	116.00	< 88.8	
Triplicate	09-Aug-2011	MP-4 Bottom T2	< 3.28	< 4.78	< 2.68	< 2.73	< 2.15	NDR 13.3	< 1.59	< 2.33	< 9.59	< 1.61	< 2.50	< 3.63	35.10	< 28.6	< 10.7	< 5.91	< 0.462	181.00	< 11.3	306.00	< 30.7	< 26.5	< 17.9	32.50	< 86.0	84.70	< 94.5	
Sample	05-Mar-2012	MP-4 Bottom	< 3.58	< 6.53	< 3.52	< 2.60	< 4.45	< 12.5	< 3.23	< 5.24	< 21.2	< 2.08	< 10.1	< 7.29	13.80	< 90.2	< 32.1	< 6.92	< 0.934	NDR 65.2	< 10.8	206.00	< 25.7	< 39.0	< 20.0	< 23.7	< 152	< 149	< 180	
Triplicate	05-Mar-2012	MP-4 Bottom T1	< 7.60	< 9.76	< 4.48	< 2.48	< 4.49	< 20.5	< 4.58	< 2.52	< 16.6	< 2.20	< 5.52	< 5.27	16	< 47.4	< 28.4	< 7.10	< 1.15	NDR 57.4	< 10.6	536	< 26.1	< 22.2	< 13.0	NDR 21.4	< 109	< 119	< 130	
Triplicate	05-Mar-2012	MP-4 Bottom T2	< 5.49	< 9.06	< 4.28	< 3.16	< 4.12	< 10.1	< 2.43	< 3.44	< 12.9	< 1.64	< 6.24	< 4.90	14.90	< 50.4	< 19.1	< 7.17	< 0.579	NDR 69.5	< 15.7	251.00	< 58.5	< 23.1	< 18.7	< 43.9	< 114	< 179	< 244	
Blanks																														
Equipment	28-Jul-2010	Equipment Blank	< 1.27	< 4.43	< 1.42	< 2.14	< 1.71	< 6.05	< 1.40	< 1.36	< 2.92	< 0.449	< 1.32	< 3.86	5.60	< 12.7	< 5.91	< 1.67	< 0.499	< 5.93	< 7.37	142.00	< 9.91	< 27.5	< 3.02	18.10	300.00	1280.00	< 14.6	
	07-Apr-2011	Equipment Blank	< 1.93	< 2.12	< 9.67	< 13.4	< 16.2	< 7.07	< 9.16	< 8.00	< 4.33	< 6.18	< 3.70	< 4.73	< 29.5	< 17.1	< 19.8	< 3.95	< 0.599	< 5.79	< 7.48	106.00	< 13.2	< 33.5	< 12.2	< 13.3	< 64.7	130.00	< 48.9	
	09-Aug-2011	Equipment Blank	< 1.39	< 2.34	< 1.68	< 1.52	NDR 2.42	NDR 8.05	< 0.730	< 1.92	< 3.53	< 0.815	< 1.82	< 3.41	25.70	< 15.8	< 11.2	< 6.25	< 0.342	< 4.91	< 6.21	82.70	< 9.90	< 21.1	< 6.57	< 10.1	< 46.2	< 41.9	< 49.8	
	05-Mar-2012	Equipment Blank	< 1.46	< 3.52	< 1.15	< 1.09	< 0.655	NDR 11.9	< 0.817	< 1.51	< 2.70	< 0.253	< 1.56	< 3.48	16.60	< 14.2	< 11.2	< 3.11	< 0.416	854.00	259.00	1890.00	267.00	< 34.5	< 21.6	< 22.9	< 133	< 160	< 137	
Laboratory	28-Jul-2010	Lab Blank	< 0.670	< 8.16	< 1.11	< 1.98	< 2.34	NDR 5.58	< 1.25	< 0.982	< 2.50	< 0.768	< 1.10	< 3.44	NDR 4.12	< 14.2	< 5.95	< 2.08	< 0.390	< 6.24	< 6.16	136.00	< 10.6	< 38.0	< 6.07	< 7.79	< 28.3	< 51.2	< 30.0	
	07-Apr-2011	Lab Blank	< 1.69	< 2.42	< 1.19	< 1.68	< 0.882	< 7.39	< 0.626	< 1.35	< 6.65	< 0.565	< 1.63	< 2.55	< 2.40	< 18.6	< 7.74	< 3.93	< 0.306	< 5.07	< 6.55	< 7.36	< 14.0	< 29.0	< 7.30	< 10.5	< 53.7	NDR 88.6	< 35.5	
	09-Aug-2011	Lab Blank	< 0.973	< 1.35	< 1.55	< 1.20	< 1.06	NDR 6.70	< 0.511	< 1.40	< 3.14	< 0.569	< 1.67	< 3.05	NDR 13.6	< 10.0	< 8.75	< 5.63	< 0.376	< 3.53	< 4.47	68.00	< 9.54	< 19.7	< 4.72	< 9.56	< 35.9	< 27.3	< 39.7	
	05-Mar-2012	Lab Blank	< 1.34	< 3.60	< 1.97	< 2.72	< 3.27	10.10	< 1.82	< 4.55	< 4.92	&																		

Water Quality Analytical Results: Field Blank Analysis

PROJECT NO.: 307071-00020				Dissolved Metals and Trace Elements								Total Metals and Trace Elements								Aroclors				Microbiological Parameters								
Monitoring Station	Season	Date (d-m-y)	Lab File	Sample Name	Cadmium - D (µg/L)	Cobalt - D (µg/L)	Copper - D (µg/L)	Iron - D (µg/L)	Lead - D (µg/L)	Manganese - D (µg/L)	Nickel - D (µg/L)	Zinc - D (µg/L)	Cadmium - T (µg/L)	Calcium - T (µg/L)	Cobalt - T (µg/L)	Copper - T (µg/L)	Iron - T (µg/L)	Lead - T (µg/L)	Magnesium - T (µg/L)	Manganese - T (µg/L)	Mercury - T (µg/L)	Nickel - T (µg/L)	Phosphorus - T (µg/L)	Zinc - T (µg/L)	Aroclor 1242 (µg/L)	Aroclor 1248 (µg/L)	Aroclor 1254 (µg/L)	Aroclor 1260 (µg/L)	Fecal Coliform (cfu/100ml)	Enterococcus (cfu/100ml)		
Detection Limit ⁽³⁾					0.01	0.05	0.05	1	0.05	0.2	0.05	0.5	0.01	50	0.05	0.05	1	0.05	50	0.2	0.02	0.05	3	0.5	0.10	0.10	0.10	0.10	1	1.0		
QAQC Samples																																
Blanks																																
	Spring 2010	28-Apr-2010	B027291	BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		06-May-2010	B029749	BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	50	< 0.05	< 0.05	< 1	< 0.05	60	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		12-May-2010	B032251	EQUIPMENT BLANK	< 0.01	< 0.05	0.06	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	0.11	< 1	< 0.05	< 50	< 0.2	< 0.02	0.12	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		18-May-2010	B034330	BLANK	< 0.01	< 0.05	0.09	< 1	< 0.05	< 0.2	0.21	< 0.5	< 0.01	< 50	< 0.05	< 0.08	< 1	< 0.05	130	< 0.2	< 0.02	0.14	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		25-May-2010	B036570	BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
	Summer 2010	26-Jul-2010	B062668	BLANK	< 0.01	< 0.05	0.14	< 1	< 0.05	< 0.2	0.15	0.6	< 0.01	< 50	< 0.05	0.06	< 1	< 0.05	< 50	< 0.2	< 0.02	0.23	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		28-Jul-2010	B063834	EQUIPMENT BLANK	< 0.01	< 0.05	< 0.05	1	< 0.05	< 0.2	0.1	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	0.11	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		03-Aug-2010	B066176	EQUIPMENT BLANK	< 0.01	< 0.05	0.06	< 1	< 0.05	< 0.2	0.1	0.7	< 0.01	< 50	< 0.05	0.08	< 1	< 0.05	< 50	< 0.2	< 0.02	0.11	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		10-Aug-2010	B069347	BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		17-Aug-2010	B072723	BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	0.05	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
	Fall 2010	02-Nov-2010	B0A7047	BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		08-Nov-2010	B0A9355	EQUIPMENT BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	100	< 0.05	< 0.05	< 1	< 0.05	340	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		18-Nov-2010	B0B3065	EQUIPMENT BLANK	< 0.01	< 0.05	0.12	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	0.08	< 1	< 0.05	50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		24-Nov-2010	B0B4832	BLANK	< 0.01	< 0.05	0.1	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	90	< 0.05	0.08	< 1	< 0.05	210	< 0.2	< 0.02	0.07	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		01-Dec-2010	B0B7266	BLANK	< 0.01	< 0.05	0.32	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
	Winter 2011	16-Mar-2011	B121043	BLANK	< 0.01	< 0.05	0.14	< 1	< 0.05	< 0.2	0.09	0.6	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	0.17	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		22-Mar-2011	B122666	BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 500	< 0.05	0.07	< 1	< 0.05	< 500	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		28-Mar-2011	B124352	BLANK	< 0.01	< 0.05	0.05	< 1	< 0.05	< 0.2	0.07	0.5	< 0.01	< 500	< 0.05	0.07	< 1	< 0.05	< 500	< 0.2	< 0.02	0.22	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		07-Apr-2011	B127749	BLANK	< 0.01	< 0.05	0.14	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	100	< 0.05	0.1	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		12-Apr-2011	B128938	BLANK	< 0.01	< 0.05	0.16	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	0.17	< 1	< 0.05	< 50	< 0.2	< 0.02	0.09	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
	Spring 2011	04-May-2011	B135916	BLANK	< 0.01	< 0.05	0.06	< 1	< 0.05	< 0.2	0.1	0.6	< 0.01	< 50	< 0.05	0.1	< 1	< 0.05	100	< 0.2	< 0.02	0.19	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		09-May-2011	B137304	BLANK	< 0.01	< 0.05	0.13	< 1	< 0.05	< 0.2	0.08	0.7	< 0.01	< 50	< 0.05	0.08	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		17-May-2011	B140372	BLANK	< 0.01	< 0.05	0.17	< 1	< 0.05	< 0.2	0.05	1.1	< 0.01	330	< 0.05	0.15	< 1	< 0.05	110	< 0.2	< 0.02	0.09	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		25-May-2011	B143055	BLANK	< 0.01	< 0.05	0.18	< 1	< 0.05	< 0.2	< 0.05	1.5	< 0.01	< 50	< 0.05	0.09	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		30-May-2011	B144562	BLANK	< 0.01	< 0.05	0.15	< 1	< 0.05	< 0.2	0.97	1.4	< 0.01	< 50	< 0.05	0.1	< 1	< 0.05	< 50	< 0.2	< 0.02	0.92	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
	Summer 2011	20-Jul-2011	B165469	BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		26-Jul-2011	B167823	BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		02-Aug-2011	B169888	BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		09-Aug-2011	B173361	BLANK	< 0.01	< 0.05	0.07	< 1	< 0.05	< 0.2	< 0.05	1	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		16-Aug-2011	B175552	BLANK	< 0.01	< 0.05	0.06	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
	Fall 2011	31-Oct-2011	B1A5294	BLANK	< 0.01	< 0.05	0.07	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	0.07	< 1	< 0.05	100	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		07-Nov-2011	B1A8247	BLANK	< 0.01	< 0.05	0.15	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	0.17	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		15-Nov-2011	B1B1047	BLANK	< 0.01	< 0.05	< 0.05	< 1	< 0.05	< 0.2	< 0.05	< 0.5	< 0.01	< 50	< 0.05	< 0.05	< 1	< 0.05	< 50	< 0.2	< 0.02	< 0.05	< 3	< 0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 1	< 1.0		
		28-Nov-2011	B1B5372	BLANK	< 0.01	< 0.05	0.14	< 1	&																							

Water Quality Analytical Results: Field Blank Analysis

PROJECT NO.: 307071-00020

Monitoring Station	Season	Date (d-m-y)	Lab File	Sample Name	PAHs																						
					2-Methylnaphthalene (µg/L)	Acenaphthylene (µg/L)	Acenaphthene (µg/L)	Acridine (µg/L)	Anthracene (µg/L)	Benzo[a]anthracene (µg/L)	Benzo[a]pyrene (µg/L)	Benzo[b]fluoranthene (µg/L)	Benzo[g,h,i]perylene (µg/L)	Benzo[k]fluoranthene (µg/L)	Chrysene (µg/L)	Dibenzo[a,h]anthracene (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Indeno[1,2,3-cd]pyrene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)	Quinoline (µg/L)	Light PAHs (µg/L)	Heavy PAHs (µg/L)	Total PAHs (µg/L)	
QAQC Samples					Detection Limit^[3]																						
Blanks					0.01	0.05	0.01	0.01	0.05	0.05	0.01	0.01	0.01	0.02	0.01	0.01	0.02	0.01	0.01	0.02	0.05	0.01	0.01	0.05	0.05	0.02	0.05
	Spring 2010	28-Apr-2010	B027291	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
		06-May-2010	B029749	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		12-May-2010	B032251	EQUIPMENT BLANK	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.02	< 0.02	< 0.01	< 0.01	< 0.05	---	< 0.05		
		18-May-2010	B034330	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		25-May-2010	B036570	BLANK	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.02	< 0.02	< 0.01	< 0.01	< 0.05	---	< 0.05		
	Summer 2010	26-Jul-2010	B062668	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
		28-Jul-2010	B063834	EQUIPMENT BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		03-Aug-2010	B066176	EQUIPMENT BLANK	< 0.05	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.02	< 0.05	< 0.01	< 0.01	< 0.05	< 0.05	< 0.02	< 0.05	
		10-Aug-2010	B069347	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		17-Aug-2010	B072723	BLANK	< 0.05	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.02	< 0.05	< 0.01	< 0.01	< 0.05	< 0.05	< 0.02	< 0.05	
	Fall 2010	02-Nov-2010	B0A7047	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		08-Nov-2010	B0A9355	EQUIPMENT BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		18-Nov-2010	B0B3065	EQUIPMENT BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		24-Nov-2010	B0B4832	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		01-Dec-2010	B0B7266	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	Winter 2011	16-Mar-2011	B121043	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		22-Mar-2011	B122666	BLANK	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.5	< 0.5	
		28-Mar-2011	B124352	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		07-Apr-2011	B127749	BLANK	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.5	< 0.5	
		12-Apr-2011	B128938	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Spring 2011	04-May-2011	B135916	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		09-May-2011	B137304	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		17-May-2011	B140372	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		25-May-2011	B143055	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		30-May-2011	B144562	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	Summer 2011	20-Jul-2011	B165469	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		26-Jul-2011	B167823	BLANK	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.5	< 0.5	
		02-Aug-2011	B169888	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		09-Aug-2011	B173361	BLANK	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.009	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.5	< 0.5	
		16-Aug-2011	B175552	BLANK	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.009	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.05	< 0.05	< 0.5	< 0.5		
	Fall 2011	31-Oct-2011	B1A5294	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		07-Nov-2011	B1A8247	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		15-Nov-2011	B1B1047	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		28-Nov-2011	B1B5372	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		30-Nov-2011	B1B6322	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	Winter 2012	08-Feb-2012	B210733	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		15-Feb-2012	B212982	BLANK	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.0090	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.020	< 0.050	< 0.050	< 0.050	< 0.020	< 0.50	< 0.50	< 0.050	< 0.50	
		21-Feb-2012	B214515	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		27-Feb-2012	B216209	BLANK	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.0090	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.020	< 0.050	< 0.050	< 0.050	< 0.020	< 0.50	< 0.50	< 0.050	< 0.50	
		04-Mar-2012	B218224	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Spring 2012	15-May-2012	B239924	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		22-May-2012	B241909	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		28-May-2012	B243848	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		31-May-2012	B245213	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	06-Jun-2012	B247308	BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		



PROJECT NO.: 307071-00020

Associated Station / Sample	Date	Representativeness (Blank)	Precision (Replicates)	Bias (Standards)	Data Qualifier Values Above Detection Limit)	Data Qualifier Values Below Detection Limit)	Note	Data Included / Rejected
Table 2&3: Routine Parameter								
Ammonia	All Stations	26-Jul-10	S		J		RSD of triplicate analysis for MP4 - Mid >15%	Included
Ammonia	All Stations	8-Nov-10	M		J		RSD of triplicate analysis for MP4-Mid >10% and <15%	Included
Ammonia	All Stations	8-Nov-10	M		J		RSD of triplicate analysis for MP4 - Surface >15%	Included
Ammonia	All Stations	22-Mar-11	S		J		RSD of triplicate analysis for MP4 - Mid >15%	Included
Ammonia	All Stations	4-May-11	S		J		RSD of triplicate analysis for AH2 - Surface >15%	Included
Ammonia	All Stations	9-May-11	S		J		RSD of triplicate analysis for MP4 - Surface >15%	Included
Ammonia	All Stations	20-Jul-11	S		J		RSD of triplicate analysis for AH2 - Surface >15%	Included
Ammonia	All Stations	7-Nov-11	S		J		RSD of triplicate analysis for AH2 - Bottom >15%	Included
Ammonia	All Stations	7-Nov-11	S		J		RSD of triplicate analysis for MP4 - Mid >15%	Included
Ammonia	All Stations	8-Feb-12	S		J		RSD of triplicate analysis for AH2 - Surface >15%	Included
Ammonia	All Stations	15-Feb-12	S		J		RSD of triplicate analysis for MP4 - Mid & Surface >15%	Included
Ammonia	All Stations	26-Jul-12	S		J		RSD of triplicate analysis for MP4 - Mid & Surface >15%	Included
Ammonia	All Stations	22-May-12	S		J		RSD of triplicate analysis for MP4 - Bottom >15%	Included
Fluoride	All Stations	8-Nov-10	M		J		RSD of triplicate analysis for MP4 - Mid >15% and < 25%	Included
Sulphate	All Stations	8-Nov-10	M		J		RSD of triplicate analysis for MP4 - Mid >15% and < 25%	Included
Nitrate	All Stations	7-Apr-11	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	
Nitrate, Nitrate +Nitrite	All Stations	20-Jul-11	M		J		RSD of triplicate analysis for AH2 - Surface >10% and <15%	Included
Nitrate, Nitrate +Nitrite	All Stations	26-Jul-11	S		J		RSD of triplicate analysis for AH2 - Surface >10% and <15%	Included
Nitrate, Nitrate +Nitrite	All Stations	28-Jul-10	S		R			
Nitrate, Nitrate +Nitrite	All Stations	22-May-12	S		J		RSD of triplicate analysis for MP4 - Bottom >15%	Included
Nitrate, Nitrate +Nitrite	All Stations	22-May-12	S		J		RSD of triplicate analysis for MP4 - Mid >15%	Included
Total Suspended Solids	All Stations	4-May-11	S		J		RSD of triplicate analysis for AH2 - Bottom, Mid and Surface Triplicates >25%	Included
Total Suspended Solids	All Stations	26-Jul-11	S		J		RSD of triplicate analysis for MP4- Mid Triplicates >25%	Included
Total Suspended Solids	All Stations	6-Jun-12		M	J		Spiked Blank > 110% , exceeds laboratory QA/QC criteria	Included

PROJECT NO.: 307071-00020

Associated Station / Sample	Date	Representativeness (Blank)	Precision (Replicates)	Bias (Standards)	Data Qualifier Values Above Detection Limit)	Data Qualifier Values Below Detection Limit)	Note	Data Included / Rejected
Table 4: Dissolved Metals and Trace Elements								
Copper	All Stations	26-Jul-10	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	18-Nov-10	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	16-Mar-11	S		R		Field Blank, >10% of Associated Sample Concentration and >5 x DL	Rejected
Copper	All Stations	7-Apr-11	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	12-Apr-11	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	9-May-11	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	17-May-11	M	M	J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	17-May-11		S	J		RSD of triplicate analysis for MP4 - Mid >20% and <40%	Included
Copper	All Stations	25-May-11	M		J+		RSD of triplicate analysis for MP4 - Surface >40%	Included
Copper	All Stations	30-May-11	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	7-Nov-11	M	M	J		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	15-Nov-11		M	J		Spiked Blank <75% and > 60%, Marginal Failure	Included
Copper	All Stations	28-Nov-11	M		J+		RSD of triplicate analysis for MP4 - Mid >20% and <40%	Included
Copper	All Stations	30-Nov-11	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	8-Feb-12	S		R		Field Blank, >10% of Associated Sample Concentration and >5 x DL	Rejected
Copper	All Stations	21-Feb-12		S	J		RSD of triplicate analysis for MP4 - Surface >40%	Included
Copper	All Stations	27-Feb-12	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	4-Mar-12	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	15-May-2012	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	22-May-2012	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	28-May-2012	S		R		Field Blank, >10% of Associated Sample Concentration and >5 x DL	Rejected
Copper	All Stations	31-May-2012	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	06-Jun-2012	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Iron	All Stations	31-Oct-11		M	J		Spiked Blank <75% and > 60%, Marginal Failure	Included
Iron	All Stations	28-Nov-11		M	J		Spiked Blank <75% and > 60%, Marginal Failure	Included
Nickel	All Stations	18-May-10	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Nickel	All Stations	26-Jul-10	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Nickel	All Stations	15-Nov-11		S	J		RSD of triplicate analysis for MP4 - Bottom >40%	Included
Nickel	All Stations	17-May-11		M	J		RSD of triplicate analysis for MP4 - Mid >20% and <40%	Included
Nickel	All Stations	30-May-11	S		R		Field Blank, >10% of Associated Sample Concentration and >5 x DL	Rejected
Zinc	All Stations	17-May-11	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Zinc	All Stations	25-May-11	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Zinc	All Stations	30-May-11	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included



PROJECT NO.: 307071-00020

Associated Station / Sample	Date	Representativeness (Blank)	Precision (Replicates)	Bias (Standards)	Data Qualifier Values Above Detection Limit)	Data Qualifier Values Below Detection Limit)	Note	Data Included / Rejected
Table 5: Total Metals and Trace Elements								
Copper	All Stations	12-May-10	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	12-Apr-11	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	17-May-11	M	S	J		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL MP4-Surface Field RSD > 40%, Severe failure	Included
Copper	All Stations	7-Nov-11	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
	All Stations	15-Nov-11		M	J		MP4 Bottom - RSD > 20 % Marginal Failure	Included
Copper	All Stations	8-Feb-12	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
	All Stations	21-Feb-12		S	J		MP4 Mid - RSD > 40 % Severe Failure	Included
Copper	All Stations	27-Feb-12	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	15-May-12	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Copper	All Stations	22-May-12	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
							Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL, MP4 Surface - RSD > 20 % Marginal Failure, MP4 Mid - RSD > 40 % Severe Failure	Included
Copper	All Stations	28-May-12		S	J		MP4 Mid - RSD > 40 % Severe Failure	Included
Copper	All Stations	31-May-12	M		J+		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Iron	All Stations	17-May-2011		M	J		Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL MP4-Surface Field RSD > 20%, Marginal Failure	Included
Iron	All Stations	31-Oct-11			M	J	Spiked Blank <75% and > 60%, Marginal Failure	Included
Iron	All Stations	28-Nov-11			M	J	Spiked Blank <75% and > 60%, Marginal Failure	Included
Iron	All Stations	21-Feb-12		M		J	MP4-Surface Field RSD > 20%, Marginal Failure	Included
Nikel	All Stations	12-May-10	M				Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Nikel	All Stations	18-May-10	M				Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Nikel	All Stations	28-Jul-10	M				Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Nikel	All Stations	3-Aug-10	M				Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Nikel	All Stations	16-Mar-11	M				Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Nikel	All Stations	28-Mar-11	M				Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Nikel	All Stations	4-May-11	M				Field Blank, >10% of Associated Sample Concentration and >2xDL but less than < 5 x DL	Included
Nikel	All Stations	30-May-11	S			R	Field Blank, >10% of Associated Sample Concentration and 2x Associated Sample	Rejected
Nikel	All Stations	21-Feb-12		S		J	MP4 Mid RSD > 40%, Severed Failure	Included



PROJECT NO.: 307071-00020

Associated Station / Sample	Date	Representativeness (Blank)	Precision (Replicates)	Bias (Standards)	Data Qualifier Values Above Detection Limit	Data Qualifier Values Below Detection Limit	Note	Data Included / Rejected
Table 6: PAH								
Quinoline	All Stations	15-Feb-12		S		UN	Matrix Spike % Recovery > 175%,	Rejected
Table 7: OC Pesticides								
Surogate Recovery	All Stations	27-Feb-12		M	J-	UN	Surogate Recovery <50% and >25%, Possible Low Bias	Included
Hexachlorocyclopentadiene	All Stations	3-Aug-10		M	J-		Matrix Spike % Recovery <30% and > 25%	Included
Table 9: Hydrocarbons								
				M	J-		Matrix Spike < 50%	Included
Table 10: Volatile Organic Compounds								
Chloromethane	All Stations	17-Aug-10		M	J+	UN	Spiked Blank > 150% and <175%	Included
Chloroform	All Stations	12-May-12	S			UN	Field Blank, >10% of Associated Sample Concentration and >5 x DL	Rejected
Bromomethane	All Stations	7-Apr-11		M	J-	UN	Matrix Spike < 50%	Included
Table 12: Polybrominated Diphenyl Ethers								
Br2-DPE-7	All Stations	3-Aug-10		M	J+		Lab Blank, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br2-DPE-15	All Stations	3-Aug-10		M	J+		Lab Blank, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br3-DPE-17/25	All Stations	3-Aug-10		M	J+		Lab Blank, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br3-DPE-28/33	All Stations	3-Aug-10		M	J+		Lab Blank, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br4-DPE-47	All Stations	All		S	R	UN	Field & Lab Blanks, > 20% Associated Sample Concentration and > 5xDL	Rejected
Br4-DPE-49	All Stations	3-Aug-10		S	R	UN	Lab Blank, >10% of Associated Sample Concentration, and > 5 x DL	Included
Br4-DPE-49	All Stations	22-Mar-11		M	J+		Field Blank, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br4-DPE-49	All Stations	26-Jul-11		M	J+		Field Blank, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br4-DPE-49	All Stations	27-Feb-12		M	J+		Lab Blank, >10% of Associated Sample Concentration, and >2xDL	Included
Br4-DPE-66	All Stations	3-Aug-10		M	R	UN	Lab Blank, >10% of Associated Sample Concentration, and >5 x DL	Rejected
Br4-DPE-71	All Stations	3-Aug-10		M	J+		Lab Blank, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br5-DPE-85	All Stations	22-Mar-11		M	J+		Lab Blank, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br5-DPE-85	All Stations	26-Jul-11		S	J	UN	MP4 Bottom - RSD > 75 % Severe Failure	Included
Br5-DPE-99	All Stations	All		S	R	UN	Field & Lab Blanks, > 20% Associated Sample Concentration and > 5xDL	Rejected
Br5-DPE-100	All Stations	All		S	R	UN	Field & Lab Blanks, > 20% Associated Sample Concentration and > 5xDL	Rejected
Br6-DPE-153	All Stations	All		M	J+		Field & Lab Blanks, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br6-DPE-154	All Stations	All		M	J+		Field & Lab Blanks, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br7-DPE-183	All Stations	3-Aug-10		M	J+		Field Blanks, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br7-DPE-183	All Stations	15-Feb-12		M	J+		Field Blanks, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br8-DPE-203	All Stations	30-Aug-10		M	J+		Field Blanks, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included

