Lake Spokane Nutrient Monitoring, 2010-2011

Data Summary Report

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Lake Spokane Nutrient Monitoring, 2010-2011

Data Summary Report

by

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Water Resource Inventory Areas (WRIAs):

- 54, 55

Eight-digit Hydrologic Unit Code (HUC) numbers:

- WA-54-1010 NHD 17010307010740
- WA-54-1020 NHD 17010307009597
- WA-55-1010 NHD 17010308000018

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Abstract

The last major monitoring effort on Lake Spokane occurred in 2001 during Total Maximum Daily Load (TMDL) development. As the TMDL moves from development to implementation, more up-to-date dataare needed to verify the baseline condition of Lake Spokane. These data will be used for comparison with future effectiveness monitoring data. The data may also be used for additional verification of the CE-QUAL-W2 model that was used during the TMDL development.

Regular critical-period sampling on Lake Spokane, the Spokane River, and the Little Spokane River began in 2010. Sampling was conducted by the Washington State Department of Ecology and Avista Corp. Parameters sampled were pH, temperature, conductivity, dissolved oxygen, alkalinity, ammonia nitrogen, chlorides, chlorophyll-a, total and dissolved organic carbon, nitrate and nitrite nitrogen, ortho-phosphorus, total dissolved solids, total persulfate nitrogen, and total phosphorus.

This data summary report covers sampling done May-Oct 2010 and May-Oct 2011.

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Introduction

Toxic algae blooms occurring in Lake Spokane in the 1970s led to court-ordered phosphorus limits in the lake, originally adopted as a Phosphorus Management Plan in 1989. The plan required the city of Spokane and other local entities that discharge to the river to reduce the levels of phosphorus in their effluent by 85%.

Subsequent years of excessive algae blooms in Lake Spokane and violations of water quality standards for dissolved oxygen (DO) and phosphorus demonstrated that the plan did not adequately protect water quality. As a result, several waterbody segments of the Spokane River were included on the Washington State Department of Ecology (Ecology) 303(d) lists of impaired waterbodies for 1996, 1998, and 2004. These listings required a water cleanup plan, otherwise known as a total maximum daily load (TMDL) to be developed. The Spokane River DO TMDL development began in 1998 and was approved by the U.S. Environmental Protection Agency (EPA) in May 2010.

The last major monitoring effort on Lake Spokane occurred in 2001 during TMDL development. As the TMDL moves from development to implementation, more up-to-date data are needed to verify the baseline condition of Lake Spokane. These will be used for comparison with future effectiveness monitoring data. These data may also be used for additional verification of the CE-QUAL-W2 model that was used during the TMDL development.

Regular critical-period sampling on Lake Spokane and on the Spokane and Little Spokane Rivers began in 2010 (Figure 1). Sampling was conducted by Ecology's Environmental Assessment Program and Avista Corp. Parameters sampled were pH, temperature, conductivity, DO, alkalinity, ammonia nitrogen, chlorides, chlorophyll-a, total and dissolved organic carbon, nitrate and nitrite nitrogen, ortho-phosphorus, total dissolved solids, total persulfate nitrogen, and total phosphorus.

This data summary report covers sampling conducted May-October 2010 and May-October 2011. Avista Corp. is continuing this monitoring effort on their own. Their data will also be available on Ecology's Environmental Information Management (EIM) database.

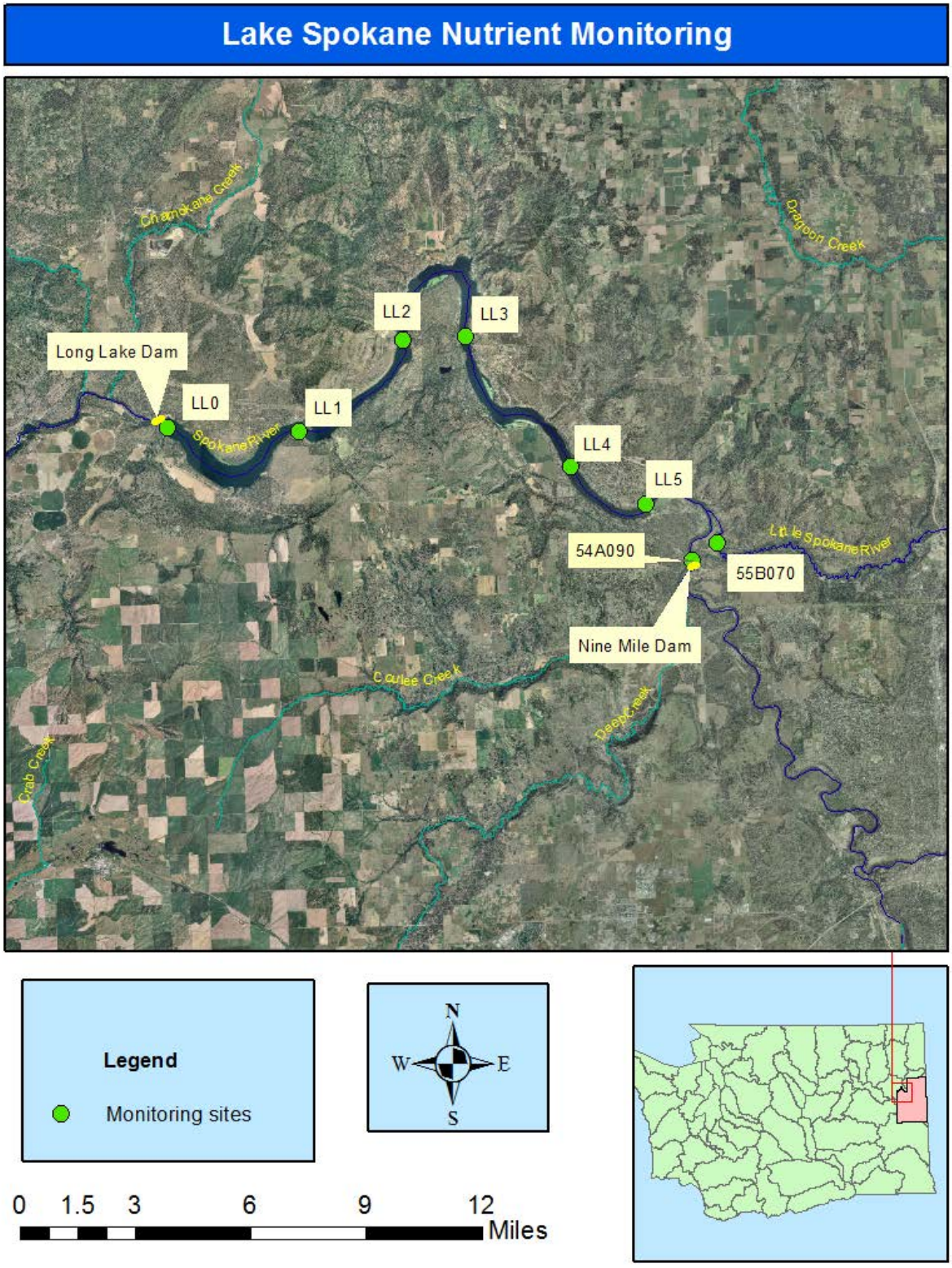

Figure 1. Project Vicinity Map.

Study Design and Methods

The study area includes that portion of the lower Spokane River Water Resource Inventory Area (WRIA) 54 above Long Lake Dam and below Nine Mile Dam. It also includes the mouth of the Little Spokane River, which is in WRIA 55.

Figure 1 illustrates monitoring sites on Lake Spokane (sites LL0 through LL5), the mouth of the Little Spokane River (site 55B070), and the Spokane River (site 55A090).

As part of TMDL development, Ecology used a hydrodynamic model, CE-QUAL-2K, to simulate river and lake conditions. The Spokane River and Lake Spokane Dissolved Oxygen TMDL (Moore and Ross, 2010) describes the processes used to establish "natural conditions" and develop pollutant load and wasteload allocations. A key element in setting allocations and tracking progress toward meeting the goals of the TMDL includes determining flow-weighted average phosphorus loads from the Spokane River below Nine Mile Dam (55A090) and the Little Spokane River (55B070). Also needed are DO profiles across Lake Spokane. Lake station LL0 is the deepest and most downstream location on the reservoir, so it represents a critical location. Profiles measured as part of this study from this location are found in Appendix A.

This project collects samples and measures conditions in Lake Spokane to be used for comparison with past and future monitoring efforts and TMDL implementation. Sampling and data collection in 2010 and 2011 was a joint effort between Ecology and Avista. Figure 2 illustrates a comparison of historic river flows and those during the duration of this project.

Sampling occurred according to the following schedule. *Italics*=sampling performed by Avista.

- May 17-18, 2010
- June 1-2, 2010
- *June 29-30, 2010*
- July 6-7, 2010
- *July 20-21, 2010*
- Aug 8-9, 2010
- *Aug 30-31, 2010*
- *Sept 13-14, 2010*
- Sept 27-28, 2010
- Oct 12-13, 2010

- May 23-24, 2011
- June 6-7 2011
- *June 20-21, 2011*
- July 11-12, 2011
- *July 25-26, 2011*
- Aug 8-9, 2011
- *Aug 22-23, 2011*
- *Sept 12-13, 2011*
- Sept 26-27, 2011

To ensure field crew consistency, all crews were provided copies of the Lake Spokane Nutrient Monitoring Quality Assurance Project Plan (Sherratt and Stuart, 2010) and followed the methods and procedures discussed therein.

For each season of sampling, samples were collected twice a week during the critical season at the same well-established locations on Lake Spokane that were sampled during the 2001 Spokane River DO TMDL study. Also, one site each at Nine Mile Dam and the mouth of the Little Spokane River were sampled.

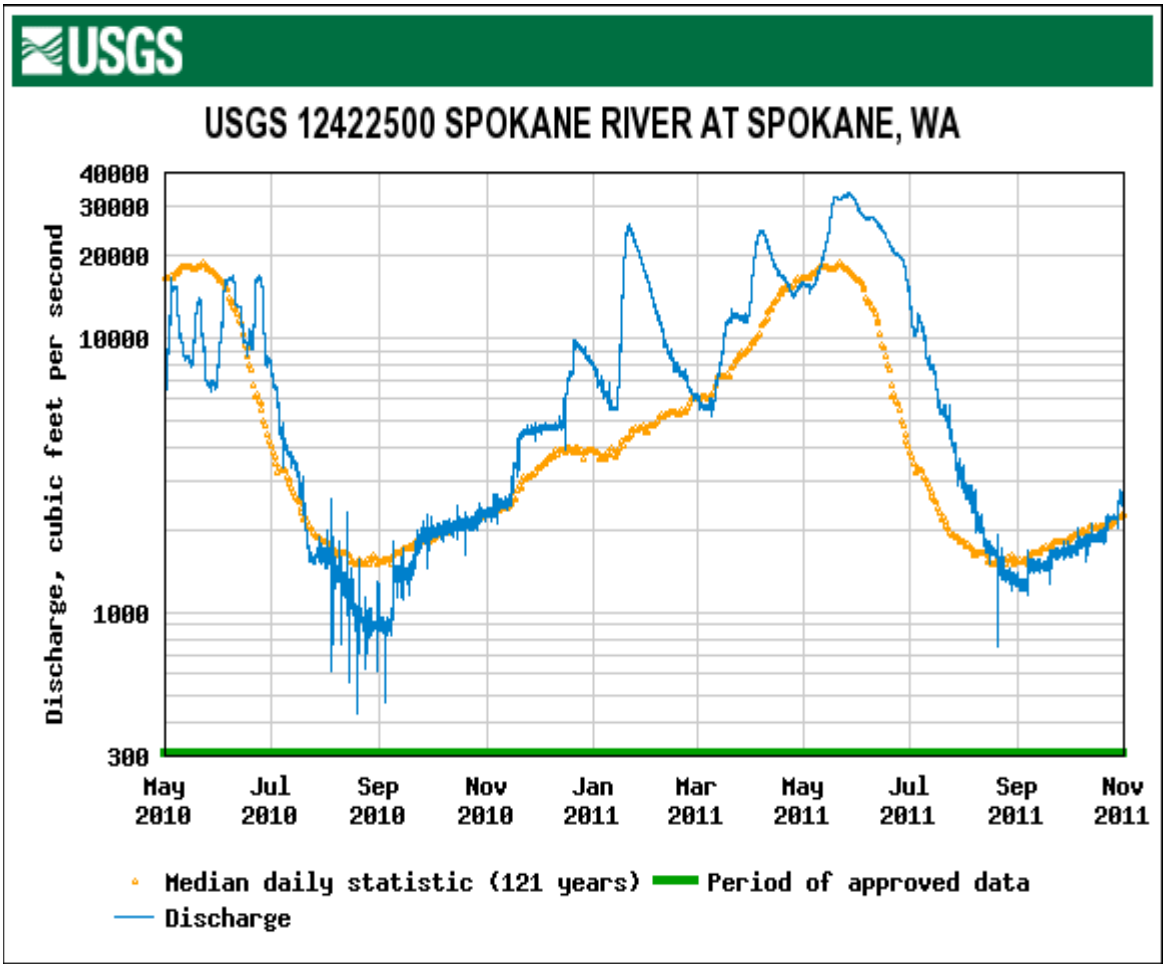

Figure 2. Spokane River Flows during Current Study.

Results

All data in Appendices A, B, C, and D are available from Ecology's online EIM database located at www.ecy.wa.gov/eim/. Results may be accessed by searching EIM using the User Study ID JROS0020 or the Study Name Lake Spokane Nutrient Monitoring.

Avista's contractor was able to successfully perform all of their scheduled sampling. For Ecology, the following events resulted in less than complete data collection.

- The sampling for July 6-7, 2010 was cancelled due to failure of Ecology's boat motor.
- Ecology sampled site LL0 on the lake only in June 2011.
- A cable failure resulted in Ecology's inability to collect depth profiles in August 2011.
- No sampling was done in October 2011 as Lake Spokane had "turned over".See http://education.nationalgeographic.com/education/media/lake-turnover/?ar_a=1 for graphic of lake turnover.
- Sampling at the riverine sites was inconsistent throughout the project, but sufficient data were collected to meet the needs of the study.

Ecology calibrated all field monitoring equipment according to manufacturers' specifications and pre-calibrated and post-checked Hydrolab® meters with certified standards.

Ecology took replicate field samples for laboratory parameter analyses. *Field replicates* are two samples collected from the same location at the same time. Ecology collects field replicates to check the precision of the entire process of sampling and analysis. The percentage of replicates taken per parameter is shown in Tables 1 and 2. Both the frequency of field replicates and precision of the replicated samples met acceptance criteria specified in the Quality Assurance Project Plan.

Ecology's Manchester Environmental Laboratory standard operating procedure (SOP) calls for duplicating a minimum of 5% of all samples (1in 20 samples or 1per analytical batch). That goal was exceeded for all parameters. Duplicate precision was met for all parameters. (Table 2)

Table 1. Field Replicate Precision.

Parameter	Number of measurements	Number of replicates	RPD (%)	RSD (%)	% replicated
Temperature	1675	144	0.2	0.1	8.6
Dissolved Oxygen	1675	144	0.3	0.2	8.6
Conductivity	1675	144	0.3	0.2	8.6
pH	1675	144	0.3	0.2	8.6
Secchi	104	7	11.8	8.4	6.7

RPD: Relative Percent Difference
RSD: Relative Standard Deviation

Table 2. Sample Data Quality.

Parameter	Number of samples	Number of replicates	RPD (%)	RSD (%)	% replicated
Alkalinity	279	34	0.9	0.6	12.2
Ammonia	279	35	4.3	4.1	12.5
Chloride	280	36	2.4	1.7	12.9
Chlorophyll	279	35	14.1	9.9	12.5
Dissolved Organic Carbon	278	36	7.6	5.4	12.9
Nitrite & Nitrate	278	36	2.2	1.5	12.9
Ortho-phosphorus	278	37	8.0	5.7	13.3
Total Dissolved Solids	278	36	2.1	1.5	12.9
Total Organic Carbon	278	36	5.1	3.6	12.9
Total Persulfate Nitrogen	278	38	3.8	2.7	13.7
Total Phosphorus	278	38	11.2	7.9	13.7

The graphs of depth profiles indicate where field crews checked DO for accuracy by performing Winkler titrations (Appendix A). Hydrolab® DO grab data reported in this publication have not been corrected based on those measurements.

Hydrolab post-run calibration checks for conductivity and pH were within the specified target accuracy.

Manchester Laboratory performed all laboratory analyses within specified holding times using appropriate quality assurance measures unless noted with qualifier codes (Table 3). Qualifiers place specific conditions on the laboratory data. Data reported with qualifiers should be used with caution, and data variability must be taken into consideration when interpreting results and applying data to other analyses. All other data reported by Manchester Laboratory may be used without qualification. Appendix E contains summaries of Manchester-provided case narratives where explanations of qualified data are necessary.

Table 3. Data Qualifier Codes.

Qualifier	Definition
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U	The analyte was not detected at or above the reported sample quantitation limit.
UJ	The analyte was not detected at or above the reported sample quantitation limit. The reported quantitation limit is approximate.
E	The reported result is an estimate because it exceeds the calibration range.
G	The value is likely greater than the result reported; result is an estimated minimum value.
Y	Value is a replicate taken in a side-by-side method in the field.

References

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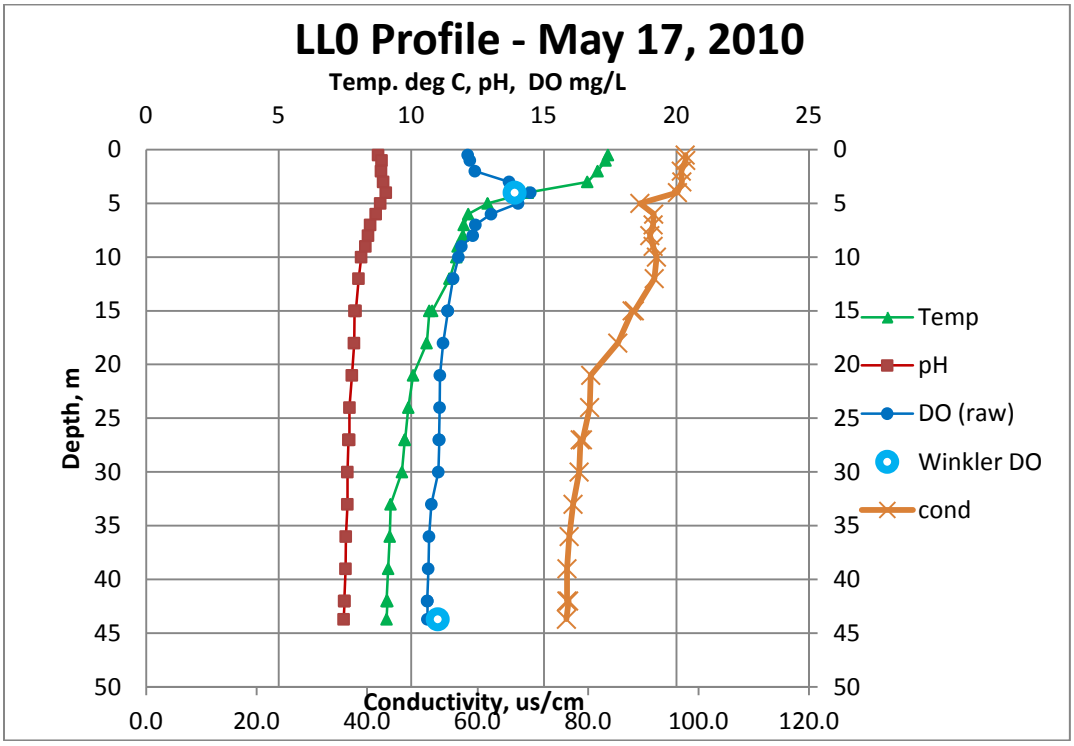
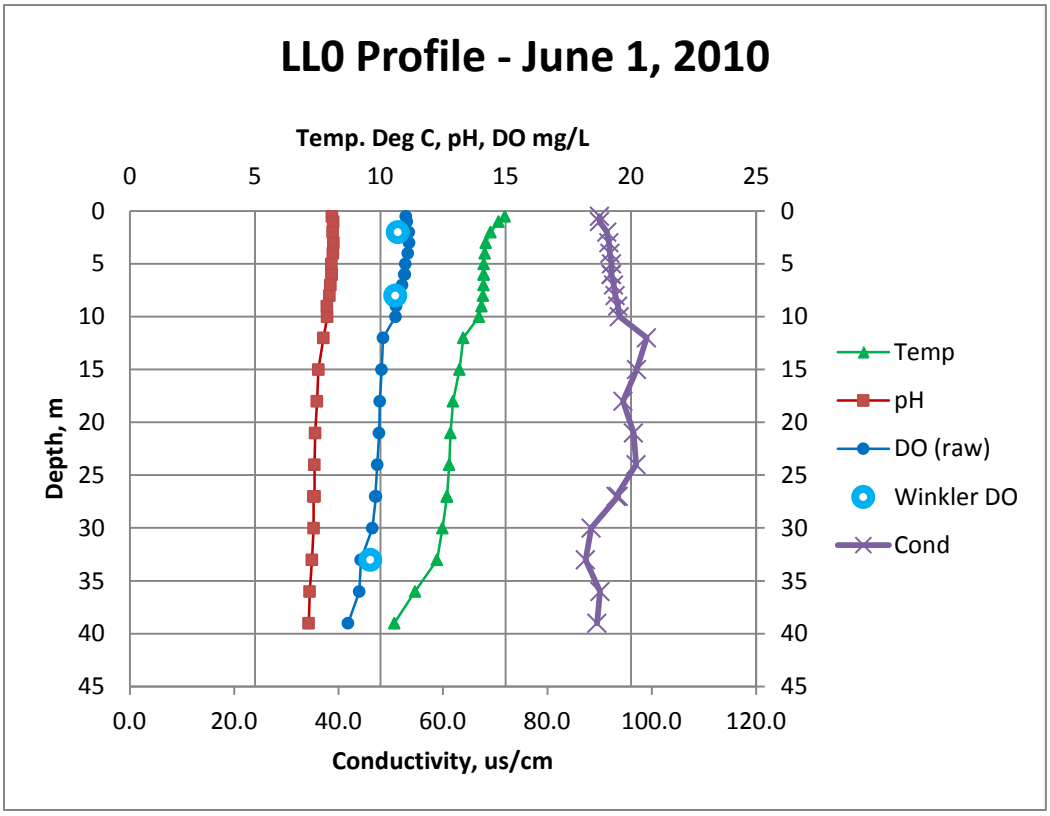
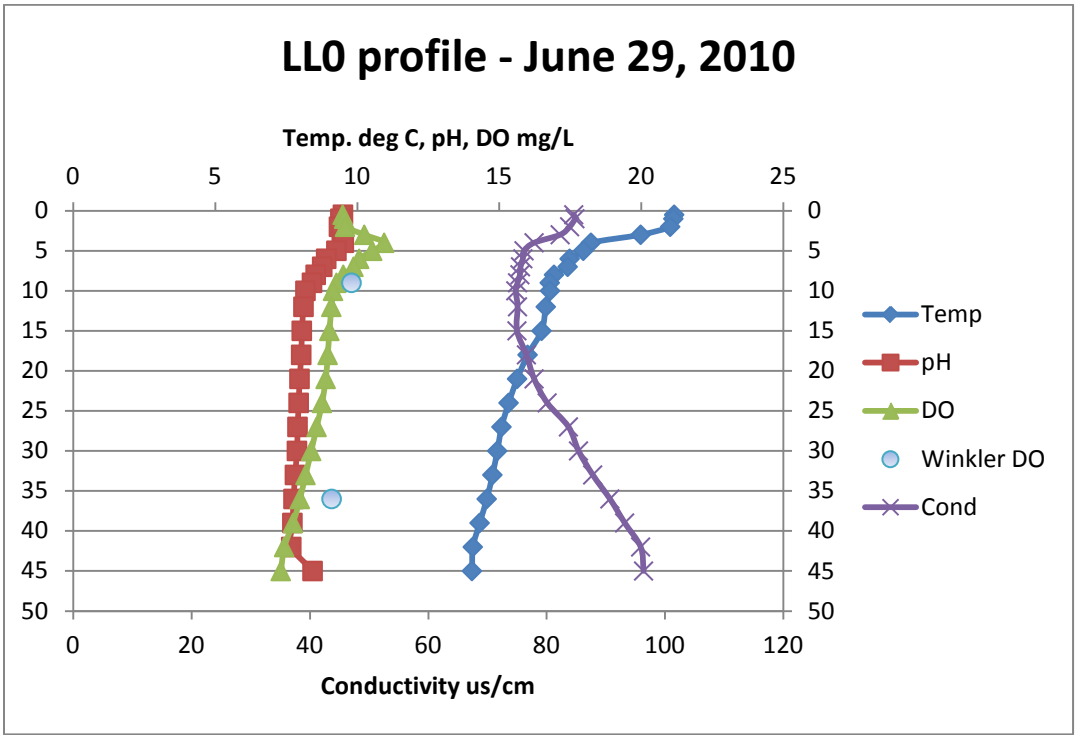
MEL, 2012. Manchester Environmental Laboratory Quality Assurance Manual. Manchester Environmental Laboratory, Washington State Department of Ecology, Manchester, WA.

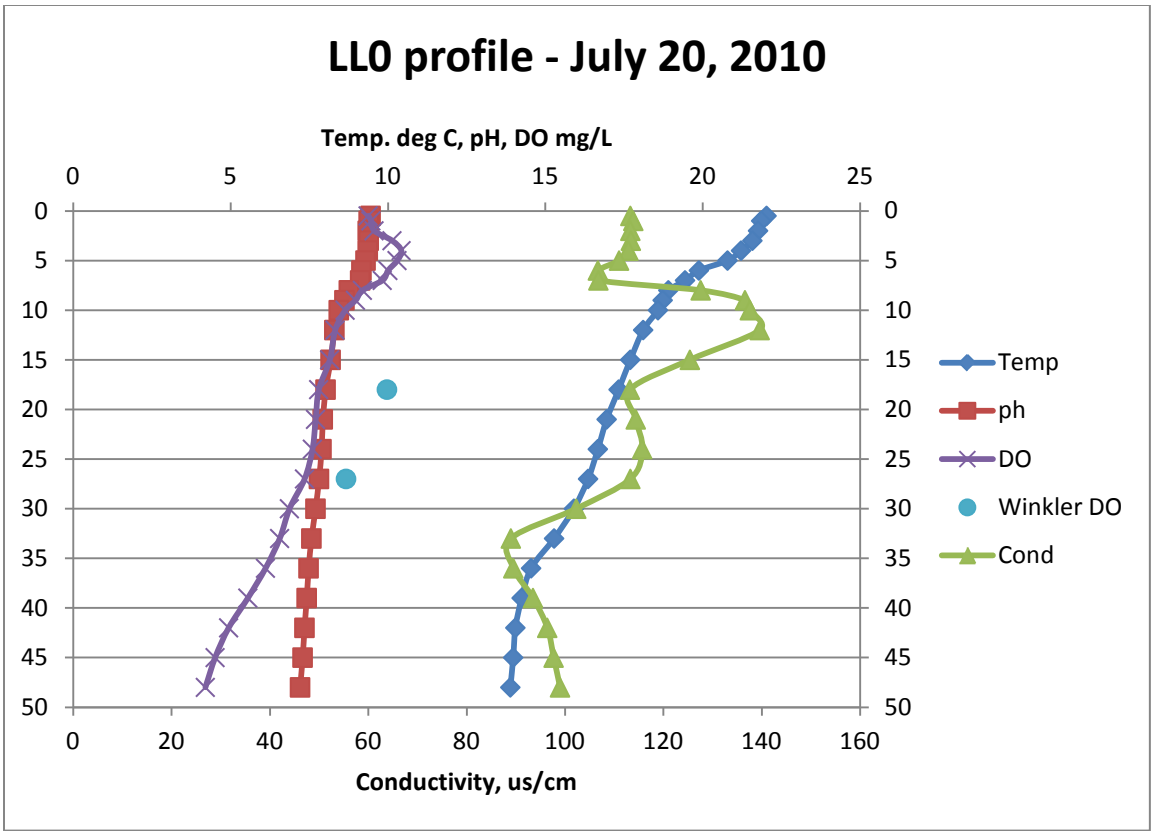
Appendices

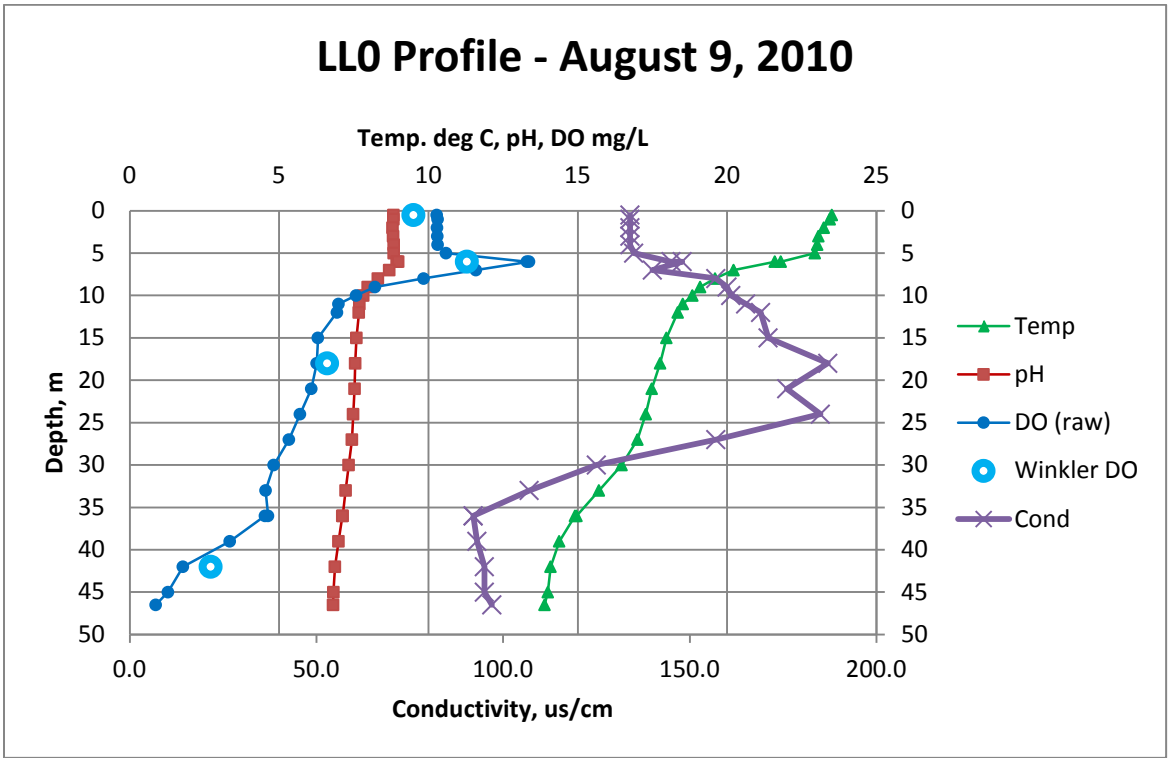
Appendix A. Station LL0 Profiles

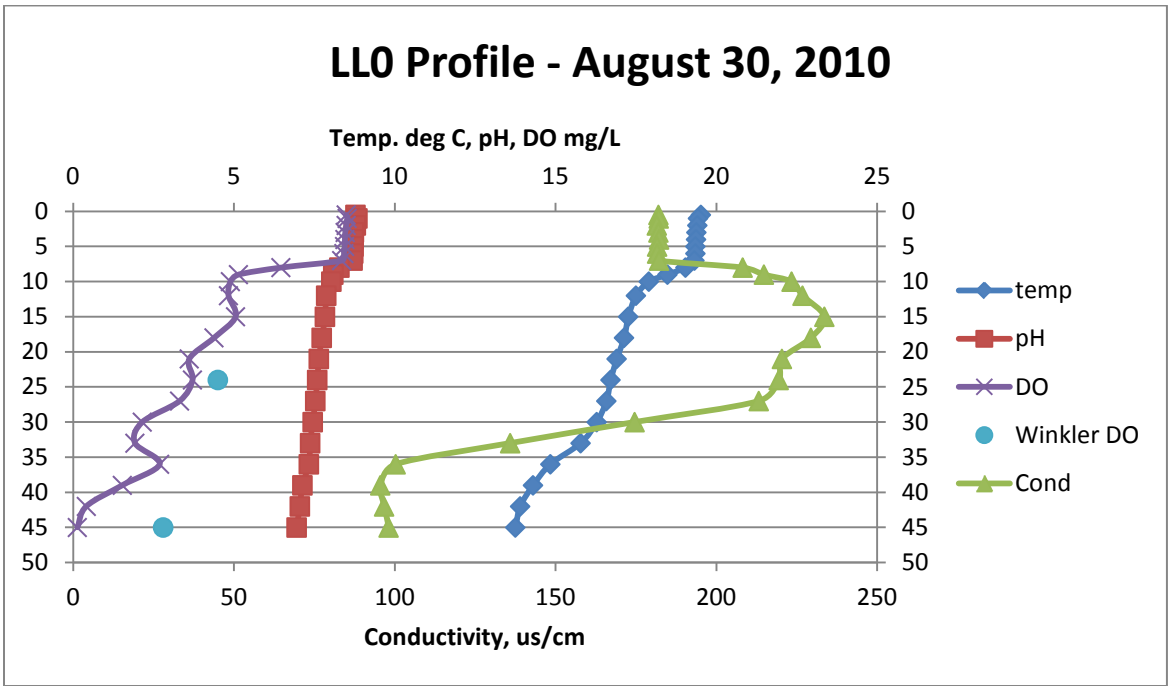





LL0 profile - June 29, 2010
Temp. deg C, pH, DO mg/L
0
5
10
15
20
25
0
5
10
15
20
25
30
35
40
45
50
0
20
40
60
80
100
120
Conductivity us/cm
Temp
pH
DO
Winkler DO
Cond