PROJECT NO.: 307071-00020

Associated Station / Sample	Date	Representativeness (Blank)	Precision (Replicates)	Bias (Standards)	Data Qualifier Values Above Detection Limit)	Data Qualifier Values Below Detection Limit)	Note	Data Included / Rejected
Br8-DPE-203	All Stations	26-Jul-11	M		J+		Lab Blanks, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br9-DPE-207	All Stations	17-Aug-10	M		J+		Field Blanks, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br9-DPE-207	All Stations	22-Mar-11	S		R	UN	Field & Lab Blanks, > 20% Associated Sample Concentration and > 5xDL	Rejected
Br9-DPE-208	All Stations	3-Aug-10	S		R	UN	Field Blank, > 20% Associated Sample Concentration and > 5xDL	Rejected
Br9-DPE-208	All Stations	22-Mar-11	M		J+		Field Blanks, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br10-DPE-209	All Stations	17-Aug-10	M		J+		Field Blanks, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br10-DPE-209	All Stations	22-Mar-11	M		J+		Field & Lab Blanks, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included
Br10-DPE-209	All Stations	7-Apr-11	M		J+		Field Blanks, >10% of Associated Sample Concentration, and >2xDL but less than < 5 x DL	Included

Notes:

REM = Receiving Environment Monitoring Stations

PDM = Pre Discharge Monitoring Stations

S = Severe DQO Failure

S+ = Severe DQO Failure, that is believed to be biased high

M = Marginal DQO Failure

R = Datum Rejected

J = analyte has been positively identified, but the reported concentration is an estimate value and the direction of the bias is unknown

J- = analyte has been positively identified, but the reported concentration is an estimate value that is believed to be biased low

U = analyte was not detected above the sample DL

Appendices

Appendix 1 Field Data Sheets

Field Data Sheet

Season	Week	CTD		AH2				Sample			
		Profile	Week	ID	Date / Time	ID	Date / Time	Week	Time	Depth	
Winter	1	12:35	1	AH2 - CTD	20/01/2010 12:35	AH2 Surface	20/01/2010 11:50	1	11:50	1	
			1			AH2 MID	20/01/2010 11:43	1	11:43	25	
			1			AH2 Bottom	20/01/2010 11:33	1	11:33	50	
	2	9:24	2	2	AH2 - CTD	26/01/2010 9:24	AH2 Surface	26/01/2010 11:16	2	11:16	1
				2			AH2 MID	26/01/2010 11:11	2	11:11	22.5
				2			AH2 Bottom	26/01/2010 11:04	2	11:04	45
	3	10:10	3	3	AH2 - CTD	02/02/2010 10:10	AH2 Surface	02/02/2010 12:10	3	12:10	1
				3			AH2 MID	02/02/2010 12:02	3	12:02	22
				3			AH2 Bottom	02/02/2010 11:40	3	11:40	44
	4	9:29	4	4	AH2 - CTD	09/02/2010 9:29	AH2 Surface	09/02/2010 11:08	4	11:08	1
				4			AH2 MID	09/02/2010 10:59	4	10:59	22
				4			AH2 Bottom	09/02/2010 10:49	4	10:49	44
	5	9:08	5	5	AH2 - CTD	17/02/2010 9:08	AH2 Surface	17/02/2010 11:07	5	11:07	1
				5			AH2 MID	17/02/2010 10:59	5	10:59	22
				5			AH2 Bottom	17/02/2010 10:34	5	10:34	44
Average									1		
									23		
									45		

Season	Week	CTD		AH2				Sample			
		Profile	Week	ID	Date / Time	ID	Date / Time	Week	Time	Depth	
Spring	1	10:06	1	AH2 - CTD	28/04/2010 10:06	AH2 Surface	28/04/2010 11:32	1	11:32	1	
			1			AH2 MID	28/04/2010 11:21	1	11:21	23	
			1			AH2 Bottom	28/04/2010 11:12	1	11:12	46	
	2	9:33	2	2	AH2 - CTD	06/05/2010 9:33	AH2 Surface	06/05/2010 11:29	2	11:29	1
				2			AH2 MID	06/05/2010 11:19	2	11:19	23
				2			AH2 Bottom	06/05/2010 11:07	2	11:07	48
	3	8:35	3	3	AH2 - CTD	12/05/2010 8:35	AH2 Surface	12/05/2010 11:37	3	11:37	1
				3			AH2 MID	12/05/2010 11:24	3	11:24	20
				3			AH2 Bottom	12/05/2010 11:04	3	11:04	40
	4	13:46	4	4	AH2 - CTD	18/05/2010 13:46	AH2 Surface	18/05/2010 14:57	4	14:57	1
				4			AH2 MID	18/05/2010 14:45	4	14:45	23
				4			AH2 Bottom	18/05/2010 14:37	4	14:37	46
	5	7:19	5	5	AH2 - CTD	25/05/2010 7:19	AH2 Surface	25/05/2010 8:55	5	8:55	1
				5			AH2 MID	25/05/2010 8:46	5	8:46	20
				5			AH2 Bottom	25/05/2010 8:31	5	8:31	39
Average									1		
									22		
									44		

Season	Week	CTD		AH2				Sample			
		Profile	Week	ID	Date / Time	ID	Date / Time	Week	Time	Depth	
Summer	1	9:03	1	AH2 - CTD	26/07/2010 9:03	AH2 Surface	26/07/2010 10:06	1	10:06	1	
			1			AH2 MID	26/07/2010 9:59	1	9:59	20	
			1			AH2 Bottom	26/07/2010 9:52	1	9:52	40	
	2	8:23	2	2	AH2 - CTD	28/07/2010 8:23	AH2 Surface	28/07/2010 10:23	2	10:23	1
				2			AH2 MID	28/07/2010 10:15	2	10:15	20
				2			AH2 Bottom	28/07/2010 10:01	2	10:01	41
	3	11:15	3	3	AH2 - CTD	03/08/2010 11:15	AH2 Surface	03/08/2010 11:55	3	11:55	1
				3			AH2 MID	03/08/2010 11:40	3	11:40	24
				3			AH2 Bottom	03/08/2010 11:21	3	11:21	38
	4	8:54	4	4	AH2 - CTD	10/08/2010 8:54	AH2 Surface	10/08/2010 10:26	4	10:26	1
				4			AH2 MID	10/08/2010 10:17	4	10:17	21
				4			AH2 Bottom	10/08/2010 10:06	4	10:06	42
	5	9:05	5	5	AH2 - CTD	17/08/2010 9:05	AH2 Surface	17/08/2010 10:45	5	10:45	1
				5			AH2 MID	17/08/2010 10:35	5	10:35	23
				5			AH2 Bottom	17/08/2010 10:18	5	10:18	47
Average									1		
									22		
									42		

Field Data Sheet

Season	Week	CTD		AH2				Sample			
		Profile	Week	ID	Date / Time	ID	Date / Time	Week	Time	Depth	
Fall	1	10:21	1	AH2 - CTD	02/11/2010 10:21	AH2 Surface	02/11/2010 11:34	1	11:34	1	
			1			AH2 MID	02/11/2010 11:25	1	11:25	21	
			1			AH2 Bottom	02/11/2010 11:17	1	11:17	43	
	2	9:07	2	AH2 - CTD	08/11/2010 9:07	AH2 Surface	08/11/2010 10:50	2	10:50	1	
				2			AH2 MID	08/11/2010 10:51	2	10:51	22
				2			AH2 Bottom	08/11/2010 10:28	2	10:28	44
	3	9:12	3	AH2 - CTD	18/11/2010 9:12	AH2 Surface	18/11/2010 13:05	3	13:05	1	
				3			AH2 MID	18/11/2010 12:57	3	12:57	27
				3			AH2 Bottom	18/11/2010 12:43	3	12:43	43
	4	9:05	4	AH2 - CTD	24/11/2010 9:05	AH2 Surface	24/11/2010 10:25	4	10:25	1	
				4			AH2 MID	24/11/2010 10:14	4	10:14	23
				4			AH2 Bottom	24/11/2010 10:06	4	10:06	47
	5	9:00	5	AH2 - CTD	01/12/2010 9:00	AH2 Surface	01/12/2010 10:11	5	10:11	1	
				5			AH2 MID	01/12/2010 10:01	5	10:01	22
				5			AH2 Bottom	01/12/2010 9:54	5	9:54	44
Average									1	23	44

Season	Week	CTD		AH2				Sample			
		Profile	Week	ID	Date / Time	ID	Date / Time	Week	Time	Depth	
Winter	1	9:59	1	AH2 - CTD	16/03/2011 9:59	AH2 Surface	16/03/2011 10:45	1	10:45	1	
			1			AH2 MID	16/03/2011 10:30	1	10:30	21	
			1			AH2 Bottom	16/03/2011 9:59	1	9:59	42	
	2	ns	2	AH2 - CTD	#VALUE!	AH2 Surface	22/03/2011 10:15	2	10:15	1	
				2			AH2 MID	22/03/2011 10:05	2	10:05	24
				2			AH2 Bottom	22/03/2011 9:45	2	9:45	48
	3	9:52	3	AH2 - CTD	28/03/2011 9:52	AH2 Surface	28/03/2011 10:35	3	10:35	1	
				3			AH2 MID	28/03/2011 10:21	3	10:21	23
				3			AH2 Bottom	28/03/2011 10:01	3	10:01	46
	4	9:44	4	AH2 - CTD	07/04/2011 9:44	AH2 Surface	07/04/2011 10:35	4	10:35	1	
				4			AH2 MID	07/04/2011 10:26	4	10:26	21
				4			AH2 Bottom	07/04/2011 9:53	4	9:53	42
	5	9:30	5	AH2 - CTD	12/04/2011 9:30	AH2 Surface	12/04/2011 9:57	5	9:57	1	
				5			AH2 MID	12/04/2011 9:50	5	9:50	24
				5			AH2 Bottom	12/04/2011 9:42	5	9:42	48
Average									1	23	45

Season	Week	CTD		AH2				Sample			
		Profile	Week	ID	Date / Time	ID	Date / Time	Week	Time	Depth	
Spring	1	9:27	1	AH2 - CTD	04/05/2011 9:27	AH2 Surface	04/05/2011 10:11	1	10:11	1	
			1			AH2 MID	04/05/2011 9:55	1	9:55	23	
			1			AH2 Bottom	04/05/2011 9:40	1	9:40	46	
	2	9:01	2	AH2 - CTD	09/05/2011 9:01	AH2 Surface	09/05/2011 9:30	2	9:30	1	
				2			AH2 MID	09/05/2011 9:23	2	9:23	23
				2			AH2 Bottom	09/05/2011 9:17	2	9:17	45
	3	8:37	3	AH2 - CTD	17/05/2011 8:37	AH2 Surface	17/05/2011 9:17	3	9:17	1	
				3			AH2 MID	17/05/2011 9:05	3	9:05	21
				3			AH2 Bottom	17/05/2011 8:51	3	8:51	42
	4	9:06	4	AH2 - CTD	25/05/2011 9:06	AH2 Surface	25/05/2011 9:33	4	9:33	1	
				4			AH2 MID	25/05/2011 9:26	4	9:26	26
				4			AH2 Bottom	25/05/2011 9:16	4	9:16	42
	5	8:26	5	AH2 - CTD	30/05/2011 8:26	AH2 Surface	30/05/2011 8:53	5	8:53	1	
				5			AH2 MID	30/05/2011 8:46	5	8:46	24
				5			AH2 Bottom	30/05/2011 8:38	5	8:38	48
Average									1	23	45

Field Data Sheet

Season	Week	CTD Profile	CTD ID			AH2			Sample		
			Week	ID	Date / Time	ID	Date / Time	Week	Time	Depth	
Summer	1	9:05	1	AH2 - CTD	20/07/2011 9:05	AH2 Surface	20/07/2011 9:55	1	9:55	1	
			1			AH2 MID	20/07/2011 9:35	1	9:35	23	
			1			AH2 Bottom	20/07/2011 9:12	1	9:12	46	
	2	9:43	2	AH2 - CTD	26/07/2011 9:43	AH2 Surface	26/07/2011 10:25	2	10:25	1	
			2			AH2 MID	26/07/2011 10:12	2	10:12	22	
			2			AH2 Bottom	26/07/2011 9:51	2	9:51	42	
	3	8:45	3	AH2 - CTD	02/08/2011 8:45	AH2 Surface	02/08/2011 9:30	3	9:30	1	
			3			AH2 MID	02/08/2011 9:20	3	9:20	27	
			3			AH2 Bottom	02/08/2011 9:07	3	9:07	47	
	4	8:39	4	AH2 - CTD	09/08/2011 8:39	AH2 Surface	09/08/2011 9:50	4	9:50	1	
			4			AH2 MID	09/08/2011 9:40	4	9:40	23	
			4			AH2 Bottom	09/08/2011 9:01	4	9:01	45	
	5	8:23	5	AH2 - CTD	16/08/2011 8:23	AH2 Surface	16/08/2011 9:00	5	9:00	1	
			5			AH2 MID	16/08/2011 8:50	5	8:50	23	
			5			AH2 Bottom	16/08/2011 8:35	5	8:35	46	
Average									1		
									24		
									45		

Season	Week	CTD Profile	CTD ID			AH2			Sample		
			Week	ID	Date / Time	ID	Date / Time	Week	Time	Depth	
Fall	1	9:45	1	AH2 - CTD	31/10/2011 9:45	AH2 Surface	31/10/2011 10:36	1	10:36	1	
			1			AH2 MID	31/10/2011 10:17	1	10:17	21	
			1			AH2 Bottom	31/10/2011 10:01	1	10:01	42	
	2	9:45	2	AH2 - CTD	05/11/2011 9:45	AH2 Surface	05/11/2011 10:20	2	10:20	1	
			2			AH2 MID	05/11/2011 10:07	2	10:07	23	
			2			AH2 Bottom	05/11/2011 9:58	2	9:58	47	
	3	9:55	3	AH2 - CTD	15/11/2011 9:55	AH2 Surface	15/11/2011 10:45	3	10:45	1	
			3			AH2 MID	15/11/2011 10:29	3	10:29	20	
			3			AH2 Bottom	15/11/2011 10:08	3	10:08	39	
	4	9:37	4	AH2 - CTD	28/11/2011 9:37	AH2 Surface	28/11/2011 10:05	4	10:05	1	
			4			AH2 MID	28/11/2011 9:55	4	9:55	23	
			4			AH2 Bottom	28/11/2011 9:48	4	9:48	46	
	5	9:49	5	AH2 - CTD	30/11/2011 9:49	AH2 Surface	30/11/2011 10:18	5	10:18	1	
			5			AH2 MID	30/11/2011 10:09	5	10:09	22	
			5			AH2 Bottom	30/11/2011 9:59	5	9:59	44	
Average									1		
									22		
									44		

Season	Week	CTD Profile	CTD ID			AH2			Sample		
			Week	ID	Date / Time	ID	Date / Time	Week	Time	Depth	
Winter	1	10:38	1	AH2 - CTD	08/02/2012 10:38	AH2 Surface	08/02/2012 11:21	1	11:21	1	
			1			AH2 MID	08/02/2012 11:04	1	11:04	23	
			1			AH2 Bottom	08/02/2012 10:47	1	10:47	46	
	2	9:18	2	AH2 - CTD	15/02/2012 9:18	AH2 Surface	15/02/2012 9:56	2	9:56	1	
			2			AH2 MID	15/02/2012 9:49	2	9:49	23	
			2			AH2 Bottom	15/02/2012 9:30	2	9:30	46	
	3	13:37	3	AH2 - CTD	20/02/2012 13:37	AH2 Surface	20/02/2012 14:25	3	14:25	1	
			3			AH2 MID	20/02/2012 13:56	3	13:56	21	
			3			AH2 Bottom	20/02/2012 13:38	3	13:38	42	
	4	11:17	4	AH2 - CTD	27/02/2012 11:17	AH2 Surface	27/02/2012 11:58	4	11:58	1	
			4			AH2 MID	27/02/2012 11:52	4	11:52	23	
			4			AH2 Bottom	27/02/2012 11:32	4	11:32	45	
	5	10:04	5	AH2 - CTD	04/03/2012 10:04	AH2 Surface	04/03/2012 10:45	5	10:45	1	
			5			AH2 MID	04/03/2012 10:37	5	10:37	23	
			5			AH2 Bottom	04/03/2012 10:12	5	10:12	44	
Average									1		
									23		
									45		

Season	Week	CTD Profile	CTD ID			AH2			Sample		
			Week	ID	Date / Time	ID	Date / Time	Week	Time	Depth	
Winter	1	9:08	1	AH2 - CTD	15/05/2012 9:08	AH2 Surface	15/05/2012 9:53	1	9:53	1	
			1			AH2 MID	15/05/2012 9:38	1	9:38	21	
			1			AH2 Bottom	15/05/2012 9:19	1	9:19	42	
	2		2	AH2 - CTD	22/05/2012 0:00	AH2 Surface	22/05/2012 9:36	2	9:36	1	
			2			AH2 MID	22/05/2012 9:30	2	9:30	20	
			2			AH2 Bottom	22/05/2012 9:22	2	9:22	40	
	3		3	AH2 - CTD	28/05/2012 0:00	AH2 Surface	28/05/2012 9:59	3	9:59	1	
			3			AH2 MID	28/05/2012 9:43	3	9:43	22	
			3			AH2 Bottom	28/05/2012 9:23	3	9:23	44	
	4		4	AH2 - CTD	31/05/2012 0:00	AH2 Surface	31/05/2012 9:34	4	9:34	1	
			4			AH2 MID	31/05/2012 9:28	4	9:28	23	
			4			AH2 Bottom	31/05/2012 9:21	4	9:21	46	
	5		5	AH2 - CTD	06/06/2012 0:00	AH2 Surface	06/06/2012 10:51	5	10:51	1	
			5			AH2 MID	06/06/2012 10:41	5	10:41	23	
			5			AH2 Bottom	06/06/2012 10:32	5	10:32	46	
Average									1		
									22		
									44		

Field Data Sheet

FC5/FC7										
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Time	Sample Depth	
Winter	1	13:38	1	FC7 - CTD	20/01/2010 13:38	FC7 Surface	20/01/2010 14:46	1	14:46	1
				FC7 Mid	20/01/2010 14:37	1	14:37	22		
				FC7 Bottom	20/01/2010 14:28	1	14:28	45		
	2	12:34	2	FC7 - CTD	26/01/2010 12:34	FC7 Surface	26/01/2010 14:13	2	14:13	1
				FC7 Mid	26/01/2010 14:14	2	14:14	23.5		
				FC7 Bottom	26/01/2010 13:55	2	13:55	47		
	3	12:29	3	FC7 - CTD	02/02/2010 12:29	FC7 Surface	02/02/2010 15:25	3	15:25	1
				FC7 Mid	02/02/2010 15:24	3	15:24	24		
				FC7 Bottom	02/02/2010 15:06	3	15:06	48		
	4	12:31	4	FC7 - CTD	09/02/2010 12:31	FC7 Surface	09/02/2010 13:47	4	13:47	1
				FC7 Mid	09/02/2010 13:35	4	13:35	20		
				FC7 Bottom	09/02/2010 13:29	4	13:29	40		
	5	12:31	5	FC7 - CTD	17/02/2010 12:31	FC7 Surface	17/02/2010 14:10	5	14:10	1
				FC7 Mid	17/02/2010 14:02	5	14:02	23		
				FC7 Bottom	17/02/2010 13:39	5	13:39	46		
Surface									1	
Average Mid									23	
Bottom									45	

FC5/FC7										
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Time	Sample Depth	
Spring	1	13:08	1	FC7 - CTD	28/04/2010 13:08	FC7 Surface	28/04/2010 14:09	1	14:09	1
				FC7 Mid	28/04/2010 14:02	1	14:02	22		
				FC7 Bottom	28/04/2010 13:54	1	13:54	44		
	2	13:09	2	FC7 - CTD	06/05/2010 13:09	FC7 Surface	06/05/2010 14:49	2	14:49	1
				FC7 Mid	06/05/2010 14:40	2	14:40	23		
				FC7 Bottom	06/05/2010 14:32	2	14:32	46		
	3	13:52	3	FC7 - CTD	12/05/2010 13:52	FC7 Surface	12/05/2010 15:51	3	15:51	1
				FC7 Mid	12/05/2010 15:42	3	15:42	21.5		
				FC7 Bottom	12/05/2010 15:23	3	15:23	43		
	4	10:04	4	FC7 - CTD	18/05/2010 10:04	FC7 Surface	18/05/2010 11:14	4	11:14	1
				FC7 Mid	18/05/2010 11:07	4	11:07	23		
				FC7 Bottom	18/05/2010 10:56	4	10:56	46		
	5	10:23	5	FC7 - CTD	25/05/2010 10:23	FC7 Surface	25/05/2010 12:02	5	12:02	1
				FC7 Mid	25/05/2010 11:50	5	11:50	22		
				FC7 Bottom	25/05/2010 11:30	5	11:30	44		
Surface									1	
Average Mid									22	
Bottom									45	

FC5/FC7										
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Time	Sample Depth	
Summer	1	12:34	1	FC7 - CTD	26/07/2010 12:34	FC7 Surface	26/07/2010 12:58	1	12:58	1
				FC7 Mid	26/07/2010 12:46	1	12:46	23		
				FC7 Bottom	26/07/2010 12:43	1	12:43	47		
	2	14:31	2	FC7 - CTD	28/07/2010 14:31	FC7 Surface	28/07/2010 14:59	2	14:59	1
				FC7 Mid	28/07/2010 14:53	2	14:53	22		
				FC7 Bottom	28/07/2010 14:41	2	14:41	43		
	3	16:44	3	FC7 - CTD	03/08/2010 16:44	FC7 Surface	03/08/2010 17:10	3	17:10	1
				FC7 Mid	03/08/2010 17:00	3	17:00	23		
				FC7 Bottom	03/08/2010 16:49	3	16:49	48		
	4	13:16	4	FC7 - CTD	10/08/2010 13:16	FC7 Surface	10/08/2010 13:47	4	13:47	1
				FC7 Mid	10/08/2010 13:40	4	13:40	22		
				FC7 Bottom	10/08/2010 13:26	4	13:26	44		
	5	13:45	5	FC7 - CTD	17/08/2010 13:45	FC7 Surface	17/08/2010 14:21	5	14:21	1
				FC7 Mid	17/08/2010 14:13	5	14:13	24		
				FC7 Bottom	17/08/2010 13:56	5	13:56	49		
Surface									1	
Average Mid									23	
Bottom									46	

Field Data Sheet

		FC5/FC7									
Season	Week	CTD Profile	Week	ID	CTD ID Date / Time	ID	Sample	Date / Time	Time	Sample	Depth
Fall	1	14:25	1	FC7 - CTD	02/11/2010 14:25	FC7 Surface		02/11/2010 14:49	1	14:49	1
			1			FC7 Mid		02/11/2010 14:42	1	14:42	22
			1			FC7 Bottom		02/11/2010 14:32	1	14:32	42
	2	13:55	2	FC7 - CTD	08/11/2010 13:55	FC7 Surface		08/11/2010 14:25	2	14:25	1
			2			FC7 Mid		08/11/2010 14:14	2	14:14	25
			2			FC7 Bottom		08/11/2010 14:05	2	14:05	50
	3	14:30	3	FC7 - CTD	18/11/2010 14:30	FC7 Surface		18/11/2010 14:52	3	14:52	1
			3			FC7 Mid		18/11/2010 14:46	3	14:46	25
			3			FC7 Bottom		18/11/2010 14:37	3	14:37	49
	4	13:30	4	FC7 - CTD	24/11/2010 13:30	FC7 Surface		24/11/2010 14:02	4	14:02	1
			4			FC7 Mid		24/11/2010 13:53	4	13:53	22
			4			FC7 Bottom		24/11/2010 13:41	4	13:41	45
	5	12:31	5	FC7 - CTD	01/12/2010 12:31	FC7 Surface		01/12/2010 13:00	5	13:00	1
			5			FC7 Mid		01/12/2010 12:50	5	12:50	23
			5			FC7 Bottom		01/12/2010 12:43	5	12:43	47
Surface											1
Average Mid											23
Bottom											47
		FC5/FC7									
Season	Week	CTD Profile	Week	ID	CTD ID Date / Time	ID	Sample	Date / Time	Time	Sample	Depth
Winter	1	13:00	1	FC7 - CTD	16/03/2011 13:00	FC7 Surface		16/03/2011 13:45	1	13:45	1
			1			FC7 Mid		16/03/2011 13:35	1	13:35	20
			1			FC7 Bottom		16/03/2011 13:15	1	13:15	40
	2	14:23	2	FC7 - CTD	22/03/2011 14:23	FC7 Surface		22/03/2011 14:59	2	14:59	1
			2			FC7 Mid		22/03/2011 14:51	2	14:51	20
			2			FC7 Bottom		22/03/2011 14:37	2	14:37	40
	3	13:55	3	FC7 - CTD	28/03/2011 13:55	FC7 Surface		28/03/2011 14:35	3	14:35	1
			3			FC7 Mid		28/03/2011 14:19	3	14:19	22
			3			FC7 Bottom		28/03/2011 14:03	3	14:03	45
	4	13:45	4	FC7 - CTD	07/04/2011 13:45	FC7 Surface		07/04/2011 14:40	4	14:40	1
			4			FC7 Mid		07/04/2011 14:31	4	14:31	22
			4			FC7 Bottom		07/04/2011 14:02	4	14:02	44
	5	12:25	5	FC7 - CTD	12/04/2011 12:25	FC7 Surface		12/04/2011 12:52	5	12:52	1
			5			FC7 Mid		12/04/2011 12:47	5	12:47	22
			5			FC7 Bottom		12/04/2011 12:35	5	12:35	44
Surface											1
Average Mid											21
Bottom											43
		FC5/FC7									
Season	Week	CTD Profile	Week	ID	CTD ID Date / Time	ID	Sample	Date / Time	Time	Sample	Depth
Spring	1	12:27	1	FC7 - CTD	04/05/2011 12:27	FC7 Surface		04/05/2011 12:52	1	12:52	1
			1			FC7 Mid		04/05/2011 12:48	1	12:48	24
			1			FC7 Bottom		04/05/2011 12:40	1	12:40	47
	2	12:10	2	FC7 - CTD	09/05/2011 12:10	FC7 Surface		09/05/2011 12:37	2	12:37	1
			2			FC7 Mid		09/05/2011 12:32	2	12:32	23
			2			FC7 Bottom		09/05/2011 12:22	2	12:22	46
	3	12:23	3	FC7 - CTD	17/05/2011 12:23	FC7 Surface		17/05/2011 12:52	3	12:52	1
			3			FC7 Mid		17/05/2011 12:44	3	12:44	22
			3			FC7 Bottom		17/05/2011 12:34	3	12:34	44
	4	11:38	4	FC7 - CTD	25/05/2011 11:38	FC7 Surface		25/05/2011 12:05	4	12:05	1
			4			FC7 Mid		25/05/2011 11:57	4	11:57	25
			4			FC7 Bottom		25/05/2011 11:49	4	11:49	50
	5	10:53	5	FC7 - CTD	30/05/2011 10:53	FC7 Surface		30/05/2011 11:20	5	11:20	1
			5			FC7 Mid		30/05/2011 11:13	5	11:13	24
			5			FC7 Bottom		30/05/2011 11:04	5	11:04	47
Surface											1
Average Mid											24
Bottom											47

Field Data Sheet

		FC5/FC7									
Season	Week	CTD Profile	Week	ID	CTD ID Date / Time	ID	Sample	Date / Time	Time	Sample	Depth
Summer	1	12:20	1	1	20/07/2011 12:20	FC7 Surface	FC7	20/07/2011 12:45	1	12:45	1
				1		FC7 Mid		20/07/2011 12:36	1	12:36	25
				1		FC7 Bottom		20/07/2011 12:28	1	12:28	50
	2	14:20	2	2	26/07/2011 14:20	FC7 Surface	FC7	26/07/2011 15:15	2	15:15	1
				2		FC7 Mid		26/07/2011 14:55	2	14:55	25
				2		FC7 Bottom		26/07/2011 14:31	2	14:31	50
	3	12:36	3	3	02/08/2011 12:36	FC7 Surface	FC7	02/08/2011 13:05	3	13:05	1
				3		FC7 Mid		02/08/2011 12:55	3	12:55	25
				3		FC7 Bottom		02/08/2011 12:45	3	12:45	49
	4	13:15	4	4	09/08/2011 13:15	FC7 Surface	FC7	09/08/2011 14:15	4	14:15	1
				4		FC7 Mid		09/08/2011 13:55	4	13:55	25
				4		FC7 Bottom		09/08/2011 13:25	4	13:25	49
	5	11:05	5	5	16/08/2011 11:05	FC7 Surface	FC7	16/08/2011 11:40	5	11:40	1
				5		FC7 Mid		16/08/2011 11:30	5	11:30	25
				5		FC7 Bottom		16/08/2011 11:20	5	11:20	51
Surface											1
Average Mid											25
Bottom											50
		FC5/FC7									
Season	Week	CTD Profile	Week	ID	CTD ID Date / Time	ID	Sample	Date / Time	Time	Sample	Depth
Fall	1	13:15	1	1	31/10/2011 13:15	FC7 Surface	FC7	31/10/2011 13:43	1	13:43	1
				1		FC7 Mid		31/10/2011 13:36	1	13:36	25
				1		FC7 Bottom		31/10/2011 13:27	1	13:27	50
	2	13:00	2	2	05/11/2011 13:00	FC7 Surface	FC7	05/11/2011 13:30	2	13:30	1
				2		FC7 Mid		05/11/2011 13:15	2	13:15	24
				2		FC7 Bottom		05/11/2011 13:00	2	13:00	48
	3	13:34	3	3	15/11/2011 13:34	FC7 Surface	FC7	15/11/2011 14:10	3	14:10	1
				3		FC7 Mid		15/11/2011 13:57	3	13:57	23
				3		FC7 Bottom		15/11/2011 13:45	3	13:45	46
	4	12:10	4	4	28/11/2011 12:10	FC7 Surface	FC7	28/11/2011 12:29	4	12:29	1
				4		FC7 Mid		28/11/2011 12:21	4	12:21	28
				4		FC7 Bottom		28/11/2011 12:50	4	12:50	57
	5	12:00	5	5	30/11/2011 12:00	FC7 Surface	FC7	30/11/2011 12:57	5	12:57	1
				5		FC7 Mid		30/11/2011 12:43	5	12:43	23
				5		FC7 Bottom		30/11/2011 12:35	5	12:35	47
Surface											1
Average Mid											25
Bottom											50
		FC5/FC7									
Season	Week	CTD Profile	Week	ID	CTD ID Date / Time	ID	Sample	Date / Time	Time	Sample	Depth
Winter	1	13:55	1	1	08/02/2012 13:55	FC7 Surface	FC7	08/02/2012 14:23	1	14:23	1
				1		FC7 Mid		08/02/2012 14:15	1	14:15	22
				1		FC7 Bottom		08/02/2012 14:05	1	14:05	43
	2	13:35	2	2	15/02/2012 13:35	FC7 Surface	FC7	15/02/2012 14:05	2	14:05	1
				2		FC7 Mid		15/02/2012 14:01	2	14:01	22
				2		FC7 Bottom		15/02/2012 13:41	2	13:41	44
	3	15:12	3	3	20/02/2012 15:12	FC7 Surface	FC7	20/02/2012 15:43	3	15:43	1
				3		FC7 Mid		20/02/2012 15:31	3	15:31	23
				3		FC7 Bottom		20/02/2012 15:21	3	15:21	45
	4	13:36	4	4	27/02/2012 13:36	FC7 Surface	FC7	27/02/2012 14:26	4	14:26	1
				4		FC7 Mid		27/02/2012 14:07	4	14:07	23
				4		FC7 Bottom		27/02/2012 13:49	4	13:49	46
	5	13:28	5	5	04/03/2012 13:28	FC7 Surface	FC7	04/03/2012 14:01	5	14:01	1
				5		FC7 Mid		04/03/2012 13:55	5	13:55	22
				5		FC7 Bottom		04/03/2012 13:34	5	13:34	45
Surface											1
Average Mid											22
Bottom											45
		FC5/FC7									
Season	Week	CTD Profile	Week	ID	CTD ID Date / Time	ID	Sample	Date / Time	Time	Sample	Depth
Winter	1	12:20	1	1	15/05/2012 12:20	FC7 Surface	FC7	15/05/2012 12:50	1	12:50	1
				1		FC7 Mid		15/05/2012 12:40	1	12:40	23
				1		FC7 Bottom		15/05/2012 12:31	1	12:31	47
	2	12:17	2	2	22/05/2012 12:17	FC7 Surface	FC7	22/05/2012 12:45	2	12:45	1
				2		FC7 Mid		22/05/2012 12:38	2	12:38	22
				2		FC7 Bottom		22/05/2012 12:29	2	12:29	44
	3	13:03	3	3	28/05/2012 13:03	FC7 Surface	FC7	28/05/2012 13:37	3	13:37	1
				3		FC7 Mid		28/05/2012 13:32	3	13:32	23
				3		FC7 Bottom		28/05/2012 13:16	3	13:16	46
	4	11:35	4	4	31/05/2012 11:35	FC7 Surface	FC7	31/05/2012 12:02	4	12:02	1
				4		FC7 Mid		31/05/2012 11:56	4	11:56	23
				4		FC7 Bottom		31/05/2012 11:45	4	11:45	46
	5	13:12	5	5	06/06/2012 13:12	FC7 Surface	FC7	06/06/2012 13:39	5	13:39	1
				5		FC7 Mid		06/06/2012 13:30	5	13:30	24
				5		FC7 Bottom		06/06/2012 13:21	5	13:21	47
Surface											1
Average Mid											23
Bottom											46

Field Data Sheet

		MP4								
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Sample Time	Depth	
Winter	1									
	2									
	3									
	4									
	5									
		Surface							#DIV/0!	
		Average Mid							#DIV/0!	
		Bottom							#DIV/0!	

		MP4								
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Sample Time	Depth	
Spring	1									
	2									
	3									
	4									
	5									
		Surface							#DIV/0!	
		Average Mid							#DIV/0!	
		Bottom							#DIV/0!	

		MP4								
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Sample Time	Depth	
Summer	1	10:50	1	MP4 - CTD	26/07/2010 10:50	MP4 Surface	26/07/2010 11:28	1	11:28	1
			1			MP4 Mid	26/07/2010 11:21	1	11:21	30
			1			MP4 Bottom	26/07/2010 11:11	1	11:11	61
	2	14:03	2	MP4 - CTD	28/07/2010 14:03	MP4 Surface	28/07/2010 13:42	2	13:42	1
			2			MP4 Mid	28/07/2010 13:23	2	13:23	30
			2			MP4 Bottom	28/07/2010 12:51	2	12:51	60
	3	15:45	3	MP4 - CTD	03/08/2010 15:45	MP4 Surface	03/08/2010 15:39	3	15:39	1
			3			MP4 Mid	03/08/2010 15:30	3	15:30	31
			3			MP4 Bottom	03/08/2010 14:19	3	14:19	62
	4	12:07	4	MP4 - CTD	10/08/2010 12:07	MP4 Surface	10/08/2010 12:38	4	12:38	1
			4			MP4 Mid	10/08/2010 12:35	4	12:35	30
			4			MP4 Bottom	10/08/2010 12:20	4	12:20	62
	5	12:25	5	MP4 - CTD	17/08/2010 12:25	MP4 Surface	17/08/2010 12:58	5	12:58	1
			5			MP4 Mid	17/08/2010 12:50	5	12:50	31
			5			MP4 Bottom	17/08/2010 12:35	5	12:35	62
		Surface							1	
		Average Mid							30	
		Bottom							61	

Field Data Sheet

		MP4								
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Sample		
								Time	Depth	
Fall	1	13:00	1	MP4 - CTD	02/11/2010 13:00	MP4 Surface	02/11/2010 13:30	1	13:30	1
				1		MP4 Mid	02/11/2010 13:23	1	13:23	28
				1		MP4 Bottom	02/11/2010 13:13	1	13:13	58
	2	12:20	2	MP4 - CTD	08/11/2010 12:20	MP4 Surface	08/11/2010 13:05	2	13:05	1
				2		MP4 Mid	08/11/2010 12:50	2	12:50	30
				2		MP4 Bottom	08/11/2010 12:29	2	12:29	60
	3	10:02	3	MP4 - CTD	18/11/2010 10:02	MP4 Surface	18/11/2010 10:52	3	10:52	1
				3		MP4 Mid	18/11/2010 10:39	3	10:39	30
				3		MP4 Bottom	18/11/2010 10:13	3	10:13	60
	4	12:45	4	MP4 - CTD	24/11/2010 12:45	MP4 Surface	24/11/2010 12:30	4	12:30	1
				4		MP4 Mid	24/11/2010 12:17	4	12:17	30
				4		MP4 Bottom	24/11/2010 12:05	4	12:05	61
	5	11:50	5	MP4 - CTD	01/12/2010 11:50	MP4 Surface	01/12/2010 11:42	5	11:42	1
				5		MP4 Mid	01/12/2010 11:32	5	11:32	30
				5		MP4 Bottom	01/12/2010 11:25	5	11:25	60
Surface									1	
Average Mid									30	
Bottom									60	

		MP4								
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Sample		
								Time	Depth	
Winter	1	11:59	1	MP4 - CTD	16/03/2011 11:59	MP4 Surface	16/03/2011 12:35	1	12:35	1
				1		MP4 Mid	16/03/2011 12:24	1	12:24	30
				1		MP4 Bottom	16/03/2011 12:10	1	12:10	60
	2	13:32	2	MP4 - CTD	22/03/2011 13:32	MP4 Surface	22/03/2011 13:05	2	13:05	1
				2		MP4 Mid	22/03/2011 12:57	2	12:57	29
				2		MP4 Bottom	22/03/2011 11:20	2	11:20	58
	3	11:56	3	MP4 - CTD	28/03/2011 11:56	MP4 Surface	28/03/2011 13:02	3	13:02	1
				3		MP4 Mid	28/03/2011 12:28	3	12:28	30
				3		MP4 Bottom	28/03/2011 12:08	3	12:08	60
	4	13:14	4	MP4 - CTD	07/04/2011 13:14	MP4 Surface	07/04/2011 13:00	4	13:00	1
				4		MP4 Mid	07/04/2011 12:51	4	12:51	29
				4		MP4 Bottom	07/04/2011 12:00	4	12:00	59
	5	11:35	5	MP4 - CTD	12/04/2011 11:35	MP4 Surface	12/04/2011 11:20	5	11:20	1
				5		MP4 Mid	12/04/2011 11:13	5	11:13	28
				5		MP4 Bottom	12/04/2011 11:02	5	11:02	59
Surface									1	
Average Mid									29	
Bottom									59	

		MP4								
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Sample		
								Time	Depth	
Spring	1	11:14	1	MP4 - CTD	04/05/2011 11:14	MP4 Surface	04/05/2011 11:50	1	11:50	1
				1		MP4 Mid	04/05/2011 11:39	1	11:39	29
				1		MP4 Bottom	04/05/2011 11:30	1	11:30	58
	2	11:26	2	MP4 - CTD	09/05/2011 11:26	MP4 Surface	09/05/2011 11:01	2	11:01	1
				2		MP4 Mid	09/05/2011 10:47	2	10:47	30
				2		MP4 Bottom	09/05/2011 10:31	2	10:31	59
	3	10:45	3	MP4 - CTD	17/05/2011 10:45	MP4 Surface	17/05/2011 11:25	3	11:25	1
				3		MP4 Mid	17/05/2011 11:13	3	11:13	29
				3		MP4 Bottom	17/05/2011 10:59	3	10:59	58
	4	10:35	4	MP4 - CTD	25/05/2011 10:35	MP4 Surface	25/05/2011 10:59	4	10:59	1
				4		MP4 Mid	25/05/2011 10:51	4	10:51	30
				4		MP4 Bottom	25/05/2011 10:42	4	10:42	60
	5	9:45	5	MP4 - CTD	30/05/2011 9:45	MP4 Surface	30/05/2011 10:13	5	10:13	1
				5		MP4 Mid	30/05/2011 10:07	5	10:07	29
				5		MP4 Bottom	30/05/2011 9:58	5	9:58	59
Surface									1	
Average Mid									29	
Bottom									59	

Field Data Sheet

		MP4									
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Sample			
								Time	Depth		
Summer	1	10:30	1	MP4 - CTD	20/07/2011 10:30	MP4 Surface	20/07/2011 11:02	1	11:02	1	
				1	MP4 Mid	20/07/2011 10:50	1	10:50	31		
				1	MP4 Bottom	20/07/2011 10:36	1	10:36	62		
	2	11:50	2	MP4 - CTD	26/07/2011 11:50	MP4 Surface	26/07/2011 13:40	2	13:40	1	
				2	MP4 Mid	26/07/2011 13:16	2	13:16	31		
				2	MP4 Bottom	26/07/2011 12:07	2	12:07	62		
	3	9:47	3	MP4 - CTD	02/08/2011 9:47	MP4 Surface	02/08/2011 10:50	3	10:50	1	
				3	MP4 Mid	02/08/2011 10:20	3	10:20	33		
				3	MP4 Bottom	02/08/2011 10:05	3	10:05	64		
	4	10:10	4	MP4 - CTD	09/08/2011 10:10	MP4 Surface	09/08/2011 11:40	4	11:40	1	
				4	MP4 Mid	09/08/2011 11:30	4	11:30	32		
				4	MP4 Bottom	09/08/2011 10:25	4	10:25	66		
	5	9:10	5	MP4 - CTD	16/08/2011 9:10	MP4 Surface	16/08/2011 9:50	5	9:50	1	
				5	MP4 Mid	16/08/2011 9:40	5	9:40	30		
				5	MP4 Bottom	16/08/2011 9:23	5	9:23	60		
Surface									1		
Average Mid									31		
Bottom									63		

		MP4									
Season	Week	Profile	Week	ID	Date / Time	ID	Date / Time	Sample			
								Time	Depth		
Fall	1	12:00	1	MP4 - CTD	31/10/2011 12:00	MP4 Surface	31/10/2011 12:26	1	12:26	1	
				1	MP4 Mid	31/10/2011 12:20	1	12:20	29		
				1	MP4 Bottom	31/10/2011 12:08	1	12:08	59		
	2	11:14	2	MP4 - CTD	05/11/2011 11:14	MP4 Surface	05/11/2011 11:55	2	11:55	1	
				2	MP4 Mid	05/11/2011 11:40	2	11:40	30		
				2	MP4 Bottom	05/11/2011 11:25	2	11:25	60		
	3	12:50	3	MP4 - CTD	15/11/2011 12:50	MP4 Surface	15/11/2011 12:30	3	12:30	1	
				3	MP4 Mid	15/11/2011 12:10	3	12:10	30		
				3	MP4 Bottom	15/11/2011 11:50	3	11:50	60		
	4	11:05	4	MP4 - CTD	28/11/2011 11:05	MP4 Surface	28/11/2011 11:25	4	11:25	1	
				4	MP4 Mid	28/11/2011 11:19	4	11:19	30		
				4	MP4 Bottom	28/11/2011 11:11	4	11:11	60		
	5	11:11	5	MP4 - CTD	30/11/2011 11:11	MP4 Surface	30/11/2011 11:40	5	11:40	1	
				5	MP4 Mid	30/11/2011 11:31	5	11:31	30		
				5	MP4 Bottom	30/11/2011 11:23	5	11:23	60		
Surface									1		
Average Mid									30		
Bottom									60		

		MP4									
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Sample			
								Time	Depth		
Winter	1	12:42	1	MP4 - CTD	08/02/2012 12:42	MP4 Surface	08/02/2012 13:07	1	13:07	1	
				1	MP4 Mid	08/02/2012 12:59	1	12:59	30		
				1	MP4 Bottom	08/02/2012 12:51	1	12:51	60		
	2	11:09	2	MP4 - CTD	15/02/2012 11:09	MP4 Surface	15/02/2012 12:43	2	12:43	1	
				2	MP4 Mid	15/02/2012 12:26	2	12:26	30		
				2	MP4 Bottom	15/02/2012 11:20	2	11:20	60		
	3	10:07	3	MP4 - CTD	20/02/2012 10:07	MP4 Surface	20/02/2012 11:09	3	11:09	1	
				3	MP4 Mid	20/02/2012 10:47	3	10:47	30		
				3	MP4 Bottom	20/02/2012 10:19	3	10:19	61		
	4	9:03	4	MP4 - CTD	27/02/2012 9:03	MP4 Surface	27/02/2012 9:41	4	9:41	1	
				4	MP4 Mid	27/02/2012 9:33	4	9:33	29		
				4	MP4 Bottom	27/02/2012 9:14	4	9:14	59		
	5	11:44	5	MP4 - CTD	04/03/2012 11:44	MP4 Surface	04/03/2012 12:41	5	12:41	1	
				5	MP4 Mid	04/03/2012 12:34	5	12:34	30		
				5	MP4 Bottom	04/03/2012 11:53	5	11:53	61		
Surface									1		
Average Mid									30		
Bottom									60		

		MP4									
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Sample			
								Time	Depth		
Winter	1		1	MP4 - CTD	15/05/2012 0:00	MP4 Surface	15/05/2012 11:40	1	11:40	1	
				1	MP4 Mid	15/05/2012 11:30	1	11:30	30		
				1	MP4 Bottom	15/05/2012 11:20	1	11:20	59		
	2		2	MP4 - CTD	22/05/2012 0:00	MP4 Surface	22/05/2012 11:28	2	11:28	1	
				2	MP4 Mid	22/05/2012 11:10	2	11:10	30		
				2	MP4 Bottom	22/05/2012 10:50	2	10:50	59		
	3	12:03	3	MP4 - CTD	28/05/2012 12:03	MP4 Surface	28/05/2012 11:46	3	11:46	1	
				3	MP4 Mid	28/05/2012 11:29	3	11:29	30		
				3	MP4 Bottom	28/05/2012 11:10	3	11:10	60		
	4	10:23	4	MP4 - CTD	31/05/2012 10:23	MP4 Surface	31/05/2012 10:57	4	10:57	1	
				4	MP4 Mid	31/05/2012 10:50	4	10:50	29		
				4	MP4 Bottom	31/05/2012 10:39	4	10:39	58		
	5	12:07	5	MP4 - CTD	06/06/2012 12:07	MP4 Surface	06/06/2012 12:32	5	12:32	1	
				5	MP4 Mid	06/06/2012 12:23	5	12:23	29		
				5	MP4 Bottom	06/06/2012 12:14	5	12:14	58		
Surface									1		
Average Mid									30		
Bottom									59		

Field Data Sheet

		MP5								
Season	Week	CTD Profile					Sample Time	Depth		
Winter	1									
	2									
	3									
	4									
	5									
		Surface					#DIV/0!			
Average		Mid					#DIV/0!			
		Bottom					#DIV/0!			
		MP5								
Season	Week	CTD Profile					Sample Time	Depth		
Spring	1									
	2									
	3									
	4									
	5									
		Surface					#DIV/0!			
Average		Mid					#DIV/0!			
		Bottom					#DIV/0!			
		MP5								
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Sample Time	Depth	
Summer	1	11:00	1	MP5 - CTD	26/07/2010 11:00	MP5 Surface	26/07/2010 11:57	1	11:57	1
					MP5 Mid	26/07/2010 11:50	1	11:50	29	
					MP5 Bottom	26/07/2010 11:42	1	11:42	58	
	2	12:09	2	MP5 - CTD	28/07/2010 12:09	MP5 Surface	28/07/2010 12:41	2	12:41	1
					MP5 Mid	28/07/2010 12:33	2	12:33	28	
					MP5 Bottom	28/07/2010 12:27	2	12:27	56	
	3	13:14	3	MP5 - CTD	03/08/2010 13:14	MP5 Surface	03/08/2010 14:00	3	14:00	1
					MP5 Mid	03/08/2010 13:51	3	13:51	30	
					MP5 Bottom	03/08/2010 13:33	3	13:33	60	
	4	11:52	4	MP5 - CTD	10/08/2010 11:52	MP5 Surface	10/08/2010 11:42	4	11:42	1
					MP5 Mid	10/08/2010 11:32	4	11:32	27	
					MP5 Bottom	10/08/2010 11:22	4	11:22	56	
	5	12:07	5	MP5 - CTD	17/08/2010 12:07	MP5 Surface	17/08/2010 11:55	5	11:55	1
					MP5 Mid	17/08/2010 11:45	5	11:45	30	
					MP5 Bottom	17/08/2010 11:28	5	11:28	60	
		Surface						1		
Average		Mid						29		
		Bottom						58		

Field Data Sheet

		MP5							Sample	
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Time	Depth	
Fall	1	11:25	1	MP5 - CTD	02/11/2010 11:25	MP5 Surface	02/11/2010 12:57	1	12:57	1
			1			MP5 Mid	02/11/2010 12:49	1	12:49	28
			1			MP5 Bottom	02/11/2010 12:42	1	12:42	57
	2	12:04	2	MP5 - CTD	08/11/2010 12:04	MP5 Surface	08/11/2010 11:58	2	11:58	1
			2			MP5 Mid	08/11/2010 11:51	2	11:51	28
			2			MP5 Bottom	08/11/2010 11:39	2	11:39	57
	3	9:50	3	MP5 - CTD	18/11/2010 9:50	MP5 Surface	18/11/2010 11:35	3	11:35	1
			3			MP5 Mid	18/11/2010 11:23	3	11:23	28
			3			MP5 Bottom	18/11/2010 11:13	3	11:13	57
	4	11:25	4	MP5 - CTD	24/11/2010 11:25	MP5 Surface	24/11/2010 11:57	4	11:57	1
			4			MP5 Mid	24/11/2010 11:47	4	11:47	28
			4			MP5 Bottom	24/11/2010 11:37	4	11:37	57
	5	10:45	5	MP5 - CTD	01/12/2010 10:45	MP5 Surface	01/12/2010 11:17	5	11:17	1
			5			MP5 Mid	01/12/2010 11:07	5	11:07	29
			5			MP5 Bottom	01/12/2010 10:59	5	10:59	57
Surface									1	
Average Mid									28	
Bottom									57	

		MP5							Sample	
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Time	Depth	
Winter	1	11:00	1	MP5 - CTD	16/03/2011 11:00	MP5 Surface	16/03/2011 11:50	1	11:50	1
			1			MP5 Mid	16/03/2011 11:30	1	11:30	28
			1			MP5 Bottom	16/03/2011 11:09	1	11:09	56
	2	13:49	2	MP5 - CTD	22/03/2011 13:49	MP5 Surface	22/03/2011 11:08	2	11:08	1
			2			MP5 Mid	22/03/2011 11:00	2	11:00	27.5
			2			MP5 Bottom	22/03/2011 11:40	2	11:40	55
	3	11:46	3	MP5 - CTD	28/03/2011 11:46	MP5 Surface	28/03/2011 11:35	3	11:35	1
			3			MP5 Mid	28/03/2011 11:23	3	11:23	28
			3			MP5 Bottom	28/03/2011 11:04	3	11:04	46
	4	10:59	4	MP5 - CTD	07/04/2011 10:59	MP5 Surface	07/04/2011 11:45	4	11:45	1
			4			MP5 Mid	07/04/2011 11:34	4	11:34	28
			4			MP5 Bottom	07/04/2011 11:10	4	11:10	56
	5	10:15	5	MP5 - CTD	12/04/2011 10:15	MP5 Surface	12/04/2011 10:50	5	10:50	1
			5			MP5 Mid	12/04/2011 10:44	5	10:44	28
			5			MP5 Bottom	12/04/2011 10:30	5	10:30	57
Surface									1	
Average Mid									28	
Bottom									54	

		MP5							Sample	
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Time	Depth	
Spring	1	10:40	1	MP5 - CTD	04/05/2011 10:40	MP5 Surface	04/05/2011 11:06	1	11:06	1
			1			MP5 Mid	04/05/2011 10:58	1	10:58	28
			1			MP5 Bottom	04/05/2011 10:48	1	10:48	55
	2	9:55	2	MP5 - CTD	09/05/2011 9:55	MP5 Surface	09/05/2011 10:17	2	10:17	1
			2			MP5 Mid	09/05/2011 10:13	2	10:13	28
			2			MP5 Bottom	09/05/2011 10:05	2	10:05	56
	3	9:46	3	MP5 - CTD	17/05/2011 9:46	MP5 Surface	17/05/2011 10:30	3	10:30	1
			3			MP5 Mid	17/05/2011 10:17	3	10:17	28
			3			MP5 Bottom	17/05/2011 10:00	3	10:00	55
	4	9:54	4	MP5 - CTD	25/05/2011 9:54	MP5 Surface	25/05/2011 10:20	4	10:20	1
			4			MP5 Mid	25/05/2011 10:13	4	10:13	27
			4			MP5 Bottom	25/05/2011 10:07	4	10:07	55
	5	9:09	5	MP5 - CTD	30/05/2011 9:09	MP5 Surface	30/05/2011 9:36	5	9:36	1
			5			MP5 Mid	30/05/2011 9:29	5	9:29	28
			5			MP5 Bottom	30/05/2011 9:21	5	9:21	56
Surface									1	
Average Mid									28	
Bottom									55	

Field Data Sheet

Season	Week	CTD Profile	MP5						Sample	
			Week	ID	Date / Time	ID	Date / Time	Time	Depth	
Summer	1	11:17	1	MP5 - CTD	20/07/2011 11:17	MP5 Surface	20/07/2011 11:40	1	11:40	1
			1			MP5 Mid	20/07/2011 11:30	1	11:30	30
			1			MP5 Bottom	20/07/2011 11:23	1	11:23	59
	2	10:44	2	MP5 - CTD	26/07/2011 10:44	MP5 Surface	26/07/2011 11:25	2	11:25	1
			2			MP5 Mid	26/07/2011 11:17	2	11:17	29
			2			MP5 Bottom	26/07/2011 10:53	2	10:53	58
	3	11:05	3	MP5 - CTD	02/08/2011 11:05	MP5 Surface	02/08/2011 11:50	3	11:50	1
			3			MP5 Mid	02/08/2011 11:35	3	11:35	29
			3			MP5 Bottom	02/08/2011 11:20	3	11:20	56
	4	11:52	4	MP5 - CTD	09/08/2011 11:52	MP5 Surface	09/08/2011 12:45	4	12:45	1
			4			MP5 Mid	09/08/2011 12:30	4	12:30	28
			4			MP5 Bottom	09/08/2011 12:15	4	12:15	59
	5	10:01	5	MP5 - CTD	16/08/2011 10:01	MP5 Surface	16/08/2011 10:40	5	10:40	1
			5			MP5 Mid	16/08/2011 10:30	5	10:30	30
			5			MP5 Bottom	16/08/2011 10:15	5	10:15	60
Surface									1	
Average Mid									29	
Bottom									58	