LL0 profile - July 20, 2010
Temp. deg C, pH, DO mg/L
0
5
10
15
20
25
0
5
10
15
20
25
30
35
40
45
50
0
20
40
60
80
100
120
140
160
Conductivity, us/cm
Temp
ph
DO
Winkler DO
Cond


LL0 Profile - August 9, 2010
Temp. deg C, pH, DO mg/L
0
5
10
15
20
25
Depth, m
0.0
50.0
100.0
150.0
200.0
Conductivity, us/cm
Temp
pH
DO (raw)
Winkler DO
Cond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Temp. deg C, pH, DO mg/L
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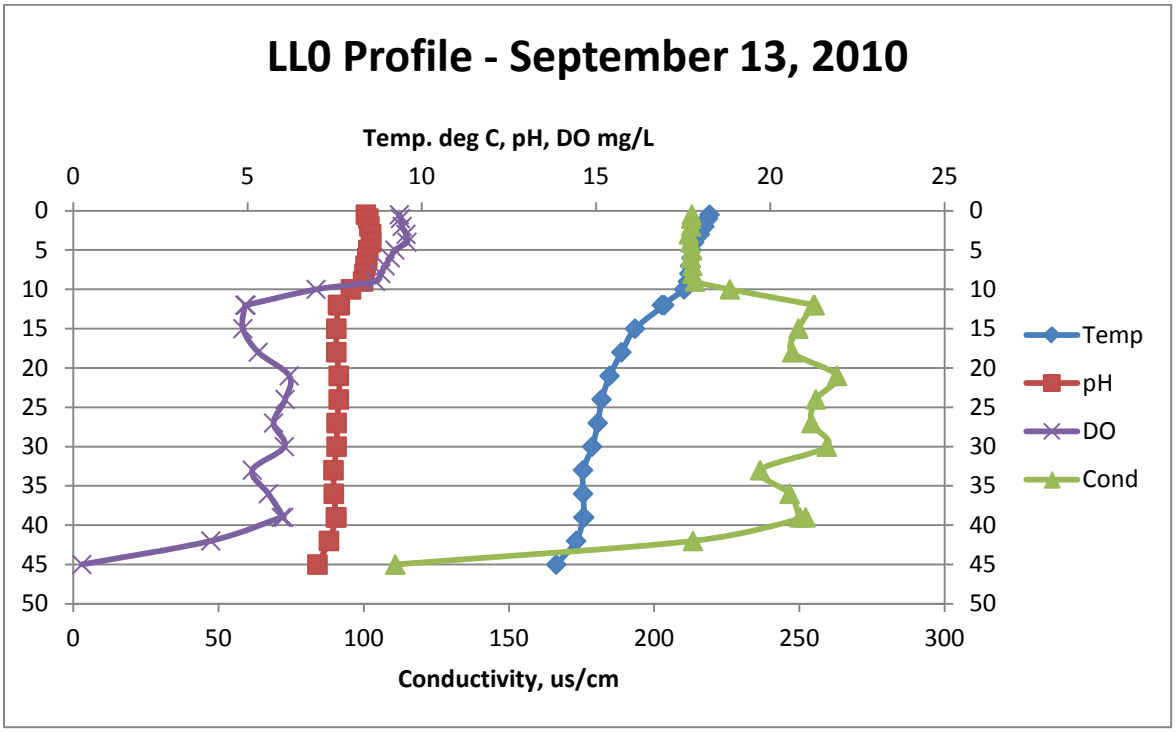
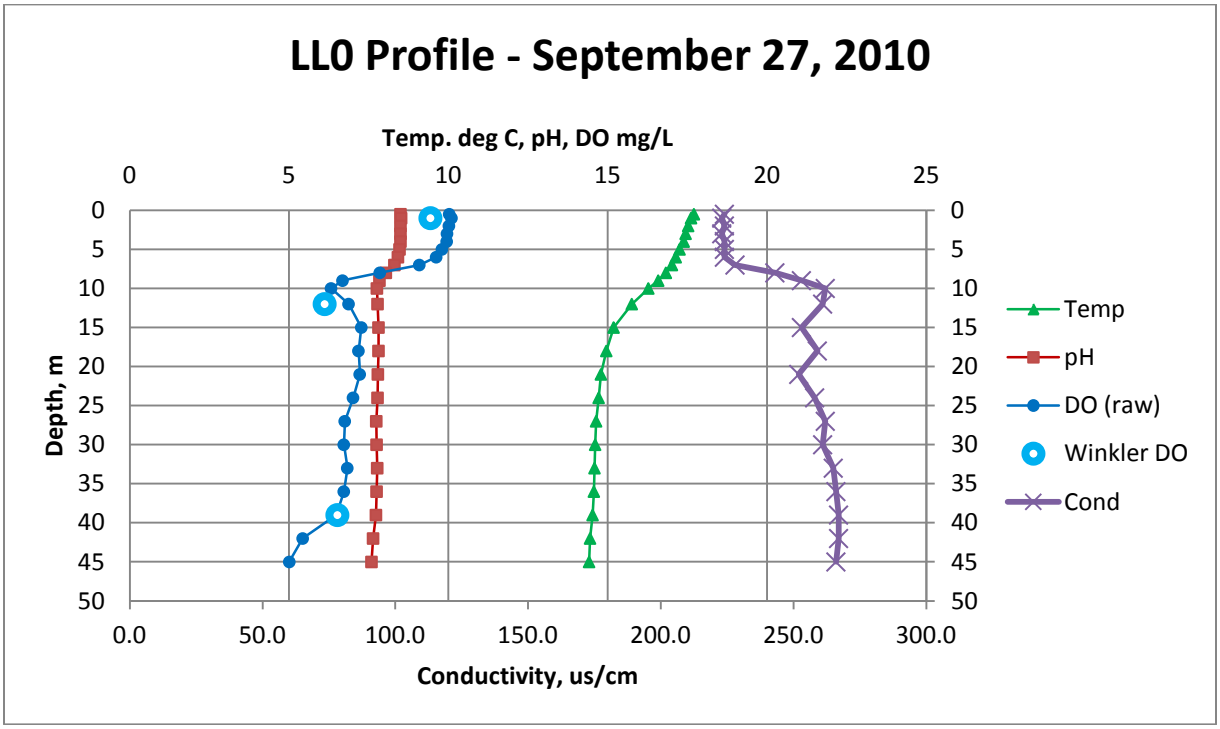
5
10
15
20
25
0
50
100
150
200
250
Conductivity, us/cm
temp
pH
DO
Winkler DO
Cond


LL0 Profile - September 13, 2010
Temp. deg C, pH, DO mg/L
0
5
10
15
20
25
0
5
10
15
20
25
30
35
40
45
50
0
50
100
150
200
250
300
Conductivity, us/cm
Temp
pH
DO
Cond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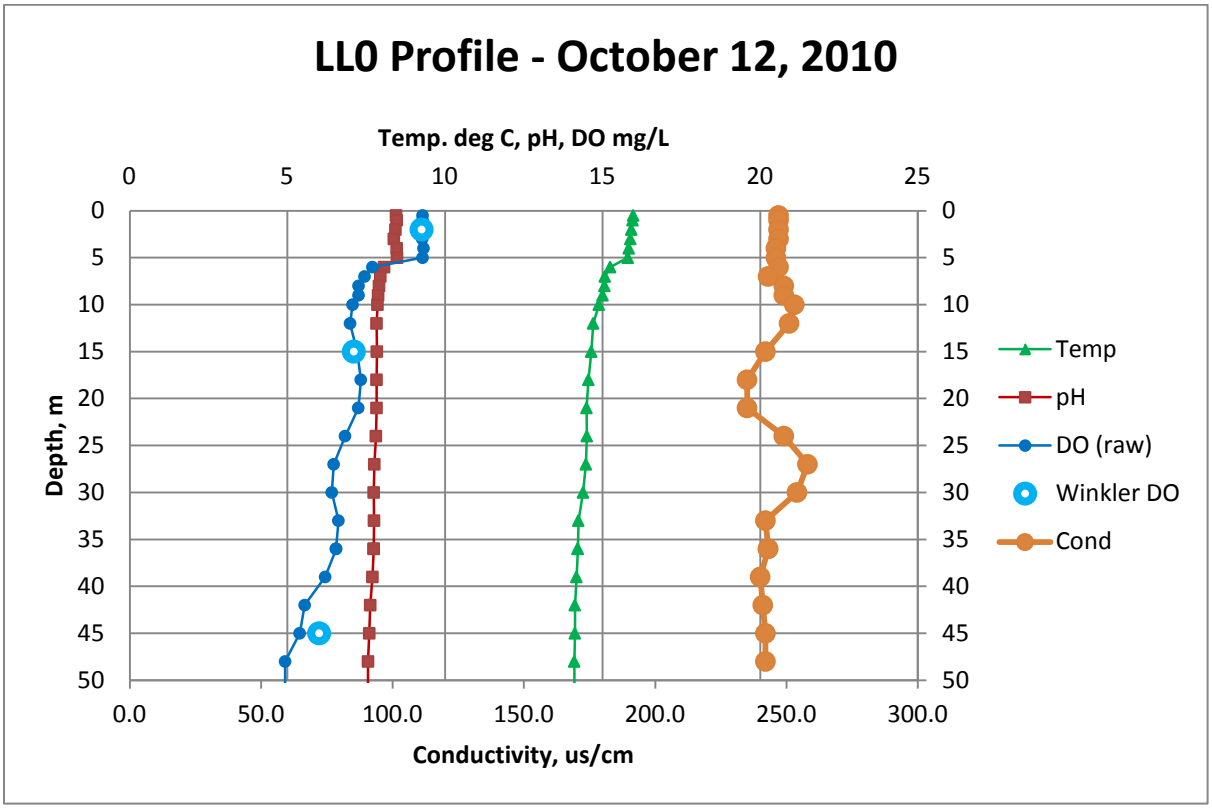
Temp. deg C, pH, DO mg/L
0
5
10
15
20
25
Depth, m
0.0
50.0
100.0
150.0
200.0
250.0
300.0
Conductivity, us/cm
Temp
pH
DO (raw)
Winkler DO
Cond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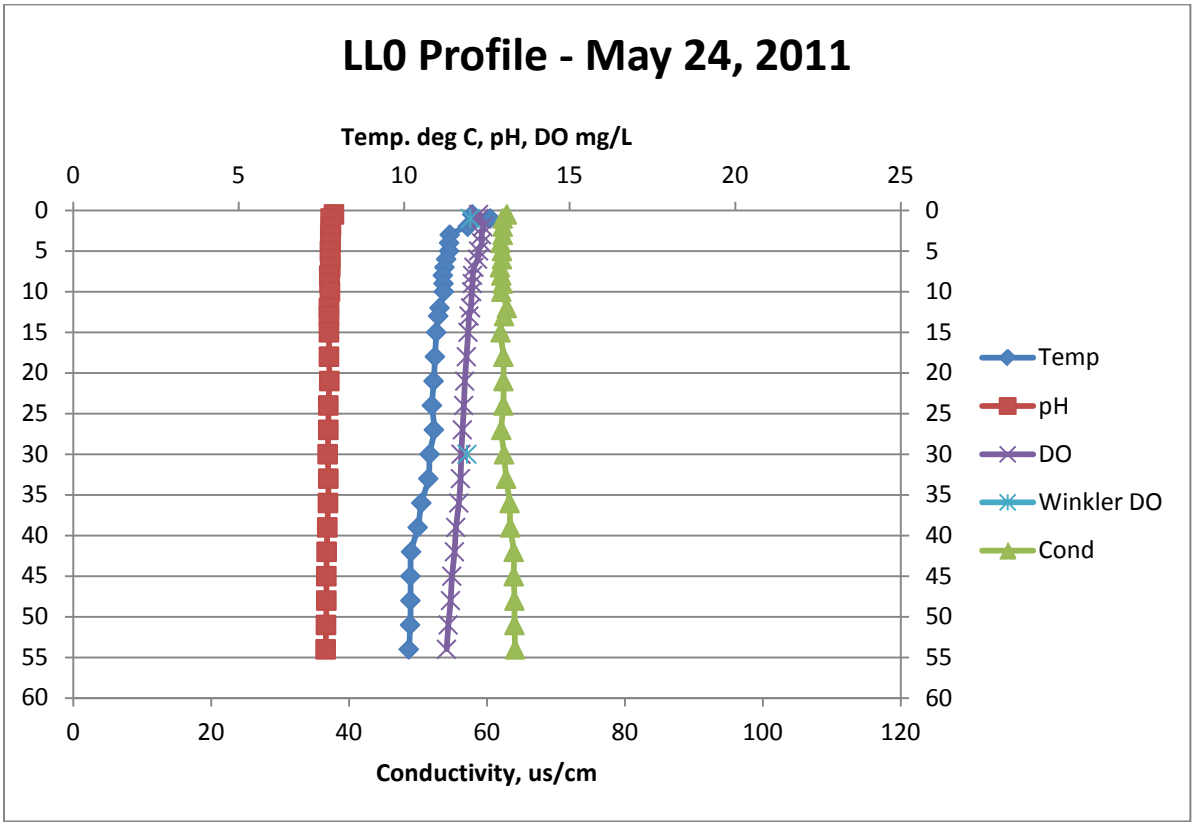
Temp. deg C, pH, DO mg/L
Depth, m
Conductivity, us/cm
Temp
pH
DO (raw)
Winkler DO
Cond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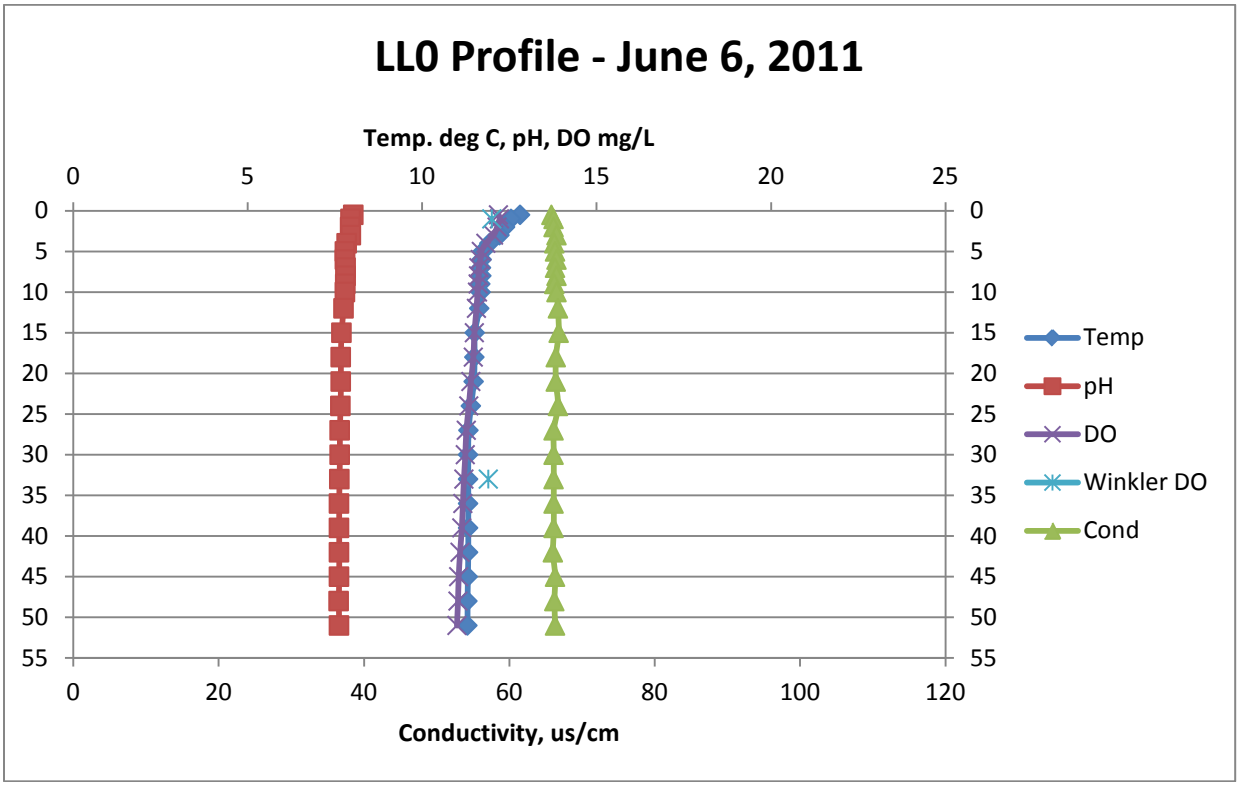
Temp. deg C, pH, DO mg/L
Conductivity, us/cm
Temp
pH
DO
Winkler DO
Cond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Temp. deg C, pH, DO mg/L
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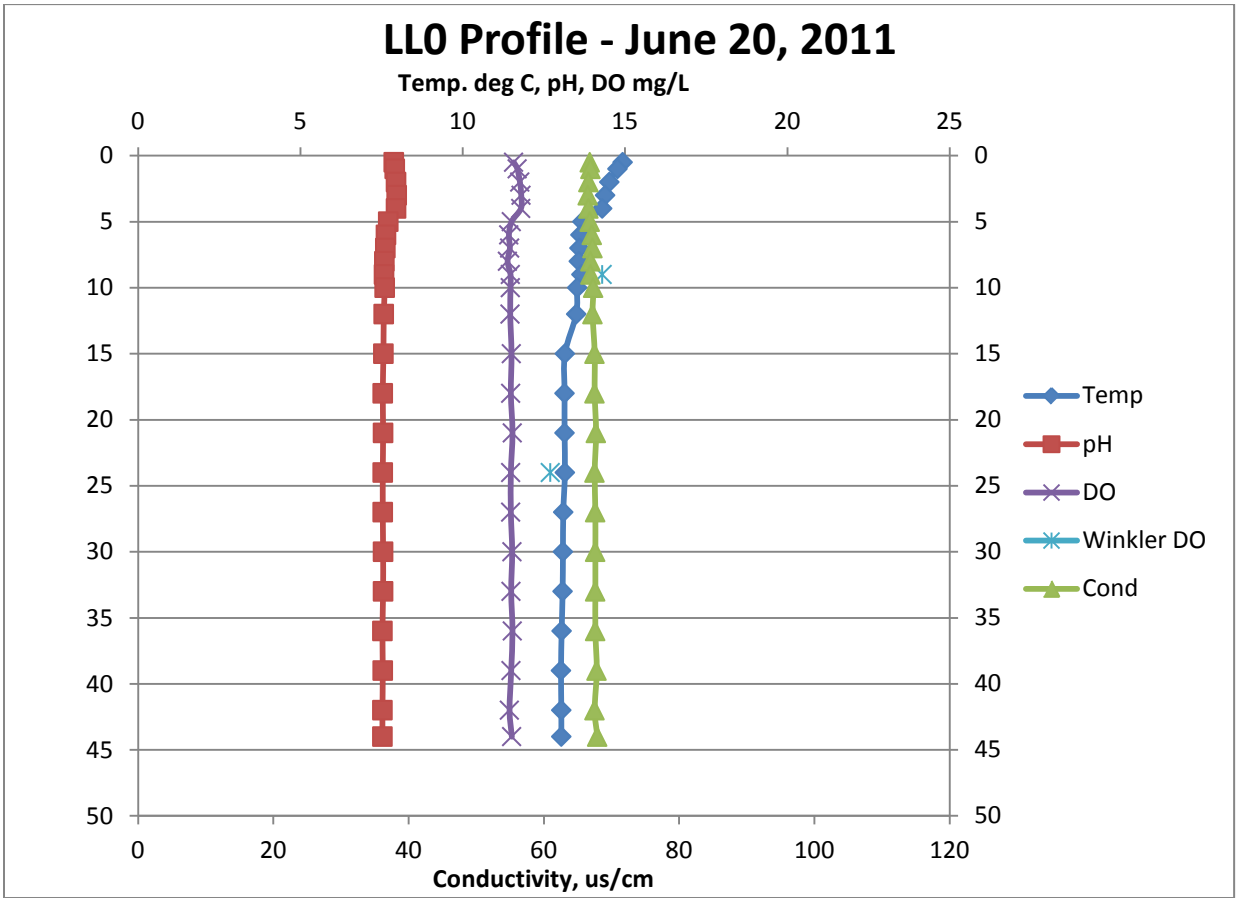
5
10
15
20
25
0
5
10
15
20
25
30
35
40
45
50
55
0
20
40
60
80
100
120
Conductivity, us/cm
Temp
pH
DO
Winkler DO
Cond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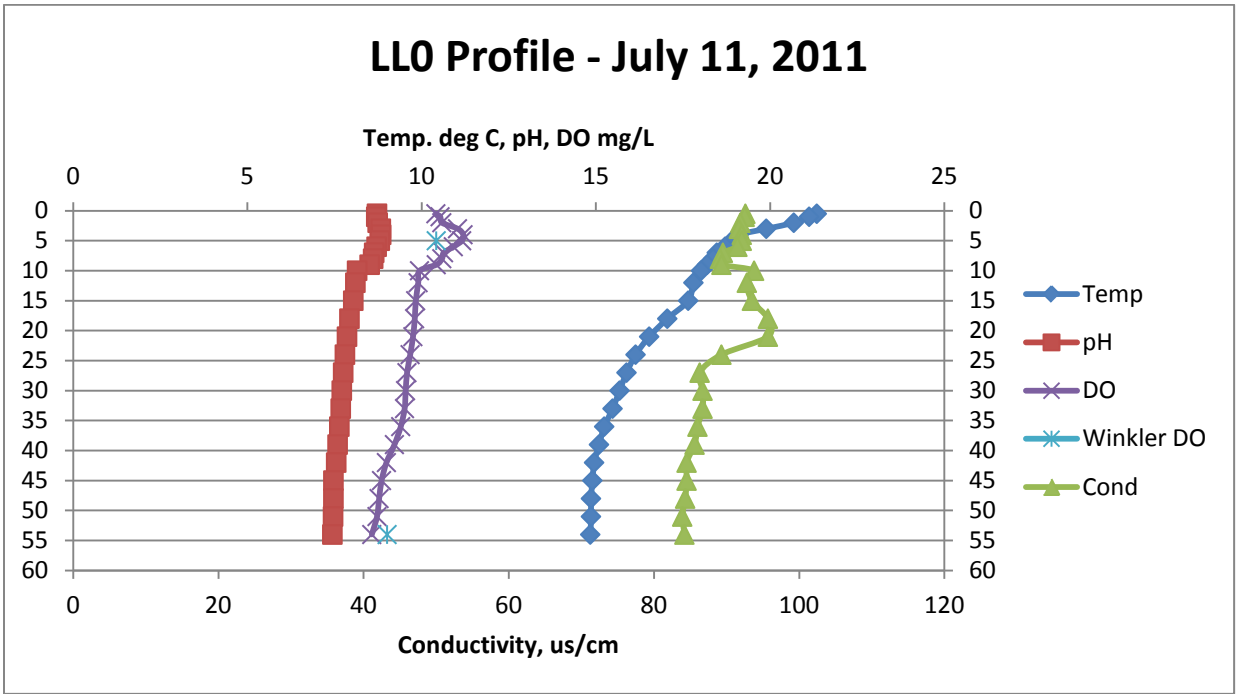
0
5
10
15
20
25
0
5
10
15
20
25
30
35
40
45
50
0
20
40
60
80
100
120
Conductivity, us/cm
Temp
pH
DO
Winkler DO
Cond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Temp. deg C, pH, DO mg/L
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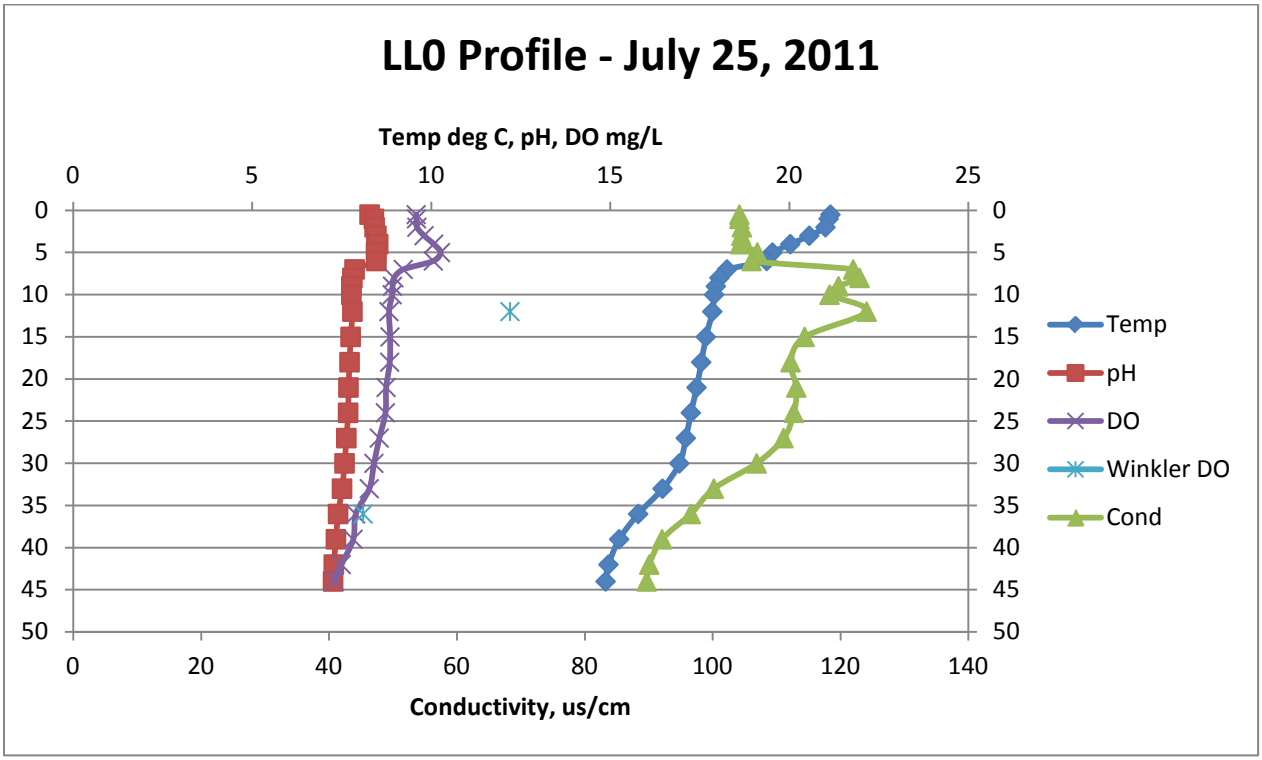
5
10
15
20
25
0
5
10
15
20
25
30
35
40
45
50
55
60
0
20
40
60
80
100
120
Conductivity, us/cm
Temp
pH
DO
Winkler DO
Cond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Temp deg C, pH, DO mg/L
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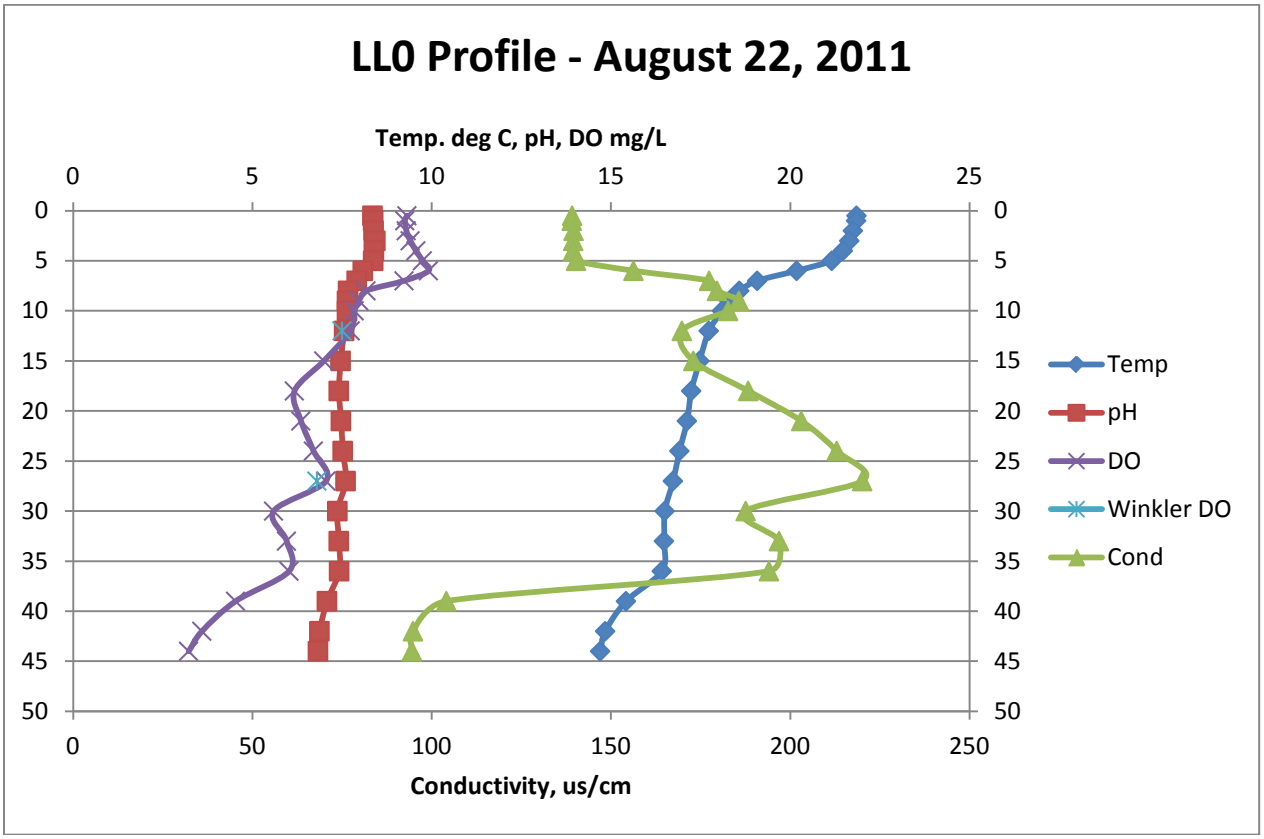
5
10
15
20
25
0
5
10
15
20
25
30
35
40
45
50
0
20
40
60
80
100
120
140
Conductivity, us/cm
Temp
pH
DO
Winkler DO
Cond