Season	Week	Profile	MP5						Sample	
			Week	ID	Date / Time	ID	Date / Time	Time	Depth	
Fall	1	11:10	1	MP5 - CTD	31/10/2011 11:10	MP5 Surface	31/10/2011 11:46	1	11:46	1
			1			MP5 Mid	31/10/2011 11:30	1	11:30	23
			1			MP5 Bottom	31/10/2011 11:20	1	11:20	57
	2	10:34	2	MP5 - CTD	05/11/2011 10:34	MP5 Surface	05/11/2011 11:10	2	11:10	1
			2			MP5 Mid	05/11/2011 10:56	2	10:56	29
			2			MP5 Bottom	05/11/2011 10:47	2	10:47	57
	3	11:05	3	MP5 - CTD	15/11/2011 11:05	MP5 Surface	15/11/2011 11:45	3	11:45	1
			3			MP5 Mid	15/11/2011 11:29	3	11:29	29
			3			MP5 Bottom	15/11/2011 11:17	3	11:17	57
	4	10:25	4	MP5 - CTD	28/11/2011 10:25	MP5 Surface	28/11/2011 10:52	4	10:52	1
			4			MP5 Mid	28/11/2011 10:44	4	10:44	28
			4			MP5 Bottom	28/11/2011 10:35	4	10:35	57
	5	10:35	5	MP5 - CTD	30/11/2011 10:35	MP5 Surface	30/11/2011 11:05	5	11:05	1
			5			MP5 Mid	30/11/2011 10:54	5	10:54	22
			5			MP5 Bottom	30/11/2011 10:46	5	10:46	44
Surface									1	
Average Mid									26	
Bottom									54	

Season	Week	CTD Profile	MP5						Sample	
			Week	ID	Date / Time	ID	Date / Time	Time	Depth	
Winter	1	12:03	1	MP5 - CTD	08/02/2012 12:03	MP5 Surface	08/02/2012 12:30	1	12:30	1
			1			MP5 Mid	08/02/2012 12:23	1	12:23	29
			1			MP5 Bottom	08/02/2012 12:14	1	12:14	57
	2	10:17	2	MP5 - CTD	15/02/2012 10:17	MP5 Surface	15/02/2012 10:17	2	10:17	1
			2			MP5 Mid	15/02/2012 10:51	2	10:51	28
			2			MP5 Bottom	15/02/2012 10:29	2	10:29	56
	3	11:36	3	MP5 - CTD	20/02/2012 11:36	MP5 Surface	20/02/2012 12:06	3	12:06	1
			3			MP5 Mid	20/02/2012 11:58	3	11:58	29
			3			MP5 Bottom	20/02/2012 11:47	3	11:47	57
	4	12:18	4	MP5 - CTD	27/02/2012 12:18	MP5 Surface	27/02/2012 13:00	4	13:00	1
			4			MP5 Mid	27/02/2012 12:52	4	12:52	28
			4			MP5 Bottom	27/02/2012 12:32	4	12:32	56
	5	11:04	5	MP5 - CTD	04/03/2012 11:04	MP5 Surface	04/03/2012 11:34	5	11:34	1
			5			MP5 Mid	04/03/2012 11:25	5	11:25	28
			5			MP5 Bottom	04/03/2012 11:15	5	11:15	57
Surface									1	
Average Mid									28	
Bottom									57	

Season	Week	CTD Profile	MP5						Sample	
			Week	ID	Date / Time	ID	Date / Time	Time	Depth	
Spring	1	9:25	1	MP5 - CTD	15/05/2012 9:25	MP5 Surface	15/05/2012 10:52	1	10:52	1
			1			MP5 Mid	15/05/2012 10:44	1	10:44	28
			1			MP5 Bottom	15/05/2012 10:35	1	10:35	56
	2	9:59	2	MP5 - CTD	22/05/2012 9:59	MP5 Surface	22/05/2012 10:27	2	10:27	1
			2			MP5 Mid	22/05/2012 10:20	2	10:20	28
			2			MP5 Bottom	22/05/2012 10:12	2	10:12	56
	3	10:29	3	MP5 - CTD	28/05/2012 10:29	MP5 Surface	28/05/2012 10:56	3	10:56	1
			3			MP5 Mid	28/05/2012 10:48	3	10:48	28
			3			MP5 Bottom	28/05/2012 10:28	3	10:28	56
	4	9:49	4	MP5 - CTD	31/05/2012 9:49	MP5 Surface	31/05/2012 10:15	4	10:15	1
			4			MP5 Mid	31/05/2012 10:10	4	10:10	28
			4			MP5 Bottom	31/05/2012 10:02	4	10:02	56
	5	11:19	5	MP5 - CTD	06/06/2012 11:19	MP5 Surface	06/06/2012 11:58	5	11:58	1
			5			MP5 Mid	06/06/2012 11:48	5	11:48	28
			5			MP5 Bottom	06/06/2012 11:39	5	11:39	56
Surface									1	
Average Mid									28	
Bottom									56	

Field Data Sheet

MP6			Sample
Season	Week	CTD Profile	Time Depth
Winter	1		
	2		
	3		
	4		
	5		
Surface			#DIV/0!
Average Mid			#DIV/0!
Bottom			#DIV/0!

MP6			Sample
Season	Week	CTD Profile	Time Depth
Spring	1		
	2		
	3		
	4		
	5		
Surface			#DIV/0!
Average Mid			#DIV/0!
Bottom			#DIV/0!

MP6											
Season	Week	CTD Profile	Week	ID	Date / Time	ID	Date / Time	Time	Depth		
Summer	1		1	MP6 - CTD	26/07/2010 0:00	MP6 Surface	26/07/2010 8:26	1	8:26	1	
			1			MP6 Mid	26/07/2010 8:19	1	8:19	46	
			1			MP6 Bottom	26/07/2010 7:38	1	7:38	92	
	2			2	MP6 - CTD	28/07/2010 0:00	MP6 Surface	28/07/2010 11:30	2	11:30	1
				2			MP6 Mid	28/07/2010 11:23	2	11:23	42
				2			MP6 Bottom	28/07/2010 11:13	2	11:13	85
	3			3	MP6 - CTD	03/08/2010 0:00	MP6 Surface	03/08/2010 8:20	3	8:20	1
				3			MP6 Mid	03/08/2010 8:15	3	8:15	45
				3			MP6 Bottom	03/08/2010 7:57	3	7:57	90
	4			4	MP6 - CTD	10/08/2010 0:00	MP6 Surface	10/08/2010 8:24	4	8:24	1
				4			MP6 Mid	10/08/2010 8:16	4	8:16	45
				4			MP6 Bottom	10/08/2010 8:20	4	8:20	87
	5			5	MP6 - CTD	17/08/2010 0:00	MP6 Surface	17/08/2010 8:28	5	8:28	1
				5			MP6 Mid	17/08/2010 8:18	5	8:18	45
				5			MP6 Bottom	17/08/2010 8:00	5	8:00	90
Surface										1	
Average Mid										45	
Bottom										89	

Field Data Sheet

MP6							
Season	Week	CTD Profile	Week	ID	Date / Time	Time	Sample Depth
Fall	1		1	MP6 Surface	02/11/2010 9:55	1	9:55
			1	MP6 Mid	02/11/2010 9:48	1	9:48
			1	MP6 Bottom	02/11/2010 9:36	1	9:36
	2		2	MP6 Surface	08/11/2010 8:40	2	8:40
			2	MP6 Mid	08/11/2010 8:31	2	8:31
			2	MP6 Bottom	08/11/2010 8:15	2	8:15
	3		3	MP6 Surface	18/11/2010 8:45	3	8:45
			3	MP6 Mid	18/11/2010 8:35	3	8:35
			3	MP6 Bottom	18/11/2010 8:23	3	8:23
	4		4	MP6 Surface	24/11/2010 8:40	4	8:40
			4	MP6 Mid	24/11/2010 8:29	4	8:29
			4	MP6 Bottom	24/11/2010 8:15	4	8:15
	5		5	MP6 Surface	01/12/2010 8:30	5	8:30
			5	MP6 Mid	01/12/2010 8:23	5	8:23
			5	MP6 Bottom	01/12/2010 8:13	5	8:13
Surface							1
Average Mid							43
Bottom							85

MP6							
Season	Week	CTD Profile	Week	ID	Date / Time	Time	Sample Depth
Winter	1	9:00	1	MP6 - CTD	16/03/2011 9:00	MP6 Surface	16/03/2011 9:45
			1	MP6 Mid	16/03/2011 9:34	1	9:34
			1	MP6 Bottom	16/03/2011 9:23	1	9:23
	2	9:10	2	MP6 - CTD	22/03/2011 9:10	MP6 Surface	22/03/2011 9:25
			2	MP6 Mid	22/03/2011 9:10	2	9:10
			2	MP6 Bottom	22/03/2011 9:08	2	9:08
	3	8:56	3	MP6 - CTD	28/03/2011 8:56	MP6 Surface	28/03/2011 9:30
			3	MP6 Mid	28/03/2011 9:21	3	9:21
			3	MP6 Bottom	28/03/2011 9:12	3	9:12
	4	8:50	4	MP6 - CTD	07/04/2011 8:50	MP6 Surface	07/04/2011 9:30
			4	MP6 Mid	07/04/2011 9:14	4	9:14
			4	MP6 Bottom	07/04/2011 9:04	4	9:04
	5	8:38	5	MP6 - CTD	12/04/2011 8:38	MP6 Surface	12/04/2011 9:10
			5	MP6 Mid	12/04/2011 9:03	5	9:03
			5	MP6 Bottom	12/04/2011 8:54	5	8:54
Surface							1
Average Mid							43
Bottom							86

MP6							
Season	Week	CTD Profile	Week	ID	Date / Time	Time	Sample Depth
Spring	1		1	MP6 - CTD	04/05/2011 0:00	MP6 Surface	04/05/2011 8:29
			1	MP6 Mid	04/05/2011 8:20	1	8:20
			1	MP6 Bottom	04/05/2011 8:10	1	8:10
	2		2	MP6 - CTD	09/05/2011 0:00	MP6 Surface	09/05/2011 8:30
			2	MP6 Mid	09/05/2011 8:39	2	8:39
			2	MP6 Bottom	09/05/2011 8:43	2	8:43
	3		3	MP6 - CTD	17/05/2011 0:00	MP6 Surface	17/05/2011 8:20
			3	MP6 Mid	17/05/2011 8:12	3	8:12
			3	MP6 Bottom	17/05/2011 8:00	3	8:00
	4		4	MP6 - CTD	25/05/2011 0:00	MP6 Surface	25/05/2011 8:50
			4	MP6 Mid	25/05/2011 8:45	4	8:45
			4	MP6 Bottom	25/05/2011 8:33	4	8:33
	5		5	MP6 - CTD	30/05/2011 0:00	MP6 Surface	30/05/2011 8:12
			5	MP6 Mid	30/05/2011 8:04	5	8:04
			5	MP6 Bottom	30/05/2011 7:54	5	7:54
Surface							1
Average Mid							43
Bottom							85

Field Data Sheet

MP6								
Season	Week	CTD Profile	Week	ID	Date / Time	Time	Sample Depth	
Summer	1		1	MP6 - CTD	20/07/2011 0:00	MP6 Surface	20/07/2011 8:38 1 8:38	
			1	MP6 Mid	20/07/2011 8:28 1 8:28	45		
			1	MP6 Bottom	20/07/2011 8:16 1 8:16	89		
	2		2	MP6 - CTD	26/07/2011 0:00	MP6 Surface	26/07/2011 9:14 2 9:14	1
			2	MP6 Mid	26/07/2011 9:03 2 9:03	45		
			2	MP6 Bottom	26/07/2011 8:50 2 8:50	49		
	3		3	MP6 - CTD	02/08/2011 0:00	MP6 Surface	02/08/2011 8:30 3 8:30	1
			3	MP6 Mid	02/08/2011 8:23 3 8:23	45		
			3	MP6 Bottom	02/08/2011 8:05 3 8:05	87		
	4		4	MP6 - CTD	09/08/2011 0:00	MP6 Surface	09/08/2011 8:30 4 8:30	1
			4	MP6 Mid	09/08/2011 8:15 4 8:15	47		
			4	MP6 Bottom	09/08/2011 8:00 4 8:00	95		
	5		5	MP6 - CTD	16/08/2011 0:00	MP6 Surface	16/08/2011 8:10 5 8:10	1
			5	MP6 Mid	16/08/2011 8:00 5 8:00	44		
			5	MP6 Bottom	16/08/2011 7:50 5 7:50	88		
Surface							1	
Average Mid							45	
Bottom							82	

MP6								
Season	Week	CTD Profile	Week	ID	Date / Time	Time	Sample Depth	
Fall	1		1	MP6 - CTD	31/10/2011 0:00	MP6 Surface	31/10/2011 15:22 1 15:22	1
			1	MP6 Mid	31/10/2011 15:14 1 15:14	42		
			1	MP6 Bottom	31/10/2011 15:04 1 15:04	85		
	2		2	MP6 - CTD	05/11/2011 0:00	MP6 Surface	05/11/2011 9:30 2 9:30	1
			2	MP6 Mid	05/11/2011 9:20 2 9:20	43		
			2	MP6 Bottom	05/11/2011 9:08 2 9:08	87		
	3		3	MP6 - CTD	15/11/2011 0:00	MP6 Surface	15/11/2011 9:32 3 9:32	1
			3	MP6 Mid	15/11/2011 9:24 3 9:24	43		
			3	MP6 Bottom	15/11/2011 9:14 3 9:14	87		
	4		4	MP6 - CTD	28/11/2011 0:00	MP6 Surface	28/11/2011 9:21 4 9:21	1
			4	MP6 Mid	28/11/2011 9:13 4 9:13	43		
			4	MP6 Bottom	28/11/2011 9:04 4 9:04	86		
	5		5	MP6 - CTD	30/11/2011 0:00	MP6 Surface	30/11/2011 9:27 5 9:27	1
			5	MP6 Mid	30/11/2011 9:20 5 9:20	43		
			5	MP6 Bottom	30/11/2011 9:12 5 9:12	86		
Surface							1	
Average Mid							43	
Bottom							86	

MP6								
Season	Week	CTD Profile	Week	ID	Date / Time	Time	Sample Depth	
Winter	1		1	MP6 - CTD	08/02/2012 0:00	MP6 Surface	08/02/2012 10:20 1 10:20	1
			1	MP6 Mid	08/02/2012 10:13 1 10:13	43		
			1	MP6 Bottom	08/02/2012 10:00 1 10:00	86		
	2		2	MP6 - CTD	15/02/2012 0:00	MP6 Surface	15/02/2012 9:02 2 9:02	1
			2	MP6 Mid	15/02/2012 8:56 2 8:56	43		
			2	MP6 Bottom	15/02/2012 8:47 2 8:47	86		
	3		3	MP6 - CTD	20/02/2012 0:00	MP6 Surface	20/02/2012 13:08 3 13:08	1
			3	MP6 Mid	20/02/2012 12:58 3 12:58	44		
			3	MP6 Bottom	20/02/2012 12:47 3 12:47	87		
	4		4	MP6 - CTD	27/02/2012 0:00	MP6 Surface	27/02/2012 11:01 4 11:01	1
			4	MP6 Mid	27/02/2012 10:53 4 10:53	43		
			4	MP6 Bottom	27/02/2012 10:44 4 10:44	86		
	5		5	MP6 - CTD	04/03/2012 0:00	MP6 Surface	04/03/2012 9:45 5 9:45	1
			5	MP6 Mid	04/03/2012 9:38 5 9:38	43		
			5	MP6 Bottom	04/03/2012 9:25 5 9:25	87		
Surface							1	
Average Mid							43	
Bottom							86	

MP6								
Season	Week	CTD Profile	Week	ID	Date / Time	Time	Sample Depth	
Spring	1	8:20	1	MP6 - CTD	15/05/2012 8:20	MP6 Surface	15/05/2012 8:55 1 8:55	1
			1	MP6 Mid	15/05/2012 8:47 1 8:47	43		
			1	MP6 Bottom	15/05/2012 8:36 1 8:36	86		
	2	8:14	2	MP6 - CTD	22/05/2012 8:14	MP6 Surface	22/05/2012 8:51 2 8:51	1
			2	MP6 Mid	22/05/2012 8:43 2 8:43	43		
			2	MP6 Bottom	22/05/2012 8:32 2 8:32	86		
	3	8:22	3	MP6 - CTD	28/05/2012 8:22	MP6 Surface	28/05/2012 8:53 3 8:53	1
			3	MP6 Mid	28/05/2012 8:45 3 8:45	43		
			3	MP6 Bottom	28/05/2012 8:35 3 8:35	86		
	4	8:22	4	MP6 - CTD	31/05/2012 8:22	MP6 Surface	31/05/2012 8:57 4 8:57	1
			4	MP6 Mid	31/05/2012 8:51 4 8:51	43		
			4	MP6 Bottom	31/05/2012 8:40 4 8:40	86		
	5	9:29	5	MP6 - CTD	06/06/2012 9:29	MP6 Surface	06/06/2012 10:00 5 10:00	1
			5	MP6 Mid	06/06/2012 9:52 5 9:52	44		
			5	MP6 Bottom	06/06/2012 9:38 5 9:38	88		
Surface							1	
Average Mid							43	
Bottom							86	

Appendix 2 Certificates of Analysis

Appendix 3 Seabird SBE19 – Calibration Records

SEA-BIRD ELECTRONICS, INC.

13431 NE 20th Street, Bellevue, Washington, 98005-2010 USA

Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 1731
CALIBRATION DATE: 20-Jan-11p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.4477
Voffset = -0.4990
Tau20 = 1.32

A = -1.8063e-003
B = 1.1772e-004
C = -2.4176e-006
E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4 H1 = -3.30000e-2
D2 = -4.64803e-2 H2 = 5.00000e+3
H3 = 1.45000e+3

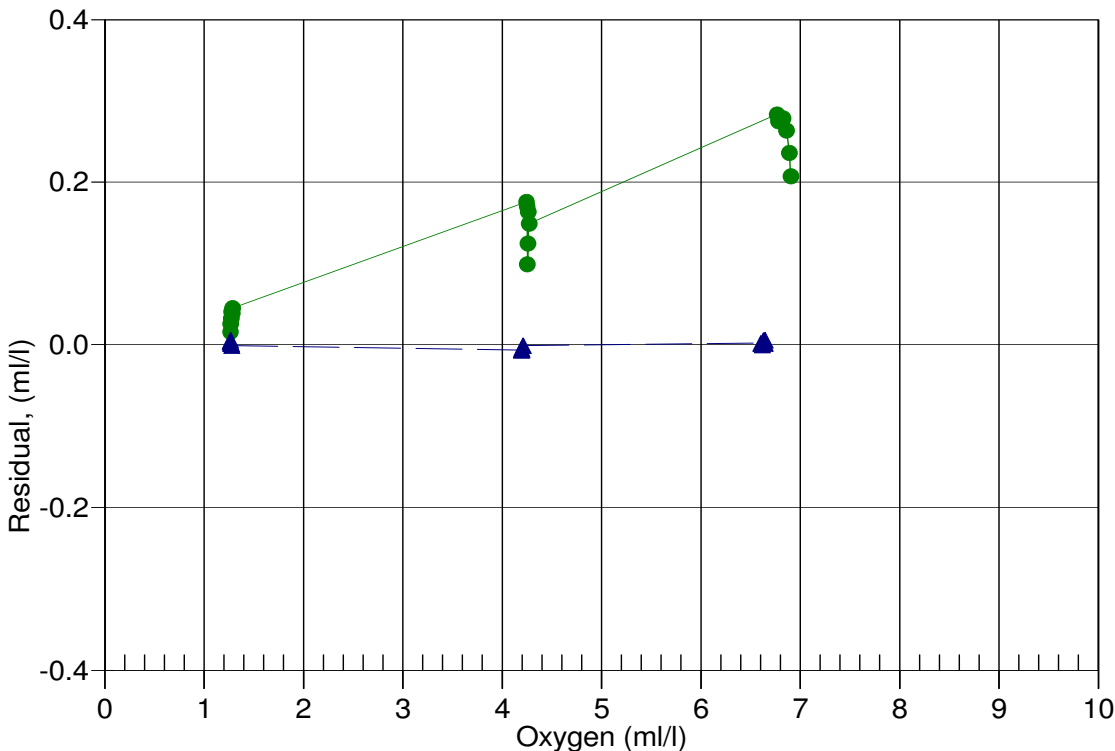
BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(VOLTS)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.26	6.00	0.01	0.826	1.26	0.00
1.26	12.00	0.01	0.877	1.27	0.00
1.26	2.00	0.01	0.793	1.27	0.01
1.28	20.00	0.02	0.951	1.28	0.00
1.28	26.00	0.02	1.008	1.28	-0.00
1.28	30.00	0.02	1.048	1.28	-0.00
4.19	12.00	0.01	1.749	4.18	-0.01
4.20	20.00	0.02	1.983	4.19	-0.00
4.20	6.00	0.01	1.582	4.19	-0.00
4.20	26.00	0.02	2.165	4.19	-0.00
4.20	2.00	0.01	1.470	4.19	-0.01
4.21	30.00	0.02	2.300	4.21	-0.00
6.60	12.00	0.01	2.473	6.60	0.00
6.61	30.00	0.02	3.330	6.61	-0.00
6.62	2.00	0.01	2.033	6.62	0.00
6.62	6.00	0.01	2.211	6.63	0.01
6.64	26.00	0.02	3.141	6.65	0.01
6.64	20.00	0.02	2.852	6.64	0.00

Oxygen (ml/l) = Soc * (V + Voffset) * (1.0 + A * T + B * T² + C * T³) * OxSol(T,S) * exp(E * P / K)

V = voltage output from SBE43, T = temperature [deg C], S = salinity [PSU] K = temperature [deg K]

OxSol(T,S) = oxygen saturation [ml/l], P = pressure [dbar], Residual = instrument oxygen - bath oxygen

Date, Delta Ox (ml/l)



● 22-Dec-09p 0.9648
▲ 20-Jan-11p 1.0000

SEA-BIRD ELECTRONICS, INC.

13431 NE 20th Street, Bellevue, Washington, 98005-2010 USA

Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 1731
CALIBRATION DATE: 27-Aug-11p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.4518
Voffset = -0.5030
Tau20 = 1.29

A = -2.4020e-003
B = 1.5028e-004
C = -2.9041e-006
E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4 H1 = -3.30000e-2
D2 = -4.64803e-2 H2 = 5.00000e+3
H3 = 1.45000e+3

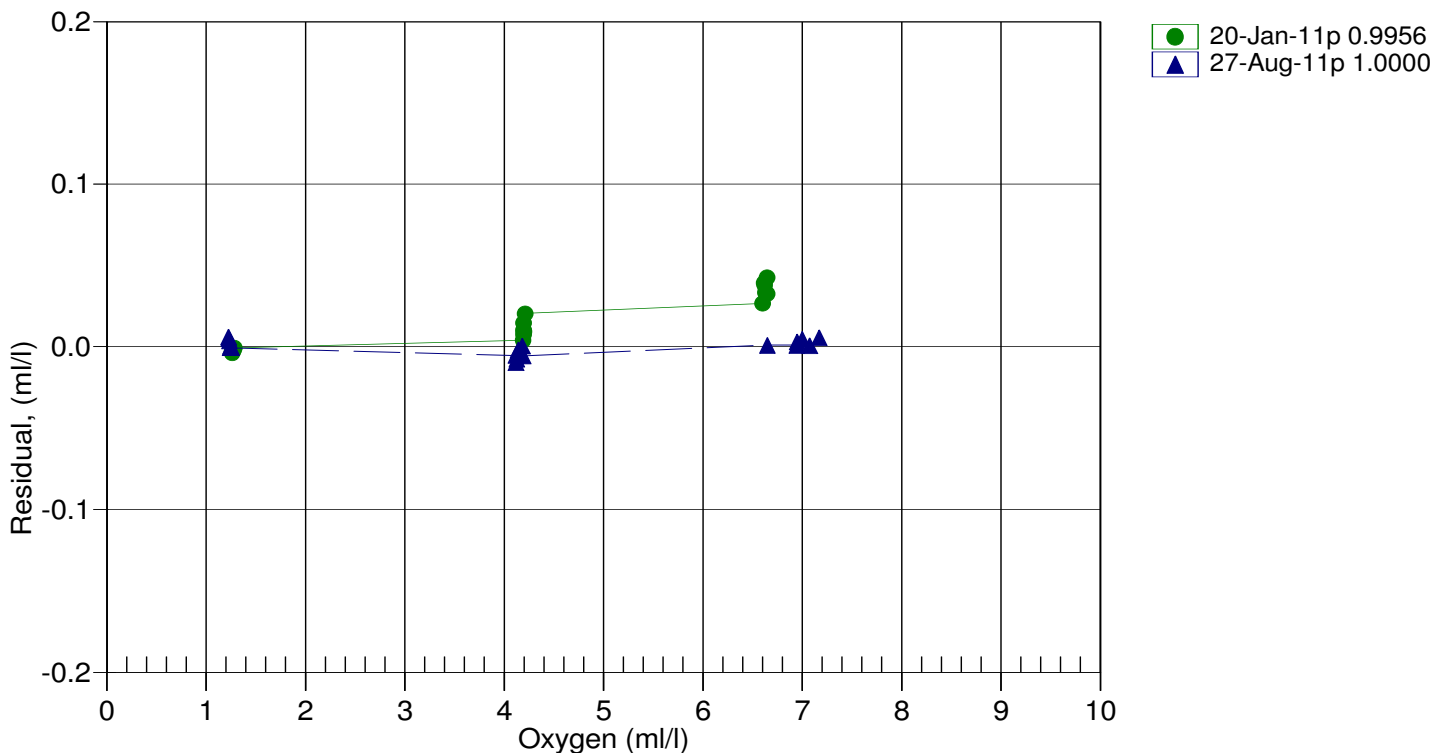
BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(VOLTS)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.22	2.00	0.00	0.785	1.23	0.01
1.23	6.00	0.00	0.819	1.23	0.01
1.23	12.00	0.00	0.870	1.24	0.00
1.24	20.00	0.00	0.941	1.24	-0.00
1.25	26.00	0.00	0.996	1.25	0.00
1.25	30.00	0.00	1.035	1.25	-0.00
4.12	6.00	0.00	1.558	4.11	-0.01
4.12	2.00	0.00	1.447	4.11	-0.01
4.12	12.00	0.00	1.726	4.12	-0.01
4.14	20.00	0.00	1.960	4.14	-0.00
4.18	30.00	0.00	2.280	4.18	0.00
4.19	26.00	0.00	2.153	4.18	-0.01
6.65	30.00	0.00	3.327	6.65	0.00
6.94	26.00	0.00	3.243	6.94	0.00
6.94	20.00	0.00	2.947	6.95	0.00
7.00	12.00	0.00	2.583	7.00	0.00
7.07	6.00	0.00	2.318	7.08	0.00
7.17	2.00	0.00	2.150	7.17	0.01

$$\text{Oxygen (ml/l)} = \text{Soc} * (\text{V} + \text{Voffset}) * (1.0 + \text{A} * \text{T} + \text{B} * \text{T}^2 + \text{C} * \text{T}^3) * \text{OxSol(T,S)} * \exp(\text{E} * \text{P} / \text{K})$$

V = voltage output from SBE43, T = temperature [deg C], S = salinity [PSU] K = temperature [deg K]

OxSol(T,S) = oxygen saturation [ml/l], P = pressure [dbar], Residual = instrument oxygen - bath oxygen

Date, Delta Ox (ml/l)



CALIBRATION SHEETS

Temperature Calibration - S/N 6482.....	1
Conductivity Calibration - S/N 6482.....	2
Pressure Calibration - S/N 6482.....	3
SBE 5P Configuration - S/N 055508.....	4
SBE 18 pH Calibration - S/N 180740.....	5
SBE 43 Oxygen Calibration - S/N 431731.....	6
D and A OBS-3 Calibration - S/N T8610.....	7

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Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 17-Dec-09

SBE19plus TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

a0 = 1.253367e-003
a1 = 2.600994e-004
a2 = -3.189288e-007
a3 = 1.484506e-007

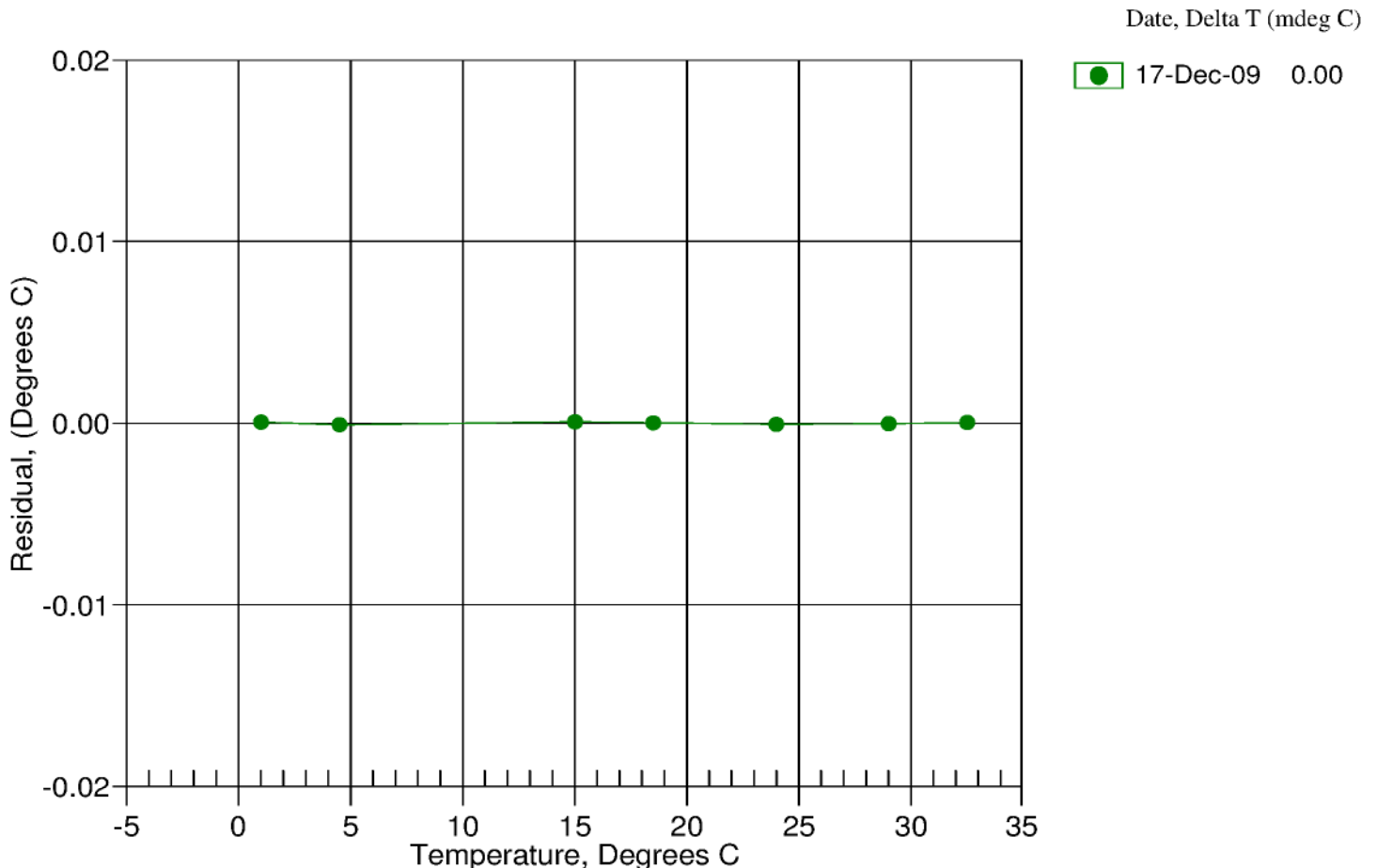
BATH TEMP (ITS-90)	INSTRUMENT OUTPUT(n)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0000	699285.508	1.0000	0.0000
4.5000	623272.610	4.4999	-0.0001
15.0000	431825.424	15.0001	0.0001
18.5000	379827.017	18.5000	0.0000
24.0000	308905.610	23.9999	-0.0001
29.0000	254712.305	29.0000	-0.0000
32.5000	221914.271	32.5000	0.0000

$$MV = (n - 524288) / 1.6e+007$$

$$R = (MV * 2.900e+009 + 1.024e+008) / (2.048e+004 - MV * 2.0e+005)$$

$$\text{Temperature ITS-90} = 1 / \{ a_0 + a_1 [\ln(R)] + a_2 [\ln^2(R)] + a_3 [\ln^3(R)] \} - 273.15 \text{ (}^\circ\text{C)}$$

$$\text{Residual} = \text{instrument temperature} - \text{bath temperature}$$



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 17-Dec-09

SBE19plus CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -1.057543e+000

CPcor = -9.5700e-008

h = 1.421697e-001

CTcor = 3.2500e-006

i = -1.518545e-004

j = 2.965842e-005

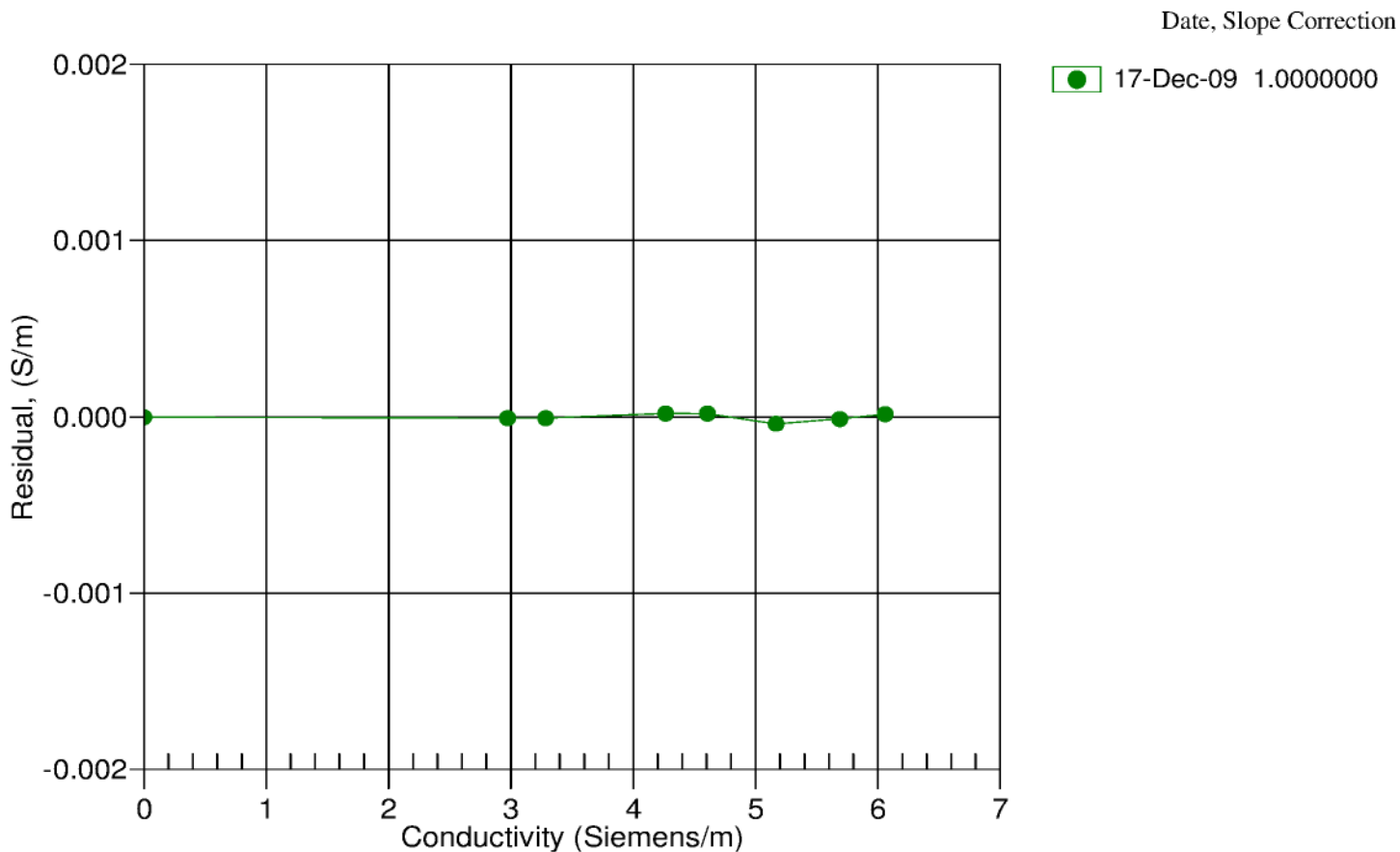
BATH TEMP (ITS-90)	BATH SAL (PSU)	BATH COND (Siemens/m)	INST FREQ (Hz)	INST COND (Siemens/m)	RESIDUAL (Siemens/m)
22.0000	0.0000	0.00000	2729.24	0.0000	0.00000
1.0000	34.8076	2.97529	5325.40	2.9753	-0.00001
4.5000	34.7875	3.28227	5523.74	3.2823	-0.00001
15.0000	34.7436	4.26364	6114.13	4.2637	0.00002
18.5000	34.7342	4.60865	6308.33	4.6087	0.00002
24.0000	34.7237	5.16637	6609.91	5.1663	-0.00004
29.0000	34.7177	5.68798	6879.77	5.6880	-0.00001
32.5000	34.7145	6.06024	7065.89	6.0603	0.00002

f = INST FREQ / 1000.0

Conductivity = $(g + hf^2 + if^3 + jf^4) / (1 + \delta t + \epsilon p)$ Siemens/meter

t = temperature[°C]; p = pressure[decibars]; δ = CTcor; ϵ = CPcor;

Residual = instrument conductivity - bath conductivity



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 14-Dec-09

SBE19plus PRESSURE CALIBRATION DATA
160 psia S/N 2932954

COEFFICIENTS:

PA0 =	8.651570e-002	PTCA0 =	5.250039e+005
PA1 =	4.883403e-004	PTCA1 =	2.255154e+001
PA2 =	-5.151139e-012	PTCA2 =	-6.934837e-001
PTEMPA0 =	-6.500782e+001	PTCB0 =	2.499950e+001
PTEMPA1 =	5.185782e+001	PTCB1 =	7.000000e-004
PTEMPA2 =	-2.533178e-001	PTCB2 =	0.000000e+000

PRESSURE SPAN CALIBRATION

PRESSURE PSIA	INST OUTPUT	THERMISTOR OUTPUT	COMPUTED PRESSURE	ERROR %FSR
14.63	554948.0	1.6	14.61	-0.01
29.85	586257.0	1.6	29.88	0.02
59.87	647843.0	1.6	59.88	0.00
94.91	719819.0	1.6	94.89	-0.01
124.89	781561.0	1.6	124.89	-0.01
159.89	853740.0	1.6	159.90	0.00
124.90	781609.0	1.6	124.91	0.00
94.92	719857.0	1.6	94.91	-0.00
59.93	647946.0	1.6	59.93	0.00
29.94	586436.0	1.6	29.96	0.02
14.64	554972.0	1.6	14.62	-0.01

THERMAL CORRECTION

TEMP ITS90	THERMISTOR OUTPUT	INST OUTPUT
32.50	1.90	555513.19
29.00	1.83	555567.88
24.00	1.73	555626.55
18.50	1.62	555678.25
15.00	1.55	555695.46
4.50	1.35	555606.57
1.00	1.28	555508.06

TEMP (ITS90)	SPAN (mV)
-5.00	25.00
35.00	25.02

$$y = \text{thermistor output}; t = PTEMPA0 + PTEMPA1 * y + PTEMPA2 * y^2$$

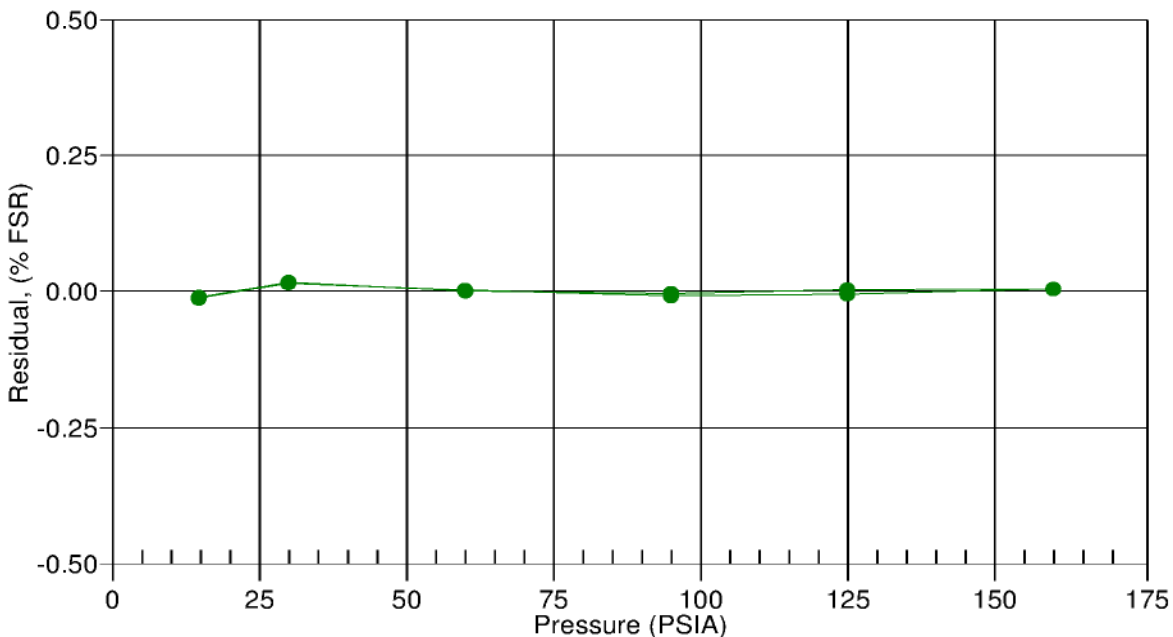
$$x = \text{pressure output} - PTCA0 - PTCA1 * t - PTCA2 * t^2$$

$$n = x * PTCB0 / (PTCB0 + PTCB1 * t + PTCB2 * t^2)$$

$$\text{pressure (psia)} = PA0 + PA1 * n + PA2 * n^2$$

Date, Avg Delta P %FS

14-Dec-09 0.00





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Website: http://www.seabird.com

Tel: (425) 643-9866

Email: seabird@seabird.com

Fax: (425) 643-9866

SBE 5P SUBMERSIBLE PUMP CONFIGURATION SHEETCustomer: **WorleyParsons Canada**Delivery Date: **12/30/2009**Serial Number: **5508**MRP PN: **90618**Job Number: **55714**

Pressure Case: 600 meters (Plastic)

Pittman Motor Type:**P/N 3711B113-R1, 18.02 ohms nominal (For applications up to 2000 RPM MAX)** 5 Winding, low voltage input (jump P5 to P7)
(80676 assy/3711B113-R1 motor) 5 Winding, standard voltage input (jump P5 to P6)
(80676 assy/3711B113-R1 motor) **P/N 3711B112-R1, 7.40 ohms nominal (For applications up to 4500 RPM MAX)** 3 Winding, low voltage input (jump P5 to P7)
(80675 assy/3711B112-R1 motor) 3 Winding, standard voltage input (jump P5 to P6)
(80675 assy/3711B112-R1 motor) **P/N 3711B112-R2, 3.55 ohms nominal (For applications up to 4500 RPM MAX)** 3 Winding, low voltage input (jump P5 to P7)
(801572 assy/3711B112-R2 motor) 3 Winding, standard voltage input (jump P5 to P6)
(801572 assy/3711B112-R2 motor) Speed Adjust Range: Min: **975** RPM Max: **5201** RPM (@ 12 Vin/300mA load)Final Speed Setting: **2000** RPM (TP1 = **66.7** Hz)**Low voltage pumps only:**Motor speed at 7.5 Vin with no load: **0** RPM (TP1 = **0.0** Hz)Motor speed at 7.5 Vin with 200mA load: **0** RPM (TP1 = **0.0** Hz)Motor dropout voltage: **9.3**

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1808 136th Place N.E., Bellevue, Washington, 98005 USA

Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 0740
CALIBRATION DATE: 23-Dec-09

SBE18 pH CALIBRATION DATA

pH COEFFICIENTS

pHslope = 4.4843

pHoffset = 2.5173

pH	Temperature (deg C)	Vout	Instrument Output (pH units)	Residual (pH units)
4.0	20.0	1.733	3.993	-0.007
7.0	20.0	2.521	7.014	0.014
10.0	20.0	3.298	9.993	-0.007

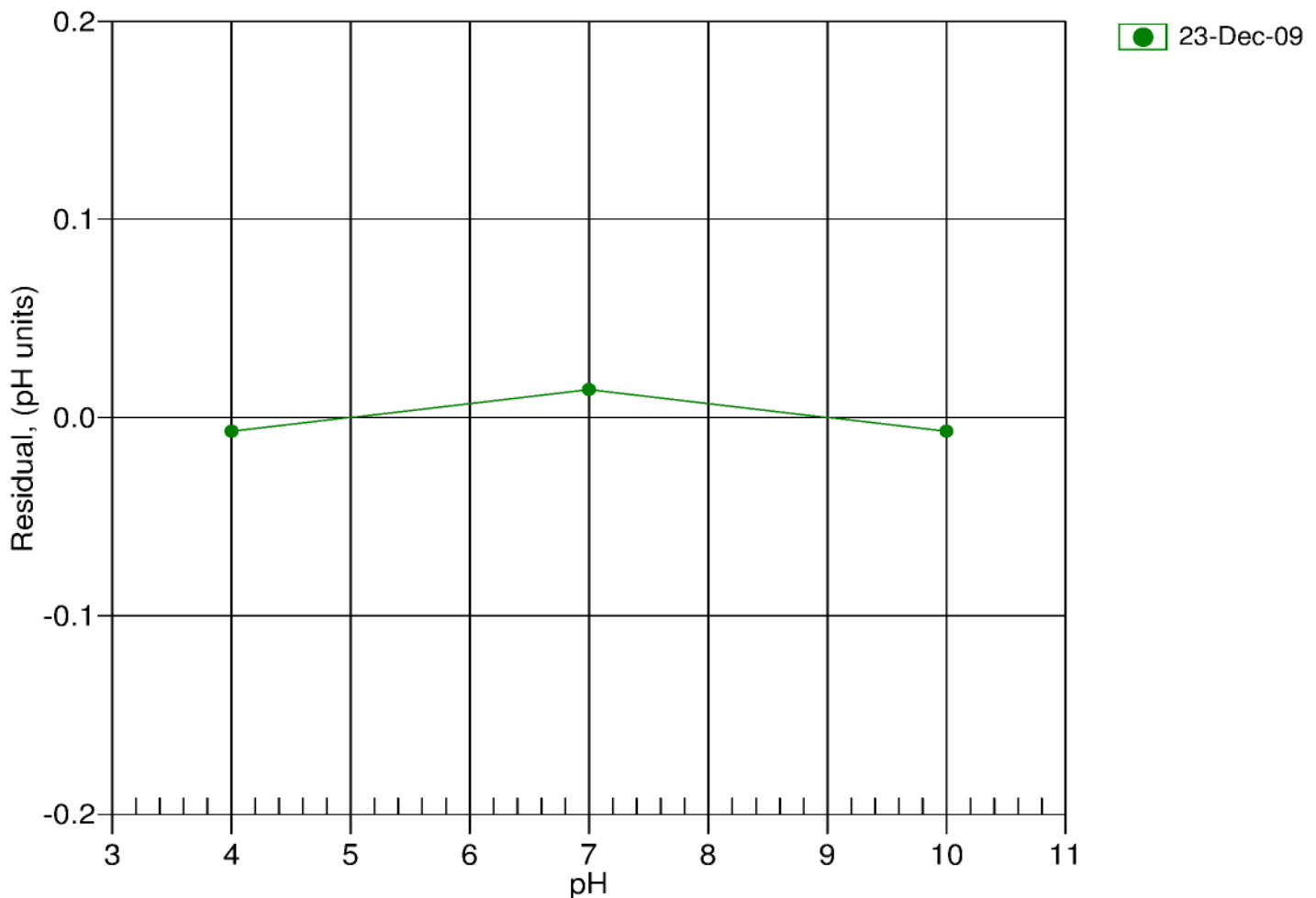
$$\text{pH} = 7.0 + (\text{Vout} - \text{pHoffset}) / (\text{pHslope} * \text{°K} * 1.98416\text{E-}4)$$

Where:

Vout = pH sensor output in volts

K is the water temperature in degrees Kelvin

Residual = instrument pH - buffer pH



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1808 136th Place N.E., Bellevue, Washington, 98005 USA

Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 1731
CALIBRATION DATE: 22-Dec-09p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.4347

Voffset = -0.4924

Tau20 = 1.56

A = -3.3327e-003

B = 1.8199e-004

C = -3.3656e-006

E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4 H1 = -3.30000e-2

D2 = -4.64803e-2 H2 = 5.00000e+3

H3 = 1.45000e+3

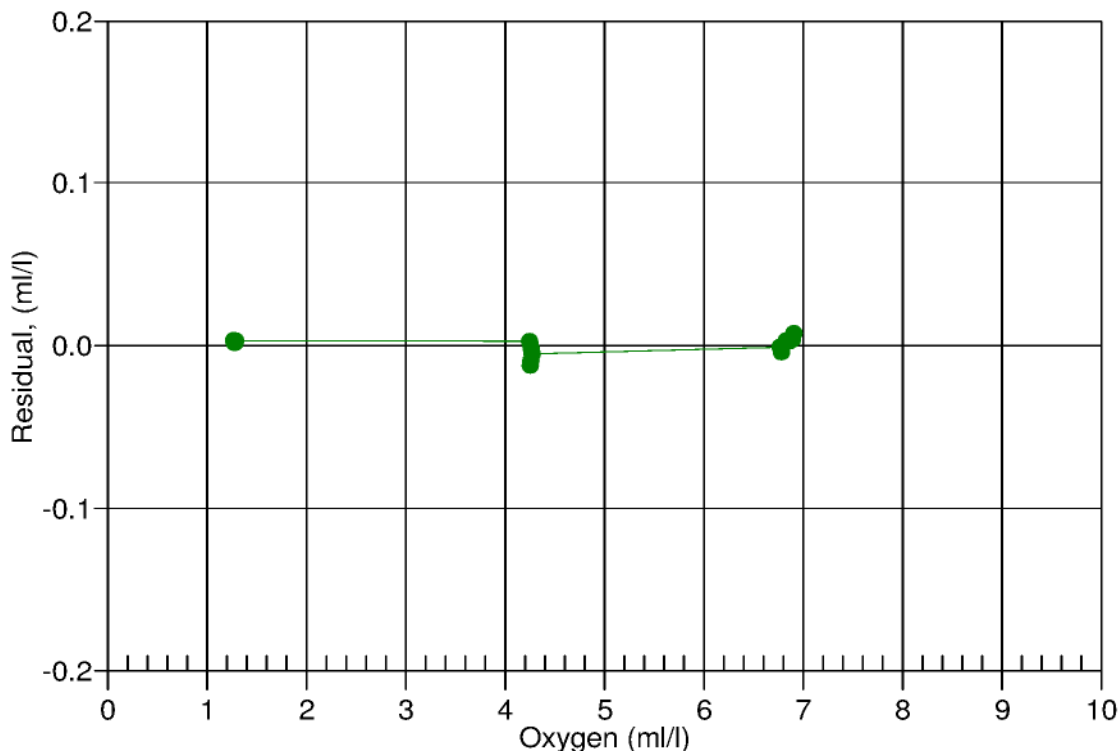
BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(VOLTS)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.26	2.00	0.00	0.795	1.27	0.00
1.27	6.00	0.00	0.834	1.27	0.00
1.28	12.00	0.01	0.890	1.28	0.00
1.28	26.00	0.01	1.024	1.28	0.00
1.28	20.00	0.01	0.966	1.28	0.00
1.29	30.00	0.01	1.068	1.29	0.00
4.24	30.00	0.01	2.391	4.25	0.00
4.25	26.00	0.01	2.256	4.25	0.00
4.25	2.00	0.00	1.507	4.24	-0.01
4.26	6.00	0.00	1.632	4.25	-0.01
4.27	20.00	0.01	2.067	4.26	-0.00
4.27	12.00	0.01	1.819	4.26	-0.01
6.76	30.00	0.01	3.516	6.76	-0.00
6.78	26.00	0.01	3.303	6.78	-0.00
6.83	20.00	0.01	3.014	6.83	0.00
6.86	12.00	0.01	2.628	6.86	0.00
6.89	6.00	0.00	2.339	6.89	0.00
6.90	2.00	0.00	2.146	6.91	0.01

Oxygen (ml/l) = Soc * (V + Voffset) * (1.0 + A * T + B * T² + C * T³) * OxSol(T,S) * exp(E * P / K)

V = voltage output from SBE43, T = temperature [deg C], S = salinity [PSU] K = temperature [deg K]

OxSol(T,S) = oxygen saturation [ml/l], P = pressure [dbar], Residual = instrument oxygen - bath oxygen

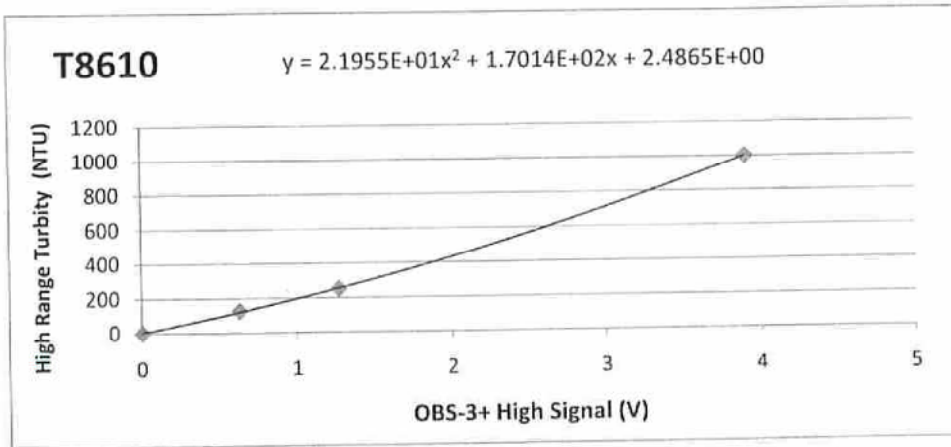
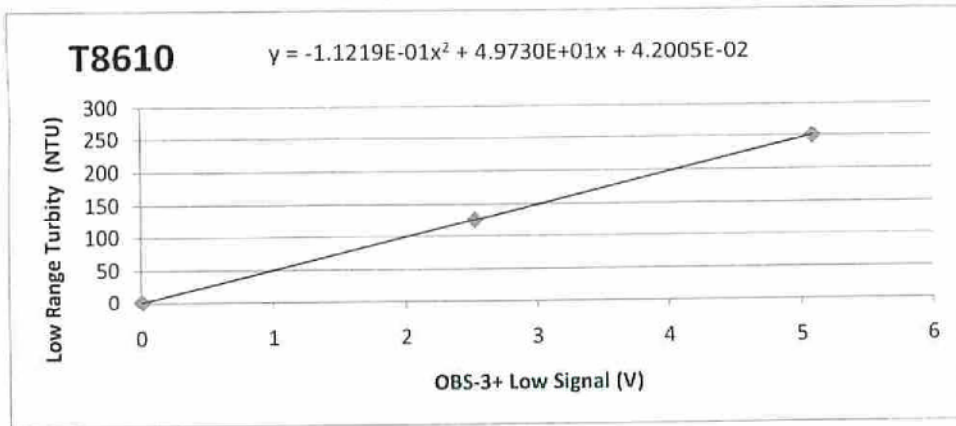
Date, Delta Ox (ml/l)