LL0 Profile - August 22, 2011
Temp. deg C, pH, DO mg/L
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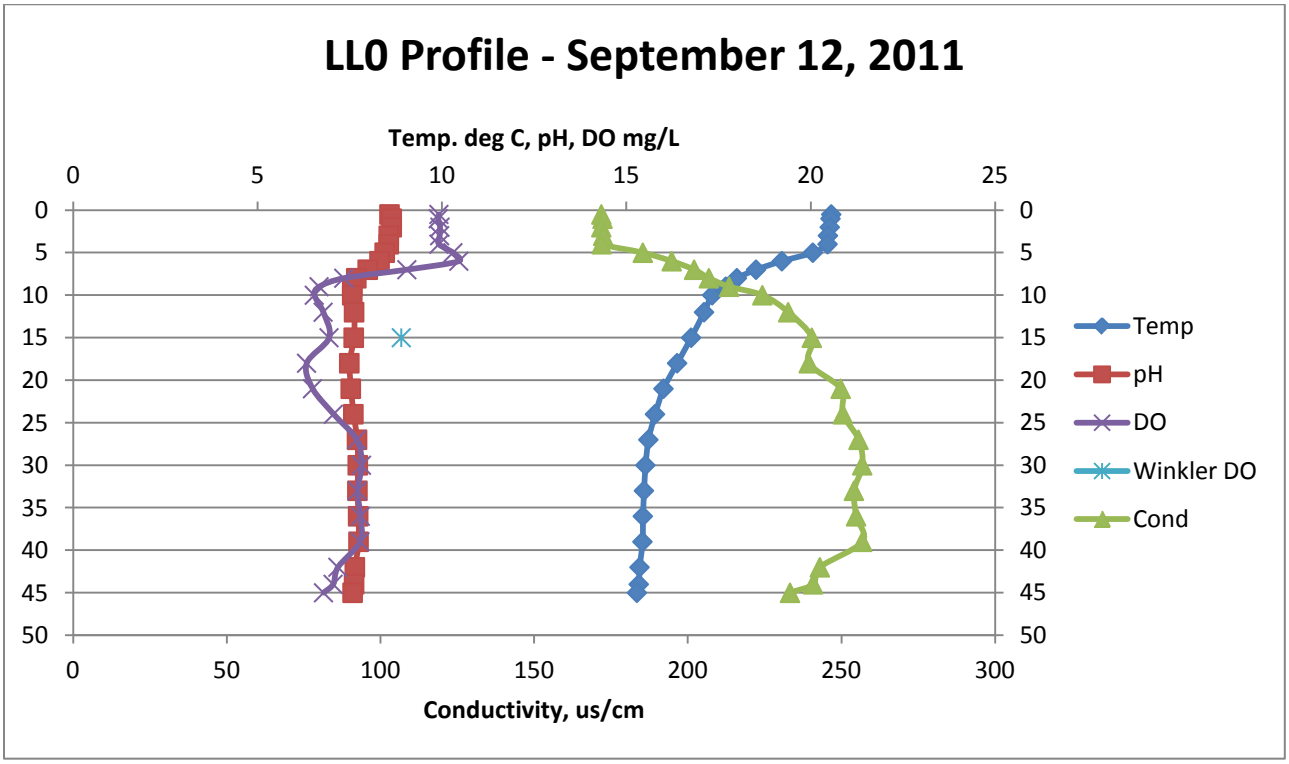
10
15
20
25
0
5
10
15
20
25
30
35
40
45
50
0
50
100
150
200
250
Conductivity, us/cm
Temp
pH
DO
Winkler DO
Cond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Temp. deg C, pH, DO mg/L
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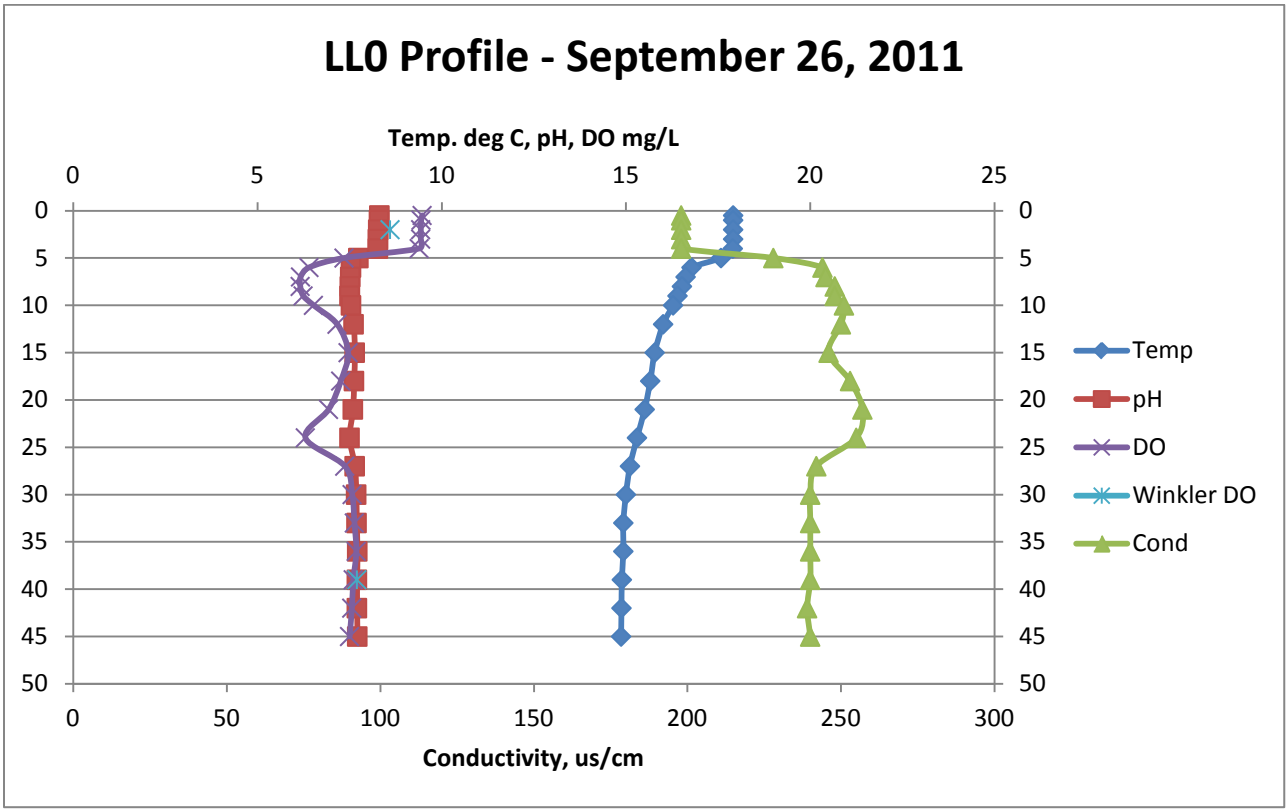
5
10
15
20
25
0
5
10
15
20
25
30
35
40
45
50
0
50
100
150
200
250
300
Conductivity, us/cm
Temp
pH
DO
Winkler DO
Cond


LL0 Profile - September 26, 2011
Temp. deg C, pH, DO mg/L
0
5
10
15
20
25
0
5
10
15
20
25
30
35
40
45
50
0
50
100
150
200
250
300
Conductivity, us/cm
Temp
pH
DO
Winkler DO
Cond

Appendix B. Field Data

Table B-1.

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
5/17/2010	LL0	0.5		97.6	12.13	8.75	17.42		5/18/2010	LL2	0.5		98.1	12.17	8.48	16.28
5/17/2010	LL0	1		97.7	12.21	8.88	17.33		5/18/2010	LL2	1		97.9	12.48	8.5	15.61
5/17/2010	LL0	2		96.9	12.4	8.86	17.03		5/18/2010	LL2	2		98.2	12.64	8.52	14.5
5/17/2010	LL0	3		97	13.69	8.94	16.64		5/18/2010	LL2	3		98.3	11.86	8.15	13.11
5/17/2010	LL0	4		96.2	14.49	9.04	14.4		5/18/2010	LL2	4		98.2	11.21	7.96	12.64
5/17/2010	LL0	5		89.4	14.03	8.83	12.88		5/18/2010	LL2	5		98.2	11.12	7.89	12.52
5/17/2010	LL0	6		91.9	13.01	8.66	12.15		5/18/2010	LL2	6		98.5	11.11	7.82	12.49
5/17/2010	LL0	7		91.8	12.42	8.45	11.98		5/18/2010	LL2	7		98.6	11.05	7.81	12.44
5/17/2010	LL0	8		91.2	12.32	8.37	11.95		5/18/2010	LL2	8		98	10.81	7.79	12.23
5/17/2010	LL0	9		91.8	11.89	8.27	11.75		5/18/2010	LL2	9		98.6	10.88	7.7	12.11
5/17/2010	LL0	10		92.4	11.78	8.11	11.7		5/18/2010	LL2	10	Y	97.7	10.58	7.65	11.87
5/17/2010	LL0	12		92	11.58	8.01	11.44		5/18/2010	LL2	10		97.7	10.56	7.72	11.88
5/17/2010	LL0	15	Y	88	11.37	7.9	10.68		5/18/2010	LL2	12		97.4	10.5	7.63	11.73
5/17/2010	LL0	15		88.4	11.38	7.86	10.79		5/18/2010	LL2	15		95.8	10.47	7.53	11.2
5/17/2010	LL0	18		85.4	11.2	7.84	10.58		5/18/2010	LL2	18		85.8	10.72	7.51	10.27
5/17/2010	LL0	21		80.5	11.08	7.76	10.07		5/18/2010	LL2	21		78.1	10.98	7.44	9.54
5/17/2010	LL0	24		80.3	11.07	7.67	9.89		5/18/2010	LL2	23		75.9	10.83	7.36	9.17
5/17/2010	LL0	27		79	11.06	7.63	9.76		5/18/2010	LL2	24		76.4	10.63	7.31	9.18
5/17/2010	LL0	27	Y	78.6	11.04	7.66	9.75		5/18/2010	LL4	0.5		88.6	10.29	7.38	13.72
5/17/2010	LL0	30		78.4	11.02	7.59	9.65		5/18/2010	LL4	1		89.3	10.31	7.39	13.71
5/17/2010	LL0	33		77.3	10.76	7.59	9.22		5/18/2010	LL4	2		88.9	10.26	7.41	13.71
5/17/2010	LL0	36		76.6	10.67	7.53	9.19		5/18/2010	LL4	3		89	10.24	7.4	13.7
5/17/2010	LL0	39		76.2	10.64	7.52	9.13		5/18/2010	LL4	4		89.1	10.21	7.45	13.65
5/17/2010	LL0	42		76.2	10.6	7.47	9.07		5/18/2010	LL4	5		91.4	10.2	7.44	13.63
5/17/2010	LL0	42	Y	76.5	10.61	7.48	9.1		5/18/2010	LL4	6		91.6	10.18	7.44	13.62
5/17/2010	LL0	43.7		76.1	10.61	7.45	9.07		5/18/2010	LL4	7		91.6	10.16	7.48	13.61
5/17/2010	LL1	0.5		94.9	12.63	8.75	16.41		5/18/2010	LL4	8		91.6	10.41	7.45	13.61
5/17/2010	LL1	1		94.7	12.77	8.79	16.2		5/18/2010	LL4	9		92	10.13	7.44	13.62
5/17/2010	LL1	2		94.9	12.79	8.78	16.03		5/18/2010	LL4	9	Y	92	10.13	7.45	13.61
5/17/2010	LL1	3		95.2	12.93	8.78	15.79		5/18/2010	LL5	0.5		86.3	10.37	7.85	13.99
5/17/2010	LL1	4		93.3	13.67	8.84	14.29		5/18/2010	LL5	1		85.2	10.4	7.72	13.43
5/17/2010	LL1	5		95.8	12.71	8.56	12.87		5/18/2010	LL5	2		85.6	10.39	7.69	13.56
5/17/2010	LL1	6		96.1	12.19	8.42	12.58		5/18/2010	LL5	3		85	10.41	7.66	13.43
5/17/2010	LL1	7		97	11.5	8.17	12.09		5/18/2010	LL5	4		84.8	10.41	7.59	13.45
5/17/2010	LL1	8		96.7	11.36	8.06	12.1		5/18/2010	LL5	5		84.7	10.37	7.55	13.46
5/17/2010	LL1	9		97.1	11.04	7.88	11.88		5/18/2010	LL5	6		86	10.33	7.55	13.47
5/17/2010	LL1	10		97	10.83	7.82	11.77		5/18/2010	LL5	7		86.6	10.35	7.52	13.5
5/17/2010	LL1	10	Y	96.7	10.82	7.81	11.77									
5/17/2010	LL1	12		95.7	10.88	7.75	11.61									
5/17/2010	LL1	15		92.4	10.72	7.71	10.95									
5/17/2010	LL1	18		86	10.88	7.69	10.43									
5/17/2010	LL1	21		82.5	11.04	7.62	9.97									
5/17/2010	LL1	24		78.3	11.04	7.52	9.65									
5/17/2010	LL1	27		76.8	10.91	7.46	9.4									
5/17/2010	LL1	30		75	10.73	7.38	9.03									
5/17/2010	LL1	30	Y	74.9	10.8	7.39	9.05									
5/17/2010	LL1	33		75.2	10.4	7.39	8.96									
5/17/2010	LL1	33.8		75.5	10.34	7.28	8.92									
5/17/2010	LL3	0.5		100.5	11.2	8.09	15.43									
5/17/2010	LL3	1		100.9	11.26	8.16	15.18									
5/17/2010	LL3	2		100.9	11.37	8.17	14.57									
5/17/2010	LL3	3		101.6	11.13	8.05	14.09									
5/17/2010	LL3	4		101.3	10.77	7.92	13.35									
5/17/2010	LL3	5		102.5	10.47	7.84	13.24									
5/17/2010	LL3	6		102.2	10.42	7.8	13.13									
5/17/2010	LL3	7		101.7	10.32	7.76	13.07									
5/17/2010	LL3	8		100.2	10.27	7.71	12.39									
5/17/2010	LL3	9		97.3	10.31	7.64	12.42									
5/17/2010	LL3	10		98	10.32	7.61	11.93									
5/17/2010	LL3	12		97.5	10.35	7.52	11.76									
5/17/2010	LL3	15		91.6	10.39	7.56	10.56									
5/17/2010	LL3	18		83.4	9.86	7.52	9.77									
5/17/2010	LL3	21		83	9.35	7.4	9.55									
5/17/2010	LL3	21.6		83.2	9.31	7.2	9.52									

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
6/1/2010	LL0	0.5		90	11.02	8.07	14.97		6/1/2010	LL3	0.5		111.9	11.15	8.07	14.42
6/1/2010	LL0	1		90	11.06	8.12	14.72		6/1/2010	LL3	1		111.6	11.12	8.03	14.41
6/1/2010	LL0	2		91.4	11.14	8.1	14.4		6/1/2010	LL3	2	Y	110.4	11.03	7.96	14.32
6/1/2010	LL0	3		91.8	11.15	8.13	14.21		6/1/2010	LL3	2		111	11.01	8.02	14.26
6/1/2010	LL0	4		92	11.1	8.11	14.17		6/1/2010	LL3	3		107.7	10.94	7.93	13.97
6/1/2010	LL0	5		92.3	11	8.05	14.13		6/1/2010	LL3	4		106.6	10.9	7.84	13.79
6/1/2010	LL0	6		92.2	10.98	8.06	14.13		6/1/2010	LL3	5		107.6	10.77	7.84	13.61
6/1/2010	LL0	6	Y	92.3	10.96	8.06	14.13		6/1/2010	LL3	6		108.5	10.75	7.82	13.57
6/1/2010	LL0	7		92.7	10.87	8.01	14.12		6/1/2010	LL3	7		109.2	10.62	7.82	13.41
6/1/2010	LL0	8		93	10.75	7.97	14.1		6/1/2010	LL3	8	Y	108.6	10.55	7.75	13.33
6/1/2010	LL0	9		93.5	10.63	7.87	14.04		6/1/2010	LL3	8		108.2	10.56	7.8	13.32
6/1/2010	LL0	10		93.8	10.61	7.88	13.94		6/1/2010	LL3	9		108.8	10.53	7.76	13.3
6/1/2010	LL0	12		99	10.11	7.73	13.31		6/1/2010	LL3	10		108.8	10.5	7.76	13.28
6/1/2010	LL0	15		97.1	10.05	7.53	13.16		6/1/2010	LL3	12		109.6	10.35	7.74	13.22
6/1/2010	LL0	18		94.5	9.98	7.47	12.9		6/1/2010	LL3	15		111.2	10.24	7.69	13.16
6/1/2010	LL0	21		96.5	9.95	7.4	12.8		6/1/2010	LL3	18		104.9	10.12	7.66	13.09
6/1/2010	LL0	24		97	9.88	7.37	12.75		6/1/2010	LL3	21		113	10.01	7.64	13.04
6/1/2010	LL0	27		93.2	9.83	7.38	12.66		6/2/2010	LL4	0.5		86.1	10.64	7.49	13.13
6/1/2010	LL0	27	Y	93.6	9.8	7.33	12.66		6/2/2010	LL4	1		86	10.63	7.47	13.12
6/1/2010	LL0	30		88.4	9.68	7.34	12.48		6/2/2010	LL4	2		86.1	10.63	7.42	13.11
6/1/2010	LL0	33		87.3	9.22	7.27	12.26		6/2/2010	LL4	3		85.8	10.64	7.43	13.1
6/1/2010	LL0	36		90.1	9.16	7.18	11.39		6/2/2010	LL4	4		85.7	10.61	7.45	13.1
6/1/2010	LL0	39		89.5	8.71	7.14	10.56		6/2/2010	LL4	5	Y	86	10.59	7.42	13.09
6/1/2010	LL1	0.5		93.1	11.09	8.32	15.22		6/2/2010	LL4	5		86.2	10.59	7.44	13.08
6/1/2010	LL1	1		92.7	11.13	8.36	15.16		6/2/2010	LL4	6		86.1	10.57	7.44	13.08
6/1/2010	LL1	2		93.1	11.19	8.35	15.15		6/2/2010	LL4	7		86.2	10.56	7.45	13.08
6/1/2010	LL1	3		93.1	11.27	8.4	14.68		6/2/2010	LL4	8		86.4	10.53	7.44	13.07
6/1/2010	LL1	4		92.6	11.26	8.4	14.6		6/2/2010	LL4	9		86	10.53	7.43	13.08
6/1/2010	LL1	5		93	11.1	8.36	14.53		6/2/2010	LL5	0.5		87.9	10.54	7.56	12.82
6/1/2010	LL1	6		95.4	11	8.28	14.28		6/2/2010	LL5	1		87.7	10.65	7.54	12.83
6/1/2010	LL1	7		96	10.88	8.19	14.14		6/2/2010	LL5	2		88	10.69	7.49	12.84
6/1/2010	LL1	8		102.2	10.55	8.03	13.81		6/2/2010	LL5	3		88	10.68	7.49	12.84
6/1/2010	LL1	9	Y	108.6	10.38	7.82	13.5		6/2/2010	LL5	4		87.9	10.68	7.48	12.84
6/1/2010	LL1	9		108.4	10.36	7.89	13.47		6/2/2010	LL5	5		88.1	10.68	7.48	12.83
6/1/2010	LL1	10		106.4	10.31	7.76	13.43		6/2/2010	LL5	5	Y	88.1	10.7	7.46	12.82
6/1/2010	LL1	12		109.1	10.08	7.7	13.22		6/2/2010	LL5	6		87.9	10.69	7.45	12.83
6/1/2010	LL1	15		110.4	9.86	7.63	13.04		6/2/2010	LL5	7		88	10.67	7.5	12.83
6/1/2010	LL1	18		111.2	9.71	7.57	13									
6/1/2010	LL1	21		109.2	9.59	7.52	12.83									
6/1/2010	LL1	24		102.4	9.59	7.49	12.68									
6/1/2010	LL1	27		98.6	9.55	7.41	12.56									
6/1/2010	LL1	30		94.4	9.4	7.36	12.35									
6/1/2010	LL1	33		92.5	8.2	7.2	11.37									
6/1/2010	LL2	0.5		98.9	11.25	8.29	15.09									
6/1/2010	LL2	1		98.3	11.38	8.39	15.01									
6/1/2010	LL2	2		98.8	11.5	8.42	14.92									
6/1/2010	LL2	3	Y	98.4	11.55	8.43	14.81									
6/1/2010	LL2	3		98.8	11.54	8.42	14.8									
6/1/2010	LL2	4		100	11.48	8.39	14.56									
6/1/2010	LL2	5		103.6	11.36	8.28	14.11									
6/1/2010	LL2	6		106.2	10.92	8.12	13.76									
6/1/2010	LL2	7		108.6	10.65	7.99	13.56									
6/1/2010	LL2	8		110.4	10.55	7.86	13.53									
6/1/2010	LL2	9		110	10.4	7.8	13.41									
6/1/2010	LL2	10		110.7	10.28	7.74	13.34									
6/1/2010	LL2	12		111.2	10.2	7.7	13.25									
6/1/2010	LL2	15		112.7	10.07	7.64	13.02									
6/1/2010	LL2	18		112.8	10.01	7.61	12.98									
6/1/2010	LL2	21		113.1	9.84	7.59	12.96									
6/1/2010	LL2	21	Y	112.7	9.92	7.57	12.96									
6/1/2010	LL2	24		113	9.82	7.6	12.95									

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
6/29/2010	LL0	0.5		84.6	9.49	9.5	21.16		6/29/2010	LL2	0.5		75.1	10.15	10.2	20.6
6/29/2010	LL0	1		84.8	9.54	9.41	21.13		6/29/2010	LL2	1		75.2	10.17	10	20.59
6/29/2010	LL0	2		83.9	9.57	9.36	21.02		6/29/2010	LL2	2		75.3	10.29	9.88	20.46
6/29/2010	LL0	3		82.3	10.25	9.46	19.98		6/29/2010	LL2	3		75.9	10.46	9.81	19.98
6/29/2010	LL0	4		77.9	10.95	9.53	18.23		6/29/2010	LL2	4		78	10.34	9.74	19.51
6/29/2010	LL0	5		76.2	10.53	9.27	17.96		6/29/2010	LL2	5		82.6	10.09	9.48	18.41
6/29/2010	LL0	6		76	10.07	8.91	17.48		6/29/2010	LL2	6		84.8	9.88	9.33	17.94
6/29/2010	LL0	7		75.6	9.87	8.77	17.41		6/29/2010	LL2	7		96.1	9.21	9.12	17.36
6/29/2010	LL0	8		75.5	9.51	8.54	16.93		6/29/2010	LL2	8		93.8	8.87	8.98	17.1
6/29/2010	LL0	9	Y	74.8	9.27	8.41	16.78		6/29/2010	LL2	9	Y	85.3	8.7	8.9	17.01
6/29/2010	LL0	9		75.1	9.18	8.21	16.8		6/29/2010	LL2	9		85.8	8.73	8.77	17.02
6/29/2010	LL0	10		74.8	9.15	8.18	16.79		6/29/2010	LL2	10		85.2	8.62	8.88	16.99
6/29/2010	LL0	12		75.1	9.09	8.11	16.64		6/29/2010	LL2	12		82.2	8.54	8.63	16.72
6/29/2010	LL0	15		75	9.02	8.05	16.49		6/29/2010	LL2	15		87.4	8.51	8.5	16.64
6/29/2010	LL0	18		76.6	8.96	8.03	16		6/29/2010	LL2	18		79.6	8.55	8.43	15.93
6/29/2010	LL0	21		77.9	8.89	7.97	15.63		6/29/2010	LL2	21		79.3	8.56	8.39	15.31
6/29/2010	LL0	24		80.1	8.76	7.94	15.33		6/29/2010	LL2	23		81	8.49	8.34	15.09
6/29/2010	LL0	27		83.7	8.57	7.9	15.08		6/29/2010	LL2	25		86	8.09	8.24	14.69
6/29/2010	LL0	30		85.4	8.38	7.88	14.93		6/30/2010	LL3	0.5		92	9.75	9.27	19.49
6/29/2010	LL0	33		87.8	8.18	7.81	14.76		6/30/2010	LL3	1		91.7	9.75	9.17	19.48
6/29/2010	LL0	36	Y	90.4	7.98	7.76	14.6		6/30/2010	LL3	2		98.5	9.45	8.93	18.77
6/29/2010	LL0	36		90.7	8.05	7.76	14.56		6/30/2010	LL3	3		104.3	9.06	8.66	18.25
6/29/2010	LL0	39		93.2	7.74	7.72	14.31		6/30/2010	LL3	4		105.8	8.79	8.57	18.11
6/29/2010	LL0	42		95.9	7.43	7.68	14.07		6/30/2010	LL3	5		105.8	8.73	8.51	18.08
6/29/2010	LL0	45		96.4	7.31	8.43	14.04		6/30/2010	LL3	6		106.8	8.64	8.44	18.04
6/29/2010	LL1	0.5		79.6	9.68	9.81	20.75		6/30/2010	LL3	7		107	8.57	8.38	18.01
6/29/2010	LL1	1		79.2	9.74	9.53	20.61		6/30/2010	LL3	8		106.4	8.57	8.36	18
6/29/2010	LL1	2		78.4	10	9.45	20.27		6/30/2010	LL3	9	Y	106.6	8.58	8.35	17.98
6/29/2010	LL1	3		76.7	10.59	9.59	19.75		6/30/2010	LL3	9	U	106.2	8.55	8.34	17.99
6/29/2010	LL1	4		76.5	10.61	9.41	18.72		6/30/2010	LL3	10		106.6	8.57	8.32	17.97
6/29/2010	LL1	5		76.8	10.27	8.94	18		6/30/2010	LL3	12		106.6	8.55	8.31	17.95
6/29/2010	LL1	6		76.2	9.76	8.83	17.94		6/30/2010	LL3	15		107.1	8.53	8.29	17.89
6/29/2010	LL1	7		76.3	9.39	8.59	17.58		6/30/2010	LL3	18		108.8	8.31	8.18	17.47
6/29/2010	LL1	8		76.8	9.21	8.46	17.3		6/30/2010	LL3	21		105.1	7.73	8.01	16.82
6/29/2010	LL1	9		77.1	9.12	8.3	17.28		6/30/2010	LL4	0.5		104.4	8.6	8.57	18.06
6/29/2010	LL1	9	Y	77.5	9.05	8.4	17.28		6/30/2010	LL4	1		105	8.59	8.61	17.92
6/29/2010	LL1	10		77.6	9.04	8.35	17.26		6/30/2010	LL4	2		104.8	8.57	8.56	17.8
6/29/2010	LL1	12		77.7	8.85	8.2	16.91		6/30/2010	LL4	3		104.7	8.52	8.45	17.78
6/29/2010	LL1	15		75.6	8.77	8.11	16.65		6/30/2010	LL4	4		104.9	8.51	8.4	17.58
6/29/2010	LL1	18		76.4	8.88	8.08	15.82		6/30/2010	LL4	5		104.6	8.44	8.35	17.54
6/29/2010	LL1	21		78.9	8.71	7.99	15.37		6/30/2010	LL4	6		105	8.42	8.31	17.53
6/29/2010	LL1	24		80.1	8.55	7.94	15.18		6/30/2010	LL4	7		104.9	8.41	8.26	17.52
6/29/2010	LL1	27		83.2	8.4	7.9	14.94		6/30/2010	LL4	8		104.9	8.38	8.24	17.52
6/29/2010	LL1	27	Y	83.5	8.38	7.86	14.91		6/30/2010	LL4	9		104.9	8.36	8.21	17.52
6/29/2010	LL1	30		85.6	8.22	7.84	14.77		6/30/2010	LL4	9	Y	105.4	8.36	8.2	17.52
6/29/2010	LL1	32		93.1	7.17	7.71	14.25		6/30/2010	LL5	0.5		103.5	9.05	9.74	17.66
									6/30/2010	LL5	1		103.8	9.04	9.5	17.6
									6/30/2010	LL5	2		104.3	9.02	9.22	17.56
									6/30/2010	LL5	3		104	8.99	9.06	17.56
									6/30/2010	LL5	4		104	8.99	8.95	17.57
									6/30/2010	LL5	5		104.1	8.97	8.88	17.57
									6/30/2010	LL5	6		104.4	8.95	8.8	17.59

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
7/20/2010	LL0	0.5		113.3	9.37	9.45	22.03		7/20/2010	LL2	0.5		121.7	9.72	9.64	23.17
7/20/2010	LL0	1		113.9	9.46	9.39	21.86		7/20/2010	LL2	1		121.4	9.71	9.53	23.18
7/20/2010	LL0	2		113.3	9.56	9.36	21.76		7/20/2010	LL2	2		121.9	9.76	9.43	23.09
7/20/2010	LL0	3		113.4	10.13	9.39	21.58		7/20/2010	LL2	2	Y	121.6	9.76	9.44	23.08
7/20/2010	LL0	4		112.9	10.42	9.36	21.22		7/20/2010	LL2	3		121.9	9.78	9.38	23
7/20/2010	LL0	5		111	10.29	9.29	20.79		7/20/2010	LL2	4		123.5	10.25	9.51	22.3
7/20/2010	LL0	6		106.7	10	9.16	19.88		7/20/2010	LL2	5		142.9	11.68	9.64	20.73
7/20/2010	LL0	7		106.8	9.82	9.12	19.44		7/20/2010	LL2	6		147.6	11.69	9.56	20.15
7/20/2010	LL0	8		127.6	9.19	8.76	18.91		7/20/2010	LL2	7		152.2	11.11	9.37	19.87
7/20/2010	LL0	9	Y	136.6	8.91	8.62	18.73		7/20/2010	LL2	8		161.1	9.29	8.95	19.11
7/20/2010	LL0	9		136.6	8.97	8.55	18.78		7/20/2010	LL2	9		164.4	8.86	8.74	19.04
7/20/2010	LL0	10		137.6	8.64	8.44	18.58		7/20/2010	LL2	10		168.6	8.57	8.61	18.8
7/20/2010	LL0	12		139.6	8.32	8.3	18.11		7/20/2010	LL2	12		172	8.02	8.42	18.4
7/20/2010	LL0	15		125.4	8.15	8.18	17.7		7/20/2010	LL2	15		167.2	7.94	8.33	17.93
7/20/2010	LL0	18		113.2	7.77	7.99	17.33		7/20/2010	LL2	18	Y	160.1	7.91	8.28	17.61
7/20/2010	LL0	18	Y	112.3	7.8	8.02	17.33		7/20/2010	LL2	18		160.2	7.89	8.25	17.56
7/20/2010	LL0	21		114.4	7.7	7.93	16.95		7/20/2010	LL2	21		145.8	6.71	7.97	16.88
7/20/2010	LL0	24		115.7	7.6	7.89	16.67		7/20/2010	LL2	24		137.9	6.01	7.77	16.58
7/20/2010	LL0	27		113.3	7.35	7.81	16.36		7/20/2010	LL2	26		135.9	5.11	7.63	16.38
7/20/2010	LL0	30	Y	102.8	6.8	7.66	15.97		7/21/2010	LL3	0.5		125.1	9.67	9.49	22.99
7/20/2010	LL0	30		102.3	6.87	7.7	15.91		7/21/2010	LL3	1		124.6	9.69	9.39	22.97
7/20/2010	LL0	33		89	6.56	7.57	15.28		7/21/2010	LL3	2		125.1	9.73	9.37	22.92
7/20/2010	LL0	36		89.5	6.11	7.48	14.55		7/21/2010	LL3	3		139.6	12.24	9.56	21.84
7/20/2010	LL0	39		93.5	5.55	7.42	14.25		7/21/2010	LL3	4		148.7	12.2	9.51	21.06
7/20/2010	LL0	42		96.4	4.94	7.35	14.05		7/21/2010	LL3	5		163.8	10.03	9.06	20.34
7/20/2010	LL0	45		97.7	4.51	7.29	13.98		7/21/2010	LL3	6		162.5	9.77	8.96	20.18
7/20/2010	LL0	48		99	4.2	7.21	13.89		7/21/2010	LL3	7		174.4	9.26	8.72	19.55
7/20/2010	LL1	0.5		121.5	9.54	9.78	22.62		7/21/2010	LL3	8		176.5	8.79	8.6	19.2
7/20/2010	LL1	1		121.4	9.54	9.65	22.62		7/21/2010	LL3	9		180.1	8.56	8.5	18.77
7/20/2010	LL1	2		121	9.56	9.54	22.47		7/21/2010	LL3	10	Y	181.8	8.28	8.4	18.43
7/20/2010	LL1	3		120.2	9.56	9.46	22.3		7/21/2010	LL3	10		181.7	8.27	8.37	18.46
7/20/2010	LL1	4		117.3	9.81	9.49	21.91		7/21/2010	LL3	12		184.9	8.17	8.29	18.18
7/20/2010	LL1	5		115	10.31	9.38	21.12		7/21/2010	LL3	15		184.3	7.94	8.16	18.07
7/20/2010	LL1	6	Y	112.1	10.82	9.44	20.27		7/21/2010	LL3	18		181.5	7.76	8.05	17.98
7/20/2010	LL1	6		112.8	10.89	9.42	20.23		7/21/2010	LL3	20		156.5	4.96	7.59	17.29
7/20/2010	LL1	7		129	10.43	9.17	19.58		7/21/2010	LL3	21		156.3	4.66	7.49	17.02
7/20/2010	LL1	8		142.5	9.51	8.91	19.31		7/21/2010	LL4	0.5		140.8	9.37	9.94	22.95
7/20/2010	LL1	9		154.7	8.71	8.71	18.87		7/21/2010	LL4	1		140.5	9.4	9.66	22.73
7/20/2010	LL1	10		159.2	8.63	8.67	18.65		7/21/2010	LL4	2		138.9	9.39	9.44	22.57
7/20/2010	LL1	12		165.4	8.33	8.49	18.28		7/21/2010	LL4	3		148.2	9.24	9.24	22.3
7/20/2010	LL1	15		159.1	8.27	8.42	17.84		7/21/2010	LL4	4	Y	161.1	9.39	9.22	21.47
7/20/2010	LL1	18		146.1	7.9	8.23	17.39		7/21/2010	LL4	4		160.7	9.38	9.03	21.4
7/20/2010	LL1	21		131.5	7.57	8.11	16.9		7/21/2010	LL4	5		195	9.51	9.14	17.96
7/20/2010	LL1	24		128.1	7.32	8.01	16.6		7/21/2010	LL4	6		195	9.46	9.03	17.93
7/20/2010	LL1	27		127.3	6.91	7.88	16.43		7/21/2010	LL4	7		195.3	9.4	8.88	17.9
7/20/2010	LL1	30		123.4	6.43	7.79	16.15		7/21/2010	LL4	8		195.1	9.29	8.72	17.87
7/20/2010	LL1	33		104.5	4.17	7.53	15.2		7/21/2010	LL4	9		195.4	9.26	8.61	17.88
									7/21/2010	LL5	0.5		202.9	8.31	12	18.18
									7/21/2010	LL5	1		202.7	8.42	11.5	17.64
									7/21/2010	LL5	2		203.5	8.36	11	17.48
									7/21/2010	LL5	3		203.4	8.31	10.5	17.43
									7/21/2010	LL5	4	Y	203.5	8.26	9.99	17.39
									7/21/2010	LL5	4		203.4	8.27	10.2	17.35
									7/21/2010	LL5	5		204	8.28	9.84	17.29

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
8/9/2010	LL0	0.5		134	10.28	8.83	23.51		8/10/2010	LL2	0.5		148	10.06	8.89	23.33
8/9/2010	LL0	1		134	10.31	8.83	23.44		8/10/2010	LL2	1		149	10.07	8.86	23.32
8/9/2010	LL0	2		134	10.29	8.8	23.24		8/10/2010	LL2	2		148	10.06	8.84	23.28
8/9/2010	LL0	3		134	10.3	8.82	23.06		8/10/2010	LL2	3		148	10.03	8.86	23.26
8/9/2010	LL0	4		134	10.31	8.84	23.02		8/10/2010	LL2	4		148	10	8.83	23.24
8/9/2010	LL0	5		135	10.59	8.84	22.94		8/10/2010	LL2	5		147	9.98	8.84	23.23
8/9/2010	LL0	6	Y	148	13.37	8.94	21.6		8/10/2010	LL2	6		147	9.95	8.84	23.19
8/9/2010	LL0	6		145	13.3	8.99	21.8		8/10/2010	LL2	7	Y	199	9.43	8.38	21.09
8/9/2010	LL0	7		140	11.59	8.69	20.22		8/10/2010	LL2	7		195	9.36	8.31	21.06
8/9/2010	LL0	8		157	9.84	8.31	19.6		8/10/2010	LL2	8		218	7.96	8.03	19.19
8/9/2010	LL0	9		160	8.21	7.97	19.1		8/10/2010	LL2	9		221	7.9	7.96	18.99
8/9/2010	LL0	10		161	7.58	7.82	18.84		8/10/2010	LL2	10		225	7.93	7.93	18.8
8/9/2010	LL0	11		165	6.99	7.69	18.52		8/10/2010	LL2	12		223	7.55	7.86	18.47
8/9/2010	LL0	12		169	6.94	7.67	18.35		8/10/2010	LL2	15	Y	223	7.17	7.79	18.13
8/9/2010	LL0	15		171	6.3	7.59	17.97		8/10/2010	LL2	15		223	7.23	7.8	18.14
8/9/2010	LL0	18		187	6.26	7.55	17.76		8/10/2010	LL2	18		223	7	7.75	17.9
8/9/2010	LL0	21		176	6.08	7.53	17.48		8/10/2010	LL2	21		223	6.91	7.73	17.7
8/9/2010	LL0	24		185	5.7	7.48	17.28		8/10/2010	LL2	24		226	4.91	7.55	17.31
8/9/2010	LL0	27		157	5.33	7.44	17		8/10/2010	LL2	25		226	4.19	7.42	17.22
8/9/2010	LL0	30		125	4.82	7.33	16.47		8/10/2010	LL3	0.5		159	10.24	8.83	23.44
8/9/2010	LL0	33		107	4.55	7.23	15.71		8/10/2010	LL3	1		159	10.24	8.83	23.44
8/9/2010	LL0	36	Y	92	4.53	7.12	14.91		8/10/2010	LL3	2		159	10.25	8.76	23.39
8/9/2010	LL0	36		92	4.63	7.13	14.96		8/10/2010	LL3	3		159	10.24	8.85	23.36
8/9/2010	LL0	39		93	3.35	6.99	14.38		8/10/2010	LL3	4		159	10.14	8.85	23.3
8/9/2010	LL0	42		95	1.78	6.87	14.09		8/10/2010	LL3	5		159	10.11	8.84	23.27
8/9/2010	LL0	45		95	1.28	6.82	14		8/10/2010	LL3	5	Y	159	10.12	8.84	23.27
8/9/2010	LL0	46.5		97	0.87	6.81	13.89		8/10/2010	LL3	6		181	10.53	8.68	21.97
8/9/2010	LL1	0.5		138	9.89	8.81	24.04		8/10/2010	LL3	7		207	9.21	8.34	20.64
8/9/2010	LL1	1		138	9.93	8.82	24.05		8/10/2010	LL3	8		231	8.45	8.1	18.78
8/9/2010	LL1	2		138	10.06	8.85	23.93		8/10/2010	LL3	9		232	8.47	8.05	18.48
8/9/2010	LL1	3		138	10.18	8.86	23.63		8/10/2010	LL3	10		233	8.35	8.01	18.34
8/9/2010	LL1	4		139	10.21	8.87	23.6		8/10/2010	LL3	12		234	8.13	7.97	18.18
8/9/2010	LL1	4	Y	138	10.2	8.88	23.6		8/10/2010	LL3	15		231	7.18	7.82	17.94
8/9/2010	LL1	5		142	10.35	8.85	23.21		8/10/2010	LL3	18		225	6.38	7.7	17.74
8/9/2010	LL1	6		169	10.72	8.65	21.04		8/10/2010	LL3	21		224	5.98	7.64	17.61
8/9/2010	LL1	7		185	10.03	8.42	19.87		8/10/2010	LL4	0.5		163	10.06	8.69	23.77
8/9/2010	LL1	8		207	8.29	8.01	19.24		8/10/2010	LL4	1		164	10.12	8.68	23.7
8/9/2010	LL1	9		209	7.6	7.88	18.95		8/10/2010	LL4	2		162	10.23	8.7	23.43
8/9/2010	LL1	10		193	7.41	7.82	18.7		8/10/2010	LL4	3	Y	180	10.09	8.61	22.51
8/9/2010	LL1	12		210	6.82	7.74	18.43		8/10/2010	LL4	3		177	10.2	8.59	22.67
8/9/2010	LL1	15		218	6.71	7.68	18.12		8/10/2010	LL4	4		193	10.05	8.52	21.47
8/9/2010	LL1	18		224	6.5	7.66	17.88		8/10/2010	LL4	5		211	10.12	8.43	19.92
8/9/2010	LL1	21		228	6.17	7.63	17.61		8/10/2010	LL4	6		237	9.66	8.18	17.53
8/9/2010	LL1	21	Y	228	6.15	7.62	17.6		8/10/2010	LL4	7		240	9.5	8.1	17.3
8/9/2010	LL1	24		227	5.89	7.59	17.46		8/10/2010	LL4	8		241	9.34	8.05	17.19
8/9/2010	LL1	27		205	4.35	7.48	17.05		8/10/2010	LL4	9	Y	241	9.27	8.03	17.18
8/9/2010	LL1	30		178	2.32	7.27	16.62		8/10/2010	LL4	9		241	9.25	8.05	17.16
									8/10/2010	LL5	0.5		172	10.05	8.7	22.51
									8/10/2010	LL5	1		180	10.04	8.68	21.82
									8/10/2010	LL5	2		232	9.39	8.26	18.05
									8/10/2010	LL5	3		240	9.3	8.19	17.39
									8/10/2010	LL5	3	Y	239	9.33	8.19	17.29
									8/10/2010	LL5	4		242	9.24	8.19	17.06
									8/10/2010	LL5	5		243	9.18	8.16	16.97
									8/10/2010	LL5	6		243	9.11	8.13	16.91
									8/10/2010	LL5	7		243	9.06	8.14	16.87

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
8/30/2010	LL0	0.5		182	8.49	8.78	19.52		8/30/2010	LL2	0.5		189	8.77	8.94	20.05
8/30/2010	LL0	1		182.1	8.52	8.84	19.43		8/30/2010	LL2	1		189.1	8.77	8.74	20.04
8/30/2010	LL0	2		181.5	8.49	8.79	19.41		8/30/2010	LL2	1	Y	189	8.77	8.71	20.05
8/30/2010	LL0	3		182	8.46	8.73	19.38		8/30/2010	LL2	2		189	8.76	8.61	20.04
8/30/2010	LL0	4		182.2	8.45	8.72	19.37		8/30/2010	LL2	3		189	8.74	8.61	20.04
8/30/2010	LL0	5		181.6	8.44	8.72	19.35		8/30/2010	LL2	4		189.3	8.71	8.59	20.02
8/30/2010	LL0	6		181.6	8.42	8.71	19.35		8/30/2010	LL2	5		189	8.69	8.58	20.01
8/30/2010	LL0	7		182.2	8.35	8.69	19.32		8/30/2010	LL2	6		189.3	8.62	8.53	19.95
8/30/2010	LL0	8		208.2	6.46	8.28	19.04		8/30/2010	LL2	7		190.6	8.46	8.48	19.92
8/30/2010	LL0	9		214.8	5.13	7.87	18.46		8/30/2010	LL2	8		196.2	8.15	8.36	19.77
8/30/2010	LL0	9	Y	213.9	5.14	8.09	18.48		8/30/2010	LL2	9		211.6	7.43	8.15	19.4
8/30/2010	LL0	10	U	223.4	4.89	8.03	17.9		8/30/2010	LL2	10		231.1	7.17	8.05	18.77
8/30/2010	LL0	12		226.8	4.83	7.87	17.5		8/30/2010	LL2	10	Y	232.2	7.11	8.01	18.63
8/30/2010	LL0	15		233.6	5.05	7.83	17.26		8/30/2010	LL2	12		241.4	6.94	7.96	17.85
8/30/2010	LL0	18		229.4	4.38	7.73	17.13		8/30/2010	LL2	15		249.7	7.15	7.92	17.3
8/30/2010	LL0	21		220.4	3.61	7.64	16.9		8/30/2010	LL2	18		261	8.06	8.03	16.44
8/30/2010	LL0	24		219.4	3.71	7.59	16.71		8/30/2010	LL2	21		262.4	8.15	7.95	16.24
8/30/2010	LL0	27		213.2	3.31	7.53	16.58		8/30/2010	LL2	24		264.5	8.09	7.88	16.06
8/30/2010	LL0	30		174.6	2.15	7.45	16.28		8/30/2010	LL2	25		264.9	8.09	7.84	16.01
8/30/2010	LL0	33		135.9	1.92	7.37	15.78		8/31/2010	LL3	0.5		192.6	8.87	8.01	19.93
8/30/2010	LL0	36	Y	99.9	2.74	7.25	14.84		8/31/2010	LL3	1		192.7	8.88	8.23	19.9
8/30/2010	LL0	36		100.3	2.69	7.33	14.81		8/31/2010	LL3	2		192.4	8.86	8.36	19.94
8/30/2010	LL0	39		95.5	1.53	7.13	14.3		8/31/2010	LL3	3		192.6	8.85	8.43	19.92
8/30/2010	LL0	42		96.7	0.41	7.05	13.9		8/31/2010	LL3	4		193	8.83	8.46	19.94
8/30/2010	LL0	45		98.1	0.13	6.95	13.75		8/31/2010	LL3	5		192.3	8.76	8.48	19.94
8/30/2010	LL1	0.5		188.4	8.87	9.2	19.86		8/31/2010	LL3	6		193.2	8.72	8.49	19.9
8/30/2010	LL1	1		188.3	8.9	9.19	19.78		8/31/2010	LL3	7		198.5	8.45	8.43	19.87
8/30/2010	LL1	2		187.5	8.92	9.15	19.71		8/31/2010	LL3	8		212.4	8.06	8.32	19.52
8/30/2010	LL1	3		187.1	8.88	9.11	19.65		8/31/2010	LL3	9	Y	212.1	8.15	8.31	19.35
8/30/2010	LL1	4		187	8.87	9.08	19.6		8/31/2010	LL3	9		212.6	8.14	8.31	19.31
8/30/2010	LL1	5		187.1	8.84	9.05	19.58		8/31/2010	LL3	10		211.2	8.21	8.34	19.13
8/30/2010	LL1	6		187.1	8.81	9.02	19.57		8/31/2010	LL3	12		227.3	8.65	8.42	17.81
8/30/2010	LL1	7	Y	187.3	8.79	8.98	19.56		8/31/2010	LL3	15		268.2	9.06	8.45	14.99
8/30/2010	LL1	7		187	8.78	8.99	19.56		8/31/2010	LL3	18		270	9.04	8.34	14.84
8/30/2010	LL1	8		187.6	8.75	8.97	19.54		8/31/2010	LL3	20		270.2	9	8.22	14.85
8/30/2010	LL1	9		190.6	8.5	8.89	19.4		8/31/2010	LL3	21		269.8	8.96	8.17	14.9
8/30/2010	LL1	10	Y	226.6	6.23	8.43	18.31		8/31/2010	LL4	0.5		191.5	9.11	8.53	19.66
8/30/2010	LL1	10		224.6	6.19	8.23	18.38		8/31/2010	LL4	1		191.6	9.11	8.53	19.66
8/30/2010	LL1	12		233.2	5.68	8.28	17.82		8/31/2010	LL4	2		192.2	9.11	8.56	19.6
8/30/2010	LL1	15		242	5.86	8.21	17.43		8/31/2010	LL4	3		191.9	9.07	8.57	19.58
8/30/2010	LL1	15	Y	241.7	5.83	8.12	17.42		8/31/2010	LL4	4		191.9	9	8.56	19.41
8/30/2010	LL1	18		247.8	6.2	8.16	17.21		8/31/2010	LL4	5		210.2	9.56	8.67	18.42
8/30/2010	LL1	21		252.5	6.76	8.17	16.98		8/31/2010	LL4	5	Y	208.9	9.51	8.64	18.49
8/30/2010	LL1	21	Y	252.5	6.71	8.14	16.97		8/31/2010	LL4	6		280.2	9.52	8.55	13.92
8/30/2010	LL1	24		256	7.03	8.18	16.75		8/31/2010	LL4	7		280.8	9.66	8.44	13.81
8/30/2010	LL1	27		260.6	7.16	8.17	16.43		8/31/2010	LL4	8		280.8	9.68	8.33	13.8
8/30/2010	LL1	30	Y	261.7	7.12	8.13	16.3		8/31/2010	LL4	9		281.1	9.65	8.26	13.81
8/30/2010	LL1	30		261.7	7.15	8.15	16.3		8/31/2010	LL5	0.5		208.2	10.28	8.53	17.76
8/30/2010	LL1	33		261.7	7.02	8.07	16.28		8/31/2010	LL5	1		209.9	10.29	8.52	17.61
									8/31/2010	LL5	2		231.6	10.08	8.45	16.13
									8/31/2010	LL5	3		249.3	10	8.35	14.97
									8/31/2010	LL5	3	Y	251	9.98	8.41	15.03
									8/31/2010	LL5	4		277.6	9.73	8.21	13.18
									8/31/2010	LL5	5		279.3	9.67	8.11	13.04

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
9/13/2010	LL0	0.5		213	9.36	8.4	18.26		9/13/2010	LL2	0.5		218.5	8.86	8.6	19.27
9/13/2010	LL0	1		212.8	9.39	8.47	18.21		9/13/2010	LL2	0.5	Y	218.4	8.89	8.6	19.29
9/13/2010	LL0	2		212.8	9.44	8.5	18.11		9/13/2010	LL2	1		217.7	8.98	8.61	18.57
9/13/2010	LL0	3		212	9.55	8.55	17.98		9/13/2010	LL2	2		217.9	8.98	8.56	18.37
9/13/2010	LL0	4		212.5	9.58	8.55	17.82		9/13/2010	LL2	3		217.5	8.94	8.47	18.24
9/13/2010	LL0	5		213.1	9.23	8.47	17.74		9/13/2010	LL2	4		217.8	8.85	8.38	18.17
9/13/2010	LL0	6		212.7	9.1	8.44	17.74		9/13/2010	LL2	5		217.7	8.88	8.34	18.08
9/13/2010	LL0	7		213.2	8.95	8.39	17.7		9/13/2010	LL2	6	Y	217.4	8.73	8.29	17.98
9/13/2010	LL0	8		213.2	8.83	8.36	17.68		9/13/2010	LL2	6		217.1	8.73	8.26	17.98
9/13/2010	LL0	9		214.1	8.68	8.32	17.64		9/13/2010	LL2	7		218.2	8.72	8.24	17.95
9/13/2010	LL0	10		226.1	6.97	7.97	17.53		9/13/2010	LL2	8		218.8	8.55	8.2	17.89
9/13/2010	LL0	12	Y	254.9	4.93	7.6	16.96		9/13/2010	LL2	9		229.3	7.96	8.07	17.62
9/13/2010	LL0	12		255.3	4.96	7.65	16.89		9/13/2010	LL2	10		250.7	6.62	7.9	17.23
9/13/2010	LL0	15		249.7	4.87	7.55	16.12		9/13/2010	LL2	12		257.8	6.41	7.85	16.85
9/13/2010	LL0	18		247.6	5.31	7.55	15.73		9/13/2010	LL2	15		261.7	6.96	7.91	16.25
9/13/2010	LL0	21		263	6.2	7.62	15.39		9/13/2010	LL2	18		252.7	8.76	8.2	15.06
9/13/2010	LL0	24		255.7	6.08	7.62	15.16		9/13/2010	LL2	21		261.2	8.88	8.23	14.32
9/13/2010	LL0	27		254.2	5.75	7.56	15.05		9/13/2010	LL2	24		261.7	8.81	8.13	14.26
9/13/2010	LL0	30		259.5	6.06	7.56	14.89		9/13/2010	LL2	24	Y	261.7	8.83	8.17	14.25
9/13/2010	LL0	33		236.5	5.14	7.47	14.63		9/13/2010	LL2	25		262	8.79	8.09	14.25
9/13/2010	LL0	36		246.7	5.6	7.48	14.63		9/14/2010	LL3	0.5		202.1	9.51	8.26	18.36
9/13/2010	LL0	39	Y	252.2	5.97	7.54	14.66		9/14/2010	LL3	1		202	9.48	8.25	18.36
9/13/2010	LL0	39		250.2	6.04	7.55	14.64		9/14/2010	LL3	2		202.3	9.5	8.25	18.34
9/13/2010	LL0	42		213.4	3.95	7.34	14.43		9/14/2010	LL3	3		202.4	9.45	8.25	18.29
9/13/2010	LL0	45		110.9	0.25	7.01	13.86		9/14/2010	LL3	4		202.9	9.43	8.26	18.15
9/13/2010	LL1	0.5		218	9.21	9.02	18.55		9/14/2010	LL3	5		202.6	9.35	8.26	18.06
9/13/2010	LL1	1		218.2	9.21	8.96	18.42		9/14/2010	LL3	6		204.7	8.86	8.14	17.91
9/13/2010	LL1	2		217.9	9.23	8.96	18.18		9/14/2010	LL3	7		203.9	8.61	8.09	17.67
9/13/2010	LL1	3		217.5	9.28	8.95	18.01		9/14/2010	LL3	8		204	8.73	8.11	17.49
9/13/2010	LL1	4		217	9.34	8.92	17.93		9/14/2010	LL3	9		206	8.8	8.11	17.32
9/13/2010	LL1	5		218.3	9.14	8.84	17.91		9/14/2010	LL3	10		208.9	9	8.13	17.05
9/13/2010	LL1	6		218.8	9.01	8.77	17.83		9/14/2010	LL3	10	Y	208.7	9.01	8.12	17.05
9/13/2010	LL1	7	Y	218.9	8.92	8.71	17.79		9/14/2010	LL3	12		221.7	9.45	8.13	15.82
9/13/2010	LL1	7		219	8.91	8.71	17.8		9/14/2010	LL3	15		236.3	9.52	8.08	14.35
9/13/2010	LL1	8		218.8	8.87	8.68	17.8		9/14/2010	LL3	18		236.5	9.44	7.96	14.31
9/13/2010	LL1	9		220.5	8.58	8.59	17.71		9/14/2010	LL3	20		236.7	9.4	7.88	14.27
9/13/2010	LL1	10		222	8.23	8.47	17.61		9/14/2010	LL3	21		236.7	9.33	7.84	14.26
9/13/2010	LL1	12		257.1	5.52	7.98	17.11		9/14/2010	LL4	0.5		200.6	9.35	7.77	18.23
9/13/2010	LL1	15		266.4	5.84	7.96	16.54		9/14/2010	LL4	1		200.7	9.45	7.77	18.2
9/13/2010	LL1	18		266.9	6.7	8.04	16.07		9/14/2010	LL4	2		201.3	9.46	7.79	18.04
9/13/2010	LL1	21		269	7.56	8.14	15.4		9/14/2010	LL4	3		203.8	10.01	7.88	17.8
9/13/2010	LL1	24		271.7	8.2	8.23	14.55		9/14/2010	LL4	4		215.2	10.46	7.95	17.01
9/13/2010	LL1	27		273.3	8.22	8.21	14.44		9/14/2010	LL4	4	Y	217.7	10.38	7.95	16.81
9/13/2010	LL1	30		273.6	8.2	8.17	14.33		9/14/2010	LL4	5		239.1	9.93	8	14.2
9/13/2010	LL1	30	Y	273.8	8.19	8.19	14.35		9/14/2010	LL4	6		239.3	9.88	7.91	14.13
9/13/2010	LL1	32		274.1	8.13	8.14	14.32		9/14/2010	LL4	7		239.6	9.86	7.83	14.12
									9/14/2010	LL4	8		239.9	9.84	7.77	14.07
									9/14/2010	LL4	9		240	9.8	7.72	14.08
									9/14/2010	LL5	0.5		236	9.73	8.53	14.32
									9/14/2010	LL5	1		235.7	9.7	8.47	14.27
									9/14/2010	LL5	2		236	9.69	8.35	14.23
									9/14/2010	LL5	3		235.1	9.58	8.21	14.23
									9/14/2010	LL5	4		238.4	9.56	8.13	14.04
									9/14/2010	LL5	5	Y	238.6	9.58	8.04	13.95
									9/14/2010	LL5	5		238.5	9.57	8.07	13.96
									9/14/2010	LL5	6		237.9	9.58	8	13.95