OBS-3+ AMCO Clear Calibration Certificate

Serial Number: T8610 Nominal Low Range: 250 NTU
 Customer: Sea-Bird Electronics Inc. Nominal High Range: 1000 NTU

Voltage Calibration



Performed by



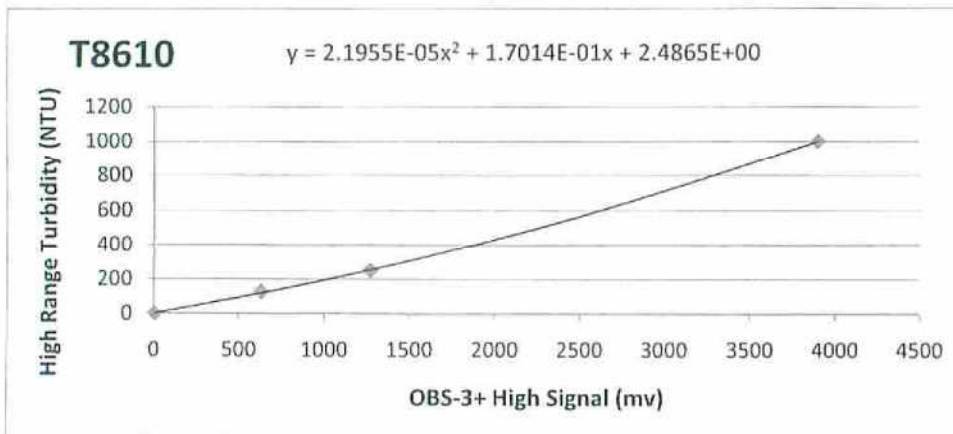
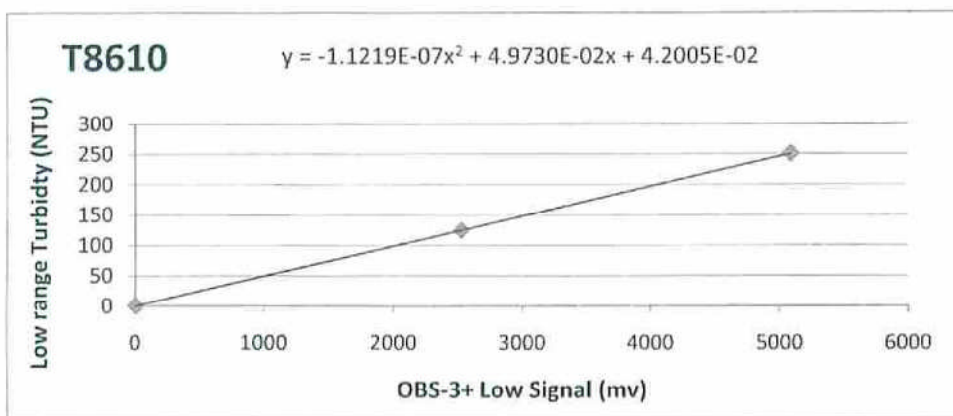
November 25, 2009

815w 1800n Logan UT 84321 435-753-2342

OBS-3+ AMCO Clear Calibration Certificate

Serial Number: T8610 Nominal Low Range: 250 NTU
 Customer: Sea- Bird Electronics Inc. Nominal High Range: 1000 NTU

Milli-Volt Calibration



Performed by 



November 25, 2009

815w 1800n Logan UT 84321 435-753-2342



SEA-BIRD ELECTRONICS, INC.

13431 NE 20th Street Bellevue, Washington 98005 USA

Phone: (425) 643-9866 Fax: (425) 643-9954 www.seabird.com

Conductivity Calibration Report

Customer:	WorleyParsons Canada		
Job Number:	62753	Date of Report:	2/2/2011
Model Number	SBE 19Plus	Serial Number:	19P55714-6482

Conductivity sensors are normally calibrated 'as received', without cleaning or adjustments, allowing a determination of sensor drift. If the calibration identifies a problem or indicates cell cleaning is necessary, then a second calibration is performed after work is completed. The 'as received' calibration is not performed if the sensor is damaged or non-functional, or by customer request.

An 'as received' calibration certificate is provided, listing the coefficients used to convert sensor frequency to conductivity. Users must choose whether the 'as received' calibration or the previous calibration better represents the sensor condition during deployment. In SEASOFT enter the chosen coefficients using the program SEACON. The coefficient 'slope' allows small corrections for drift between calibrations (consult the SEASOFT manual). Calibration coefficients obtained after a repair or cleaning apply only to subsequent data.

'AS RECEIVED CALIBRATION' Performed Not Performed

Date: Drift since last cal: PSU/month

Comments:

'CALIBRATION AFTER CLEANING & REPLATINIZING' Performed Not Performed

Date: Drift since 17 Dec 09 PSU/month

Comments:

**Measured at 3.0 S/m*

Cell cleaning and electrode replatinizing tend to 'reset' the conductivity sensor to its original condition. Lack of drift in post-cleaning-calibration indicates geometric stability of the cell and electrical stability of the sensor circuit.

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SENSOR SERIAL NUMBER: 0740
CALIBRATION DATE: 08-Feb-11

SBE18 pH CALIBRATION DATA

pH COEFFICIENTS

pHslope = 4.5433

pHoffset = 2.5137

pH	Temperature (deg C)	Vout	Instrument Output (pH units)	Residual (pH units)
4.0	21.0	1.715	3.988	-0.012
7.0	21.1	2.520	7.024	0.024
10.0	21.1	3.306	9.987	-0.013

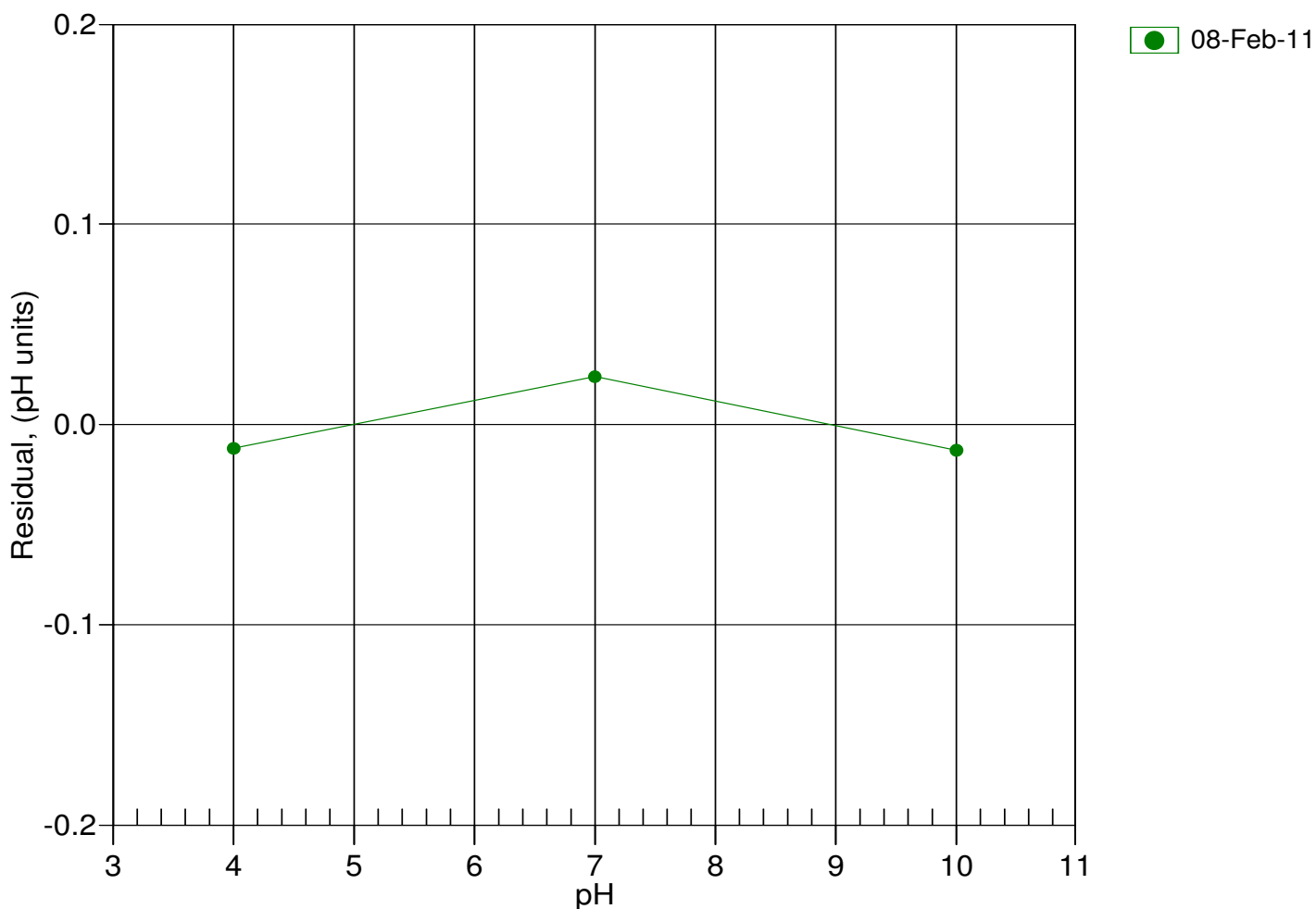
$$\text{pH} = 7.0 + (\text{Vout} - \text{pHoffset}) / (\text{pHslope} * \text{°K} * 1.98416\text{E-}4)$$

Where:

Vout = pH sensor output in volts

K is the water temperature in degrees Kelvin

Residual = instrument pH - buffer pH



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SENSOR SERIAL NUMBER: 0740
CALIBRATION DATE: 25-Jan-11

SBE18 pH CALIBRATION DATA

pH COEFFICIENTS

pHslope = 4.4845

pHoffset = 2.8243

pH	Temperature (deg C)	Vout	Instrument Output (pH units)	Residual (pH units)
4.0	21.3	2.024	3.945	-0.055
7.0	21.3	2.853	7.109	0.109
10.0	21.3	3.596	9.945	-0.055

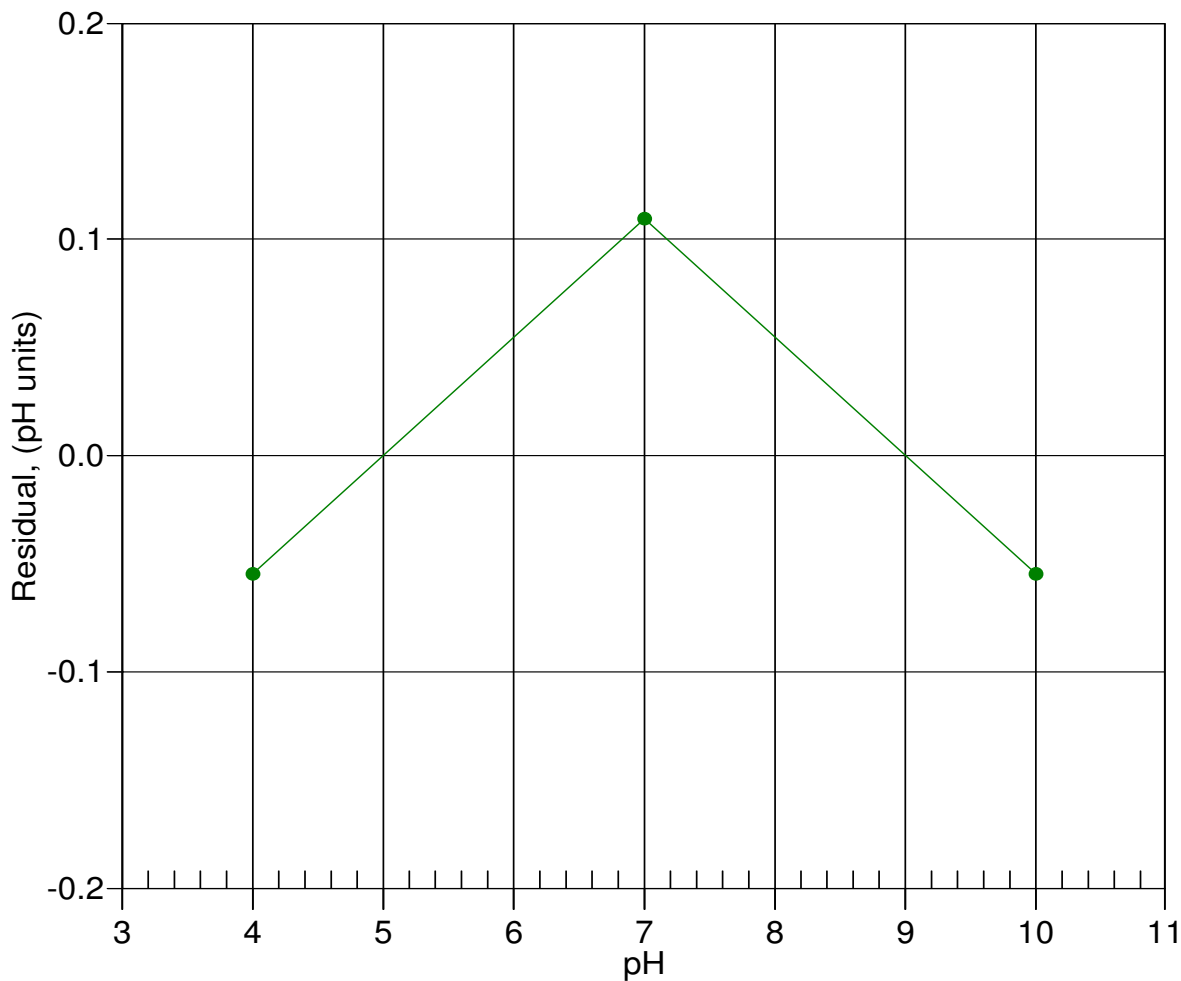
$$\text{pH} = 7.0 + (\text{Vout} - \text{pHoffset}) / (\text{pHslope} * \text{°K} * 1.98416\text{E-}4)$$

Where:

Vout = pH sensor output in volts

K is the water temperature in degrees Kelvin

Residual = instrument pH - buffer pH



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Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 0740
CALIBRATION DATE: 30-Aug-11

SBE18 pH CALIBRATION DATA

pH COEFFICIENTS

pHslope = 4.5214

pHoffset = 2.6197

pH	Temperature (deg C)	Vout	Instrument Output (pH units)	Residual (pH units)
4.0	22.8	1.817	3.977	-0.023
7.0	22.8	2.632	7.046	0.046
10.0	22.8	3.410	9.977	-0.023

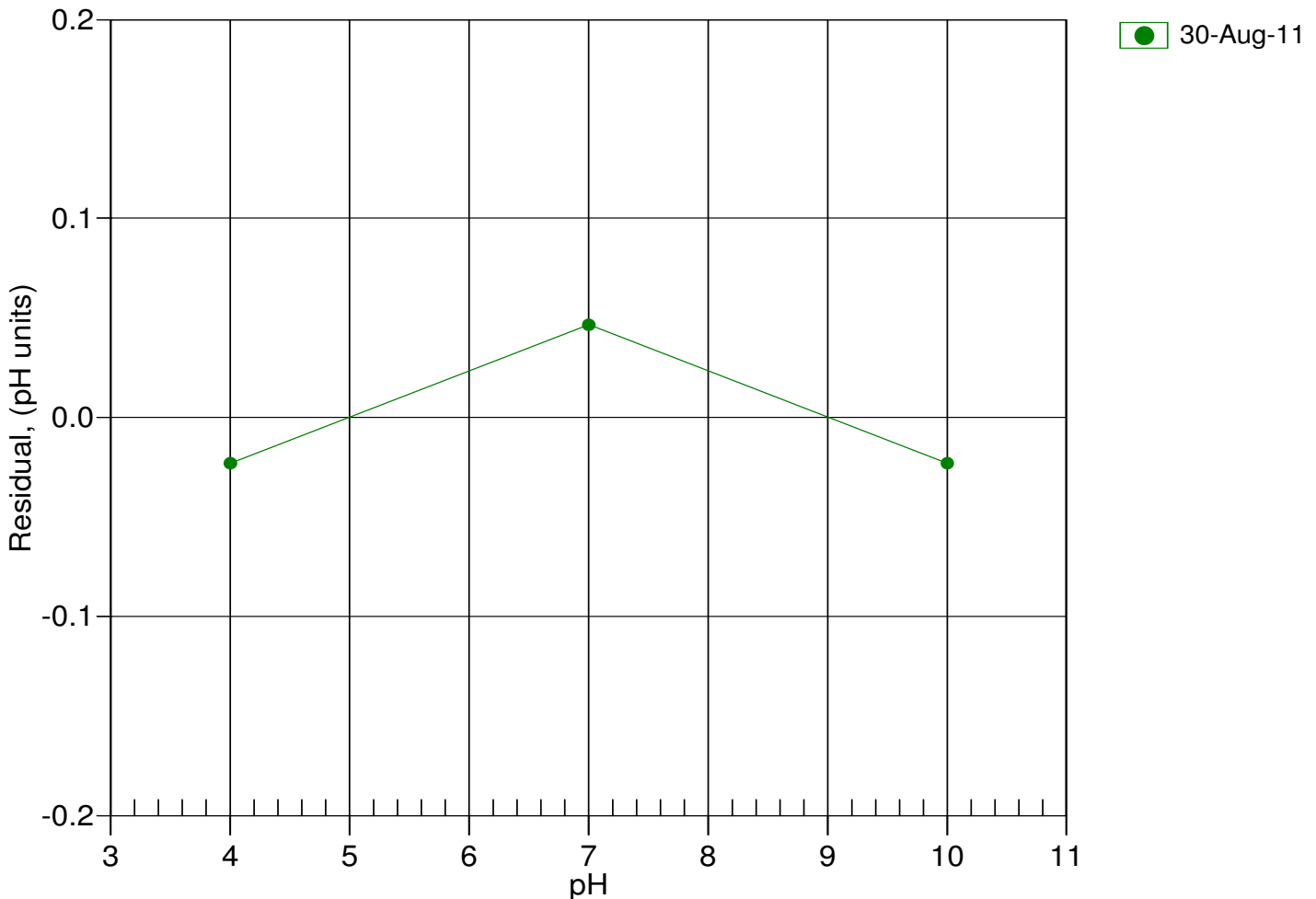
$$\text{pH} = 7.0 + (\text{Vout} - \text{pHoffset}) / (\text{pHslope} * \text{°K} * 1.98416\text{E-}4)$$

Where:

Vout = pH sensor output in volts

K is the water temperature in degrees Kelvin

Residual = instrument pH - buffer pH



SEA-BIRD ELECTRONICS, INC.

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Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 02-Feb-11

SBE19plus CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -1.057430e+000 CPcor = -9.5700e-008
h = 1.422015e-001 CTcor = 3.2500e-006
i = -1.764174e-004
j = 3.168159e-005

BATH TEMP (ITS-90)	BATH SAL (PSU)	BATH COND (Siemens/m)	INST FREQ (Hz)	INST COND (Siemens/m)	RESIDUAL (Siemens/m)
22.0000	0.0000	0.00000	2729.28	0.0000	0.00000
1.0000	34.6099	2.96000	5316.03	2.9600	-0.00000
4.5000	34.5899	3.26546	5513.81	3.2655	-0.00000
15.0000	34.5474	4.24210	6102.64	4.2421	0.00001
18.5000	34.5378	4.58539	6296.30	4.5854	0.00001
24.0000	34.5271	5.14034	6597.07	5.1403	-0.00001
29.0000	34.5193	5.65912	6866.06	5.6591	-0.00001
32.5000	34.5136	6.02915	7051.48	6.0292	0.00001

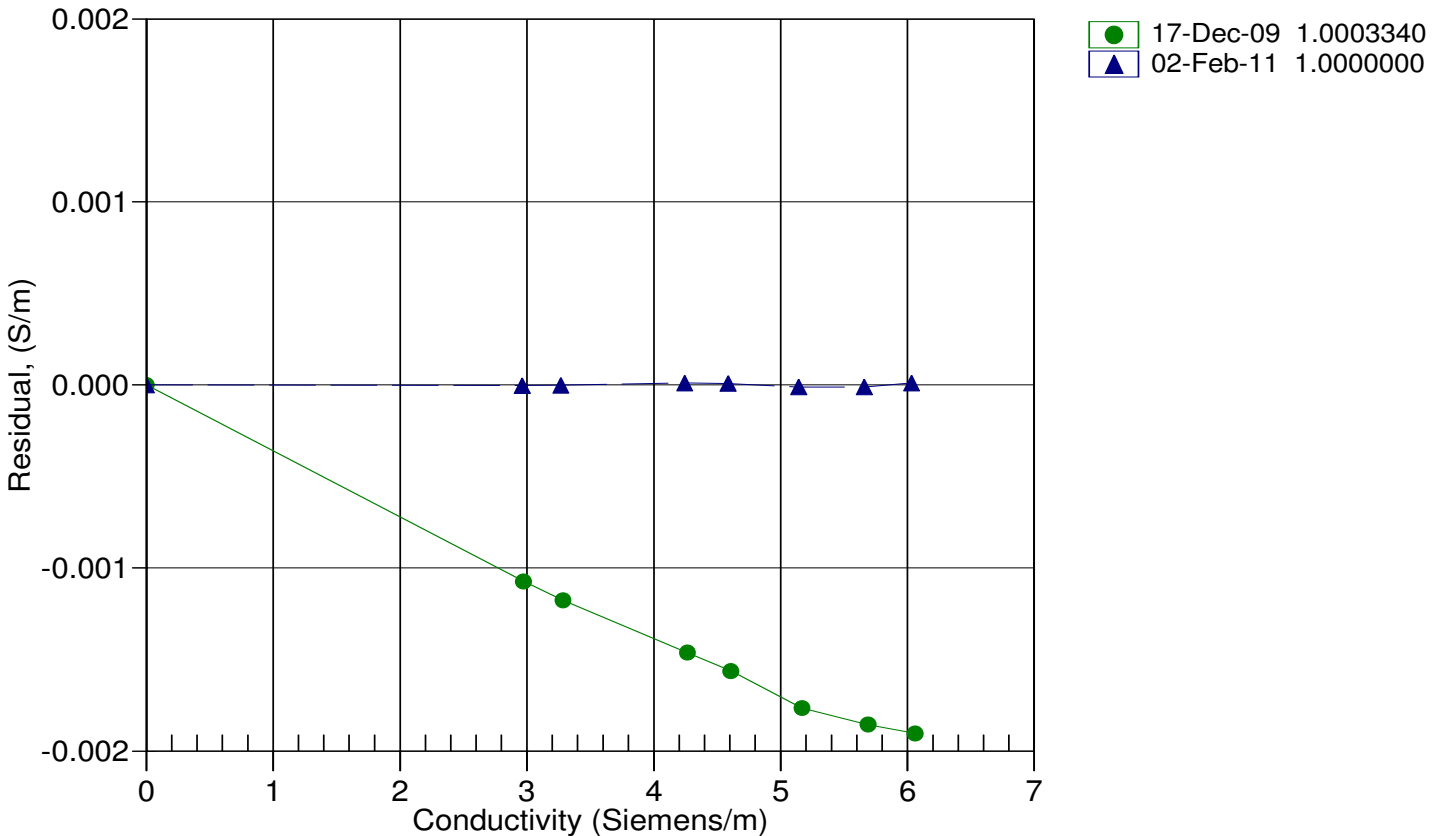
f = INST FREQ / 1000.0

Conductivity = (g + hf² + if³ + jf⁴) / (1 + δt + εp) Siemens/meter

t = temperature[°C]; p = pressure[decibars]; δ = CTcor; ε = CPcor;

Residual = instrument conductivity - bath conductivity

Date, Slope Correction



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 08-Sep-11

SBE19plus CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -1.057798e+000 CPcor = -9.5700e-008
h = 1.422329e-001 CTcor = 3.2500e-006
i = -1.707962e-004
j = 3.185540e-005

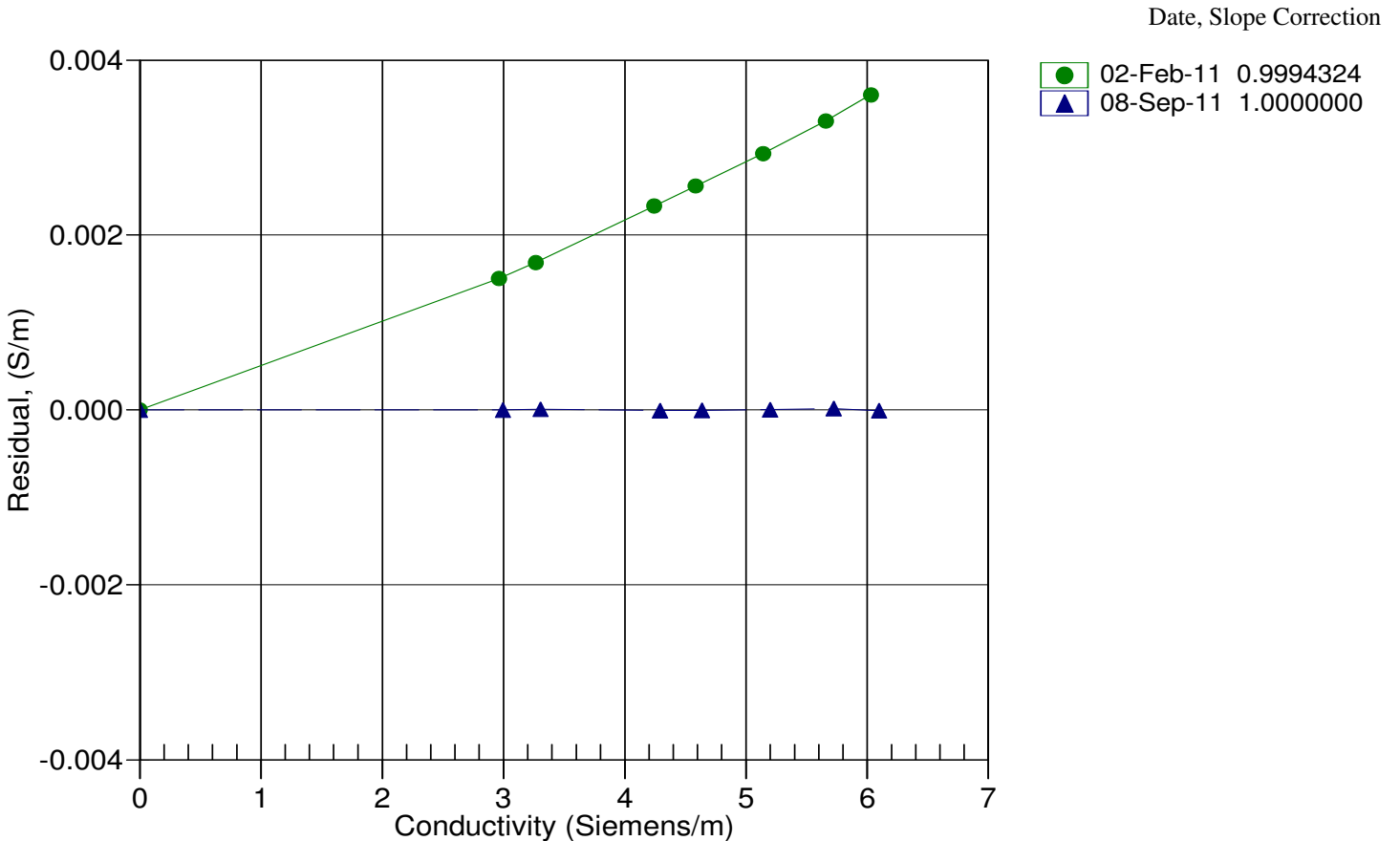
BATH TEMP (ITS-90)	BATH SAL (PSU)	BATH COND (Siemens/m)	INST FREQ (Hz)	INST COND (Siemens/m)	RESIDUAL (Siemens/m)
22.0000	0.0000	0.00000	2729.30	0.0000	0.00000
1.0000	35.0475	2.99383	5337.30	2.9938	-0.00000
4.5000	35.0270	3.30264	5536.31	3.3026	0.00001
15.0000	34.9836	4.28996	6128.66	4.2899	-0.00001
18.5000	34.9733	4.63694	6323.42	4.6369	-0.00001
24.0000	34.9614	5.19782	6625.86	5.1978	0.00000
29.0000	34.9532	5.72221	6896.34	5.7222	0.00001
32.5000	34.9467	6.09615	7082.72	6.0961	-0.00001

f = INST FREQ / 1000.0

Conductivity = (g + hf² + if³ + jf⁴) / (1 + δt + εp) Siemens/meter

t = temperature[°C]; p = pressure[decibars]; δ = CTcor; ε = CPcor;