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
9/27/2010	LL0	0.5		224	10.03	8.5	17.71		9/27/2010	LL2	0.5		228	9.03	8.2	17.58
9/27/2010	LL0	1		223	10.1	8.52	17.62		9/27/2010	LL2	1		228	9.03	8.19	17.51
9/27/2010	LL0	2		224	10.02	8.5	17.53		9/27/2010	LL2	1	Y	228	9.04	8.18	17.5
9/27/2010	LL0	3		223	9.96	8.5	17.45		9/27/2010	LL2	2		228	9.08	8.18	17.13
9/27/2010	LL0	4		224	9.95	8.5	17.39		9/27/2010	LL2	3		228	9.05	8.18	17.12
9/27/2010	LL0	5		224	9.8	8.47	17.26		9/27/2010	LL2	4		228	8.96	8.17	17.04
9/27/2010	LL0	6		224	9.62	8.42	17.14		9/27/2010	LL2	5		228	8.94	8.16	17.02
9/27/2010	LL0	7		228	9.09	8.31	17.02		9/27/2010	LL2	6		242	9.8	8.17	14
9/27/2010	LL0	8		243	7.85	8.04	16.83		9/27/2010	LL2	7		227	8.8	8.11	16.87
9/27/2010	LL0	9		253	6.68	7.84	16.59		9/27/2010	LL2	8		227	8.52	8.06	16.69
9/27/2010	LL0	10		262	6.32	7.76	16.28		9/27/2010	LL2	9		225	8.53	8.02	16.52
9/27/2010	LL0	12		261	6.87	7.78	15.76		9/27/2010	LL2	10		225	8.69	8.03	16.14
9/27/2010	LL0	15		253	7.27	7.81	15.19		9/27/2010	LL2	12	Y	230	8.56	7.99	15.69
9/27/2010	LL0	18		259	7.18	7.81	14.96		9/27/2010	LL2	12		230	8.58	8	15.72
9/27/2010	LL0	21		252	7.22	7.79	14.79		9/27/2010	LL2	15		229	8.73	8	15.14
9/27/2010	LL0	24		258	7.01	7.78	14.72		9/27/2010	LL2	18		217	9.3	8.07	14.22
9/27/2010	LL0	27		262	6.75	7.74	14.64		9/27/2010	LL2	21		217	9.11	8.02	13.92
9/27/2010	LL0	30		261	6.72	7.75	14.61		9/27/2010	LL2	24		218	8.99	8	13.87
9/27/2010	LL0	33		265	6.83	7.77	14.59		9/28/2010	LL3	0.5		217	9.71	8.34	17.44
9/27/2010	LL0	36		266	6.72	7.75	14.57		9/28/2010	LL3	1		218	9.86	8.37	17.28
9/27/2010	LL0	39		267	6.48	7.73	14.53		9/28/2010	LL3	2		217	9.94	8.39	17.29
9/27/2010	LL0	42		267	5.43	7.64	14.45		9/28/2010	LL3	3		217	9.93	8.4	17.26
9/27/2010	LL0	45		266	5.01	7.59	14.42		9/28/2010	LL3	4	Y	220	10	8.39	16.79
9/27/2010	LL1	0.5		226	9.59	8.39	17.6		9/28/2010	LL3	4		220	10.01	8.39	16.79
9/27/2010	LL1	1		227	9.6	8.38	17.47		9/28/2010	LL3	5		220	9.98	8.38	16.77
9/27/2010	LL1	2		227	9.48	8.35	17.22		9/28/2010	LL3	6		220	9.67	8.32	16.67
9/27/2010	LL1	3		228	9.33	8.31	17.13		9/28/2010	LL3	7		218	9.3	8.27	16.96
9/27/2010	LL1	4	Y	228	9.25	8.29	17.06		9/28/2010	LL3	8		217	9.4	8.21	16.14
9/27/2010	LL1	4		228	9.24	8.29	17.06		9/28/2010	LL3	9		215	9.58	8.24	15.81
9/27/2010	LL1	5		228	9.24	8.3	17.01		9/28/2010	LL3	10		215	9.89	8.27	15.62
9/27/2010	LL1	6		228	9.24	8.3	16.99		9/28/2010	LL3	12		213	9.94	8.23	14.87
9/27/2010	LL1	7		228	9.14	8.28	16.98		9/28/2010	LL3	15		212	9.7	8.16	14.48
9/27/2010	LL1	7	Y	228	9.15	8.28	16.95		9/28/2010	LL3	18		212	9.65	8.11	14.15
9/27/2010	LL1	8		228	9.12	8.27	16.95		9/28/2010	LL4	0.5		214	10.76	8.56	17.3
9/27/2010	LL1	9		228	9.09	8.27	16.93		9/28/2010	LL4	1		214	10.83	8.57	17.3
9/27/2010	LL1	10		229	9.11	8.26	16.83		9/28/2010	LL4	2		214	10.69	8.54	17.2
9/27/2010	LL1	12	Y	248	7.45	7.87	15.8		9/28/2010	LL4	3		215	11.42	8.67	16.28
9/27/2010	LL1	12		248	7.39	7.85	15.81		9/28/2010	LL4	3	Y	212	11.55	8.65	16.39
9/27/2010	LL1	15		244	7.67	7.85	15.21		9/28/2010	LL4	4		236	12.85	8.39	10.99
9/27/2010	LL1	18		241	7.97	7.87	14.84		9/28/2010	LL4	5		247	13.93	8.26	10.75
9/27/2010	LL1	18	Y	241	7.9	7.88	15.03		9/28/2010	LL4	6		209	10.3	8.17	14.26
9/27/2010	LL1	21		239	8.26	7.91	14.56		9/28/2010	LL4	7		211	10.1	8.12	14.17
9/27/2010	LL1	24		235	8.64	7.97	14.34		9/28/2010	LL4	8		213	9.93	8.07	13.68
9/27/2010	LL1	27		236	8.56	7.96	14.25		9/28/2010	LL4	9		213	9.83	8.05	13.86
9/27/2010	LL1	30		235	8.61	7.97	14.16		9/28/2010	LL4	9	Y	213	9.83	8.06	13.84
9/27/2010	LL1	33		235	8.54	7.96	14.13		9/28/2010	LL5	0.5		211	9.71	8.08	14.78
9/27/2010	LL1	33	Y	235	8.55	7.96	14.12		9/28/2010	LL5	1		211	9.7	8.07	14.77
									9/28/2010	LL5	2	Y	210	9.72	8.08	14.81
									9/28/2010	LL5	2		210	9.75	8.08	14.77
									9/28/2010	LL5	3		211	9.81	8.11	14.62
									9/28/2010	LL5	4		210	9.82	8.1	14.42
									9/28/2010	LL5	5		210	9.73	8.09	14.34
									9/28/2010	LL5	6		210	9.73	8.08	14.32
									9/28/2010	LL5	7		209	9.7	8.08	14.31
									9/28/2010	LL5	8		222	10.66	8.08	13.45

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
10/12/2010	LL0	0.5		247	9.29	8.45	15.97		10/12/2010	LL2	0.5		239	8.83	8.2	16.15
10/12/2010	LL0	1		247	9.29	8.47	15.95		10/12/2010	LL2	1		238	8.91	8.24	16.09
10/12/2010	LL0	2		247	9.27	8.43	15.91		10/12/2010	LL2	2		238	8.96	8.26	15.95
10/12/2010	LL0	3		247	9.28	8.38	15.88		10/12/2010	LL2	3		238	8.97	8.25	15.85
10/12/2010	LL0	4		246	9.32	8.47	15.83		10/12/2010	LL2	4		238	8.97	8.23	15.82
10/12/2010	LL0	5		246	9.29	8.48	15.8		10/12/2010	LL2	5		238	8.98	8.27	15.79
10/12/2010	LL0	6		247	7.7	8.07	15.24		10/12/2010	LL2	6		237	8.94	8.27	15.79
10/12/2010	LL0	7		243	7.45	7.95	15.07		10/12/2010	LL2	7		238	8.9	8.27	15.75
10/12/2010	LL0	8		249	7.26	7.91	15.06		10/12/2010	LL2	8	Y	238	8.88	8.26	15.73
10/12/2010	LL0	9		249	7.26	7.88	15		10/12/2010	LL2	8		238	8.89	8.26	15.74
10/12/2010	LL0	10		253	7.07	7.86	14.88		10/12/2010	LL2	9		238	8.88	8.26	15.72
10/12/2010	LL0	12		251	6.99	7.83	14.7		10/12/2010	LL2	10		237	8.83	8.25	15.71
10/12/2010	LL0	15		242	7.21	7.84	14.64		10/12/2010	LL2	12		237	8.74	8.23	15.67
10/12/2010	LL0	18		235	7.33	7.83	14.55		10/12/2010	LL2	15		227	8.65	8.08	14.74
10/12/2010	LL0	21		235	7.25	7.83	14.49		10/12/2010	LL2	18		225	8.54	8.01	13.81
10/12/2010	LL0	24		249	6.83	7.81	14.5		10/12/2010	LL2	21		225	8.63	7.99	13.76
10/12/2010	LL0	27		258	6.47	7.76	14.47		10/12/2010	LL2	24		224	8.51	7.97	13.66
10/12/2010	LL0	30		254	6.41	7.74	14.38		10/13/2010	LL3	0.5		234	9.16	8.25	15.62
10/12/2010	LL0	33		242	6.62	7.75	14.23		10/13/2010	LL3	1	Y	234	9.2	8.28	15.64
10/12/2010	LL0	36		243	6.54	7.74	14.21		10/13/2010	LL3	1		234	9.19	8.26	15.65
10/12/2010	LL0	36	Y	243	6.55	7.74	14.21		10/13/2010	LL3	2		234	9.22	8.3	15.63
10/12/2010	LL0	39		240	6.2	7.7	14.17		10/13/2010	LL3	3		234	9.22	8.29	15.62
10/12/2010	LL0	42		241	5.55	7.63	14.12		10/13/2010	LL3	4		234	9.21	8.29	15.62
10/12/2010	LL0	45		242	5.39	7.6	14.12		10/13/2010	LL3	5		234	9.17	8.28	15.6
10/12/2010	LL0	48		242	4.93	7.56	14.1		10/13/2010	LL3	6		234	9.16	8.29	15.59
10/12/2010	LL0	51		242	4.93	7.56	14.1		10/13/2010	LL3	7		233	9.16	8.27	15.55
10/12/2010	LL1	0.5		244	9.06	8.37	15.98		10/13/2010	LL3	8		232	9.16	8.26	15.5
10/12/2010	LL1	1		244	9.07	8.36	15.98		10/13/2010	LL3	9		232	9.18	8.27	15.49
10/12/2010	LL1	2		243	9.05	8.33	15.96		10/13/2010	LL3	10		230	9.24	8.27	15.26
10/12/2010	LL1	3		244	9.07	8.34	15.98		10/13/2010	LL3	12		227	9.3	8.21	14.23
10/12/2010	LL1	4		244	9.04	8.34	15.94		10/13/2010	LL3	15		225	9.31	8.15	13.46
10/12/2010	LL1	5		243	9.06	8.35	15.8		10/13/2010	LL3	18		225	9.27	8.12	13.33
10/12/2010	LL1	6		243	9.04	8.35	15.77		10/13/2010	LL3	18	Y	225	9.26	8.12	13.35
10/12/2010	LL1	7		243	8.98	8.34	15.74		10/13/2010	LL3	21		225	9.2	8.12	13.31
10/12/2010	LL1	8		243	8.97	8.34	15.71		10/13/2010	LL4	0.5		229	10.13	8.42	14.5
10/12/2010	LL1	9		243	8.94	8.33	15.69		10/13/2010	LL4	1		228	10.33	8.5	14.37
10/12/2010	LL1	9	Y	243	8.93	8.33	15.7		10/13/2010	LL4	2		228	10.24	8.49	14.14
10/12/2010	LL1	10		241	8.78	8.26	15.67		10/13/2010	LL4	3		224	10.1	8.33	12.72
10/12/2010	LL1	12		233	7.98	7.99	15.1		10/13/2010	LL4	4		224	10.05	8.25	12.31
10/12/2010	LL1	15		228	8.01	7.93	14.69		10/13/2010	LL4	4	Y	223	10.05	8.23	12.3
10/12/2010	LL1	18		227	8.11	7.94	14.48		10/13/2010	LL4	5		223	10	8.22	12.21
10/12/2010	LL1	21		227	8.14	7.93	14.22		10/13/2010	LL4	6		223	9.98	8.21	12.18
10/12/2010	LL1	24		226	8.24	7.94	13.99		10/13/2010	LL4	7		223	9.95	8.2	12.17
10/12/2010	LL1	27		226	8.2	7.94	13.89		10/13/2010	LL4	8		223	9.94	8.2	12.17
10/12/2010	LL1	30		226	8.03	7.92	13.86		10/13/2010	LL4	9		223	9.93	8.2	12.18
									10/13/2010	LL5	0.5		222	9.85	8.21	12.04
									10/13/2010	LL5	1		222	9.86	8.2	12
									10/13/2010	LL5	2		223	9.86	8.2	11.96
									10/13/2010	LL5	3		223	9.86	8.18	11.94
									10/13/2010	LL5	4		223	9.86	8.17	11.91
									10/13/2010	LL5	5	Y	223	9.81	8.17	11.91
									10/13/2010	LL5	5		223	9.81	8.17	11.9
									10/13/2010	LL5	6		223	9.8	8.17	11.9
									10/13/2010	LL5	7		223	9.79	8.17	11.89
									10/13/2010	LL5	8		223	9.75	8.16	11.89

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
5/23/2011	LL0	0.5		62.9	12.25	7.88	12.06		5/23/2011	LL2	0.5		62.3	12	7.98	11.87
5/23/2011	LL0	1		62.3	12.26	7.78	12.6		5/23/2011	LL2	1		62	12.02	7.9	11.79
5/23/2011	LL0	2		62.3	12.38	7.79	11.92		5/23/2011	LL2	2		62.2	12.03	7.87	11.74
5/23/2011	LL0	3		62.3	12.34	7.77	11.38		5/23/2011	LL2	3		62.2	12.04	7.86	11.92
5/23/2011	LL0	4		62	12.34	7.78	11.36		5/23/2011	LL2	4		62.3	12.02	7.83	11.87
5/23/2011	LL0	5		62.2	12.25	7.76	11.36		5/23/2011	LL2	4	Y	62.2	12.01	7.86	11.83
5/23/2011	LL0	6		62.2	12.22	7.77	11.27		5/23/2011	LL2	5		62.2	11.99	7.86	11.83
5/23/2011	LL0	7		61.9	12.11	7.77	11.22		5/23/2011	LL2	6		62.2	12	7.86	11.89
5/23/2011	LL0	8		62.1	12.07	7.74	11.17		5/23/2011	LL2	7		62.1	11.99	7.85	11.84
5/23/2011	LL0	9		62.3	12.06	7.75	11.19		5/23/2011	LL2	8		62.1	11.96	7.85	11.76
5/23/2011	LL0	10		62.1	12.04	7.76	11.2		5/23/2011	LL2	9		62	11.93	7.85	11.73
5/23/2011	LL0	12	Y	62.2	12.01	7.73	11.09		5/23/2011	LL2	10		61.8	11.91	7.83	11.69
5/23/2011	LL0	12		62.9	12	7.73	11.07		5/23/2011	LL2	11		62	11.9	7.83	11.66
5/23/2011	LL0	13		62.5	11.96	7.73	11.03		5/23/2011	LL2	12	Y	62.2	11.85	7.83	11.65
5/23/2011	LL0	15		62	11.93	7.73	10.97		5/23/2011	LL2	12		62	11.89	7.84	11.66
5/23/2011	LL0	18		62.4	11.88	7.73	10.93		5/23/2011	LL2	15		62	11.82	7.84	11.66
5/23/2011	LL0	21		62.4	11.83	7.74	10.89		5/23/2011	LL2	18		62.1	11.78	7.84	11.66
5/23/2011	LL0	24		62.4	11.8	7.71	10.84		5/23/2011	LL2	21		62	11.76	7.83	11.64
5/23/2011	LL0	27		62.1	11.76	7.71	10.9		5/23/2011	LL2	24		62.1	11.68	7.85	11.62
5/23/2011	LL0	30		62.5	11.74	7.69	10.77		5/24/2011	LL3	0.5		60.8	11.91	7.76	11.78
5/23/2011	LL0	30	Y	62.7	11.72	7.69	10.74		5/24/2011	LL3	1		61.1	11.93	7.76	11.75
5/23/2011	LL0	33		62.8	11.7	7.71	10.73		5/24/2011	LL3	2		60.9	11.92	7.77	11.74
5/23/2011	LL0	36		63.3	11.65	7.7	10.52		5/24/2011	LL3	3		60.9	11.9	7.77	11.74
5/23/2011	LL0	39		63.4	11.56	7.68	10.41		5/24/2011	LL3	4		60.8	11.88	7.78	11.76
5/23/2011	LL0	42		63.9	11.52	7.66	10.21		5/24/2011	LL3	5		60.7	11.86	7.79	11.75
5/23/2011	LL0	45		63.9	11.44	7.65	10.19		5/24/2011	LL3	5	Y	60.8	11.87	7.79	11.75
5/23/2011	LL0	48		64	11.4	7.65	10.19		5/24/2011	LL3	6		60.9	11.84	7.8	11.75
5/23/2011	LL0	51		64	11.33	7.64	10.18		5/24/2011	LL3	7		60.9	11.82	7.8	11.74
5/23/2011	LL0	54		64.1	11.28	7.63	10.14		5/24/2011	LL3	8		60.7	11.8	7.81	11.75
5/23/2011	LL1	0.5		62.1	12.03	7.96	12.84		5/24/2011	LL3	9		60.5	11.79	7.81	11.74
5/23/2011	LL1	1	Y	61.9	12.13	7.87	12.08		5/24/2011	LL3	10		60.9	11.79	7.82	11.74
5/23/2011	LL1	1		62.1	12.11	7.86	12.08		5/24/2011	LL3	12		60.9	11.75	7.83	11.75
5/23/2011	LL1	2		62.2	12.09	7.86	11.82		5/24/2011	LL3	15		60.5	11.71	7.82	11.74
5/23/2011	LL1	3		62.1	12.06	7.86	11.82		5/24/2011	LL3	18		60.8	11.68	7.83	11.74
5/23/2011	LL1	4		62.1	11.94	7.82	11.72		5/24/2011	LL3	21		60.9	11.62	7.83	11.74
5/23/2011	LL1	5		62.2	11.9	7.8	11.7		5/24/2011	LL4	0.5		57.7	12.12	7.75	11.78
5/23/2011	LL1	6		62.4	11.88	7.81	11.69		5/24/2011	LL4	1		57.8	12.11	7.76	11.77
5/23/2011	LL1	7		62	11.87	7.81	11.67		5/24/2011	LL4	1	Y	57.7	12.1	7.76	11.78
5/23/2011	LL1	8		61.9	11.84	7.82	11.68		5/24/2011	LL4	2		57.8	12.11	7.77	11.77
5/23/2011	LL1	9		62.1	11.82	7.8	11.66		5/24/2011	LL4	3		57.8	12.1	7.77	11.77
5/23/2011	LL1	10		62.4	11.8	7.79	11.62		5/24/2011	LL4	4		57.7	12.1	7.78	11.77
5/23/2011	LL1	11	Y	62.3	11.8	7.78	11.64		5/24/2011	LL4	5		57.8	12.07	7.78	11.77
5/23/2011	LL1	11		62	11.77	7.78	11.65		5/24/2011	LL4	6		57.7	12.02	7.79	11.77
5/23/2011	LL1	12		62	11.77	7.79	11.63		5/24/2011	LL4	7		57.7	12.04	7.79	11.77
5/23/2011	LL1	15		62.3	11.72	7.78	11.61		5/24/2011	LL4	8		57.7	12	7.78	11.77
5/23/2011	LL1	18		62	11.66	7.8	11.59		5/24/2011	LL4	9		57.9	12.01	7.79	11.77
5/23/2011	LL1	21		62.4	11.64	7.8	11.58		5/24/2011	LL5	0.5		61.4	12.06	7.78	11.84
5/23/2011	LL1	24		62.3	11.61	7.78	11.53		5/24/2011	LL5	0.5	Y	62	12.08	7.78	11.85
5/23/2011	LL1	27		62.9	11.62	7.75	11.07		5/24/2011	LL5	1		61.2	12.1	7.78	11.85
5/23/2011	LL1	30		63.8	11.52	7.73	10.56		5/24/2011	LL5	2		61.4	12.09	7.79	11.84
5/23/2011	LL1	33		64.2	11.45	7.68	10.23		5/24/2011	LL5	3		61.6	12.07	7.79	11.84
									5/24/2011	LL5	5.5		61.8	12	7.81	11.84

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
6/6/2011	LL0	0.5		65.8	12.19	8.03	12.81
6/6/2011	LL0	1		66.1	12.22	7.95	12.55
6/6/2011	LL0	2		66.1	12.15	7.94	12.38
6/6/2011	LL0	3		66.5	12.05	7.93	12.26
6/6/2011	LL0	3	Y	66.4	12.01	7.96	12.22
6/6/2011	LL0	4		66.2	11.83	7.84	11.93
6/6/2011	LL0	5		66.3	11.7	7.79	11.74
6/6/2011	LL0	6		66.5	11.67	7.79	11.71
6/6/2011	LL0	7		66.3	11.63	7.81	11.69
6/6/2011	LL0	8		66.5	11.62	7.81	11.7
6/6/2011	LL0	9		66.2	11.61	7.8	11.67
6/6/2011	LL0	10		66.5	11.59	7.79	11.68
6/6/2011	LL0	12		66.7	11.56	7.75	11.64
6/6/2011	LL0	15		66.8	11.5	7.69	11.51
6/6/2011	LL0	18		66.4	11.47	7.66	11.5
6/6/2011	LL0	18	Y	66.5	11.45	7.67	11.48
6/6/2011	LL0	21		66.4	11.4	7.67	11.48
6/6/2011	LL0	24		66.7	11.34	7.66	11.4
6/6/2011	LL0	27		66.1	11.27	7.64	11.33
6/6/2011	LL0	30		66.1	11.24	7.64	11.32
6/6/2011	LL0	33		66.1	11.2	7.63	11.32
6/6/2011	LL0	36		66.1	11.17	7.62	11.32
6/6/2011	LL0	39		66.1	11.14	7.62	11.32
6/6/2011	LL0	42		66	11.09	7.62	11.32
6/6/2011	LL0	45	Y	66	11.08	7.62	11.31
6/6/2011	LL0	45		66.3	11.05	7.62	11.31
6/6/2011	LL0	48		66.2	11.03	7.61	11.3
6/6/2011	LL0	51		66.3	11	7.62	11.3

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
6/20/2011	LL0	0.5		66.8	11.57	7.88	14.93		6/20/2011	LL2	0.5		70.1	11.41	7.56	14.58
6/20/2011	LL0	1		66.9	11.68	7.91	14.77		6/20/2011	LL2	1		70	11.4	7.6	14.57
6/20/2011	LL0	2		66.6	11.76	7.95	14.52		6/20/2011	LL2	2		70.1	11.54	7.64	14.13
6/20/2011	LL0	3		66.5	11.8	7.97	14.39		6/20/2011	LL2	3		69.9	11.57	7.65	13.89
6/20/2011	LL0	4		66.6	11.79	7.95	14.3		6/20/2011	LL2	4		69.9	11.49	7.64	13.86
6/20/2011	LL0	5		66.8	11.5	7.71	13.69		6/20/2011	LL2	4	Y	69.9	11.5	7.65	13.73
6/20/2011	LL0	6		67.1	11.42	7.64	13.63		6/20/2011	LL2	5		70	11.5	7.66	13.74
6/20/2011	LL0	7		67.2	11.45	7.62	13.6		6/20/2011	LL2	6		69.8	11.5	7.65	13.66
6/20/2011	LL0	8		66.9	11.38	7.59	13.58		6/20/2011	LL2	7		70.2	11.48	7.64	13.66
6/20/2011	LL0	9		66.9	11.47	7.58	13.66		6/20/2011	LL2	8		69.9	11.41	7.67	13.66
6/20/2011	LL0	10		67.3	11.47	7.6	13.53		6/20/2011	LL2	9		70	11.38	7.64	13.64
6/20/2011	LL0	12		67.2	11.47	7.57	13.5		6/20/2011	LL2	10		69.9	11.4	7.66	13.63
6/20/2011	LL0	12	Y	68	11.46	7.58	13.47		6/20/2011	LL2	12		70	11.39	7.67	13.64
6/20/2011	LL0	15		67.5	11.5	7.56	13.15		6/20/2011	LL2	15		70	11.35	7.65	13.55
6/20/2011	LL0	18		67.5	11.48	7.54	13.14		6/20/2011	LL2	18		70	11.29	7.63	13.51
6/20/2011	LL0	21		67.7	11.53	7.55	13.14		6/20/2011	LL2	21		69.9	11.29	7.62	13.5
6/20/2011	LL0	24		67.5	11.48	7.54	13.15		6/20/2011	LL2	24		70	11.31	7.62	13.48
6/20/2011	LL0	27		67.6	11.48	7.54	13.1		6/20/2011	LL2	26		70	11.33	7.62	13.48
6/20/2011	LL0	30		67.6	11.52	7.55	13.09		6/21/2011	LL3	0.5		71.9	11.56	7.72	13.71
6/20/2011	LL0	33		67.6	11.49	7.55	13.08		6/21/2011	LL3	1		71.9	11.5	7.71	13.69
6/20/2011	LL0	36		67.6	11.53	7.53	13.05		6/21/2011	LL3	2		72.1	11.49	7.72	13.68
6/20/2011	LL0	39		67.8	11.49	7.54	13.03		6/21/2011	LL3	3		72	11.54	7.72	13.65
6/20/2011	LL0	42		67.5	11.44	7.53	13.04		6/21/2011	LL3	4		71.7	11.49	7.73	13.65
6/20/2011	LL0	44		67.9	11.51	7.53	13.04		6/21/2011	LL3	5		71.9	11.55	7.73	13.65
6/20/2011	LL1	0.5		67.3	11.86	8.24	15.92		6/21/2011	LL3	6		71.9	11.48	7.78	13.64
6/20/2011	LL1	1		67.4	12.22	8.34	14.84		6/21/2011	LL3	7		71.7	11.53	7.72	13.63
6/20/2011	LL1	2		67.7	12.23	8.35	14.76		6/21/2011	LL3	8		72	11.56	7.67	13.63
6/20/2011	LL1	3		67.5	12.2	8.36	14.71		6/21/2011	LL3	9		71.9	11.53	7.73	13.64
6/20/2011	LL1	4		67.9	12.05	8.24	14.35		6/21/2011	LL3	9	Y	72	11.5	7.75	13.64
6/20/2011	LL1	5		68.3	11.87	8.03	13.99		6/21/2011	LL3	10		71.9	11.53	7.75	13.64
6/20/2011	LL1	6		68.5	11.8	7.93	13.78		6/21/2011	LL3	12		72	11.54	7.77	13.63
6/20/2011	LL1	7		68.2	11.77	7.87	13.71		6/21/2011	LL3	15		72	11.54	7.75	13.63
6/20/2011	LL1	8		68.5	11.62	7.81	13.52		6/21/2011	LL3	18		72	11.54	7.73	13.62
6/20/2011	LL1	9		68.9	11.57	7.76	13.48		6/21/2011	LL4	0.5		71.2	11.53	7.64	13.4
6/20/2011	LL1	9	Y	68.6	11.59	7.78	13.47		6/21/2011	LL4	1		71.4	11.54	7.66	13.35
6/20/2011	LL1	10		68.9	11.59	7.75	13.46		6/21/2011	LL4	2		71.6	11.54	7.66	13.34
6/20/2011	LL1	12		68.8	11.51	7.71	13.32		6/21/2011	LL4	3		71.8	11.53	7.66	13.31
6/20/2011	LL1	15		68.8	11.51	7.69	13.3		6/21/2011	LL4	4		71.5	11.56	7.67	13.32
6/20/2011	LL1	18		68.8	11.55	7.59	13.3		6/21/2011	LL4	5		71.9	11.57	7.67	13.29
6/20/2011	LL1	21		68.6	11.54	7.69	13.26		6/21/2011	LL4	6		71.9	11.57	7.69	13.29
6/20/2011	LL1	24		68.4	11.51	7.65	13.25		6/21/2011	LL4	7		71.9	11.56	7.7	13.29
6/20/2011	LL1	27		68.5	11.47	7.64	13.21		6/21/2011	LL4	8		71.9	11.59	7.69	13.29
6/20/2011	LL1	30		68.9	11.52	7.64	13.2		6/21/2011	LL4	9		71.9	11.57	7.7	13.28
6/20/2011	LL1	32		68.8	11.48	7.64	13.2		6/21/2011	LL5	0.5		72	11.66	7.67	13.35
									6/21/2011	LL5	1		71.9	11.71	7.66	13.33
									6/21/2011	LL5	2		71.8	11.68	7.64	13.34
									6/21/2011	LL5	3		71.8	11.63	7.67	13.33
									6/21/2011	LL5	4		71.8	11.65	7.7	13.33
									6/21/2011	LL5	5		71.9	11.64	7.71	13.33