Residual = instrument conductivity - bath conductivity



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 26-Jan-11

SBE19plus CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -1.058250e+000 CPcor = -9.5700e-008
h = 1.423587e-001 CTcor = 3.2500e-006
i = -2.101273e-004
j = 3.731532e-005

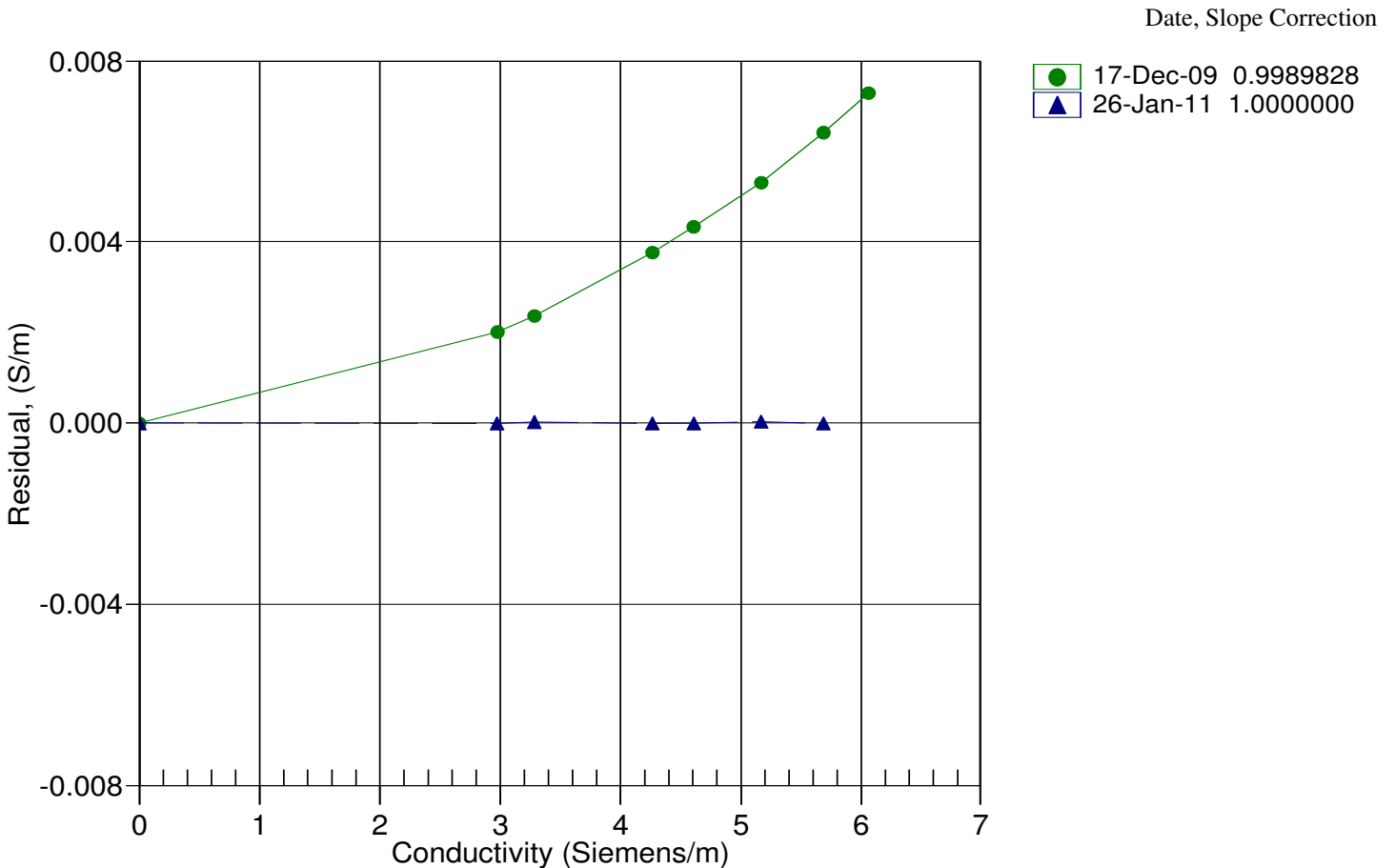
BATH TEMP (ITS-90)	BATH SAL (PSU)	BATH COND (Siemens/m)	INST FREQ (Hz)	INST COND (Siemens/m)	RESIDUAL (Siemens/m)
22.0000	0.0000	0.00000	2729.31	0.0000	0.00000
1.0000	34.7850	2.97354	5322.93	2.9735	-0.00001
4.5000	34.7653	3.28039	5521.06	3.2804	0.00002
15.0001	34.7242	4.26152	6110.76	4.2615	-0.00002
18.5001	34.7155	4.60645	6304.71	4.6064	-0.00001
24.0000	34.7058	5.16400	6605.88	5.1640	0.00002
29.0000	34.7001	5.68542	6875.23	5.6854	-0.00001

f = INST FREQ / 1000.0

Conductivity = (g + hf² + if³ + jf⁴) / (1 + δt + εp) Siemens/meter

t = temperature[°C]; p = pressure[decibars]; δ = CTcor; ε = CPcor;

Residual = instrument conductivity - bath conductivity



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 30-Aug-11

SBE19plus CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -1.058022e+000 CPcor = -9.5700e-008
h = 1.422780e-001 CTcor = 3.2500e-006
i = -1.798214e-004
j = 3.210713e-005

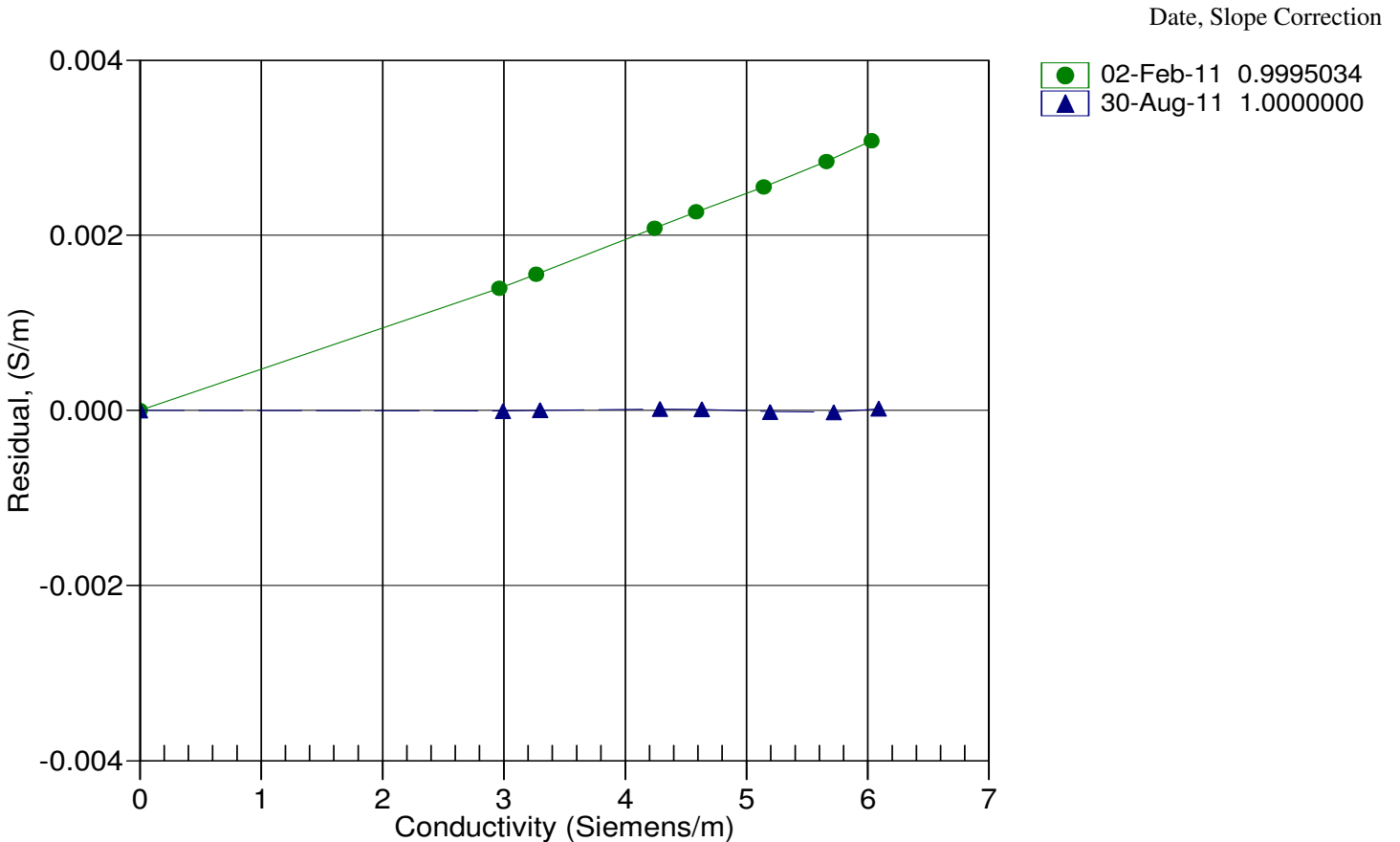
BATH TEMP (ITS-90)	BATH SAL (PSU)	BATH COND (Siemens/m)	INST FREQ (Hz)	INST COND (Siemens/m)	RESIDUAL (Siemens/m)
22.0000	0.0000	0.00000	2729.37	0.0000	0.00000
1.0001	35.0021	2.99034	5335.07	2.9903	-0.00001
4.5000	34.9811	3.29873	5533.93	3.2987	0.00000
15.0000	34.9370	4.28485	6125.90	4.2849	0.00001
18.5000	34.9268	4.63144	6320.55	4.6315	0.00001
24.0000	34.9160	5.19181	6622.89	5.1918	-0.00001
29.0000	34.9098	5.71590	6893.37	5.7159	-0.00002
32.5000	34.9057	6.08981	7079.88	6.0898	0.00002

f = INST FREQ / 1000.0

Conductivity = (g + hf² + if³ + jf⁴) / (1 + δt + εp) Siemens/meter

t = temperature[°C]; p = pressure[decibars]; δ = CTcor; ε = CPcor;

Residual = instrument conductivity - bath conductivity



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 06-Sep-11

SBE19plus PRESSURE CALIBRATION DATA
870 psia S/N 3407915

COEFFICIENTS:

PA0 = 1.827324e+000	PTCA0 = 5.245128e+005
PA1 = 2.623634e-003	PTCA1 = 5.019499e+001
PA2 = 2.360729e-011	PTCA2 = -8.273985e-001
PTEMPA0 = -5.320393e+001	PTCB0 = 2.499950e+001
PTEMPA1 = 5.468184e+001	PTCB1 = 7.000000e-004
PTEMPA2 = -6.039909e-002	PTCB2 = 0.000000e+000

PRESSURE SPAN CALIBRATION

PRESSURE PSIA	INST OUTPUT	THERMISTOR OUTPUT	COMPUTED PRESSURE	ERROR %FSR
14.67	530106.0	1.4	14.66	-0.00
179.93	593083.0	1.4	179.89	-0.00
359.91	661600.0	1.4	359.87	-0.00
539.90	730041.0	1.4	539.87	-0.00
719.88	798398.0	1.4	719.88	-0.00
874.85	857176.0	1.4	874.83	-0.00
719.90	798421.0	1.4	719.93	0.00
539.92	730076.0	1.4	539.96	0.00
359.94	661639.0	1.4	359.97	0.00
179.98	593123.0	1.4	179.99	0.00
14.67	530131.0	1.4	14.71	0.00

THERMAL CORRECTION

TEMP ITS90	THERMISTOR OUTPUT	INST OUTPUT
32.50	1.57	530309.12
29.00	1.51	530301.08
24.00	1.41	530269.26
18.50	1.31	530194.01
15.00	1.25	530117.88
4.50	1.06	529754.05
1.00	0.99	529595.54

TEMP (ITS90)	SPAN (mV)
-5.00	25.00
35.00	25.02

$$y = \text{thermistor output}; t = PTEMPA0 + PTEMPA1 * y + PTEMPA2 * y^2$$

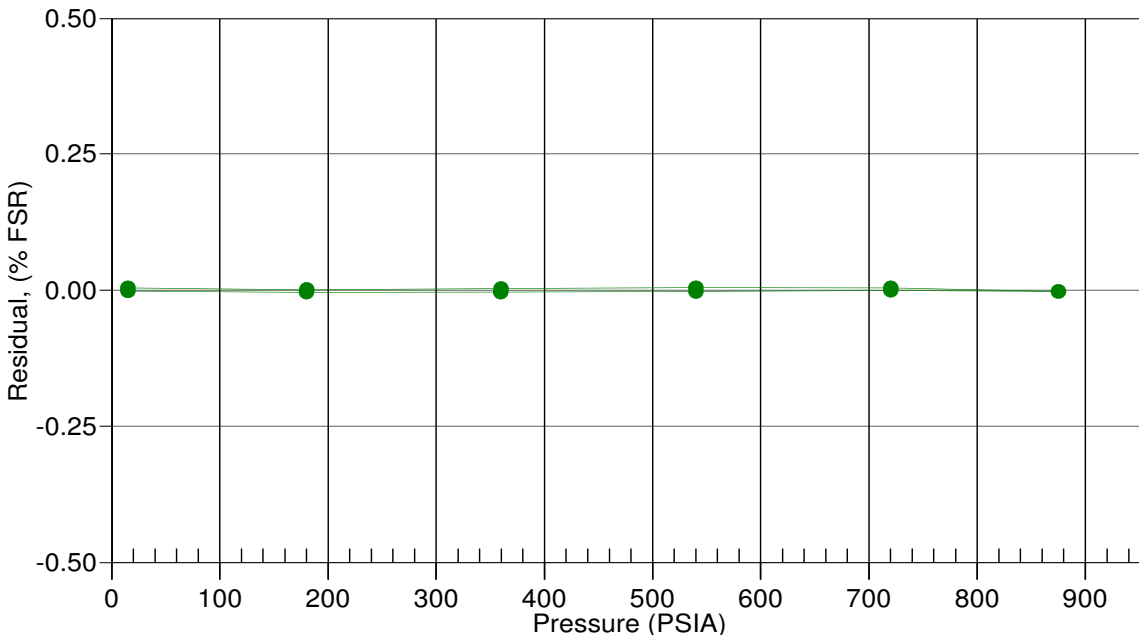
$$x = \text{pressure output} - PTCA0 - PTCA1 * t - PTCA2 * t^2$$

$$n = x * PTCB0 / (PTCB0 + PTCB1 * t + PTCB2 * t^2)$$

$$\text{pressure (psia)} = PA0 + PA1 * n + PA2 * n^2$$

Date, Avg Delta P %FS

06-Sep-11 0.00



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 25-Jan-11

SBE19plus PRESSURE CALIBRATION DATA
160 psia S/N 2932954

COEFFICIENTS:

PA0 = 8.375112e-002	PTCA0 = 5.250423e+005
PA1 = 4.884485e-004	PTCA1 = 2.363341e+001
PA2 = -5.338085e-012	PTCA2 = -7.280370e-001
PTEMPA0 = -6.518379e+001	PTCB0 = 2.499950e+001
PTEMPA1 = 5.204554e+001	PTCB1 = 7.000000e-004
PTEMPA2 = -3.232590e-001	PTCB2 = 0.000000e+000

PRESSURE SPAN CALIBRATION

PRESSURE PSIA	INST OUTPUT	THERMISTOR OUTPUT	COMPUTED PRESSURE	ERROR %FSR
14.80	555347.0	1.7	14.79	-0.01
30.00	586577.0	1.7	30.02	0.01
60.04	648225.0	1.7	60.05	0.01
95.03	720095.0	1.7	95.01	-0.01
125.04	781918.0	1.7	125.04	0.00
160.03	854049.0	1.7	160.03	0.00
125.04	781925.0	1.7	125.05	0.00
95.08	720205.0	1.7	95.07	-0.01
60.08	648301.0	1.7	60.09	0.00
14.79	555347.0	1.7	14.79	-0.00

THERMAL CORRECTION

TEMP ITS90	THERMISTOR OUTPUT	INST OUTPUT
32.50	1.90	556038.19
29.00	1.83	556095.55
24.00	1.73	556157.30
18.50	1.62	556215.72
15.00	1.56	556227.57
4.50	1.35	556136.63
1.00	1.28	556035.10

TEMP (ITS90)	SPAN (mV)
-5.00	25.00
35.00	25.02

$$y = \text{thermistor output}; t = PTEMPA0 + PTEMPA1 * y + PTEMPA2 * y^2$$

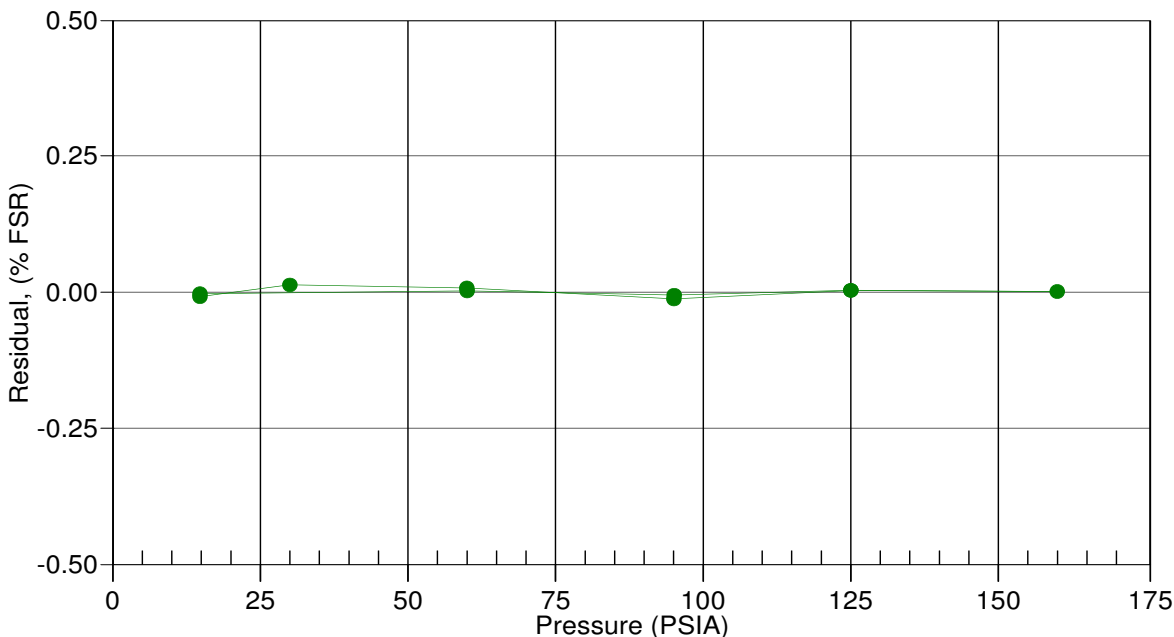
$$x = \text{pressure output} - PTCA0 - PTCA1 * t - PTCA2 * t^2$$

$$n = x * PTCB0 / (PTCB0 + PTCB1 * t + PTCB2 * t^2)$$

$$\text{pressure (psia)} = PA0 + PA1 * n + PA2 * n^2$$

Date, Avg Delta P %FS

25-Jan-11 0.00



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 29-Aug-11

SBE19plus PRESSURE CALIBRATION DATA
160 psia S/N 2932954

COEFFICIENTS:

PA0 = 7.075243e-002	PTCA0 = 5.250306e+005
PA1 = 4.882231e-004	PTCA1 = 2.216754e+001
PA2 = -4.847416e-012	PTCA2 = -7.008063e-001
PTEMPA0 = -6.505838e+001	PTCB0 = 2.499950e+001
PTEMPA1 = 5.185678e+001	PTCB1 = 7.000000e-004
PTEMPA2 = -2.528623e-001	PTCB2 = 0.000000e+000

PRESSURE SPAN CALIBRATION

PRESSURE PSIA	INST OUTPUT	THERMISTOR OUTPUT	COMPUTED PRESSURE	ERROR %FSR
14.60	554941.0	1.7	14.59	-0.01
29.83	586231.0	1.7	29.84	0.01
59.84	647844.0	1.7	59.85	0.01
94.85	719794.0	1.7	94.84	-0.00
124.86	781551.0	1.7	124.84	-0.01
159.84	853721.0	1.7	159.85	0.01
124.86	781581.0	1.7	124.86	-0.00
94.88	719843.0	1.7	94.87	-0.00
59.89	647928.0	1.7	59.89	0.00
29.89	586388.0	1.7	29.92	0.02
14.61	554940.0	1.7	14.59	-0.01

THERMAL CORRECTION

TEMP ITS90	THERMISTOR OUTPUT	INST OUTPUT
32.50	1.90	555461.53
29.00	1.83	555522.10
24.00	1.73	555581.27
18.50	1.62	555639.48
15.00	1.56	555655.97
4.50	1.35	555575.62
1.00	1.28	555476.38

TEMP (ITS90)	SPAN (mV)
-5.00	25.00
35.00	25.02

$$y = \text{thermistor output}; t = PTEMPA0 + PTEMPA1 * y + PTEMPA2 * y^2$$

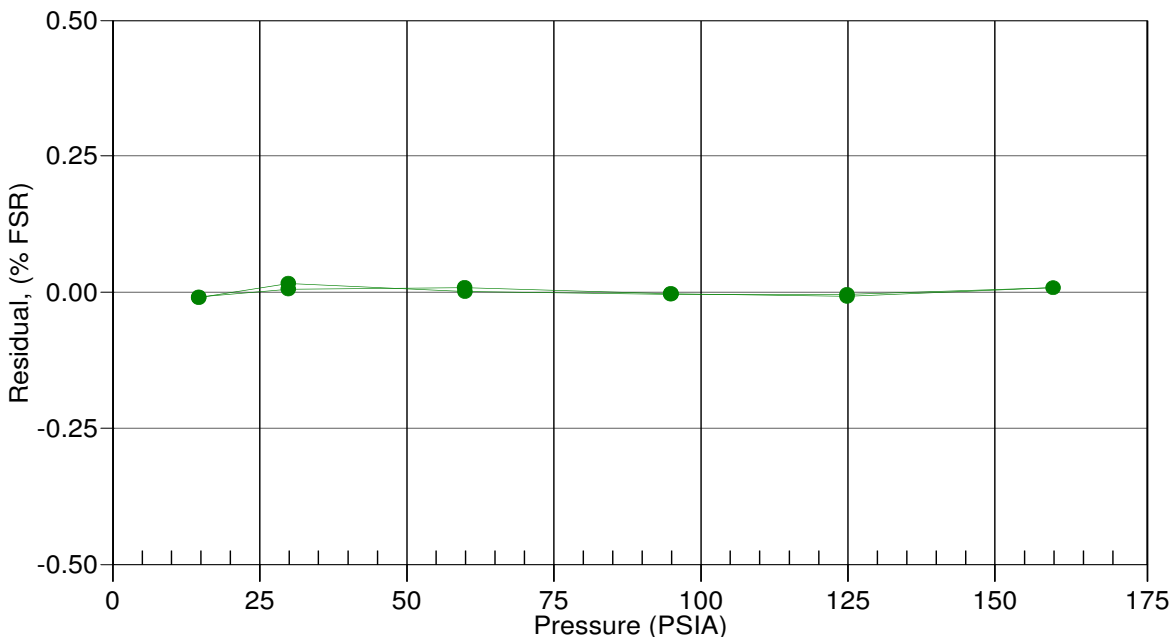
$$x = \text{pressure output} - PTCA0 - PTCA1 * t - PTCA2 * t^2$$