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
7/11/2011	LL0	0.5	Y	92.7	10.46	8.72	21.37		7/11/2011	LL2	0.5		95.3	10.86	8.88	21.85
7/11/2011	LL0	0.5		92.6	10.41	8.64	21.34		7/11/2011	LL2	1		95	11.16	8.93	20.88
7/11/2011	LL0	1		92.5	10.53	8.7	21.12		7/11/2011	LL2	2		95.9	11.54	9	19.89
7/11/2011	LL0	2		91.9	10.58	8.74	20.68		7/11/2011	LL2	3		94.1	11.71	8.88	19.06
7/11/2011	LL0	3		91.7	11.03	8.83	19.89		7/11/2011	LL2	4		93.5	11.27	8.7	18.55
7/11/2011	LL0	4		92.1	11.19	8.84	19.1		7/11/2011	LL2	4	Y	93.7	11.19	8.65	18.54
7/11/2011	LL0	5		92.1	11.15	8.8	18.91		7/11/2011	LL2	5		93.8	10.53	8.36	18.2
7/11/2011	LL0	6		91.5	10.91	8.71	18.71		7/11/2011	LL2	6		93.7	10.35	8.26	18.11
7/11/2011	LL0	7		89.5	10.63	8.64	18.47		7/11/2011	LL2	7		94.3	10.16	8.16	18
7/11/2011	LL0	8		89.1	10.58	8.61	18.37		7/11/2011	LL2	8		94	9.96	8.06	17.9
7/11/2011	LL0	9		89.3	10.42	8.51	18.19		7/11/2011	LL2	9		94.4	9.73	7.97	17.66
7/11/2011	LL0	10		93.8	9.94	8.11	18.03		7/11/2011	LL2	10		94.1	9.67	7.93	17.64
7/11/2011	LL0	10	Y	93.3	9.93	8.15	18.02		7/11/2011	LL2	12		94.5	9.63	7.89	17.56
7/11/2011	LL0	12		92.8	9.9	8.1	17.8		7/11/2011	LL2	15		94.6	9.62	7.89	17.44
7/11/2011	LL0	15		93.5	9.83	8.04	17.65		7/11/2011	LL2	18		94.6	9.51	7.85	17.04
7/11/2011	LL0	18		95.7	9.8	7.93	17.05		7/11/2011	LL2	21		94.9	9.33	7.68	16.22
7/11/2011	LL0	21		95.7	9.75	7.86	16.53		7/11/2011	LL2	21	Y	94.8	9.36	7.74	16.24
7/11/2011	LL0	24		89.3	9.67	7.8	16.14		7/11/2011	LL2	24		92.8	8.85	7.55	15.57
7/11/2011	LL0	27		86.3	9.58	7.75	15.88		7/12/2011	LL3	0.5		95.3	10.51	8.45	20.99
7/11/2011	LL0	30		86.7	9.54	7.71	15.68		7/12/2011	LL3	1		96.1	10.68	8.56	20.7
7/11/2011	LL0	33		86.7	9.51	7.68	15.48		7/12/2011	LL3	2		101.6	10.66	8.31	19.11
7/11/2011	LL0	36		86	9.4	7.64	15.24		7/12/2011	LL3	3		103.6	10.48	8.18	18.66
7/11/2011	LL0	39		85.6	9.21	7.59	15.1		7/12/2011	LL3	4		104.9	10.38	8.12	18.24
7/11/2011	LL0	39	Y	85.6	9.22	7.59	15.09		7/12/2011	LL3	5		103.4	10.37	8.07	17.91
7/11/2011	LL0	42		84.5	8.99	7.55	14.95		7/12/2011	LL3	6		105.5	10.19	7.97	17.38
7/11/2011	LL0	45		84.5	8.85	7.47	14.9		7/12/2011	LL3	7		106.5	10.14	7.94	17.31
7/11/2011	LL0	48		84.3	8.78	7.47	14.86		7/12/2011	LL3	8	Y	106	10.1	7.92	17.24
7/11/2011	LL0	51		83.9	8.72	7.46	14.86		7/12/2011	LL3	8		106	10.09	7.92	17.24
7/11/2011	LL0	54		84.2	8.57	7.44	14.84		7/12/2011	LL3	9		105.9	10.06	7.91	17.2
7/11/2011	LL1	0.5		95.6	11.1	8.82	19.86		7/12/2011	LL3	10		106	10.02	7.92	17.19
7/11/2011	LL1	1		95.4	11.09	8.79	19.8		7/12/2011	LL3	12		106.7	9.87	7.89	16.98
7/11/2011	LL1	2		95.2	11.19	8.76	19.7		7/12/2011	LL3	15		106.5	9.73	7.86	16.91
7/11/2011	LL1	3		95.1	11.33	8.8	19.42		7/12/2011	LL3	18		106.9	9.69	7.87	16.9
7/11/2011	LL1	4		95.6	11.03	8.65	18.98		7/12/2011	LL3	21		106.8	9.61	7.84	16.85
7/11/2011	LL1	5		94.6	10.48	8.41	18.68		7/12/2011	LL4	0.5		114.1	10.01	8.12	17.85
7/11/2011	LL1	6		94.6	10.36	8.33	18.64		7/12/2011	LL4	1		112.2	10.05	8.04	17.5
7/11/2011	LL1	7		93.8	10.11	8.27	18.58		7/12/2011	LL4	2		113	10	8	17.2
7/11/2011	LL1	8		93.8	9.92	8.08	18.23		7/12/2011	LL4	3		113.4	9.95	7.96	17.1
7/11/2011	LL1	9	Y	93.4	9.78	7.99	18.07		7/12/2011	LL4	4	Y	114.6	9.89	7.94	17.03
7/11/2011	LL1	9		93.7	9.77	7.96	18.07		7/12/2011	LL4	4		114.2	9.88	7.93	17.04
7/11/2011	LL1	10		93.4	9.69	7.92	17.9		7/12/2011	LL4	5		114.3	9.8	7.9	16.94
7/11/2011	LL1	12		93.2	9.56	7.86	17.68		7/12/2011	LL4	6		114.4	9.77	7.9	16.94
7/11/2011	LL1	15		93.3	9.46	7.82	17.59		7/12/2011	LL4	7		114.9	9.77	7.9	16.94
7/11/2011	LL1	18		93.8	9.36	7.78	17.49		7/12/2011	LL4	8		114.5	9.73	7.9	16.93
7/11/2011	LL1	21		96.4	9.68	7.78	16.5		7/12/2011	LL4	9		115.1	9.74	7.89	16.93
7/11/2011	LL1	24		95.1	9.62	7.73	16.17		7/12/2011	LL5	0.5		112.5	10.12	8.09	17.32
7/11/2011	LL1	27		93.2	9.5	7.68	15.86		7/12/2011	LL5	1		112.8	10.15	8.04	17.37
7/11/2011	LL1	30		89.4	9.14	7.59	15.25		7/12/2011	LL5	2		112.9	10.16	8.01	17.37
7/11/2011	LL1	33		89.1	8.88	7.5	15.13		7/12/2011	LL5	3		113.3	10.14	8	17.37
									7/12/2011	LL5	4		113.5	10.14	8.01	17.34
									7/12/2011	LL5	5		113.2	10.17	8.02	17.38
									7/12/2011	LL5	6		113	10.16	8.02	17.37
									7/12/2011	LL5	7		113	10.13	8.02	17.35

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
7/25/2011	LL0	0.5		104.2	9.58	8.28	21.15		7/25/2011	LL2	0.5		109.7	9.74	8.54	21.26
7/25/2011	LL0	1		104.2	9.59	8.4	21.1		7/25/2011	LL2	1		109.4	9.78	8.58	21.25
7/25/2011	LL0	2		104.6	9.6	8.42	21.01		7/25/2011	LL2	2		109.3	9.88	8.62	20.98
7/25/2011	LL0	3		104.5	9.8	8.47	20.56		7/25/2011	LL2	3	Y	109.6	9.86	8.61	20.91
7/25/2011	LL0	4		104.3	10.07	8.52	20.03		7/25/2011	LL2	3		110	9.86	8.61	20.91
7/25/2011	LL0	5		107	10.26	8.46	19.53		7/25/2011	LL2	4		120.6	10.61	8.63	20.19
7/25/2011	LL0	6		106.1	10.06	8.47	19.37		7/25/2011	LL2	5		133.8	9.98	8.23	18.89
7/25/2011	LL0	7		122	9.22	7.86	18.26		7/25/2011	LL2	6		135.4	9.89	8.2	18.74
7/25/2011	LL0	8		123	8.96	7.8	18.05		7/25/2011	LL2	7		136.3	9.69	8.14	18.58
7/25/2011	LL0	9		119.7	8.92	7.77	17.95		7/25/2011	LL2	8		137.4	9.51	8.08	18.39
7/25/2011	LL0	10		118.3	8.91	7.77	17.9		7/25/2011	LL2	9		138.8	9.38	8.02	18.17
7/25/2011	LL0	12	Y	124.5	8.82	7.8	17.85		7/25/2011	LL2	10		139	9.29	7.99	18.03
7/25/2011	LL0	12		124.1	8.83	7.79	17.85		7/25/2011	LL2	10	Y	139	9.27	7.99	18.03
7/25/2011	LL0	15		114.4	8.85	7.75	17.67		7/25/2011	LL2	12		141	9.22	7.95	17.74
7/25/2011	LL0	18		112.2	8.84	7.72	17.54		7/25/2011	LL2	15		143.3	9.25	7.93	17.24
7/25/2011	LL0	21		113.1	8.74	7.69	17.41		7/25/2011	LL2	18		143.4	9.34	7.94	17.15
7/25/2011	LL0	24		112.7	8.72	7.68	17.25		7/25/2011	LL2	21		143.1	9.24	7.89	17.15
7/25/2011	LL0	27		111.1	8.55	7.63	17.11		7/25/2011	LL2	24		143.6	9.25	7.87	17.13
7/25/2011	LL0	30		106.9	8.4	7.58	16.93		7/25/2011	LL2	24	Y	143.1	9.25	7.88	17.13
7/25/2011	LL0	33	Y	100.4	8.3	7.5	16.45		7/26/2011	LL3	0.5		110.7	9.899	8.53	20.9
7/25/2011	LL0	33		100.2	8.27	7.51	16.46		7/26/2011	LL3	1		110.7	9.88	8.71	20.91
7/25/2011	LL0	36		96.6	7.89	7.4	15.78		7/26/2011	LL3	2		110.9	9.92	8.73	20.91
7/25/2011	LL0	39	Y	92	7.82	7.34	15.23		7/26/2011	LL3	3		112.4	10.1	8.75	20.85
7/25/2011	LL0	39		92.1	7.82	7.33	15.25		7/26/2011	LL3	4		120	10.34	8.72	20.53
7/25/2011	LL0	42		90.1	7.49	7.28	14.95		7/26/2011	LL3	5		124.9	9.88	8.56	20.27
7/25/2011	LL0	44		89.7	7.3	7.26	14.87		7/26/2011	LL3	6		135.4	9.67	8.37	19.36
7/25/2011	LL1	0.5		109.9	9.65	8.51	21.28		7/26/2011	LL3	7		139.7	9.54	8.3	18.93
7/25/2011	LL1	1		109.9	9.68	8.53	21.11		7/26/2011	LL3	8		142.2	9.59	8.31	18.72
7/25/2011	LL1	2		108.8	9.67	8.56	20.8		7/26/2011	LL3	9		145.9	9.59	8.31	18.37
7/25/2011	LL1	3		109.4	9.97	8.6	20.19		7/26/2011	LL3	10		146.7	9.58	8.28	18.21
7/25/2011	LL1	3	Y	109.1	9.91	8.56	20.2		7/26/2011	LL3	12		147.6	9.63	8.25	17.99
7/25/2011	LL1	4		113.5	9.88	8.41	19.54		7/26/2011	LL3	15		148.1	9.67	8.2	17.73
7/25/2011	LL1	5		120.1	9.66	8.16	19.11		7/26/2011	LL3	18		148.2	9.67	8.15	17.49
7/25/2011	LL1	6		120.7	9.54	8.04	18.74		7/26/2011	LL3	20		148.3	9.44	8.07	17.42
7/25/2011	LL1	7		128.4	9.21	7.93	18.44		7/26/2011	LL4	0.5		136.4	9.9	8.52	19.46
7/25/2011	LL1	8		126.5	8.95	7.85	18.21		7/26/2011	LL4	1		136.6	9.81	8.49	19.19
7/25/2011	LL1	9		130.8	8.86	7.84	18.06		7/26/2011	LL4	2		146.4	9.97	8.44	18.29
7/25/2011	LL1	10		136.5	8.81	7.86	18.02		7/26/2011	LL4	3		154.8	9.87	8.37	17.75
7/25/2011	LL1	12		134.6	8.78	7.82	17.92		7/26/2011	LL4	4		156.7	9.8	8.35	17.56
7/25/2011	LL1	12	Y	134.4	8.79	7.8	17.75		7/26/2011	LL4	5		156.5	9.78	8.36	17.53
7/25/2011	LL1	15		138.9	8.81	7.81	17.56		7/26/2011	LL4	6	Y	156.2	9.78	8.36	17.49
7/25/2011	LL1	18		138.7	8.72	7.78	17.43		7/26/2011	LL4	6		156.2	9.78	8.36	17.49
7/25/2011	LL1	21		134.8	8.6	7.73	17.36		7/26/2011	LL4	7		155.5	9.77	8.35	17.43
7/25/2011	LL1	24		135.8	8.49	7.7	17.31		7/26/2011	LL4	8		155.5	9.76	8.35	17.41
7/25/2011	LL1	27		129.6	8.31	7.63	17.24		7/26/2011	LL4	9		155	9.74	8.34	17.4
7/25/2011	LL1	30		118.1	7.92	7.49	17.01		7/26/2011	LL5	0.5		160.4	9.41	8.07	16.96
7/25/2011	LL1	32		112.7	7.02	7.32	16.61		7/26/2011	LL5	1		160.5	9.42	8.07	16.95
									7/26/2011	LL5	2		161.2	9.41	8.08	16.87
									7/26/2011	LL5	3		161	9.41	8.09	16.88
									7/26/2011	LL5	4		161.4	9.43	8.09	16.83
									7/26/2011	LL5	5		161.6	9.44	8.09	16.79
									7/26/2011	LL5	6		160.8	9.46	8.09	16.77
									7/26/2011	LL5	6.8		161	9.42	8.09	16.76

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
8/9/2011	LL2	0.5		126.4	9.52	8.23	23.48
8/9/2011	LL2	1		126.2	9.54	8.26	23.29
8/9/2011	LL2	2		125.8	9.56	8.26	23.19
8/9/2011	LL2	3		126.3	9.58	8.28	23.08
8/9/2011	LL2	4		144.5	10.91	8.37	21.82
8/9/2011	LL2	5		160.1	10.88	8.27	20.71
8/9/2011	LL2	6		121.4	10.06	8.05	20.23
8/9/2011	LL2	7		177.2	9.68	7.95	19.64
8/9/2011	LL2	8		177.6	9.47	7.86	19.2
8/9/2011	LL2	9		186.7	8.98	7.75	18.91
8/9/2011	LL3	0.5		124	9.73	8.45	24.81
8/9/2011	LL3	1		122.9	9.79	8.47	24.44
8/9/2011	LL3	2		123.8	9.91	8.48	24.05
8/9/2011	LL3	3		143	10.38	8.38	23.41
8/9/2011	LL3	4		160	10.25	8.21	21.56
8/9/2011	LL3	5		119.2	9.71	8.07	21.16
8/9/2011	LL3	6		179.8	9.35	7.97	20.31
8/9/2011	LL3	7		200.3	9.06	7.84	18.75
8/9/2011	LL3	8		203	9.01	7.81	18.48
8/9/2011	LL3	9		205.8	8.86	7.79	18.18
8/9/2011	LL4	0.5		125.1	9.68	8.3	23.86
8/9/2011	LL4	1		133.2	9.66	8.3	23.77
8/9/2011	LL4	2		133.4	9.62	8.28	23.6
8/9/2011	LL4	3		125.7	9.94	8.33	22.73
8/9/2011	LL4	4		202.7	9.7	8.03	18.54
8/9/2011	LL4	5		209	9.54	7.97	17.84
8/9/2011	LL4	6		209.6	9.43	7.96	17.74
8/9/2011	LL4	7		209.9	9.4	7.96	17.72
8/9/2011	LL4	8		209.5	9.39	7.97	17.71
8/9/2011	LL4	9		210	9.38	7.97	17.71
8/9/2011	LL5	0.5		214	9.05	7.88	18.2
8/9/2011	LL5	1		103.4	9.03	7.86	17.69
8/9/2011	LL5	2		102.6	9.03	7.85	17.36
8/9/2011	LL5	3		214.1	8.9	7.84	17.22
8/9/2011	LL5	4		214.3	9	7.84	17.2
8/9/2011	LL5	5		214	9.01	7.85	17.14
8/9/2011	LL5	6		214.4	8.98	7.85	17.08
8/9/2011	LL5	7		214	8.96	7.86	17.06

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
8/22/2011	LL0	0.5		139.2	9.31	8.35	21.85		8/22/2011	LL2	0.5		150.4	9.3	8.23	22.09
8/22/2011	LL0	1		139.1	9.25	8.37	21.84		8/22/2011	LL2	1		150.3	9.32	8.25	22.07
8/22/2011	LL0	2		139.6	9.29	8.38	21.75		8/22/2011	LL2	2		150.1	9.35	8.26	21.95
8/22/2011	LL0	3		139.5	9.4	8.43	21.65		8/22/2011	LL2	3		150.1	9.43	8.27	21.77
8/22/2011	LL0	4		139.5	9.56	8.39	21.47		8/22/2011	LL2	4		184.7	9.5	8.05	20.97
8/22/2011	LL0	5		140.3	9.74	8.37	21.16		8/22/2011	LL2	4	Y	191.7	9.53	7.97	20.64
8/22/2011	LL0	6		156.3	9.91	8.08	20.18		8/22/2011	LL2	5		199.4	9.09	7.88	19.97
8/22/2011	LL0	7		177.4	9.23	7.91	19.08		8/22/2011	LL2	6		197.2	9.11	7.85	19.06
8/22/2011	LL0	8		179.6	8.17	7.67	18.58		8/22/2011	LL2	7		197	9	7.8	18.83
8/22/2011	LL0	9		185.7	7.97	7.64	18.3		8/22/2011	LL2	8		200.6	8.41	7.68	18.44
8/22/2011	LL0	10		182.7	7.84	7.64	18.08		8/22/2011	LL2	9		203.1	7.99	7.63	18.29
8/22/2011	LL0	10	Y	181.7	7.79	7.61	18.1		8/22/2011	LL2	10		203.7	7.76	7.61	18.17
8/22/2011	LL0	12		169.8	7.73	7.56	17.73		8/22/2011	LL2	12		209.7	7.69	7.61	17.89
8/22/2011	LL0	15		173	6.99	7.46	17.47		8/22/2011	LL2	12	Y	210.8	7.72	7.61	17.9
8/22/2011	LL0	18		188.3	6.17	7.41	17.24		8/22/2011	LL2	15		221.5	8.46	7.74	17.48
8/22/2011	LL0	21		203.1	6.35	7.47	17.12		8/22/2011	LL2	18		232.8	9.03	7.85	16.57
8/22/2011	LL0	24		213	6.7	7.52	16.91		8/22/2011	LL2	21		237	9.14	7.85	16.24
8/22/2011	LL0	27		220.1	7.05	7.6	16.73		8/22/2011	LL2	24		238.2	9.09	7.83	16.12
8/22/2011	LL0	30		187.6	5.62	7.37	16.5		8/22/2011	LL2	26		237.7	9.01	7.81	16.09
8/22/2011	LL0	30	Y	188.9	5.59	7.35	16.5		8/23/2011	LL3	0.5		156.6	8.81	8.22	22.02
8/22/2011	LL0	33		196.9	5.95	7.41	16.48		8/23/2011	LL3	1		157	8.81	8.24	22.01
8/22/2011	LL0	36		194.1	6.02	7.42	16.42		8/23/2011	LL3	2		156.9	8.69	8.23	21.97
8/22/2011	LL0	39		104.1	4.53	7.08	15.42		8/23/2011	LL3	3		156.4	8.65	8.27	21.96
8/22/2011	LL0	42		94.8	3.59	6.87	14.84		8/23/2011	LL3	4		156.5	8.66	8.29	21.94
8/22/2011	LL0	44		94.5	3.22	6.83	14.7		8/23/2011	LL3	5		158.5	8.53	8.25	21.85
8/22/2011	LL1	0.5		150.9	9.64	8.24	21.7		8/23/2011	LL3	6		184.4	8.12	8.02	20.97
8/22/2011	LL1	1		151.3	9.61	8.31	21.65		8/23/2011	LL3	7		194	8.37	8.03	20
8/22/2011	LL1	2		151.2	9.64	8.35	21.58		8/23/2011	LL3	8		197.9	8.64	8.08	19.71
8/22/2011	LL1	3		150.6	9.64	8.29	21.53		8/23/2011	LL3	9		203.2	8.27	7.97	19.3
8/22/2011	LL1	4		149.6	9.72	8.34	21.45		8/23/2011	LL3	10		205.4	7.24	7.77	19.04
8/22/2011	LL1	5		147.2	9.75	8.41	21.4		8/23/2011	LL3	10	Y	204.3	7.27	7.81	18.96
8/22/2011	LL1	5	Y	147.5	9.76	8.37	21.4		8/23/2011	LL3	12		210.5	7.58	7.83	18.47
8/22/2011	LL1	6		149.5	9.83	8.39	21.31		8/23/2011	LL3	15		241.3	9.02	8.06	16.57
8/22/2011	LL1	7		188	10	8.04	19.59		8/23/2011	LL3	18		244	9.01	8.04	16.38
8/22/2011	LL1	8		188	9.16	7.81	18.65		8/23/2011	LL3	20		244.1	8.99	8.04	16.34
8/22/2011	LL1	9		192.6	8.51	7.69	18.4		8/23/2011	LL4	0.5		155.3	9.06	8.28	22.37
8/22/2011	LL1	10		191.3	8.12	7.61	18.09		8/23/2011	LL4	1		154.6	9.08	8.29	22.34
8/22/2011	LL1	12		194.1	7.52	7.51	17.83		8/23/2011	LL4	2		155.2	9.08	8.29	22.32
8/22/2011	LL1	15		204.4	7.33	7.51	17.59		8/23/2011	LL4	3	Y	159.1	9.18	8.33	22.11
8/22/2011	LL1	18		219.1	7.66	7.57	17.4		8/23/2011	LL4	3		159.6	9.18	8.33	22.11
8/22/2011	LL1	21		227.3	8.25	7.67	17.14		8/23/2011	LL4	4		177	9.32	8.32	21.05
8/22/2011	LL1	24		233.2	8.64	7.72	16.61		8/23/2011	LL4	5		228.1	9.41	8.17	18.03
8/22/2011	LL1	24	Y	232.7	8.65	7.71	16.59		8/23/2011	LL4	6		252.5	9.58	8.1	16.37
8/22/2011	LL1	27		235.1	8.68	7.72	16.42		8/23/2011	LL4	7		253.3	9.59	8.1	16.34
8/22/2011	LL1	30		235.4	8.62	7.71	16.34		8/23/2011	LL4	8		253.5	9.57	8.07	16.34
8/22/2011	LL1	32		235.9	8.55	7.7	16.35		8/23/2011	LL4	9		253	9.59	8.06	16.34
									8/23/2011	LL4	9	Y	253.4	9.58	8.06	16.34
									8/23/2011	LL5	0.5		196.1	8.98	8.26	20.03
									8/23/2011	LL5	1		229.2	9.07	8.2	17.76
									8/23/2011	LL5	2		246.5	9.13	8.15	16.61
									8/23/2011	LL5	3		250.9	9.26	8.16	16.1
									8/23/2011	LL5	4		254.2	9.44	8.15	15.89
									8/23/2011	LL5	5	Y	254.5	9.43	8.13	15.85
									8/23/2011	LL5	5		253.7	9.37	8.14	15.88
									8/23/2011	LL5	6		254.3	9.37	8.13	15.86

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
9/12/2011	LL0	0.5		171.9	9.92	8.58	20.56		9/12/2011	LL2	0.5		177.1	9.12	8.32	21.06
9/12/2011	LL0	1		172.3	9.9	8.64	20.54		9/12/2011	LL2	1		177	9.11	8.32	20.98
9/12/2011	LL0	2		171.9	9.95	8.64	20.5		9/12/2011	LL2	2		177.7	9.16	8.31	20.72
9/12/2011	LL0	2	Y	172.3	9.9	8.56	20.52		9/12/2011	LL2	3		176.9	9.14	8.3	20.7
9/12/2011	LL0	3		172.5	9.94	8.56	20.47		9/12/2011	LL2	4		176.9	9.14	8.3	20.68
9/12/2011	LL0	4		172	9.92	8.56	20.46		9/12/2011	LL2	4	Y	176.3	9.14	8.3	20.67
9/12/2011	LL0	5		185.4	10.3	8.45	20.06		9/12/2011	LL2	5		189	9.07	8.16	20.45
9/12/2011	LL0	6		194.8	10.46	8.31	19.22		9/12/2011	LL2	6		213.6	8.34	7.87	19.36
9/12/2011	LL0	7		202.1	9.05	7.99	18.52		9/12/2011	LL2	7		223.2	7.81	7.79	18.74
9/12/2011	LL0	8		206.9	7.34	7.68	18		9/12/2011	LL2	8		228.8	7.36	7.72	18.27
9/12/2011	LL0	9		213.5	6.67	7.57	17.7		9/12/2011	LL2	9		244.1	7.3	7.75	17.61
9/12/2011	LL0	10		224.3	6.54	7.57	17.33		9/12/2011	LL2	10		249.8	7.33	7.75	17.37
9/12/2011	LL0	12	Y	234	6.81	7.62	17.11		9/12/2011	LL2	12		255.6	7.49	7.77	17.12
9/12/2011	LL0	12		232.7	6.78	7.61	17.07		9/12/2011	LL2	15		245.8	8.14	7.85	16.69
9/12/2011	LL0	15		240.4	6.94	7.61	16.76		9/12/2011	LL2	18		248.9	8.63	7.89	16.18
9/12/2011	LL0	18		239.4	6.33	7.49	16.38		9/12/2011	LL2	21		254.6	8.79	7.88	15.58
9/12/2011	LL0	21		249.8	6.49	7.53	16.01		9/12/2011	LL2	21	Y	254.4	8.79	7.89	15.57
9/12/2011	LL0	24		250.5	7.06	7.6	15.78		9/12/2011	LL2	24		257.3	8.79	7.86	15.44
9/12/2011	LL0	27		255.6	7.69	7.7	15.6		9/12/2011	LL2	25		257.1	8.81	7.83	15.43
9/12/2011	LL0	30	Y	256.2	7.79	7.72	15.52		9/13/2011	LL3	0.5		181.7	8.83	8.01	20.79
9/12/2011	LL0	30		256.8	7.82	7.72	15.52		9/13/2011	LL3	1		181.7	8.9	8.01	20.8
9/12/2011	LL0	33		254.1	7.71	7.71	15.48		9/13/2011	LL3	2		181.8	8.9	8.02	20.8
9/12/2011	LL0	36		254.8	7.79	7.73	15.45		9/13/2011	LL3	3		182.4	8.93	8.02	20.8
9/12/2011	LL0	39		256.8	7.78	7.74	15.44		9/13/2011	LL3	4		202	8.57	7.82	20.33
9/12/2011	LL0	42		243	7.18	7.64	15.36		9/13/2011	LL3	5		202	8.69	7.82	19.77
9/12/2011	LL0	44		240.8	7.05	7.62	15.34		9/13/2011	LL3	6		206.1	8.61	7.81	19.29
9/12/2011	LL0	45		233.3	6.79	7.58	15.29		9/13/2011	LL3	7		221.4	7.64	7.61	18.31
9/12/2011	LL1	0.5		174.8	9.59	8.51	20.97		9/13/2011	LL3	8	Y	227.3	7.75	7.63	17.95
9/12/2011	LL1	1		174.7	9.61	8.52	20.92		9/13/2011	LL3	8		227.7	7.79	7.64	17.93
9/12/2011	LL1	2		174.7	9.62	8.51	20.89		9/13/2011	LL3	9		229.3	8.29	7.73	17.57
9/12/2011	LL1	3		174.5	9.6	8.5	20.83		9/13/2011	LL3	10		229.9	8.4	7.75	17.39
9/12/2011	LL1	4		174.1	9.67	8.51	20.62		9/13/2011	LL3	12		236.7	8.94	7.83	16.61
9/12/2011	LL1	5		174.1	9.68	8.51	20.59		9/13/2011	LL3	15		243.5	9	7.83	15.92
9/12/2011	LL1	6		183.3	10.21	8.44	20.18		9/13/2011	LL3	18		243.2	9.01	7.81	15.98
9/12/2011	LL1	7		211	8.17	7.88	19.18		9/13/2011	LL3	20		245.1	8.87	7.79	15.82
9/12/2011	LL1	8		222.2	7.44	7.74	18.33		9/13/2011	LL4	0.5		181.6	8.86	8.01	20.9
9/12/2011	LL1	8	Y	224.4	7.33	7.73	18.26		9/13/2011	LL4	1		182.1	8.9	8.01	20.88
9/12/2011	LL1	9		226	7.04	7.68	17.96		9/13/2011	LL4	2		182.2	8.88	7.99	20.85
9/12/2011	LL1	10		228.4	7	7.67	17.66		9/13/2011	LL4	3		182.5	8.86	7.98	20.82
9/12/2011	LL1	12		241.8	7.01	7.69	17.24		9/13/2011	LL4	3	Y	181.9	8.85	8	20.83
9/12/2011	LL1	15		254.3	6.87	7.68	16.84		9/13/2011	LL4	4		201.6	9.36	8.1	19.78
9/12/2011	LL1	18		257.6	7.18	7.72	16.6		9/13/2011	LL4	5		243.1	8.76	7.92	16.15
9/12/2011	LL1	21		255	7.76	7.8	16.29		9/13/2011	LL4	6		249	9.34	7.98	15.4
9/12/2011	LL1	24		258.1	8.26	7.85	15.83		9/13/2011	LL4	7		249.9	9.42	7.98	15.36
9/12/2011	LL1	27		262.6	8.4	7.86	15.48		9/13/2011	LL4	8		249.3	9.43	7.97	15.35
9/12/2011	LL1	27	Y	262.2	8.39	7.86	15.49		9/13/2011	LL4	9		249.5	9.43	7.97	15.35
9/12/2011	LL1	30		262.3	8.39	7.86	15.41		9/13/2011	LL5	0.5		197.2	8.91	8.07	19.48
9/12/2011	LL1	32		263	8.41	7.85	15.4		9/13/2011	LL5	1		221.3	9.08	8.09	17.22
9/12/2011	LL1	33		262.9	8.38	7.84	15.39		9/13/2011	LL5	2		245.6	9.3	8.04	15.33
									9/13/2011	LL5	3		246.8	9.28	8.03	15.17
									9/13/2011	LL5	4		247.5	9.31	8.02	15.15
									9/13/2011	LL5	5		246.9	9.34	8.02	15.09
									9/13/2011	LL5	6		247	9.31	8.02	15.07
									9/13/2011	LL5	7		247	9.32	8.01	15.06

Table B-1 continued

Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C		Date	Station	Depth	Rep	Cond uS/cm	DO mg/L	pH	Temp deg C
9/26/2011	LL0	0.5		198	9.47	8.31	17.91		9/26/2011	LL2	0.5		212	8.68	8.02	18.12
9/26/2011	LL0	1		198	9.44	8.3	17.91		9/26/2011	LL2	1		212	8.66	8.03	18.07
9/26/2011	LL0	2		198	9.43	8.28	17.91		9/26/2011	LL2	2	Y	212	8.67	7.95	17.98
9/26/2011	LL0	3		198	9.43	8.27	17.91		9/26/2011	LL2	2		212	8.66	7.9	17.97
9/26/2011	LL0	4		198	9.39	8.27	17.9		9/26/2011	LL2	3		212	8.68	8	17.95
9/26/2011	LL0	5		228	7.35	7.74	17.58		9/26/2011	LL2	4		212	8.66	8	17.94
9/26/2011	LL0	6		244	6.4	7.54	16.78		9/26/2011	LL2	5		213	8.64	7.98	17.89
9/26/2011	LL0	7		245	6.17	7.52	16.62		9/26/2011	LL2	6		214	8.61	7.94	17.87
9/26/2011	LL0	8		248	6.16	7.51	16.52		9/26/2011	LL2	7		214	8.56	7.94	17.79
9/26/2011	LL0	9		248	6.24	7.5	16.4		9/26/2011	LL2	8		214	8.52	7.93	17.79
9/26/2011	LL0	10		251	6.52	7.54	16.28		9/26/2011	LL2	9		215	8.51	7.92	17.78
9/26/2011	LL0	12		250	7.16	7.61	16.01		9/26/2011	LL2	10		217	8.36	7.87	17.76
9/26/2011	LL0	15		246	7.46	7.64	15.78		9/26/2011	LL2	12		229	7.77	7.73	17.38
9/26/2011	LL0	18		253	7.26	7.62	15.66		9/26/2011	LL2	15		232	7.68	7.63	16.37
9/26/2011	LL0	21		257	6.93	7.59	15.51		9/26/2011	LL2	15	Y	231	7.73	7.65	16.44
9/26/2011	LL0	24		255	6.3	7.5	15.3		9/26/2011	LL2	18		228	8.67	7.81	15.36
9/26/2011	LL0	27		242	7.37	7.64	15.11		9/26/2011	LL2	21		233	8.85	7.83	14.53
9/26/2011	LL0	30		240	7.57	7.68	15		9/26/2011	LL2	24		233	8.82	7.82	14.5
9/26/2011	LL0	33		240	7.63	7.69	14.93		9/26/2011	LL3	0.5		199	8.88	7.91	18.51
9/26/2011	LL0	36		240	7.68	7.71	14.93		9/26/2011	LL3	1		199	8.91	7.94	18.51
9/26/2011	LL0	39		240	7.6	7.7	14.89		9/26/2011	LL3	2		199	8.9	7.96	18.48
9/26/2011	LL0	42	Y	240	7.71	7.7	14.88		9/26/2011	LL3	3		199	8.91	7.94	18.36
9/26/2011	LL0	42		239	7.56	7.71	14.88		9/26/2011	LL3	4		198	8.84	7.91	18.32
9/26/2011	LL0	45	Y	240	7.51	7.71	14.87		9/26/2011	LL3	5		198	8.82	7.9	18.31
9/26/2011	LL0	45		240	7.5	7.71	14.88		9/26/2011	LL3	6		199	8.79	7.89	18.3
9/26/2011	LL1	0.5		207	9.07	8.16	17.89		9/26/2011	LL3	6	Y	198	8.77	7.9	18.3
9/26/2011	LL1	1		206	9.09	8.13	17.89		9/26/2011	LL3	7		199	8.7	7.87	18.24
9/26/2011	LL1	1	Y	206	9.11	8.17	17.89		9/26/2011	LL3	8		199	8.69	7.85	18.21
9/26/2011	LL1	2		207	9.09	8.19	17.88		9/26/2011	LL3	9		203	8.25	7.76	17.92
9/26/2011	LL1	3		206	9.1	8.19	17.86		9/26/2011	LL3	10		206	8.12	7.71	17.68
9/26/2011	LL1	4		206	9.08	8.16	17.85		9/26/2011	LL3	12		216	8.26	7.74	16.63
9/26/2011	LL1	5		207	9.05	8.16	17.84		9/26/2011	LL3	15		228	8.99	7.86	15.04
9/26/2011	LL1	6		211	8.84	8.08	17.75		9/26/2011	LL3	18		229	9.02	7.85	14.95
9/26/2011	LL1	7		208	8.81	8.08	17.67		9/26/2011	LL3	21	Y	231	9.05	7.85	14.8
9/26/2011	LL1	8		227	8.12	7.82	17.18		9/26/2011	LL3	21		230	9.05	7.85	14.81
9/26/2011	LL1	9		229	7.98	7.79	17.05		9/27/2011	LL4	0.5		196	8.88	7.9	17.69
9/26/2011	LL1	10		237	7.85	7.72	16.26		9/27/2011	LL4	1		196	8.86	7.91	17.76
9/26/2011	LL1	12		242	7.52	7.65	16.08		9/27/2011	LL4	2		196	8.87	7.92	17.77
9/26/2011	LL1	15		242	7.49	7.64	15.81		9/27/2011	LL4	3		203	9.16	8	17.16
9/26/2011	LL1	18	Y	241	7.76	7.67	15.47		9/27/2011	LL4	4		227	9.44	8.03	14.8
9/26/2011	LL1	18		241	7.78	7.66	15.46		9/27/2011	LL4	5		233	9.27	7.94	13.7
9/26/2011	LL1	21		239	8.06	7.71	15.19		9/27/2011	LL4	6		233	9.32	7.93	13.65
9/26/2011	LL1	24		239	8.09	7.73	15		9/27/2011	LL4	7		233	9.34	7.93	13.65
9/26/2011	LL1	27		239	8.29	7.76	14.77		9/27/2011	LL4	8		234	9.38	7.93	13.62
									9/27/2011	LL4	9		233	9.36	7.93	13.61
									9/27/2011	LL5	0.5		231	9.27	8.01	13.61
									9/27/2011	LL5	1	Y	232	9.31	7.99	13.61
									9/27/2011	LL5	1		232	9.29	7.99	13.56
									9/27/2011	LL5	2		232	9.31	7.98	13.55
									9/27/2011	LL5	3		232	9.3	7.97	13.56
									9/27/2011	LL5	4		232	9.31	7.97	13.56
									9/27/2011	LL5	5		232	9.3	7.97	13.55
									9/27/2011	LL5	6		232	9.29	7.97	13.55
									9/27/2011	LL5	7		232	9.27	7.97	13.55
									9/27/2011	LL5	7	Y	232	9.24	7.97	13.54

Appendix C. Laboratory Results

Site identifiers
E is Euphotic Zone, generally first 12 feet of depth
I is Interflow Zone, generally 12 to 18 feet depth
H is Hypolimnion, generally below 21 feet

A "Y" in the rep column indicates the sample is a field replicate

Alk is Alkalinity
NH3 is ammonia nitrogen
Cl is chlorides
Chloro is chlorophyll-a
DOC is dissolved organic carbon
NO2/NO3 is nitrate and nitrite nitrogen
OP is ortho-phosphorus (also known as soluble reactive phosphorus)
TDS is total dissolved solids
TOC is total organic carbon
TPN is total persulfate nitrogen
TP is total phosphorus

Table C-1.

Date	Site		Rep	Alk		NH3		Cl		Chloro		DOC		NO2/NO3		OP		TDS		TOC		TPN		TP	
				mg/L		mg/L		mg/L		ug/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L	
05/10/10	54A090			30.4		0.01	U	5.59		3.3		1.2		0.2		0.003	U	60		1.9		0.293		0.0195	
05/10/10	55B070			118		0.01	U	8.26		3.2	J	1.3		0.935		0.011		168		1.7		1.13		0.0205	
05/17/10	LL0	E		39.9		0.01	U	2.47		7		1.8		0.207		0.003	U	59		1.9		0.379		0.0121	
05/17/10	LL0	I		38		0.01	U	2.34		7.8		1.5		0.235		0.003	U	59		1.6		0.356		0.0125	
05/17/10	LL0	H		33.7		0.019		2.1		4.1		1.5		0.222		0.0036		54		1.7		0.348		0.0118	
05/17/10	LL1	E		39.9		0.01	U	2.4		11.5		1.5		0.235		0.003	U	61		2		0.358		0.0105	
05/17/10	LL1	I		38.9		0.01	U	2.39		8		1.5		0.298		0.003	U	64		1.7		0.401		0.0119	
05/17/10	LL1	H		36.5		0.012		2.29		6.7		1.5		0.25		0.0037		57		1.9		0.373		0.0121	
05/17/10	LL2	E		41.4		0.01	U	2.56		10.2		1.5		0.298		0.003	U	59		1.9		0.409		0.0111	
05/17/10	LL2	E	Y	41.4		0.01	U	2.61		11.3		1.5		0.304		0.003	U	59		2		0.414		0.0126	
05/17/10	LL3	E		42		0.01	U	2.67		7		1.5		0.353		0.003	U	60		1.7		0.462		0.0134	
05/17/10	LL3	E		40.6		0.012		2.55		4.9		1.4		0.326		0.0046		58		1.4		0.437		0.0207	
05/17/10	LL3	E	Y	40.5		0.01	U	2.59		5.7		1.7		0.336		0.0036		61		1.7		0.447		0.0155	
05/18/10	LL2	I		40.6		0.01	U	2.55		7.1		2		0.318		0.0036		60		1.7		0.432		0.0132	
05/18/10	LL2	H		36.2		0.013		2.25		4.1		1.7		0.269		0.0056		62		1.7		0.377		0.0142	
05/18/10	LL4	E		36.9		0.01	U	2.43		4.2		1.6		0.303		0.0039		62		1.7		0.396		0.0163	
05/18/10	LL4	E		36.6		0.01	U	2.4		4.3		1.8		0.305		0.0034		59		1.6		0.419		0.014	
05/18/10	LL5	E		35.4		0.01	U	2.23		3.8		2		0.238		0.0031		61		1.7		0.336		0.0135	
05/18/10	Blank			5	U	0.01	U	0.1	U	0.1	U	1	U	0.01	U	0.003	U	10	U	1	U	0.025	U	0.005	U
06/01/10	LL0	E		36.6		0.01	U	2.41		6.6		1.9		0.234		0.003	U	71		2		0.389		0.0145	
06/01/10	LL0	I		38.4		0.01	U	2.43		5.2		1.4		0.295		0.003	U	75		1.7		0.39		0.0167	
06/01/10	LL0	H		36.9		0.034		2.31		2.5		1.6		0.282		0.006		72		1.7		0.406		0.0151	
06/01/10	LL1	E		40		0.01	U	2.45		10.6		1.7		0.265		0.003	U	72		1.6		0.375		0.0116	
06/01/10	LL1	I		44.2		0.011		2.69		5.3		1.8		0.434		0.0034		84		1.5		0.543		0.0147	
06/01/10	LL1	H		40.9		0.024		2.51		3.3		1.5		0.361		0.0057		73		1.4		0.486		0.0152	
06/01/10	LL2	E		40.9		0.01	U	2.48		13.3	U	1.5		0.308		0.003	U	71		1.8		0.394		0.0138	
06/01/10	LL2	I		44.6		0.01	U	2.67		7.4		1.4		0.416		0.0037		77		1.7		0.498		0.0146	
06/01/10	LL2	H		45.2		0.01	U	2.76		5.6		1.3		0.442		0.0045		79		1.4		0.524		0.0168	
06/01/10	LL3	E		44.9		0.01	U	2.64		7		1.5		0.416		0.003	U	76		1.6		0.524		0.0129	
06/01/10	LL3	E	Y	44.8		0.01	U	2.66		6.9		1.5		0.418		0.003	U	78		1.8		0.516		0.0131	
06/01/10	LL3	I		45.1		0.01	U	2.65		4.7		1.4		0.448		0.0032		77		1.4		0.524		0.0138	
06/01/10	LL3	I	Y	44.8		0.01	U	2.62		4.7		1.4		0.445		0.003	U	77		1.4		0.537		0.0137	
06/02/10	54A090			29.9		0.01	U	1.96		3.8		1.4		0.2		0.0037		49		1.5		0.285		0.0116	
06/02/10	55B070			109		0.014		4.69		4.2	U	2.1		0.898		0.0171		150		2.3		1.05		0.0392	
06/02/10	LL4	E		34.7		0.01	U	2.21		3.6		1.5		0.29		0.0043		56		1.8		0.377		0.0143	
06/02/10	LL4	I		34.3		0.01	U	2.17		4.1		1.5		0.287		0.0043		55		1.5		0.379		0.0158	
06/02/10	LL5	E		35.5		0.01	U	2.14		3.8		1.6		0.269		0.0043		58		1.5		0.347		0.0135	
06/14/10	54A090					0.01	U					1.3		0.262		0.0036				1.5		0.357		0.0121	
06/14/10	55B070					0.01	U					2.2		0.749		0.018				2.5		0.936		0.0322	

Table C-1 continued

Date	Site		Rep	Alk		NH3		Cl		Chloro		DOC		NO2/NO3		OP		TDS		TOC		TPN		TP	
				mg/L		mg/L		mg/L		ug/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L	
06/28/10	54A090			41.6		0.01	U	2.31		1.9		1.3		0.398		0.0059		72		1.3		0.48		0.0119	
06/28/10	55B070			97.2		0.01	U	4.46		1.9		3.1		0.731		0.0255		141		2.6		0.89		0.0423	
06/29/10	LL0	E		32.9		0.01	U	1.88		4.4		1.4		0.148		0.003	U	57		1.5		0.233		0.0118	
06/29/10	LL0	I		31.1		0.01	U	1.76		3.1		1.4		0.169		0.005		61		1.5		0.249		0.0105	
06/29/10	LL0	H		36.5		0.043		2.07		1.2		1.2		0.269		0.0105		62		1.4		0.364		0.0168	
06/29/10	LL1	E		32.3		0.01	U	1.83		5.9		1.6		0.148		0.0034		56		1.6		0.242		0.0108	
06/29/10	LL1	I		31.8		0.018		1.75		1.8		1.4		0.19		0.006		55		1.5		0.272		0.0116	
06/29/10	LL1	H		34.9		0.037		1.93		1.2		1.2		0.245		0.01		60		1.4		0.346		0.016	
06/29/10	LL2	E		32.6		0.01	U	1.85		7.5		1.4		0.159		0.003	U	55		1.6		0.224		0.0106	
06/29/10	LL2	I		36.3		0.024		2.04		1.3		1.3		0.278		0.0085		63		1.4		0.356		0.0153	
06/29/10	LL2	H		33.4		0.035		2.02		1.1		1.2		0.217		0.0087		57		1.4		0.331		0.0174	
06/30/10	LL3	E		42.3	U	0.01	U	2.24		4.9	U	1.2		0.345		0.0061		68		1.4		0.404		0.013	
06/30/10	LL3	E	Y	41.3		0.01	U	2.52		4.6	U	1.3		0.347		0.0048		63		1.4		0.396		0.0127	
06/30/10	LL3	I		45	U	0.01	U	2.4		3.5	U	1.2		0.413		0.0061		72		1.4		0.478		0.0149	
06/30/10	LL3	I	Y	43.3		0.01	U	2.5		3.4	U	1.2		0.421		0.0067		66		1.4		0.49		0.0176	
06/30/10	LL4	E		42		0.01	U	2.54		2.1		1.1		0.417		0.007		75		1.4		0.49		0.0152	
06/30/10	LL4	I		42.5		0.01	U	2.47		2.4		1.2		0.419		0.0069		63		1.4		0.482		0.0174	
06/30/10	LL5	E		42.2		0.01	U	2.33		1.5		1.1		0.377		0.0063		66		1.3		0.44		0.0142	
07/13/10	54A090					0.01	U					1.4		0.651		0.0063				1.5		0.691		0.0167	
07/13/10	55B070					0.01	U					1.5		0.909		0.009				1.6		0.971		0.0195	
07/20/10	LL0	E		47.3		0.01	U	2.41		3.4		1.4		0.341		0.003	U	75		1.4		0.422		0.0071	
07/20/10	LL0	I		51.3		0.031		2.7		2		1.6		0.481		0.0059		80		1.2		0.562		0.0099	
07/20/10	LL0	H		41.6		0.072		2.11		0.5		1.3		0.365		0.0231		71		1.3		0.513		0.0328	
07/20/10	LL1	E		52.2		0.01	U	2.64		4.5		1.4		0.408		0.003	U	81		1.4		0.497		0.0095	
07/20/10	LL1	I		64.7		0.041		3.32		2.6		1.2		0.694		0.0095		94		1.2		0.816		0.0182	
07/20/10	LL1	H		50.4		0.147		2.43		1		1.3		0.414		0.034		75		1.3		0.619		0.052	
07/20/10	LL2	E		53.8		0.01	U	2.67		6.1		1.4		0.369		0.003	U	77		1.5		0.476		0.0088	
07/20/10	LL2	I		67.7		0.041		3.42		2.2		1.2		0.757		0.0118		114		1.2		0.859		0.0191	
07/20/10	LL2	H		58.4		0.131		2.93		1.1		1.2		0.518		0.0326		85		1.2		0.696		0.0439	
07/21/10	LL3	E		58.8		0.01	U	2.97		5.1	J	1.4		0.451		0.003	U	83		1.5		0.553		0.0111	
07/21/10	LL3	I		75.5		0.041		3.8		2.2	J	1.2		0.914		0.0152		113		1.2		0.998		0.0241	
07/21/10	LL4	E		65.1		0.015		3.29		1.9	J	1.4		0.601		0.0047		96		1.4		0.707		0.0123	
07/21/10	LL4	I		76.8		0.015		3.85		2.3	J	1	U	0.87		0.0084		113		1.2		0.952		0.0166	
07/21/10	LL5	E		82.6		0.01	U	4.81		2		1.2		1.2		0.0094		122		1.1		1.26		0.0157	
07/21/10	LL5	E		83.1		0.01	U	4.75		1.8		1.2		1.21		0.0097		124		1.1		1.28		0.0167	

Table C-1 continued

Date	Site		Rep	Alk mg/L		NH3 mg/L		Cl mg/L		Chloro ug/L		DOC mg/L		NO2/NO3 mg/L		OP mg/L		TDS mg/L		TOC mg/L		TPN mg/L		TP mg/L	
08/09/10	LL0	E		57.5		0.013		3.19		3.7		1.9		0.376		0.0036		86		1.8		0.55		0.0098	
08/09/10	LL0	E	Y	57.5		0.011		3.01		3.6		1.5		0.362		0.0034		89		1.6		0.487		0.0086	
08/09/10	LL0	I		62.2		0.01	U	3.35		2.8		1.6		0.626		0.0047		100		1.3		0.72		0.0113	
08/09/10	LL0	I	Y	65.2		0.01	U	3.43		3.3		1.4		0.548		0.0042		97		1.3		0.632		0.0111	
08/09/10	LL0	H		59.1		0.01	U	3.13		1.8		1.5		0.583		0.0174		93		1.3		0.687		0.0234	
08/09/10	LL0	H	Y	57.1		0.01	U	3.07		0.9		1.4		0.628		0.0259		94		1.3		0.74		0.0313	
08/09/10	LL1	E		61.3		0.01		3.25		4.1		1.6		0.424		0.0031		92		1.6		0.556		0.0119	
08/09/10	LL1	I		76.1		0.019		4.18		3.6		1.3		0.788		0.0065		112		1.3		0.93		0.0121	
08/09/10	LL1	H		78.1		0.026		4.15		2.1		1.3		0.912		0.0317		120		1.3		1.04		0.0427	
08/10/10	LL2	E		63.6		0.01		3.4		4.2		1.6		0.429		0.003	U	92		1.6		0.587		0.0097	
08/10/10	LL2	I		79.7		0.028		4.29		4.6		1.4		0.852		0.0048		114		1.4		0.945		0.0124	
08/10/10	LL2	H		92.5		0.084		4.93		3.5		1.2		1.11		0.0225		138		1.1		1.26		0.0347	
08/10/10	LL3	E		75.5		0.019		3.99		6.3		1.5		0.639		0.0038		107		1.5		0.788		0.0146	
08/10/10	LL3	I		94.4		0.061		5.19		3.2		1.2		1.18		0.0198		143		1		1.29		0.0292	
08/10/10	LL4	E		78.1		0.01	U	4.1		7.3		1.5		0.658		0.0034		115		1.6		0.765		0.0157	
08/10/10	LL4	I		99.8		0.014		5.26		2.6		1.2		1.36		0.0115		153		1.2		1.43		0.0213	
08/10/10	LL5	E		91.2		0.01	U	4.86		4.2		1.3		1.11		0.0073		137		1.5		1.22		0.0175	
08/16/10	54A090					0.01	U					1	U	1.46		0.0123				1.1		1.57		0.0227	
08/16/10	55B070					0.01	U					1	U	1.13		0.0113				1	U	1.2		0.0156	
08/30/10	LL0	E		79.7		0.01	U	4.31		2.8		1	U	0.812		0.003	U	119		1.1		0.898		0.0095	
08/30/10	LL0	I		95.6		0.01	U	5.15		0.5		1	U	1.24		0.024		149		1	U	1.08		0.0291	
08/30/10	LL0	H		62.5		0.01	U	3.39		0.1	U	1	U	0.777		0.0414		100		1.1		0.802		0.0484	
08/30/10	LL1	E		79.3		0.01	U	4.18		4.8		1	U	0.743		0.003	U	119		1.3		0.872		0.009	
08/30/10	LL1	I		95.7		0.01	U	5.35		1.6		1	U	1.21		0.0161		147		1	U	1.12		0.0219	
08/30/10	LL1	H		107		0.158		6.02		1.2		1	U	1.32		0.0224		159		1	U	1.5		0.0327	
08/30/10	LL2	E		79.2		0.012		4.17		2.9		1		0.707		0.003	U	115		1.4		0.87		0.0096	
08/30/10	LL2	I		104		0.06		5.72		1.4		1	U	1.29		0.0147		155		1		1.52		0.0222	
08/30/10	LL2	H		109		0.047		6.52		1.9		1	U	1.42		0.0164		168		1	U	1.65		0.0289	
08/31/10	LL3	E		79.9		0.01	U	4.39		4.7		1		0.653		0.003	U	113		1.4		0.77		0.0118	
08/31/10	LL3	I		102		0.032		6.24		3.3		1	U	1.3		0.0093		149		1.2		1.45		0.0231	
08/31/10	LL4	E		88.4		0.022		4.87		5.5		1.1		0.781		0.0046		126		1.4		0.941		0.0247	
08/31/10	LL4	E	Y	89		0.022		4.96		4.4		1		0.821		0.0051		125		1.5		0.952		0.0184	
08/31/10	LL4	I		113		0.01	U	6.91		1.8		1	U	1.89		0.0094		166		1	U	1.91		0.0198	
08/31/10	LL4	I	Y	114		0.01	U	7.05		1.6		1	U	1.93		0.0099		167		1	U	1.9		0.0199	
08/31/10	LL5	E		95.9		0.01	U	5.32		5.2		1	U	0.967		0.0048		131		1.3		1.12		0.0207	

Table C-1 continued

Date	Site		Rep	Alk		NH3		Cl		Chloro		DOC		NO2/NO3		OP		TDS		TOC		TPN		TP	
				mg/L		mg/L		mg/L		ug/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L	
09/13/10	LL0	E		85.4		0.021		4.81		4.9		1		0.863		0.003	U	124		1.2		0.986		0.0075	
09/13/10	LL0	I		98		0.017		5.78		1		1	U	1.33		0.0231		146		1		1.45		0.0277	
09/13/10	LL0	H		88.5		0.031		4.91		0.5		1	U	1.12		0.0233		132		1.1		1.17		0.0318	
09/13/10	LL1	E		87.3		0.01	U	4.78		4.6		1	U	0.902		0.003	U	131		1.2		1.04		0.0088	
09/13/10	LL1	I		104		0.024		6.22		1.2		1	U	1.41		0.0183		158		1	U	1.54		0.0232	
09/13/10	LL1	H		109		0.028		6.25		1.3		1	U	1.4		0.0155		157		1	U	1.66		0.0252	
09/13/10	LL2	E		87.1		0.01	U	4.84		1.8		1	U	0.89		0.003	U	124		1.3		1.01		0.0089	
09/13/10	LL2	E	Y	86.7		0.01	U	4.99		1.9		1	U	0.872		0.003	U	121		1.3		1.02		0.0178	
09/13/10	LL2	I		102		0.012		5.73		1.3		1	U	1.28		0.0143		152		1		1.42		0.0203	
09/13/10	LL2	I	Y	101		0.01	U	5.76		1.3		1	U	1.28		0.0143		147		1		1.33		0.021	
09/13/10	LL2	H		103		0.026		5.78		2		1	U	1.32		0.0131		155		1.1		1.43		0.0289	
09/13/10	LL2	H	Y	104		0.026		6.21		1.9		1	U	1.32		0.0127		153		1.1		1.47		0.0228	
09/14/10	LL3	E		84.9		0.01	U	4.69		3.3		1.1		0.716		0.003	U	120		1.4		0.851		0.0098	
09/14/10	LL3	I		93.6		0.034		5.6		2.2		1	U	1.19		0.0095		135		1.1		1.34		0.0213	
09/14/10	LL4	E		94.9		0.01	U	5.74		1.4		1	U	1.41		0.0083		144		1		1.6		0.0156	
09/14/10	LL4	I		96.2		0.036		5.94		2.1		1	U	1.66		0.0086		146		1	U	1.66		0.0206	
09/14/10	LL5	E		88.8		0.026		5.22		3.9		1.1		0.915		0.0054		133		1.3		0.999		0.0153	
09/20/10	54A090					0.01	U					1	U	1.18		0.0119				1.3		1.24		0.0207	
09/20/10	55B070					0.01	U					1	U	1.17		0.0079				1		1.28		0.0098	
09/27/10	LL0	E		92.6		0.01	U	4.96		4.1		1.4		1		0.0034		139		1.6		1.21		0.0082	J
09/27/10	LL0	I		102		0.01	U	5.8		1.6		1		1.33		0.0146		155		1		1.51		0.0162	J
09/27/10	LL0	H		105		0.01	U	5.75		0.5		1	U	1.39		0.0187		156		1	U	1.53		0.0216	J
09/27/10	LL1	E		92.3		0.01	U	4.91		3.6		1		0.979		0.003	U	135		1.2		1.11		0.0073	J
09/27/10	LL1	I		96.4		0.01	U	5.4		1.4		1	U	1.23		0.0129		140		1		1.37		0.0172	J
09/27/10	LL1	H		94.5		0.035		5.09		1.8		1	U	1.23		0.0158		141		1.1		1.41		0.0227	J
09/27/10	LL2	E		91.8		0.01	U	4.88		2.3		1.1		0.968		0.0037		129		1.3		1.15		0.0078	J
09/27/10	LL2	I		90.8		0.023		4.86		2.1		1	U	1.08		0.01		135		1.2		1.2		0.0154	J
09/27/10	LL2	H		87.5		0.026		4.82		2.7		1	U	1.13		0.0116		128		1.1		1.29		0.0217	J
09/28/10	LL3	E		88.3		0.01	U	4.74		5		1.3		0.8		0.0032		135		1.7		0.925		0.0078	J
09/28/10	LL3	I		85.6		0.01	U	4.74		5.7		1	U	1.03		0.0064		121		1.2		1.03		0.0153	J
09/28/10	LL4	E		86.1		0.01	U	4.67		7.1		1.1		0.905		0.0051		123		1.4		0.996		0.0124	J
09/28/10	LL4	E	Y	85.7		0.01	U	4.78		7.6		1.1		0.92		0.0052		124		1.4		0.999		0.0157	J
09/28/10	LL5	E		82.7		0.01	U	4.72		1.8		1	U	1.26		0.0103		128		1.1		1.26		0.0142	J

Table C-1 continued

Date	Site		Rep	Alk mg/L		NH3 mg/L		Cl mg/L		Chloro ug/L		DOC mg/L		NO2/NO3 mg/L		OP mg/L		TDS mg/L		TOC mg/L		TPN mg/L		TP mg/L	
10/12/10	55B070					0.01	U					1	U	1.14		0.0116				1.1		1.27		0.0145	
10/12/10	LL0	E		92.5		0.01	U	5.17		2.5		1.1		1		0.0064		128		1.4		1.12		0.0078	
10/12/10	LL0	I		91.2		0.01	U	5.22		0.3		1	U	1.15		0.0195		129		1.1		1.29		0.0235	
10/12/10	LL0	H		91.5		0.019		5.17		0.3		1	U	1.13		0.0198		128		1.2		1.24		0.0242	
10/12/10	LL1	E		91.4		0.01	U	5.14		3.2		1.4		0.917		0.0043		126		1.2		1.09		0.0086	
10/12/10	LL1	I		85.8		0.028		4.74		0.6		1.1		1.01		0.013		119		1		1.14		0.0195	
10/12/10	LL1	H		84.3		0.034		4.69		0.6		1.4		1.03		0.0152		120		1	U	1.2		0.019	
10/12/10	LL2	E		89		0.014		4.82		2.3		1.4		0.894		0.0038		121		1.3		1.07		0.0086	
10/12/10	LL2	I		86.7		0.017		4.68		1.7		1.8		0.935		0.0082		114		1.3	J	1.11		0.0138	
10/12/10	LL2	H		85.6		0.02		4.59		1.4		1	U	1		0.0107		121		1	J	1.1		0.0149	
10/13/10	LL3	E		88		0.01	U	4.84		5	J	1.3		0.781		0.003	U	130		1.5		0.925		0.0105	
10/13/10	LL3	E	Y	88.6		0.013		4.78		4.7	J	1.3		0.781		0.003		130		1.6		0.976		0.0115	
10/13/10	LL3	I		85.1		0.01	U	4.72		3.1		1		0.972		0.0069		129		1.2		1.11		0.0163	
10/13/10	LL3	I	Y	85.2		0.01	U	4.69		3.2		1.6		0.991		0.007		130		1.1		1.11		0.0161	
10/13/10	LL4	E		84.2		0.01	U	4.67		5		1.8		1		0.008		130		1.4		1.16		0.0193	
10/13/10	LL5	E		82.7		0.01	U	4.59		1.3		1.4		1.13		0.0111		130		1.1		1.24		0.0169	

Table C-1 continued

Date	Site		Rep	Alk mg/L		NH3 mg/L		Cl mg/L		Chloro ug/L		DOC mg/L		NO2/NO3 mg/L		OP mg/L		TDS mg/L		TOC mg/L		TPN mg/L		TP mg/L	
05/16/11	55B070					0.018								0.446		0.0286						0.595		0.0505	
05/23/11	LL0	E		25.9		0.01	U	1.78		4.1		1.9		0.135		0.006		53		2.2		0.248		0.022	
05/23/11	LL0	I		25.9		0.01	U	1.77		3.4		1.7		0.141		0.0054		59		2		0.224		0.0229	
05/23/11	LL0	H		25.9		0.01		1.79		2.4		1.7		0.151		0.0064		61		2		0.245		0.0241	
05/23/11	LL1	E		25.6		0.01	U	1.73		3.9		1.7		0.128		0.0057		56		2		0.217		0.0239	
05/23/11	LL1	E	Y	25.7		0.01	U	1.71		4.2		1.6		0.128		0.0058		56		1.8		0.208		0.0249	
05/23/11	LL1	I		26.1		0.01	U	1.72		3.3		1.6		0.136		0.0057		53		2		0.214		0.0216	
05/23/11	LL1	I	Y	25.8		0.01	U	1.68		3.6		1.6		0.133		0.0052		51		1.7		0.2		0.0224	
05/23/11	LL1	H		26		0.011		1.77		2.7		1.7		0.142		0.0061		58		1.9		0.209		0.0241	
05/23/11	LL1	H	Y	26.1		0.013		1.82		2.4		1.6		0.145		0.0067		58		2		0.23		0.0241	
05/23/11	LL2	E		25.8		0.01	U	1.7		3.4		1.8		0.131		0.0053		51		1.8		0.19		0.0229	
05/23/11	LL2	I		26		0.01	U	1.68		3.1		1.6		0.131		0.0055		54		1.8		0.202		0.0222	
05/23/11	LL2	H		25.9		0.01	U	1.68		2.9		1.6		0.135		0.0059		57		1.8		0.196		0.023	
05/24/11	LL3	E		25.4		0.01	U	1.65		3		1.7		0.133		0.0063		52	J	1.9		0.237		0.0231	
05/24/11	LL3	I		25.6		0.011		1.61		2.8		1.6		0.135		0.0062		49	J	1.8		0.209		0.0221	
05/24/11	LL4	E		24.7		0.01	U	1.47		3.1		1.5		0.109		0.0059		41	J	1.7		0.167		0.0194	
05/24/11	LL5	E		26.1		0.01	U	1.54		3.3		1.5		0.126		0.0056		45	J	1.8		0.208		0.0207	
06/06/11	54A090	H		24.7		0.01	U	1.52		3.1		2.1		0.163		0.0039		49		2.1		0.22		0.0125	
06/06/11	55B070	H		88		0.025		4.22		1.1		3.3		0.57		0.033		133		4.7		0.751		0.0571	
06/06/11	LL0	E		28.1		0.01	U	1.69		6.2		1.8		0.152		0.004		52		2.4		0.273		0.0161	
06/06/11	LL0	I		26.5		0.01	U	1.65		3		1.7		0.176		0.0049		54		1.9		0.299		0.016	
06/06/11	LL0	H		27		0.01		1.73		2.5		2.4		0.176		0.0057		54		1.9		0.279		0.0173	
06/20/11	LL0	E		28.8		0.01	U	1.41		5.8	J	1.1		0.153		0.0032		52		1.3		0.205		0.0101	
06/20/11	LL0	I		28.7		0.01	U	1.43		2.7	J	1.1		0.189		0.004		52		1.3		0.196		0.0112	
06/20/11	LL0	H		29.1		0.01	U	1.45		2.2	J	1.1		0.18		0.0054		54		1.3		0.222		0.0139	
06/20/11	LL1	E		29.6		0.01	U	1.45		6.9	J	1.1		0.171		0.0033		54		1.2		0.228		0.0111	
06/20/11	LL1	I		29.2		0.01	U	1.44		3.3	J	1.1		0.189		0.0037		53		1.1		0.222		0.0104	
06/20/11	LL1	H		29.1		0.01	U	1.44		2.8	J	1.1		0.191		0.0041		54		1.2		0.231		0.0118	
06/20/11	LL2	E		29.9		0.01	U	1.53		4.4	J	1		0.195		0.0031		54		1.3		0.248		0.0107	
06/20/11	LL2	I		29.6		0.01	U	1.5		3.4	J	1.1		0.202		0.0038		54		1.2		0.239		0.0121	
06/20/11	LL2	H		29.7		0.01	U	1.49		1	J	1.1		0.201		0.0044		53		1.2		0.249		0.0257	
06/21/11	55B070					0.018						2		0.787		0.0213				2.3		0.918		0.0364	
06/21/11	LL3	E		30.5		0.01	U	1.52		1.7		1.1		0.217		0.004		53		1.1		0.277		0.012	
06/21/11	LL3	I		31		0.01	U	1.53		1.7		1.1		0.217		0.0048		53		1.2		0.271		0.0122	
06/21/11	LL4	E		30.7		0.01	U	1.57		1.6		1.1		0.207		0.0044		53		1.2		0.253		0.0108	
06/21/11	LL4	E	Y	30.8		0.01	U	1.47		1.8		1		0.194		0.004		54		1.1		0.256		0.0102	
06/21/11	LL4	I		30.4		0.01	U	1.52		1.2		1.1		0.194		0.0041		51		1.3		0.247		0.0121	
06/21/11	LL4	I	Y	30.4		0.01	U	1.5		2.4		1.1		0.198		0.0039		52		1.1		0.244		0.0114	
06/21/11	LL5	E		30.9		0.01	U	1.5		1.6		1.1		0.198		0.0042		53		1.1		0.226		0.011	

Table C-1 continued

Date	Site		Rep	Alk mg/L		NH3 mg/L		Cl mg/L		Chloro ug/L		DOC mg/L		NO2/NO3 mg/L		OP mg/L		TDS mg/L		TOC mg/L		TPN mg/L		TP mg/L	
07/11/11	LL0	E		39.4		0.01	U	1.96		3.1		1.1		0.236		0.0039		60		1.3		0.318		0.0102	
07/11/11	LL0	E	Y	39.5		0.01	U	2.01		2.9		1.2		0.232		0.0045		61		1.4		0.325		0.0118	
07/11/11	LL0	I		40.2		0.011		1.94		2.9		1.1		0.262		0.003	U	61		1.3		0.361		0.0102	
07/11/11	LL0	I	Y	40.1		0.011		1.93		2.4		1.1		0.262		0.0032		61		1.3		0.35		0.0098	
07/11/11	LL0	H		38.5		0.021		1.89		1.7		1	U	0.288		0.0052		59		1.2		0.404		0.0114	
07/11/11	LL0	H	Y	38.5		0.029		1.95		1.1		1.1		0.294		0.0058		59		1.3		0.414		0.011	
07/11/11	LL1	E		41		0.01	U	2.01		6.6		1.1		0.266		0.0039		63		1.4		0.405		0.0105	
07/11/11	LL1	I		40.4		0.011		1.96		3.4		1		0.292		0.0048		63		1.2		0.397		0.012	
07/11/11	LL1	H		40.2		0.023		1.91		1.3		1		0.324		0.0072		62		1.2		0.394		0.0121	
07/11/11	LL2	E		40.8		0.011		2		5.4		1		0.27		0.0037		61		1.3		0.355		0.0097	
07/11/11	LL2	I		40.4		0.013		1.97		3.3		1		0.322		0.0076		62		1.3		0.428		0.0106	
07/11/11	LL2	H		41.4		0.021		1.96		2.7		1	U	0.316		0.0062		62		1.2		0.358		0.0125	
07/12/11	LL3	E		42.7		0.01	U	2.15		3.9		1.2		0.36		0.0035		67		1.5		0.496		0.0117	
07/12/11	LL3	I		44.7		0.01	U	2.26		2.6		1.2		0.442		0.0044		69		1.4		0.607		0.0119	
07/12/11	LL4	E		48.4		0.01	U	2.4		1.3		1	U	0.508		0.0043		75		1.2		0.594		0.0102	
07/12/11	LL5	E		48.6		0.01	U	2.4		1.1		1.1		0.47		0.0047		76		1.2		0.591		0.0108	
07/24/11	55B070					0.013								1.03		0.0118						1.1		0.0206	
07/25/11	LL0	E		45.9		0.01	U	2.17		2		1	U	0.369		0.003	U	71		1.1		0.441		0.0069	
07/25/11	LL0	I		48.7		0.022		2.49		1		1	U	0.494		0.0037		74		1	U	0.557		0.0073	
07/25/11	LL0	H		43.3		0.049		2.17		0.5		1	U	0.385		0.0118		69		1	U	0.487		0.016	
07/25/11	LL1	E		49.7		0.011		2.51		1.5		1	U	0.434		0.003	U	75		1	U	0.487		0.0061	
07/25/11	LL1	I		58		0.027		2.86		1.2		1	U	0.638		0.0067		87		1	U	0.679		0.0116	
07/25/11	LL1	H		53.6		0.051		2.66		0.7		1	U	0.559		0.0139		80		1	U	0.622		0.0198	
07/25/11	LL2	E		49.8		0.01	U	2.43		2.3		1	U	0.392		0.0032		74		1		0.464		0.0093	
07/25/11	LL2	I		60.2		0.017		3		1.7		1	U	0.666		0.0065		89		1	U	0.743		0.0126	
07/25/11	LL2	H		59.6		0.024		3.1		1.6		1	U	0.661		0.009		88		1.1		0.738		0.0392	
07/26/11	LL3	E		52.4		0.011		2.53		1.8		1		0.407		0.0035		79		1.2		0.49		0.0106	
07/26/11	LL3	I		63.5		0.01	U	3.19		1.6		1	U	0.636		0.0055		95		1		0.716		0.0121	
07/26/11	LL4	E		62.5		0.015		3.19		1.9		1	U	0.658		0.0066		91		1		0.75		0.0152	
07/26/11	LL4	I		65.1		0.01	U	3.22		2.3		1	U	0.687		0.0056		94		1		0.724		0.0127	
07/26/11	LL5	E		66.7		0.01	U	3.68		2.5		1	U	0.841		0.0072		99		1	U	0.91		0.012	
07/26/11	LL5	E	Y	67.4		0.01	U	3.46		2.6		1	U	0.856		0.008		104		1	U	0.901		0.0121	

Table C-1 continued

Date	Site		Rep	Alk		NH3		Cl		Chloro		DOC		NO2/NO3		OP		TDS		TOC		TPN		TP	
				mg/L		mg/L		mg/L		ug/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L	
08/08/11	LL0	E		54.2		0.011		2.74		1.4		1.1		0.492		0.0051		77		1.3		0.57		0.0062	
08/08/11	LL0	I		59.3		0.021		3.03		1		1		0.624		0.0062		85		1.1		0.719		0.0059	
08/08/11	LL0	H		52.8		0.039		2.6		0.2		1	U	0.562		0.0247		78		1.1		0.61		0.0221	
08/08/11	LL1	E		53.3		0.01	U	2.67		1.4		1.1		0.455		0.0051		76		1.1		0.489		0.0067	
08/08/11	LL1	E	Y	54.7		0.01	U	2.67		1.6		1		0.468		0.0063		74		1		0.554		0.006	
08/08/11	LL1	I		72.6		0.012		3.67		2.1		1	U	0.855		0.0067		101		1	U	0.885		0.0071	
08/08/11	LL1	I	Y	72.2		0.013		3.54		2		1	U	0.857		0.0064		103		1	U	0.926		0.0088	
08/09/11	55B070	H		125		0.012		5.97		0.9															
08/09/11	LL2	E		58.5		0.015		2.8		1.9		1.3		0.475		0.0051		83		1.3		0.57		0.0077	
08/09/11	LL2	I		76.2		0.021		4.01		1.2		1	U	0.899		0.0092		108		1	U	0.984		0.0132	
08/09/11	LL3	E		61.4		0.01	U	3.07		2.4		1.1		0.498		0.006		89		1.3		0.594		0.0102	
08/09/11	LL3	I		87.2		0.041		4.63		0.7		1	U	1.1		0.015		124		1.1		1.23		0.0212	
08/09/11	LL4	E		68		0.023		3.37		1.5		1		0.622		0.0074		96		1.3		0.741		0.0103	
08/09/11	LL4	I		88.9		0.012		4.42		1.3		1	U	1.11		0.01		125		1.2		1.14		0.016	
08/09/11	LL5	E		89.4		0.013		5.05		0.7		1	U	1.3		0.0117		128		1.2		1.33		0.0141	
08/15/11	55B070					0.013						1	U	1.2		0.0156				1	U	1.23		0.0165	
08/22/11	LL0	E		64.7		0.015		3.08		1.4		1	U	0.62		0.0053		93		1	U	0.689		0.0068	
08/22/11	LL0	I		71.9		0.01	U	3.42		0.8		1	U	0.879		0.0215		105		1	U	0.937		0.0206	
08/22/11	LL0	H		72.9		0.021		3.47		0.3		1	U	0.915		0.0331		107		1	U	1.01		0.0347	
08/22/11	LL1	E		68.6		0.01	U	3.3		1.4		1	U	0.684		0.0059		97		1		0.762		0.0105	
08/22/11	LL1	I		86.1		0.03		4.15		0.8		1	U	1.09		0.0202		122		1	U	1.2		0.021	
08/22/11	LL1	H		99.8		0.037		4.85		2.7		1	U	1.27		0.0179		139		1	U	1.39		0.02	
08/22/11	LL2	E		71.9		0.01	U	3.41		1.6		1		0.689		0.005		102		1		0.741		0.008	
08/22/11	LL2	I		94.3		0.035		4.61		0.8		1	U	1.19		0.0127		135		1	U	1.28		0.0151	
08/22/11	LL2	H		100		0.032		5		0.7	J	1	U	1.32		0.014		146		1	U	1.44		0.0184	
08/23/11	LL3	E		68.8		0.023		3.23		1.6		1.1		0.525		0.0056		99		1.1		0.617		0.0107	
08/23/11	LL3	E	Y	68.7		0.023		3.17		1.5		1.1		0.51		0.0052		98		1.2		0.607		0.0103	
08/23/11	LL3	I		98.1		0.02		4.96		2.4		1	U	1.29		0.0093		144		1	U	1.39		0.0162	
08/23/11	LL3	I	Y	98.4		0.021		4.97		1.9	J	1	U	1.29		0.0096		144		1	U	1.39		0.0159	
08/23/11	LL4	E		82.6		0.015		4.05		1.2		1		0.849		0.007		121		1.1		0.937		0.0113	
08/23/11	LL4	I		106		0.011		5.36		1.7		1	U	1.44		0.0106		153		1	U	1.54		0.0237	
08/23/11	LL5	E		101		0.01		5.11		1.2		1	U	1.38		0.0093		148		1	U	1.49		0.0131	

Table C-1 continued

Date	Site		Rep	Alk		NH3		Cl		Chloro		DOC		NO2/NO3		OP		TDS		TOC		TPN		TP	
				mg/L		mg/L		mg/L		ug/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L	
09/12/11	LL0	E		79.7		0.01	U	3.97		3.6		1		0.814		0.0049		113		1.1		0.918		0.005	U
09/12/11	LL0	I		101		0.01	U	5.25		1.1		1	U	1.31		0.0153		147		1	U	1.48		0.0114	
09/12/11	LL0	H		106		0.03		5.56		0.2		1	U	1.38		0.0205		160		1	U	1.59		0.0177	
09/12/11	LL1	E		80.4		0.01	U	3.97		2.5		1	U	0.823		0.0048		116		1		0.942		0.005	U
09/12/11	LL1	I		106		0.01	U	5.49		0.9		1	U	1.42		0.014		150		1	U	1.57		0.0105	
09/12/11	LL1	H		109		0.033		5.63		0.4		1	U	1.41		0.0175		160		1	U	1.57		0.0145	
09/12/11	LL2	E		79.8		0.01	U	3.96		1.1		1	U	0.786		0.0041		119		1	U	0.905		0.005	U
09/12/11	LL2	E	Y	79.4		0.01	U	3.97		1.9		1	U	0.773		0.0045		117		1.1		0.906		0.0069	
09/12/11	LL2	I		106		0.035		5.41		0.7		1	U	1.31		0.013		154		1	U	1.5		0.0107	
09/12/11	LL2	I	Y	106		0.035		5.44		0.8		1	U	1.33		0.0129		150		1	U	1.52		0.0124	
09/12/11	LL2	H		108		0.03		5.49		0.7		1	U	1.37		0.0153		155		1	U	1.56		0.0151	
09/12/11	LL2	H	Y	108		0.031		5.53		0.6		1	U	1.38		0.0154		157		1	U	1.57		0.0151	
09/13/11	LL3	E		81.4		0.018		4.01		1.3		1.1		0.683		0.0043		118		1.1		0.845		0.006	
09/13/11	LL3	I		102		0.022		5.45		1.3		1	U	1.34		0.0122		147		1	U	1.55		0.0121ra	
09/13/11	LL4	E		87.7		0.012		4.39		2.4		1	U	0.84		0.0068		128		1		0.989		0.0096	
09/13/11	LL4	I		104		0.01	U	5.53		1.8		1	U	1.43		0.01		153		1	U	1.6		0.0101	
09/13/11	LL5	E		102		0.01	U	5.32		1.2		1	U	1.35		0.0105		153		1	U	1.55		0.0116	
09/19/11	55B070					0.01	U							1.23		0.0116						1.34		0.0129	
09/26/11	LL0	E		87.6		0.01	U	4.4		1.9		1.1		0.978		0.005		123		1.1		1.05		0.0085	
09/26/11	LL0	I		99.7		0.01	U	5.13		1.1		1.1		1.26		0.0148		131		1	U	1.33		0.0172	
09/26/11	LL0	H		102		0.017		5.24		0.6		1	U	1.3		0.0178		142		1	U	1.38		0.0213	
09/26/11	LL1	E		88.8		0.01	U	4.43		2.5		1	U	0.977		0.0045		123		1	U	1.04		0.0101	
09/26/11	LL1	I		99		0.01	U	5.15		1.1		1	U	1.24		0.0138		137		1	U	1.31		0.0159	
09/26/11	LL1	H		95.9		0.018		5.03		1		1	U	1.18		0.0139		136		1	U	1.3		0.0176	
09/26/11	LL2	E		89.6		0.01	U	4.51		1.7		1	U	0.936		0.0046		123		1	U	1.03		0.0067	
09/26/11	LL2	I		92.4		0.029		4.69		1.5		1	U	1.05		0.0066		125		1	U	1.15		0.0091	
09/26/11	LL2	H		96.6		0.025		5		0.9		1	U	1.22		0.0132		128		1	U	1.25		0.018	
09/26/11	LL3	E		84		0.014		4.2		2.9		1.1		0.729		0.0041		116		1.1		0.811		0.0085	
09/26/11	LL3	I		92.6		0.06		4.84		1.3		1	U	1.09		0.0109		121		1	U	1.22		0.0167	
09/27/11	LL4	E		88.7		0.029		4.49		1.5		1.2		0.881		0.0091		122		1.2		1.01		0.0145	
09/27/11	LL4	E	Y	87.9		0.027		4.5		1.5		1	U	0.902		0.01		121		1.1		0.998		0.0148	
09/27/11	LL5	E		96.4		0.076		5.05		1.2		1	U	1.32		0.0121		138		1	U	1.5		0.015	
10/24/11	55B070					0.01	U							1.22		0.0121						1.31		0.0148	

Appendix D. Secchi and Light Attenuation

Table D-1

Date	Site	Rep	Secchi m	Light atten m
05/17/10	LL0		2.5	
05/17/10	LL1		1.8	
05/17/10	LL3		1.9	
05/18/10	LL2		1.6	
05/18/10	LL4		2.5	
05/18/10	LL5		2.2	
05/18/10	LL5	Y	2.4	
06/01/10	LL0		3.2	10.3
06/01/10	LL1		2.4	9
06/01/10	LL2		1.7	6.9
06/01/10	LL3		2.3	8.8
06/02/10	LL4		2.2	8.8
06/02/10	LL5		2.3	7.7
06/29/10	LL0		3.3	9.1
06/29/10	LL1		2.6	9.7
06/29/10	LL2		2.4	6.4
06/30/10	LL3		2.2	7.5
06/30/10	LL3	Y	2.33	
06/30/10	LL4		3.03	9
06/30/10	LL5		2.47	5.5
07/20/10	LL0		7.6	15.6
07/20/10	LL1		5.3	12.7
07/20/10	LL2		5.5	10.8
07/21/10	LL3		4.57	9.6
07/21/10	LL4		5.1	9
07/21/10	LL5		3.93	6
08/09/10	LL0		5	11.5
08/09/10	LL1		5.5	10.7
08/10/10	LL2		4.9	11.6
08/10/10	LL3	Y	4.5	
08/10/10	LL3		4.8	10.1
08/10/10	LL4		2.6	9
08/10/10	LL5		3.6	7.5
08/30/10	LL0		6	15.1
08/30/10	LL1		4.9	15.3
08/30/10	LL2		8.9	15.4
08/31/10	LL3		4.5	12.1
08/31/10	LL4		2.6	9
08/31/10	LL5		2.77	6
09/13/10	LL0		5.6	13.4
09/13/10	LL1		6.6	14.2
09/13/10	LL2		6	13.7
09/14/10	LL3		5.3	11.2
09/14/10	LL4		4.33	9
09/14/10	LL5		5.13	6
09/27/10	LL0		6.6	15
09/27/10	LL1		5.8	14.9
09/27/10	LL2		6.5	14.1
09/28/10	LL3		6	12.2
09/28/10	LL4		2.4	8.9
09/28/10	LL4	Y	2.9	
09/28/10	LL5		4.7	8.8
10/12/10	LL0		7	16.9
10/12/10	LL1		6.8	16.9
10/12/10	LL2		7	16.3
10/13/10	LL3		6.2	12.4

Date	Site	Rep	Secchi m	Light atten m
10/13/10	LL4		3.2	9.5
10/13/10	LL5		5	8.5
05/23/11	LL0		1.3	4.5
05/23/11	LL0	Y	1.6	
05/23/11	LL1		1.2	4.8
05/23/11	LL2		1.5	4.4
05/24/11	LL3		1.6	5.3
				7.1
06/06/11	LL0		1.7	6.9
06/20/11	LL0		2.9	11
06/20/11	LL1		2.6	10.7
06/21/11	LL2		2.4	10.4
06/21/11	LL3		2.5	6.5
06/21/11	LL4		2.6	9
				5
07/11/11	LL0		4.4	11.1
07/11/11	LL0	Y	4.5	
07/11/11	LL1		3.2	9.4
07/11/11	LL2		2.5	8.5
07/12/11	LL3		2.7	8.6
07/12/11	LL4		4	9.4
07/12/11	LL5		4.5	7.5
07/25/11	LL0		5.7	12.5
07/25/11	LL1		6.3	13.3
07/25/11	LL2		4.6	11.7
07/26/11	LL3		3.8	10.4
07/26/11	LL4		4.4	9
07/26/11	LL5		3.9	6
08/08/11	LL0		8	11.6
08/08/11	LL1		8.5	6.6
				9.2
08/09/11	LL3		6.5	7.9
08/09/11	LL4		5.5	9.2
				7.5
08/22/11	LL0		10.2	16.4
08/22/11	LL1		8.2	15.8
08/22/11	LL2		6.9	15.8
08/23/11	LL3		6.3	10.6
08/23/11	LL4		6	9
08/23/11	LL5		5.6	6
09/12/11	LL0		6.7	13.8
09/12/11	LL1		7.8	16
09/12/11	LL2		7.5	15.9
09/13/11	LL3		6.2	11.8
09/13/11	LL4		5	9
09/13/11	LL5		5.2	7
09/26/11	LL0		9	19.8
09/26/11	LL1		6	14
09/26/11	LL2		8	17
09/26/11	LL3		6	10.7
09/27/11	LL4		5.5	9.6
09/27/11	LL4	Y	4.5	
09/27/11	LL5		5	7.3

Appendix E. Manchester Lab Case Narrative Summaries

Work Order: 1005078

May 17-18, 2010

All analyses were performed within their hold times except for chlorophyll. Sample 1005078-01 for chlorophyll was received with insufficient hold time remaining and was analyzed out of hold time. The result was qualified as an estimate.

Work Order: 1006046

June 1-2, 2010

All analyses were performed within their hold times except for chlorophyll. Sample 1006046-16 for chlorophyll was received with insufficient preparation hold time remaining and was prepared out of hold time. The result was qualified as an estimate.

Sample 1006046-16 for chlorophyll was also qualified as an estimate due to analysis problems.

No analytically significant levels of analyte were detected in the method blanks (MB) associated with these samples except for TP. The MB for TP was less than the reporting limit but greater than the method detection limit. The TP in samples 1006046-01 to 1006046-15, 1006046-17 and 1006046-18 was less than 10 times the contamination in the MB. The results were qualified as estimates.

Work Order: 1006047

June 29-30, 2010

All analyses were performed within their hold times except for BOD and alkalinity. Samples 1006047-10, 1006047-11 and 1006047-17 and 1006047-18 for BOD were received with insufficient hold time remaining and were analyzed out of hold time.

Samples 1006047-10 and 1006047-11 for alkalinity were analyzed out of hold time due to laboratory error. The results were qualified as estimates.

Work Order: 1007041

July 20-21, 2010

All analyses were performed within their hold times except for chlorophyll. Samples 1007041-10 to 1007041-13 for chlorophyll were received with insufficient hold time remaining and were analyzed out of hold time. The results were qualified as estimates.

Work Order: 1008040

August 30-31, 2010

All analyses were performed within their hold times except for chlorophyll. Sample 1008040-03 for chlorophyll was received with insufficient hold time remaining and was analyzed out of hold time. The result was qualified as an estimate.

Work Order: 1009043

Sept 27-28, 2010

No analytically significant levels of analyte were detected in the method blanks associated with these samples except for TP. The method blank for TP for samples 1009043-01 to 1009043-12, 1009043-14 and 1009043-15 was contaminated. The results were qualified as estimates.

Work Order: 1010012

Oct 12-13, 2010

All analyses were performed within their hold times except for chlorophyll and TOC. Samples 1010012-10 and 1010012-15 for chlorophyll were received and analyzed out of hold time. Samples 1010012-08 and 1010012-09 for TOC were analyzed out of hold time due to laboratory error. The results were qualified as estimates.

Work Order: 1105044

May 23-24, 2011

No analytically significant levels of analyte were detected in the method blanks associated with these samples except for TDS analysis. The method blank for TDS for samples 1105044-10 to 1105044-12, and 1105044-14 was greater than the detection limit but less than the reporting limit. All results less than 10 times the contamination were qualified as estimates.

Work Order: 1106031

June 20-21, 2011

Except for several samples for chlorophyll analysis, all samples were analyzed within their hold times. Samples 1106031-01 to 1106031-09 and 1106031-18 for chlorophyll analysis were received out of hold time or with insufficient time remaining prior to processing.

The duplicate RPD for chlorophyll was greater than the acceptance limit. The source sample (1106031-01) and duplicate results were qualified as estimates.

Aug 22-23, 2011

Two of the duplicate RPDs for chlorophyll were greater than the acceptance limit. The source samples (1108026-09 and 1108026-16) and duplicate results were qualified as estimates. The other duplicate RPD for chlorophyll was greater than the acceptance limit. The duplicate RPD was not evaluated because the source sample was from a different project.

Appendix F. Glossary, Acronyms, and Abbreviations

Glossary

Clean Water Act: A federal act passed in 1972 that contains provisions to restore and maintain the quality of the nation's waters. Section 303(d) of the Clean Water Act establishes the TMDL program.

Conductivity: A measure of water's ability to conduct an electrical current. Conductivity is related to the concentration and charge of dissolved ions in water.

Dissolved oxygen (DO): A measure of the amount of oxygen dissolved in water.

Nonpoint source: Pollution that enters any waters of the state from any dispersed land-based or water-based activities, including but not limited to atmospheric deposition, surface-water runoff from agricultural lands, urban areas, or forest lands, subsurface or underground sources, or discharges from boats or marine vessels not otherwise regulated under the NPDES program. Generally, any unconfined and diffuse source of contamination. Legally, any source of water pollution that does not meet the legal definition of "point source" in section 502(14) of the Clean Water Act.

Parameter: Water quality constituent being measured (analyte). A physical, chemical, or biological property whose values determine environmental characteristics or behavior.

pH: A measure of the acidity or alkalinity of water. A low pH value (0 to 7) indicates that an acidic condition is present, while a high pH (7 to 14) indicates a basic or alkaline condition. A pH of 7 is considered to be neutral. Since the pH scale is logarithmic, a water sample with a pH of 8 is ten times more basic than one with a pH of 7.

Point source: Sources of pollution that discharge at a specific location from pipes, outfalls, and conveyance channels to a surface water. Examples of point source discharges include municipal wastewater treatment plants, municipal stormwater systems, industrial waste treatment facilities, and construction sites that clear more than 5 acres of land.

Pollution: Contamination or other alteration of the physical, chemical, or biological properties of any waters of the state. This includes change in temperature, taste, color, turbidity, or odor of the waters. It also includes discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the state. This definition assumes that these changes will, or are likely to, create a nuisance or render such waters harmful, detrimental, or injurious to (1) public health, safety, or welfare, or (2) domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or (3) livestock, wild animals, birds, fish, or other aquatic life.

Relative percent difference (RPD): The absolute value of the difference between duplicates expressed as a percent of the duplicate mean.

Relative standard deviation (RSD): A statistic used to evaluate precision in environmental analysis. It is determined in the following manner: Percent relative standard deviation, %RSD = (100 * s)/x, where s = sample standard deviation and x = sample mean.

Total Maximum Daily Load (TMDL): Water cleanup plan. A distribution of a substance in a waterbody designed to protect it from not meeting (exceeding) water quality standards. A TMDL is equal to the sum of all of the following: (1) individual wasteload allocations for point sources, (2) the load allocations for nonpoint sources, (3) the contribution of natural sources, and (4) a Margin of Safety to allow for uncertainty in the wasteload determination. A reserve for future growth is also generally provided.

Watershed: A drainage area or basin in which all land and water areas drain or flow toward a central collector such as a stream, river, or lake at a lower elevation.

303(d) list: Section 303(d) of the federal Clean Water Act requires Washington State to periodically prepare a list of all surface waters in the state for which beneficial uses of the water – such as for drinking, recreation, aquatic habitat, and industrial use – are impaired by pollutants. These are water quality-limited estuaries, lakes, and streams that fall short of state surface water quality standards and are not expected to improve within the next two years.

Acronyms and Abbreviations

Ecology	Washington State Department of Ecology
EIM	Environmental Information Management database
EPA	U.S. Environmental Protection Agency
RPD	(See Glossary above)
RSD	(See Glossary above)
SOP	Standard operating procedures
TMDL	(See Glossary above)
USGS	U.S. Geological Survey
WRIA	Water Resource Inventory Area

Units of Measurement

°C	degrees centigrade
m	meter
mg/L	milligrams per liter (parts per million)
ug/L	micrograms per liter (parts per billion)
uS/cm	microsiemens per centimeter, a unit of conductivity