$$n = x * PTCB0 / (PTCB0 + PTCB1 * t + PTCB2 * t^2)$$

$$\text{pressure (psia)} = PA0 + PA1 * n + PA2 * n^2$$

Date, Avg Delta P %FS

29-Aug-11 0.00



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 02-Feb-11

SBE19plus TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

a0 = 1.261312e-003
a1 = 2.572509e-004
a2 = 2.194931e-008
a3 = 1.348167e-007

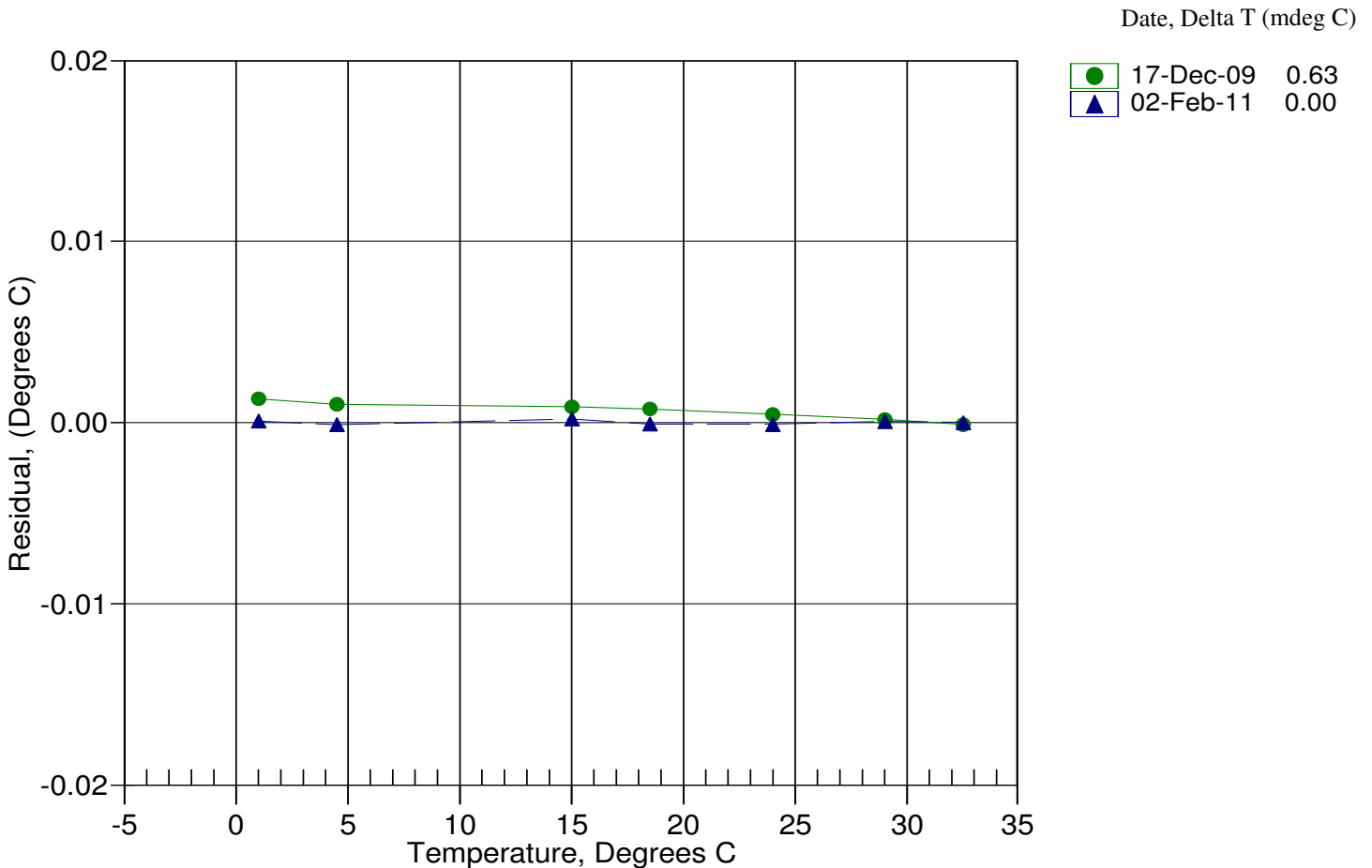
BATH TEMP (ITS-90)	INSTRUMENT OUTPUT(n)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0000	699313.390	1.0001	0.0001
4.5000	623296.136	4.4999	-0.0001
15.0000	431835.932	15.0002	0.0002
18.5000	379838.593	18.4999	-0.0001
24.0000	308912.068	23.9999	-0.0001
29.0000	254713.475	29.0000	0.0000
32.5000	221913.305	32.5000	0.0000

$$MV = (n - 524288) / 1.6e+007$$

$$R = (MV * 2.900e+009 + 1.024e+008) / (2.048e+004 - MV * 2.0e+005)$$

$$\text{Temperature ITS-90} = 1 / \{ a_0 + a_1[\ln(R)] + a_2[\ln^2(R)] + a_3[\ln^3(R)] \} - 273.15 \text{ (}^\circ\text{C)}$$

$$\text{Residual} = \text{instrument temperature} - \text{bath temperature}$$



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 08-Sep-11

SBE19plus TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

a0 = 1.263010e-003
a1 = 2.567233e-004
a2 = 7.399203e-008
a3 = 1.332246e-007

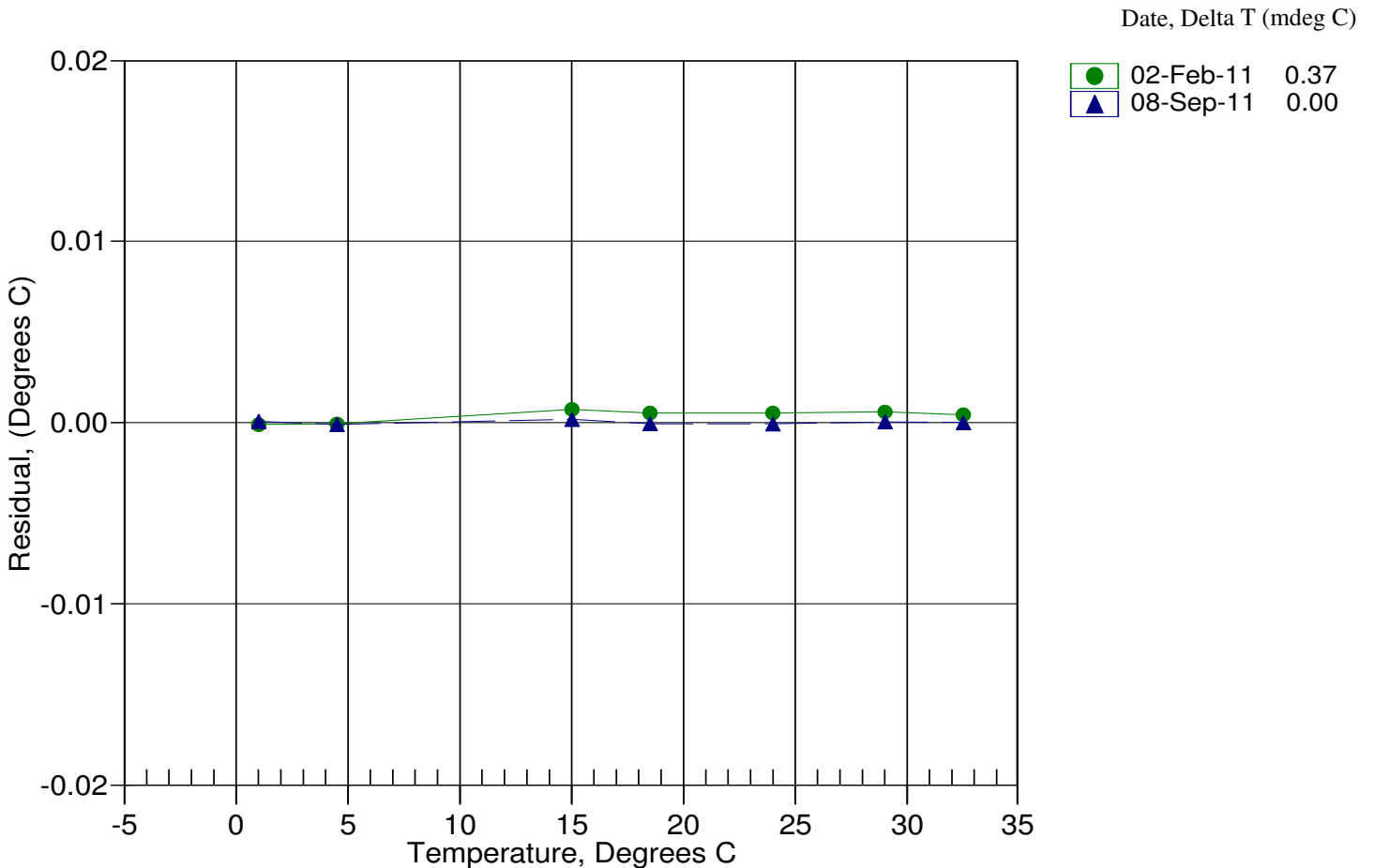
BATH TEMP (ITS-90)	INSTRUMENT OUTPUT(n)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0000	699309.678	1.0001	0.0001
4.5000	623296.864	4.4999	-0.0001
15.0000	431844.593	15.0002	0.0002
18.5000	379846.797	18.4999	-0.0001
24.0000	308919.153	23.9999	-0.0001
29.0000	254719.000	29.0000	0.0000
32.5000	221916.898	32.5000	0.0000

$$MV = (n - 524288) / 1.6e+007$$

$$R = (MV * 2.900e+009 + 1.024e+008) / (2.048e+004 - MV * 2.0e+005)$$

$$\text{Temperature ITS-90} = 1 / \{ a_0 + a_1[\ln(R)] + a_2[\ln^2(R)] + a_3[\ln^3(R)] \} - 273.15 \text{ (}^\circ\text{C)}$$

$$\text{Residual} = \text{instrument temperature} - \text{bath temperature}$$



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 26-Jan-11

SBE19plus TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

a0 = 1.258639e-003
a1 = 2.581856e-004
a2 = -8.745981e-008
a3 = 1.391204e-007

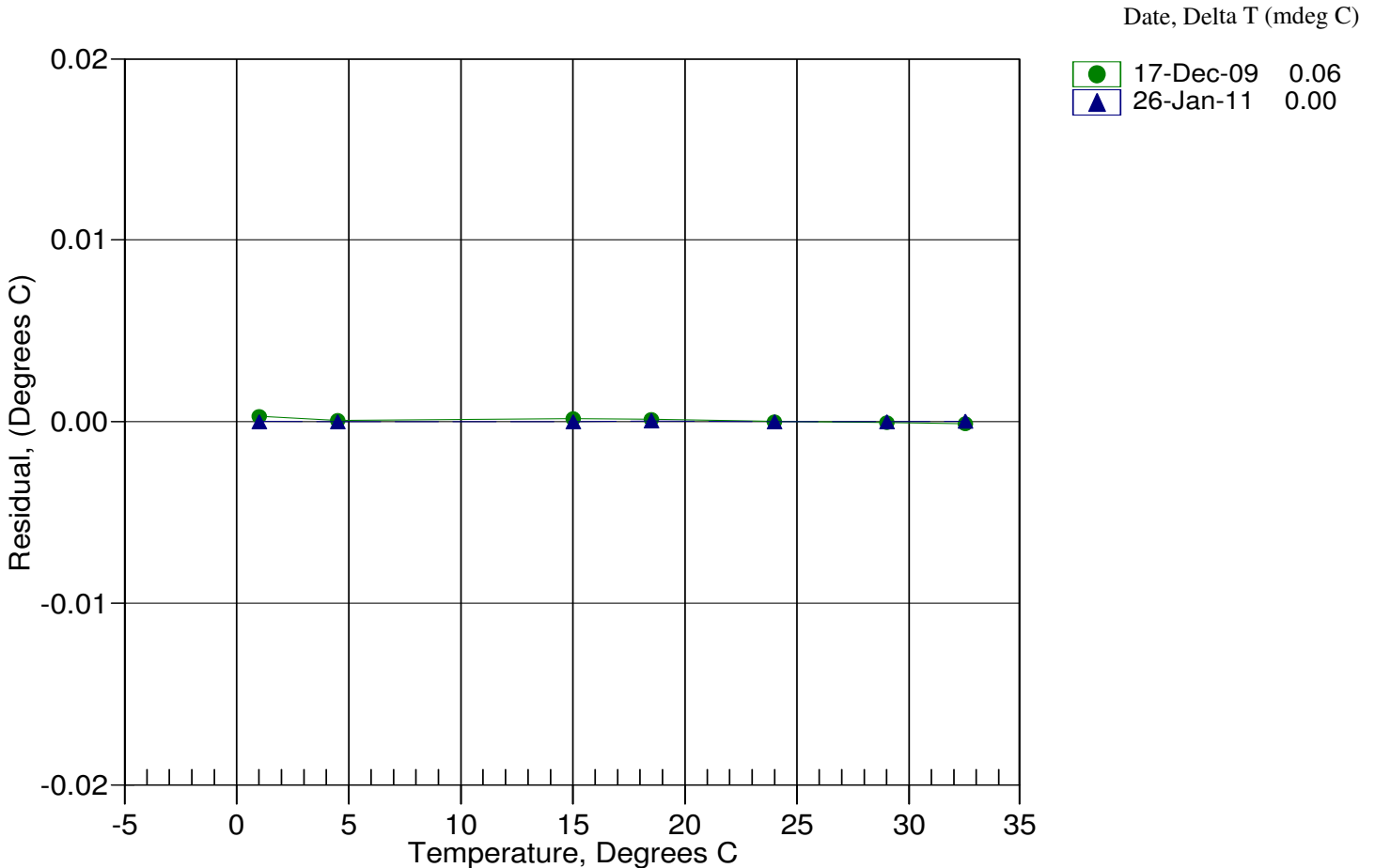
BATH TEMP (ITS-90)	INSTRUMENT OUTPUT(n)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0000	699291.847	1.0000	0.0000
4.5000	623274.102	4.5000	-0.0000
15.0001	431826.525	15.0001	-0.0000
18.5001	379826.763	18.5001	0.0000
24.0000	308905.881	24.0000	-0.0000
29.0000	254711.898	29.0000	-0.0000
32.5001	221912.153	32.5001	0.0000

$$MV = (n - 524288) / 1.6e+007$$

$$R = (MV * 2.900e+009 + 1.024e+008) / (2.048e+004 - MV * 2.0e+005)$$

$$\text{Temperature ITS-90} = 1 / \{ a_0 + a_1[\ln(R)] + a_2[\ln^2(R)] + a_3[\ln^3(R)] \} - 273.15 \text{ (}^\circ\text{C)}$$

$$\text{Residual} = \text{instrument temperature} - \text{bath temperature}$$



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SENSOR SERIAL NUMBER: 6482
CALIBRATION DATE: 30-Aug-11

SBE19plus TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

a0 = 1.258451e-003
a1 = 2.583498e-004
a2 = -1.179879e-007
a3 = 1.407406e-007

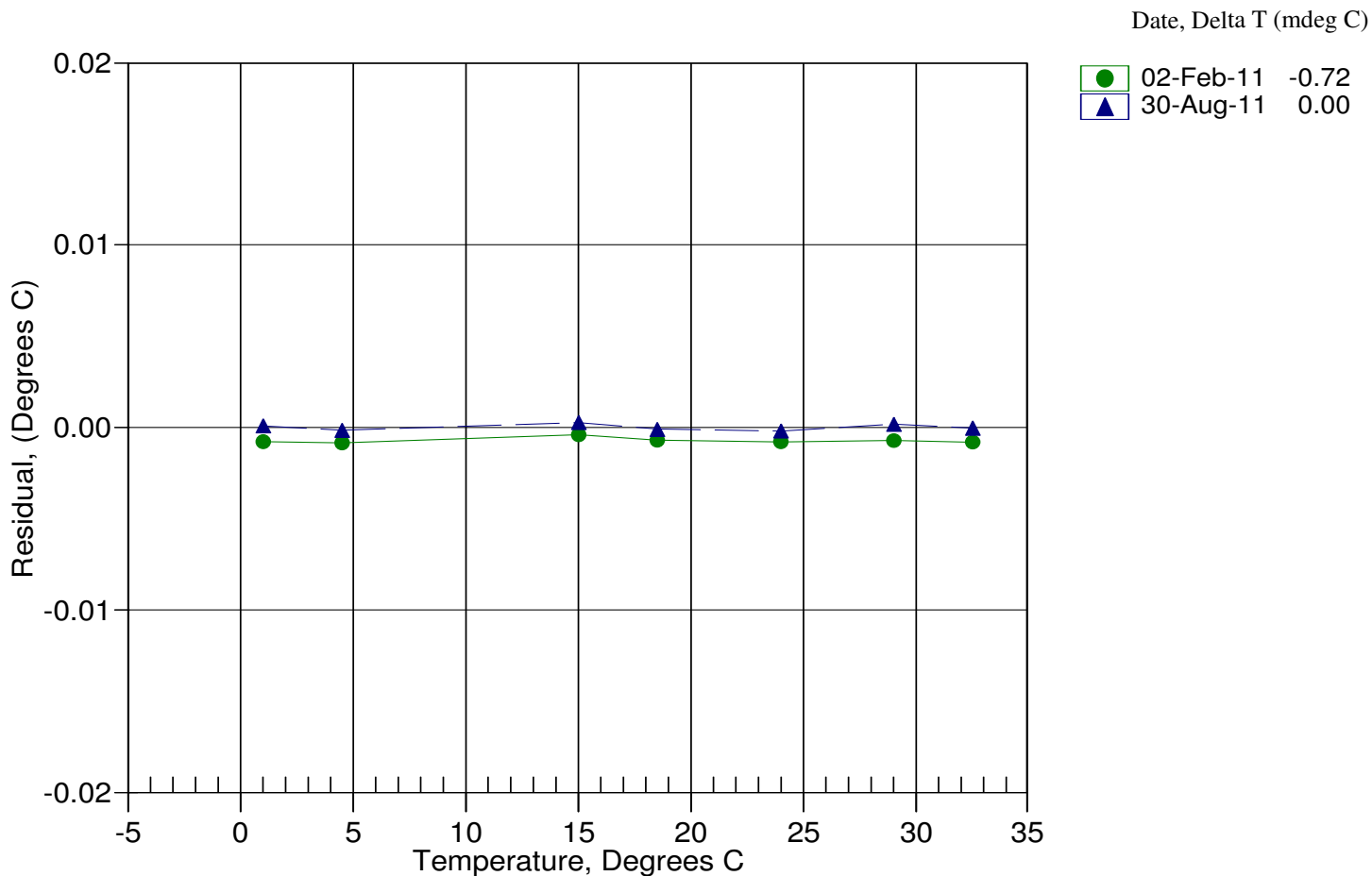
BATH TEMP (ITS-90)	INSTRUMENT OUTPUT(n)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0001	699291.600	1.0002	0.0001
4.5000	623281.750	4.4998	-0.0002
15.0000	431825.667	15.0003	0.0003
18.5000	379830.000	18.4999	-0.0001
24.0000	308905.150	23.9998	-0.0002
29.0000	254704.500	29.0002	0.0002
32.5000	221906.583	32.5000	-0.0000

$$MV = (n - 524288) / 1.6e+007$$

$$R = (MV * 2.900e+009 + 1.024e+008) / (2.048e+004 - MV * 2.0e+005)$$

$$\text{Temperature ITS-90} = 1 / \{ a_0 + a_1[\ln(R)] + a_2[\ln^2(R)] + a_3[\ln^3(R)] \} - 273.15 \text{ (}^\circ\text{C)}$$

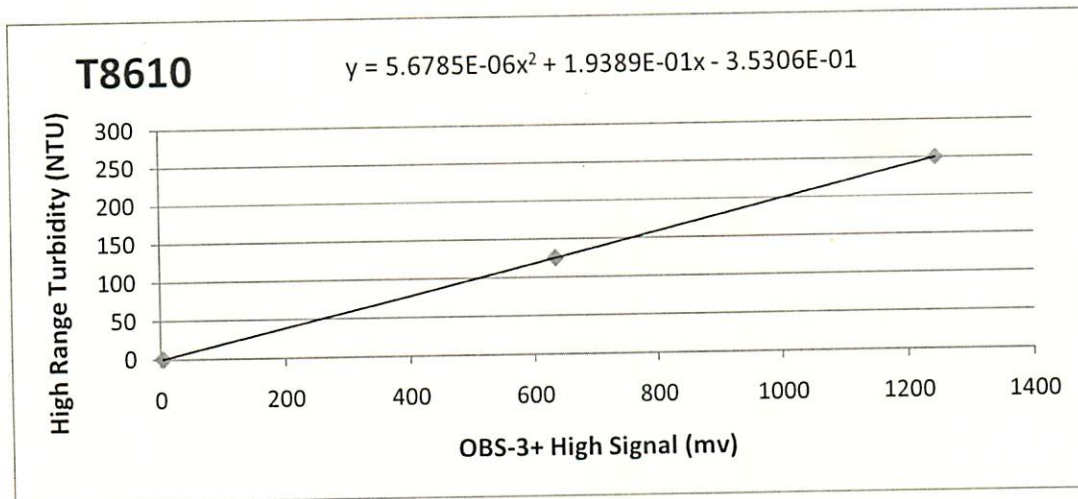
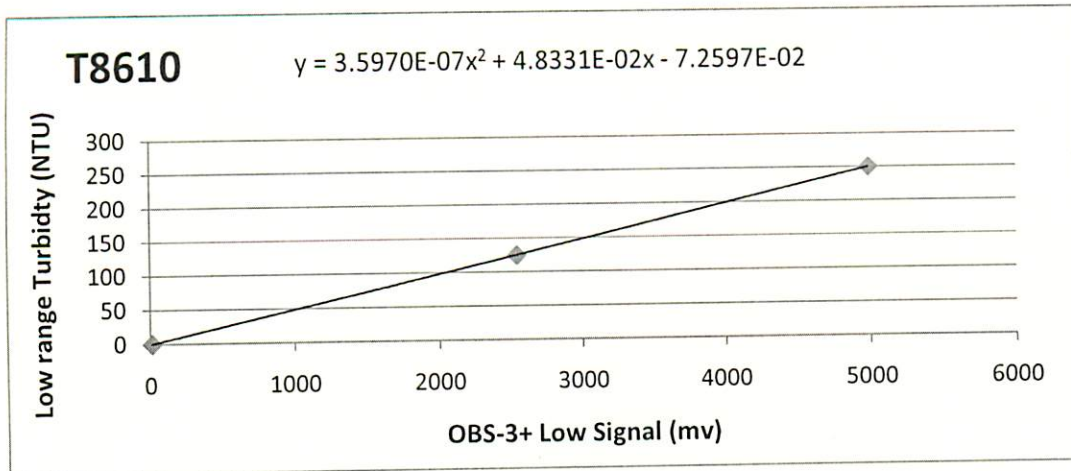
$$\text{Residual} = \text{instrument temperature} - \text{bath temperature}$$



OBS-3+ AMCO Clear Calibration Certificate

Serial Number: T8610 Nominal Low Range: 250 NTU
Customer: Sea-Bird Electronics Nominal High Range: 1000 NTU
Inc
Sales Order: 12786

Milli-Volt Calibration



Performed by 



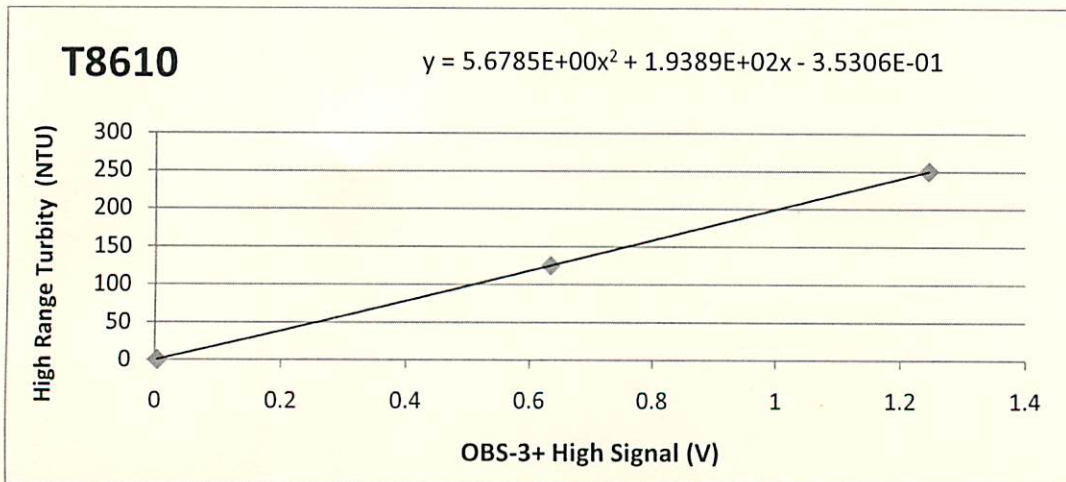
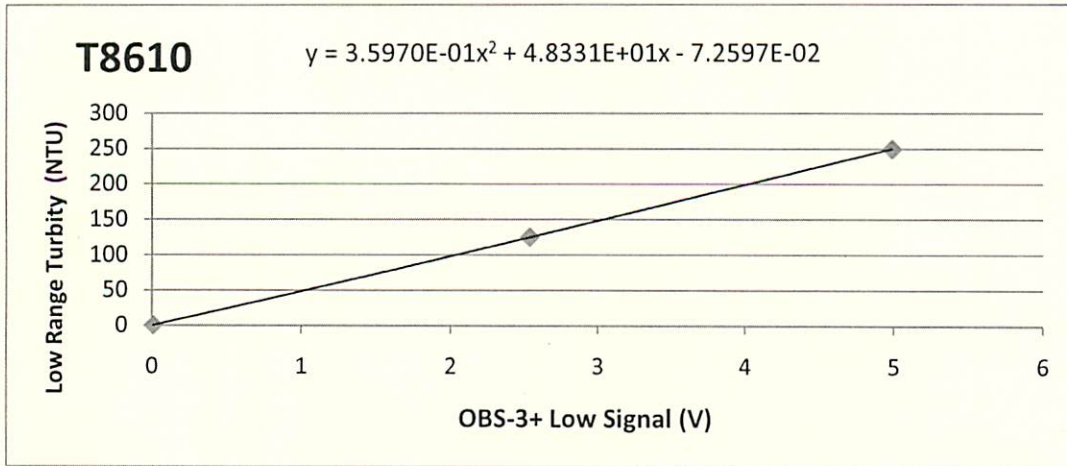
February 18, 2011

815w 1800n Logan UT 84321 435-753-2342

OBS-3+ AMCO Clear Calibration Certificate

Serial Number: T8610 Nominal Low Range: 250 NTU
Customer: Sea-Bird Electronics Nominal High Range: 1000 NTU
Inc
Sales Order: 12786

Voltage Calibration



Performed by *Shawn Mason*



February 18, 2011

815w 1800n Logan UT 84321 435-753-2342



SEA-BIRD ELECTRONICS, INC.

13431 NE 20th St. Bellevue, Washington 98005 USA

Phone: (425) 643-9866 Fax: (425) 643-9954 www.seabird.com

Temperature Calibration Report

Customer:	WorleyParsons Canada		
Job Number:	62753	Date of Report:	2/2/2011
Model Number	SBE 19Plus	Serial Number:	19P55714-6482

Temperature sensors are normally calibrated 'as received', without adjustments, allowing a determination sensor drift. If the calibration identifies a problem, then a second calibration is performed after work is completed. The 'as received' calibration is not performed if the sensor is damaged or non-functional, or by customer request.

An 'as received' calibration certificate is provided, listing coefficients to convert sensor frequency to temperature. Users must choose whether the 'as received' calibration or the previous calibration better represents the sensor condition during deployment. In SEASOFT enter the chosen coefficients using the program SEACON. The coefficient 'offset' allows a small correction for drift between calibrations (consult the SEASOFT manual). Calibration coefficients obtained after a repair apply only to subsequent data.

'AS RECEIVED CALIBRATION'

Performed Not Performed

Date: 1/26/2011

Drift since last cal: -0.00006 Degrees Celsius/year

Comments:

'FINAL CALIBRATION'

Performed Not Performed

Date: 2/2/2011

Drift since 17 Dec 09 -0.00056 Degrees Celsius/year

Comments:



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Temperature Calibration Report

Customer:	WorleyParsons Canada		
Job Number:	65607	Date of Report:	9/8/2011
Model Number	SBE 19Plus	Serial Number:	19P55714-6482

Temperature sensors are normally calibrated 'as received', without adjustments, allowing a determination sensor drift. If the calibration identifies a problem, then a second calibration is performed after work is completed. The 'as received' calibration is not performed if the sensor is damaged or non-functional, or by customer request.

An 'as received' calibration certificate is provided, listing coefficients to convert sensor frequency to temperature. Users must choose whether the 'as received' calibration or the previous calibration better represents the sensor condition during deployment. In SEASOFT enter the chosen coefficients using the program SEACON. The coefficient 'offset' allows a small correction for drift between calibrations (consult the SEASOFT manual). Calibration coefficients obtained after a repair apply only to subsequent data.

'AS RECEIVED CALIBRATION'

Performed Not Performed

Date: 8/30/2011

Drift since last cal: +0.00127 Degrees Celsius/year

Comments:

'FINAL CALIBRATION'

Performed Not Performed

Date: 9/8/2011

Drift since 02 Feb 11 -0.00062 Degrees Celsius/year

Comments: