APPENDIX E

CHANGE ORDER AND DEVIATION/CORRECTIVE ACTION REPORTS

APPENDIX E-1

CHANGE ORDER REQUEST FORMS
SIGNED

Change Request Form
Upper Columbia River (UCR) Sediment Study

Page 1 of 2

Change No. : 2 #1 MEA 07/06/10

CHANGE REQUEST: Acute water-only exposures to white sturgeon ELS using Kootenay Hatchery eggs

Applicable Reference: Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change: Use of Kootenay Hatchery White Sturgeon for the Acute 96Hr LC50 Study (Appendix B)

Reason for Change: Due to unforeseen circumstances, white sturgeon eggs from the Washington State Hatchery (i.e., Sherman Creek) as obtained by the USGS-Columbia laboratory can not be shipped to the U of S laboratory as specified within Appendix B of the QAPP. As a result, white sturgeon eggs from the Kootenay Hatchery will be used in the acute 96 Hr. LC50 tests at the U of S.

Impact on Present and Completed Work: No impacts are anticipated, see attached.

Requested By: Markus Hecker (Scientist) Date: 6/29/2010

Acknowledged By: Jonathan Doering (Task Leader) Date: 6/29/2010

APPROVAL

Project Manager: Markus Hecker Date: 6/29/2010

Teck Project Manager: Date: 07/06/10

EPA Project Manager: Helen H. Bottcher Date: 7/10/2010

From:	Adzic Marko SPOK
To:	Anne Fairbrother
Subject:	FW: Recommendation to forgo further inter-laboratory sturgeon toxicity testing at USGS-Columbia and U of S
Date:	Monday, June 28, 2010 3:59:15 PM

From: Christopher G Ingersoll [mailto:cingersoll@usgs.gov]
Sent: Monday, June 28, 2010 10:04 AM
To: Bottcher.Helen@epamail.epa.gov
Cc: Duncan.Bruce@epamail.epa.gov; Greenberg.Marc@epamail.epa.gov; mesl@shaw.ca; Stephen E Cox; Adzic Marko SPOK; Paul Paquin; Robert Santore; MHecker@entrix.com; Edward E Little
Subject: Recommendation to forgo further inter-laboratory sturgeon toxicity testing at USGS-Columbia and U of S

Helen:

Ed Little and I participated on a call Friday afternoon with Marco Adzic, Ann Fairbrother, Markus Heck, Paul Paquin, and Bob Santore to discuss the utility of conducting additional inter-laboratory comparisons of sturgeon strain sensitivity between USGS-Columbia and U of S. The consensus on the call was that additional inter-laboratory comparisons of strain sensitivity are not a high priority.

This conclusion was based on the similar sensitivity of sturgeon in 96-h acute copper exposures conducted at the USGS-Columbia and at the U of S in different waters, with normalization using BLM modeling. Moreover, there is likely some differences in strain sensitivity between years based exposures conducted by USGS-Columbia between 2007 and 2009 which encompass the range of acute copper sensitivity observed between the USGS-Columbia and the U of S based on BLM modeling. In addition, the response of the genetically distinct Kootenai River white sturgeon was similar to that of the Columbia River population. Hence, the individuals on the call Friday concluded that inter-laboratory comparisons of strain sensitivity are not a high priority.

We will drop the paragraph on inter-laboratory testing from our USGS-Columbia QAPP. Please let us know if you would like to discuss this topic further.

Sincerely,

Ed Little and Chris Ingersoll

Chris Ingersoll
Columbia Environmental Research Center, U.S. Geological Survey
4200 New Haven Rd, Columbia, MO 65201
573/876-1819 (work), -1896 (fax)
cingersoll@usgs.gov, http://www.cerc.usgs.gov/

Change Request Form
Upper Columbia River (UCR) White Sturgeon Sediment Toxicity Study

Page 1 of 1 Change No.: 2

CHANGE REQUEST: Adjustment of Exposure Time for DGTs to 48 hours

Applicable Reference:	Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*) - QAPP & and its Amendments
Description of Change:	DGTs within the chemistry chambers will be deployed for a period of 48 hours.
Reason for Change:	An error within the July 13, 2010 memorandum was identified in which it was stated that the exposure time for DGTs would be 7 days. This exposure time is only applicable to peepers and not DGTs. As noted within SOP-18, DGTs should be exposed for a period of 24-48 hours and is consistent with the recommendations provided by the developer and manufacturer (DGT Research Limited) of the DGT sediment probes and other researchers (Zhang, 2003). It is also consistent with the SOP that has been adopted by the USGS, where a deployment period of 24 - 48 hours is recommended (Brumbaugh, 2008).
Impact on Present and Completed Work:	None.

Requested By: Markus Hecker (Scientist) Date: 7/23/2010

Acknowledged By: David Vardy (Task Leader) Date: 7/23/2010

APPROVAL

Project Manager: Markus Hecker Date: 7/23/2010

Teck Project Manager: Date: 7/23/2010

EPA Project Manager: Helen H. Bottcher Date: 7/24/10

Change Request Form
Upper Columbia River (UCR) Sediment Toxicity Testing to White Sturgeon

Page 1 of 1 Change No. : 3

CHANGE REQUEST: Covert Two Biology Treatments into Chemistry Only Treatments

Applicable Reference:	Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*) - QAPP
Description of Change:	One biology replicate each from UMF-01 and the control sediment would be converted into chemistry-only chambers. Existing fish within the chambers would be removed and reseeded with fish from the stock tank, to the number removed plus the number lost during cleaning operations on Day 22 and 23 of the study.
Reason for Change:	During cleaning activities, sediments were inadvertently extracted beneath the screen. This created a vacuum in which 69 and 35 fish were respectively lost from a biology chamber for treatment groups: 1) UMF-01 and 2) laboratory control sediment.
Impact on Present and Completed Work:	No impact on the proposed work is anticipated as there remains sufficient replication (3 biology + 2 chemistry chambers = 5 replicates) within each treatment group.

Requested By: Markus Hecker (Scientist) Date: 20-Aug-10

Acknowledged By: Jonathan Doering (Task Leader) Date: 20-Aug-10

APPROVAL

Project Manager: Markus Hecker Date: 20-Aug-10

Teck Project Manager: Date: 20-Aug-10

EPA Project Manager: Helen H Bottcher Date: 8/20/2010

Change Request Form
Upper Columbia River (UCR) Sediment Toxicity Testing to White Sturgeon

Page 1 of 1 Change No. : 4

CHANGE REQUEST: Increase Water Replacement and Decrease Feeding Rates

Applicable Reference:	Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*) - QAPP
Description of Change:	Increase water replacement in all 43 exposure systems from 250 L per 24 hrs. to 375 L per 24 hrs; and decrease feeding rates by ~10% per day for 4 subsequent days. The net effect of these changes would be to reduce total ammonia and nitrate concentrations to ≤0.04 mg/L as N, respectively. Once the desired objective is satisfied, water replacement rates would gradually be set back to 250 L per 24 hrs., as appropriate. Ongoing daily water quality monitoring activities will also include: ammonia, nitrate, and nitrite until the above conditions have been met.
Reason for Change:	Due to fish bioactivity (i.e., waste production), increasing trends in ammonia and nitrate are being observed. To avoid potential toxicity due to elevated levels of these compounds and uncertainties in data interpretation these modifications are necessary.
Impact on Present and Completed Work:	There is no impact to any completed work, and this change is required to ensure that the DQO of the study can be maintained.

Requested By: Markus Hecker (Scientist) Date: 31-Aug-10

Acknowledged By: Jonathan Doering (Task Leader) Date: 31-Aug-10

APPROVAL

Project Manager: Markus Hecker Date: 31-Aug-10

Teck Project Manager: Date: 1-Sep-10

EPA Project Manager: Helen H. Bottcher Date: 9/1/2010

APPENDIX E-2

DEVIATION/CORRECTIVE ACTION REPORT FORMS SIGNED

Deviation / Corrective Action Report Form
Sturgeon Early Life Stage Sediment Toxicity Test

Date: September 7, 2010 Deviation Number: 01

Applicable Reference: 2010 Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change (what happened, when and why -- could include inadvertent deviation from QAPP, contradictory language in QAPP, unanticipated problems, schedule / time constraints):

The total number of airstones installed per exposure chamber (i.e., airstone density) was at the lower range as identified within the approved QAPP (i.e., 8). Based on methods development work, it was observed that sufficient porewater volumes could be extracted throughout the range of proposed airstone densities (i.e., 8-12 per chamber), without adversely affecting porewater integrity/quality (i.e., suctioning of overlying water). Methods development work thus confirmed that 12 airstones per chamber could be installed. Limited supplies however from airstone manufactures precluded the use of 12 airstones per chamber. As a result and consistent with the QAPP, a density of 8 airstones per chamber was employed.

Corrective Action (how the issue was addressed, any steps taken to ensure similar problems do not re-occur)

Volumes to be extracted per sampling event and device were adjusted to 13-15 mL; consistent with findings from methods development work. This extraction volume ensures that sufficient volumes are attained for chemical analyses, while maintaining porewater integrity/quality (i.e., precludes the inclusion of overlying water).

Impact on Present and Completed Work (discuss magnitude of impact and bias of change if this can be anticipated)

No impact on the present or completed work is anticipated.

Recorded by: David Vardy Date: 09/07/2010

ACKNOWLEDGED BY:

Task Manager: Dr. Markus Hecker Date: 09/07/2010

TAI Project Coordinator: Date: 09/15/10

EPA Project Coordinator: Helen H. Bottcher Date: 10/1/10

Deviation / Corrective Action Report Form
Sturgeon Early Life Stage Sediment Toxicity Test

Date: September 7, 2010 Deviation Number: 02

Applicable Reference: 2010 Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change (what happened, when and why -- could include inadvertent deviation from QAPP, contradictory language in QAPP, unanticipated problems, schedule / time constraints):

As noted within Standard Operating Procedure (SOP)-18 of the QAPP and its amendments, equilibration/exposure times for diffusive thin-film gradients (DGTs) and peepers employed within chemistry-only chambers are 24-48 hours and 7-days, respectively. During the first deployment period, equilibration/exposure times of ~60 hours (DGTs) and 8 days (peepers) were respectively observed. This minor delay in removing passive diffusive samplers from chemistry-only chambers was the result of logistical constraints. Specifically, the first extraction of passive diffusive samplers coincided with parallel activities associated with the biological chambers. Given the shear volume and frequency of sampling required at the beginning of the study; and following the priority to complete activities associated with the biological chambers (i.e., a 15-hour work day); it was deemed impractical and unsafe to continue sampling the chemistry-only chambers. As such, sampling of chemistry-only chambers was initiated and completed the following morning.

Corrective Action (how the issue was addressed, any steps taken to ensure similar problems do not re-occur)

Sampling of chemistry-only chambers was initiated approximately 12 hours later. All other sampling events associated chemistry-only chambers have been completed per the QAPP and its amendments.

Impact on Present and Completed Work (discuss magnitude of impact and bias of change if this can be anticipated)

No impact on the present or completed work is anticipated.

Recorded by: David Vardy Date: 09/07/2010

ACKNOWLEDGED BY

Task Manager: Dr. Markus Hecker Date: 09/07/2010

TAI Project Coordinator: Date: 09/15/10

EPA Project Coordinator: Helen H. Bottcher Date: 10/1/10

Deviation / Corrective Action Report Form
Sturgeon Early Life Stage Sediment Toxicity Test

Date: September 9, 2010 Deviation Number: 03

Applicable Reference: 2010 Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change (what happened, when and why -- could include inadvertent deviation from QAPP, contradictory language in QAPP, unanticipated problems, schedule / time constraints):

Given the large volume of sediment required per sample location and to minimize confusion during field sampling activities, sampling locations as identified within the QAPP were sequentially numbered and individual 5-gallon buckets assigned a dedicated Tag number. This numerical labeling system was implemented to ensure that following field sampling activities and the potential of collecting in excess of 120 5-gallon buckets; samples could be easily tracked and appropriately assigned to the sample collection area. The strategy implemented during field sampling activities was to start at the farthest downstream location (i.e., Lower Marcus Flats [LMF]) and move upstream until all primary sampling locations were visited. If required, alternative sample locations (i.e., Northport and Little Dalles) would subsequently be targeted. As a result, stations within LMF were numerically numbered 1 through 3; and dedicated 5-gallon buckets were assigned Tag Nos. of 1 through 30, Upper Marcus Flats 4 through 6; and Tag Nos. 31 through 60; etc. Based on field samples collected, corresponding treatment IDs are as follows: LMF-01 = SD0001; LMF-02 = SD0002; LMF-03 = SD0003; UMF-01 = SD0004; UMF-02 = SD0005; UMF-03 = SD0006; LD-01 = SD0013; and NP-03 = SD0018.

Corrective Action (how the issue was addressed, any steps taken to ensure similar problems do not re-occur)

Detailed field notes and tracking tables were collected/updated during sampling activities.

Impact on Present and Completed Work (discuss magnitude of impact and bias of change if this can be anticipated)

No impact on the present or completed work is anticipated.

Recorded by: Jeff Leppo Date: 09/09/2010

ACKNOWLEDGED BY

Task Manager: Dr. Markus Hecker Date: 09/09/2010

TAI Project Coordinator: Date: 09/15/10

EPA Project Coordinator: Helen M. Bottcher Date: 10/1/10

Deviation / Corrective Action Report Form
Sturgeon Early Life Stage Sediment Toxicity Test

Date: September 7, 2010 Deviation Number: 04

Applicable Reference: 2010 Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change (what happened, when and why -- could include inadvertent deviation from QAPP, contradictory language in QAPP, unanticipated problems, schedule / time constraints):

At the request and direction of the U.S. Environmental Protection Agency (EPA), residual substrate materials collected for and employed during methods development work at Deadmans Eddy (DE), were to be incorporated into the present study. Specifically, DE substrates evaluated within the modified exposure chamber were to be assigned as a biological chamber; while other residual DE substrate was to be included as a chemistry-only chamber, and as many biological chambers as possible. While it was EPA's intent that the exposure 'system' (i.e., system = substrate + the physical chamber) used during methods development be included as a biological treatment, this was not possible because the chamber itself was very different in design. Specific differences between chambers designed and constructed for this study, and that used during methods development include: 1) only four airstones were employed during methods development; 2) screens were not present; and 3) sediment chamber depth was different (3 inches vs. 2 inches). As a result, it was not possible to employ the exposure 'system' as is; but rather it was necessary that substrates be transferred to an exposure chamber specifically designed for this study (e.g., 8 airstones, presence of screens etc.).

Corrective Action (how the issue was addressed, any steps taken to ensure similar problems do not re-occur)

Upon learning that the exposure 'system' from methods development work could not be employed as is, it was agreed that residual DE substrates be homogenized per all other treatments (e.g., LMF, UMF etc); and following homogenization procedures per the QAPP, three replicate chambers (2 biological, and 1 chemistry-only) be established for the duration of the study.

Impact on Present and Completed Work (discuss magnitude of impact and bias of change if this can be anticipated)

No impact on the present or completed work is anticipated.

Recorded by: Jonathon Doering Date: 09/07/2010

ACKNOWLEDGED BY

Task Manager: Dr. Markus Hecker Date: 09/07/2010

TAI Project Coordinator: Date: 09/15/10

EPA Project Coordinator: Helen H. Bottcher Date: 10/1/10

Deviation / Corrective Action Report Form
Sturgeon Early Life Stage Sediment Toxicity Test

Date: September 7, 2010 Deviation Number: 05

Applicable Reference: 2010 Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change (what happened, when and why -- could include inadvertent deviation from QAPP, contradictory language in QAPP, unanticipated problems, schedule / time constraints):

Standard Operating Procedure (SOP)-4 'Below-Water Grab Sampling Procedures' required that material from the edges of the sampling device be excluded. Due to the large volume requirements and the nature of sediment tests to be performed, it was acknowledged prior to field mobilization activities that such a step was not necessary. As a result, the decontaminated Power Grab Sampler (i.e., a modified vanVeen sampler) was raised to the deck and inspected for acceptance criteria. If the grab sample was accepted based on criteria established within the QAPP, the whole aliquot within the sampler was placed into the sample container.

Corrective Action (how the issue was addressed, any steps taken to ensure similar problems do not re-occur)

No corrective action is required. Prior discussions between the U.S. Environmental Protection Agency and Teck American Incorporated determined that the SOP-4 restriction was not necessary when using the Power Grab technique and sample transfer protocols described above.

Impact on Present and Completed Work (discuss magnitude of impact and bias of change if this can be anticipated)

There are no impacts or compromises on present and/or completed work.

Recorded by: Jeff Leppo Date: 09/06/2010

ACKNOWLEDGED BY

Task Manager: Dr. Markus Hecker Date: 09/07/2010

TAI Project Coordinator: Date: 09/15/10

EPA Project Coordinator: Helen H. Bottcher Date: 10/1/10

Deviation / Corrective Action Report Form
Sturgeon Early Life Stage Sediment Toxicity Test

Date: September 9, 2010 Deviation Number: 06

Applicable Reference: 2010 Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change (what happened, when and why -- could include inadvertent deviation from QAPP, contradictory language in QAPP, unanticipated problems, schedule / time constraints):

Based on field observations recorded during sediment sampling activities within Lower Marcus Flats (LMF), specifically at station LMF-02, the potential for wood burning activities associated with a historical saw mill was identified. As a result, to ensure that sediments were not adversely affected by such historical activities, the list of organics to be analyzed within sediment samples was expanded to include polycyclic aromatic hydrocarbons (PAHs).

Corrective Action (how the issue was addressed, any steps taken to ensure similar problems do not re-occur)

Due to the above-mentioned potential, in addition to analyzing sediment samples for polychlorinated biphenyls (PCBs), and organochlorine pesticides (e.g., DDT) per the QAPP, sediment samples are also being analyzed at the start of the study for the following PAHs: Anthracene, Pyrene, Dibenzofuran, Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene, Benzo(b)fluoranthene, Fluoranthene, Benzo(k)fluoranthene, Acenaphthylene, Chrysene, Benzo(a)pyrene, Dibenz(a,h)anthracene, Benz(a)anthracene, Acenaphthene, Phenanthrene, Fluorene, Naphthalene, 2-Methylnaphthalene.

Impact on Present and Completed Work (discuss magnitude of impact and bias of change if this can be anticipated)

No impact on the present or completed work is anticipated. The additional data will help in the evaluation of test results.

Recorded by: David Vardy Date: 09/09/2010

ACKNOWLEDGED BY

Task Manager: Dr. Markus Hecker Date: 09/09/2010

TAI Project Coordinator: Date: 09/15/10

EPA Project Coordinator: Helen H. Bottcher Date: 10/1/10

Deviation / Corrective Action Report Form
Sturgeon Early Life Stage Sediment Toxicity Test

Date: September 9, 2010 Deviation Number: 07

Applicable Reference: 2010 Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change (what happened, when and why -- could include inadvertent deviation from QAPP, contradictory language in QAPP, unanticipated problems, schedule / time constraints):

At the request and suggestion of the U.S. Environmental Protection Agency's (EPA's) oversight personal, water hardness within head storage tanks was to be measured following recharge (filling).

Corrective Action (how the issue was addressed, any steps taken to ensure similar problems do not re-occur)

Since July 27, 2010 and following each recharge activity, in-house water hardness as described within the QAPP is being monitored within the head tanks of the water distribution system.

Impact on Present and Completed Work (discuss magnitude of impact and bias of change if this can be anticipated)

No impact on the present or completed work is anticipated.

Recorded by: Jonathon Doering Date: 09/09/2010

ACKNOWLEDGED BY

Task Manager: Dr. Markus Hecker Date: 09/09/2010

TAI Project Coordinator: Date: 09/15/10

EPA Project Coordinator: Helen H. Bottcher Date: 10/1/10

Deviation / Corrective Action Report Form
Sturgeon Early Life Stage Sediment Toxicity Test

Date: September 9, 2010 Deviation Number: 08

Applicable Reference: 2010 Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change (what happened, when and why -- could include inadvertent deviation from QAPP, contradictory language in QAPP, unanticipated problems, schedule / time constraints):

Chronic sediment toxicity tests were initiated (i.e., seeding of sturgeon into test chambers) on July 24, 2010 (i.e., day 2 post hatch [2 dph]) as opposed to the planned 1 dph. In addition, following study initiation and within 48 hours, it was observed that a limited number of fish escaped beneath or along the sides of the screens; or in the case of water only treatments, become entrained within sample port tubing not connected to an airstone. As a result, escaping fish or those entrained within sampling equipment were removed and replaced.

Corrective Action (how the issue was addressed, any steps taken to ensure similar problems do not re-occur)

Per ASTM E1241-05, study initiation is appropriately defined as ≤48 hours post hatch and as such, laboratory personal ensured that all exposure chambers were seeded within this timeframe. In addition and in consultation and coordination with on-site EPA technical oversight (Cameron Irvine), it was agreed that escaping fish and/or those entrained within equipment (e.g., tubing) should not be counted as a mortality; but rather removed and replaced. As a result, for those fish affected by the above-mentioned observations, they were immediately replaced with fish from the stock tank. In addition, to minimize the potential for further losses due to similar characteristics, decontaminated high-density polyethylene (i.e., plastic) rulers were inserted along the seams of the screens so as to thwart potential escape routes; and sample port tubing not connected to an airstone was tied-off.

Impact on Present and Completed Work (discuss magnitude of impact and bias of change if this can be anticipated)

No impact on the proposed work is anticipated. Although actual seeding numbers may slightly differ from the targeted seeding density (100 fish per chamber); daily records in combination with counts of remaining fish at the end of the study will verify the exact seeding density.

Recorded by: David Vardy Date: 09/09/2010

ACKNOWLEDGED BY

Task Manager: Dr. Markus Hecker Date: 09/09/2010

TAI Project Coordinator: Date: 09/15/10

EPA Project Coordinator: Helen H. Bottcher Date: 10/1/10

Deviation / Corrective Action Report Form
Sturgeon Early Life Stage Sediment Toxicity Test

Date: September 10, 2010 Deviation Number: 09

Applicable Reference: 2010 Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change (what happened, when and why -- could include inadvertent deviation from QAPP, contradictory language in QAPP, unanticipated problems, schedule / time constraints):

Parallel acute toxicity tests (Appendix B of the QAPP) are being performed at the University of Saskatchewan's (U of S) Aquatic Toxicology Centre, and at the U.S. Geological Survey (USGS) Columbia Environmental Research Center (CERC). To ensure that these two studies are harmonized to the maximum extent possible, acute 96 hour (hr) toxicity tests (water-only exposures) were initiated on day 16 post hatch (16 dph); as opposed to 15 dph outlined within Appendix B of the QAPP. Similarly, additional acute 96 hr toxicity tests were performed on 45 dph due to logistical laboratory constraints.

Corrective Action (how the issue was addressed, any steps taken to ensure similar problems do not re-occur)

Regular communications (e.g., at a minimum bi-monthly) identified that acute 96 hr tests at the USGS CERC laboratory were initiated on 16 dph. As a result, to ensure harmonization between tests and laboratories, the U of S adjusted the initiation of their parallel acute water-only exposure toxicity tests. The two biological laboratories continue to maintain regular communications to ensure that any ongoing parallel tests continue to be harmonized to the maximum extent possible and practical.

Impact on Present and Completed Work (discuss magnitude of impact and bias of change if this can be anticipated)

No impact on the present or completed work is anticipated.

Recorded by: David Vardy Date: 09/10/2010

ACKNOWLEDGED BY

Task Manager: Dr. Markus Hecker Date: 09/10/2010

TAI Project Coordinator: Date: 09/15/10

EPA Project Coordinator: Helen H. Bottcher Date: 10/1/10

Deviation / Corrective Action Report Form
Sturgeon Early Life Stage Sediment Toxicity Test

Date: September 10, 2010 Deviation Number: 10

Applicable Reference: 2010 Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change (what happened, when and why -- could include inadvertent deviation from QAPP, contradictory language in QAPP, unanticipated problems, schedule / time constraints):

During the first two weeks of the study, despite flow rates within all exposure chambers being within an acceptable range as determined through methods development work (i.e., 17-20 liters per minute [L/min]), and water quality parameters (e.g., dissolved oxygen) being within design and acceptable limits; flow rates within some chambers was slightly less than the targeted 20 L/min.

Corrective Action (how the issue was addressed, any steps taken to ensure similar problems do not re-occur)

In addition to the ongoing monitoring of exposure chambers for water quality parameters (e.g., hydrogen ion activity [pH], specific conductance, dissolved oxygen etc), weekly monitoring of water flow rates was also initiated. This increased monitoring ensures that flow rates are set and maintained at the target level of 20 L/min until flow rates were to be increased to 25 L/min during the second part of the chronic exposure studies (increased monitoring was maintained during the second part of the study to insure stable flow rates).

Impact on Present and Completed Work (discuss magnitude of impact and bias of change if this can be anticipated)

No impact on the present or completed work is anticipated.

Recorded by: Jonathon Doering Date: 09/10/2010

ACKNOWLEDGED BY

Task Manager: Dr. Markus Hecker Date: 09/10/2010

TAI Project Coordinator: Date: 09/15/10

EPA Project Coordinator: Helen H. Bottcher Date: 10/1/10

Deviation / Corrective Action Report Form
Sturgeon Early Life Stage Sediment Toxicity Test

Date: September 10, 2010 Deviation Number: 11

Applicable Reference: 2010 Quality Assurance Project Plan for the Assessment of Sediment Toxicity to White Sturgeon (*Acipenser transmontanus*)

Description of Change (what happened, when and why -- could include inadvertent deviation from QAPP, contradictory language in QAPP, unanticipated problems, schedule / time constraints):

Two water only exposure chambers received five and six airstones respectively rather than eight as per all other sediment containing chambers.

Corrective Action (how the issue was addressed, any steps taken to ensure similar problems do not re-occur)

To ensure that sufficient water volumes are made available to the analytical laboratory (i.e., Columbia Analytical Services) for 'porewater' analyses from the above-mentioned water only exposure chambers, volumes extracted per sampling event per airstone was respectively adjusted to 17 (6 airstones) and 20 (5 airstones) milliliters (mL). Given that the exposure chambers in question do not contain sediment (i.e., water-only exposures) there is no true porewater.

Impact on Present and Completed Work (discuss magnitude of impact and bias of change if this can be anticipated)

No impact on the present or completed work is anticipated.

Recorded by: Jonathon Doering Date: 09/10/2010

ACKNOWLEDGED BY

Task Manager: Dr. Markus Hecker Date: 09/10/2010

TAI Project Coordinator: Date: 09/15/10

EPA Project Coordinator: Helen H. Bottcher Date: 10/1/10

APPENDIX E-3

U.S. ENVIRONMENTAL PROTECTION AGENCY, THE OFFICE OF RESEARCH AND DEVELOPMENT PEER REVIEW

Adzic Marko SPOK

From: Helen Bottcher <Bottcher.Helen@epamail.epa.gov>
Sent: Tuesday, February 07, 2012 4:58 PM
To: daniel_audet@nps.gov; Keith_Holliday@nps.gov; patti.bailey@colvilletribes.com; connolly@spokanetribe.com; jrol461@ecy.wa.gov; chgr461@ecy.wa.gov; bdow461 @ecy.wa.gov; Monica Tonel; Helen Bottcher; fredk@aeseinc.com; Bruce Duncan; Davidw Charters; Marc Greenberg; Burt Shephard; Adzic Marko SPOK; afairbrother@exponent.com; jwichmann@wildblue.net; Carrie.Rickwood@NRCan-RNCan.gc.ca
Cc: Markus Hecker; cingersoll@usgs.gov; Craig Cameron
Subject: UCR sturgeon toxicity studies - results of peer review
Attachments: ORD Sturgeon Peer Review.pdf

Hi, everyone.

The results of EPA's peer review of the sturgeon toxicity studies conducted for the Upper Columbia River remedial investigation and feasibility study are attached. As you'll recall, studies to look at metal toxicity in water and the toxicity of sediment from the Upper Columbia River to larval white sturgeon were performed in 2010 by the U.S. Geological Survey lab in Columbia, Missouri and the University of Saskatchewan lab in Saskatoon. At my request, EPA's Office of Research and Development conducted an internal peer review on the two studies, using the study QAPPs, any change orders or deviation reports, and the performance data from both studies.

The principal investigators for both studies have reviewed the findings and reported that the findings are clear and contain useful suggestions.
Neither team had any questions for the peer reviewers.

The next step is for both teams to move forward and complete draft study reports, a process that will take us well into the spring / early summer.

As always, feel free to contact me with any questions.

Regards,

Helen Bottcher

(See attached file: ORD Sturgeon Peer Review.pdf)

RECEIVED
By mea at 7:20 am, Feb 09, 2012

Peer Review Preface

The purpose of this document is to provide a technical review of materials associated with toxicity testing of white sturgeon conducted by the United States Geological Survey (USGS) and the University of Saskatchewan (U of S) in support of remedial activities on the Upper Columbia River. Reviewers received several Quality Assurance Project Plans (QAPPs) and copies of several communications between EPA Region 10 Superfund project management personal and principle investigators from the Department of Interior (USGS), the University of Saskatchewan (Canada), and the consulting firm Entrix.

The reviewers note that the raw data were provided in a form that made the review exceptionally difficult and time consuming. The data were not adequately summarized and much of the review time was spent organizing and summarizing data so that the reviewers could gain some understanding of what was done. The QAPPs and memos that were provided did not always explain actions in sufficient detail to allow the reviewers to fully comprehend the data. For example, it was very difficult for reviewers to decipher much of the replicate survival and weight data, especially in the chronic tests. Also, there was confusion as to why data provided in summary form (much later than original data package) did not match those initially provided in the raw data files. Finally, this review was completed making the assumption that measured concentrations were similar to the nominal concentrations provided in the raw data package; measured chemistry results were not provided to the reviewers.

In spite of these many issues, the reviewers evaluated the toxicity test data as thoroughly as possible. A summary write-up is provided on the following pages. The summary is organized to answer the specific questions under **c. Charge Questions** on page 3 of the request (**2010 Upper Columbia Sturgeon Toxicity Testing Peer Review (updated)**). The reviewer responses to these charge questions were numbered 1, 2, 4, and 5 as this is how the charge questions were numbered in the review request. It should be noted that while trying to address the items listed in the "Table of Key QA Issues. Version 5/5/11-for Peer Reviewer use" (under charge question number 2), the reviewers were, at times, confused about what exactly was being requested to review. For some items, the reviewers did not know if comments were requested regarding the issue, approach, discussion, or path forward columns in the table of QA issues. For example, Task 6 in the table simply reads "Low flow rates" in the Key Issue column with a simple description for action regarding U of S. The reviewers attempted to address items or questions that were thought to be associated with each issue listed in the table but may have missed addressing pertinent points hoped for by USEPA Region 10. Because of this confusion, the reviewers provided a discussion of what was thought to be the most important issues at the end of the summary, under charge question number 5, Opinions on Data Usability.

Charge Questions

1) **QAPP Development:**
   a. **DQO Adequacy: Did the data quality objectives support the development of data of sufficient quality for the intended use of the data?**

      In general, the reviewers concluded that (with the possible exception listed below) the *a priori* data quality objectives should have been sufficient to support reasonable data quality for the intended use..

      Were important/significant DQOs missing?

      In retrospect, laboratories should have documented data that would demonstrate baseline culturing capabilities of organisms at various life stages. If this would have been adequately completed before toxicity testing began, risk managers would have understood that control mortality in certain age groups was going to be an issue, or laboratories would have been able to alter baseline culturing conditions to improve swim-up survivability during transition to exogenous feeding. Current publications in peer-reviewed literature from University of Saskatchewan (U of S) studies (Vardy et al. 2011) cite several sources of information arguing that this is a common phenomenon known to experienced white sturgeon culturists. If this is such a well known phenomenon, why wasn't this issue identified and accounted for in the DQOs? Furthermore, in the USGS QAPP "for the evaluation of the acute or chronic toxicity of individual chemicals of interest to white sturgeon and rainbow trout in water-only exposures", the authors specifically identify mortality of white sturgeon at the onset of exogenous feeding in chronic tests conducted at U of S, but fail to account for this important observation in the DQOs.

2) **QAPP Modification/Deviation. For each issue in the table and any other issues you identify, address the following:**
   a. **Modifications: Was the QAPP modified after conducting the tests or in response to events during testing? How does this impact the validity of the results? Were the QAPP modifications adequate and practicable for producing usable data?**

   b. **Deviations: Did deviations in method performance negate any or a substantial portion of the resulting data? What is your opinion on the effect of the deviations on the method performance?**

      Task 1. Fish escapees

The loss of organisms by escaping is certainly not unique to sturgeon testing. If the losses are indeed escapees and the number of fish escaping is low (e.g., 10-20%) then it would be reasonable to adjust the starting number of organisms downward (e.g., 10-20%) and calculate ending survival based on the adjusted number. If the problem is more than

minimal, survivor estimation models like Kaplain-meyer may be useful. These models can be used to estimate survival in populations when organisms may be lost from the population for unknown reasons. Often used in wildlife studies with transmittered animals, these models "censor" individuals within the population who are not found, but there is good reason to believe they are surviving. However, regardless of the method used, feeding regimes should be adjusted to note the change in numbers of individual/replication/treatment. During a test, if animals were removed from the population, and the same feeding regime was followed as if they hadn't, then the remaining organisms will have had additional ration available. The peer reviewers are not privy to this level of detail, but unequal seeding densities not accounted for in the feed ration can certainly impact growth, and potentially survival.

Additional discussion of fish that were lost from the chambers during testing is provided under 4) Opinions on Data Usability.

Task 2. Inability to collect all sediment samples

The key point here would be to have REPRESENTATIVE sediment and porewater concentrations tested in the laboratory that reflect conditions in the field in an attempt to establish threshold effect concentrations. The number of samples taken within a representative range is less important than ensuring that the full range of sediment and porewater concentrations was tested.

Task 3. Low control survival

Control survival is very important in evaluating the reliability of the results from a toxicity study. It is the key determinant assessing the health of the test organisms and the viability of the test design and exposure system. Without good control survivorship (at least 80%, but preferably >90%) there is no assurance that treatment effects were as a result of the treatment or of an overly sensitive response from a compromised organism. In the table provided to peer reviewers entitled "Table of Key QA Issues Version : 5/5/11" there is mention of Abbots formula to be used as a control correction. The following is Abbot's formula:

$$\text{Corrected \%} = \left(1 - \frac{n \text{ in T after treatment}}{n \text{ in Co after treatment}}\right) * 100$$

Where "n in T" refers to the number of organisms surviving in treatment experimental units and "n in Co" refers to the number of organisms surviving in control experimental units.

This formula was first presented in a 1925 publication proposing a new method for assessing the effectiveness of pesticides in terrestrial settings. Abbot used this equation to argue that to truly measure the effectiveness of a pesticide, one had to account for

survivorship of pests on an area that had not been treated with a pesticide. If survivorship was low on the control setting, then the pesticide was not nearly as potent as had previously described when control mortality wasn't taken into account. By extending that logic for use in this scenario, it would be reasonable to conclude that LC50s from tests with high control mortality would not be as low as estimates from studies with no control mortalities.

More discussion of control mortality is provided under 4) Opinions on Data Usability.

Task 3.a. Acute sturgeon 2nd set of exposures

Only the QAPP and raw data were provided to the peer reviewers. Therefore, it was challenging for reviewers to conclusively match acute test results with the test names, i.e., we were not certain which data were obtained from the "2nd set of exposures". The acute exposures of the data reviewed were for sturgeon 2, 16, 30, 44, 61, 72, and 89 days post hatch (dph) exposed for 96 hrs to Cu, Cd, and Zn. Tables made available to peer reviewers listed nominal concentrations of the various metals. A primary issue the reviewers identified with these data was the lack of measured metal concentrations. Responses to requests by peer reviewers to verify nominal concentrations were not received.

The control mortality observed during transition to exogenous feeding is important; more discussion of control mortality is provided under 4) Opinions on Data Usability.

Task 3.b. Sturgeon Continuous Chronic Study (USGS)

The high rate of mortality observed when the fish transition to exogenous feeding life-stage observed by both laboratories is a problem. The reviewers feel this may be the most important issue that should be resolved in conducting long-term toxicity tests with this species. More discussion of this issue is provided under 4) Opinions on Data Usability.

The high variability in organism responses, especially among controls, is another extremely important issue that should be addressed and corrected. More discussion of this issue is provided under 4) Opinions on Data Usability.

It is the reviewers' understanding that the animals in the USGS continuous chronic test were thinned to 10 organisms per replicate on test day 25. The only issue the reviewers have with culling or thinning organisms is that it is impossible to randomly select organisms for removal, and because of this, one runs the risk of selecting a disproportionally high number of weak or healthy organisms. Care must be taken to ensure that the arbitrarily selected organisms that are removed from the chamber are representative (e.g., size and health); the reviewers found no reason to think this was not done during the continuous chronic test.

Task 3.c. Sediments (U of S)

Increased mortality during transition to exogenous feeding and high variability in organism response were observed in the sediment tests conducted by the U of S. As noted, these

issues were also identified as problem areas in the USGS continuous chronic tests; these issues are discussed under 4) Opinions on Data Usability.

Task 4. Interlab DOC Comparability & Relationship to Site Data

Sufficient information to adequately respond to this comment was not provided to the peer reviewers. Specifically, information was not available to compare DOC concentrations from the UCR to those in the toxicity tests.

Task 5. Fish Replacement Outside of First 24 Hours (at 48 hrs) (U of S)

This is a bit unclear as the reviewers could not locate the exact numbers of fish that were replaced (added) to each test chamber within the information that was provided. With the exception of two chambers with a large proportion of the fish being lost, the numbers of lost fish did not seem to be outrageous. The reviewers feel it would have been better to simply remove the lost or entrained fish from the test chambers and not replace them. Although not very desirable, one can probably deal with the replaced fish as long as the exact numbers (proportion) of replaced fish in each test chamber are known. Investigators may qualitatively evaluate the suitability of the test results by comparing data from chambers containing replaced fish with those not containing replaced fish.

Task 6. Low Flow Rates

Although flow rates were lower than those outlined in each laboratory study plan, it appears as though the flow rates were sufficient (e.g., satisfied requirements outlined in ASTM).

However, one wonders whether the larval sturgeon could be adversely affected by laboratory flow rates that were substantially different than those in the river, especially during transition to exogenous feeding? It has been hypothesized that larval sturgeon swim higher in the water column when food resources are limited or competition for food is high; they use the river current flow to transport and re-distribute them to new or different feeding areas (Muir et al., 2000).

Task 7. LALL sample in exposure chambers did not appear to be fully homogenized (U of S)

If the researchers believe there is reason to think that the sediment tested in the laboratory was not representative of that found in the river, these data should probably be excluded.

Task 8. Day 0 Fish Weight/Lengths were done on Test Day 3 (U of S)

Obviously, it would have been better to obtain the initial weights from a subset of organisms on the day the test was started. However, the reviewers feel that the data can still be used following the approach listed in the Table of Key QA Issues.

However, based on the reviewers' understanding of the data in the tables provided, it appears as though the ending weights of control sturgeon in the long-term test conducted at the USGS lab were substantially larger than the ending control weights obtained in the long-

term U of S test. These data suggest that either the U of S fish were underfed (compared with those in the USGS lab) or they were less able to convert food mass to tissue mass.

Task 9. Light Intensity at 1000 Lux Instead of 200 Lux – Sturgeon through Day 22 (USGS)

Based on the behavior of larval sturgeon, one would guess that they would prefer less light and so the higher amount of light during the first portion of the long-term study may have been stressful for them. However, there is no way to know for certain whether the fish were affected by the increased light. The reviewers agree with the approaches to address this listed in the Table of Key QA Issues.

Task 10. Number of Replicate Control Tanks in Sturgeon Chronic Continuous Study at Post Swim up (USGS)

Although the reviewers understand the desire to start additional control replicates after so much mortality was observed during transition to exogenous feeding, we are not certain that the addition of the "pseudoreplicates" helps to reduce uncertainty. Because the organisms in the "pseudoreplicates" may have been more robust than that of the population used to initiate the studies (e.g., weaker organisms died prior to assignment to the additional replicates), the reviewers do not feel it would be appropriate to calculate the continuous study endpoints (e.g., NOEC, LOEC, and ECx) using the "pseudoreplicate" control data.

3) QAPP and Lab Performance:

a. DQOs and Goals: Did the method performance meet the data quality objectives and overall goals in the QAPP?

In general yes, except for control survival in some age groups.

b. Unmet DQOs and Significance: What is your opinion on the significance of not meeting these DQOs and goals relative to the use of the results?

For those age categories with high mortalities, effect concentrations should be viewed as highly uncertain.

c. High Control Mortality: In particular, high control mortality was encountered. What is the significance of this? How might analyses be done to account for this?

See discussion under 4) Opinions on Data Usability.

d. Numbers of Fish Used: Similarly, accounting for all fish appeared problematic; fish were lost from some exposure tanks. What is the significance of this? How might analyses be done to account for this?

See discussion under 4) Opinions on Data Usability.

4) Opinions on Data Usability:

a. Data Evaluation and Use: The Peer Reviewers will render their opinions on whether and how the results might be used in light of the QA methods peer review. The reviewers will provide potential analytical methods for using the data, if appropriate. The Peer Reviewers will not evaluate test results to determine an adverse risk level.

The reviewers have used this Charge Question as a place to provide opinions on the data generated by both laboratories. Several areas have been identified that cause the most concern; these are listed and discussed in the following paragraphs.

High control mortality. The high rate of sturgeon mortality observed by both labs is troubling. Obviously, control survival criteria are extremely important in toxicity testing and are included for good reason. If good control survival is maintained during the toxicity test, evidence is provided that the test organisms were healthy and researchers can be more confident that measured effects can be attributed to the test material(s). However, if high control mortality is observed, are the remaining (surviving) test animals weak, resulting in a measured effect that would overestimate toxicity? Or did the remaining animals survive because they are extremely robust? Under this scenario, one would predict that the test would underestimate toxicity. Although statistical procedures (e.g., Abbott's formula) can be used when calculating endpoints to account for excessive control mortality, the question remains, does the test over- or under-estimate toxicity because of the variable robustness of the organisms?

We gather from reviewing these data (and those generated during previous studies) that excessive mortality during transition to exogenous feeding has been previously observed during testing and culturing of white sturgeon. However, one wonders whether this high rate of mortality at this life stage actually occurs in the wild. It is understood that this species can produce large numbers of eggs, but it doesn't make sense that so many animals would simply die "naturally" during this stage in the absence of other stressors (e.g., predation). Is it possible that this mortality is occurring for a reason, for example, are the fish missing some component (e.g., a unique food) critical to their health during this life stage? Although an extensive search for information regarding increased mortality at this life-stage has not been conducted by the reviewers, we note that at least some researchers have hypothesized that white sturgeon are particularly susceptible to limited food (e.g., *Corophium* sp.) availability during this life stage (Muir et al., 2000). The reviewers feel that additional studies and research should be conducted to better understand the reason(s) for these mortalities. Without this understanding, the reviewers don't feel confident that results of tests conducted with animals in this life stage will provide a true measure of toxicity. In general, the reviewers believe that toxicity testing of the organisms was undertaken before successful baseline culturing techniques were established for this species, especially during transition to exogenous feeding.

Variable Organism Response. During the longer-term tests conducted in both laboratories, high variability in responses among control replicates and among concurrently conducted control groups was observed. It seems odd that substantially higher mortality would be observed in one or two replicates compared with that observed in other replicates from the same treatment. One might expect to observe higher variability in organism response at toxicant concentrations where adverse effects are evident, but not in the control replicates. It is troubling that both laboratories observed substantial control mortality in at least one control replicate.

Another example of variable organism performance is the difference among responses observed in the USGS lab among concurrently conducted controls. After 25 days of testing, the average survival in two of the controls (38.8% and 40%, respectively) was substantially lower than the average survival observed in the remaining two control groups (71.3% and 62.5%). Further, at the end of the long-term (53-d) test, the average weight value for the control associated with one test (lead) is quite low compared to those measured in the controls associated with the other three tests. In fact, the average control weight measured in the lead control is lower than that observed in any other treatment, except for the high and medium-high copper treatments.

Variable control results suggest that the group of organisms used for testing were somehow stressed, decreasing confidence that the results obtained with the tests can provide a true measure of toxicity. The reviewers feel that more research should be conducted to understand specifically what is causing these differences in response.

Relationship between Survival and Weight. For the control test chambers in the USGS Lab and all test chambers in the University of Saskatchewan Lab, there appears to be a strong correlation between ending survival and weight during the long-term exposures. In chambers where more organisms are present at the end of the study, the ending weights of the organisms appear to be lower. Where fewer organisms are present, the average weight appears to be higher. This survival: weight relationship suggests that some of the organisms with lower weights were either eating less or were unable to convert food to body mass, possibly because of competition.

This survival: weight relationship is sometimes observed in toxicity tests, especially those conducted with fishes, and may be difficult to avoid. However, the relationship demonstrates that survival is closely tied to weight. Given this, the reviewers recommend calculating biomass endpoints instead of only survival or only weight. Biomass should be calculated as the ending weight multiplied by the % survival. If an organism dies, a weight value of 0 is assigned; conversely, escaped organisms or those that or die during the exposure due to technician error are subtracted from the original number of organisms. For example, if during a test initially stocked with 20 animals, 2 organisms died (mortalities), 1 was lost (escaped from the test chamber), and one was accidentally killed (by a technician during chamber cleaning), and the ending average weight was 1.10 g, the ending biomass for this chamber is 1.10 g multiplied by 16/18 = 0.98 g per organism. Or, biomass can be

calculated by dividing total ending mass by the original number of organisms, e.g., 17.6 g/(20 -2 organisms) = 0.98 g per organism.

A related issue is the apparent difference in ending weights obtained at the end of the long-term tests conducted by each laboratory (as discussed previously). Even though it appears that both tests were initiated with organisms of roughly the same weight, it appears as though the ending weights of control sturgeon in the test conducted at the USGS lab were substantially larger than the ending control weights obtained in the U of S test. Can these weight differences be somehow explained? Differences like these cause one to be less certain that the test results provide a true reflection of toxicity.

Loss of Fish from Tanks. Obviously, it is concerning that such large numbers of fish were lost (escaped?) from some test chambers in the University of Saskatchewan test chambers during the long-term sediment exposure. All who have conducted toxicity tests have observed escapees, but usually not to the degree seen in a couple of these chambers. As discussed previously, the most common way to deal with escapees is to simply remove them from consideration. For example if the starting chamber N was 20, and 2 organisms escaped during the study, the starting chamber N would be adjusted to 18. This is usually considered acceptable, especially because only a few escapees are typically observed. However, with the high number of lost organisms in some chambers in the U of S test, one has to wonder whether the loss of these fish can affect the test results. For example, were the organisms that were lost more robust and healthy than the organisms that remained in the chamber? Or, were the lost organisms weaker than those remaining in the chamber (e.g., weaker fish might be expected to be more easily washed down the drain or drawn against a chamber screen). Under the first scenario (weak unhealthy organisms remaining), one could predict that the calculated end-point would be lower; under the second scenario (strong and healthy organisms remaining), one might predict a higher end-point.

Other than the loss of fish observed in two test chambers, relatively few fish were lost during the U of S long-term exposure (e.g., <20% in each chamber). We agree that the two chambers with the highest numbers of lost fish (Ctr D and UMF-01 D) should be excluded from analysis; we do not feel it is necessary to exclude data from the remaining chambers.

References

Muir, WD, GT McCabe Jr., MJ Parsley, SA Hinton. 2000. Diet of First-Feeding Larval and Young-of-the-Year White Sturgeon in the Lower Columbia River. Northwest Science, Vol. 74, No. 1.

Vardy, DW, AR Thompsett, JL Sigurdson, JA Doering, Xiaowei Zhang, JP Geisy, and M Hecker. 2011. Effects of Subchronic Exposure of Early Life Stages of White Sturgeon (*Acipenser transmontanus*) to Copper, Cadmium, and Zinc. Environmental Toxicology and Chemistry, Vol. 30, No. 11, pp. 2497-2505.

APPENDIX F

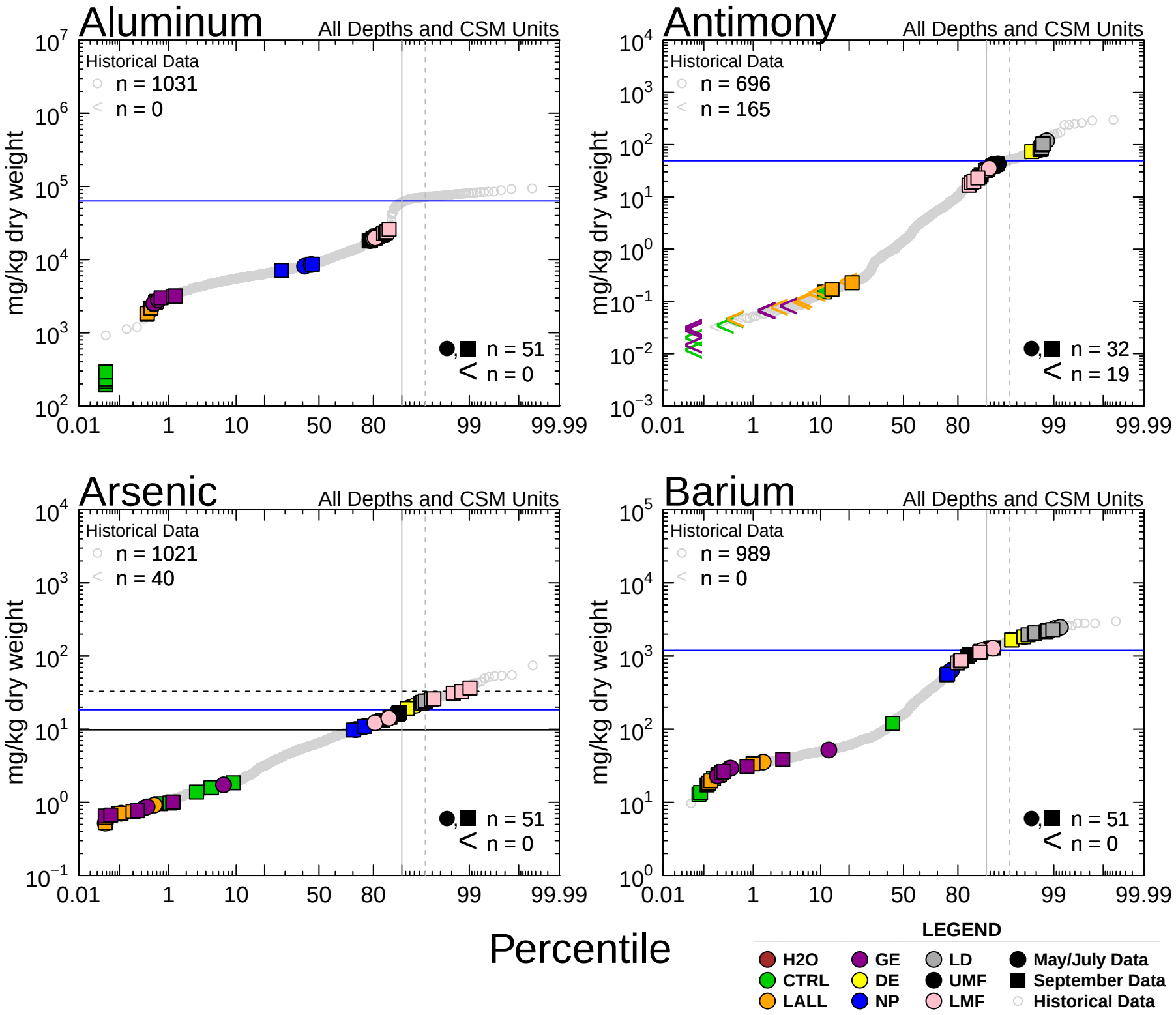
SEDIMENT DATA DISTRIBUTION PLOTS FOR WHITE STURGEON TOXICITY TESTING

APPENDIX F-1

INORGANICS

Legend for Sediment Data Distributions, Inorganic Analytes:

The vertical, solid grey line indicates the 90th percentile of the distribution on the probability axis. The vertical, dashed grey line indicates the 95th percentile of the distribution. The horizontal, solid black line indicates the Threshold Effects Concentration (TEC) (if a TEC exists). Similarly, the horizontal, dashed black line indicates the Probable Effects Concentration (PEC) (if a PEC exists). The horizontal, solid blue line indicates the concentration associated with the 90th percentile of the distribution as calculated by ProUCL and may differ from where concentration values intersect the 90th percentile position on the probability axis because of below detection limit values. Analyte concentrations identified as being below detection limits are illustrated with a less than symbol (<) and are plotted at the detection limit.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< n = 19
Arsenic
All Depths and CSM Units
Historical Data
n = 1021
< n = 40
●,■ n = 51
< n = 0
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All Depths and CSM Units
Historical Data
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< n = 0
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10
50
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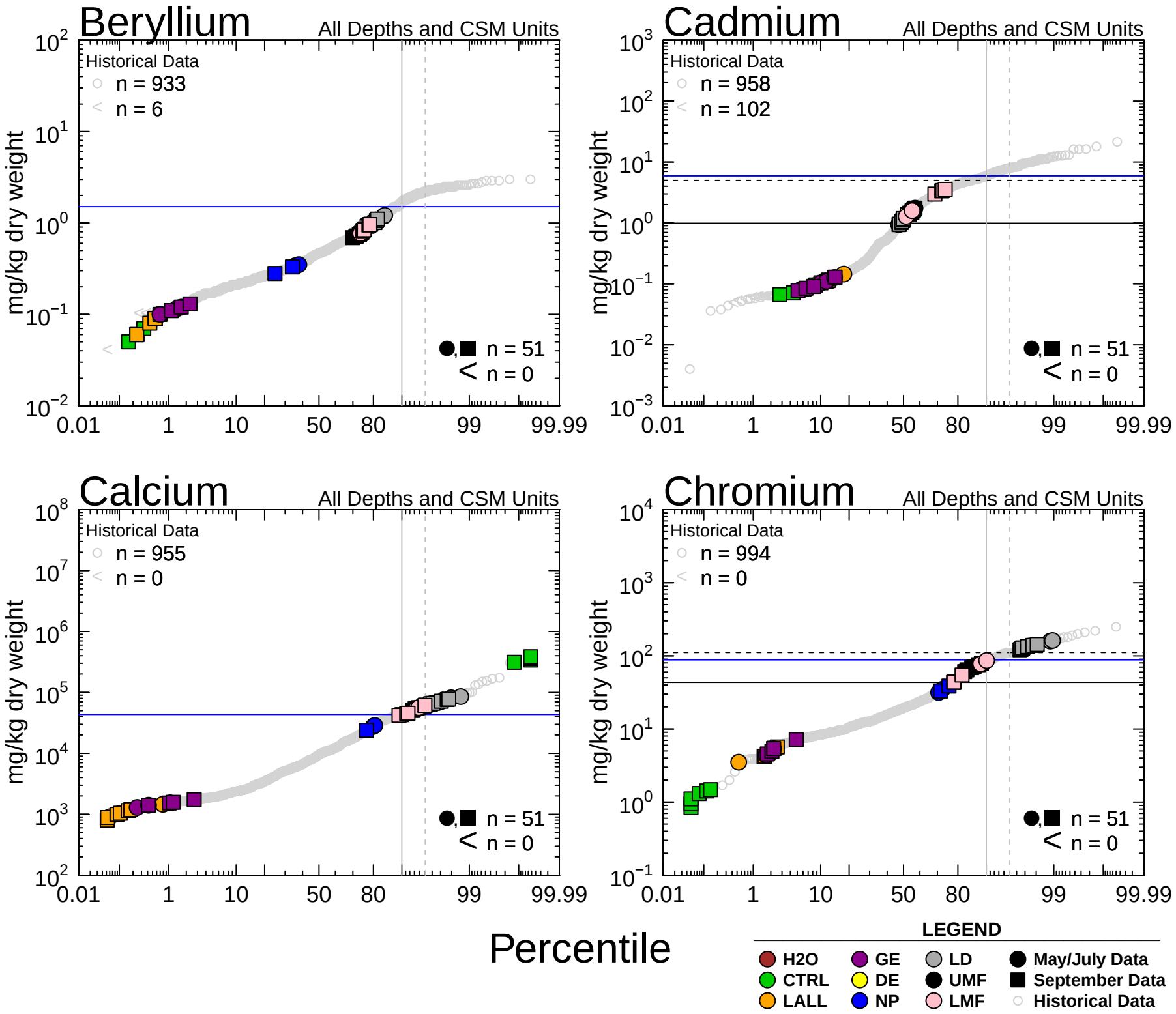
UMF
LMF
May/July Data
September Data
Historical Data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n = 958
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1
10
50
80
99
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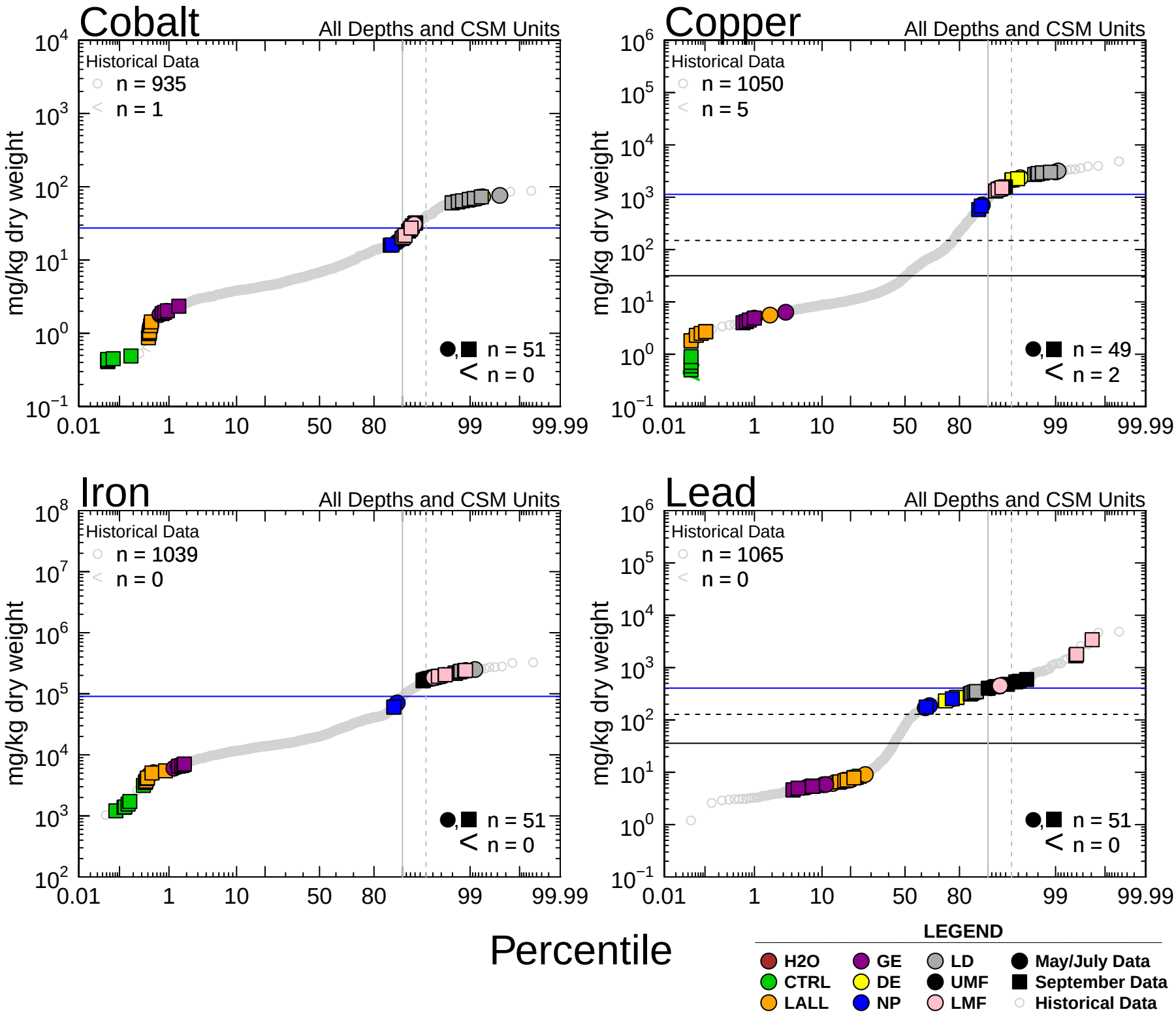
UMF
LMF
May/July Data
September Data
Historical Data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All Depths and CSM Units
Historical Data
n = 1039
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●,■ n = 51
< n = 0
Lead
All Depths and CSM Units
Historical Data
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mg/kg dry weight
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1
10
50
80
99
99.99
Percentile
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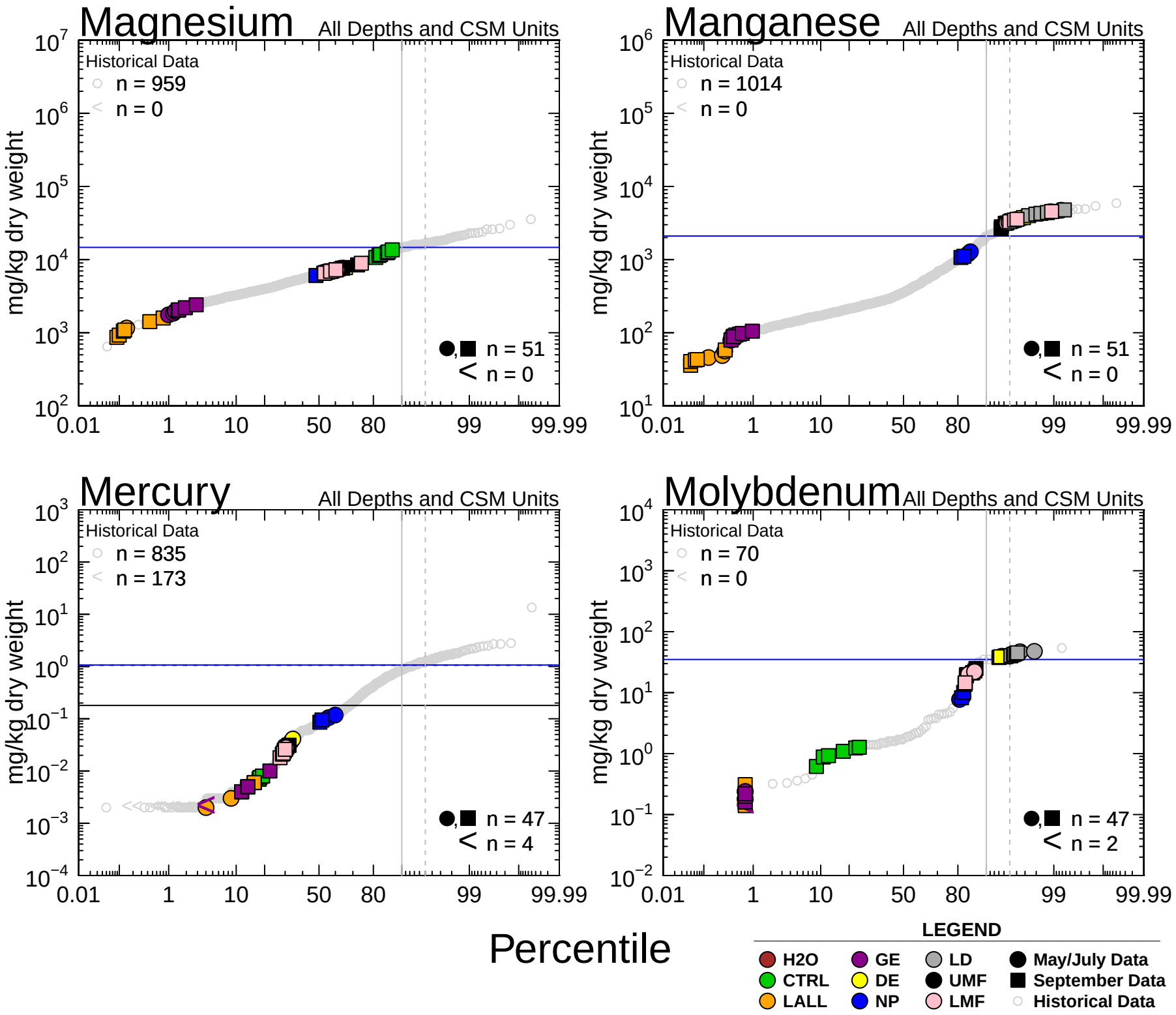
Historical Data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mg/kg dry weight
Mercury
All Depths and CSM Units
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mg/kg dry weight
Molybdenum
All Depths and CSM Units
Historical Data
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mg/kg dry weight
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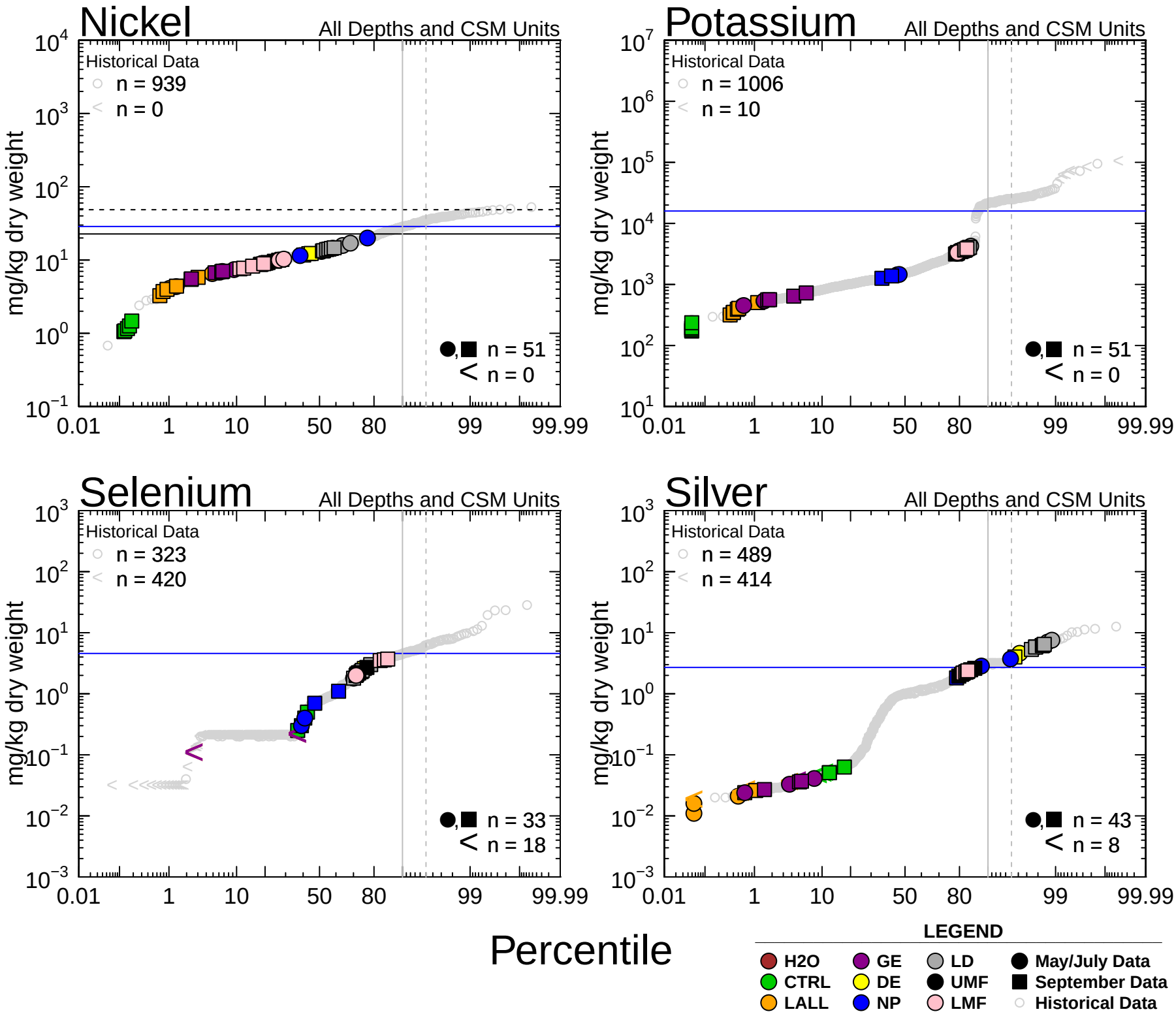
May/July Data
September Data
Historical Data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Historical Data
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Selenium
All Depths and CSM Units
Historical Data
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●,■ n = 33
< n = 18
mg/kg dry weight
Silver
All Depths and CSM Units
Historical Data
n = 489
< n = 414
●,■ n = 43
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mg/kg dry weight
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H2O
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LALL
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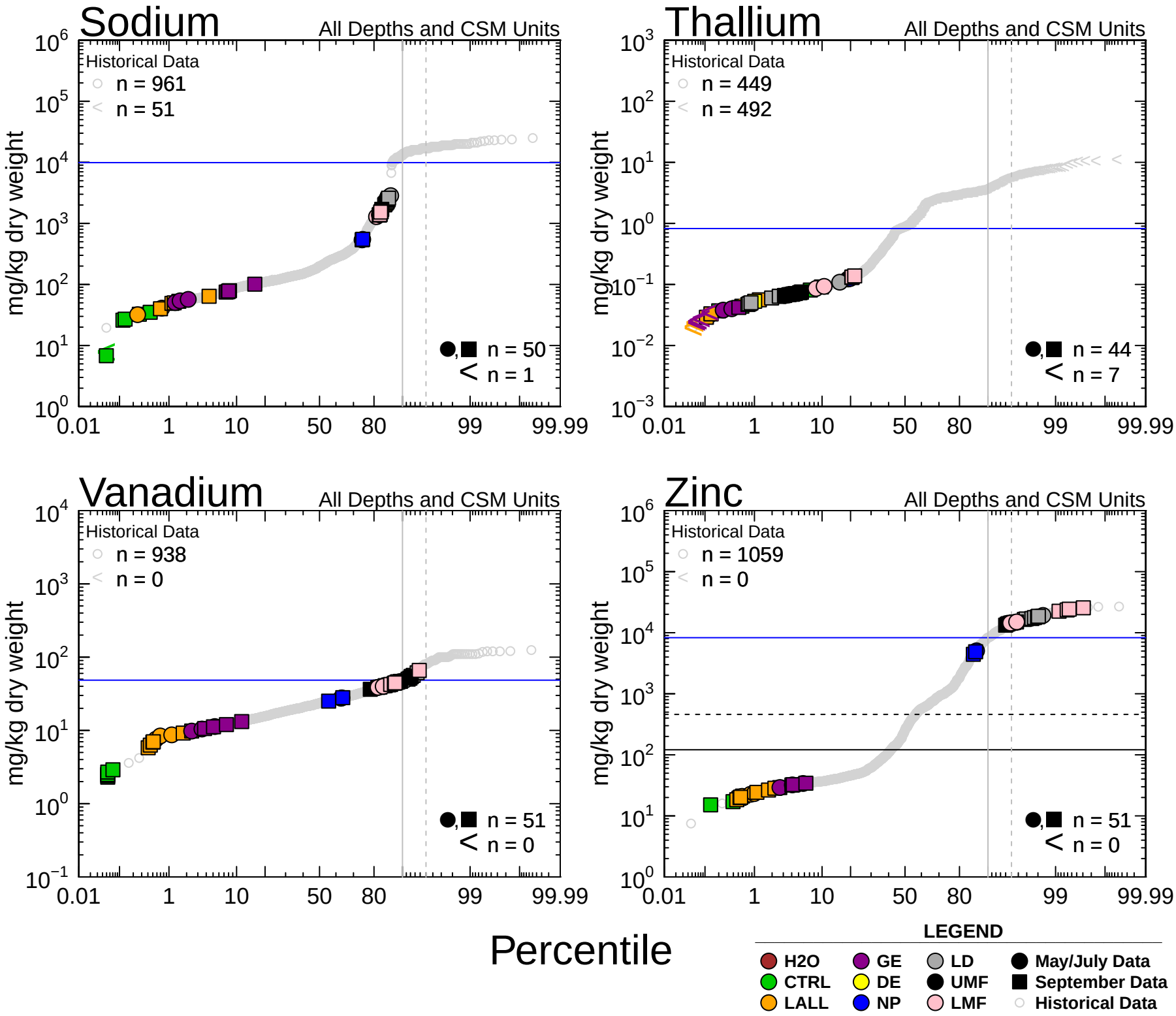
NP
LD
UMF
LMF
May/July Data
September Data
Historical Data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Historical Data
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n = 50
n = 1
Thallium
All Depths and CSM Units
Historical Data
n = 449
n = 492
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Vanadium
All Depths and CSM Units
Historical Data
n = 938
n = 0
n = 51
n = 0
Zinc
All Depths and CSM Units
Historical Data
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n = 0
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Percentile
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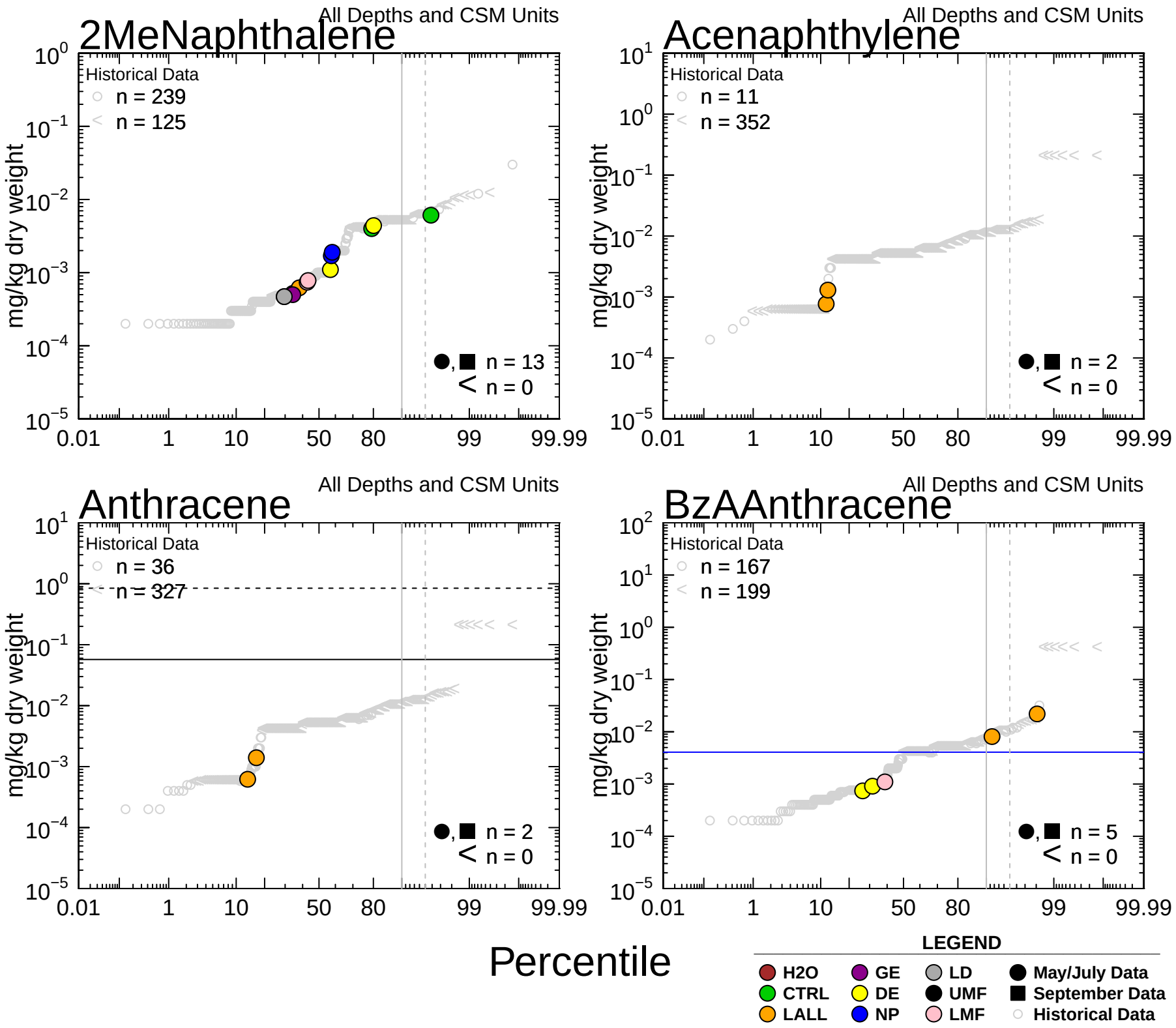
LD
UMF
LMF
May/July Data
September Data
Historical Data

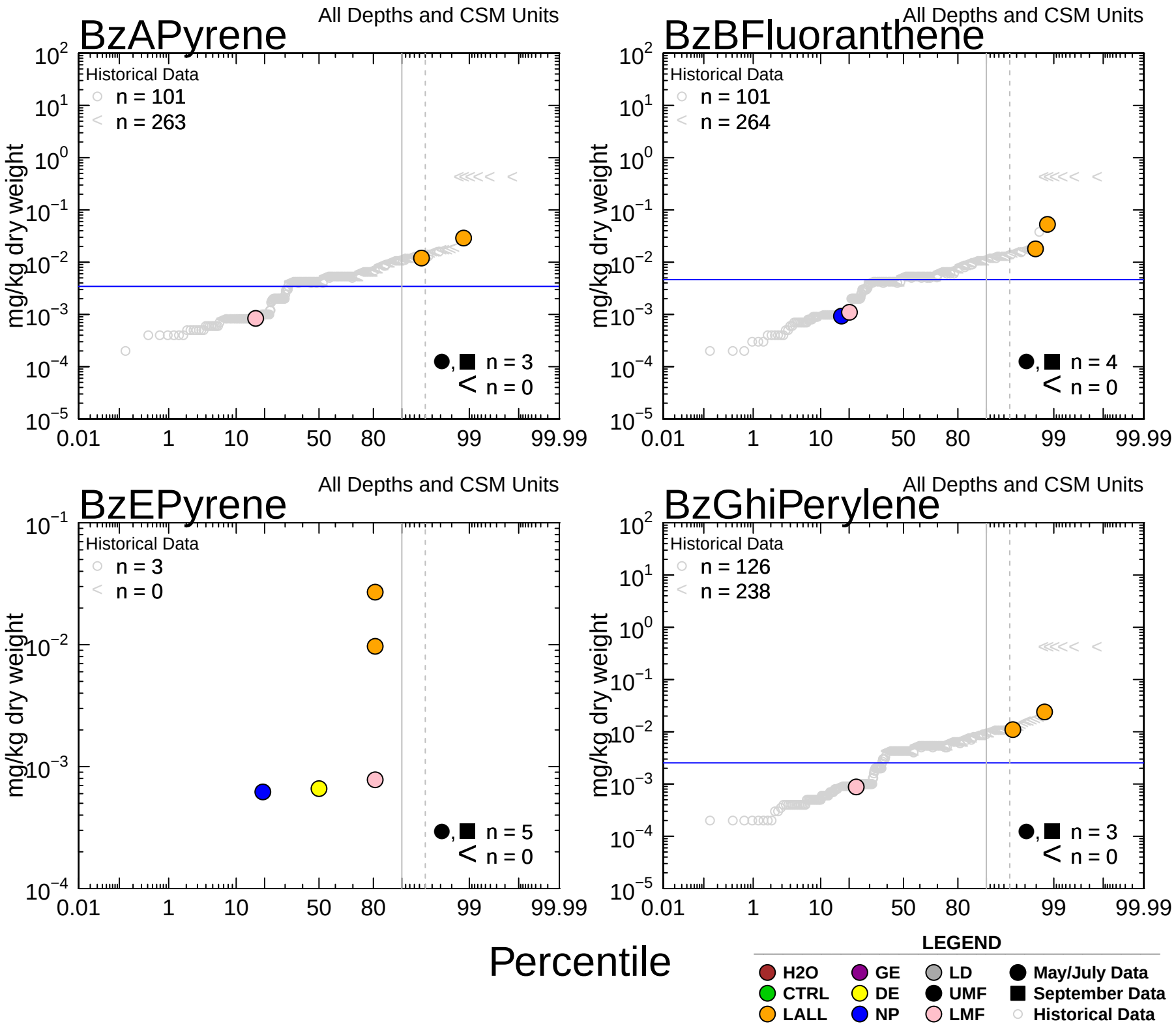
APPENDIX F-2

ORGANICS

Legend for Sediment Data Distributions, Organic Analytes:

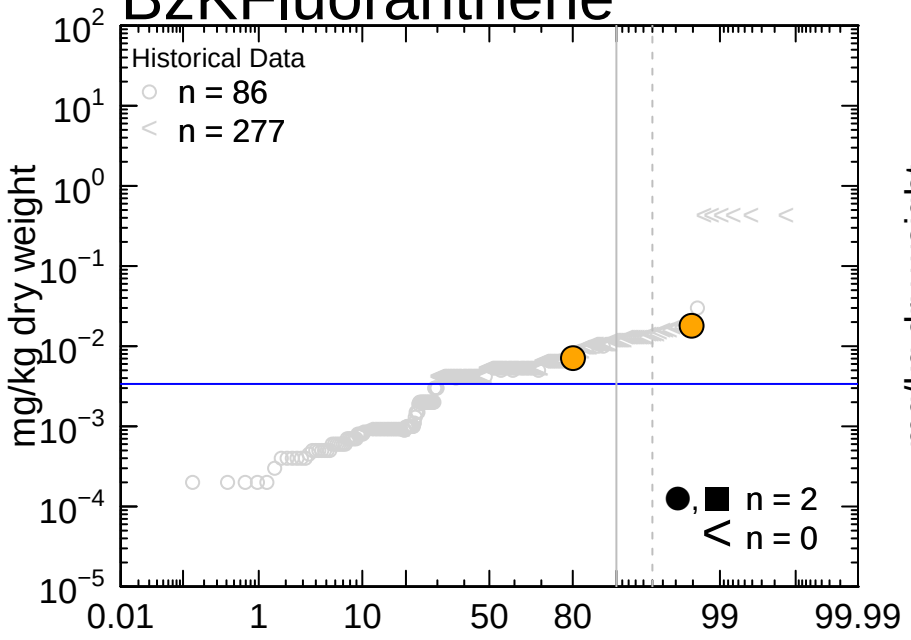
The vertical, solid grey line indicates the 90th percentile of the distribution on the probability axis. The vertical, dashed grey line indicates the 95th percentile of the distribution. The horizontal, solid black line indicates the Threshold Effects Concentration (TEC) (if a TEC exists). Similarly, the horizontal, dashed black line indicates the Probable Effects Concentration (PEC) (if a PEC exists). The horizontal, solid blue line indicates the concentration associated with the 90th percentile of the distribution as calculated by ProUCL and may differ from where concentration values intersect the 90th percentile position on the probability axis because of below detection limit values. Analyte concentrations identified as being below detection limits are illustrated with a less than symbol (<) and are plotted at the detection limit.


All Depths and CSM Units
2MeNaphthalene
Historical Data
n = 239
n = 125
n = 13
n = 0
All Depths and CSM Units
Acenaphthylene
Historical Data
n = 11
n = 352
n = 2
n = 0
All Depths and CSM Units
Anthracene
Historical Data
n = 36
n = 327
n = 2
n = 0
All Depths and CSM Units
BzAAnthracene
Historical Data
n = 167
n = 199
n = 5
n = 0
mg/kg dry weight
0.01
1
10
50
80
99
99.99
Percentile
LEGEND
H2O
CTRL
LALL
GE
DE
NP
LD
UMF
LMF
May/July Data
September Data
Historical Data


All Depths and CSM Units
BzAPyrene
Historical Data
n = 101
n = 263
n = 3
n = 0
mg/kg dry weight
All Depths and CSM Units
BzBFluoranthene
Historical Data
n = 101
n = 264
n = 4
n = 0
mg/kg dry weight
All Depths and CSM Units
BzEPyrene
Historical Data
n = 3
n = 0
n = 5
n = 0
mg/kg dry weight
All Depths and CSM Units
BzGhiPerylene
Historical Data
n = 126
n = 238
n = 3
n = 0
mg/kg dry weight
0.01
1
10
50
80
99
99.99
Percentile
LEGEND
H2O
CTRL
LALL
GE
DE
NP
LD
UMF
LMF
May/July Data
September Data
Historical Data

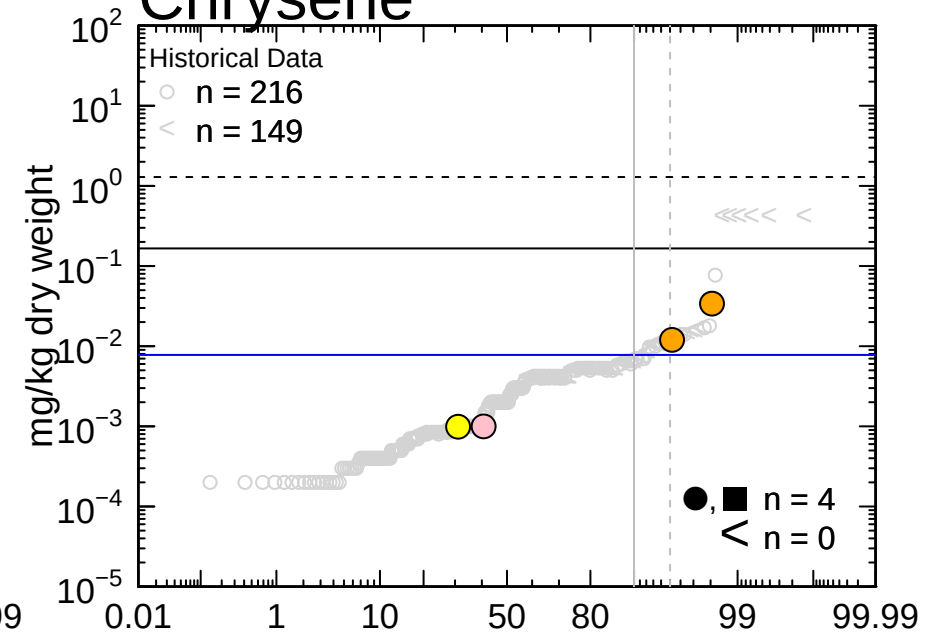
All Depths and CSM Units

BzKFluoranthene



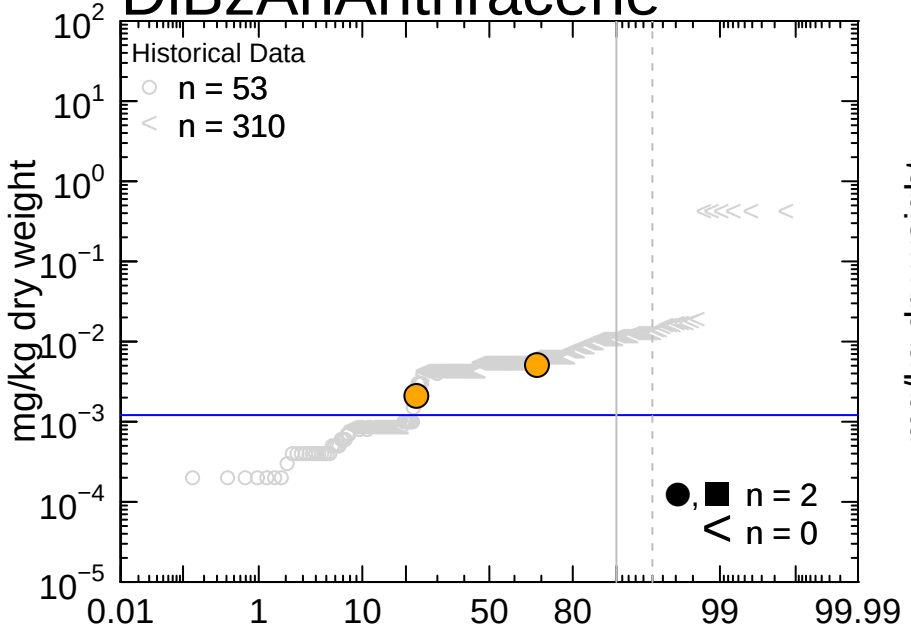
All Depths and CSM Units

Chrysene



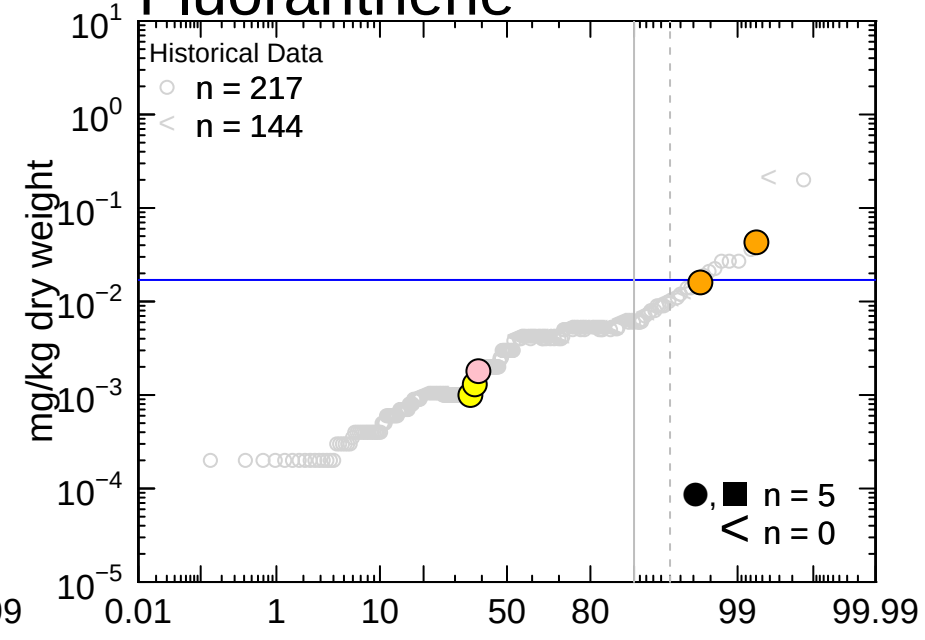
All Depths and CSM Units

DiBzAhAnthracene



All Depths and CSM Units

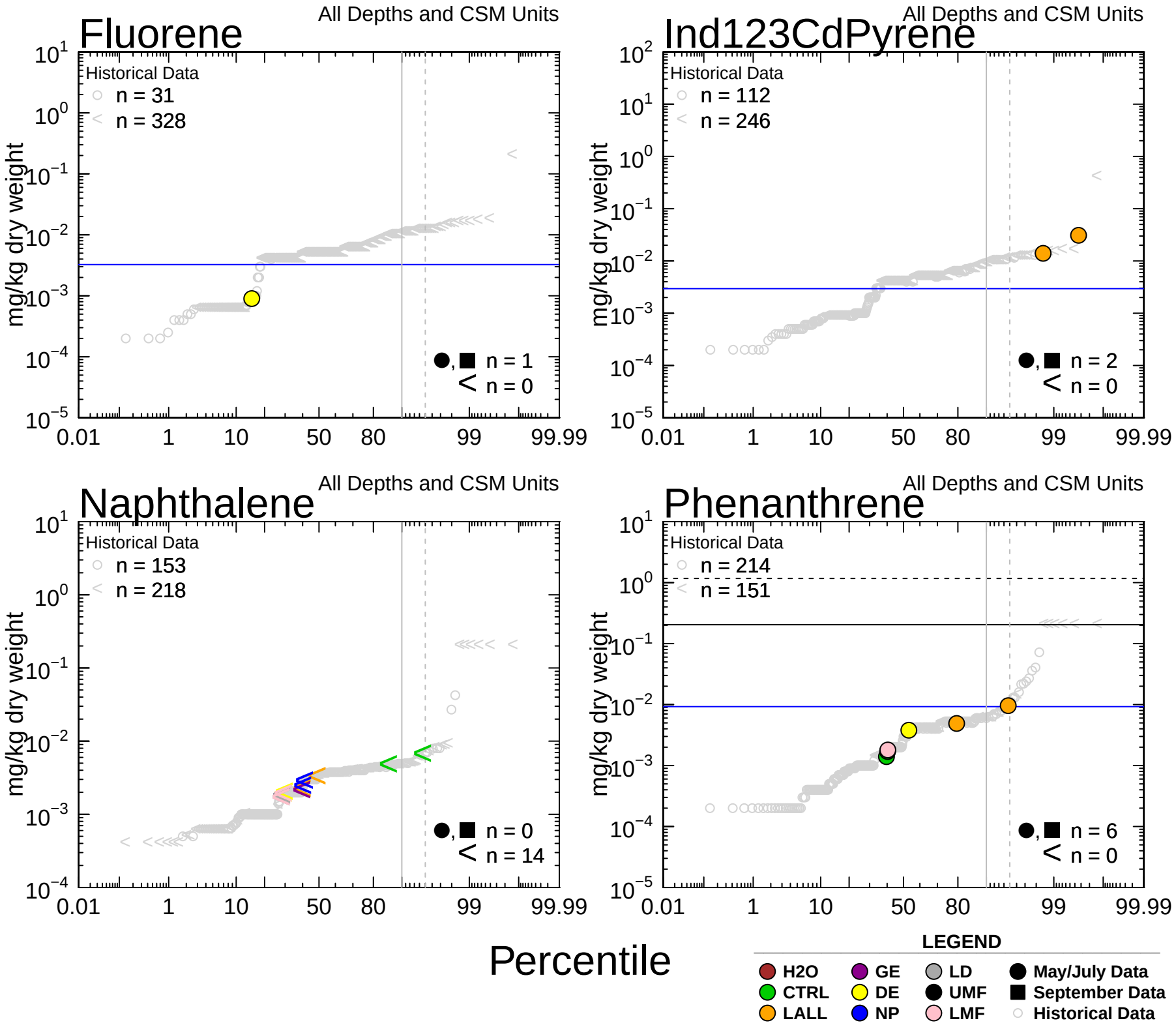
Fluoranthene

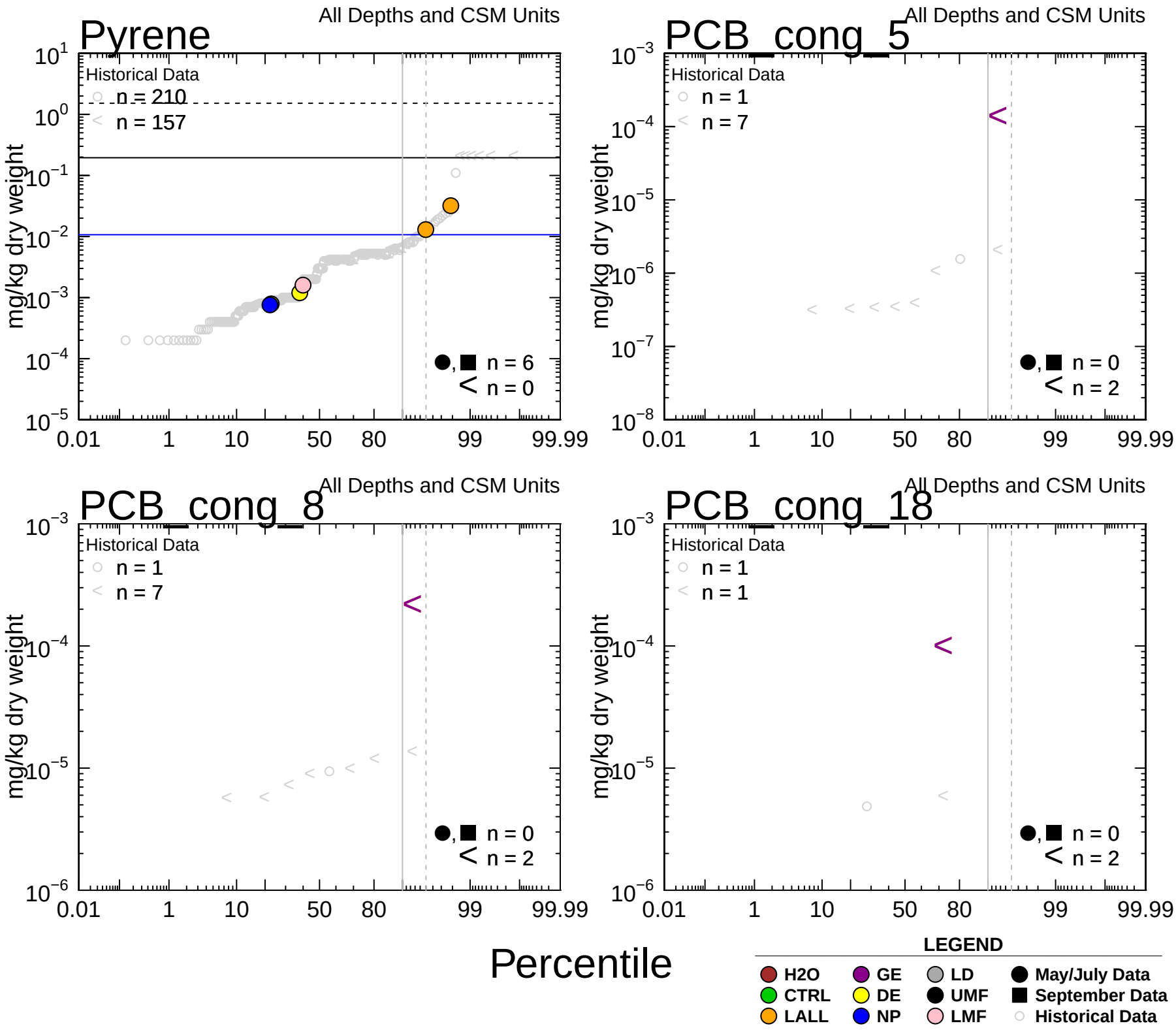


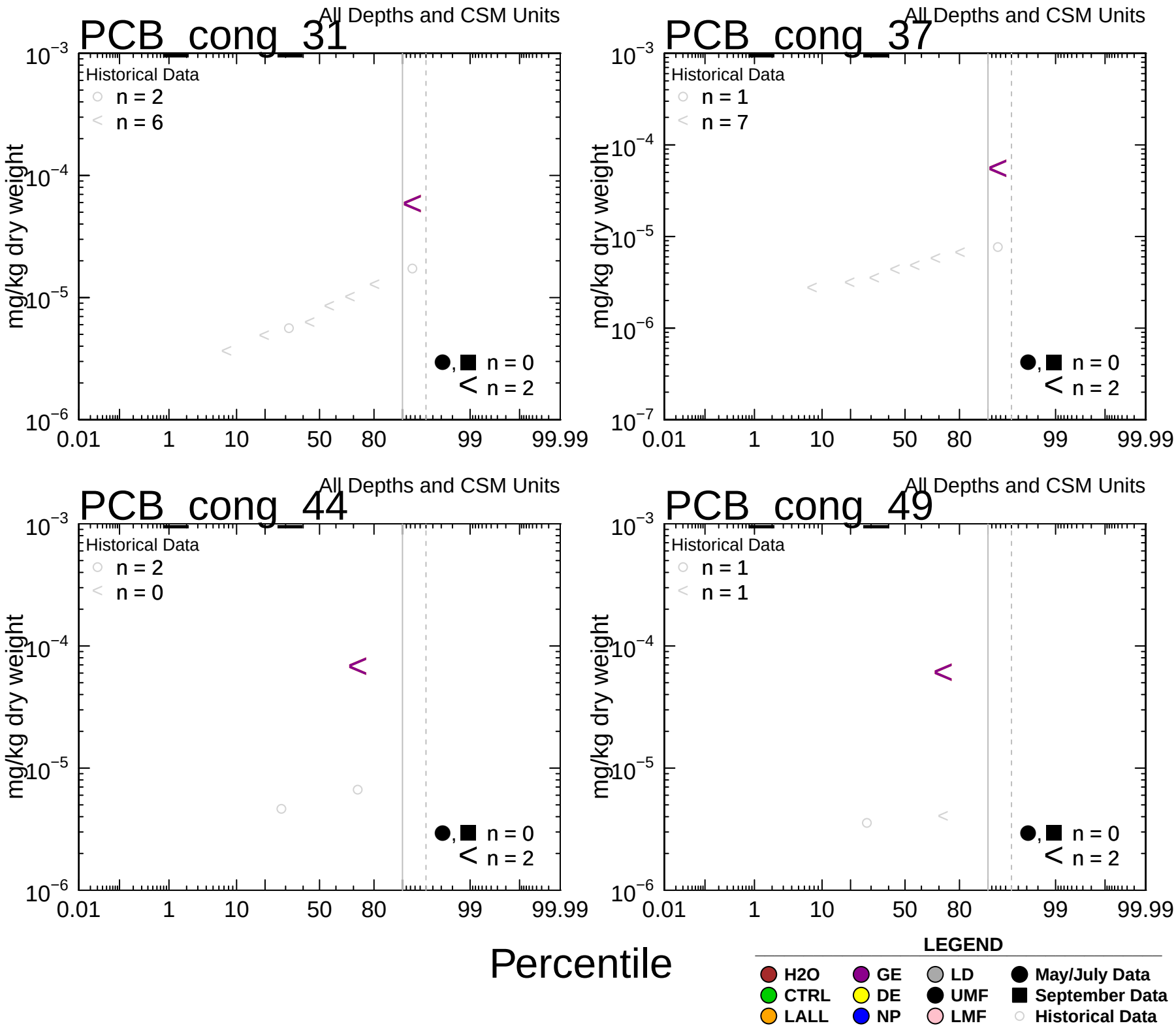
Percentile

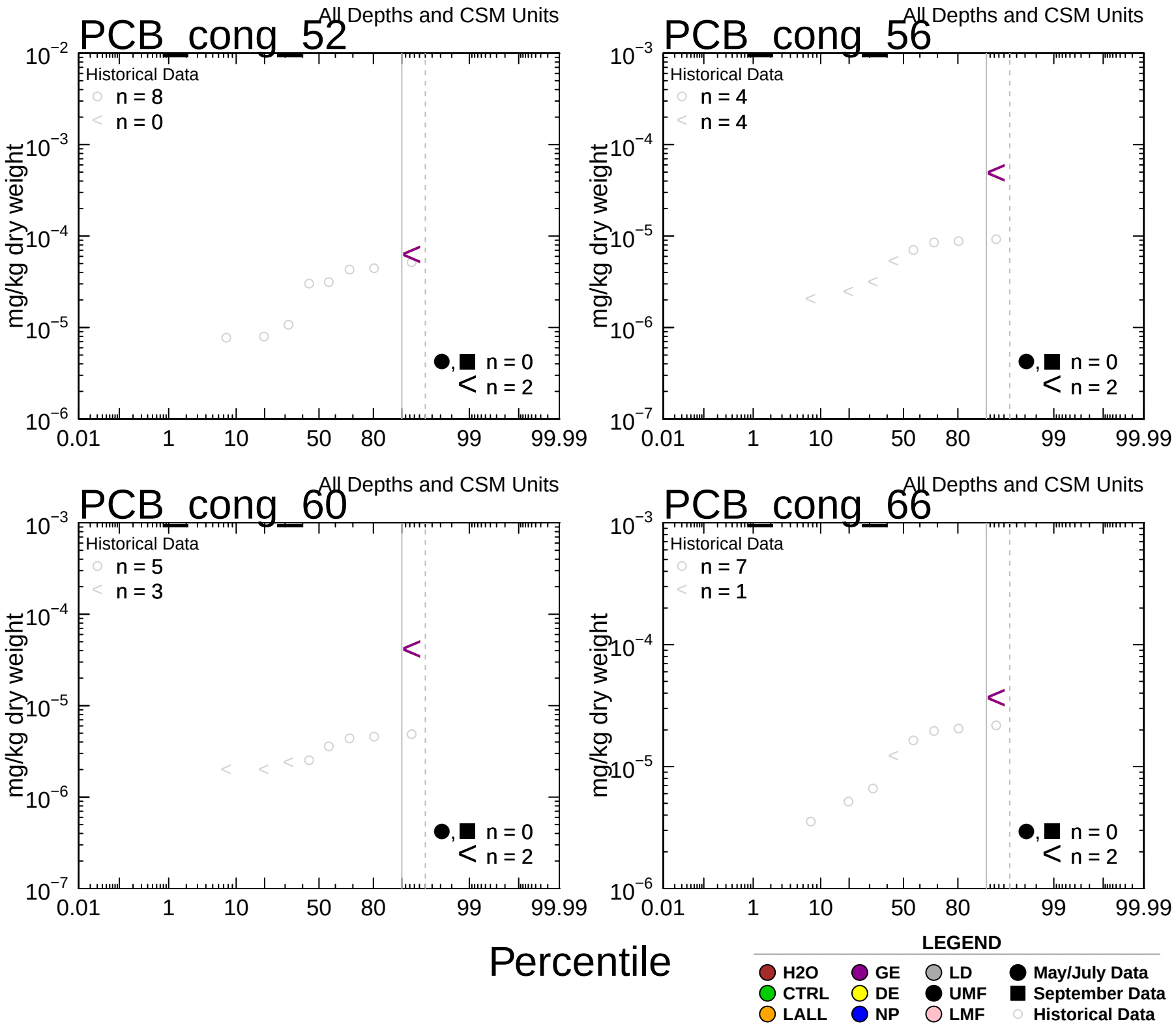
LEGEND

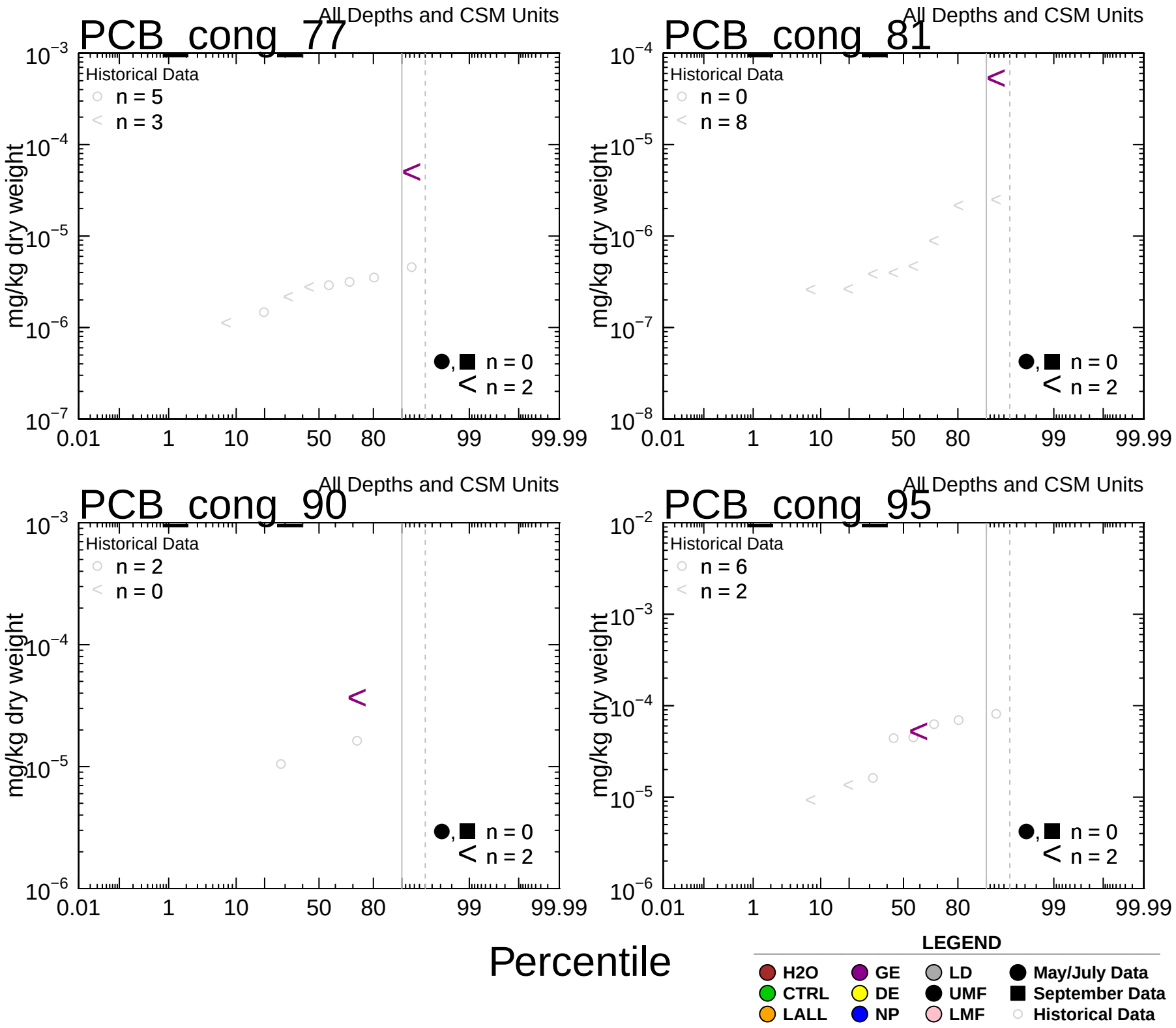
H2O	GE	LD	May/July Data
CTRL	DE	UMF	September Data
LALL	NP	LMF	Historical Data

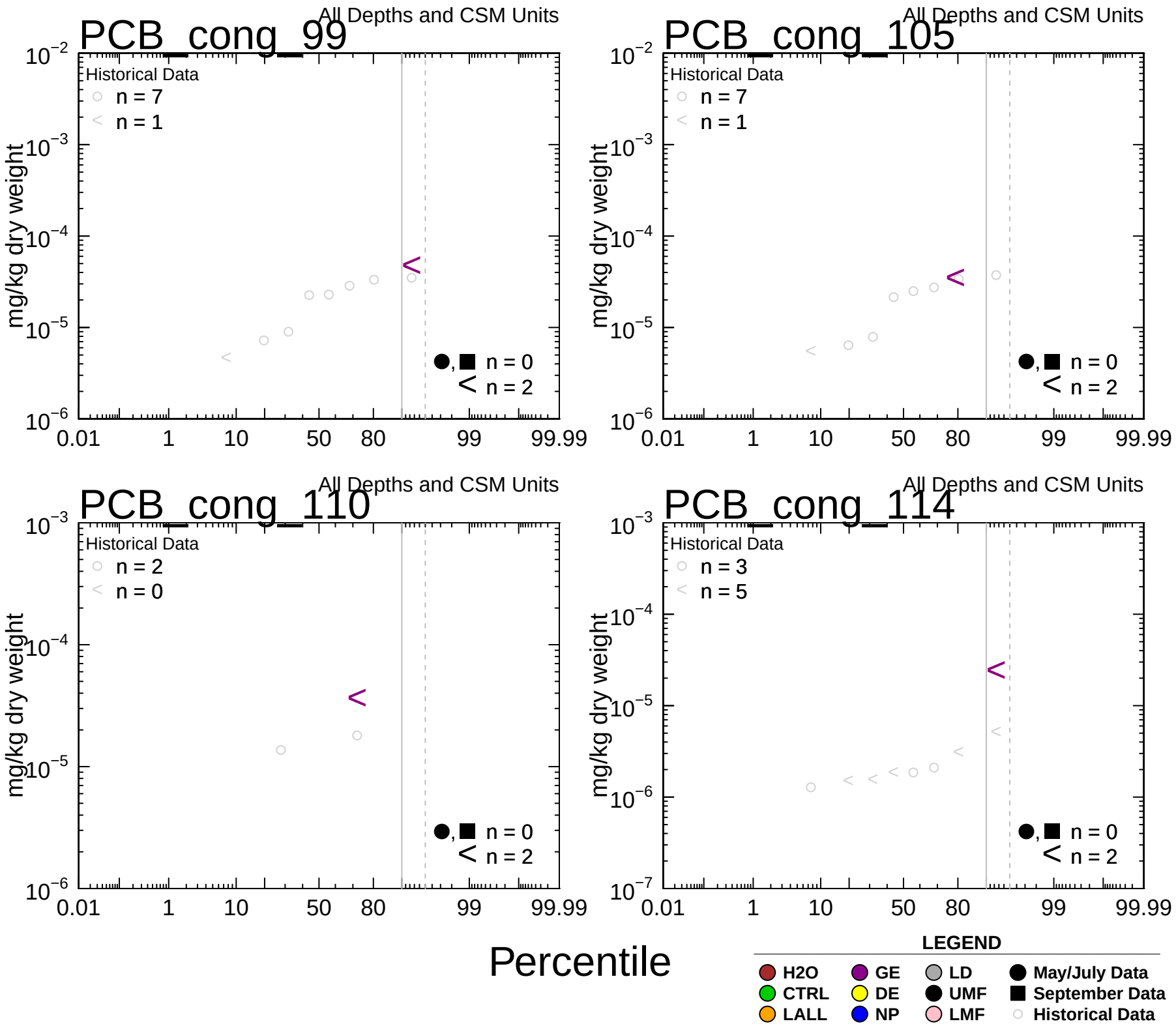

Fluorene
All Depths and CSM Units
Historical Data
n = 31
n = 328
●,■ n = 1
< n = 0
Ind123CdPyrene
All Depths and CSM Units
Historical Data
n = 112
n = 246
●,■ n = 2
< n = 0
Naphthalene
All Depths and CSM Units
Historical Data
n = 153
n = 218
●,■ n = 0
< n = 14
Phenanthrene
All Depths and CSM Units
Historical Data
n = 214
n = 151
●,■ n = 6
< n = 0
mg/kg dry weight
0.01
1
10
50
80
99
99.99
Percentile
LEGEND
H2O
CTRL
LALL
GE
DE
NP
LD
UMF
LMF
May/July Data
September Data
Historical Data


Pyrene
All Depths and CSM Units
Historical Data
n = 210
n = 157
n = 6
n = 0
PCB_cong_5
All Depths and CSM Units
Historical Data
n = 1
n = 7
n = 0
n = 2
PCB_cong_8
All Depths and CSM Units
Historical Data
n = 1
n = 7
n = 0
n = 2
PCB_cong_18
All Depths and CSM Units
Historical Data
n = 1
n = 1
n = 0
n = 2
mg/kg dry weight
0.01
1
10
50
80
99
99.99
Percentile
LEGEND
H2O
CTRL
LALL
GE
DE
NP
LD
UMF
LMF
May/July Data
September Data
Historical Data


All Depths and CSM Units
PCB_cong_31
Historical Data
n = 2
n = 6
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_37
Historical Data
n = 1
n = 7
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_44
Historical Data
n = 2
n = 0
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_49
Historical Data
n = 1
n = 1
n = 0
n = 2
mg/kg dry weight
0.01
1
10
50
80
99
99.99
Percentile
LEGEND
H2O
CTRL
LALL
GE
DE
NP
LD
UMF
LMF
May/July Data
September Data
Historical Data

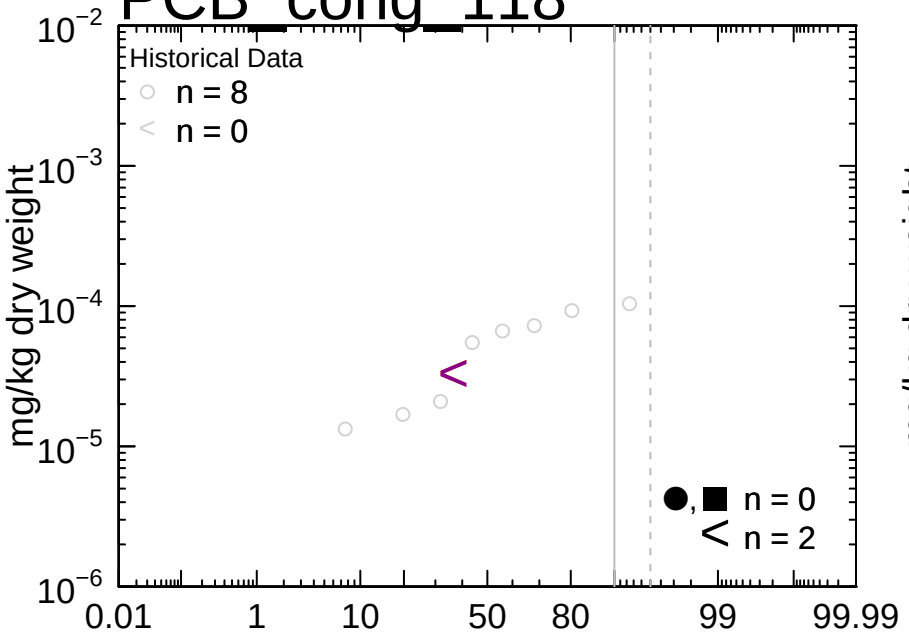

All Depths and CSM Units
PCB_cong_52
Historical Data
n = 8
n = 0
n = 0
n = 2
All Depths and CSM Units
PCB_cong_56
Historical Data
n = 4
n = 4
n = 0
n = 2
All Depths and CSM Units
PCB_cong_60
Historical Data
n = 5
n = 3
n = 0
n = 2
All Depths and CSM Units
PCB_cong_66
Historical Data
n = 7
n = 1
n = 0
n = 2
mg/kg dry weight
0.01
1
10
50
80
99
99.99
Percentile
LEGEND
H2O
GE
LD
May/July Data
CTRL
DE
UMF
September Data
LALL
NP
LMF
Historical Data


All Depths and CSM Units
PCB_cong_77
Historical Data
n = 5
n = 3
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_81
Historical Data
n = 0
n = 8
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_90
Historical Data
n = 2
n = 0
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_95
Historical Data
n = 6
n = 2
n = 0
n = 2
mg/kg dry weight
0.01
1
10
50
80
99
99.99
Percentile
LEGEND
H2O
CTRL
LALL
GE
DE
NP
LD
UMF
LMF
May/July Data
September Data
Historical Data


All Depths and CSM Units
PCB_cong_99
Historical Data
n = 7
n = 1
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_105
Historical Data
n = 7
n = 1
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_110
Historical Data
n = 2
n = 0
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_114
Historical Data
n = 3
n = 5
n = 0
n = 2
mg/kg dry weight
0.01
1
10
50
80
99
99.99
Percentile
LEGEND
H2O
CTRL
LALL
GE
DE
NP
LD
UMF
LMF
May/July Data
September Data
Historical Data

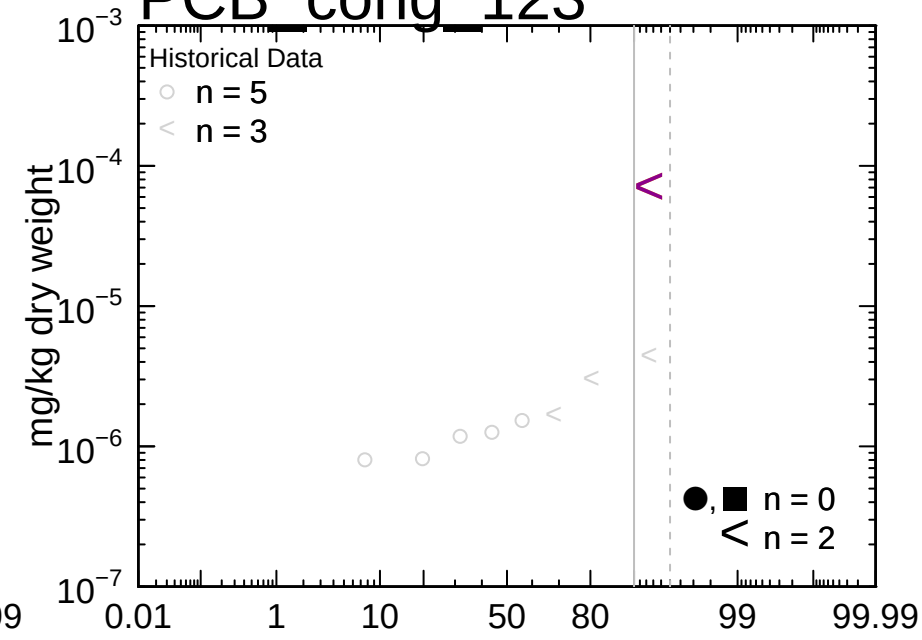
All Depths and CSM Units

PCB_cong_118



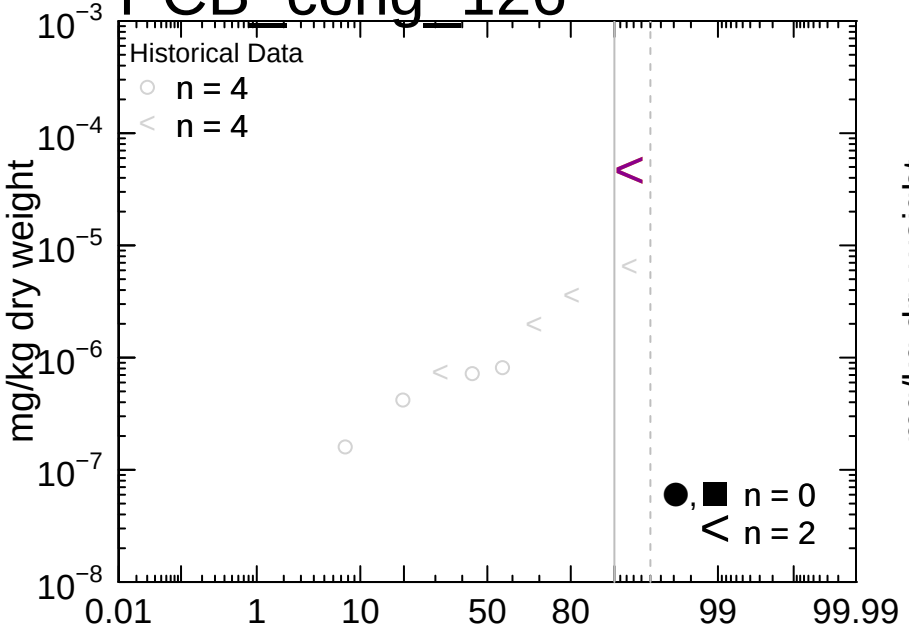
All Depths and CSM Units

PCB_cong_123



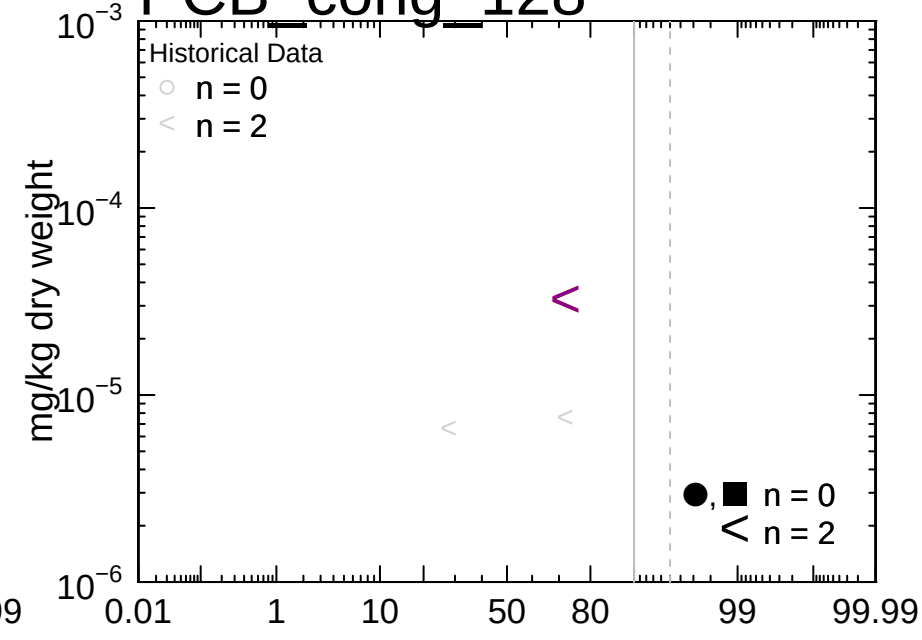
All Depths and CSM Units

PCB_cong_126



All Depths and CSM Units

PCB_cong_128



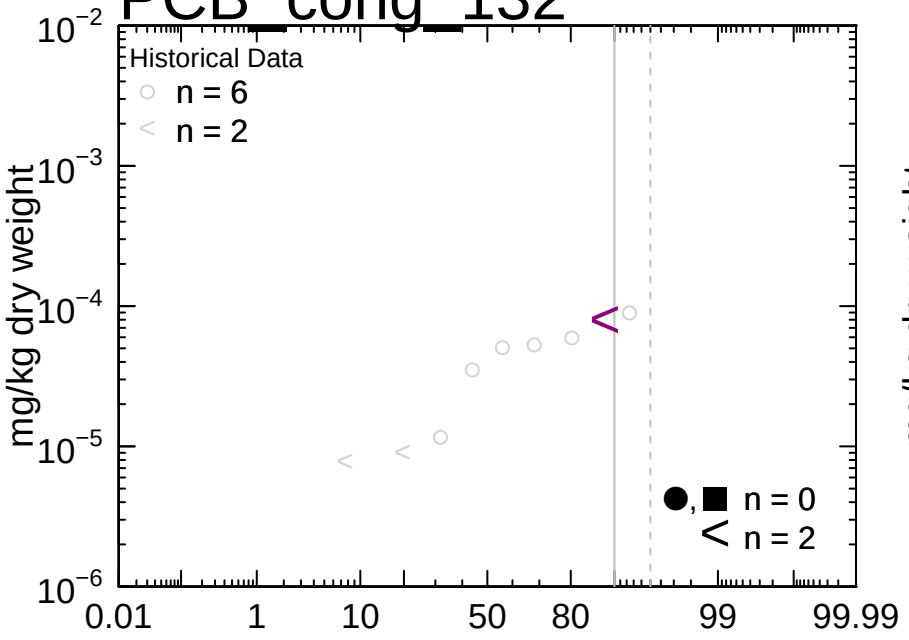
Percentile

LEGEND

H2O	GE	LD	May/July Data
CTRL	DE	UMF	September Data
LALL	NP	LMF	Historical Data

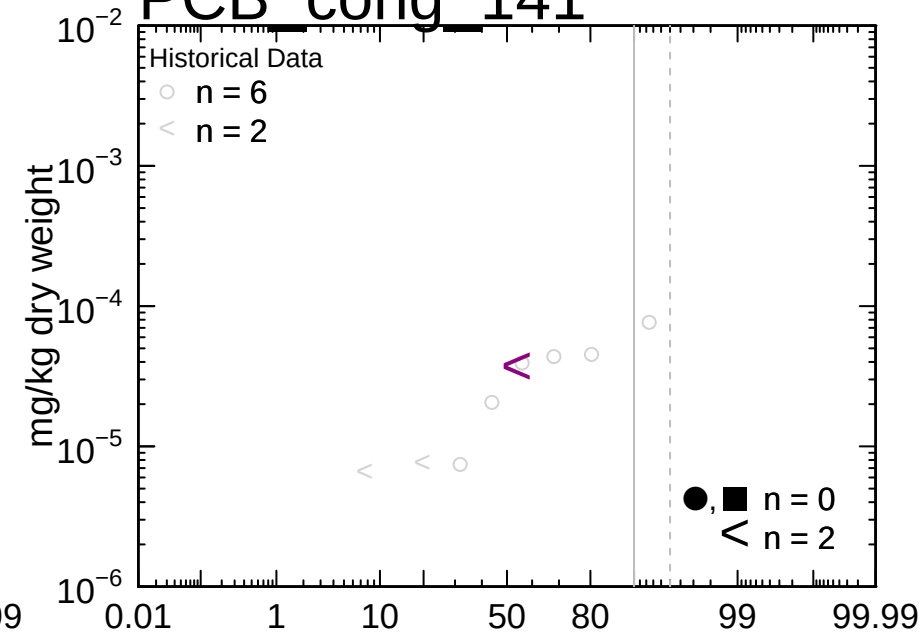
All Depths and CSM Units

PCB_cong_132



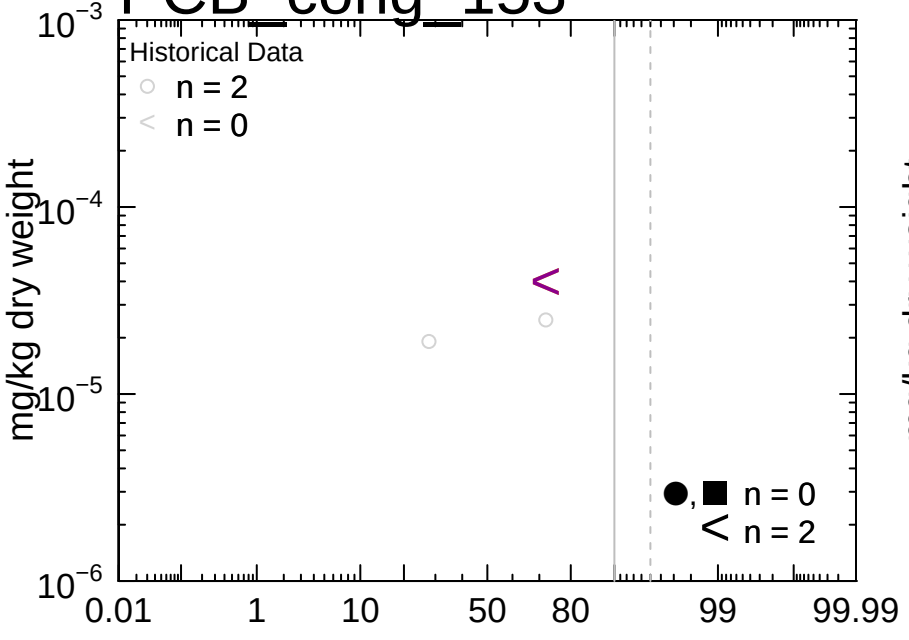
All Depths and CSM Units

PCB_cong_141



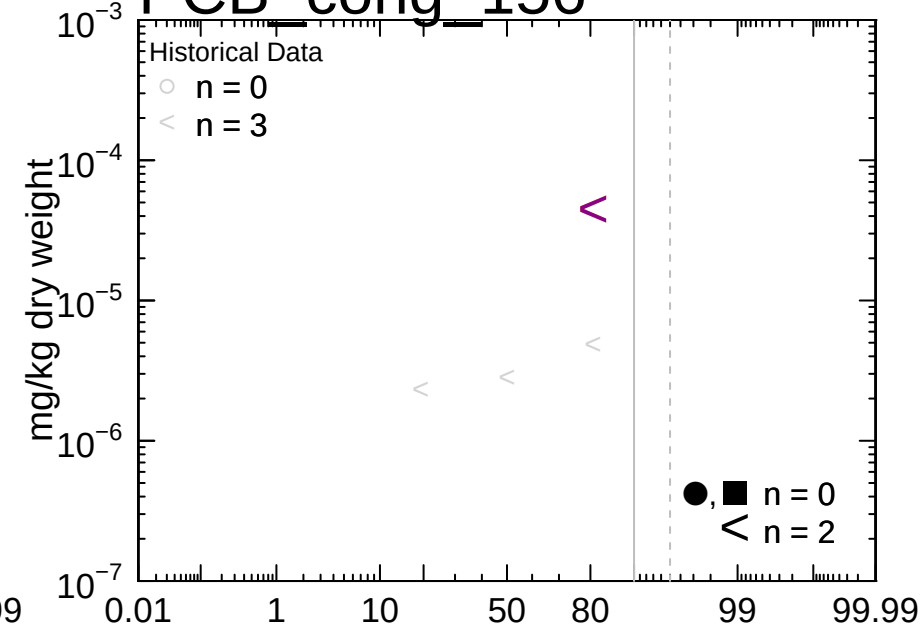
All Depths and CSM Units

PCB_cong_153



All Depths and CSM Units

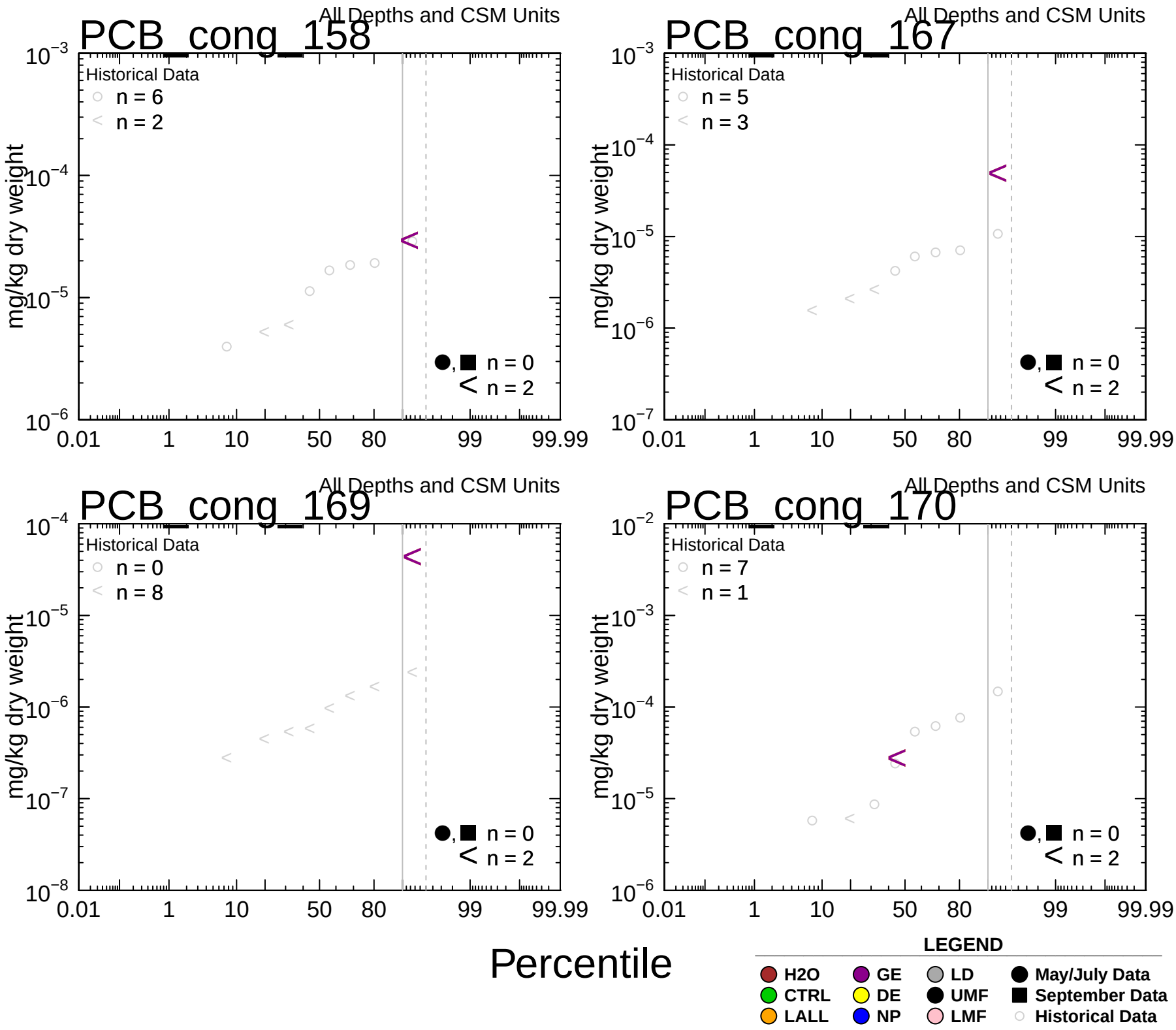
PCB_cong_156



Percentile

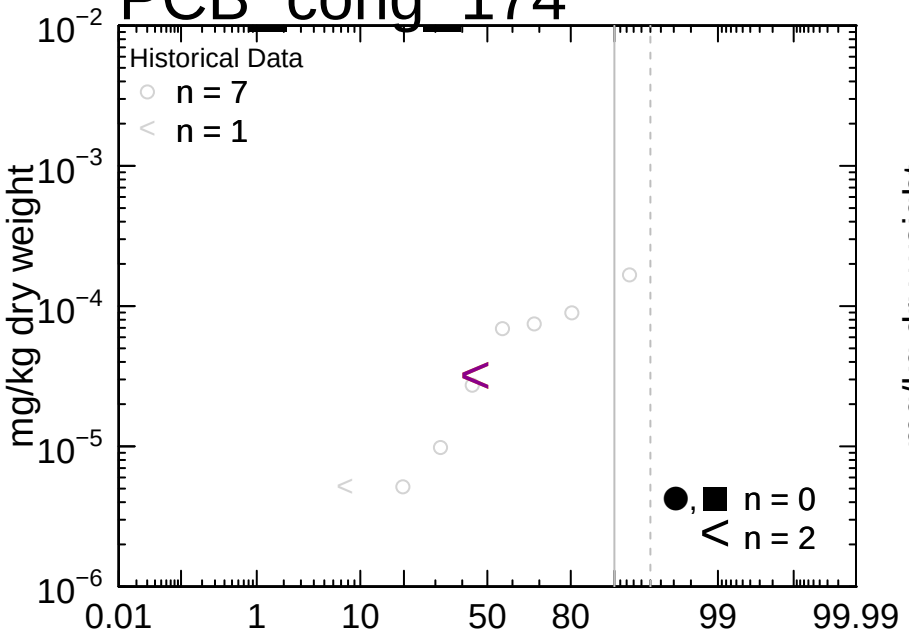
LEGEND

H2O	GE	LD	May/July Data
CTRL	DE	UMF	September Data
LALL	NP	LMF	Historical Data


All Depths and CSM Units
PCB_cong_158
Historical Data
n = 6
n = 2
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_167
Historical Data
n = 5
n = 3
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_169
Historical Data
n = 0
n = 8
n = 0
n = 2
mg/kg dry weight
All Depths and CSM Units
PCB_cong_170
Historical Data
n = 7
n = 1
n = 0
n = 2
mg/kg dry weight
0.01
1
10
50
80
99
99.99
Percentile
LEGEND
H2O
CTRL
LALL
GE
DE
NP
LD
UMF
LMF
May/July Data
September Data
Historical Data

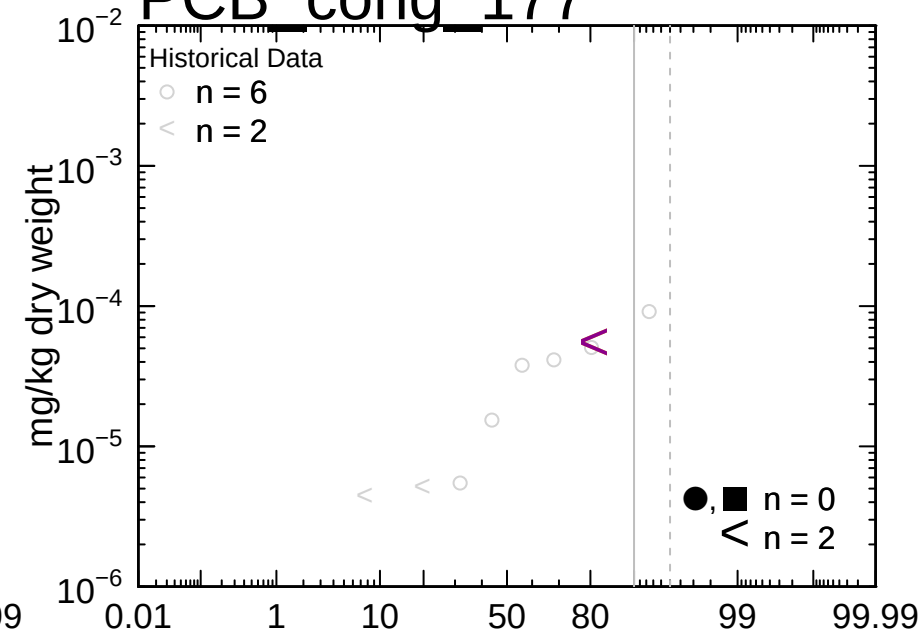
All Depths and CSM Units

PCB_cong_174



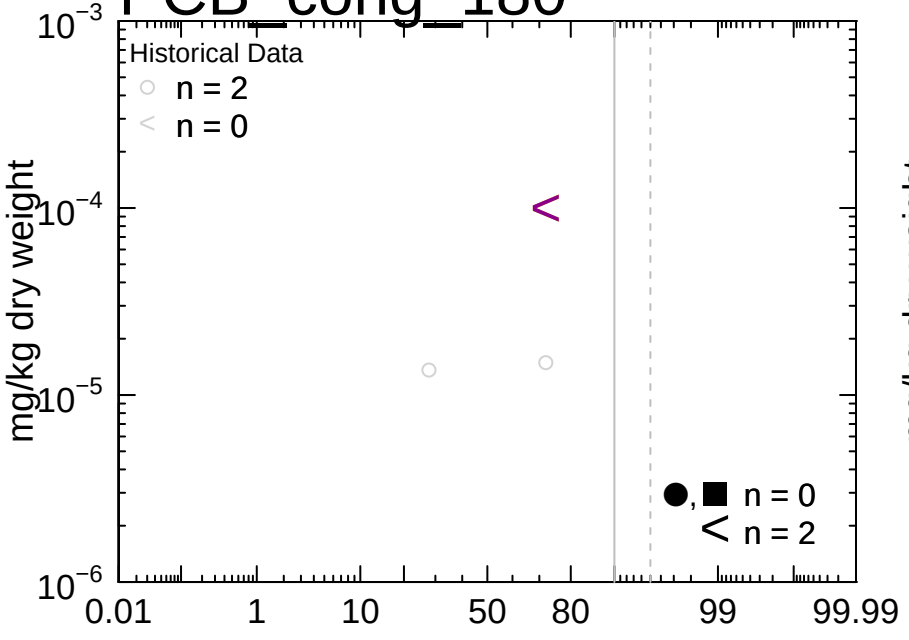
All Depths and CSM Units

PCB_cong_177



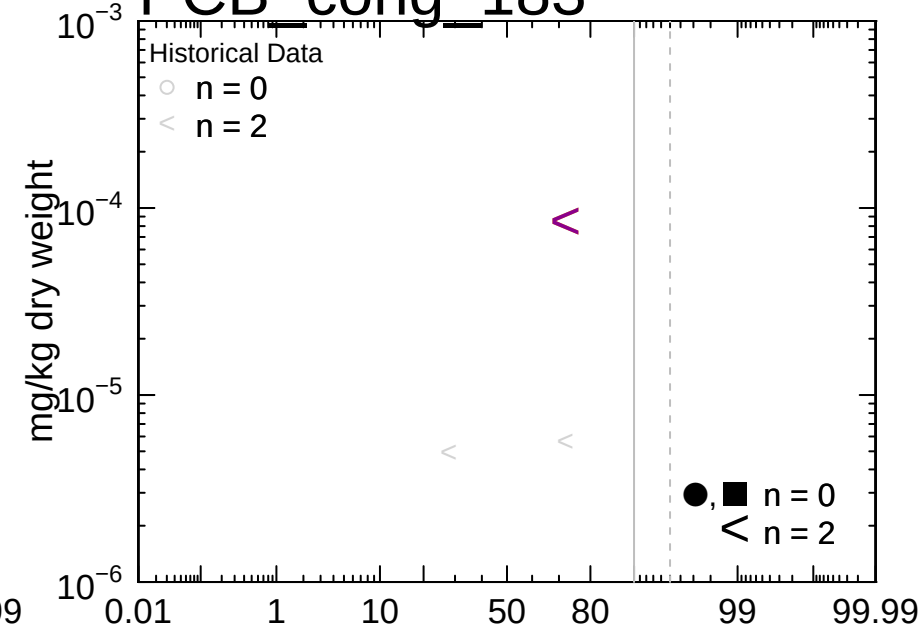
All Depths and CSM Units

PCB_cong_180



All Depths and CSM Units

PCB_cong_183



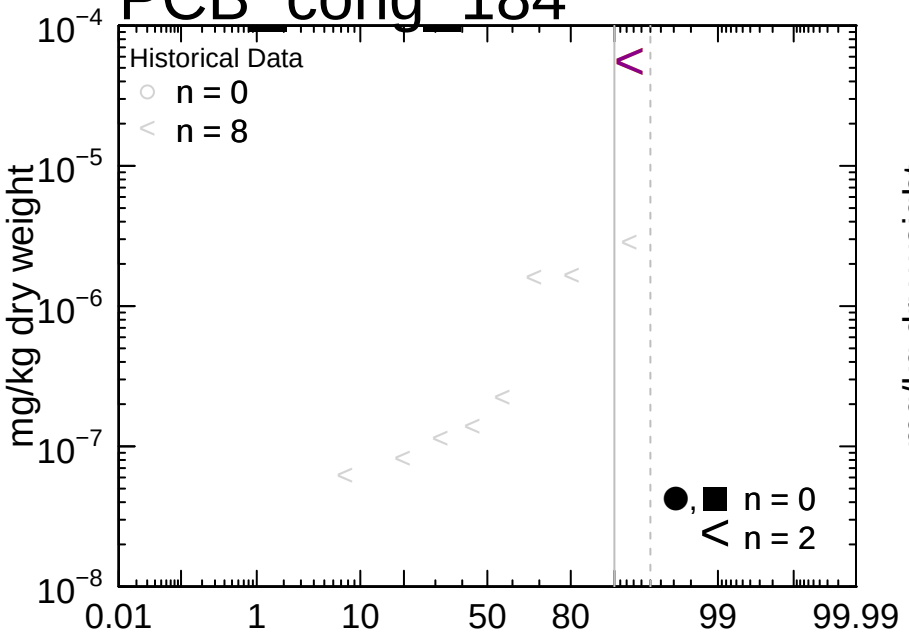
Percentile

LEGEND

H2O	GE	LD	May/July Data
CTRL	DE	UMF	September Data
LALL	NP	LMF	Historical Data

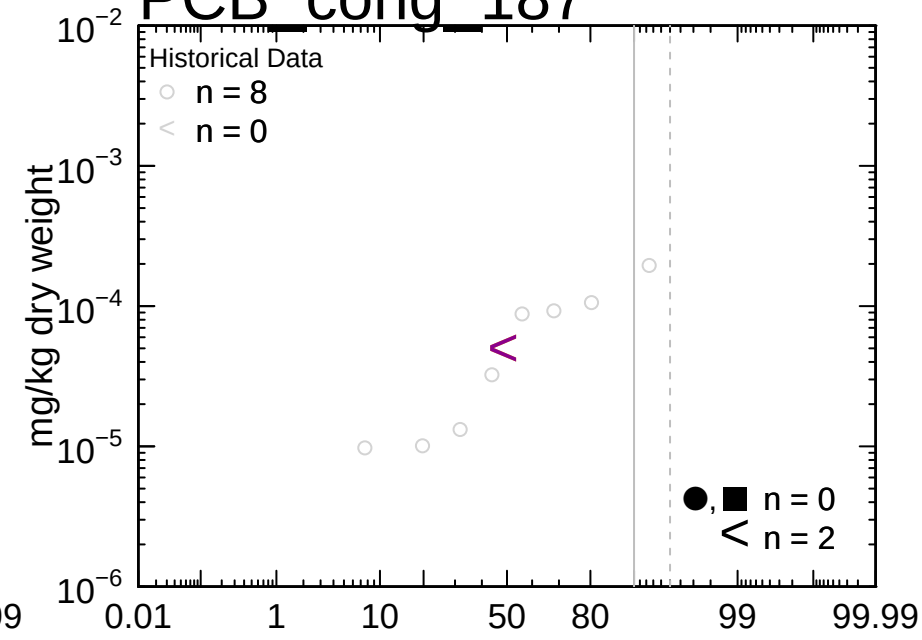
All Depths and CSM Units

PCB_cong_184



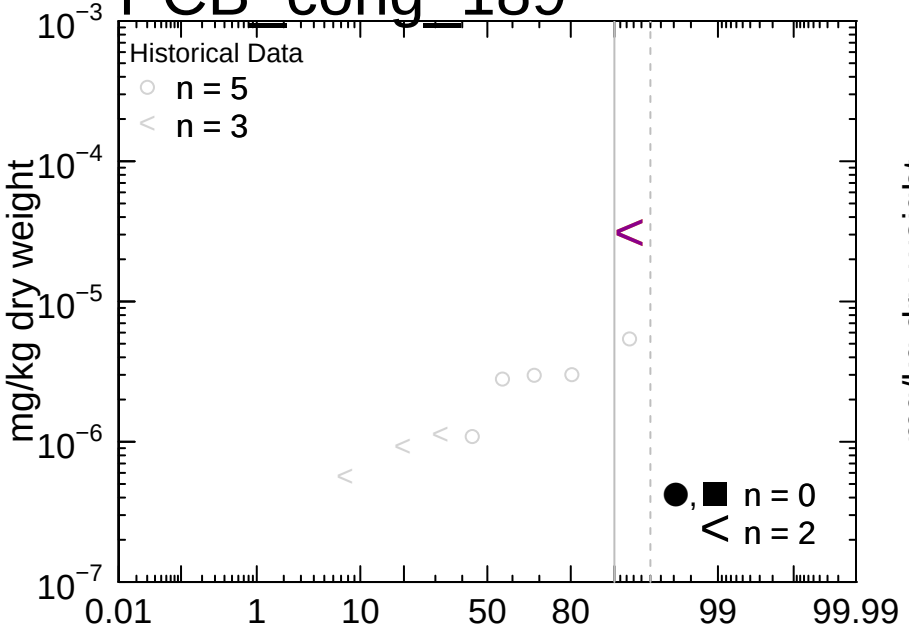
All Depths and CSM Units

PCB_cong_187



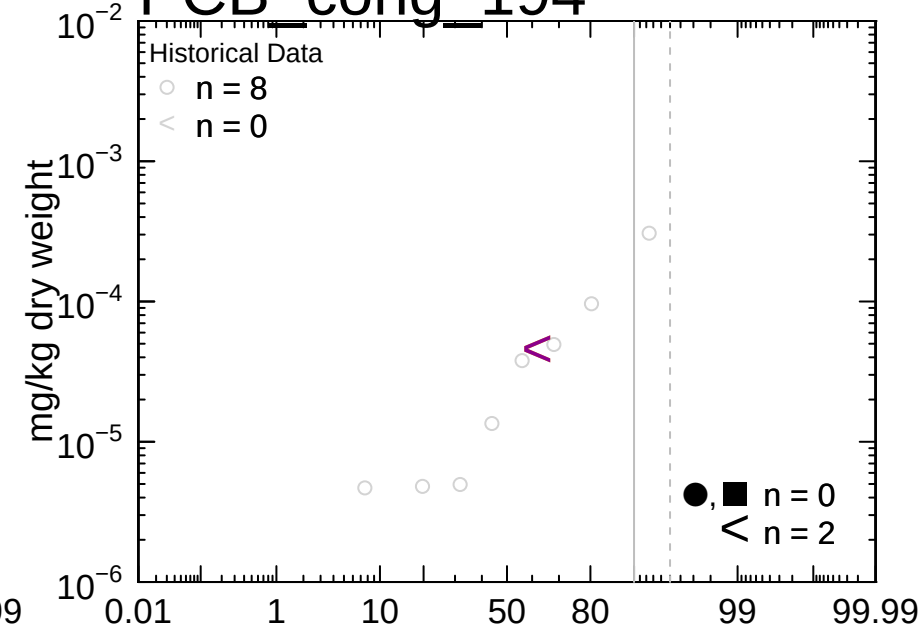
All Depths and CSM Units

PCB_cong_189



All Depths and CSM Units

PCB_cong_194



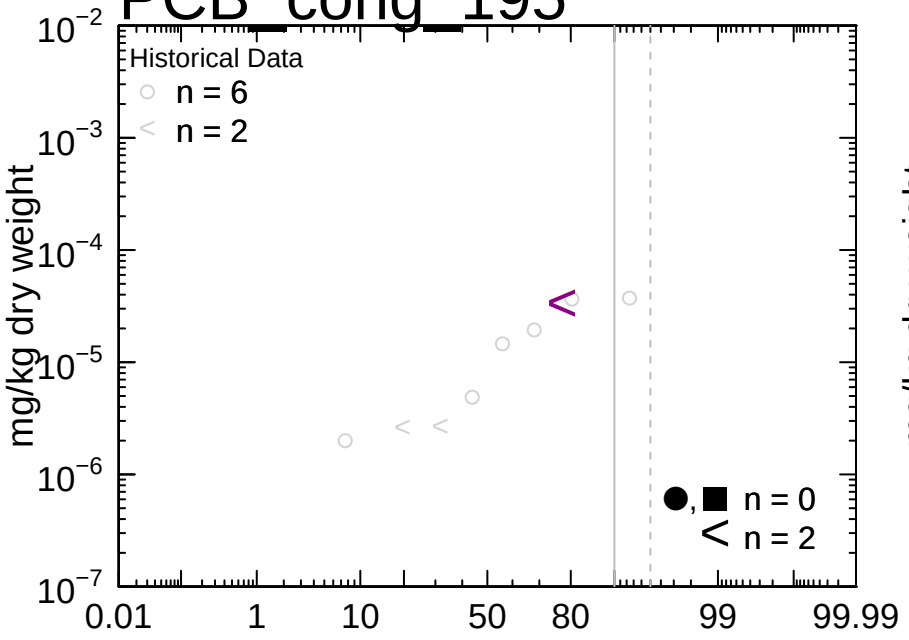
Percentile

LEGEND

H2O	GE	LD	May/July Data
CTRL	DE	UMF	September Data
LALL	NP	LMF	Historical Data

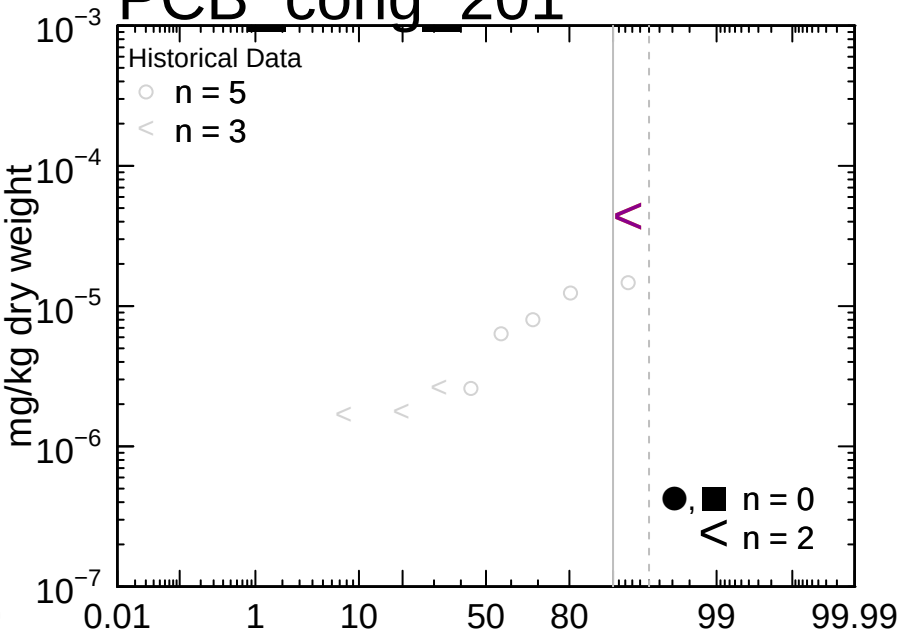
All Depths and CSM Units

PCB_cong_195



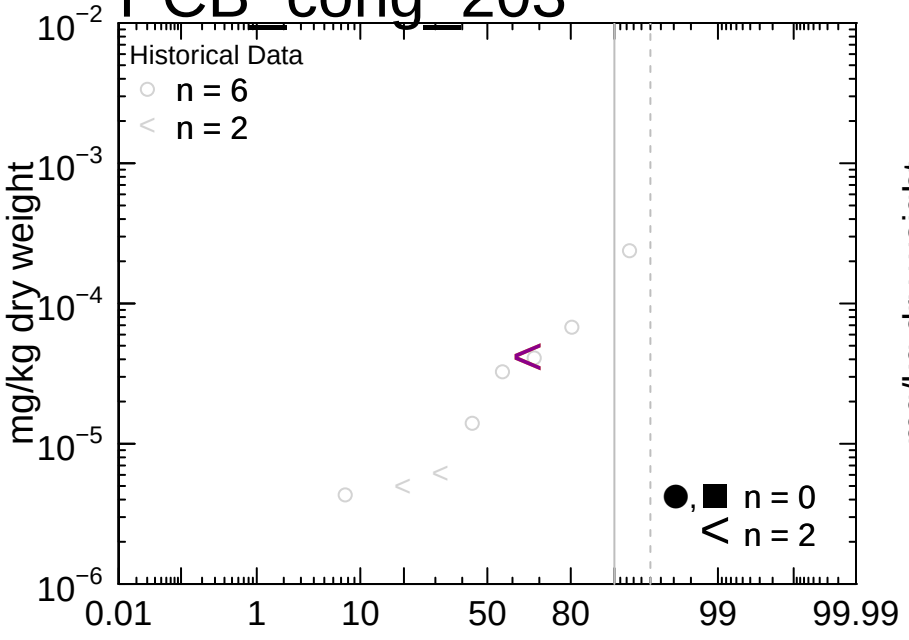
All Depths and CSM Units

PCB_cong_201



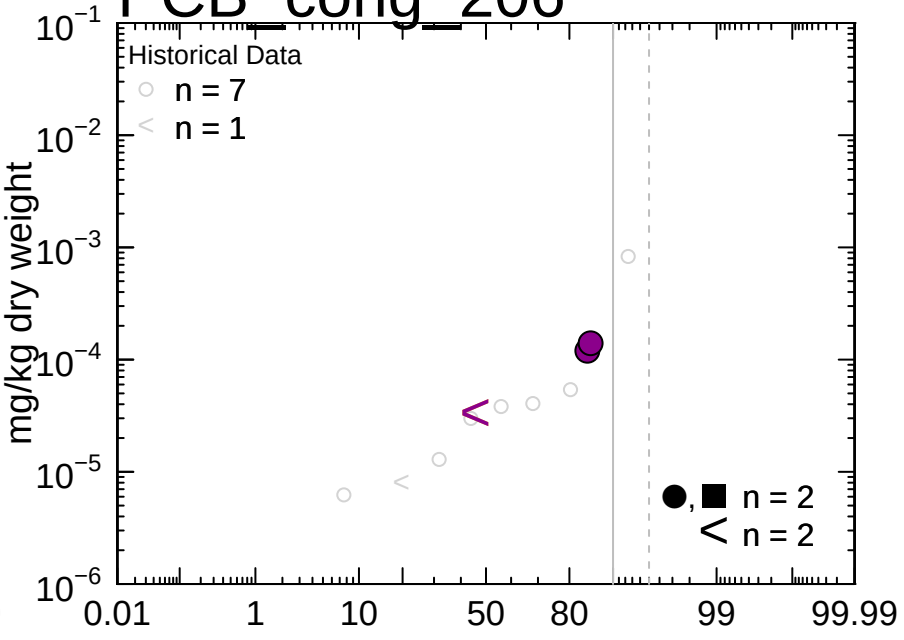
All Depths and CSM Units

PCB_cong_203



All Depths and CSM Units

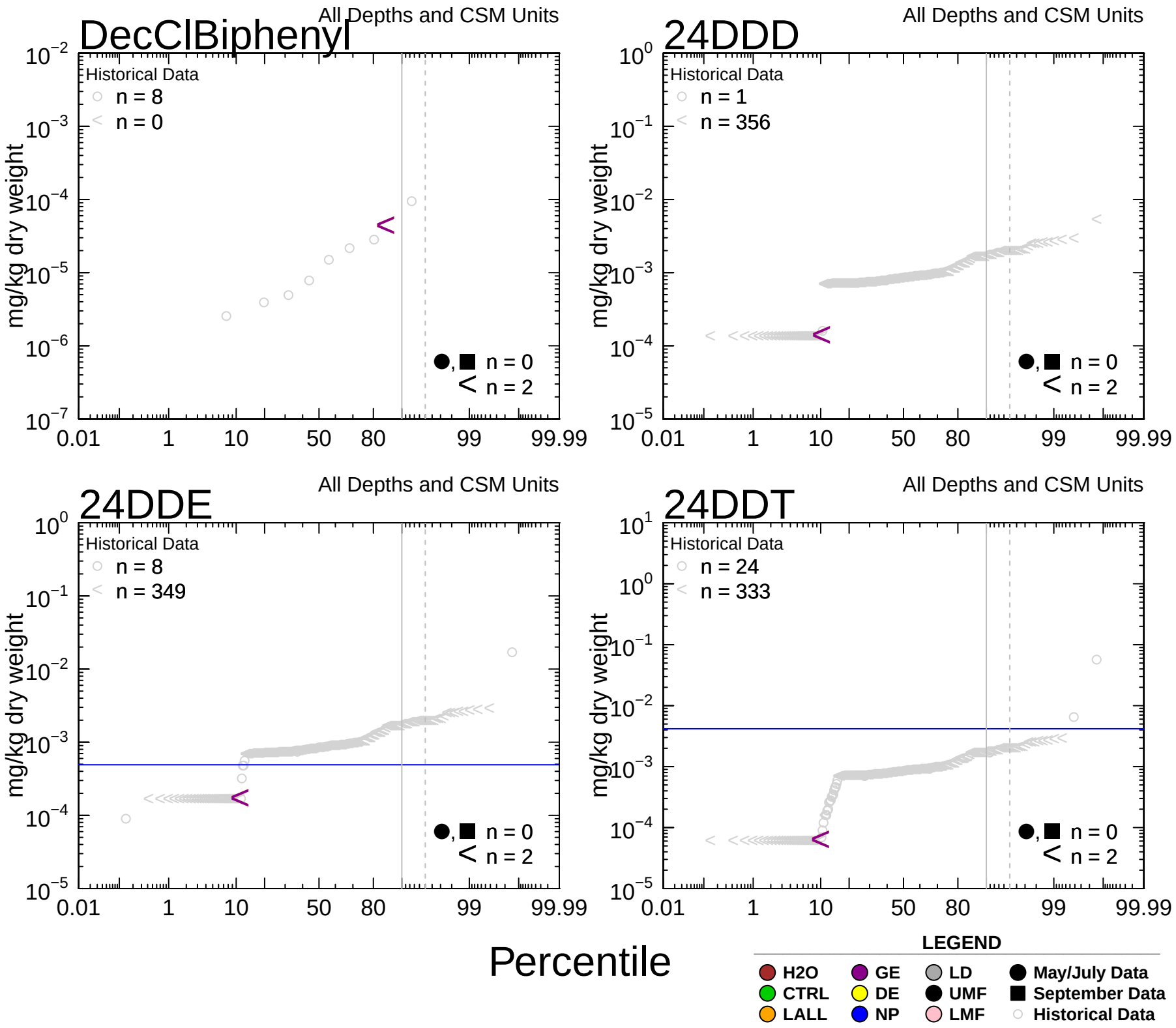
PCB_cong_206

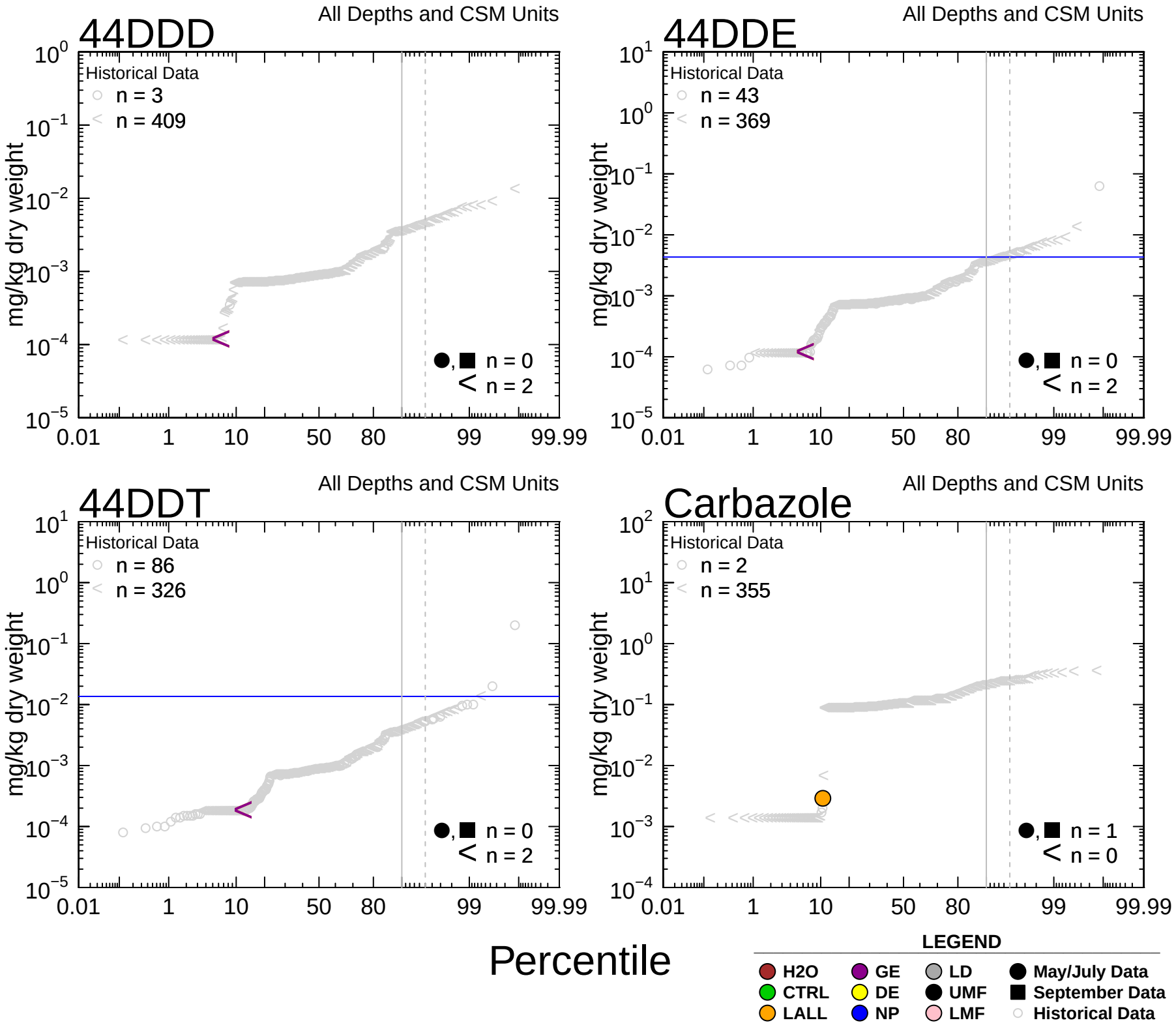


Percentile

LEGEND

H2O	GE	LD	May/July Data
CTRL	DE	UMF	September Data
LALL	NP	LMF	Historical Data


All Depths and CSM Units
DecClBiphenyl
Historical Data
n = 8
n = 0
mg/kg dry weight
●,■ n = 0
< n = 2
All Depths and CSM Units
24DDD
Historical Data
n = 1
n = 356
mg/kg dry weight
●,■ n = 0
< n = 2
All Depths and CSM Units
24DDE
Historical Data
n = 8
n = 349
mg/kg dry weight
●,■ n = 0
< n = 2
All Depths and CSM Units
24DDT
Historical Data
n = 24
n = 333
mg/kg dry weight
●,■ n = 0
< n = 2
0.01
1
10
50
80
99
99.99
Percentile
LEGEND
H2O
CTRL
LALL
GE
DE
NP
LD
UMF
LMF
May/July Data
September Data
Historical Data


44DDD
All Depths and CSM Units
Historical Data
n = 3
n = 409
●,■ n = 0
< n = 2
mg/kg dry weight
44DDE
All Depths and CSM Units
Historical Data
n = 43
n = 369
●,■ n = 0
< n = 2
mg/kg dry weight
44DDT
All Depths and CSM Units
Historical Data
n = 86
n = 326
●,■ n = 0
< n = 2
mg/kg dry weight
Carbazole
All Depths and CSM Units
Historical Data
n = 2
n = 355
●,■ n = 1
< n = 0
mg/kg dry weight
0.01
1
10
50
80
99
99.99
Percentile
LEGEND
H2O
CTRL
LALL
GE
DE
NP
LD
UMF
LMF
May/July Data
September Data
Historical Data

APPENDIX G

ESTIMATING SUMMARY STATISTICS FOR DATASETS THAT INCLUDE BELOW DETECTION LIMIT VALUES

ESTIMATING SUMMARY STATISTICS FOR DATASETS THAT INCLUDE BELOW DETECTION LIMIT VALUES

In the analysis of water quality data that accompanies the 2010 chronic sturgeon sediment exposure, reported concentrations as measured on a parts per billion (ppb) basis were frequently below analytical detection limits (BDLs). As a result, the true concentrations for chemicals of potential concern (e.g., dissolved metals) lay somewhere between zero and the analytical method detection limit (MDL) or method reporting limit (MRL). To enable the use of this data (i.e., censored data) in evaluating summary statistics such as arithmetic- and geometric means, and standard deviations, maximum likelihood estimation (MLE) procedures were used. Procedures such as MLE provide better estimates of summary statistics for censored data (e.g., BDLs) than simple "blind" calculations that treat BDLs as detected measurements or 'fabricating' values with the use of archaic substitution (e.g., one-half the value of the detection limit) methods (Helsel 1990). The following appendix outlines the application and subsequent evaluation (via Monte Carlo methodology) of several methods based on MLE or alternative procedures applied to data containing BDLs. Four methods were tested in this comparison and include the "censored MLE" (CENMLE) and "regression on order statistics" (ROS) procedures built in to the R-statistical package (Helsel 2005), the MLE procedure built in to the Biotic Ligand Model (BLM; HydroQual 2009), and a "blind" calculation method that treats the BDL values as regular measurements.

To evaluate these methods, a Monte Carlo procedure was used to generate a sample dataset from a known distribution. Estimates of the geometric mean and standard deviation from each of the methods could then be compared to the known answer to evaluate the accuracy and precision of each method. Sample datasets generated by Monte Carlo were intended to resemble the types of metal concentration data encountered in the study. Values for geometric mean, standard deviation, number of data points, and fraction of data that were BDL were all chosen to resemble the actual metal data. For a given distribution with specified geometric mean and standard deviation, individual data points were randomly generated, some noise representing plus or minus 10 percent of the value was introduced to represent analytical variability, and a detection limit was then chosen so that a specified fraction of the available data were BDL. Different values of the fraction BDL were used ranging from 20 percent to 80 percent of the total number of data to test these methods over a range of conditions representative of metal concentration data in the 2010 sturgeon database. An example dataset is shown in Figure E-1. For these example data, there are 10 data points and 70 percent of them are BDL. The "true" lognormal distribution used to generate the data is shown as the black diagonal line, and represents a dataset with a geometric mean of 0.017, and standard deviation of 0.75.

For this example, the 10 data points were then supplied to four different estimation procedures to evaluate how well these methods could estimate summary statistics. Values that were BDL were replaced by the detection limit (as shown in Figure E-1).

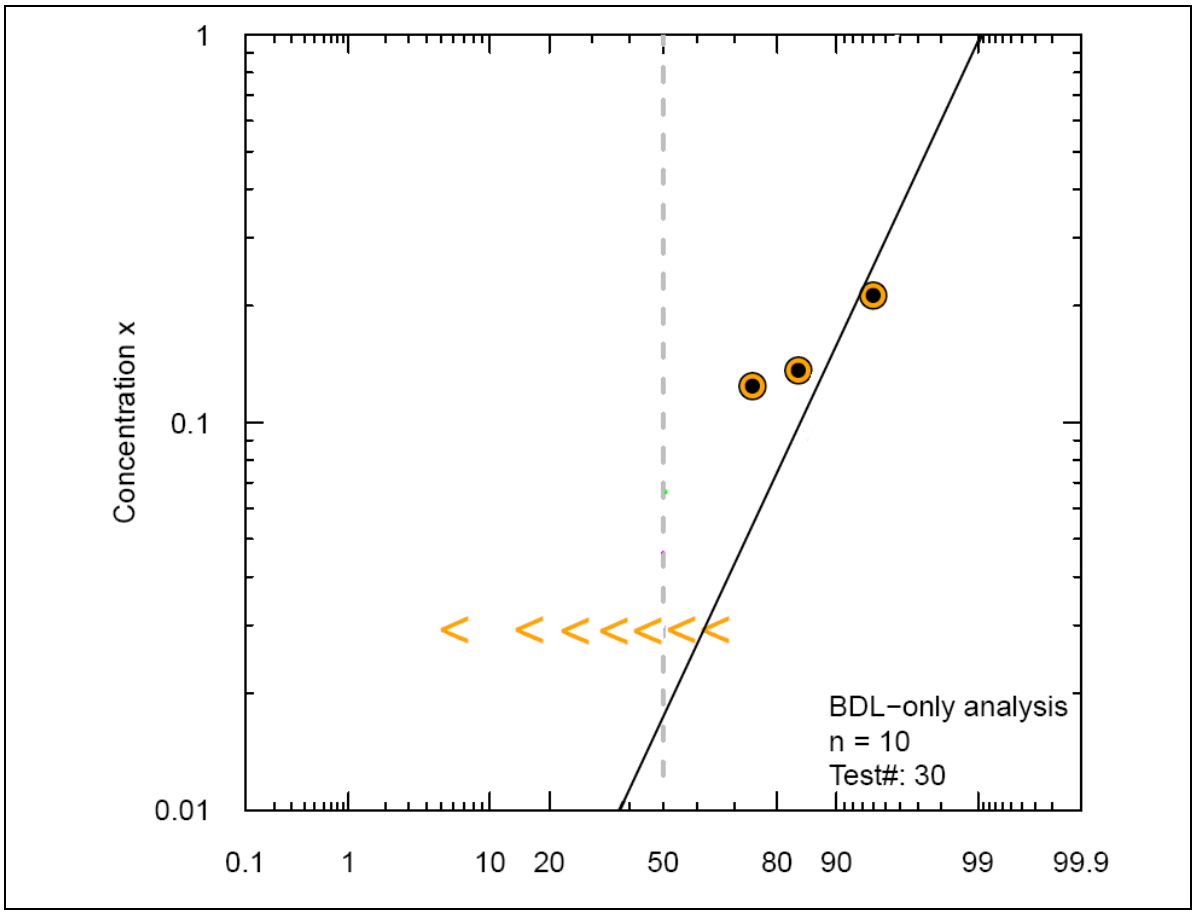


Figure E-1. An example test dataset generated for a Monte Carlo evaluation of numerical procedures to estimate statistical distributions for datasets that include values below an analytical detection limit.

Note:
The true distribution is a lognormal distribution with a geometric mean of 0.017, and standard deviation of 0.75 and is shown with the solid black line. Ten random sample points were generated from this distribution. To each data some random noise was added. A detection limit was selected and any points with values below the detection limit were replaced with the detection limit. Observations that remain above the detection limit are shown as circles and those below the detection limit are shown as less-than (i.e. "<") symbols plotted at the value of the detection limit. The geometric mean, standard deviation, number of points, and proportion of data below the detection limit were all selected to be similar to actual metal datasets produced as part of the chronic sturgeon study.

The MLE procedures are based on optimization of a likelihood function (Shumway et al. 2002). For a given dataset with n observations, the likelihood function is based on the following equation:

$$L = \prod_{i=1}^{n} P(x_i)^{1-\delta_i} \times C(x_i)^{\delta_i} \quad \text{E-1}$$

Where, for the likelihood function L across n observations $P(x)$ is the probability density function for a normal distribution used for non-BDL values of x, and $C(x)$ is the cumulative density function used for BDL values of x.

For a given mean (μ) and standard deviation (σ), the probability density function is:

$$P(x) = \frac{exp\left[-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2\right]}{\sigma\sqrt{2\pi}} \quad \text{E-2}$$

For the same distribution, a cumulative density function is defined as:

$$C(x) = \frac{1}{2}\left[1 + \text{erf}\left(\frac{x-\mu}{\sqrt{2\sigma^2}}\right)\right] \quad \text{E.3}$$

Where erf is the Gauss error function (Andrews 1997). For detected observations, the censored flag δ is 0, so only the term for P(x) is used in the likelihood function, and the C(x) term will drop out. For BDL observations, the censored flag δ is 1 and the P(x) term will drop out. The goal of the MLE procedure is to find a mean (μ) and standard deviation (σ) that maximizes "L" (Equation E-1) for a given dataset, that includes both detected and BDL observations. For a log-normally distributed dataset, a geometric mean can be found by applying the MLE to log-transformed values of x.

The "blind" calculation was included to allow comparison of MLE methods that consider BDL values against a simple alternative to demonstrate the benefit of incorporating these methods into the overall analysis. As shown in the pink line in Figure E-2 if the BDL data are treated the same as other measurements, calculation of the geometric mean tends to produce a value that is higher than the true value, and the estimate of the standard deviation is lower than the true value. For this example, the resulting "blind" estimate of the geometric mean is 0.047, compared to an actual value of 0.017; while the estimate of the standard deviation is 0.36, compared to an actual value of 0.75.

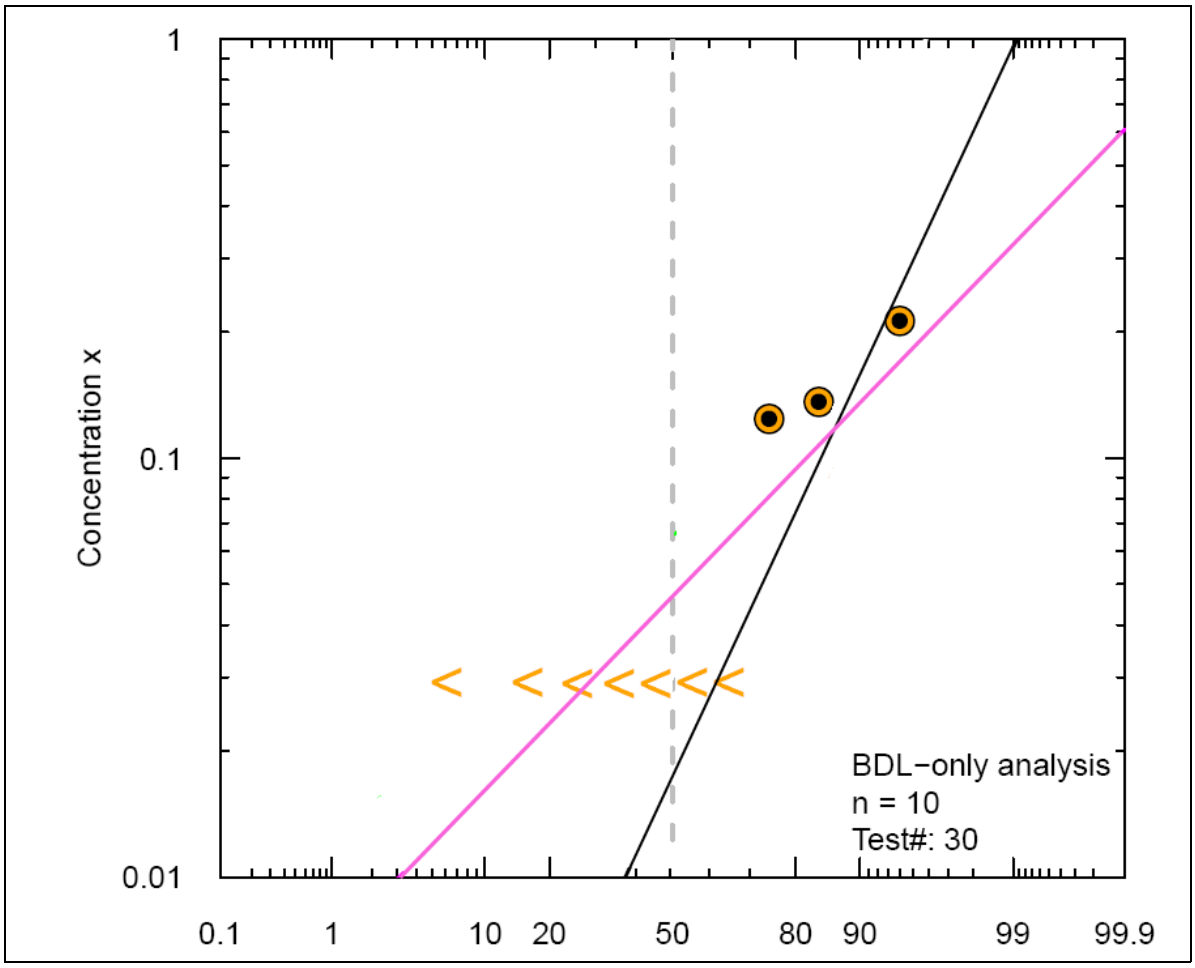


Figure E-2. Example "blind" calculation permitting the comparison of MLE methods that consider BDL values against a simple alternative

Note:
If below detection limit values shown in Figure E-1 are treated as actual measured values, the resulting geometric mean and standard deviation are biased from the true values. This "blind" characterization of the distribution (shown as the solid pink line) tends to over-estimate the geometric mean (estimate 0.047, actual value 0.017) and underestimate the standard deviation (estimate 0.36, actual value 0.75) relative to the true distribution (shown as the solid black line).

Consideration of BDL values using a MLE procedure results in estimated summary statistics that are much closer to the true values (Figure E-3) (estimated geometric mean of 0.011 and standard deviation of 0.48). This type of comparison was repeated with a Monte Carlo procedure to generate 4000 independent datasets. Results for all 4000 comparisons of the geometric mean are shown in Figure E-4. For each estimate, the ratio of the estimated value of the geometric mean to the true value is shown as a histogram. Results from the CENMLE procedure produce a histogram that is nearly centered around a ratio of 1.0, see Figure E-4 Panel A. Results from the ROS procedure (Helsel 2005) are shown in Figure E-4 Panel B for comparison. A second MLE method incorporated in the BLM (HydroQual 2009), differs from the CENMLE procedure in that it only assumes that the fraction of the data that are BDL are normally distributed. This method was included in this comparison since the general use of the BLM in the analysis of sturgeon and other metals effects data make this built-in procedure an attractive alternative in subsequent

data analyses. For these data, the BLM based MLE produced results that were comparable to CENMLE (Figure E-4 Panel C). The ROS procedure typically produced estimates that were somewhat more variable compared to the true value than either of the MLE procedures (i.e., the histogram in Panel B is broader, indicating that there were a higher proportion of ROS estimates with larger deviations from the true value). The blind calculation that treats BDL data the same as detected observations shows a consistent tendency to overestimate the geometric mean (Figure E-4 Panel D).

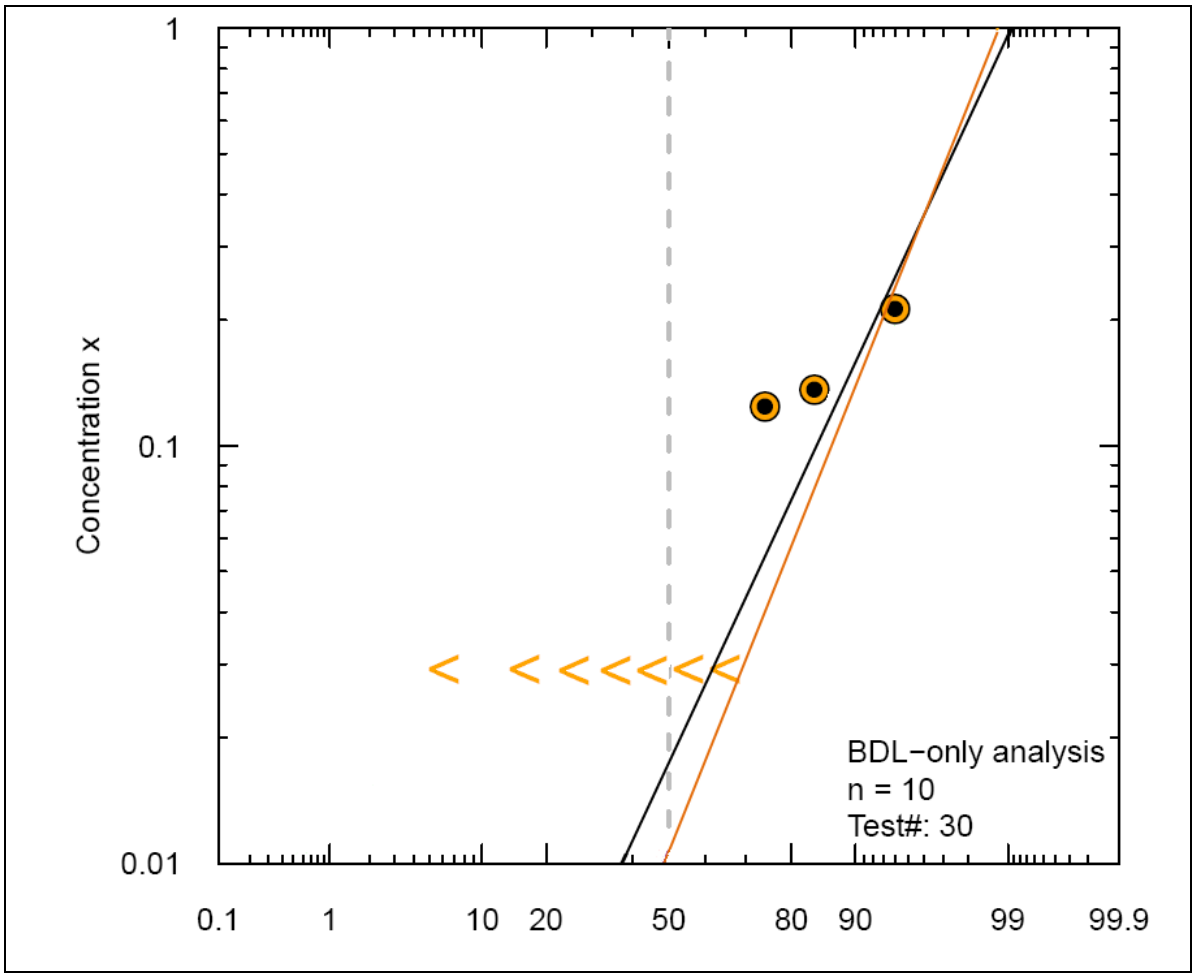


Figure E-3. Example calculation incorporating BDL values using MLE methods.

Note:
Summary statistics for datasets that include values below analytical detection limits can be estimated using MLE techniques. An estimate of the distribution using MLE is shown for the sample data described in Figure E-1 (brown line). The MLE estimates of the geometric mean (0.011) and standard deviation (0.48) are closer to the true distribution (shown in black) than a blind calculation that does not consider BDL values (shown in Figure E-2).

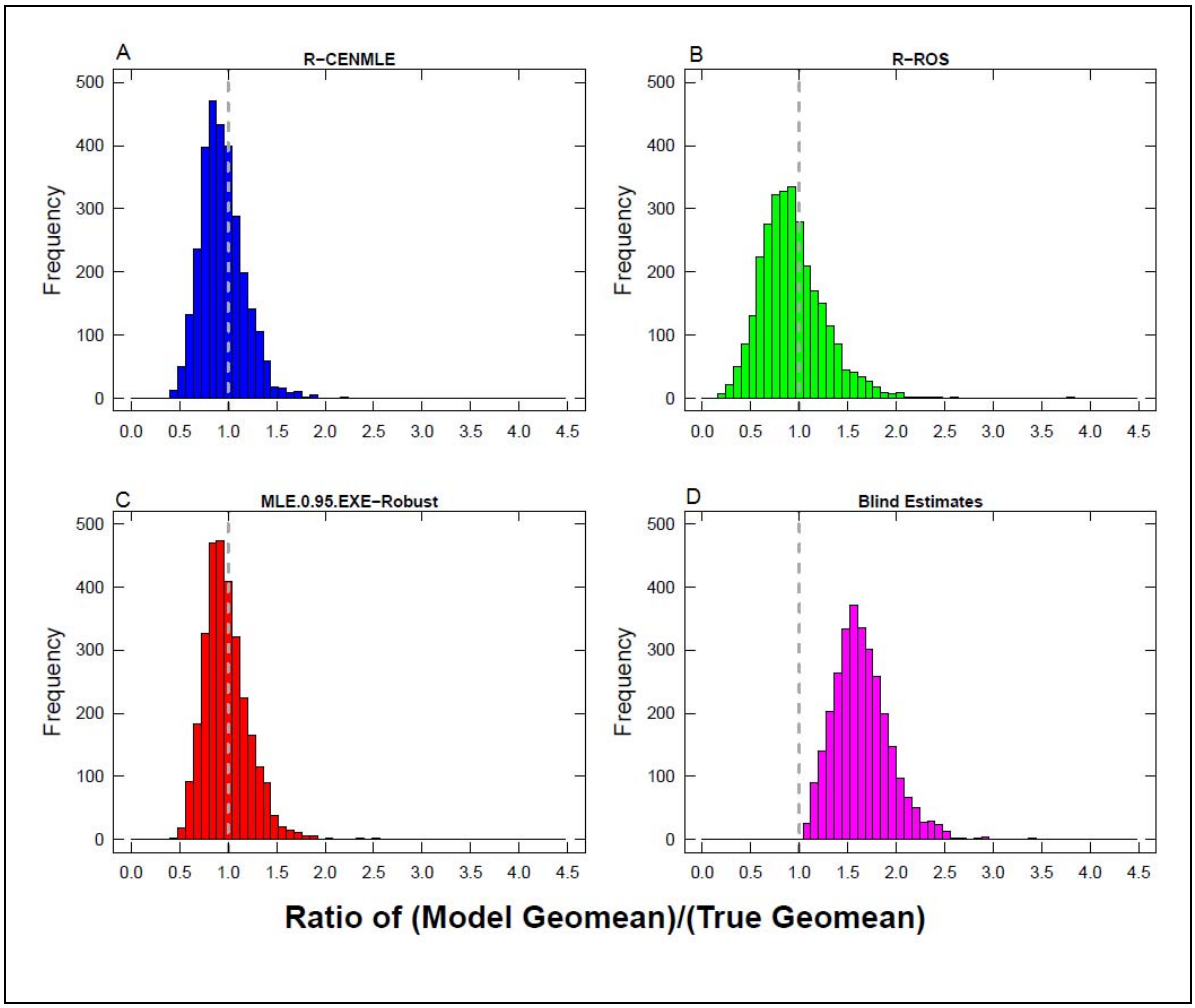


Figure E-4. Frequency histograms for 4000 estimates of the geometric mean from 4000 different synthetic datasets generated as part of the Monte Carlo evaluation

Note:
Results for four estimation methods are shown, including the CENMLE and ROS procedures in the R-statistical package (Panels A and B; Helsel 2005), the MLE procedure built into the BLM (Panel C) and a blind calculation that treats BDL as normal measurements (Panel D). Estimated values are shown as a ratio to the actual geomean. For this comparison 40 percent of the synthetic data were replaced by a detection limit value.

Similar conclusions are reached from comparisons of the estimates of the standard deviation (see Figure E-5). Both MLE methods and ROS produce histograms centered around a value of 1, indicating that there is no systematic bias in these methods. However, estimates from the ROS method tend to deviate from the true values more frequently (and hence a broader histogram in Figure E-5 Panel B). The blind calculation shows a systematic bias with estimates of standard deviation consistently lower than the true values.

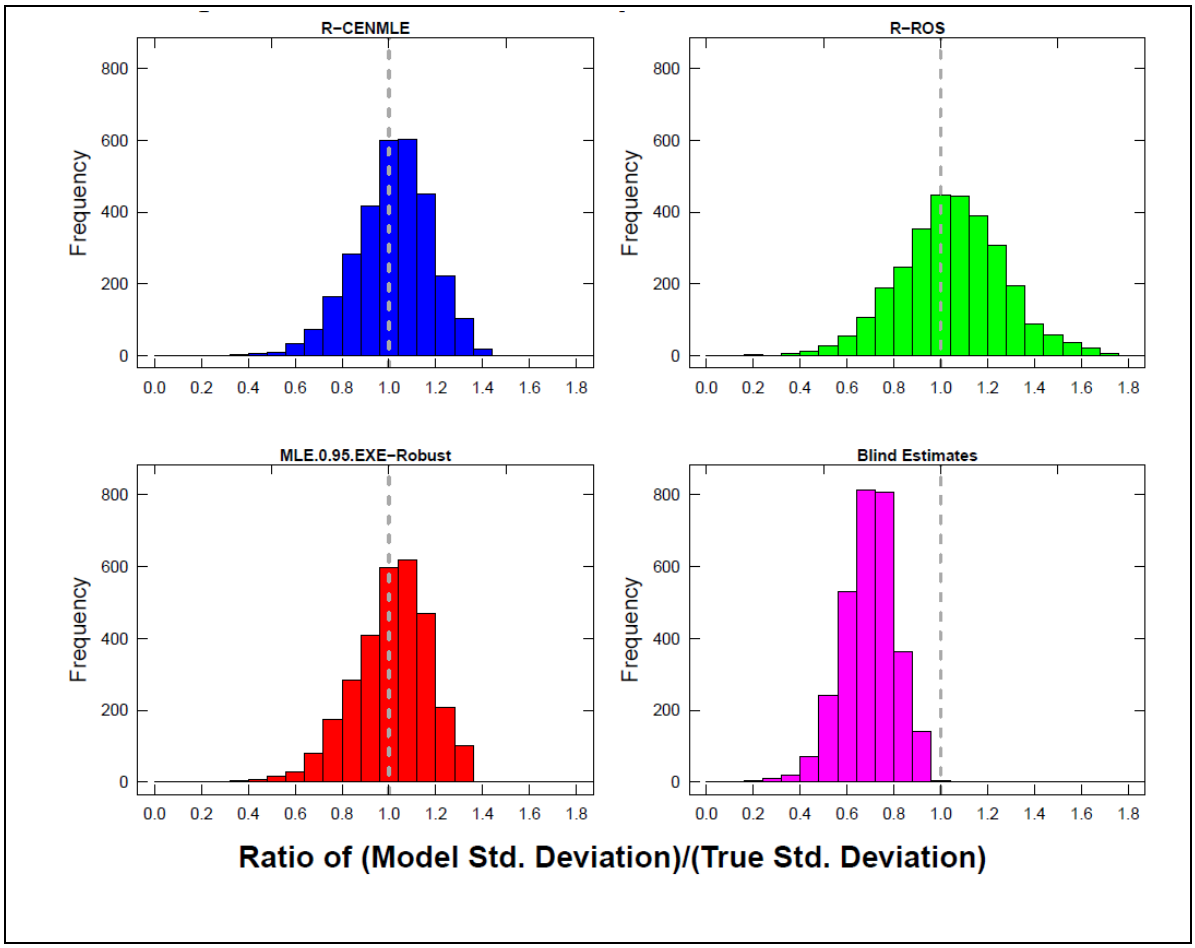


Figure E-5. Frequency histograms for 4000 estimates of the standard deviation from 4000 different synthetic datasets generated as part of the Monte Carlo evaluation

Note:
Results for four estimation methods are shown, including the CENMLE and ROS procedures in the R-statistical package (Panels A and B; Helsel 2005), the MLE procedure built into the BLM (Panel C) and a blind calculation that treats BDL as normal measurements (Panel D). Estimated values are shown as a ratio to the actual standard deviation. For this comparison 40 percent of the synthetic data were replaced by a detection limit value.

The Monte Carlo evaluation shown in Figures E-4 and E-5 were repeated with percentages of data assigned as BDL ranging from 20 to 80 percent and number of data points from 10 to 30. Results from all cases were comparable to the 40 percent BDL dataset show in Figures E-4 and E-5. The MLE methods consistently performed marginally better than ROS and considerably better than a blind estimate that did not consider BDLs. As a result and given that the R-statistical software package was used extensively in the evaluation and graphing of 2010 sturgeon data, the CENMLE procedure (an internal function in the R software) was chosen for the analysis of metal concentration data. Application of the CENMLE procedure was limited to datasets which had BDL values ≤ 80 percent of the total number of observations, as the procedure has been noted by others to be unreliable when more than 80 percent of the data correspond to BDL values (Helsel 2005). For datasets with greater than 80 percent BDLs, an upper bound to the geometric mean was estimated by using the detection limit values in the averaging

procedure. Monte Carlo analysis shows that this result is always greater than the actual geometric mean, and values estimated this way are therefore shown with a less than symbol (i.e., "<") to indicate that the result is known to be lower than the estimated value.

The results from this comparison are consistent with recommendations by Helsel (2005, p. 78) that either MLE or ROS would be appropriate for small datasets with percent censored values that are 80 percent or fewer of the total data. The demonstrated performance of these methods in this Monte Carlo analysis is particularly relevant to the 2010 sturgeon dataset, since parameters such as number of data points, geometric mean, and standard deviation were all chosen to be representative of metal concentration data from this study. The performance summarized in Figures E-4 and E-5 is, therefore, representative of the expected performance of the MLE procedure used in the analysis of the metals concentration data in the 2010 sturgeon database. For datasets where BDL values represent more than 80 percent of the total data available, MLE and ROS procedures are less reliable, and in these cases a "blind" estimate of the geometric mean can be used, with the acknowledgment that it is a conservative estimate shown to be biased to values greater than the actual value (as in Figure E-4, Panel D).

The MLE procedure was also used to develop box-and-whisker plots for data that included BDL values. An example of this application is shown in Figure E-6. The box in the box and whisker plot is defined such that the upper edge of the box corresponds to the 75th percentile of the original data, and the bottom edge of the box corresponds to the 25th percentile, and the whiskers extend to maximum and minimum values exclusive of extreme values. Application of the box and whisker to the true distribution from the aforementioned example is shown as the gray box in Figure E-6 Panel A. Vertical lines show where the true distribution (black line) intersects the 25th and 75th percentile. At these intersections, horizontal lines read across to the lower and upper edge of the box. The geometric mean for this distribution is equivalent to the median (50th percentile), since it is log-normally distributed, and this value is shown as a horizontal line in the middle of the box.

If BDL values are not considered, and are treated the same as detected values, the result will over-estimate the geometric mean, and under-estimate the standard deviation as is shown in the pink box in Figure E-6 Panel B. These graphical discrepancies are consistent with the numerical discrepancies seen in Figures E-4 and E-5.

If MLE methods are used to consider BDL values, a much better estimate of the true distribution results such that the red box in Figure E-6 Panel C is nearly identical to the gray box that results from the true distribution. It is important to note, however, that the resulting box and whisker plot that results from the MLE analysis appears to produce a geometric mean that is lower than all of the observed data (i.e., measured values and detection limits for samples that are BDL). This apparent discrepancy results from the fact that a high proportion of the observed data are actually BDL values plotted at the detection limit. The real values that correspond to these BDL values are, by definition,

lower than the detection. The MLE procedure considers this fact, and produces an estimate of the geometric mean accordingly. Similar box and whisker plots that correspond to metal concentrations in the chronic sturgeon exposure chambers frequently exhibit similar behavior, and the comparably low geometric means evident in those figures are likewise an understandable and expected consequence that results from a high proportion of BDL values in the metals datasets.

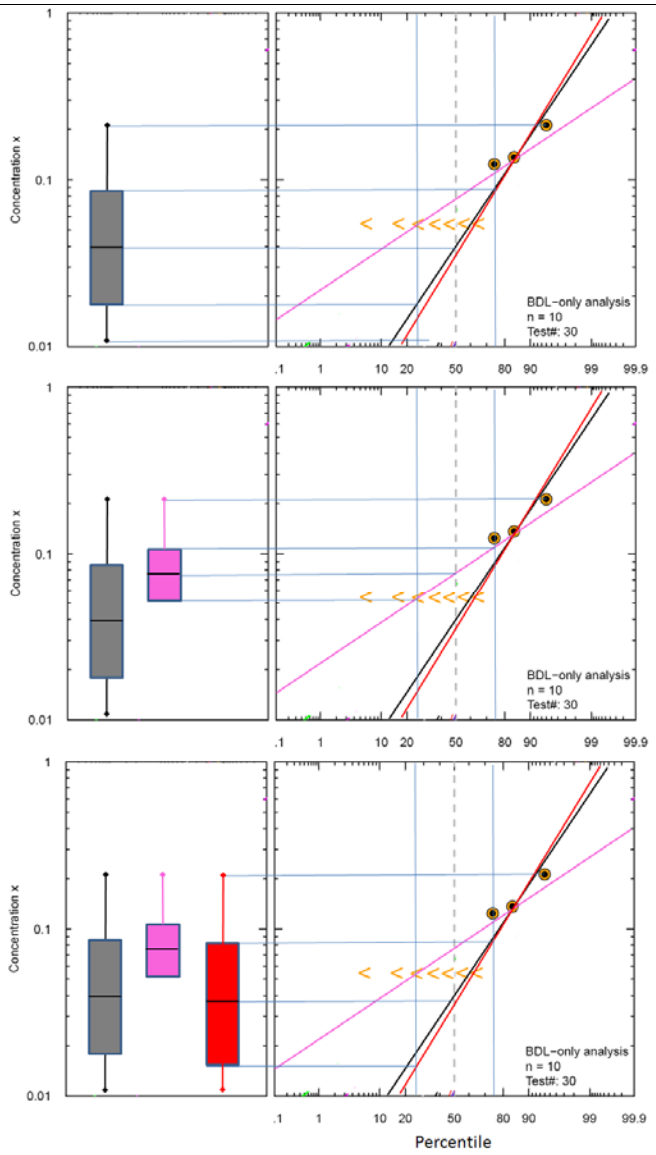


Figure E-6. Box-plots of MLE results for datasets that include BDL values

Note:
Data are the same in Figure E-1 and are drawn at random from a distribution (black line). For each box plot, the upper edge of the box represents the 75th percentile, the lower edge the 25th percentile, and the horizontal line in the middle of the figure represents the geometric mean. Whiskers above and below the box extend to min and max values. In Panel A the box plot (gray) is developed from the true distribution. In Panel B, the measurements are used to develop the box plot (pink) without considering that some values are below detection limit and show the typical overestimation of the mean, and underestimation of the standard deviation. In Panel C, the summary statistics for the box plot (red) were derived from the MLE estimate of the distribution, as characterized by the geometric mean and standard deviation.

SUMMARY

- Metals concentration datasets in the chronic sturgeon exposures frequently include values that are below an BDLs.
- A Monte Carlo analysis showed that ignoring the presence of BDLs resulted in systematic errors in estimates of the mean and standard deviation and should be avoided.
- Consideration of BDLs using either MLE or ROS produced unbiased estimates of the mean and standard deviation, and of these two methods the MLE procedure produced an accurate result.
- The MLE procedure, and specifically the CENMLE procedure in the R-statistical software package, was chosen for the analysis of metal concentrations in chronic sturgeon exposures to produce summary statistics, and summary graphics (e.g., box and whisker plots).
- Application of the MLE was limited to datasets which had 80 percent or fewer observations flagged as BDLs. For datasets with more than 80 percent BDLs, an upper bound on the geometric mean was calculated using the reported detection limit values.

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HydroQual. 2009. The Biotic Ligand Model users guide, version 2.4.4. August 2009. HydroQual, Inc.

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APPENDIX H

BIOTIC LIGAND MODEL INPUT/OUTPUT FILES

APPENDIX H-1

ABBREVIATIONS

Table H1. Abbreviations

Abbreviation	Meaning
µg/L	micrograms per liter
bdl	Below detection limit
BL	Biotic Ligand
BLM	Biotic Ligand Model
°C	degrees Celsius
cont	Associated with contaminated blank
CTRL	Artificial substrate control
DE	Deadman's Eddy
DGT	Diffusive gradient thin-film
DIC	Dissolved inorganic carbon
DOC	Dissolved organic carbon
EC20	20% effect concentration
est	Estimated
GE	Genelle Eddy
H2O	Water-only control
LA50	Median lethal accumulation
LALL	Lower Arrow Lakes
LD	Little Dalles
LMF	Lower Marcus Flats
mol/L	moles per liter
nmol/gw	nanomoles per gram wet weight
none	No qualifier
NP	North Port
OW	Overlying water
pH	log10(hydrogen ion activity)
PW	Porewater
SWI	Sediment-water Interface
UMF	Upper Marcus Flats

APPENDIX H-2

FILE DESCRIPTIONS

Table H2. File Descriptions

BLM parameters used for the Cd BLM calculations

Biotic Ligand Reaction	Log K
BL-Cd	8.6
BL-Ca	4.5
BL-Mg	3.5
BL-H	6.7
BL-Na	3.0
LA50 (nmol/gw)	2.5

BLM parameters used for the Cu BLM calculations

Biotic Ligand Reaction	Log K
BL-Cu	7.4
BL-CuOH	-1.3
BL-Ca	3.6
BL-Mg	3.6
BL-H	5.4
BL-Na	3.0
LA50 (nmol/gw)	0.00424

BLM parameters used for the Pb BLM calculations

Biotic Ligand Reaction	Log K
BL-Pb	6.65
BL-PbOH	-1.1
BL-Ca	5.1
BL-Mg	4.0
BL-H	4.0
BL-Na	4.2
LA50 (nmol/gw)	0.0283

BLM parameters used for the Zn BLM calculations

Biotic Ligand Reaction	Log K
BL-Zn	5.5
BL-ZnOH	-3.8
BL-Ca	3.8
BL-Mg	3.6
BL-H	6.6
BL-Na	2.0
LA50 (nmol/gw)	1.24

Notes:

LogK - logarithm of the distribution coefficient and/or solubility product or ion activity

Ca - calcium
Cd - cadmium
Cu - copper
CuOH - copper hydroxide
H - hydrogen
Mg - magnesium
Na - sodium
Pb - lead
PbOH - lead hydroxide
Zn - zinc
ZnOH - zinc hydroxide

APPENDIX H-3

INPUT/OUTPUT SUMMARY

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
OW Ctrl-A_0723	7/23/2010	CTRL	A	Overlying Water	OverWater	7.7789	2.3	1.5	10	15.25	3.09E-04	3.54E-04	5.79E-04	4.22E-05	4.82E-04	1.74E-04	9.41E-04	0.011	0.36	0.025	19.8
OW Ctrl-A_0726	7/26/2010	CTRL	A	Overlying Water	OverWater	7.7789	1.9	1.5	10	15.25	3.14E-04	3.32E-04	5.48E-04	3.86E-05	4.76E-04	1.70E-04	9.41E-04	0.006	0.42	0.02	13.9
OW Ctrl-A_0802	8/2/2010	CTRL	A	Overlying Water	OverWater	7.7789	4.2	2.3	10	15.25	2.99E-04	3.29E-04	6.09E-04	4.20E-05	5.03E-04	1.92E-04	9.41E-04	0.006	0.35	0.026	27.3
OW Ctrl-A_0809	8/9/2010	CTRL	A	Overlying Water	OverWater	7.7789	5.5	3.5	10	15.25	3.42E-04	3.30E-04	6.44E-04	4.58E-05	4.93E-04	2.09E-04	9.41E-04	0.019	0.88	0.082	9.8
OW Ctrl-A_0816	8/16/2010	CTRL	A	Overlying Water	OverWater	7.7789	2.9	1.5	10	15.25	3.14E-04	3.16E-04	5.92E-04	4.20E-05	4.66E-04	1.79E-04	9.41E-04	0.013	0.62	0.069	228
OW Ctrl-A_0823	8/23/2010	CTRL	A	Overlying Water	OverWater	7.7789	2.3	1.5	10	15.25	3.32E-04	3.10E-04	5.92E-04	4.17E-05	4.75E-04	1.55E-04	9.41E-04	0.008	0.61	0.047	11.5
OW Ctrl-A_0823_2	8/23/2010	CTRL	A	Overlying Water	OverWater	7.7789	3.7	1.8	10	15.25	2.75E-04	3.19E-04	6.18E-04	4.48E-05	4.72E-04	1.55E-04	9.41E-04	0.022	1.66	0.084	1090
OW Ctrl-A_0830	8/30/2010	CTRL	A	Overlying Water	OverWater	7.7789	2.3	1.5	10	15.25	3.02E-04	2.90E-04	5.79E-04	4.14E-05	4.81E-04	1.49E-04	9.41E-04	0.008	0.54	0.04	7.1
OW Ctrl-A_0906	9/6/2010	CTRL	A	Overlying Water	OverWater	7.7789	1.4	1.5	10	15.25	2.27E-04	2.83E-04	5.18E-04	3.61E-05	4.59E-04	1.46E-04	9.41E-04	0.009	0.45	0.082	2.6
OW Ctrl-A_0913	9/13/2010	CTRL	A	Overlying Water	OverWater	7.7789	3.4	1.5	10	15.25	2.65E-04	3.21E-04	5.96E-04	4.12E-05	5.21E-04	1.64E-04	9.41E-04	0.027	0.46	0.027	28
OW Ctrl-A_0920	9/20/2010	CTRL	A	Overlying Water	OverWater	7.7789	3.6	1.7	10	15.25	2.57E-04	2.77E-04	5.92E-04	3.86E-05	4.84E-04	1.42E-04	9.41E-04	0.017	0.42	0.035	10.1
PW Ctrl-A_0723	7/23/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	4.8	2.9	10	18.05	5.49E-04	3.22E-04	6.22E-04	4.14E-05	4.94E-04	2.40E-04	2.08E-03	0.056	0.57	0.15	29.2
PW Ctrl-A_0726	7/26/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	10.5	8.6	10	18.05	4.34E-04	3.04E-04	6.61E-04	4.78E-05	5.33E-04	1.84E-04	2.08E-03	0.039	0.42	0.04	11.8
PW Ctrl-A_0802	8/2/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	6.0	4.1	10	18.05	5.41E-04	3.24E-04	5.83E-04	4.37E-05	5.07E-04	3.40E-04	2.08E-03	0.023	1.19	0.1	62.8
PW Ctrl-A_0809	8/9/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	5.6	3.7	10	18.05	7.24E-04	3.83E-04	6.35E-04	6.16E-05	5.06E-04	2.14E-04	2.08E-03	0.286	0.65	0.064	11.6
PW Ctrl-A_0816	8/16/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	8.6	6.6	10	18.05	9.51E-04	4.16E-04	6.13E-04	6.55E-05	4.99E-04	2.10E-04	2.08E-03	0.021	0.71	0.32	12.7
PW Ctrl-A_0823	8/23/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	9.1	7.2	10	18.05	8.78E-04	4.20E-04	6.83E-04	6.52E-05	4.97E-04	3.70E-04	2.08E-03	1.6	0.8	0.176	20.2
PW Ctrl-A_0830	8/30/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	9.5	7.5	10	18.05	7.76E-04	3.74E-04	6.26E-04	6.19E-05	4.87E-04	1.93E-04	2.08E-03	0.246	0.67	0.097	15.6
PW Ctrl-A_0906	9/6/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	10.9	9.0	10	18.05	8.06E-04	3.84E-04	6.26E-04	5.63E-05	4.30E-04	1.85E-04	2.08E-03	0.005	0.35	0.025	1.7
PW Ctrl-A_0913	9/13/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	6.8	4.8	10	18.05	7.50E-04	3.66E-04	6.00E-04	5.41E-05	4.72E-04	2.31E-04	2.08E-03	0.069	0.44	1.94	15.8
PW Ctrl-A_0920	9/20/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	5.1	3.1	10	18.05	7.19E-04	3.63E-04	6.13E-04	4.71E-05	5.13E-04	1.65E-04	2.08E-03	0.023	0.33	0.052	5.3
SWI Ctrl-A_0726	7/26/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	2.0	1.5	10	16.45	3.12E-04	3.56E-04	5.83E-04	3.76E-05	4.89E-04	1.74E-04	9.54E-04	0.007	0.49	0.043	88.9
SWI Ctrl-A_0802	8/2/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	3.7	1.7	10	16.45	2.75E-04	3.12E-04	5.35E-04	3.86E-05	4.83E-04	2.02E-04	9.54E-04	0.015	0.47	0.043	12.5
SWI Ctrl-A_0809	8/9/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	4.0	2.0	10	16.45	3.24E-04	3.36E-04	6.48E-04	4.25E-05	4.88E-04	2.04E-04	9.54E-04	0.012	0.69	0.095	4.6
SWI Ctrl-A_0816	8/16/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	11.6	9.7	10	16.45	3.14E-04	3.25E-04	5.96E-04	4.22E-05	4.73E-04	1.67E-04	9.54E-04	0.014	0.56	0.054	11.4
SWI Ctrl-A_0823	8/23/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	3.1	1.5	10	16.45	3.47E-04	3.31E-04	5.96E-04	3.96E-05	4.45E-04	1.58E-04	9.54E-04	0.011	0.57	0.051	21.6
SWI CTRL-A_0823_2	8/23/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	2.9	1.5	10	16.45	3.47E-04	3.22E-04	5.83E-04	3.86E-05	4.69E-04	1.56E-04	9.54E-04	0.017	0.59	0.057	7.4
SWI Ctrl-A_0830	8/30/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	3.3	1.5	10	16.45	3.04E-04	2.97E-04	5.83E-04	4.12E-05	4.73E-04	1.50E-04	9.54E-04	0.016	0.74	0.051	12.4
SWI Ctrl-A_0906	9/6/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	3.7	1.8	10	16.45	2.46E-04	3.09E-04	5.52E-04	3.84E-05	4.82E-04	1.55E-04	9.54E-04	0.008	0.61	0.022	5.3
SWI Ctrl-A_0913	9/13/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	3.5	1.6	10	16.45	2.70E-04	3.18E-04	5.87E-04	4.09E-05	5.07E-04	1.59E-04	9.54E-04	0.006	0.41	0.03	3.3
SWI Ctrl-A_0920	9/20/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	1.9	1.5	10	16.45	2.94E-04	3.00E-04	5.92E-04	4.09E-05	4.99E-04	1.43E-04	9.54E-04	0.028	0.44	0.045	4.5
OW Ctrl-B_0723	7/23/2010	CTRL	B	Overlying Water	OverWater	7.7539	1.6	1.5	10	15.15	3.07E-04	3.62E-04	6.00E-04	4.30E-05	5.05E-04	1.80E-04	9.17E-04	0.005	0.35	0.022	10.5
OW Ctrl-B_0726	7/26/2010	CTRL	B	Overlying Water	OverWater	7.7539	1.7	1.5	10	15.15	3.04E-04	3.59E-04	5.92E-04	3.81E-05	4.82E-04	1.71E-04	9.17E-04	0.005	0.37	0.02	5.4
OW Ctrl-B_0802	8/2/2010	CTRL	B	Overlying Water	OverWater	7.7539	3.2	1.5	10	15.15	2.94E-04	3.31E-04	6.22E-04	4.35E-05	5.13E-04	1.91E-04	9.17E-04	0.005	0.72	0.02	10.1
OW Ctrl-B_0809	8/9/2010	CTRL	B	Overlying Water	OverWater	7.7539	6.6	4.7	10	15.15	3.24E-04	3.31E-04	6.53E-04	4.71E-05	5.04E-04	2.11E-04	9.17E-04	0.021	1.21	0.053	10.7
OW Ctrl-B_0816	8/16/2010	CTRL	B	Overlying Water	OverWater	7.7539	3.4	1.5	10	15.15	3.37E-04	3.16E-04	5.79E-04	4.17E-05	4.70E-04	1.70E-04	9.17E-04	0.013	0.67	0.056	4.7
OW Ctrl-B_0823	8/23/2010	CTRL	B	Overlying Water	OverWater	7.7539	2.7	1.5	10	15.15	3.17E-04	3.23E-04	5.87E-04	4.20E-05	4.69E-04	1.55E-04	9.17E-04	0.013	0.49	0.05	6.2
OW Ctrl-B_0830	8/30/2010	CTRL	B	Overlying Water	OverWater	7.7539	3.9	2.0	10	15.15	2.60E-04	2.92E-04	5.74E-04	3.99E-05	4.44E-04	1.50E-04	9.17E-04	0.026	0.53	0.078	6.9
OW Ctrl-B_0906	9/6/2010	CTRL	B	Overlying Water	OverWater	7.7539	2.2	1.5	10	15.15	2.30E-04	2.84E-04	5.48E-04	3.66E-05	4.60E-04	1.47E-04	9.17E-04	0.01	0.62	0.037	4.3
OW Ctrl-B_0913	9/13/2010	CTRL	B	Overlying Water	OverWater	7.7539	2.6	1.5	10	15.15	2.57E-04	3.11E-04	5.70E-04	4.02E-05	4.93E-04	1.58E-04	9.17E-04	0.016	0.46	0.024	4.3
OW Ctrl-B_0920	9/20/2010	CTRL	B	Overlying Water	OverWater	7.7539	3.4	1.5	10	15.15	2.75E-04	2.91E-04	5.48E-04	3.56E-05	4.58E-04	1.37E-04	9.17E-04	0.005	0.43	0.013	9.2
Ctrl-B INF SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	1.26E-04	2.63E-05	7.87E-05	5.12E-06	4.76E-04	2.27E-04	1.88E-03	0.0155	0.402	0.106	3.92
Ctrl-B MID SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	1.24E-04	2.61E-05	6.35E-05	5.12E-06	4.76E-04	2.27E-04	1.88E-03	0.0135	0.44	0.105	4.02
Ctrl-B OUF SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	1.24E-04	2.53E-05	6.13E-05	5.12E-06	4.76E-04	2.27E-04	1.88E-03	0.0174	0.443	0.14	3.96
Ctrl-B PPR1 SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	1.44E-04	2.84E-04	4.83E-04	7.11E-04	4.76E-04	2.27E-04	1.88E-03	2.5	10	98.7	143
Ctrl-B PPR2 SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	3.42E-04	3.24E-04	5.52E-04	2.84E-05	4.76E-04	2.27E-04	1.88E-03	0.1	0.4	3.98	4
Ctrl-B PPR3 SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	3.44E-04	3.12E-04	5.26E-04	2.84E-05	4.76E-04	2.27E-04	1.88E-03	0.1	0.4	4.21	6.2
Ctrl-B INF SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	8.26E-05	1.07E-05	6.79E-05	5.12E-06	4.76E-04	2.27E-04	1.88E-03	0.0302	0.19	0.0557	5.62
Ctrl-B MID SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	8.28E-05	2.30E-05	8.27E-05	5.12E-06	4.76E-04	2.27E-04	1.88E-03	0.0331	0.594	0.0234	7.95
Ctrl-B OUF SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	9.28E-05	2.63E-05	9.87E-05	5.47E-06	4.76E-04	2.27E-04	1.88E-03	0.0409	0.35	0.0181	4.13
Ctrl-B PPR1 SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	5.07E-04	3.05E-04	5.66E-04	4.20E-05	4.76E-04	2.27E-04	1.88E-03	0.1	0.4	1.61	4
Ctrl-B PPR2 SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	6.14E-04	3.22E-04	5.52E-04	4.22E-05	4.76E-04	2.27E-04	1.88E-03	0.1	0.4	3.84	4
Ctrl-B PPR3 SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	7.04E-04	3.22E-04	5.61E-04	3.58E-05	4.76E-04	2.27E-04	1.88E-03	0.1	0.4	1.68	4
Ctrl-B PPR1 SED_0919	9/19/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	5.02E-04	3.51E-04	6.83E-04	5.76E-05	4.76E-04	2.27E-04	1.88E-03	0.1	0.4	0.102	4
Ctrl-B PPR2 SED_0919	9/19/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	6.69E-04	3.24E-04	6.00E-04	5.04E-05	4.76E-04	2.27E-04	1.88E-03	0.1	0.4	0.222	4
Ctrl-B PPR3 SED_0919	9/19/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	4.87E-04	3.45E-04	6.35E-04	4.81E-05	4.76E-04	2.27E-04	1.88E-03	0.1	0.4	0.13	4

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
PW Ctrl-B_0723	7/23/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	4.5	2.6	10	17.85	4.94E-04	2.70E-04	5.57E-04	4.71E-05	4.22E-04	1.69E-04	1.88E-03	0.065	0.48	0.046	33.2
PW Ctrl-B_0726	7/26/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	10.5	8.6	10	17.85	4.62E-04	2.69E-04	5.96E-04	7.06E-05	4.49E-04	1.77E-04	1.88E-03	0.029	0.44	0.04	2.4
PW Ctrl-B_0802	8/2/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	4.4	2.5	10	17.85	5.56E-04	3.02E-04	5.31E-04	4.25E-05	4.98E-04	2.99E-04	1.88E-03	0.02	0.33	0.074	48.1
PW Ctrl-B_0809	8/9/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	5.5	3.6	10	17.85	8.18E-04	3.76E-04	6.18E-04	6.19E-05	4.93E-04	2.03E-04	1.88E-03	0.039	0.52	0.046	5.7
PW Ctrl-B_0816	8/16/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	8.0	6.1	10	17.85	8.06E-04	3.79E-04	6.31E-04	6.57E-05	4.85E-04	2.05E-04	1.88E-03	0.048	0.68	0.08	667
PW Ctrl-B_0823	8/23/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	7.4	5.5	10	17.85	7.96E-04	3.76E-04	6.83E-04	6.04E-05	5.15E-04	4.85E-04	1.88E-03	0.193	0.73	0.229	15.5
PW Ctrl-B_0830	8/30/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	7.5	5.5	10	17.85	7.66E-04	3.69E-04	6.26E-04	6.04E-05	4.62E-04	1.88E-04	1.88E-03	0.033	0.4	0.105	15.2
PW Ctrl-B_0906	9/6/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	6.0	4.1	10	17.85	7.26E-04	3.44E-04	6.05E-04	4.89E-05	4.59E-04	1.65E-04	1.88E-03	0.008	0.39	0.067	4.3
PW Ctrl-B_0913	9/13/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	4.5	2.6	10	17.85	7.84E-04	3.54E-04	5.79E-04	4.40E-05	5.03E-04	3.27E-04	1.88E-03	0.058	0.4	1.51	18.9
PW CTRL-B_0920	9/20/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	5.2	3.3	10	17.85	7.46E-04	3.58E-04	6.05E-04	4.32E-05	5.40E-04	1.69E-04	1.88E-03	0.015	0.28	0.086	4.6
SWI Ctrl-B_0726	7/26/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	2.3	1.5	10	16.45	7.91E-04	3.37E-04	6.18E-04	4.27E-05	4.80E-04	1.69E-04	9.99E-04	0.046	0.91	0.15	14.1
Ctrl-B INF H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	1.03E-04	3.53E-05	6.57E-05	5.12E-06	4.78E-04	1.67E-04	9.99E-04	0.0169	0.379	0.165	4.54
Ctrl-B MID H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	1.04E-04	3.69E-05	5.39E-05	5.12E-06	4.78E-04	1.67E-04	9.99E-04	0.0162	0.387	0.116	5.27
Ctrl-B OUF H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	1.06E-04	3.76E-05	5.83E-05	5.12E-06	4.78E-04	1.67E-04	9.99E-04	0.0168	0.442	0.0819	7.33
Ctrl-B PPR1 H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	1.85E-04	1.76E-04	3.45E-04	2.84E-05	4.78E-04	1.67E-04	9.99E-04	0.1	0.4	4.07	7.8
Ctrl-B PPR2 H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	2.77E-04	3.28E-04	5.44E-04	2.84E-05	4.78E-04	1.67E-04	9.99E-04	0.1	0.4	4.52	4
Ctrl-B PPR3 H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	2.75E-04	3.15E-04	5.66E-04	2.84E-05	4.78E-04	1.67E-04	9.99E-04	0.1	0.4	3.93	4
SWI Ctrl-B_0802	8/2/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	4.2	2.3	10	16.45	2.70E-04	3.12E-04	5.52E-04	3.91E-05	4.84E-04	1.95E-04	9.99E-04	0.013	1.23	0.032	21.9
SWI Ctrl-B_0809	8/9/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	3.5	1.5	10	16.45	5.89E-04	3.39E-04	6.70E-04	4.50E-05	4.93E-04	2.02E-04	9.99E-04	0.078	0.72	0.063	10.5
SWI Ctrl-B_0816	8/16/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	5.0	3.0	10	16.45	3.52E-04	3.22E-04	5.74E-04	4.14E-05	4.66E-04	1.74E-04	9.99E-04	0.013	19.4	0.272	15.7
Ctrl-B INF H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	2.21E-04	5.88E-05	9.14E-05	5.12E-06	4.78E-04	1.67E-04	9.99E-04	0.103	0.914	0.0623	12.1
Ctrl-B MID H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	2.28E-04	3.32E-05	7.66E-05	5.12E-06	4.78E-04	1.67E-04	9.99E-04	0.0969	0.621	0.201	7.51
Ctrl-B OUF H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	1.93E-04	2.93E-05	5.52E-05	5.12E-06	4.78E-04	1.67E-04	9.99E-04	0.0658	0.544	0.154	6.9
Ctrl-B PPR1 H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	2.99E-04	3.07E-04	5.44E-04	3.25E-05	4.78E-04	1.67E-04	9.99E-04	0.1	0.4	1.72	4
Ctrl-B PPR2 H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	2.92E-04	3.09E-04	5.39E-04	3.89E-05	4.78E-04	1.67E-04	9.99E-04	0.1	0.8	1.86	4
Ctrl-B PPR3 H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	2.84E-04	3.09E-04	5.44E-04	3.76E-05	4.78E-04	1.67E-04	9.99E-04	0.1	0.52	1.88	4
SWI Ctrl-B_0823	8/23/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	2.9	1.5	10	16.45	3.22E-04	3.20E-04	5.92E-04	3.98E-05	4.63E-04	1.52E-04	9.99E-04	0.016	0.55	0.044	7.3
SWI Ctrl-B_0830	8/30/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	3.5	1.5	10	16.45	2.60E-04	2.87E-04	5.92E-04	4.20E-05	4.54E-04	1.43E-04	9.99E-04	0.025	0.79	0.243	27.9
SWI Ctrl-B_0906	9/6/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	4.0	2.0	10	16.45	2.47E-04	3.03E-04	5.52E-04	3.86E-05	4.70E-04	1.63E-04	9.99E-04	0.012	0.92	0.025	5.8
SWI Ctrl-B_0913	9/13/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	3.8	1.8	10	16.45	2.60E-04	3.08E-04	5.96E-04	4.12E-05	5.04E-04	1.55E-04	9.99E-04	0.011	0.35	0.027	3.5
Ctrl-B PPR1 H2O_0919	9/19/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	4.12E-04	3.50E-04	6.39E-04	5.50E-05	4.78E-04	1.67E-04	9.99E-04	0.1	0.4	0.128	4
Ctrl-B PPR2 H2O_0919	9/19/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	3.52E-04	3.56E-04	6.79E-04	6.11E-05	4.78E-04	1.67E-04	9.99E-04	0.114	0.4	0.512	4
Ctrl-B PPR3 H2O_0919	9/19/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	3.72E-04	3.47E-04	6.13E-04	4.32E-05	4.78E-04	1.67E-04	9.99E-04	0.1	0.4	0.1	4
SWI Ctrl-B_0920	9/20/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	3.0	1.5	10	16.45	2.84E-04	2.90E-04	5.87E-04	4.04E-05	4.85E-04	1.50E-04	9.99E-04	0.029	0.59	0.061	18.4
OW Ctrl-C_0723	7/23/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.2	1.5	10	15.25	2.97E-04	3.38E-04	5.52E-04	3.61E-05	4.59E-04	1.68E-04	9.15E-04	0.005	0.4	0.033	15.1
OW Ctrl-C_0726	7/26/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.7	1.5	10	15.25	3.07E-04	3.55E-04	5.83E-04	3.71E-05	4.91E-04	1.74E-04	9.15E-04	0.005	0.35	0.038	4
OW Ctrl-C_0802	8/2/2010	CTRL	C	Overlying Water	OverWater	7.7496	4.0	2.1	10	15.25	2.92E-04	3.29E-04	6.39E-04	4.40E-05	5.06E-04	1.91E-04	9.15E-04	0.005	0.36	0.026	14
OW Ctrl-C_0809	8/9/2010	CTRL	C	Overlying Water	OverWater	7.7496	4.3	2.4	10	15.25	3.09E-04	3.16E-04	6.48E-04	4.30E-05	5.05E-04	2.03E-04	9.15E-04	0.01	0.54	0.036	7.4
OW Ctrl-C_0816	8/16/2010	CTRL	C	Overlying Water	OverWater	7.7496	4.1	2.2	10	15.25	3.37E-04	3.40E-04	6.35E-04	4.53E-05	4.72E-04	1.76E-04	9.15E-04	0.006	0.64	0.036	3.4
OW Ctrl-C_0823	8/23/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.5	1.5	10	15.25	3.19E-04	3.34E-04	6.00E-04	4.25E-05	4.95E-04	1.61E-04	9.15E-04	0.011	0.59	0.047	13.8
OW Ctrl-C_0830	8/30/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.5	1.5	10	15.25	2.94E-04	3.20E-04	6.26E-04	4.45E-05	5.22E-04	1.62E-04	9.15E-04	0.014	0.56	0.045	9.8
OW Ctrl-C_0906	9/6/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.3	1.5	10	15.25	2.57E-04	3.21E-04	5.96E-04	4.12E-05	5.23E-04	1.68E-04	9.15E-04	0.017	0.52	0.049	4.7
OW Ctrl-C_0913	9/13/2010	CTRL	C	Overlying Water	OverWater	7.7496	4.3	2.4	10	15.25	3.09E-04	3.81E-04	6.66E-04	4.78E-05	5.76E-04	1.89E-04	9.15E-04	0.023	0.5	0.021	27.5
OW Ctrl-C_0920	9/20/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.7	1.5	10	15.25	3.17E-04	3.41E-04	7.13E-04	4.73E-05	6.13E-04	1.88E-04	9.15E-04	0.01	0.72	0.025	2.8
Ctrl-C INF SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	1.22E-04	3.00E-05	6.66E-05	5.12E-06	5.28E-04	2.27E-04	1.86E-03	0.0147	0.399	0.0956	14.7
Ctrl-C MID SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	1.39E-04	3.24E-05	8.83E-05	5.12E-06	5.28E-04	2.27E-04	1.86E-03	0.0177	0.459	0.11	23.1
Ctrl-C OUF SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	1.15E-04	3.09E-05	7.26E-05	5.12E-06	5.28E-04	2.27E-04	1.86E-03	0.0168	0.506	0.118	6.96
Ctrl-C PPR1 SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	3.47E-04	3.36E-04	5.74E-04	2.84E-05	5.28E-04	2.27E-04	1.86E-03	0.1	0.4	3.97	4
Ctrl-C PPR2 SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	3.54E-04	3.28E-04	5.83E-04	4.37E-05	5.28E-04	2.27E-04	1.86E-03	0.1	0.4	4.05	4
Ctrl-C PPR3 SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	3.82E-04	3.40E-04	5.87E-04	2.84E-05	5.28E-04	2.27E-04	1.86E-03	0.1	0.4	3.93	4
Ctrl-C INF SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	1.01E-04	2.50E-05	5.22E-05	5.12E-06	5.28E-04	2.27E-04	1.86E-03	0.0368	0.368	0.0282	4.3
Ctrl-C MID SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	9.91E-05	2.58E-05	4.70E-05	5.12E-06	5.28E-04	2.27E-04	1.86E-03	0.0496	0.348	0.0269	3.65
Ctrl-C OUF SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	1.02E-04	3.05E-05	5.92E-05	5.12E-06	5.28E-04	2.27E-04	1.86E-03	0.0451	0.343	0.0267	3.65
Ctrl-C PPR1 SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	8.18E-04	3.25E-04	5.83E-04	3.89E-05	5.28E-04	2.27E-04	1.86E-03	0.1	0.4	1.56	4
Ctrl-C PPR2 SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	7.51E-04	3.31E-04	5.39E-04	3.48E-05	5.28E-04	2.27E-04	1.86E-03	0.1	0.56	1.64	4
Ctrl-C PPR3 SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	4.99E-04	3.12E-04	5.39E-04	5.22E-05	5.28E-04	2.27E-04	1.86E-03	0.566	1.45	1.78	10.7

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
Ctrl-C INF SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	1.15E-04	2.56E-05	4.79E-05	6.39E-06	5.28E-04	2.27E-04	1.86E-03	0.0267	1.13	0.052	11.4
Ctrl-C MID SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	1.17E-04	2.49E-05	5.48E-05	6.39E-06	5.28E-04	2.27E-04	1.86E-03	0.0213	1.1	0.0276	10.3
Ctrl-C OUF SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	1.01E-04	2.06E-05	5.74E-05	6.39E-06	5.28E-04	2.27E-04	1.86E-03	0.0239	1.01	0.0325	9.38
Ctrl-C PPR1 SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	6.44E-04	3.36E-04	5.96E-04	5.58E-05	5.28E-04	2.27E-04	1.86E-03	0.1	0.4	0.1	4
Ctrl-C PPR2 SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	7.36E-04	3.38E-04	6.18E-04	4.94E-05	5.28E-04	2.27E-04	1.86E-03	0.1	0.4	0.1	4
Ctrl-C PPR3 SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	6.89E-04	3.43E-04	6.35E-04	4.99E-05	5.28E-04	2.27E-04	1.86E-03	0.1	0.4	0.196	4
PW Ctrl-C_0723	7/23/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	6.5	4.6	10	17.85	5.44E-04	2.57E-04	5.48E-04	4.68E-05	4.24E-04	2.38E-04	1.86E-03	0.12	0.73	0.091	26
PW Ctrl-C_0726	7/26/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	4.1	2.2	10	17.85	5.22E-04	3.02E-04	6.05E-04	4.17E-05	4.85E-04	2.07E-04	1.86E-03	0.119	0.25	0.046	7
PW Ctrl-C_0802	8/2/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	8.6	6.6	10	17.85	6.04E-04	3.13E-04	5.70E-04	4.73E-05	5.27E-04	2.88E-04	1.86E-03	0.184	0.45	0.06	95.8
PW Ctrl-C_0809	8/9/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	7.0	5.0	10	17.85	8.31E-04	3.85E-04	6.39E-04	6.11E-05	5.51E-04	2.24E-04	1.86E-03	1.29	1.02	2.4	43.4
PW Ctrl-C_0816	8/16/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	8.1	6.1	10	17.85	9.13E-04	3.90E-04	6.00E-04	6.01E-05	5.02E-04	2.17E-04	1.86E-03	0.094	1.11	0.404	13.4
PW Ctrl-C_0823	8/23/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	7.4	5.4	10	17.85	6.44E-04	3.49E-04	6.48E-04	5.60E-05	5.43E-04	3.22E-04	1.86E-03	0.131	0.52	0.132	8.3
PW Ctrl-C_0830	8/30/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	5.3	3.3	10	17.85	6.46E-04	3.54E-04	6.13E-04	4.94E-05	6.00E-04	1.90E-04	1.86E-03	0.079	0.41	0.037	29.9
PW Ctrl-C_0906	9/6/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	5.6	3.7	10	17.85	6.79E-04	3.80E-04	6.31E-04	5.01E-05	5.20E-04	1.87E-04	1.86E-03	0.072	0.32	0.022	4.5
PW Ctrl-C_0913	9/13/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	4.0	2.1	10	17.85	7.16E-04	3.74E-04	6.18E-04	4.55E-05	5.47E-04	2.14E-04	1.86E-03	0.077	0.23	0.182	10.2
PW CTRL-C_0920	9/20/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	4.5	2.6	10	17.85	6.64E-04	3.75E-04	6.44E-04	4.71E-05	5.83E-04	1.82E-04	1.86E-03	0.094	0.25	0.046	5.2
SWI Ctrl-C_0726	7/26/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	2.5	1.5	10	16.35	3.07E-04	3.51E-04	5.83E-04	3.68E-05	4.85E-04	1.74E-04	9.67E-04	0.005	0.55	0.021	11.5
Ctrl-C INF H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	9.06E-05	3.48E-05	6.92E-05	5.12E-06	5.19E-04	1.77E-04	9.67E-04	0.0123	0.358	0.0803	4.04
Ctrl-C MID H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	1.14E-04	4.32E-05	1.01E-04	5.12E-06	5.19E-04	1.77E-04	9.67E-04	0.0147	0.41	0.0917	17.5
Ctrl-C OUF H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	1.13E-04	4.53E-05	1.08E-04	5.12E-06	5.19E-04	1.77E-04	9.67E-04	0.0153	0.403	0.0838	9.47
Ctrl-C PPR1 H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	2.75E-04	3.34E-04	5.70E-04	2.84E-05	5.19E-04	1.77E-04	9.67E-04	0.1	0.4	4.08	4
Ctrl-C PPR2 H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	2.80E-04	3.33E-04	5.70E-04	4.78E-05	5.19E-04	1.77E-04	9.67E-04	0.1	0.47	0.74	4.7
Ctrl-C PPR3 H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	2.50E-04	3.32E-04	5.79E-04	4.27E-05	5.19E-04	1.77E-04	9.67E-04	0.1	0.4	0.466	4
SWI Ctrl-C_0802	8/2/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	2.6	1.5	10	16.35	2.97E-04	3.26E-04	5.96E-04	4.04E-05	4.70E-04	1.94E-04	9.67E-04	0.005	0.37	0.025	25.3
SWI Ctrl-C_0809	8/9/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	6.3	4.4	10	16.35	3.07E-04	3.13E-04	6.48E-04	4.48E-05	5.08E-04	1.96E-04	9.67E-04	0.011	0.97	0.095	3.6
SWI Ctrl-C_0816	8/16/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	3.5	1.5	10	16.35	3.27E-04	3.27E-04	6.00E-04	4.27E-05	4.81E-04	1.76E-04	9.67E-04	0.01	0.53	0.038	6
Ctrl-C INF H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	1.20E-04	1.88E-05	5.31E-05	5.12E-06	5.19E-04	1.77E-04	9.67E-04	0.0196	0.297	0.0601	4.49
Ctrl-C MID H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	1.18E-04	1.91E-05	4.65E-05	5.12E-06	5.19E-04	1.77E-04	9.67E-04	0.0306	0.304	0.0684	3.42
Ctrl-C OUF H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	1.34E-04	2.10E-05	6.57E-05	5.12E-06	5.19E-04	1.77E-04	9.67E-04	0.0487	0.36	0.0717	3.66
Ctrl-C PPR1 H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	3.24E-04	3.09E-04	5.35E-04	3.53E-05	5.19E-04	1.77E-04	9.67E-04	0.1	0.8	1.87	7.7
Ctrl-C PPR2 H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	3.12E-04	3.07E-04	5.48E-04	4.14E-05	5.19E-04	1.77E-04	9.67E-04	0.1	0.48	1.81	4
Ctrl-C PPR3 H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	2.87E-04	3.10E-04	5.61E-04	4.04E-05	5.19E-04	1.77E-04	9.67E-04	0.1	0.95	2.99	30.1
SWI Ctrl-C_0823	8/23/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	3.1	1.5	10	16.35	3.22E-04	3.26E-04	6.39E-04	4.50E-05	5.09E-04	1.64E-04	9.67E-04	0.008	0.56	0.033	2.8
SWI Ctrl-C_0830	8/30/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	2.7	1.5	10	16.35	2.82E-04	3.15E-04	6.35E-04	4.37E-05	5.17E-04	1.52E-04	9.67E-04	0.009	0.88	0.038	14
SWI Ctrl-C_0906	9/6/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	2.7	1.5	10	16.35	2.67E-04	3.30E-04	6.13E-04	4.25E-05	5.18E-04	1.72E-04	9.67E-04	0.038	0.49	0.069	5
SWI Ctrl-C_0913	9/13/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	5.1	3.2	10	16.35	2.87E-04	3.42E-04	6.48E-04	4.58E-05	5.82E-04	1.81E-04	9.67E-04	0.008	0.43	0.027	3.9
Ctrl-C INF H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	9.13E-05	2.74E-05	1.72E-05	6.39E-06	5.19E-04	1.77E-04	9.67E-04	0.0267	0.954	0.0155	9.65
Ctrl-C MID H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	9.56E-05	2.93E-05	2.74E-05	6.39E-06	5.19E-04	1.77E-04	9.67E-04	0.0282	1	0.0161	10.2
Ctrl-C OUF H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	9.73E-05	2.82E-05	3.95E-05	6.39E-06	5.19E-04	1.77E-04	9.67E-04	0.0317	1.21	0.0206	11.4
Ctrl-C PPR1 H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	3.62E-04	3.45E-04	6.13E-04	4.83E-05	5.19E-04	1.77E-04	9.67E-04	0.1	0.54	0.1	4
Ctrl-C PPR2 H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	3.27E-04	3.35E-04	5.87E-04	4.58E-05	5.19E-04	1.77E-04	9.67E-04	0.1	0.62	0.142	4
Ctrl-C PPR3 H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	3.22E-04	3.42E-04	6.05E-04	4.86E-05	5.19E-04	1.77E-04	9.67E-04	0.1	0.4	0.132	4
SWI Ctrl-C_0920	9/20/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	3.9	2.0	10	16.35	3.59E-04	4.04E-04	7.61E-04	5.32E-05	6.12E-04	1.85E-04	9.67E-04	0.036	0.63	0.063	12.8
OW Ctrl-D_0723	7/23/2010	CTRL	D	Overlying Water	OverWater	7.7519	1.9	1.5	10	15.25	3.14E-04	3.42E-04	5.66E-04	3.89E-05	4.77E-04	1.65E-04	9.29E-04	0.005	0.35	0.026	9
OW Ctrl-D_0726	7/26/2010	CTRL	D	Overlying Water	OverWater	7.7519	4.4	2.4	10	15.25	3.14E-04	3.75E-04	6.18E-04	3.81E-05	4.81E-04	1.74E-04	9.29E-04	0.01	1.7	0.054	8.3
OW Ctrl-D_0802	8/2/2010	CTRL	D	Overlying Water	OverWater	7.7519	4.5	2.5	10	15.25	3.09E-04	3.77E-04	6.96E-04	4.66E-05	4.84E-04	1.99E-04	9.29E-04	0.01	0.98	0.066	20.6
OW Ctrl-D_0809	8/9/2010	CTRL	D	Overlying Water	OverWater	7.7519	5.8	3.8	10	15.25	3.57E-04	3.01E-04	6.00E-04	4.22E-05	4.62E-04	2.05E-04	9.29E-04	0.019	0.64	0.091	22.7
OW Ctrl-D_0816	8/16/2010	CTRL	D	Overlying Water	OverWater	7.7519	4.5	2.6	10	15.25	3.59E-04	3.38E-04	6.26E-04	4.58E-05	4.98E-04	1.81E-04	9.29E-04	0.01	0.69	0.068	42.6
OW Ctrl-D_0823	8/23/2010	CTRL	D	Overlying Water	OverWater	7.7519	2.4	1.5	10	15.25	3.39E-04	3.38E-04	6.39E-04	4.50E-05	5.01E-04	1.65E-04	9.29E-04	0.009	0.54	0.044	15.1
OW Ctrl-D_0830	8/30/2010	CTRL	D	Overlying Water	OverWater	7.7519	3.6	1.6	10	15.25	2.65E-04	3.05E-04	5.87E-04	4.22E-05	4.48E-04	1.60E-04	9.29E-04	0.008	0.58	0.028	4.3
OW Ctrl-D_0906	9/6/2010	CTRL	D	Overlying Water	OverWater	7.7519	4.7	2.8	10	15.25	2.62E-04	3.22E-04	5.87E-04	4.07E-05	5.35E-04	1.64E-04	9.29E-04	0.027	1.04	0.053	3.7
OW Ctrl-D_0913	9/13/2010	CTRL	D	Overlying Water	OverWater	7.7519	4.9	3.0	10	15.25	3.14E-04	3.80E-04	6.61E-04	4.68E-05	5.90E-04	1.92E-04	9.29E-04	0.014	0.44	0.029	8.3
OW Ctrl-D_0920	9/20/2010	CTRL	D	Overlying Water	OverWater	7.7519	3.8	1.9	10	15.25	3.54E-04	3.78E-04	6.79E-04	4.71E-05	6.15E-04	1.77E-04	9.29E-04	0.005	8.29	0.016	2.5
Ctrl-d INF SED	9/19/2010	CTRL	D	Porewater (1 cm)	DGT	7.69	8.7	6.8	10	17.95	1.54E-04	2.90E-05	1.03E-04	6.39E-06	4.96E-04	6.99E-04	2.41E-03	0.0339	1.09	0.0796	10.6
Ctrl-D MID SED	9/19/2010	CTRL	D	Porewater (1 cm)	DGT	7.69	8.7	6.8	10	17.95	1.61E-04	3.12E-05	9.27E-05	6.39E-06	4.96E-04	6.99E-04	2.41E-03	0.0289	1.13	0.0409	9.63
Ctrl-D OUF SED	9/19/2010	CTRL	D	Porewater (1 cm)	DGT	7.69	8.7	6.8	10	17.95	1.42E-04	2.92E-05	7.92E-05	6.39E-06	4.96E-04	6.99E-04	2.41E-03	0.0243	1.02	0.07	8.76

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
Ctrl-D PPR 1 SED	9/19/2010	CTRL	D	Porewater (1 cm)	Peeper	7.69	8.7	6.8	10	17.95	5.89E-04	3.34E-04	6.22E-04	6.34E-05	4.96E-04	6.99E-04	2.41E-03	0.1	0.68	0.214	4.3
Ctrl-D PPR 2 SED	9/19/2010	CTRL	D	Porewater (1 cm)	Peeper	7.69	8.7	6.8	10	17.95	5.86E-04	3.41E-04	6.09E-04	5.37E-05	4.96E-04	6.99E-04	2.41E-03	0.1	0.4	0.15	4
PW Ctrl-D_0723	7/23/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	4.0	2.1	10	17.95	4.92E-04	3.09E-04	6.18E-04	4.71E-05	4.88E-04	1.82E-04	2.41E-03	0.02	0.48	0.032	15.6
PW Ctrl-D_0726	7/26/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	3.7	1.8	10	17.95	4.74E-04	2.91E-04	5.79E-04	4.50E-05	4.50E-04	1.82E-04	2.41E-03	0.013	0.45	0.029	3.1
PW Ctrl-D_0802	8/2/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	4.7	2.8	10	17.95	5.32E-04	3.35E-04	6.09E-04	4.60E-05	5.15E-04	2.42E-04	2.41E-03	0.012	0.49	0.051	56.1
PW Ctrl-D_0809	8/9/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	4.8	2.8	10	17.95	7.44E-04	3.91E-04	6.26E-04	5.83E-05	6.15E-04	2.16E-04	2.41E-03	0.209	0.49	0.314	13.3
PW Ctrl-D_0816	8/16/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	15.9	14.0	10	17.95	9.18E-04	3.88E-04	5.92E-04	6.16E-05	5.02E-04	2.09E-04	2.41E-03	0.025	1.23	0.441	6.8
PW Ctrl-D_0823	8/23/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	9.7	7.8	10	17.95	8.66E-04	4.06E-04	6.57E-04	6.11E-05	4.97E-04	5.67E-03	2.41E-03	0.408	10	2.57	68.6
PW Ctrl-D_0830	8/30/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	12.7	10.8	10	17.95	7.91E-04	3.70E-04	6.00E-04	6.04E-05	4.64E-04	1.95E-04	2.41E-03	0.036	0.37	0.091	12.8
PW Ctrl-D_0906	9/6/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	19.0	17.1	10	17.95	7.46E-04	3.82E-04	6.18E-04	5.09E-05	4.34E-04	1.79E-04	2.41E-03	0.013	0.32	0.061	1.6
PW Ctrl-D_0913	9/13/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	7.3	5.4	10	17.95	7.74E-04	3.83E-04	6.26E-04	4.86E-05	4.75E-04	2.26E-04	2.41E-03	0.023	7	0.754	8.2
PW CTRL-D_0920	9/20/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	5.5	3.6	10	17.95	6.89E-04	3.61E-04	6.13E-04	4.58E-05	5.17E-04	1.79E-04	2.41E-03	0.022	0.29	0.028	4.3
SWI Ctrl-D_0726	7/26/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	2.3	1.5	10	16.75	3.07E-04	3.50E-04	5.74E-04	3.71E-05	4.82E-04	1.73E-04	9.83E-04	0.005	0.39	0.021	13.3
SWI Ctrl-D_0802	8/2/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	4.0	2.0	10	16.75	3.07E-04	3.37E-04	6.18E-04	4.20E-05	4.70E-04	1.98E-04	9.83E-04	0.005	0.42	0.048	11.9
SWI Ctrl-D_0809	8/9/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	4.7	2.8	10	16.75	3.99E-04	3.25E-04	6.31E-04	4.55E-05	5.03E-04	2.09E-04	9.83E-04	0.01	0.5	0.054	4.9
SWI Ctrl-D_0816	8/16/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	3.7	1.8	10	16.75	3.54E-04	3.37E-04	5.96E-04	4.37E-05	4.84E-04	1.77E-04	9.83E-04	0.021	1.16	0.083	4.5
SWI Ctrl-D_0823	8/23/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	5.2	3.3	10	16.75	3.24E-04	3.12E-04	5.83E-04	4.40E-05	5.19E-04	1.66E-04	9.83E-04	0.014	0.55	0.055	6.3
SWI Ctrl-D_0830	8/30/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	3.9	2.0	10	16.75	2.82E-04	3.17E-04	6.00E-04	4.35E-05	4.59E-04	1.59E-04	9.83E-04	0.011	0.59	0.038	12.8
SWI Ctrl-D_0906	9/6/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	3.8	1.9	10	16.75	2.62E-04	3.23E-04	6.05E-04	4.09E-05	5.24E-04	1.68E-04	9.83E-04	0.008	0.41	0.018	7.7
SWI Ctrl-D_0913	9/13/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	3.1	1.5	10	16.75	2.99E-04	3.56E-04	6.74E-04	4.68E-05	6.06E-04	1.83E-04	9.83E-04	0.008	0.44	0.019	3.1
Ctrl-D INF H2O	9/19/2010	CTRL	D	Sediment-Water Interface	DGT	7.5725	3.6	1.7	10	16.75	1.38E-04	4.53E-05	1.09E-04	6.39E-06	5.18E-04	1.83E-04	9.83E-04	0.0289	1.1	0.0222	10.2
Ctrl-D MID H2O	9/19/2010	CTRL	D	Sediment-Water Interface	DGT	7.5725	3.6	1.7	10	16.75	1.44E-04	4.81E-05	9.53E-05	6.39E-06	5.18E-04	1.83E-04	9.83E-04	0.0237	1.16	0.0245	10.6
Ctrl-D OUF H2O	9/19/2010	CTRL	D	Sediment-Water Interface	DGT	7.5725	3.6	1.7	10	16.75	1.50E-04	5.06E-05	9.92E-05	6.39E-06	5.18E-04	1.83E-04	9.83E-04	0.0279	1.18	0.0287	10.1
Ctrl-D Peeper 1 H2O	9/19/2010	CTRL	D	Sediment-Water Interface	Peeper	7.5725	3.6	1.7	10	16.75	3.22E-04	3.25E-04	6.00E-04	5.45E-05	5.18E-04	1.83E-04	9.83E-04	0.1	0.4	0.118	4
Ctrl-D Peeper 2 H2O	9/19/2010	CTRL	D	Sediment-Water Interface	Peeper	7.5725	3.6	1.7	10	16.75	3.27E-04	3.42E-04	6.35E-04	5.01E-05	5.18E-04	1.83E-04	9.83E-04	0.1	0.4	0.154	4
SWI Ctrl-D_0920	9/20/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	2.6	1.5	10	16.75	3.49E-04	3.76E-04	6.83E-04	4.60E-05	6.34E-04	1.86E-04	9.83E-04	0.005	0.43	0.017	5.2
OW Ctrl-E_0723	7/23/2010	CTRL	E	Overlying Water	OverWater	7.7864	1.9	1.5	10	15.15	3.24E-04	3.72E-04	5.92E-04	4.22E-05	4.64E-04	1.63E-04	9.70E-04	0.01	0.36	0.078	6
OW Ctrl-E_0726	7/26/2010	CTRL	E	Overlying Water	OverWater	7.7864	1.9	1.5	10	15.15	3.07E-04	3.57E-04	5.79E-04	3.68E-05	4.77E-04	1.72E-04	9.70E-04	0.011	1.72	0.046	13.1
OW Ctrl-E_0802	8/2/2010	CTRL	E	Overlying Water	OverWater	7.7864	3.7	1.8	10	15.15	3.04E-04	3.37E-04	5.87E-04	4.02E-05	4.99E-04	1.71E-04	9.70E-04	0.005	10.6	0.022	42.1
OW Ctrl-E_0809	8/9/2010	CTRL	E	Overlying Water	OverWater	7.7864	4.8	2.8	10	15.15	3.74E-04	3.19E-04	6.61E-04	4.55E-05	4.70E-04	2.54E-04	9.70E-04	0.042	0.82	0.085	13.7
OW Ctrl-E_0816	8/16/2010	CTRL	E	Overlying Water	OverWater	7.7864	3.7	1.8	10	15.15	1.06E-03	3.37E-04	8.00E-04	5.99E-05	5.28E-04	2.00E-04	9.70E-04	0.066	1.48	0.176	67.2
OW Ctrl-E_0823	8/23/2010	CTRL	E	Overlying Water	OverWater	7.7864	5.9	4.0	10	15.15	3.99E-04	3.27E-04	6.79E-04	4.94E-05	4.93E-04	1.83E-04	9.70E-04	0.028	0.93	0.099	25.2
OW Ctrl-E_0830	8/30/2010	CTRL	E	Overlying Water	OverWater	7.7864	2.7	1.5	10	15.15	2.77E-04	3.21E-04	6.48E-04	4.63E-05	4.73E-04	1.61E-04	9.70E-04	0.03	0.9	0.248	18.6
OW Ctrl-E_0906	9/6/2010	CTRL	E	Overlying Water	OverWater	7.7864	4.0	2.0	10	15.15	2.57E-04	3.14E-04	5.74E-04	4.02E-05	5.26E-04	1.70E-04	9.70E-04	0.015	0.96	0.074	5.3
OW Ctrl-E_0913	9/13/2010	CTRL	E	Overlying Water	OverWater	7.7864	3.2	1.5	10	15.15	2.84E-04	3.32E-04	5.96E-04	4.25E-05	5.27E-04	1.62E-04	9.70E-04	0.028	0.59	0.056	6.9
OW Ctrl-E_0920	9/20/2010	CTRL	E	Overlying Water	OverWater	7.7864	3.9	2.0	10	15.15	3.29E-04	3.33E-04	6.83E-04	4.68E-05	5.77E-04	1.68E-04	9.70E-04	0.034	0.56	0.061	2.4
PW Ctrl-E_0723	7/23/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	5.4	3.5	10	18.05	5.69E-04	2.86E-04	5.44E-04	4.32E-05	4.63E-04	1.91E-04	1.68E-03	0.028	0.57	0.091	5.6
PW Ctrl-E_0726	7/26/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	6.0	4.1	10	18.05	5.32E-04	2.74E-04	6.05E-04	6.06E-05	4.79E-04	1.95E-04	1.68E-03	0.094	0.74	0.104	11.5
PW Ctrl-E_0802	8/2/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	4.6	2.6	10	18.05	4.69E-04	3.05E-04	5.52E-04	4.25E-05	4.93E-04	2.73E-04	1.68E-03	0.029	0.44	0.064	76.9
PW Ctrl-E_0809	8/9/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	7.7	5.8	10	18.05	6.79E-04	3.72E-04	6.53E-04	5.93E-05	5.13E-04	2.30E-04	1.68E-03	0.273	0.87	0.065	5.8
PW Ctrl-E_0816	8/16/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	6.5	4.5	10	18.05	7.89E-04	4.03E-04	6.57E-04	7.24E-05	4.89E-04	2.33E-04	1.68E-03	0.028	0.81	0.062	10
PW Ctrl-E_0823	8/23/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	6.4	4.4	10	18.05	8.53E-04	4.28E-04	6.83E-04	7.09E-05	5.12E-04	2.16E-04	1.68E-03	0.084	0.69	0.096	6.9
PW Ctrl-E_0830	8/30/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	5.2	3.2	10	18.05	7.06E-04	3.53E-04	6.05E-04	5.27E-05	5.06E-04	1.75E-04	1.68E-03	0.011	0.43	0.075	22.3
PW Ctrl-E_0906	9/6/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	4.4	2.4	10	18.05	6.41E-04	3.43E-04	6.00E-04	4.83E-05	5.15E-04	1.71E-04	1.68E-03	0.019	0.6	0.019	4.4
PW Ctrl-E_0913	9/13/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	4.9	3.0	10	18.05	6.94E-04	3.61E-04	5.92E-04	4.53E-05	5.26E-04	1.77E-04	1.68E-03	0.019	0.36	0.038	4.1
PW CTRL-E_0920	9/20/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	3.6	1.6	10	18.05	7.54E-04	3.85E-04	6.39E-04	4.96E-05	4.85E-04	1.75E-04	1.68E-03	0.024	0.24	0.101	2.7
SWI Ctrl-E_0726	7/26/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	2.2	1.5	10	16.25	2.99E-04	3.55E-04	5.79E-04	3.79E-05	5.04E-04	1.73E-04	9.85E-04	0.019	0.6	0.042	225
SWI Ctrl-E_0802	8/2/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	4.9	3.0	10	16.25	2.94E-04	3.25E-04	5.79E-04	3.86E-05	4.77E-04	1.87E-04	9.85E-04	0.005	4.97	0.023	11.1
SWI Ctrl-E_0809	8/9/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	4.3	2.3	10	16.25	3.32E-04	2.99E-04	5.92E-04	4.17E-05	4.75E-04	2.45E-04	9.85E-04	0.02	0.7	0.084	9.3
SWI Ctrl-E_0816	8/16/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	5.5	3.6	10	16.25	4.24E-04	3.25E-04	6.57E-04	5.17E-05	4.97E-04	1.99E-04	9.85E-04	0.029	1.23	0.101	5.1
SWI Ctrl-E_0823	8/23/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	6.9	5.0	10	16.25	4.22E-04	3.51E-04	6.48E-04	5.12E-05	5.07E-04	1.77E-04	9.85E-04	0.019	0.93	0.064	7
SWI Ctrl-E_0830	8/30/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	3.3	1.5	10	16.25	2.84E-04	3.25E-04	6.18E-04	4.35E-05	4.85E-04	1.62E-04	9.85E-04	0.043	0.79	0.097	14.2
SWI Ctrl-E_0906	9/6/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	3.1	1.5	10	16.25	3.24E-04	2.96E-04	5.57E-04	3.81E-05	5.17E-04	1.68E-04	9.85E-04	0.015	0.46	0.044	4
SWI Ctrl-E_0913	9/13/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	3.2	1.5	10	16.25	2.82E-04	3.26E-04	6.26E-04	4.37E-05	5.30E-04	1.61E-04	9.85E-04	0.014	0.55	0.088	9
SWI Ctrl-E_0920	9/20/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	2.5	1.5	10	16.25	3.47E-04	3.79E-04	7.00E-04	4.83E-05	5.73E-04	1.68E-04	9.85E-04	0.038	0.5	0.06	5.9
OW Ctrl-F_0723	7/23/2010	CTRL	F	Overlying Water	OverWater	7.7599	2.1	1.5	10	15.35	3.09E-04	3.52E-04	5.79E-04	3.99E-05	7.35E-04	1.68E-04	9.62E-04	0.008	0.38	0.034	3.6

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
OW Ctrl-F_0726	7/26/2010	CTRL	F	Overlying Water	OverWater	7.7599	2.0	1.5	10	15.35	2.99E-04	3.46E-04	5.66E-04	3.73E-05	4.73E-04	1.65E-04	9.62E-04	0.007	0.4	0.091	12.3
OW Ctrl-F_0802	8/2/2010	CTRL	F	Overlying Water	OverWater	7.7599	2.1	1.5	10	15.35	3.02E-04	3.27E-04	6.22E-04	4.27E-05	4.84E-04	1.89E-04	9.62E-04	0.015	0.42	0.047	174
OW Ctrl-F_0809	8/9/2010	CTRL	F	Overlying Water	OverWater	7.7599	6.5	4.6	10	15.35	3.74E-04	3.35E-04	6.57E-04	4.78E-05	4.99E-04	2.70E-04	9.62E-04	0.024	0.75	0.077	22
OW Ctrl-F_0816	8/16/2010	CTRL	F	Overlying Water	OverWater	7.7599	3.7	1.8	10	15.35	3.72E-04	3.16E-04	5.92E-04	4.25E-05	4.90E-04	1.80E-04	9.62E-04	0.009	1.07	0.073	13.2
OW Ctrl-F_0823	8/23/2010	CTRL	F	Overlying Water	OverWater	7.7599	3.3	1.5	10	15.35	3.39E-04	3.34E-04	6.22E-04	4.48E-05	5.20E-04	1.72E-04	9.62E-04	0.014	0.67	0.047	17.1
OW Ctrl-F_0830	8/30/2010	CTRL	F	Overlying Water	OverWater	7.7599	3.4	1.5	10	15.35	2.45E-04	2.74E-04	5.48E-04	3.96E-05	4.46E-04	1.39E-04	9.62E-04	0.005	0.59	0.038	8.5
OW Ctrl-F_0906	9/6/2010	CTRL	F	Overlying Water	OverWater	7.7599	3.2	1.5	10	15.35	2.62E-04	3.23E-04	6.00E-04	4.12E-05	5.31E-04	1.69E-04	9.62E-04	0.01	0.45	0.038	3.3
OW Ctrl-F_0913	9/13/2010	CTRL	F	Overlying Water	OverWater	7.7599	3.3	1.5	10	15.35	2.82E-04	3.33E-04	5.92E-04	4.14E-05	4.83E-04	1.56E-04	9.62E-04	0.022	0.74	0.048	5.5
OW Ctrl-F_0920	9/20/2010	CTRL	F	Overlying Water	OverWater	7.7599	4.7	2.7	10	15.35	4.09E-04	4.36E-04	8.00E-04	5.27E-05	7.16E-04	2.07E-04	9.62E-04	0.005	0.59	0.015	1.9
PW Ctrl-F_0723	7/23/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	9.8	7.9	10	18.45	5.71E-04	2.65E-04	5.79E-04	5.06E-05	4.71E-04	2.07E-04	1.26E-03	0.034	0.79	0.1	29.7
PW Ctrl-F_0726	7/26/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	8.4	6.5	10	18.45	5.07E-04	2.87E-04	6.53E-04	7.34E-05	4.83E-04	2.08E-04	1.26E-03	0.34	1.04	0.099	14.7
PW Ctrl-F_0802	8/2/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	5.1	3.2	10	18.45	5.76E-04	3.27E-04	6.00E-04	4.66E-05	4.82E-04	2.30E-04	1.26E-03	0.026	0.51	0.085	63
PW Ctrl-F_0809	8/9/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	6.9	5.0	10	18.45	8.43E-04	3.81E-04	6.31E-04	6.37E-05	4.99E-04	2.16E-04	1.26E-03	0.019	0.65	0.108	6.3
PW Ctrl-F_0816	8/16/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	6.4	4.5	10	18.45	6.99E-04	3.62E-04	6.26E-04	5.83E-05	4.89E-04	2.03E-04	1.26E-03	0.062	0.92	0.126	679
PW Ctrl-F_0823	8/23/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	4.4	2.5	10	18.45	6.41E-04	3.59E-04	6.31E-04	4.55E-05	5.10E-04	1.87E-04	1.26E-03	0.27	0.82	0.116	285
PW Ctrl-F_0830	8/30/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	6.3	4.4	10	18.45	6.96E-04	3.55E-04	6.18E-04	5.14E-05	6.51E-04	1.82E-04	1.26E-03	0.035	0.61	0.095	17.3
PW Ctrl-F_0906	9/6/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	7.8	5.9	10	18.45	7.54E-04	3.87E-04	6.31E-04	5.45E-05	4.77E-04	1.72E-04	1.26E-03	0.006	0.35	0.095	2.8
PW Ctrl-F_0913	9/13/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	5.1	3.2	10	18.45	7.36E-04	3.70E-04	5.92E-04	4.43E-05	5.13E-04	2.46E-04	1.26E-03	0.019	0.34	1.35	12.9
PW Ctrl-F_0920	9/20/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	5.4	3.5	10	18.45	6.89E-04	3.83E-04	6.74E-04	4.96E-05	5.90E-04	1.86E-04	1.26E-03	0.044	0.39	0.111	5.7
SWI Ctrl-F_0726	7/26/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	2.3	1.5	10	16.55	3.09E-04	3.46E-04	5.79E-04	3.68E-05	4.68E-04	1.68E-04	1.01E-03	0.012	0.37	0.076	9.1
SWI Ctrl-F_0802	8/2/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	4.8	2.9	10	16.55	2.87E-04	3.25E-04	5.92E-04	4.17E-05	4.74E-04	1.95E-04	1.01E-03	0.014	0.39	0.038	20
SWI Ctrl-F_0809	8/9/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	3.2	1.5	10	16.55	4.57E-04	3.76E-04	6.35E-04	4.50E-05	4.98E-04	2.06E-04	1.01E-03	0.023	0.62	0.096	10.5
SWI Ctrl-F_0816	8/16/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	4.0	2.1	10	16.55	3.79E-04	3.19E-04	5.61E-04	4.09E-05	4.77E-04	1.74E-04	1.01E-03	0.016	1.05	0.067	13.6
SWI Ctrl-F_0823	8/23/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	2.7	1.5	10	16.55	3.52E-04	3.42E-04	6.44E-04	4.63E-05	5.07E-04	1.69E-04	1.01E-03	0.016	0.66	0.042	7
SWI Ctrl-F_0830	8/30/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	3.7	1.7	10	16.55	2.41E-04	2.69E-04	5.48E-04	3.89E-05	4.34E-04	1.37E-04	1.01E-03	0.007	0.64	0.037	9.2
SWI Ctrl-F_0906	9/6/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	4.1	2.2	10	16.55	2.48E-04	3.14E-04	6.00E-04	4.22E-05	5.09E-04	1.68E-04	1.01E-03	0.015	1.05	0.14	12.3
SWI Ctrl-F_0913	9/13/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	2.6	1.5	10	16.55	2.92E-04	3.25E-04	6.26E-04	4.43E-05	5.14E-04	1.57E-04	1.01E-03	0.018	0.45	0.052	6
SWI Ctrl-F_0920	9/20/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	2.6	1.5	10	16.55	4.39E-04	4.73E-04	8.48E-04	5.96E-05	7.04E-04	2.16E-04	1.01E-03	0.02	0.38	0.043	5
OW DE-A_0723	7/23/2010	DE	A	Overlying Water	OverWater	7.5506	1.8	1.5	10	15.25	2.80E-04	3.51E-04	5.70E-04	4.07E-05	4.76E-04	1.64E-04	9.43E-04	0.007	0.74	0.037	8
OW DE-A_0726	7/26/2010	DE	A	Overlying Water	OverWater	7.5506	2.6	1.5	10	15.25	9.38E-04	3.31E-04	6.44E-04	4.35E-05	4.95E-04	1.87E-04	9.43E-04	0.119	1.93	0.336	16
OW DE-A_0802	8/2/2010	DE	A	Overlying Water	OverWater	7.5506	4.0	2.1	10	15.25	2.92E-04	3.40E-04	6.35E-04	4.63E-05	4.92E-04	1.93E-04	9.43E-04	0.015	1.39	0.103	23.6
OW DE-A_0809	8/9/2010	DE	A	Overlying Water	OverWater	7.5506	3.2	1.5	10	15.25	3.02E-04	3.27E-04	6.31E-04	4.40E-05	5.04E-04	3.33E-04	9.43E-04	0.032	2.64	0.117	11.5
OW DE-A_0816	8/16/2010	DE	A	Overlying Water	OverWater	7.5506	3.1	1.5	10	15.25	2.75E-04	3.14E-04	5.92E-04	4.30E-05	4.65E-04	1.77E-04	9.43E-04	0.102	4.15	0.196	52.8
OW DE-A_0823	8/23/2010	DE	A	Overlying Water	OverWater	7.5506	2.5	1.5	10	15.25	2.65E-04	3.03E-04	5.66E-04	3.96E-05	5.03E-04	1.53E-04	9.43E-04	0.022	2.53	0.096	11.6
OW De-A_0830	8/30/2010	DE	A	Overlying Water	OverWater	7.5506	3.1	1.5	10	15.25	2.75E-04	3.27E-04	6.35E-04	4.71E-05	5.31E-04	1.67E-04	9.43E-04	0.035	3.86	0.084	18.7
OW DE-A_0906	9/6/2010	DE	A	Overlying Water	OverWater	7.5506	2.1	1.5	10	15.25	2.65E-04	3.44E-04	6.26E-04	4.45E-05	5.25E-04	1.70E-04	9.43E-04	0.016	1.26	0.033	8.9
OW DE-A_0913	9/13/2010	DE	A	Overlying Water	OverWater	7.5506	2.6	1.5	10	15.25	2.65E-04	3.42E-04	6.05E-04	4.40E-05	5.29E-04	1.68E-04	9.43E-04	0.029	1.91	0.061	6.9
OW DE-A_0913_2	9/13/2010	DE	A	Overlying Water	OverWater	7.5506	3.8	1.8	10	15.25	2.60E-04	3.37E-04	6.31E-04	4.35E-05	5.40E-04	1.65E-04	9.43E-04	0.019	1.75	0.043	7.5
OW DE-A_0920	9/20/2010	DE	A	Overlying Water	OverWater	7.5506	4.1	2.2	10	15.25	2.82E-04	3.32E-04	7.31E-04	4.91E-05	5.87E-04	2.11E-04	9.43E-04	0.044	1.85	0.085	54.2
PW DE-A_0723	7/23/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	19.6	17.7	10	18.65	1.23E-03	3.69E-04	6.61E-04	1.49E-04	9.20E-04	3.64E-04	2.64E-03	0.355	30.9	0.298	37.8
PW DE-A_0726	7/26/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	7.4	5.5	10	18.65	1.21E-03	3.97E-04	6.48E-04	1.00E-04	8.46E-04	2.65E-04	2.64E-03	0.298	22.9	0.741	37.7
PW DE-A_0802	8/2/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	9.4	7.5	10	18.65	1.25E-03	3.99E-04	6.35E-04	1.03E-04	8.12E-04	6.32E-04	2.64E-03	0.623	26.7	0.314	467
PW DE-A_0809	8/9/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	9.5	7.5	10	18.65	1.29E-03	4.20E-04	6.48E-04	1.03E-04	5.28E-04	2.62E-04	2.64E-03	0.36	46.1	0.314	28.1
PW DE-A_0816	8/16/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	12.7	10.8	10	18.65	1.15E-03	3.77E-04	6.09E-04	8.75E-05	6.32E-05	2.62E-04	2.64E-03	1.18	153	60.2	301
PW DE-A_0823	8/23/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	10.7	8.8	10	18.65	1.14E-03	3.62E-04	6.92E-04	9.36E-05	6.43E-04	2.26E-04	2.64E-03	0.405	33	0.782	16.1
PW DE-A_0830	8/30/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	8.5	6.6	10	18.65	9.11E-04	3.09E-04	7.05E-04	8.31E-05	6.12E-04	2.05E-04	2.64E-03	0.15	66.6	1.86	19.2
PW DE-A_0906	9/6/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	10.2	8.3	10	18.65	8.18E-04	2.42E-04	7.26E-04	8.82E-05	5.28E-04	1.93E-04	2.64E-03	0.081	86	0.988	4.9
PW DE-A_0913	9/13/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	10.2	8.3	10	18.65	8.18E-04	1.92E-04	8.13E-04	1.04E-04	6.43E-04	2.45E-04	2.64E-03	0.144	114	1.42	7.9
PW DE-A_0920	9/20/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	8.5	6.6	10	18.65	7.66E-04	1.45E-04	7.74E-04	9.59E-05	6.04E-04	1.86E-04	2.64E-03	0.091	102	1.63	4
SWI DE-A_0726	7/26/2010	DE	A	Sediment-Water Interface	SWI	7.6156	2.5	1.5	10	16.25	2.75E-04	3.39E-04	5.57E-04	3.40E-05	4.74E-04	1.68E-04	9.03E-04	0.011	1.15	0.041	8.9
SWI DE-A_0802	8/2/2010	DE	A	Sediment-Water Interface	SWI	7.6156	3.9	2.0	10	16.25	2.80E-04	3.21E-04	6.00E-04	4.02E-05	4.81E-04	1.96E-04	9.03E-04	0.011	1.23	0.071	10.4
SWI DE-A_0809	8/9/2010	DE	A	Sediment-Water Interface	SWI	7.6156	3.5	1.6	10	16.25	3.04E-04	3.31E-04	6.35E-04	4.43E-05	5.00E-04	2.03E-04	9.03E-04	0.024	2.52	0.09	8.4
SWI DE-A_0816	8/16/2010	DE	A	Sediment-Water Interface	SWI	7.6156	4.8	2.9	10	16.25	2.87E-04	3.23E-04	5.66E-04	4.20E-05	4.58E-04	1.67E-04	9.03E-04	0.048	5.03	0.194	17.8
SWI De-A_0823	8/23/2010	DE	A	Sediment-Water Interface	SWI	7.6156	3.3	1.5	10	16.25	2.75E-04	3.19E-04	5.87E-04	4.32E-05	4.25E-04	1.53E-04	9.03E-04	0.03	2.84	0.126	11.9
SWI DE-A_0830	8/30/2010	DE	A	Sediment-Water Interface	SWI	7.6156	3.4	1.5	10	16.25	2.77E-04	3.33E-04	6.39E-04	4.86E-05	4.90E-04	1.62E-04	9.03E-04	0.044	3.31	0.106	17.8
SWI DE-A_0906	9/6/2010	DE	A	Sediment-Water Interface	SWI	7.6156	16.2	14.3	10	16.25	2.39E-04	3.20E-04	6.00E-04	4.25E-05	5.16E-04	1.66E-04	9.03E-04	0.021	1.3	0.094	15.5

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
SWI DE-A_0913	9/13/2010	DE	A	Sediment-Water Interface	SWI	7.6156	3.0	1.5	10	16.25	2.75E-04	3.50E-04	6.26E-04	4.55E-05	5.22E-04	1.72E-04	9.03E-04	0.036	2.04	0.067	10.3
SWI DE-A_0913_2	9/13/2010	DE	A	Sediment-Water Interface	SWI	7.6156	2.6	1.5	10	16.25	2.57E-04	3.34E-04	6.09E-04	4.25E-05	5.44E-04	1.65E-04	9.03E-04	0.017	1.74	0.038	5.5
SWI DE-A_0920	9/20/2010	DE	A	Sediment-Water Interface	SWI	7.6156	2.6	1.5	10	16.25	3.22E-04	3.78E-04	6.87E-04	4.99E-05	5.82E-04	1.77E-04	9.03E-04	0.027	1.95	0.065	6.6
OW DE-B_0723	7/23/2010	DE	B	Overlying Water	OverWater	7.7519	2.2	1.5	10	15.25	2.97E-04	3.53E-04	5.74E-04	4.04E-05	4.73E-04	1.68E-04	8.84E-04	0.016	1.16	0.057	12.3
OW DE-B_0726	7/26/2010	DE	B	Overlying Water	OverWater	7.7519	1.5	1.5	10	15.25	2.72E-04	3.35E-04	5.52E-04	3.66E-05	4.75E-04	1.67E-04	8.84E-04	0.019	1.41	0.385	15.8
OW DE-B_0802	8/2/2010	DE	B	Overlying Water	OverWater	7.7519	3.4	1.5	10	15.25	2.84E-04	3.31E-04	6.35E-04	4.37E-05	4.72E-04	1.90E-04	8.84E-04	0.014	0.98	0.061	20.4
OW DE-B_0809	8/9/2010	DE	B	Overlying Water	OverWater	7.7519	21.1	19.2	10	15.25	3.12E-04	3.35E-04	6.31E-04	4.53E-05	5.27E-04	2.05E-04	8.84E-04	0.05	6.08	0.251	15.3
OW DE-B_0816	8/16/2010	DE	B	Overlying Water	OverWater	7.7519	3.4	1.5	10	15.25	2.89E-04	3.16E-04	5.92E-04	4.27E-05	5.13E-04	1.76E-04	8.84E-04	0.091	7.2	0.346	32.9
OW DE-B_0823	8/23/2010	DE	B	Overlying Water	OverWater	7.7519	3.3	1.5	10	15.25	2.87E-04	3.34E-04	6.13E-04	4.58E-05	4.73E-04	1.66E-04	8.84E-04	0.044	5.04	0.143	21.8
OW DE-B_0830	8/30/2010	DE	B	Overlying Water	OverWater	7.7519	2.4	1.5	10	15.25	2.13E-04	2.75E-04	5.61E-04	4.07E-05	4.20E-04	1.35E-04	8.84E-04	0.037	2.83	0.118	13.7
OW DE-B_0906	9/6/2010	DE	B	Overlying Water	OverWater	7.7519	4.4	2.5	10	15.25	2.49E-04	3.28E-04	6.05E-04	4.17E-05	5.32E-04	1.72E-04	8.84E-04	0.019	1.31	0.05	7.1
OW DE-B_0913	9/13/2010	DE	B	Overlying Water	OverWater	7.7519	3.4	1.5	10	15.25	2.47E-04	3.20E-04	5.83E-04	4.12E-05	5.37E-04	1.59E-04	8.84E-04	0.014	1.24	0.03	3.8
OW DE-B_0920	9/20/2010	DE	B	Overlying Water	OverWater	7.7519	4.3	2.3	10	15.25	3.99E-04	4.49E-04	8.13E-04	5.81E-05	6.94E-04	2.10E-04	8.84E-04	0.027	1.43	0.056	6.5
DE-B INF SED	8/1/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	7.41E-04	5.06E-04	1.33E-04	6.32E-06	6.30E-04	2.29E-04	2.38E-03	0.452	25.5	1.29	184
DE-B MID SED	8/1/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	8.31E-04	5.97E-04	1.38E-04	5.12E-06	6.30E-04	2.29E-04	2.38E-03	0.432	23.3	1.28	157
DE-B OUF SED	8/1/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	9.31E-04	6.62E-04	1.79E-04	1.16E-05	6.30E-04	2.29E-04	2.38E-03	0.632	29.3	1.61	185
DE-B PPR 1 SED_0801	8/1/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	5.07E-04	2.83E-04	5.22E-04	5.81E-05	6.30E-04	2.29E-04	2.38E-03	0.1	3.31	0.392	12.3
DE-B PPR 2 SED_0801	8/1/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	4.62E-04	4.01E-04	5.48E-04	5.65E-05	6.30E-04	2.29E-04	2.38E-03	0.1	4.45	0.318	11.1
DE-B PPR 3 SED_0801	8/1/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	3.52E-04	2.71E-04	5.09E-04	4.30E-05	6.30E-04	2.29E-04	2.38E-03	0.1	2.92	0.294	8.7
DE-B INF SED_0820	8/20/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	8.76E-05	3.81E-05	5.48E-05	8.72E-06	6.30E-04	2.29E-04	2.38E-03	0.0735	1.85	0.0576	17.8
DE-B MID SED_0820	8/20/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	1.09E-04	4.73E-05	7.70E-05	5.12E-06	6.30E-04	2.29E-04	2.38E-03	0.0961	4.59	0.0485	24.5
DE-B OUF SED_0820	8/20/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	8.63E-05	3.84E-05	6.92E-05	9.69E-06	6.30E-04	2.29E-04	2.38E-03	0.0944	3.25	0.0449	22.3
DE-B PPR 1 SED_0820	8/20/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	7.81E-04	3.45E-04	5.83E-04	6.14E-05	6.30E-04	2.29E-04	2.38E-03	0.1	17.1	0.174	4.3
DE-B PPR 2 SED_0820	8/20/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	5.24E-04	3.19E-04	5.57E-04	4.78E-05	6.30E-04	2.29E-04	2.38E-03	0.128	14.5	0.168	7.6
DE-B PPR 3 SED_0820	8/20/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	3.22E-04	3.53E-04	5.61E-04	5.22E-05	6.30E-04	2.29E-04	2.38E-03	0.448	26.9	0.208	42.8
DE-B INF SED_0919	9/19/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	8.21E-05	4.65E-05	2.51E-04	6.39E-06	6.30E-04	2.29E-04	2.38E-03	0.0609	9.02	0.0353	21.4
DE-B MID SED_0919	9/19/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	9.56E-05	5.43E-05	2.25E-04	6.39E-06	6.30E-04	2.29E-04	2.38E-03	0.0683	4.59	0.0335	23
DE-B OUF SED_0919	9/19/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	8.11E-05	4.53E-05	1.72E-04	6.39E-06	6.30E-04	2.29E-04	2.38E-03	0.0606	4.28	0.0362	22.3
DE-B PPR 1 SED_0919	9/19/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	3.99E-04	3.56E-04	6.09E-04	5.35E-05	6.30E-04	2.29E-04	2.38E-03	0.1	7.33	0.146	33.9
DE-B PPR 2 SED_0919	9/19/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	6.06E-04	3.33E-04	5.83E-04	5.12E-05	6.30E-04	2.29E-04	2.38E-03	0.106	7.04	0.36	23.4
DE-B PPR 3 SED_0919	9/19/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	3.09E-04	3.42E-04	6.22E-04	5.29E-05	6.30E-04	2.29E-04	2.38E-03	0.1	0.87	0.1	4
PW DE-B_0723	7/23/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	11.8	9.9	10	18.15	1.15E-03	4.20E-04	7.79E-04	1.08E-04	8.01E-04	3.55E-04	2.38E-03	0.282	22.8	0.271	49.1
PW DE-B_0726	7/26/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	13.6	11.7	10	18.15	9.98E-04	3.59E-04	6.96E-04	1.03E-04	7.66E-04	2.75E-04	2.38E-03	0.288	22.4	1.85	46.6
PW DE-B_0802	8/2/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	7.1	5.2	10	18.15	9.93E-04	3.54E-04	5.92E-04	8.49E-05	6.45E-04	2.16E-04	2.38E-03	0.376	18.7	0.345	119
PW DE-B_0809	8/9/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	6.6	4.7	10	18.15	9.66E-04	3.53E-04	5.96E-04	7.67E-05	4.92E-04	2.34E-04	2.38E-03	0.328	20.2	0.53	28.9
PW DE-B_0816	8/16/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	7.0	5.1	10	18.15	8.71E-04	3.74E-04	5.74E-04	6.93E-05	5.83E-04	2.25E-04	2.38E-03	2.27	294	156	758
PW DE-B_0823	8/23/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	4.8	2.9	10	18.15	7.51E-04	3.49E-04	6.26E-04	6.83E-05	5.72E-04	1.80E-04	2.38E-03	0.253	15.6	0.571	31
PW DE-B_0830	8/30/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	6.4	4.5	10	18.15	7.16E-04	3.50E-04	5.74E-04	6.16E-05	5.57E-04	1.98E-04	2.38E-03	0.217	16	0.366	36.5
PW DE-B_0906	9/6/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	5.5	3.5	10	18.15	7.19E-04	3.77E-04	6.26E-04	6.27E-05	5.28E-04	1.81E-04	2.38E-03	0.063	10.3	0.179	7.4
PW DE-B_0913	9/13/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	4.5	2.6	10	18.15	6.96E-04	3.35E-04	6.35E-04	6.14E-05	7.62E-04	2.37E-04	2.38E-03	0.316	15.7	0.483	33.3
PW DE-B_0920	9/20/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	5.0	3.0	10	18.15	7.09E-04	3.37E-04	6.22E-04	5.76E-05	5.90E-04	1.87E-04	2.38E-03	0.097	9.97	0.084	8.6
SWI DE-B_0726	7/26/2010	DE	B	Sediment-Water Interface	SWI	7.4688	4.9	2.9	10	16.45	2.87E-04	3.18E-04	5.48E-04	3.84E-05	4.72E-04	1.66E-04	8.41E-04	0.02	1.29	0.054	7
DE-B inflow H2O	8/1/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	6.84E-04	3.65E-04	7.83E-05	7.14E-06	5.02E-04	1.77E-04	8.41E-04	0.126	8.3	1.36	56.3
DE-B middle H2O	8/1/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	7.74E-04	4.44E-04	7.09E-05	5.12E-06	5.02E-04	1.77E-04	8.41E-04	0.122	5.86	1.13	45.4
DE-B outflow H2O	8/1/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	8.48E-04	5.23E-04	8.35E-05	5.12E-06	5.02E-04	1.77E-04	8.41E-04	0.166	7.27	1.26	67.7
DE-B PPR 1 H2O_0801	8/1/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	2.23E-04	3.06E-04	5.22E-04	3.71E-05	5.02E-04	1.77E-04	8.41E-04	0.1	0.4	0.314	4.1
DE-B PPR 2 H2O_0801	8/1/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	2.12E-04	3.05E-04	5.13E-04	3.94E-05	5.02E-04	1.77E-04	8.41E-04	0.1	0.4	0.51	4
DE-B PPR 3 H2O_0801	8/1/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	2.28E-04	3.20E-04	5.31E-04	4.02E-05	5.02E-04	1.77E-04	8.41E-04	0.1	0.4	0.41	4
SWI DE-B_0802	8/2/2010	DE	B	Sediment-Water Interface	SWI	7.4688	3.3	1.5	10	16.45	2.75E-04	3.18E-04	5.66E-04	3.81E-05	4.77E-04	2.25E-04	8.41E-04	0.016	1.33	0.103	27.4
SWI DE-B_0809	8/9/2010	DE	B	Sediment-Water Interface	SWI	7.4688	4.0	2.1	10	16.45	3.62E-04	3.39E-04	6.39E-04	4.55E-05	5.07E-04	2.06E-04	8.41E-04	0.073	6.02	0.255	26.2
SWI DE-B_0816	8/16/2010	DE	B	Sediment-Water Interface	SWI	7.4688	2.7	1.5	10	16.45	2.99E-04	3.34E-04	6.09E-04	4.53E-05	4.78E-04	1.69E-04	8.41E-04	0.093	7.04	0.323	23.3
DE-B INF H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	9.83E-05	3.99E-05	7.13E-05	7.52E-06	5.02E-04	1.77E-04	8.41E-04	0.147	14.8	0.0602	37.4
DE-B MID H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	1.02E-04	3.68E-05	9.35E-05	5.37E-06	5.02E-04	1.77E-04	8.41E-04	0.236	33.9	0.124	45.1
DE-B OUF H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	8.68E-05	2.93E-05	8.00E-05	8.59E-06	5.02E-04	1.77E-04	8.41E-04	0.25	21.5	0.0842	32.3
DE-B PPR 1 H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	2.57E-04	3.14E-04	5.44E-04	4.50E-05	5.02E-04	1.77E-04	8.41E-04	0.1	2.14	0.418	18.1
DE-B PPR 2 H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	2.48E-04	3.16E-04	5.61E-04	4.35E-05	5.02E-04	1.77E-04	8.41E-04	0.1	1.57	0.254	16.7

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
DE-B PPR 3 H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	2.52E-04	3.18E-04	5.57E-04	3.50E-05	5.02E-04	1.77E-04	8.41E-04	0.11	2.06	0.178	15.4
SWI DE-B_0823	8/23/2010	DE	B	Sediment-Water Interface	SWI	7.4688	3.9	2.0	10	16.45	2.87E-04	3.28E-04	6.53E-04	4.71E-05	4.75E-04	1.66E-04	8.41E-04	0.049	5.37	0.144	16
SWI DE-B_0830	8/30/2010	DE	B	Sediment-Water Interface	SWI	7.4688	3.1	1.5	10	16.45	2.08E-04	2.69E-04	5.57E-04	3.96E-05	4.21E-04	1.35E-04	8.41E-04	0.019	2.28	0.073	8.7
SWI DE-B_0906	9/6/2010	DE	B	Sediment-Water Interface	SWI	7.4688	4.3	2.3	10	16.45	2.45E-04	3.22E-04	5.96E-04	4.14E-05	5.14E-04	1.73E-04	8.41E-04	0.036	1.4	0.07	6.6
SWI DE-B_0913	9/13/2010	DE	B	Sediment-Water Interface	SWI	7.4688	2.1	1.5	10	16.45	2.43E-04	3.07E-04	5.96E-04	4.20E-05	5.07E-04	1.58E-04	8.41E-04	0.025	1.35	0.046	8.2
DE-B INF H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	1.10E-04	4.81E-05	1.22E-04	6.39E-06	5.02E-04	1.77E-04	8.41E-04	0.0318	1.86	0.0236	12.6
DE-B MID H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	1.46E-04	6.83E-05	1.28E-04	6.39E-06	5.02E-04	1.77E-04	8.41E-04	0.0385	2.04	0.022	14.6
DE-B OUF H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	1.75E-04	7.74E-05	1.55E-04	6.39E-06	5.02E-04	1.77E-04	8.41E-04	0.0475	2.46	0.0273	16.9
DE-B PPR 1 H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	2.89E-04	3.34E-04	6.05E-04	4.99E-05	5.02E-04	1.77E-04	8.41E-04	0.1	0.87	0.136	35.6
De-B PPR 2 H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	3.07E-04	3.49E-04	6.79E-04	4.45E-05	5.02E-04	1.77E-04	8.41E-04	0.1	0.81	0.168	4
DE-B PPR 3 H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	4.79E-04	3.39E-04	6.05E-04	5.78E-05	5.02E-04	1.77E-04	8.41E-04	0.1	10	0.148	10.1
SWI DE-B_0920	9/20/2010	DE	B	Sediment-Water Interface	SWI	7.4688	2.9	1.5	10	16.45	3.64E-04	4.10E-04	7.61E-04	5.24E-05	6.98E-04	2.05E-04	8.41E-04	0.064	1.5	0.063	15.1
OW DE-C_0723	7/23/2010	DE	C	Overlying Water	OverWater	7.7161	1.5	1.5	10	15.25	3.02E-04	3.57E-04	5.87E-04	4.22E-05	4.75E-04	1.71E-04	8.93E-04	0.013	1.27	0.058	6.7
OW DE-C_0726	7/26/2010	DE	C	Overlying Water	OverWater	7.7161	2.5	1.5	10	15.25	2.80E-04	3.45E-04	5.70E-04	3.76E-05	4.81E-04	1.68E-04	8.93E-04	0.031	1.83	2.32	6.9
OW DE-C_0726_2	7/26/2010	DE	C	Overlying Water	OverWater	7.7161	2.0	1.5	10	15.25	2.89E-04	3.51E-04	5.83E-04	3.81E-05	4.72E-04	1.64E-04	8.93E-04	0.023	1.87	0.186	8.5
OW DE-C_0802	8/2/2010	DE	C	Overlying Water	OverWater	7.7161	3.5	1.5	10	15.25	2.80E-04	3.26E-04	6.13E-04	4.27E-05	4.77E-04	1.96E-04	8.93E-04	0.029	1.87	0.123	22.6
OW DE-C_0809	8/9/2010	DE	C	Overlying Water	OverWater	7.7161	4.9	2.9	10	15.25	3.12E-04	3.34E-04	6.70E-04	4.94E-05	5.05E-04	2.20E-04	8.93E-04	0.036	5.74	0.277	12.4
OW DE-C_0816	8/16/2010	DE	C	Overlying Water	OverWater	7.7161	4.5	2.5	10	15.25	2.99E-04	3.25E-04	6.35E-04	4.63E-05	4.78E-04	1.76E-04	8.93E-04	0.026	7.14	0.317	16
OW DE-C_0823	8/23/2010	DE	C	Overlying Water	OverWater	7.7161	3.3	1.5	10	15.25	4.14E-04	2.92E-04	1.30E-03	4.63E-05	4.84E-04	1.71E-04	8.93E-04	0.456	7.03	0.4	158
OW DE-C_0830	8/30/2010	DE	C	Overlying Water	OverWater	7.7161	2.6	1.5	10	15.25	3.79E-03	3.21E-04	7.57E-04	4.43E-05	4.38E-04	1.46E-04	8.93E-04	1.33	5.4	0.529	46
OW DE-C_0906	9/6/2010	DE	C	Overlying Water	OverWater	7.7161	4.5	2.6	10	15.25	2.45E-04	3.23E-04	6.22E-04	4.37E-05	5.27E-04	1.66E-04	8.93E-04	0.023	1.87	0.121	7.5
OW DE-C_0913	9/13/2010	DE	C	Overlying Water	OverWater	7.7161	2.2	1.5	10	15.25	2.55E-04	3.23E-04	5.79E-04	4.14E-05	4.99E-04	1.57E-04	8.93E-04	0.015	1.65	0.079	4.7
OW DE-C_0920	9/20/2010	DE	C	Overlying Water	OverWater	7.7161	3.7	1.8	10	15.25	3.77E-04	4.28E-04	7.79E-04	5.40E-05	7.15E-04	2.07E-04	8.93E-04	0.022	1.99	0.074	18.6
PW DE-C_0723	7/23/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	6.8	4.9	10	17.85	1.00E-03	2.79E-04	5.61E-04	9.77E-05	6.37E-04	2.05E-04	2.42E-03	0.281	19.2	0.326	30.3
PW DE-C_0726	7/26/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	9.7	7.7	10	17.85	9.01E-04	2.79E-04	5.83E-04	8.39E-05	5.85E-04	2.04E-04	2.42E-03	0.342	20.8	2.58	31.9
PW DE-C_0802	8/2/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	6.3	4.3	10	17.85	9.06E-04	2.64E-04	5.83E-04	8.13E-05	5.63E-04	2.76E-04	2.42E-03	0.348	17.1	0.366	609
PW DE-C_0809	8/9/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	6.7	4.8	10	17.85	9.53E-04	2.92E-04	5.92E-04	7.80E-05	5.78E-04	2.15E-04	2.42E-03	0.342	28.7	0.237	34.2
PW DE-C_0816	8/16/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	7.5	5.5	10	17.85	7.74E-04	3.06E-04	5.87E-04	6.73E-05	5.30E-04	2.22E-04	2.42E-03	0.984	115	47.4	490
PW DE-C_0823	8/23/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	5.0	3.0	10	17.85	6.76E-04	3.12E-04	6.26E-04	6.01E-05	5.31E-04	1.90E-04	2.42E-03	0.211	13.9	0.388	28.5
PW DE-C_0830	8/30/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	42.4	40.5	10	17.85	6.39E-04	3.41E-04	6.31E-04	5.96E-05	5.12E-04	1.88E-04	2.42E-03	0.197	22.3	0.33	32.4
PW DE-C_0906	9/6/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	5.5	3.6	10	17.85	6.69E-04	3.32E-04	6.26E-04	5.99E-05	5.25E-04	1.80E-04	2.42E-03	0.067	14	0.161	4.8
PW DE-C_0913	9/13/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	4.3	2.3	10	17.85	6.94E-04	3.26E-04	6.96E-04	6.62E-05	5.41E-04	2.48E-04	2.42E-03	0.208	30.1	0.622	39.6
PW DE-C_0920	9/20/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	5.2	3.3	10	17.85	6.56E-04	2.93E-04	6.70E-04	5.81E-05	5.98E-04	1.75E-04	2.42E-03	0.129	26.8	0.419	7.7
SWI DE-C_0726	7/26/2010	DE	C	Sediment-Water Interface	SWI	7.4062	2.3	1.5	10	16.35	1.34E-03	3.69E-04	7.61E-04	5.22E-05	4.82E-04	1.68E-04	8.55E-04	0.516	3.22	1.89	43.1
SWI DE-C_0726_2	7/26/2010	DE	C	Sediment-Water Interface	SWI	7.4062	2.7	1.5	10	16.35	1.10E-03	5.51E-04	8.83E-04	5.76E-05	4.70E-04	1.69E-04	8.55E-04	0.082	3.51	0.348	47.5
SWI DE-C_0802	8/2/2010	DE	C	Sediment-Water Interface	SWI	7.4062	3.5	1.6	10	16.35	2.77E-04	3.23E-04	5.96E-04	4.04E-05	4.82E-04	1.93E-04	8.55E-04	0.019	1.71	0.123	19.7
SWI DE-C_0809	8/9/2010	DE	C	Sediment-Water Interface	SWI	7.4062	4.2	2.2	10	16.35	2.60E-04	3.01E-04	6.31E-04	4.27E-05	5.03E-04	2.10E-04	8.55E-04	0.043	4.91	0.253	16.3
SWI DE-C_0816	8/16/2010	DE	C	Sediment-Water Interface	SWI	7.4062	4.2	2.2	10	16.35	3.14E-04	3.37E-04	6.13E-04	4.63E-05	4.80E-04	1.70E-04	8.55E-04	0.065	7.87	0.33	20.3
SWI DE-C_0823	8/23/2010	DE	C	Sediment-Water Interface	SWI	7.4062	3.7	1.8	10	16.35	3.14E-04	3.42E-04	6.35E-04	4.63E-05	5.00E-04	1.68E-04	8.55E-04	0.047	4.7	0.148	21.2
SWI DE-C_0830	8/30/2010	DE	C	Sediment-Water Interface	SWI	7.4062	3.9	1.9	10	16.35	2.17E-04	2.72E-04	5.39E-04	3.86E-05	4.63E-04	1.41E-04	8.55E-04	0.026	2.98	0.148	23.6
SWI DE-C_0906	9/6/2010	DE	C	Sediment-Water Interface	SWI	7.4062	3.9	2.0	10	16.35	2.46E-04	3.26E-04	6.26E-04	4.27E-05	5.14E-04	1.68E-04	8.55E-04	0.036	1.86	0.124	17.1
SWI DE-C_0913	9/13/2010	DE	C	Sediment-Water Interface	SWI	7.4062	2.1	1.5	10	16.35	2.52E-04	3.14E-04	6.00E-04	4.25E-05	5.01E-04	1.56E-04	8.55E-04	0.02	1.74	0.081	7.5
SWI DE-C_0920	9/20/2010	DE	C	Sediment-Water Interface	SWI	7.4062	2.3	1.5	10	16.35	3.89E-04	4.49E-04	8.35E-04	5.81E-05	6.96E-04	2.09E-04	8.55E-04	0.036	2.04	0.114	8.1
OW GE-A_0723	7/23/2010	GE	A	Overlying Water	OverWater	7.7218	2.1	1.5	10	15.15	3.29E-04	3.42E-04	5.92E-04	4.25E-05	4.71E-04	1.65E-04	8.76E-04	0.012	0.53	0.046	10.7
OW GE-A_0726	7/26/2010	GE	A	Overlying Water	OverWater	7.7218	1.7	1.5	10	15.15	2.94E-04	3.51E-04	5.74E-04	3.79E-05	4.72E-04	1.67E-04	8.76E-04	0.006	0.33	0.033	2.3
OW GE-A_0802	8/2/2010	GE	A	Overlying Water	OverWater	7.7218	2.5	1.5	10	15.15	2.82E-04	3.28E-04	6.35E-04	4.27E-05	4.84E-04	1.92E-04	8.76E-04	0.011	0.52	0.054	66.5
OW GE-A_0809	8/9/2010	GE	A	Overlying Water	OverWater	7.7218	4.7	2.8	10	15.15	2.55E-04	2.91E-04	5.96E-04	4.35E-05	4.89E-04	2.01E-04	8.76E-04	0.023	0.7	0.075	4.4
OW GE-A_0816	8/16/2010	GE	A	Overlying Water	OverWater	7.7218	3.3	1.5	10	15.15	2.75E-04	3.10E-04	5.87E-04	4.37E-05	4.75E-04	1.72E-04	8.76E-04	0.015	0.66	0.06	9.9
OW Ge-A_0823	8/23/2010	GE	A	Overlying Water	OverWater	7.7218	3.9	2.0	10	15.15	2.72E-04	3.30E-04	6.00E-04	4.45E-05	4.99E-04	1.79E-04	8.76E-04	0.019	0.59	0.049	7.1
OW GE-A_0906	9/6/2010	GE	A	Overlying Water	OverWater	7.7218	3.6	1.6	10	15.15	2.67E-04	3.58E-04	6.61E-04	4.66E-05	5.88E-04	1.90E-04	8.76E-04	0.009	0.5	0.022	6
OW GE-A_0913	9/13/2010	GE	A	Overlying Water	OverWater	7.7218	3.6	1.7	10	15.15	2.38E-04	3.14E-04	5.66E-04	4.02E-05	5.25E-04	1.61E-04	8.76E-04	0.007	0.43	0.022	5.8
OW GE-A_0920	9/20/2010	GE	A	Overlying Water	OverWater	7.7218	2.1	1.5	10	15.15	2.89E-04	3.33E-04	6.87E-04	4.60E-05	5.79E-04	1.74E-04	8.76E-04	0.014	0.46	0.028	5.8
PW GE-A_0723	7/23/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	45.6	43.7	10	17.95	1.50E-03	5.27E-04	1.05E-03	3.99E-04	6.28E-04	1.92E-04	3.84E-03	0.021	1.02	0.668	13
PW GE-A_0726	7/26/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	37.9	36.0	10	17.95	1.66E-03	5.72E-04	9.87E-04	3.35E-04	5.10E-04	1.96E-04	3.84E-03	0.084	1.01	0.477	17.6
PW GE-A_0802	8/2/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	32.5	30.6	10	17.95	1.74E-03	5.80E-04	9.31E-04	3.33E-04	3.16E-04	2.48E-04	3.84E-03	0.015	0.86	0.326	112
PW GE-A_0809	8/9/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	29.7	27.8	10	17.95	1.52E-03	5.06E-04	8.18E-04	2.84E-04	1.56E-04	2.04E-04	3.84E-03	0.037	0.44	0.178	14.1

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
PW GE-A_0816	8/16/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	14.4	12.5	10	17.95	1.17E-03	3.74E-04	7.35E-04	2.36E-04	9.75E-05	2.10E-04	3.84E-03	0.033	0.35	0.148	24.9
PW GE-A_0823	8/23/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	11.0	9.1	10	17.95	7.16E-04	3.09E-04	7.22E-04	1.55E-04	2.47E-04	2.42E-04	3.84E-03	0.215	0.47	0.16	4.9
PW GE-A_0830	8/30/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	30.2	28.3	10	17.95	6.09E-04	2.90E-04	6.35E-04	1.27E-04	3.09E-04	2.02E-04	3.84E-03	0.028	0.59	0.18	23.2
PW GE-A_0906	9/6/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	8.3	6.4	10	17.95	6.16E-04	3.09E-04	6.66E-04	1.28E-04	1.79E-04	1.85E-04	3.84E-03	0.014	1.55	0.24	3.8
PW GE-A_0913	9/13/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	8.0	6.0	10	17.95	5.59E-04	2.88E-04	6.00E-04	1.07E-04	2.62E-04	1.94E-04	3.84E-03	0.022	0.53	0.337	9.3
PW GE-A_0920	9/20/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	6.1	4.2	10	17.95	4.97E-04	2.66E-04	6.39E-04	1.02E-04	2.51E-04	1.72E-04	3.84E-03	0.013	0.37	0.118	5.4
SWI GE-A_0726	7/26/2010	GE	A	Sediment-Water Interface	SWI	7.5225	2.1	1.5	10	16.55	2.92E-04	3.43E-04	5.74E-04	4.04E-05	4.79E-04	1.67E-04	8.50E-04	0.01	0.49	0.028	156
SWI GE-A_0802	8/2/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.9	2.0	10	16.55	2.70E-04	3.23E-04	5.66E-04	4.09E-05	4.87E-04	1.89E-04	8.50E-04	0.014	0.69	0.061	7.7
SWI GE-A_0809	8/9/2010	GE	A	Sediment-Water Interface	SWI	7.5225	5.6	3.7	10	16.55	2.87E-04	3.19E-04	6.39E-04	4.63E-05	4.83E-04	2.01E-04	8.50E-04	0.011	0.68	0.055	7.8
SWI GE-A_0816	8/16/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.8	1.8	10	16.55	2.77E-04	3.14E-04	5.79E-04	4.30E-05	4.56E-04	1.70E-04	8.50E-04	0.029	0.85	0.08	9.5
SWI GE-A_0823	8/23/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.3	1.5	10	16.55	2.92E-04	3.46E-04	6.48E-04	4.66E-05	5.18E-04	1.71E-04	8.50E-04	0.011	0.57	0.032	5.5
SWI GE-A_0830	8/30/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.4	1.5	10	16.55	2.94E-04	3.93E-04	7.48E-04	5.45E-05	5.88E-04	1.89E-04	8.50E-04	0.01	0.66	0.077	12.6
SWI GE-A_0906	9/6/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.7	1.8	10	16.55	2.62E-04	3.54E-04	6.66E-04	4.60E-05	5.51E-04	1.90E-04	8.50E-04	0.023	0.45	0.058	3
SWI GE-A_0913	9/13/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.0	1.5	10	16.55	2.46E-04	3.10E-04	5.83E-04	4.09E-05	5.01E-04	1.59E-04	8.50E-04	0.025	0.4	0.037	4
SWI GE-A_0920	9/20/2010	GE	A	Sediment-Water Interface	SWI	7.5225	5.3	3.4	10	16.55	2.99E-04	3.60E-04	6.61E-04	4.48E-05	5.77E-04	1.70E-04	8.50E-04	0.007	0.94	0.02	4.7
OW GE-B_0723	7/23/2010	GE	B	Overlying Water	OverWater	7.7196	1.9	1.5	10	14.95	1.50E-07	8.23E-08	7.09E-04	1.28E-06	4.64E-04	1.62E-04	9.24E-04	0.009	0.96	0.044	14.4
OW GE-B_0726	7/26/2010	GE	B	Overlying Water	OverWater	7.7196	2.4	1.5	10	14.95	2.99E-04	3.33E-04	5.48E-04	3.91E-05	4.75E-04	1.74E-04	9.24E-04	0.005	0.49	0.022	7.6
OW GE-B_0802	8/2/2010	GE	B	Overlying Water	OverWater	7.7196	2.8	1.5	10	14.95	2.82E-04	3.27E-04	6.26E-04	4.30E-05	5.04E-04	1.91E-04	9.24E-04	0.007	0.44	0.061	11.8
OW GE-B_0809	8/9/2010	GE	B	Overlying Water	OverWater	7.7196	4.1	2.1	10	14.95	2.86E-04	3.23E-04	6.20E-04	4.54E-05	4.97E-04	2.07E-04	9.24E-04	0.007	0.63	0.046	4.2
OW GE-B_0816	8/16/2010	GE	B	Overlying Water	OverWater	7.7196	4.7	2.8	10	14.95	2.77E-04	3.18E-04	6.35E-04	4.68E-05	4.87E-04	1.70E-04	9.24E-04	0.014	0.86	0.047	4.2
OW GE-B_0823	8/23/2010	GE	B	Overlying Water	OverWater	7.7196	2.7	1.5	10	14.95	3.24E-04	3.47E-04	6.70E-04	4.78E-05	5.14E-04	1.85E-04	9.24E-04	0.041	1.38	0.246	21.9
OW GE-B_0830	8/30/2010	GE	B	Overlying Water	OverWater	7.7196	3.4	1.5	10	14.95	2.94E-04	3.91E-04	7.40E-04	5.50E-05	6.08E-04	1.96E-04	9.24E-04	0.01	1.28	0.054	13.1
OW GE-B_0906	9/6/2010	GE	B	Overlying Water	OverWater	7.7196	2.8	1.5	10	14.95	2.67E-04	3.59E-04	6.66E-04	4.60E-05	6.15E-04	1.88E-04	9.24E-04	0.006	0.57	0.016	2.5
OW GE-B_0913	9/13/2010	GE	B	Overlying Water	OverWater	7.7196	3.2	1.5	10	14.95	2.45E-04	3.19E-04	5.79E-04	4.17E-05	5.19E-04	1.62E-04	9.24E-04	0.034	0.5	0.031	22.8
OW GE-B_0920	9/20/2010	GE	B	Overlying Water	OverWater	7.7196	4.3	2.3	10	14.95	3.12E-04	3.56E-04	6.53E-04	4.53E-05	5.99E-04	1.72E-04	9.24E-04	0.007	5.09	0.025	7
PW GE-B_0723	7/23/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	29.9	28.0	10	17.65	1.31E-03	4.90E-04	9.87E-04	3.22E-04	7.22E-04	2.77E-04	3.18E-03	0.188	3.02	4.72	46.3
PW GE-B_0726	7/26/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	32.1	30.2	10	17.65	1.48E-03	5.23E-04	9.79E-04	3.45E-04	5.78E-04	2.44E-04	3.18E-03	0.073	0.93	0.514	15.5
PW GE-B_0802	8/2/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	28.4	26.5	10	17.65	1.53E-03	5.23E-04	9.00E-04	3.02E-04	3.49E-04	2.34E-04	3.18E-03	0.008	0.46	0.293	78.7
PW GE-B_0809	8/9/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	22.3	20.4	10	17.65	1.25E-03	4.53E-04	7.79E-04	2.41E-04	2.19E-04	2.54E-04	3.18E-03	0.059	0.34	0.122	6.1
PW GE-B_0816	8/16/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	14.4	12.5	10	17.65	1.01E-03	3.74E-04	7.26E-04	1.92E-04	1.47E-04	2.22E-04	3.18E-03	0.102	0.35	0.135	26.2
PW GE-B_0823	8/23/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	12.9	11.0	10	17.65	9.88E-04	3.65E-04	7.22E-04	1.83E-04	1.56E-04	2.34E-04	3.18E-03	0.646	0.28	0.042	5.6
PW GE-B_0830	8/30/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	12.3	10.4	10	17.65	8.68E-04	3.46E-04	6.83E-04	1.53E-04	1.30E-04	2.28E-04	3.18E-03	0.022	0.3	0.101	17.7
PW GE-B_0906	9/6/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	11.3	9.4	10	17.65	7.94E-04	3.23E-04	6.70E-04	1.44E-04	1.06E-04	1.92E-04	3.18E-03	0.012	0.17	0.055	3
PW GE-B_0913	9/13/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	8.3	6.4	10	17.65	8.16E-04	3.18E-04	7.44E-04	1.31E-04	1.89E-04	2.18E-04	3.18E-03	0.281	1	0.441	116
PW GE-B_0920	9/20/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	7.4	5.5	10	17.65	6.34E-04	2.93E-04	6.39E-04	1.16E-04	1.59E-04	1.85E-04	3.18E-03	0.026	0.26	0.078	3.9
SWI GE-B_0726	7/26/2010	GE	B	Sediment-Water Interface	SWI	7.54	2.2	1.5	10	16.15	2.94E-04	3.49E-04	5.83E-04	4.17E-05	4.80E-04	1.68E-04	9.10E-04	0.008	1.02	0.023	118
SWI GE-B_0802	8/2/2010	GE	B	Sediment-Water Interface	SWI	7.54	3.2	1.5	10	16.15	2.84E-04	3.25E-04	6.00E-04	4.12E-05	4.93E-04	1.94E-04	9.10E-04	0.005	0.37	0.022	14.3
SWI GE-B_0809	8/9/2010	GE	B	Sediment-Water Interface	SWI	7.54	4.6	2.7	10	16.15	2.89E-04	3.25E-04	6.13E-04	4.55E-05	4.91E-04	2.05E-04	9.10E-04	0.005	0.52	0.042	6.8
SWI GE-B_0816	8/16/2010	GE	B	Sediment-Water Interface	SWI	7.54	4.6	2.7	10	16.15	2.84E-04	3.21E-04	5.61E-04	4.22E-05	4.70E-04	1.71E-04	9.10E-04	0.013	0.77	0.039	5.2
SWI GE-B_0823	8/23/2010	GE	B	Sediment-Water Interface	SWI	7.54	3.4	1.5	10	16.15	2.72E-04	3.25E-04	6.39E-04	4.66E-05	4.88E-04	1.86E-04	9.10E-04	0.014	0.77	0.036	7.8
SWI GE-B_0830	8/30/2010	GE	B	Sediment-Water Interface	SWI	7.54	4.1	2.1	10	16.15	2.89E-04	3.73E-04	7.00E-04	5.27E-05	5.57E-04	1.95E-04	9.10E-04	0.017	0.76	0.086	14.5
SWI GE-B_0906	9/6/2010	GE	B	Sediment-Water Interface	SWI	7.54	3.5	1.6	10	16.15	2.65E-04	3.73E-04	6.79E-04	4.76E-05	5.70E-04	1.92E-04	9.10E-04	0.011	0.55	0.022	5.7
SWI GE-B_0913	9/13/2010	GE	B	Sediment-Water Interface	SWI	7.54	3.0	1.5	10	16.15	2.44E-04	3.09E-04	5.92E-04	4.32E-05	5.13E-04	1.61E-04	9.10E-04	0.019	0.44	0.035	10.5
SWI GE-B_0920	9/20/2010	GE	B	Sediment-Water Interface	SWI	7.54	4.4	2.4	10	16.15	3.14E-04	3.50E-04	6.53E-04	4.50E-05	6.04E-04	1.76E-04	9.10E-04	0.013	0.45	0.037	9.9
OW GE-C_0723	7/23/2010	GE	C	Overlying Water	OverWater	7.726	1.6	1.5	10	15.05	2.97E-04	3.50E-04	5.79E-04	4.04E-05	4.71E-04	1.64E-04	8.82E-04	0.012	0.49	0.033	3.9
OW GE-C_0726	7/26/2010	GE	C	Overlying Water	OverWater	7.726	1.9	1.5	10	15.05	3.06E-04	3.60E-04	6.13E-04	3.90E-05	4.75E-04	1.71E-04	8.82E-04	0.013	0.53	0.07	10.8
OW GE-C_0802	8/2/2010	GE	C	Overlying Water	OverWater	7.726	2.9	1.5	10	15.05	2.80E-04	3.28E-04	6.13E-04	4.20E-05	4.85E-04	1.95E-04	8.82E-04	0.012	0.64	0.069	105
OW GE-C_0809	8/9/2010	GE	C	Overlying Water	OverWater	7.726	4.7	2.8	10	15.05	2.65E-04	3.05E-04	6.09E-04	4.22E-05	4.88E-04	1.97E-04	8.82E-04	0.018	0.95	0.085	6.1
OW GE-C_0816	8/16/2010	GE	C	Overlying Water	OverWater	7.726	3.4	1.5	10	15.05	2.94E-04	3.40E-04	6.09E-04	4.48E-05	4.77E-04	1.78E-04	8.82E-04	0.009	0.77	0.058	5
OW GE-C_0823	8/23/2010	GE	C	Overlying Water	OverWater	7.726	2.8	1.5	10	15.05	2.70E-04	3.28E-04	6.22E-04	4.43E-05	4.97E-04	3.10E-04	8.82E-04	0.006	0.95	0.024	8.5
OW GE-C_0830	8/30/2010	GE	C	Overlying Water	OverWater	7.726	3.8	1.9	10	15.05	2.41E-04	3.12E-04	6.13E-04	4.50E-05	4.65E-04	1.54E-04	8.82E-04	0.174	0.7	0.056	9.3
OW GE-C_0906	9/6/2010	GE	C	Overlying Water	OverWater	7.726	2.3	1.5	10	15.05	2.39E-04	3.20E-04	5.96E-04	4.14E-05	5.27E-04	1.69E-04	8.82E-04	0.007	0.6	0.025	2.1
OW GE-C_0913	9/13/2010	GE	C	Overlying Water	OverWater	7.726	3.8	1.9	10	15.05	2.80E-04	3.63E-04	6.44E-04	4.63E-05	5.74E-04	1.90E-04	8.82E-04	0.016	0.44	0.024	7.3
OW GE-C_0920	9/20/2010	GE	C	Overlying Water	OverWater	7.726	3.6	1.6	10	15.05	3.64E-04	4.16E-04	7.61E-04	5.40E-05	6.23E-04	1.89E-04	8.82E-04	0.105	0.5	0.155	6.4
PW GE-C_0723	7/23/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	32.5	30.6	10	17.75	1.56E-03	5.47E-04	1.01E-03	3.66E-04	5.08E-04	1.75E-04	3.30E-03	0.102	1.15	0.946	19.7
PW GE-C_0726	7/26/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	36.1	34.2	10	17.75	1.41E-03	5.02E-04	9.87E-04	3.61E-04	6.65E-04	1.63E-04	3.30E-03	0.175	2.7	1.95	29.1

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
PW GE-C_0802	8/2/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	36.8	34.9	10	17.75	1.74E-03	5.84E-04	9.48E-04	3.35E-04	2.87E-04	2.70E-04	3.30E-03	0.016	0.81	0.475	71.4
PW GE-C_0809	8/9/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	26.6	24.7	10	17.75	1.63E-03	5.39E-04	8.79E-04	3.10E-04	1.22E-04	1.94E-04	3.30E-03	0.024	0.52	0.182	8.7
PW GE-C_0816	8/16/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	14.7	12.8	10	17.75	1.10E-03	3.58E-04	7.61E-04	2.21E-04	1.45E-04	2.06E-04	3.30E-03	0.161	0.49	0.253	222
PW GE-C_0823	8/23/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	11.9	10.0	10	17.75	9.58E-04	3.41E-04	7.48E-04	1.90E-04	1.82E-04	2.03E-04	3.30E-03	0.126	0.34	0.073	10.9
PW GE-C_0830	8/30/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	9.3	7.4	10	17.75	8.11E-04	3.37E-04	6.92E-04	1.57E-04	2.08E-04	1.92E-04	3.30E-03	0.018	0.44	0.084	22.6
PW GE-C_0906	9/6/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	10.7	8.8	10	17.75	8.23E-04	3.31E-04	6.66E-04	1.54E-04	1.08E-04	1.88E-04	3.30E-03	0.019	0.36	0.056	3.7
PW GE-C_0913	9/13/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	8.3	6.4	10	17.75	8.76E-04	3.51E-04	6.48E-04	1.48E-04	1.18E-04	2.66E-04	3.30E-03	0.036	0.48	0.148	14.5
PW GE-C_0920	9/20/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	9.6	7.7	10	17.75	7.61E-04	3.29E-04	6.74E-04	1.36E-04	1.87E-04	1.90E-04	3.30E-03	0.03	0.62	0.017	3.8
SWI GE-C_0726	7/26/2010	GE	C	Sediment-Water Interface	SWI	7.4612	2.1	1.5	10	16.75	2.80E-04	3.30E-04	5.48E-04	3.94E-05	4.87E-04	1.69E-04	9.26E-04	0.009	0.43	1.57	46.3
SWI GE-C_0802	8/2/2010	GE	C	Sediment-Water Interface	SWI	7.4612	2.9	1.5	10	16.75	2.60E-04	3.16E-04	5.83E-04	4.07E-05	4.84E-04	1.91E-04	9.26E-04	0.013	0.41	0.034	5.1
SWI GE-C_0809	8/9/2010	GE	C	Sediment-Water Interface	SWI	7.4612	5.1	3.1	10	16.75	2.52E-04	2.98E-04	5.87E-04	3.96E-05	4.77E-04	1.99E-04	9.26E-04	0.025	0.64	0.057	6.1
SWI GE-C_0816	8/16/2010	GE	C	Sediment-Water Interface	SWI	7.4612	3.3	1.5	10	16.75	2.94E-04	3.40E-04	6.18E-04	4.53E-05	4.90E-04	1.74E-04	9.26E-04	0.021	0.62	0.057	4.9
SWI GE-C_0823	8/23/2010	GE	C	Sediment-Water Interface	SWI	7.4612	4.2	2.3	10	16.75	2.84E-04	3.34E-04	6.35E-04	4.71E-05	4.71E-04	1.81E-04	9.26E-04	0.01	1.96	0.033	17
SWI GE-C_0830	8/30/2010	GE	C	Sediment-Water Interface	SWI	7.4612	2.8	1.5	10	16.75	2.29E-04	3.05E-04	6.22E-04	4.48E-05	5.14E-04	1.59E-04	9.26E-04	0.01	1.1	0.045	16.9
SWI GE-C_0906	9/6/2010	GE	C	Sediment-Water Interface	SWI	7.4612	3.4	1.5	10	16.75	2.52E-04	3.26E-04	6.13E-04	4.25E-05	5.19E-04	1.76E-04	9.26E-04	0.056	0.54	0.144	9.8
SWI GE-C_0913	9/13/2010	GE	C	Sediment-Water Interface	SWI	7.4612	3.3	1.5	10	16.75	2.80E-04	3.49E-04	6.53E-04	4.73E-05	5.83E-04	1.84E-04	9.26E-04	0.065	0.5	0.031	6.1
SWI GE-C_0920	9/20/2010	GE	C	Sediment-Water Interface	SWI	7.4612	3.4	1.5	10	16.75	3.34E-04	4.07E-04	7.61E-04	5.32E-05	6.22E-04	1.82E-04	9.26E-04	0.044	0.5	0.069	9.4
OW GE-D_0723	7/23/2010	GE	D	Overlying Water	OverWater	7.5973	1.9	1.5	10	15.85	2.97E-04	3.63E-04	5.92E-04	4.25E-05	4.65E-04	1.64E-04	8.90E-04	0.008	0.42	0.031	7.7
OW GE-D_0726	7/26/2010	GE	D	Overlying Water	OverWater	7.5973	1.9	1.5	10	15.85	2.84E-04	3.34E-04	5.70E-04	4.07E-05	4.78E-04	1.72E-04	8.90E-04	0.006	0.57	0.019	2.4
OW GE-D_0802	8/2/2010	GE	D	Overlying Water	OverWater	7.5973	2.5	1.5	10	15.85	2.89E-04	3.39E-04	6.83E-04	4.48E-05	4.85E-04	1.96E-04	8.90E-04	0.007	0.45	0.018	3.8
OW GE-D_0809	8/9/2010	GE	D	Overlying Water	OverWater	7.5973	4.5	2.6	10	15.85	3.09E-04	3.40E-04	6.39E-04	4.60E-05	5.21E-04	2.13E-04	8.90E-04	0.038	1.47	0.056	16
OW GE-D_0816	8/16/2010	GE	D	Overlying Water	OverWater	7.5973	3.2	1.5	10	15.85	2.65E-04	3.06E-04	5.83E-04	4.22E-05	4.56E-04	1.68E-04	8.90E-04	0.035	0.76	0.04	10.1
OW GE-D_0823	8/23/2010	GE	D	Overlying Water	OverWater	7.5973	2.3	1.5	10	15.85	2.75E-04	3.21E-04	5.96E-04	4.17E-05	5.25E-04	1.68E-04	8.90E-04	0.011	0.57	0.027	5.1
OW GE-D_0906	9/6/2010	GE	D	Overlying Water	OverWater	7.5973	2.2	1.5	10	15.85	2.44E-04	3.24E-04	6.00E-04	4.25E-05	5.25E-04	1.74E-04	8.90E-04	0.007	1.39	0.023	4.2
OW GE-D_0906_2	9/6/2010	GE	D	Overlying Water	OverWater	7.5973	4.9	2.9	10	15.85	2.39E-04	3.20E-04	5.96E-04	4.17E-05	5.15E-04	1.78E-04	8.90E-04	0.011	0.38	0.016	7.8
OW GE-D_0913	9/13/2010	GE	D	Overlying Water	OverWater	7.5973	3.7	1.8	10	15.85	2.55E-04	3.33E-04	5.92E-04	4.25E-05	5.30E-04	1.64E-04	8.90E-04	0.023	0.45	0.015	10.9
OW GE-D_0920	9/20/2010	GE	D	Overlying Water	OverWater	7.5973	4.0	2.1	10	15.85	2.82E-04	3.24E-04	7.26E-04	4.78E-05	5.98E-04	1.82E-04	8.90E-04	0.021	0.48	0.037	5.8
GE-D INF SED_0801	8/1/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	7.76E-05	4.07E-05	8.74E-05	5.12E-06	3.41E-04	2.24E-04	2.62E-03	0.0311	0.492	0.11	9.48
GE-D MID SED_0801	8/1/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	8.16E-05	4.24E-05	7.79E-05	5.12E-06	3.41E-04	2.24E-04	2.62E-03	0.0207	0.466	0.108	4.44
GE-D OUF SED_0801	8/1/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	6.14E-05	3.21E-05	7.87E-05	5.12E-06	3.41E-04	2.24E-04	2.62E-03	0.0246	0.455	0.109	8.68
GE-D PPR 1 SED_0801	8/1/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	3.07E-04	2.99E-04	5.52E-04	8.34E-05	3.41E-04	2.24E-04	2.62E-03	0.11	2.64	0.546	12.2
GE-D PPR 2 SED_0801	8/1/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	5.02E-04	3.08E-04	5.74E-04	1.09E-04	3.41E-04	2.24E-04	2.62E-03	0.1	1.3	0.208	4.8
GE-D PPR 3 SED_0801	8/1/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	3.54E-04	3.03E-04	5.83E-04	9.11E-05	3.41E-04	2.24E-04	2.62E-03	0.1	0.4	0.464	11.7
GE-D INF SED_0820	8/20/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	8.28E-05	4.10E-05	7.57E-05	5.12E-06	3.41E-04	2.24E-04	2.62E-03	0.0194	0.324	0.0123	4.45
GE-D MID SED_0820	8/20/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	8.33E-05	4.02E-05	5.96E-05	5.12E-06	3.41E-04	2.24E-04	2.62E-03	0.0252	0.388	0.015	5.54
GE-D OUF SED_0820	8/20/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	6.26E-05	2.73E-05	4.57E-05	5.12E-06	3.41E-04	2.24E-04	2.62E-03	0.0268	0.433	0.027	13.6
GE-D PPR 1 SED_0820	8/20/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	4.57E-04	3.28E-04	5.96E-04	9.11E-05	3.41E-04	2.24E-04	2.62E-03	0.1	1.44	0.32	4
GE-D PPR 2 SED_0820	8/20/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	5.24E-04	3.60E-04	5.92E-04	9.21E-05	3.41E-04	2.24E-04	2.62E-03	0.1	0.57	0.326	4
GE-D PPR 3 SED_0820	8/20/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	3.49E-04	3.01E-04	5.79E-04	5.58E-05	3.41E-04	2.24E-04	2.62E-03	0.1	0.42	0.348	4
GE-D INF SED_0919	9/19/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	7.14E-05	3.99E-05	1.11E-04	6.39E-06	3.41E-04	2.24E-04	2.62E-03	0.0379	2.48	0.0407	12.4
GE-D MID SED_0919	9/19/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	5.86E-05	2.97E-05	5.83E-05	6.39E-06	3.41E-04	2.24E-04	2.62E-03	0.0376	1.37	0.04	12.9
GE-D OUF SED_0919	9/19/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	6.51E-05	3.14E-05	7.70E-05	6.39E-06	3.41E-04	2.24E-04	2.62E-03	0.0338	1.22	0.0301	15
GE-D PPR 1 SED_0919	9/19/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	2.97E-04	3.36E-04	6.26E-04	6.01E-05	3.41E-04	2.24E-04	2.62E-03	0.1	0.72	0.168	4
GE-D PPR 2 SED_0919	9/19/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	3.74E-04	3.03E-04	6.09E-04	6.96E-05	3.41E-04	2.24E-04	2.62E-03	0.1	1.02	0.184	4
GE-D PPR 3 SED_0919	9/19/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	2.77E-04	3.41E-04	6.13E-04	4.83E-05	3.41E-04	2.24E-04	2.62E-03	0.1	0.72	0.108	4
PW GE-D_0723	7/23/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	24.5	22.6	10	18.25	9.21E-04	3.22E-04	7.79E-04	2.47E-04	5.52E-04	1.95E-04	2.62E-03	0.024	0.84	0.191	11
PW GE-D_0726	7/26/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	15.1	13.2	10	18.25	4.87E-04	1.87E-04	4.39E-04	1.26E-04	4.87E-04	1.77E-04	2.62E-03	0.015	0.51	0.362	8.9
PW GE-D_0802	8/2/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	17.5	15.6	10	18.25	9.76E-04	3.78E-04	7.53E-04	2.01E-04	3.45E-04	3.36E-04	2.62E-03	0.013	0.49	0.241	101
PW GE-D_0809	8/9/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	16.9	15.0	10	18.25	9.51E-04	3.54E-04	7.31E-04	1.84E-04	2.59E-04	2.43E-04	2.62E-03	0.103	0.19	0.052	4.3
PW GE-D_0816	8/16/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	11.9	10.0	10	18.25	7.89E-04	3.37E-04	6.83E-04	1.52E-04	1.43E-04	2.06E-04	2.62E-03	0.101	0.45	0.171	942
PW GE-D_0823	8/23/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	17.1	15.2	10	18.25	7.24E-04	3.16E-04	6.70E-04	1.33E-04	1.57E-04	2.36E-04	2.62E-03	0.014	0.18	0.083	4.1
PW GE-D_0830	8/30/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	10.0	8.1	10	18.25	6.06E-04	3.00E-04	6.26E-04	1.09E-04	7.00E-04	1.98E-04	2.62E-03	0.027	0.4	0.136	29.8
PW GE-D_0906	9/6/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	7.8	5.8	10	18.25	5.51E-04	2.83E-04	6.22E-04	9.95E-05	2.02E-04	2.01E-04	2.62E-03	0.018	0.33	0.078	6
PW GE-D_0913	9/13/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	6.6	4.7	10	18.25	5.61E-04	2.80E-04	5.87E-04	9.46E-05	2.08E-04	2.70E-04	2.62E-03	0.024	0.33	0.803	20.3
PW GE-D_0920	9/20/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	5.3	3.4	10	18.25	4.84E-04	2.76E-04	6.44E-04	8.34E-05	3.56E-04	1.80E-04	2.62E-03	0.016	0.27	0.091	3.1
SWI GE-D_0726	7/26/2010	GE	D	Sediment-Water Interface	SWI	7.6125	2.2	1.5	10	16.85	2.77E-04	3.46E-04	5.74E-04	3.84E-05	4.77E-04	1.71E-04	8.63E-04	0.005	0.59	0.024	9.6

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
GE-D INF H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	9.71E-05	4.24E-05	7.48E-05	5.12E-06	4.99E-04	1.79E-04	8.63E-04	0.0108	0.409	0.0825	7.12
GE-D MID H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	1.04E-04	4.57E-05	6.61E-05	5.12E-06	4.99E-04	1.79E-04	8.63E-04	0.015	0.334	0.108	7.52
GE-D OUF H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	8.51E-05	3.48E-05	7.40E-05	5.12E-06	4.99E-04	1.79E-04	8.63E-04	0.0132	0.472	0.123	4.63
GE-D PPR 1 H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	2.23E-04	3.16E-04	5.66E-04	4.50E-05	4.99E-04	1.79E-04	8.63E-04	0.1	0.4	0.36	5.8
GE-D PPR 2 H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	2.18E-04	3.14E-04	5.52E-04	4.32E-05	4.99E-04	1.79E-04	8.63E-04	0.1	0.55	0.226	4.4
GE-D PPR 3 H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	2.13E-04	3.15E-04	5.44E-04	4.73E-05	4.99E-04	1.79E-04	8.63E-04	0.1	0.4	0.29	4
SWI GE-D_0802	8/2/2010	GE	D	Sediment-Water Interface	SWI	7.6125	4.3	2.4	10	16.85	2.55E-04	3.10E-04	5.70E-04	4.14E-05	4.92E-04	1.91E-04	8.63E-04	0.016	0.39	0.042	15.9
SWI GE-D_0809	8/9/2010	GE	D	Sediment-Water Interface	SWI	7.6125	4.6	2.7	10	16.85	3.07E-04	3.42E-04	6.53E-04	4.78E-05	5.18E-04	2.15E-04	8.63E-04	0.02	0.66	0.059	9
SWI GE-D_0816	8/16/2010	GE	D	Sediment-Water Interface	SWI	7.6125	4.0	2.0	10	16.85	2.72E-04	3.15E-04	5.83E-04	4.27E-05	4.63E-04	1.67E-04	8.63E-04	0.028	0.75	0.063	6.5
GE-D INF H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	5.99E-05	3.38E-05	8.92E-05	6.19E-06	4.99E-04	1.79E-04	8.63E-04	0.00763	0.207	0.0713	3.79
GE-D MID H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	5.79E-05	3.14E-05	6.87E-05	5.12E-06	4.99E-04	1.79E-04	8.63E-04	0.0111	0.192	0.0517	4.34
GE-D OUF H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	4.27E-05	2.01E-05	4.61E-05	5.12E-06	4.99E-04	1.79E-04	8.63E-04	0.0232	0.227	0.0414	44.6
GE-D PPR 1 H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	2.57E-04	3.19E-04	5.57E-04	4.35E-05	4.99E-04	1.79E-04	8.63E-04	0.106	0.62	1.78	4190
GE-D PPR 2 H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	1.99E-04	2.54E-04	4.52E-04	4.37E-05	4.99E-04	1.79E-04	8.63E-04	0.114	2.01	1.68	9
GE-D PPR 3 H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	2.55E-04	3.20E-04	5.61E-04	4.17E-05	4.99E-04	1.79E-04	8.63E-04	0.1	1.05	0.34	27.6
SWI Ge-D_0823	8/23/2010	GE	D	Sediment-Water Interface	SWI	7.6125	3.1	1.5	10	16.85	2.70E-04	3.25E-04	6.00E-04	4.20E-05	4.41E-04	1.66E-04	8.63E-04	0.013	0.69	0.043	5.2
SWI GE-D_0830	8/30/2010	GE	D	Sediment-Water Interface	SWI	7.6125	3.5	1.6	10	16.85	2.99E-04	3.91E-04	7.35E-04	5.45E-05	5.59E-04	1.92E-04	8.63E-04	0.011	0.75	0.032	12.5
SWI GE-D_0906	9/6/2010	GE	D	Sediment-Water Interface	SWI	7.6125	2.8	1.5	10	16.85	2.43E-04	3.26E-04	5.96E-04	4.17E-05	5.13E-04	1.67E-04	8.63E-04	0.018	0.51	0.033	8.5
SWI GE-D_0906_2	9/6/2010	GE	D	Sediment-Water Interface	SWI	7.6125	4.2	2.3	10	16.85	2.36E-04	3.19E-04	5.96E-04	4.17E-05	5.41E-04	1.86E-04	8.63E-04	0.015	0.43	0.033	14.5
SWI GE-D_0913	9/13/2010	GE	D	Sediment-Water Interface	SWI	7.6125	4.8	2.9	10	16.85	2.38E-04	3.03E-04	5.87E-04	4.09E-05	5.10E-04	1.60E-04	8.63E-04	0.03	0.46	0.038	7.5
GE-D INF H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	9.08E-05	4.04E-05	1.07E-04	6.39E-06	4.99E-04	1.79E-04	8.63E-04	0.0297	1.73	0.024	13.3
GE-D MID H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	9.96E-05	4.36E-05	6.57E-05	6.39E-06	4.99E-04	1.79E-04	8.63E-04	0.0328	1.59	0.0202	14.6
GE-D OUF H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	1.01E-04	4.16E-05	8.09E-05	6.39E-06	4.99E-04	1.79E-04	8.63E-04	0.0304	1.32	0.0189	20.4
GE-D PPR 1 H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	2.87E-04	3.39E-04	6.18E-04	6.93E-05	4.99E-04	1.79E-04	8.63E-04	0.1	1.08	0.106	6.5
GE-D PPR 2 H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	3.04E-04	3.53E-04	6.39E-04	5.29E-05	4.99E-04	1.79E-04	8.63E-04	0.1	0.4	0.1	4
GE-D PPR 3 H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	2.87E-04	3.46E-04	6.39E-04	5.81E-05	4.99E-04	1.79E-04	8.63E-04	0.1	0.66	0.1	4
SWI GE-D_0920	9/20/2010	GE	D	Sediment-Water Interface	SWI	7.6125	2.9	1.5	10	16.85	3.24E-04	3.87E-04	7.00E-04	4.99E-05	4.80E-04	1.77E-04	8.63E-04	0.036	0.5	0.065	6.3
OW H2O-A_0723	7/23/2010	H2O	A	Overlying Water	OverWater	7.7346	2.9	1.5	10	15.25	2.92E-04	3.54E-04	5.79E-04	4.04E-05	4.53E-04	1.61E-04	9.00E-04	0.013	0.49	0.083	13.3
OW H2O-A_0726	7/26/2010	H2O	A	Overlying Water	OverWater	7.7346	2.7	1.5	10	15.25	2.84E-04	3.49E-04	5.74E-04	3.71E-05	4.72E-04	1.68E-04	9.00E-04	0.008	0.4	0.052	5.8
OW H2O-A_0802	8/2/2010	H2O	A	Overlying Water	OverWater	7.7346	3.1	1.5	10	15.25	2.84E-04	3.35E-04	6.22E-04	4.30E-05	4.85E-04	1.84E-04	9.00E-04	0.008	0.57	0.034	23.5
OW H2O-A_0809	8/9/2010	H2O	A	Overlying Water	OverWater	7.7346	5.3	3.4	10	15.25	2.43E-04	2.88E-04	5.87E-04	4.02E-05	4.84E-04	1.98E-04	9.00E-04	0.022	0.62	0.053	15.4
OW H2O-A_0816	8/16/2010	H2O	A	Overlying Water	OverWater	7.7346	2.6	1.5	10	15.25	2.80E-04	3.25E-04	6.09E-04	4.35E-05	4.51E-04	1.96E-04	9.00E-04	0.016	0.67	0.044	30.7
OW H2O-A_0823	8/23/2010	H2O	A	Overlying Water	OverWater	7.7346	2.7	1.5	10	15.25	3.32E-04	3.58E-04	6.74E-04	4.73E-05	5.15E-04	1.70E-04	9.00E-04	0.011	0.59	0.027	11.1
OW H2O-A_0830	8/30/2010	H2O	A	Overlying Water	OverWater	7.7346	3.4	1.5	10	15.25	2.89E-04	3.79E-04	7.22E-04	5.32E-05	5.83E-04	1.99E-04	9.00E-04	0.03	0.77	0.058	6.5
OW H2O-A_0906	9/6/2010	H2O	A	Overlying Water	OverWater	7.7346	2.6	1.5	10	15.25	2.72E-04	3.63E-04	6.48E-04	4.58E-05	5.89E-04	1.88E-04	9.00E-04	0.005	0.56	0.022	2.7
OW H2O-A_0913	9/13/2010	H2O	A	Overlying Water	OverWater	7.7346	4.8	2.8	10	15.25	2.39E-04	3.14E-04	6.00E-04	4.09E-05	5.06E-04	1.76E-04	9.00E-04	0.012	0.54	0.019	5.3
OW H2O-A_0920	9/20/2010	H2O	A	Overlying Water	OverWater	7.7346	2.4	1.5	10	15.25	3.02E-04	3.35E-04	7.70E-04	4.89E-05	5.67E-04	1.71E-04	9.00E-04	0.04	0.7	0.07	16.1
PW H2O-A_0723	7/23/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	4.4	2.5	10	17.55	2.89E-04	3.23E-04	6.05E-04	4.37E-05	4.82E-04	1.72E-04	1.22E-03	0.018	0.41	0.036	11
PW H2O-A_0726	7/26/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	5.2	3.3	10	17.55	2.92E-04	3.29E-04	5.96E-04	4.32E-05	4.46E-04	1.79E-04	1.22E-03	0.022	0.84	0.028	9.5
PW H2O-A_0802	8/2/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	7.0	5.1	10	17.55	2.75E-04	3.16E-04	5.92E-04	4.04E-05	4.78E-04	2.29E-04	1.22E-03	0.022	0.24	0.057	66.2
PW H2O-A_0809	8/9/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	7.1	5.2	10	17.55	3.04E-04	3.38E-04	6.26E-04	4.89E-05	3.46E-04	2.14E-04	1.22E-03	0.186	0.64	0.1	24
PW H2O-A_0816	8/16/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	3.6	1.7	10	17.55	2.89E-04	3.35E-04	6.00E-04	4.68E-05	4.43E-04	1.82E-04	1.22E-03	0.061	1.16	0.052	560
PW H2O-A_0823	8/23/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	5.6	3.7	10	17.55	2.97E-04	3.72E-04	6.57E-04	5.40E-05	5.15E-04	8.27E-04	1.22E-03	0.185	1.32	0.156	804
PW H2O-A_0830	8/30/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	6.4	4.4	10	17.55	3.04E-04	3.88E-04	7.18E-04	5.68E-05	8.41E-04	1.99E-04	1.22E-03	0.022	0.69	0.035	42
PW H2O-A_0906	9/6/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	9.7	7.8	10	17.55	3.02E-04	3.82E-04	6.70E-04	5.47E-05	5.23E-04	1.83E-04	1.22E-03	0.056	0.39	0.008	7.2
PW H2O-A_0913	9/13/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	2.9	1.5	10	17.55	2.72E-04	3.38E-04	5.87E-04	4.63E-05	4.97E-04	1.88E-04	1.22E-03	0.156	0.53	0.324	22
PW H2O-A_0920	9/20/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	3.6	1.7	10	17.55	3.14E-04	3.56E-04	6.35E-04	4.76E-05	5.66E-04	1.73E-04	1.22E-03	0.02	0.72	0.019	4.8
OW H2O-B_0723	7/23/2010	H2O	B	Overlying Water	OverWater	7.7521	2.9	1.5	10	15.05	2.94E-04	3.51E-04	5.66E-04	4.04E-05	4.63E-04	1.65E-04	8.79E-04	0.005	0.37	0.028	10
OW H2O-B_0726	7/26/2010	H2O	B	Overlying Water	OverWater	7.7521	2.3	1.5	10	15.05	2.84E-04	3.32E-04	5.52E-04	3.84E-05	4.84E-04	1.82E-04	8.79E-04	0.005	0.35	0.02	4.7
OW H2O-B_0802	8/2/2010	H2O	B	Overlying Water	OverWater	7.7521	3.4	1.5	10	15.05	2.77E-04	3.25E-04	6.09E-04	4.12E-05	4.99E-04	1.94E-04	8.79E-04	0.006	0.42	0.022	4.6
OW H2O-B_0809	8/9/2010	H2O	B	Overlying Water	OverWater	7.7521	4.0	2.1	10	15.05	1.93E-03	3.19E-04	7.70E-04	4.81E-05	5.05E-04	1.94E-04	8.79E-04	1	2.08	0.271	38.1
OW H2O-B_0816	8/16/2010	H2O	B	Overlying Water	OverWater	7.7521	2.8	1.5	10	15.05	3.07E-04	3.41E-04	6.57E-04	4.83E-05	4.85E-04	1.82E-04	8.79E-04	0.014	0.66	0.043	17.1
OW H2O-B_0823	8/23/2010	H2O	B	Overlying Water	OverWater	7.7521	4.4	2.5	10	15.05	2.97E-04	3.32E-04	6.79E-04	4.96E-05	5.09E-04	1.69E-04	8.79E-04	0.446	1.32	0.296	59
OW H2O-B_0830	8/30/2010	H2O	B	Overlying Water	OverWater	7.7521	3.0	1.5	10	15.05	2.30E-04	3.00E-04	6.13E-04	4.35E-05	4.83E-04	1.62E-04	8.79E-04	0.027	0.62	0.044	12.2
OW H2O-B_0906	9/6/2010	H2O	B	Overlying Water	OverWater	7.7521	1.4	1.5	10	15.05	2.39E-04	3.22E-04	6.18E-04	4.27E-05	5.24E-04	1.67E-04	8.79E-04	0.211	0.6	0.098	9.5
OW H2O-B_0913	9/13/2010	H2O	B	Overlying Water	OverWater	7.7521	4.8	2.9	10	15.05	2.84E-04	3.83E-04	7.00E-04	4.89E-05	5.97E-04	1.88E-04	8.79E-04	0.006	0.76	0.016	5.4

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
OW H2O-B_0920	9/20/2010	H2O	B	Overlying Water	OverWater	7.7521	3.4	1.5	10	15.05	2.87E-04	3.77E-04	7.70E-04	5.12E-05	6.16E-04	1.85E-04	8.79E-04	0.014	0.63	0.03	3.5
PW H2O-B_0723	7/23/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	4.1	2.2	10	17.25	2.97E-04	3.33E-04	6.05E-04	4.43E-05	4.98E-04	1.77E-04	9.42E-04	0.012	0.31	0.026	5.6
PW H2O-B_0802	8/2/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	5.1	3.1	10	17.25	2.77E-04	3.21E-04	6.05E-04	4.25E-05	4.87E-04	2.82E-04	9.42E-04	0.054	0.6	0.087	118
PW H2O-B_0809	8/9/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	4.6	2.6	10	17.25	3.07E-04	3.50E-04	6.35E-04	4.68E-05	4.13E-04	2.04E-04	9.42E-04	0.174	0.53	0.056	6.2
PW H2O-B_0816	8/16/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	5.4	3.5	10	17.25	3.02E-04	3.44E-04	6.39E-04	5.35E-05	4.55E-04	2.12E-04	9.42E-04	0.043	0.97	0.041	1140
PW H2O-B_0823	8/23/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	6.7	4.8	10	17.25	2.97E-04	3.48E-04	6.35E-04	4.40E-05	5.20E-04	6.23E-04	9.42E-04	0.599	1.08	0.111	63.7
PW H2O-B_0830	8/30/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	5.0	3.1	10	17.25	2.55E-04	3.24E-04	6.05E-04	4.78E-05	4.95E-04	1.64E-04	9.42E-04	0.04	0.54	0.026	13.8
PW H2O-B_0906	9/6/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	5.5	3.5	10	17.25	2.75E-04	3.50E-04	6.09E-04	4.73E-05	3.95E-04	1.88E-04	9.42E-04	0.133	0.54	0.008	7.1
PW H2O-B_0913	9/13/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	3.8	1.9	10	17.25	2.94E-04	3.69E-04	6.31E-04	5.04E-05	5.63E-04	3.24E-04	9.42E-04	0.061	0.51	1.37	13.3
PW H2O-B_0920	9/20/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	4.8	2.9	10	17.25	3.32E-04	3.85E-04	6.70E-04	5.32E-05	5.99E-04	1.88E-04	9.42E-04	0.045	0.62	0.013	4.9
OW H2O-C_0723	7/23/2010	H2O	C	Overlying Water	OverWater	7.7542	1.6	1.5	10	15.55	2.92E-04	3.50E-04	5.70E-04	4.20E-05	4.65E-04	1.70E-04	8.88E-04	0.005	0.44	0.043	10.7
OW-H2O-C	7/26/2010	H2O	C	Overlying Water	OverWater	7.7542	2.5	1.5	10	15.55	2.84E-04	3.30E-04	5.52E-04	3.94E-05	4.81E-04	1.69E-04	8.88E-04	0.005	0.61	0.033	12.2
OW H2O-C_0802	8/2/2010	H2O	C	Overlying Water	OverWater	7.7542	3.9	2.0	10	15.55	3.27E-04	3.95E-04	7.05E-04	4.86E-05	5.63E-04	2.20E-04	8.88E-04	0.007	0.4	0.034	8.7
OW H2O-C_0809	8/9/2010	H2O	C	Overlying Water	OverWater	7.7542	3.8	1.8	10	15.55	2.84E-04	3.27E-04	6.31E-04	4.68E-05	4.03E-04	2.04E-04	8.88E-04	0.019	0.65	0.035	8.6
OW H2O-C_0816	8/16/2010	H2O	C	Overlying Water	OverWater	7.7542	4.1	2.2	10	15.55	2.80E-04	3.21E-04	5.92E-04	4.37E-05	4.93E-04	1.81E-04	8.88E-04	0.01	0.82	0.028	7.9
OW H2O-C_0816_2	8/16/2010	H2O	C	Overlying Water	OverWater	7.7542	3.5	1.6	10	15.55	2.84E-04	3.27E-04	5.87E-04	4.35E-05	5.04E-04	1.81E-04	8.88E-04	0.012	0.78	0.031	8.4
OW H2O-C_0823	8/23/2010	H2O	C	Overlying Water	OverWater	7.7542	2.9	1.5	10	15.55	2.99E-04	3.64E-04	6.57E-04	4.63E-05	5.52E-04	1.79E-04	8.88E-04	0.016	0.86	0.042	7.2
OW H2O-C_0830	8/30/2010	H2O	C	Overlying Water	OverWater	7.7542	4.3	2.4	10	15.55	2.42E-04	3.12E-04	6.35E-04	4.55E-05	4.70E-04	1.71E-04	8.88E-04	0.028	0.83	0.06	16.5
OW H2O-C_0906	9/6/2010	H2O	C	Overlying Water	OverWater	7.7542	2.5	1.5	10	15.55	2.52E-04	3.33E-04	6.22E-04	4.32E-05	5.30E-04	1.69E-04	8.88E-04	0.006	0.66	0.013	1.5
OW H2O-C_0913	9/13/2010	H2O	C	Overlying Water	OverWater	7.7542	4.1	2.2	10	15.55	2.37E-04	3.13E-04	5.74E-04	4.07E-05	5.00E-04	1.55E-04	8.88E-04	0.019	0.38	0.035	3.5
OW H2O-C_0920	9/20/2010	H2O	C	Overlying Water	OverWater	7.7542	4.3	2.4	10	15.55	4.07E-04	4.53E-04	8.18E-04	5.65E-05	7.50E-04	2.18E-04	8.88E-04	0.006	0.87	0.012	2.1
PW H2O-C_0723	7/23/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	6.3	4.4	10	17.85	2.87E-04	3.23E-04	6.48E-04	4.43E-05	4.66E-04	1.84E-04	1.03E-03	0.079	0.78	0.142	24.9
PW H2O-C_0726	7/26/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	9.6	7.7	10	17.85	1.69E-04	1.95E-04	4.21E-04	8.21E-05	4.76E-04	1.84E-04	1.03E-03	0.153	0.87	0.069	27.8
PW H2O-C_0802	8/2/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	6.0	4.1	10	17.85	3.24E-04	3.89E-04	6.87E-04	4.89E-05	5.43E-04	2.34E-04	1.03E-03	0.063	0.75	0.069	675
PW H2O-C_0809	8/9/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	8.7	6.8	10	17.85	3.19E-04	3.60E-04	6.66E-04	5.12E-05	2.42E-04	2.29E-04	1.03E-03	0.507	1.35	0.611	15.5
PW H2O-C_0816	8/16/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	5.2	3.3	10	17.85	2.99E-04	3.46E-04	6.09E-04	4.99E-05	4.69E-04	1.92E-04	1.03E-03	0.052	1.09	0.07	639
PW H2O-C_0823	8/23/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	6.0	4.1	10	17.85	3.12E-04	3.65E-04	6.70E-04	4.83E-05	5.20E-04	2.39E-04	1.03E-03	0.711	1.76	0.64	1480
PW H2O-C_0830	8/30/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	4.1	2.2	10	17.85	3.04E-04	3.55E-04	6.66E-04	5.04E-05	5.43E-04	1.75E-04	1.03E-03	0.062	0.93	0.066	50
PW H2O-C_0906	9/6/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	4.1	2.2	10	17.85	2.77E-04	3.57E-04	6.31E-04	4.81E-05	4.91E-04	1.74E-04	1.03E-03	0.035	0.6	0.011	4.6
PW H2O-C_0913	9/13/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	2.4	1.5	10	17.85	2.55E-04	3.19E-04	5.48E-04	4.12E-05	6.49E-04	3.72E-04	1.03E-03	0.041	0.54	0.367	20.5
PW H2O-C_0920	9/20/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	4.5	2.6	10	17.85	3.89E-04	4.40E-04	7.31E-04	5.70E-05	6.63E-04	2.07E-04	1.03E-03	0.075	0.54	0.02	5.2
OW H2O-D_0723	7/23/2010	H2O	D	Overlying Water	OverWater	7.7551	1.8	1.5	10	15.05	3.04E-04	3.64E-04	5.87E-04	4.17E-05	4.60E-04	1.73E-04	8.92E-04	0.007	0.4	0.023	9.1
OW H2O-D_0726	7/26/2010	H2O	D	Overlying Water	OverWater	7.7551	4.3	2.4	10	15.05	2.89E-04	3.60E-04	5.83E-04	3.81E-05	5.08E-04	1.80E-04	8.92E-04	0.012	0.42	0.042	10.4
OW H2O-D_0802	8/2/2010	H2O	D	Overlying Water	OverWater	7.7551	3.5	1.6	10	15.05	2.92E-04	3.37E-04	6.39E-04	4.43E-05	5.13E-04	1.98E-04	8.92E-04	0.005	0.55	0.041	142
OW H2O-D_0809	8/9/2010	H2O	D	Overlying Water	OverWater	7.7551	30.8	28.9	10	15.05	3.02E-03	3.28E-04	9.00E-04	5.78E-05	3.88E-04	1.97E-04	8.92E-04	1.85	3.95	1.1	83.2
OW H2O-D_0816	8/16/2010	H2O	D	Overlying Water	OverWater	7.7551	3.9	1.9	10	15.05	4.09E-04	3.28E-04	6.96E-04	5.17E-05	4.81E-04	1.77E-04	8.92E-04	0.25	1.45	0.363	36.1
OW H2O-D_0823	8/23/2010	H2O	D	Overlying Water	OverWater	7.7551	2.8	1.5	10	15.05	2.72E-04	3.31E-04	6.13E-04	4.45E-05	4.98E-04	1.68E-04	8.92E-04	0.01	0.7	0.024	3.4
OW H2O-D_0830	8/30/2010	H2O	D	Overlying Water	OverWater	7.7551	3.2	1.5	10	15.05	2.42E-04	3.16E-04	6.48E-04	4.60E-05	4.79E-04	1.64E-04	8.92E-04	0.022	0.57	0.05	17.6
OW H2O-D_0906	9/6/2010	H2O	D	Overlying Water	OverWater	7.7551	3.0	1.5	10	15.05	2.39E-04	3.19E-04	5.83E-04	4.09E-05	5.21E-04	1.66E-04	8.92E-04	0.015	0.75	0.422	22.6
OW H2O-D_0913	9/13/2010	H2O	D	Overlying Water	OverWater	7.7551	3.1	1.5	10	15.05	2.52E-04	3.33E-04	5.92E-04	4.22E-05	5.12E-04	1.66E-04	8.92E-04	0.033	0.53	0.062	5.6
OW H2O-D_0920	9/20/2010	H2O	D	Overlying Water	OverWater	7.7551	3.1	1.5	10	15.05	3.29E-04	3.70E-04	7.05E-04	4.91E-05	5.79E-04	1.72E-04	8.92E-04	0.02	0.41	0.04	3.3
H2O-D INF bottom	8/1/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	1.15E-04	5.31E-05	3.59E-05	5.12E-06	5.05E-04	2.37E-04	1.02E-03	0.0115	0.431	0.032	6.31
H2O-D MID bottom	8/1/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	1.21E-04	5.68E-05	3.39E-05	5.12E-06	5.05E-04	2.37E-04	1.02E-03	0.0152	0.435	0.0291	7.72
H2O-D OUF bottom	8/1/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	1.11E-04	5.18E-05	3.15E-05	5.12E-06	5.05E-04	2.37E-04	1.02E-03	0.0223	0.501	0.0447	16.1
H2O-D PPR 1 BTM_0801	8/1/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	2.29E-04	3.26E-04	5.87E-04	4.91E-05	5.05E-04	2.37E-04	1.02E-03	0.1	0.4	0.338	4
H2O-D PPR 2 BTM_0801	8/1/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	2.20E-04	3.28E-04	5.92E-04	4.55E-05	5.05E-04	2.37E-04	1.02E-03	0.1	0.4	0.18	4
H2O-D PPR 3 BTM_0801	8/1/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	2.35E-04	3.33E-04	5.83E-04	4.25E-05	5.05E-04	2.37E-04	1.02E-03	0.1	0.4	0.606	6.9
H2O-D INF BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	9.11E-05	4.36E-05	3.49E-05	5.12E-06	5.05E-04	2.37E-04	1.02E-03	0.0423	0.497	0.0135	5.7
H2O-D MID BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	8.98E-05	4.20E-05	3.87E-05	7.29E-06	5.05E-04	2.37E-04	1.02E-03	0.049	0.738	0.017	5.58
H2O-D OUF BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	7.24E-05	2.93E-05	4.12E-05	5.76E-06	5.05E-04	2.37E-04	1.02E-03	0.0546	0.466	0.0139	5.27
H2O-D PPR 1 BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	2.48E-04	3.34E-04	6.00E-04	4.91E-05	5.05E-04	2.37E-04	1.02E-03	0.1	0.49	1.74	4
H2O-D PPR 2 BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	1.44E-04	1.95E-04	3.54E-04	3.30E-05	5.05E-04	2.37E-04	1.02E-03	0.108	0.64	1.75	7.9
H2O-D PPR 3 BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	2.52E-04	3.31E-04	5.70E-04	5.63E-05	5.05E-04	2.37E-04	1.02E-03	0.1	0.69	1.79	7.3
H2O-D INF BTM_0919	9/19/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	9.91E-05	4.16E-05	4.65E-05	6.39E-06	5.05E-04	2.37E-04	1.02E-03	0.0267	0.995	0.0117	9.9
H2O-D MID BTM_0919	9/19/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	1.05E-04	4.57E-05	5.39E-05	6.39E-06	5.05E-04	2.37E-04	1.02E-03	0.0245	0.988	0.0113	9.3
H2O-D OUF BTM_0919	9/19/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	9.66E-05	4.02E-05	5.83E-05	6.39E-06	5.05E-04	2.37E-04	1.02E-03	0.0231	0.892	0.0104	8.39

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
H2O-D PPR 1 BTM_0919	9/19/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	3.14E-04	3.35E-04	6.26E-04	5.06E-05	5.05E-04	2.37E-04	1.02E-03	0.1	0.43	0.122	4
H2O-D PPR 2 BTM_0919	9/19/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	3.14E-04	3.43E-04	6.35E-04	5.60E-05	5.05E-04	2.37E-04	1.02E-03	0.1	0.4	0.144	4
PW H2O-D_0723	7/23/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	6.5	4.6	10	17.45	3.22E-04	3.76E-04	6.53E-04	4.17E-05	5.01E-04	2.09E-04	1.02E-03	0.06	0.57	0.032	13.8
PW H2O-D_0726	7/26/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	7.2	5.3	10	17.45	2.89E-04	3.29E-04	6.66E-04	7.72E-05	4.96E-04	1.95E-04	1.02E-03	0.107	0.92	0.063	6.6
PW H2O-D_0802	8/2/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	8.8	6.9	10	17.45	2.97E-04	3.42E-04	6.48E-04	4.43E-05	5.00E-04	3.08E-04	1.02E-03	0.045	0.5	0.073	20
PW H2O-D_0809	8/9/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	8.5	6.6	10	17.45	2.97E-04	3.26E-04	6.18E-04	5.04E-05	5.05E-04	2.23E-04	1.02E-03	0.106	1.52	0.18	16.5
PW H2O-D_0816	8/16/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	9.0	7.0	10	17.45	2.84E-04	3.31E-04	6.26E-04	5.19E-05	4.94E-04	2.24E-04	1.02E-03	0.151	1.9	0.2	62.8
PW H2O-D_0823	8/23/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	4.9	3.0	10	17.45	2.97E-04	3.46E-04	6.48E-04	4.60E-05	5.11E-04	3.58E-04	1.02E-03	0.324	1.13	0.435	529
PW H2O-D_0830	8/30/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	6.0	4.0	10	17.45	2.84E-04	3.19E-04	6.05E-04	4.12E-05	4.77E-04	1.73E-04	1.02E-03	0.054	0.8	0.032	37.3
PW H2O-D_0906	9/6/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	4.3	2.3	10	17.45	2.77E-04	3.53E-04	6.22E-04	4.58E-05	4.68E-04	1.74E-04	1.02E-03	0.028	0.64	0.017	5.6
PW H2O-D_0913	9/13/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	3.0	1.5	10	17.45	2.75E-04	3.43E-04	5.96E-04	4.32E-05	5.28E-04	2.36E-04	1.02E-03	0.034	0.49	0.512	5.3
PW H2O-D_0920	9/20/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	4.1	2.2	10	17.45	3.24E-04	3.63E-04	6.31E-04	5.09E-05	5.63E-04	1.81E-04	1.02E-03	0.067	0.65	0.028	7.1
H2O-D inflow top	8/1/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	1.05E-04	4.81E-05	3.39E-05	5.12E-06	0.00E+00	0.00E+00	0.00E+00	0.0149	0.417	0.0402	29.4
H2O-D middle top	8/1/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	1.17E-04	5.43E-05	3.22E-05	5.12E-06	0.00E+00	0.00E+00	0.00E+00	0.0143	0.423	0.0312	43.9
H2O-D OUF top	8/1/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	1.16E-04	5.27E-05	3.29E-05	5.12E-06	0.00E+00	0.00E+00	0.00E+00	0.0135	0.472	0.0404	83.5
H2O-D Peeper 1 Top	8/1/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	2.34E-04	3.34E-04	5.70E-04	4.78E-05	0.00E+00	0.00E+00	0.00E+00	0.1	0.4	0.348	4
H2O-D Peeper 2 Top	8/1/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	2.19E-04	3.30E-04	6.09E-04	5.37E-05	0.00E+00	0.00E+00	0.00E+00	0.1	0.4	0.208	4
H2O-D PPR 3 Top_0801	8/1/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	2.35E-04	3.32E-04	6.18E-04	5.81E-05	0.00E+00	0.00E+00	0.00E+00	0.12	5.99	2.12	9.6
H2O-D INF top_0820	8/20/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	8.93E-05	4.05E-05	3.95E-05	8.42E-06	0.00E+00	0.00E+00	0.00E+00	0.0439	0.503	0.0146	5.22
H2O-D MID top_0820	8/20/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	9.88E-05	4.44E-05	4.74E-05	5.93E-06	0.00E+00	0.00E+00	0.00E+00	0.0544	0.575	0.0132	5.38
H2O-D OUF top_0820	8/20/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	8.93E-05	4.00E-05	5.66E-05	8.47E-06	0.00E+00	0.00E+00	0.00E+00	0.0583	0.588	0.0155	6.02
H2O-D PPR 1 top_0820	8/20/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	2.57E-04	3.34E-04	5.96E-04	4.68E-05	0.00E+00	0.00E+00	0.00E+00	0.138	0.4	1.5	4
H2O-D PPR 2 top_0820	8/20/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	2.65E-04	3.42E-04	6.05E-04	4.83E-05	0.00E+00	0.00E+00	0.00E+00	0.1	0.42	1.65	4
H2O-D PPR 3 TOP_0820	8/20/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	2.55E-04	3.35E-04	5.83E-04	4.22E-05	0.00E+00	0.00E+00	0.00E+00	0.1	0.99	1.99	5.5
H2O-D INF Top_0919	9/19/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	1.34E-04	5.60E-05	6.53E-05	6.39E-06	0.00E+00	0.00E+00	0.00E+00	0.0297	1.35	0.0145	12.5
H2O-D MID Top_0919	9/19/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	1.08E-04	4.94E-05	4.02E-05	6.39E-06	0.00E+00	0.00E+00	0.00E+00	0.025	1	0.0105	9.6
H2O-D OUF Top_0919	9/19/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	9.33E-05	3.84E-05	3.67E-05	6.39E-06	0.00E+00	0.00E+00	0.00E+00	0.0238	1.02	0.014	9.72
H2O-D PPR 1 Top_0919	9/19/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	3.12E-04	3.49E-04	6.31E-04	6.04E-05	0.00E+00	0.00E+00	0.00E+00	0.1	0.66	0.342	4
H2O-D PPR 2 Top_0919	9/19/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	3.17E-04	3.45E-04	6.31E-04	6.04E-05	0.00E+00	0.00E+00	0.00E+00	0.1	0.4	0.256	4
OW H2O-E_0723	7/23/2010	H2O	E	Overlying Water	OverWater	7.76	3.0	1.5	10	15.05	2.92E-04	3.56E-04	5.87E-04	4.25E-05	4.77E-04	1.70E-04	9.04E-04	0.006	0.54	0.028	12.2
OW H2O-E_0726	7/26/2010	H2O	E	Overlying Water	OverWater	7.76	2.5	1.5	10	15.05	2.89E-04	3.42E-04	5.57E-04	3.56E-05	4.23E-04	1.63E-04	9.04E-04	0.006	0.44	0.04	10.4
OW H2O-E_0802	8/2/2010	H2O	E	Overlying Water	OverWater	7.76	3.5	1.6	10	15.05	2.65E-04	3.18E-04	6.09E-04	4.20E-05	5.03E-04	1.90E-04	9.04E-04	0.021	0.55	0.181	34.7
OW H2O-E_0809	8/9/2010	H2O	E	Overlying Water	OverWater	7.76	8.3	6.4	10	15.05	2.89E-04	3.30E-04	6.48E-04	4.50E-05	4.88E-04	2.10E-04	9.04E-04	0.016	0.67	0.047	3.7
OW H2O-E_0816	8/16/2010	H2O	E	Overlying Water	OverWater	7.76	4.6	2.7	10	15.05	2.75E-04	3.19E-04	5.92E-04	4.37E-05	4.82E-04	1.73E-04	9.04E-04	0.018	0.64	0.042	16.3
OW H2O-E_0823	8/23/2010	H2O	E	Overlying Water	OverWater	7.76	3.1	1.5	10	15.05	2.72E-04	3.22E-04	6.00E-04	4.14E-05	4.91E-04	1.65E-04	9.04E-04	0.012	0.72	0.026	8.6
OW H2O-E_0830	8/30/2010	H2O	E	Overlying Water	OverWater	7.76	2.6	1.5	10	15.05	2.16E-04	2.75E-04	5.79E-04	4.12E-05	4.44E-04	1.40E-04	9.04E-04	0.023	0.65	0.058	18.3
OW H2O-E_0906	9/6/2010	H2O	E	Overlying Water	OverWater	7.76	3.1	1.5	10	15.05	2.43E-04	3.25E-04	5.92E-04	4.12E-05	5.19E-04	1.69E-04	9.04E-04	0.015	0.55	0.051	11.5
OW H2O-E_0913	9/13/2010	H2O	E	Overlying Water	OverWater	7.76	3.6	1.7	10	15.05	2.41E-04	3.14E-04	5.79E-04	4.04E-05	5.20E-04	1.59E-04	9.04E-04	0.021	0.44	0.04	4
OW H2O-E_0920	9/20/2010	H2O	E	Overlying Water	OverWater	7.76	4.0	2.0	10	15.05	3.84E-04	4.53E-04	8.18E-04	5.70E-05	7.22E-04	2.16E-04	9.04E-04	0.037	0.66	0.06	3.1
PW H2O-E_0723	7/23/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	7.2	5.3	10	-1272.15	2.92E-04	3.27E-04	6.00E-04	4.17E-05	5.01E-04	2.24E-04	0.00E+00	1.13	0.89	0.121	33.2
PW H2O-E_0726	7/26/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	7.7	5.8	10	-1272.15	2.70E-04	3.16E-04	6.31E-04	5.29E-05	5.07E-04	1.98E-04	0.00E+00	1.45	0.76	0.061	16.1
PW H2O-E_0802	8/2/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	5.7	3.8	10	-1272.15	2.77E-04	3.21E-04	6.13E-04	4.50E-05	4.75E-04	1.06E-03	0.00E+00	0.426	2.73	0.51	87.5
PW H2O-E_0809	8/9/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	6.1	4.2	10	-1272.15	3.09E-04	3.49E-04	6.61E-04	4.99E-05	5.08E-04	2.29E-04	0.00E+00	0.386	0.78	0.075	7.7
PW H2O-E_0816	8/16/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	24.9	23.0	10	-1272.15	2.94E-04	3.40E-04	6.18E-04	5.04E-05	4.79E-04	2.15E-04	0.00E+00	0.084	1.49	0.11	517
PW H2O-E_0823	8/23/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	7.0	5.1	10	-1272.15	2.92E-04	3.39E-04	6.26E-04	4.37E-05	5.21E-04	1.89E-04	0.00E+00	0.653	0.97	0.108	99.4
PW H2O-E_0830	8/30/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	3.4	1.5	10	-1272.15	2.40E-04	2.93E-04	5.61E-04	4.22E-05	7.53E-04	1.55E-04	0.00E+00	0.043	0.77	0.04	23.1
PW H2O-E_0906	9/6/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	5.9	4.0	10	-1272.15	2.77E-04	3.49E-04	6.31E-04	4.63E-05	4.80E-04	1.82E-04	0.00E+00	0.066	1	0.014	22.1
PW H2O-E_0913	9/13/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	4.0	2.1	10	-1272.15	2.62E-04	3.31E-04	5.70E-04	4.20E-05	4.79E-04	2.09E-04	0.00E+00	0.056	0.54	1.86	31.8
PW H2O-E_0920	9/20/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	4.2	2.3	10	-1272.15	3.87E-04	4.49E-04	7.44E-04	5.96E-05	6.77E-04	2.19E-04	0.00E+00	0.046	0.5	0.024	140
OW H2O-F_0723	7/23/2010	H2O	F	Overlying Water	OverWater	7.98	2.0	1.5	10	16.85	2.92E-04	3.53E-04	5.79E-04	4.30E-05	4.78E-04	1.67E-04	9.10E-04	0.01	0.35	0.042	4.4
PW H2O-F	7/23/2010	H2O	F	Porewater (2.5 cm)	PoreWater	7.7575	7.3	5.4	10	19.35	2.70E-04	3.06E-04	5.66E-04	3.94E-05	4.77E-04	2.75E-04	1.08E-03	0.291	1.11	0.078	48.4
OW LALL-A_0723	7/23/2010	LALL	A	Overlying Water	OverWater	7.7624	2.1	1.5	10	15.25	2.92E-04	3.47E-04	5.74E-04	4.09E-05	4.70E-04	1.68E-04	8.89E-04	0.011	0.33	0.021	7.7
OW LALL-A_0726	7/26/2010	LALL	A	Overlying Water	OverWater	7.7624	2.2	1.5	10	15.25	2.97E-04	3.70E-04	6.05E-04	3.86E-05	5.03E-04	1.77E-04	8.89E-04	0.014	0.39	0.108	10.1
OW LALL-A_0802	8/2/2010	LALL	A	Overlying Water	OverWater	7.7624	3.3	1.5	10	15.25	2.89E-04	3.36E-04	6.39E-04	4.37E-05	5.10E-04	2.01E-04	8.89E-04	0.009	0.46	0.03	19.3
OW LALL-A_0809	8/9/2010	LALL	A	Overlying Water	OverWater	7.7624	5.5	3.5	10	15.25	2.70E-04	3.05E-04	5.92E-04	4.30E-05	4.44E-04	1.94E-04	8.89E-04	0.072	0.74	0.102	5.6
OW LALL-A_0816	8/16/2010	LALL	A	Overlying Water	OverWater	7.7624	3.9	2.0	10	15.25	2.82E-04	3.32E-04	6.44E-04	4.66E-05	4.85E-04	1.75E-04	8.89E-04	0.013	1.38	0.049	53.1

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
OW LALL-A_0823	8/23/2010	LALL	A	Overlying Water	OverWater	7.7624	2.9	1.5	10	15.25	2.84E-04	3.38E-04	6.26E-04	4.31E-05	5.04E-04	1.66E-04	8.89E-04	0.018	0.64	0.047	6.4
OW LALL-A_0830	8/30/2010	LALL	A	Overlying Water	OverWater	7.7624	17.8	15.9	10	15.25	2.46E-04	3.15E-04	6.26E-04	4.55E-05	5.03E-04	1.57E-04	8.89E-04	0.016	0.57	0.045	20.5
OW LALL-A_0906	9/6/2010	LALL	A	Overlying Water	OverWater	7.7624	2.6	1.5	10	15.25	2.39E-04	3.19E-04	6.05E-04	4.17E-05	5.30E-04	1.64E-04	8.89E-04	0.09	1.51	0.146	18.7
OW LALL-A_0913	9/13/2010	LALL	A	Overlying Water	OverWater	7.7624	3.1	1.5	10	15.25	2.45E-04	3.21E-04	5.87E-04	4.09E-05	5.19E-04	1.59E-04	8.89E-04	0.01	0.99	0.023	3.2
OW LALL-A_0920	9/20/2010	LALL	A	Overlying Water	OverWater	7.7624	3.1	1.5	10	15.25	3.24E-04	3.52E-04	6.74E-04	4.76E-05	5.69E-04	1.71E-04	8.89E-04	0.029	0.41	0.056	2.6
PW LALL-A_0723	7/23/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	12.6	10.7	10	19.05	5.29E-04	1.79E-04	5.31E-04	1.43E-04	4.66E-04	1.31E-04	1.77E-03	0.338	1.61	0.437	19.6
PW LALL-A_0726	7/26/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	19.8	17.9	10	19.05	5.22E-04	1.81E-04	5.92E-04	1.70E-04	4.26E-04	1.38E-04	1.77E-03	0.382	1.37	0.41	39.1
PW LALL-A_0802	8/2/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	9.0	7.0	10	19.05	5.86E-04	1.95E-04	5.48E-04	1.27E-04	4.50E-04	2.54E-04	1.77E-03	0.137	0.99	0.256	583
PW LALL-A_0809	8/9/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	10.0	8.0	10	19.05	6.19E-04	2.08E-04	5.92E-04	1.34E-04	4.56E-04	1.70E-04	1.77E-03	0.191	0.75	0.218	17.8
PW LALL-A_0816	8/16/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	7.1	5.2	10	19.05	5.02E-04	2.29E-04	5.74E-04	9.85E-05	4.54E-04	1.90E-04	1.77E-03	0.497	3.02	13.3	37.5
PW LALL-A_0823	8/23/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	5.9	4.0	10	19.05	5.17E-04	2.40E-04	6.66E-04	1.06E-04	5.37E-04	1.82E-04	1.77E-03	0.332	0.49	0.21	14
PW LALL-A_0830	8/30/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	5.0	3.1	10	19.05	4.92E-04	2.61E-04	6.44E-04	8.90E-05	5.12E-04	1.86E-04	1.77E-03	0.096	0.67	0.195	35.6
PW LALL-A_0906	9/6/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	5.7	3.8	10	19.05	4.34E-04	2.65E-04	6.31E-04	8.49E-05	4.80E-04	1.75E-04	1.77E-03	0.025	0.31	0.141	10.9
PW LALL-A_0913	9/13/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	4.7	2.8	10	19.05	4.32E-04	3.05E-04	5.87E-04	6.83E-05	4.96E-04	1.68E-04	1.77E-03	0.169	0.82	0.218	30.5
PW LALL-A_0920	9/20/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	6.2	4.2	10	19.05	4.65E-04	2.73E-04	6.13E-04	7.84E-05	5.23E-04	1.77E-04	1.77E-03	0.051	0.34	0.168	20.7
SWI LALL-A_0726	7/26/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	11.8	9.9	10	16.55	3.02E-04	3.66E-04	6.00E-04	3.91E-05	5.00E-04	1.68E-04	8.87E-04	0.018	0.38	0.025	5.8
SWI LALL-A_0802	8/2/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	3.7	1.8	10	16.55	2.84E-04	3.28E-04	6.13E-04	4.12E-05	4.92E-04	2.12E-04	8.87E-04	0.017	0.41	0.036	12.4
SWI LALL-A_0809	8/9/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	6.0	4.1	10	16.55	2.62E-04	3.00E-04	5.96E-04	4.32E-05	4.57E-04	1.94E-04	8.87E-04	0.014	0.73	0.052	10.4
SWI LALL-A_0816	8/16/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	4.8	2.9	10	16.55	3.17E-03	3.79E-04	8.70E-04	5.42E-05	4.84E-04	1.74E-04	8.87E-04	0.453	2.58	0.549	62.5
SWI LALL-A_0823	8/23/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	4.2	2.3	10	16.55	2.82E-04	3.37E-04	6.39E-04	4.71E-05	4.99E-04	1.66E-04	8.87E-04	0.012	0.71	0.038	7.4
SWI LALL-A_0830	8/30/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	3.5	1.6	10	16.55	2.40E-04	3.14E-04	6.00E-04	4.35E-05	4.80E-04	4.03E-04	8.87E-04	0.014	0.57	0.044	10.5
SWI LALL-A_0906	9/6/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	3.2	1.5	10	16.55	2.38E-04	3.21E-04	5.92E-04	4.07E-05	5.10E-04	1.70E-04	8.87E-04	0.014	0.62	0.031	20.1
SWI LALL-A_0913	9/13/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	2.5	1.5	10	16.55	2.55E-04	3.26E-04	6.13E-04	4.35E-05	5.48E-04	1.67E-04	8.87E-04	0.011	0.51	0.05	4.2
SWI LALL-A_0920	9/20/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	3.7	1.7	10	16.55	3.04E-04	3.32E-04	6.70E-04	4.68E-05	5.74E-04	1.71E-04	8.87E-04	0.034	0.5	0.067	2.8
OW LALL-B_0723	7/23/2010	LALL	B	Overlying Water	OverWater	7.744	1.1	1.5	10	15.05	3.12E-04	3.62E-04	5.96E-04	4.14E-05	4.66E-04	1.68E-04	8.95E-04	0.008	0.39	0.024	3.05
OW LALL-B_0726	7/26/2010	LALL	B	Overlying Water	OverWater	7.744	2.3	1.5	10	15.05	2.89E-04	3.51E-04	5.79E-04	3.61E-05	4.63E-04	1.66E-04	8.95E-04	0.007	0.38	0.056	7.6
OW LALL-B_0802	8/2/2010	LALL	B	Overlying Water	OverWater	7.744	2.9	1.5	10	15.05	2.77E-04	3.27E-04	6.35E-04	4.37E-05	4.91E-04	1.91E-04	8.95E-04	0.009	0.49	0.053	591
OW LALL-B_0809	8/9/2010	LALL	B	Overlying Water	OverWater	7.744	5.2	3.2	10	15.05	2.80E-04	3.25E-04	6.61E-04	4.45E-05	5.04E-04	2.09E-04	8.95E-04	0.009	0.6	0.034	9.5
OW LALL-B_0816	8/16/2010	LALL	B	Overlying Water	OverWater	7.744	3.2	1.5	10	15.05	2.94E-04	3.40E-04	6.00E-04	4.30E-05	4.91E-04	1.76E-04	8.95E-04	0.009	0.61	0.032	4.3
OW LALL-B_0823	8/23/2010	LALL	B	Overlying Water	OverWater	7.744	3.5	1.6	10	15.05	2.75E-04	3.36E-04	6.13E-04	4.43E-05	4.85E-04	1.62E-04	8.95E-04	0.014	0.61	0.039	13.9
OW LALL-B_0830	8/30/2010	LALL	B	Overlying Water	OverWater	7.744	2.8	1.5	10	15.05	2.41E-04	3.12E-04	6.22E-04	4.58E-05	5.76E-04	1.57E-04	8.95E-04	0.019	0.69	0.043	15.8
OW LALL-B_0906	9/6/2010	LALL	B	Overlying Water	OverWater	7.744	2.7	1.5	10	15.05	2.44E-04	3.22E-04	5.87E-04	4.09E-05	5.20E-04	1.75E-04	8.95E-04	0.021	0.51	0.043	3.7
OW LALL-B_0913	9/13/2010	LALL	B	Overlying Water	OverWater	7.744	3.5	1.5	10	15.05	2.80E-04	3.70E-04	6.66E-04	4.71E-05	5.78E-04	1.90E-04	8.95E-04	0.02	0.44	0.035	4.1
OW LALL-B_0920	9/20/2010	LALL	B	Overlying Water	OverWater	7.744	3.6	1.7	10	15.05	3.02E-04	3.76E-04	7.44E-04	4.91E-05	6.23E-04	1.86E-04	8.95E-04	0.01	0.56	0.031	1.8
LALL-B INF SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	4.52E-05	2.22E-05	5.79E-05	5.12E-06	4.63E-04	1.96E-04	2.21E-03	0.0548	0.49	0.115	7.54
LALL-B MID SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	4.57E-05	2.05E-05	4.52E-05	5.12E-06	4.63E-04	1.96E-04	2.21E-03	0.0444	0.415	0.102	4.03
LALL-B OUF SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	3.94E-05	1.74E-05	3.31E-05	5.12E-06	4.63E-04	1.96E-04	2.21E-03	0.0408	0.456	0.0843	4.46
LALL-B PPR1 SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	2.67E-04	2.90E-04	5.52E-04	4.35E-05	4.63E-04	1.96E-04	2.21E-03	0.1	0.4	0.332	4
LALL-B PPR2 SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	3.09E-04	2.46E-04	5.18E-04	6.47E-05	4.63E-04	1.96E-04	2.21E-03	0.174	0.97	0.3	4
LALL-B PPR3 SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	3.19E-04	2.37E-04	5.26E-04	6.96E-05	4.63E-04	1.96E-04	2.21E-03	0.17	0.84	0.308	5.9
LALL-B INF SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	8.31E-05	5.47E-05	4.04E-04	1.50E-05	4.63E-04	1.96E-04	2.21E-03	0.063	0.382	0.391	15.6
LALL-B MID SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	9.58E-05	6.79E-05	2.56E-04	1.29E-05	4.63E-04	1.96E-04	2.21E-03	0.0656	0.411	0.331	14.1
LALL-B OUF SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	9.78E-05	6.75E-05	2.37E-04	1.11E-05	4.63E-04	1.96E-04	2.21E-03	0.0832	0.605	0.299	9.7
LALL-B PPR1 SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	2.99E-04	3.09E-04	5.61E-04	4.04E-05	4.63E-04	1.96E-04	2.21E-03	0.1	0.4	1.68	4
LALL-B PPR2 SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	3.09E-04	3.23E-04	5.70E-04	5.83E-05	4.63E-04	1.96E-04	2.21E-03	0.1	0.61	1.85	6.9
LALL-B PPR3 SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	4.12E-04	3.39E-04	5.48E-04	6.83E-05	4.63E-04	1.96E-04	2.21E-03	0.1	0.4	1.47	4
LALL-B INF SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	7.94E-05	3.92E-05	5.57E-05	6.39E-06	4.63E-04	1.96E-04	2.21E-03	0.046	1.24	0.0941	11.7
LALL-B MID SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	8.48E-05	4.61E-05	5.87E-05	6.39E-06	4.63E-04	1.96E-04	2.21E-03	0.0405	1.23	0.111	10.6
LALL-B OUF SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	6.14E-05	3.50E-05	7.44E-05	6.39E-06	4.63E-04	1.96E-04	2.21E-03	0.0357	1.02	0.115	9.92
LALL-B PPR1 SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	3.12E-04	2.98E-04	5.96E-04	6.42E-05	4.63E-04	1.96E-04	2.21E-03	0.1	0.45	0.186	4
LALL-B PPR2 SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	3.29E-04	3.30E-04	5.83E-04	3.84E-05	4.63E-04	1.96E-04	2.21E-03	0.1	0.4	0.142	4
LALL-B PPR3 SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	2.77E-04	3.42E-04	6.13E-04	6.55E-05	4.63E-04	1.96E-04	2.21E-03	0.1	0.43	0.136	4
PW LALL-B_0723	7/23/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	9.2	7.3	10	18.65	4.47E-04	1.57E-04	4.65E-04	1.17E-04	3.97E-04	1.54E-04	2.21E-03	0.338	1.85	0.233	26.7
PW LALL-B_0726	7/26/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	8.9	7.0	10	18.65	5.04E-04	1.79E-04	5.09E-04	1.14E-04	4.03E-04	1.50E-04	2.21E-03	0.502	1.92	0.528	57.1
PW LALL-B_0802	8/2/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	9.9	8.0	10	18.65	5.44E-04	1.91E-04	5.57E-04	1.19E-04	4.37E-04	3.02E-04	2.21E-03	0.323	1.3	0.305	1200
PW LALL-B_0809	8/9/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	8.5	6.5	10	18.65	5.66E-04	2.04E-04	5.79E-04	1.19E-04	4.54E-04	2.03E-04	2.21E-03	0.161	0.78	0.232	16.3

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
PW LALL-B_0816	8/16/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	12.6	10.7	10	18.65	5.54E-04	2.36E-04	5.44E-04	1.02E-04	4.33E-04	1.96E-04	2.21E-03	0.469	3.02	10.6	166
PW LALL-B_0823	8/23/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	6.9	4.9	10	18.65	5.37E-04	2.31E-04	6.00E-04	1.00E-04	4.73E-04	1.89E-04	2.21E-03	0.427	0.88	0.289	38.4
PW LALL-B_0830	8/30/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	5.3	3.4	10	18.65	4.97E-04	2.29E-04	5.83E-04	8.59E-05	4.77E-04	1.77E-04	2.21E-03	0.054	0.44	0.17	104
PW LALL-B_0906	9/6/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	7.6	5.7	10	18.65	5.19E-04	2.36E-04	5.96E-04	9.49E-05	4.31E-04	2.01E-04	2.21E-03	0.034	0.42	0.147	162
PW LALL-B_0913	9/13/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	7.2	5.3	10	18.65	5.22E-04	2.40E-04	5.57E-04	8.59E-05	5.89E-04	2.07E-04	2.21E-03	0.069	0.5	0.276	145
PW LALL-B_0920	9/20/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	8.7	6.7	10	18.65	5.37E-04	2.53E-04	6.00E-04	8.93E-05	5.38E-04	1.80E-04	2.21E-03	0.04	0.39	0.193	65.1
SWI LALL-B_0726	7/26/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	1.9	1.5	10	16.05	2.94E-04	3.51E-04	5.83E-04	3.58E-05	4.72E-04	1.71E-04	9.12E-04	0.008	0.37	0.0205	30.5
LALL-B INF H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	4.74E-05	1.82E-05	3.55E-05	5.12E-06	5.09E-04	1.78E-04	9.12E-04	0.0147	0.343	0.0558	5.47
LALL-B MID H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	5.74E-05	2.48E-05	3.67E-05	5.12E-06	5.09E-04	1.78E-04	9.12E-04	0.0135	0.382	0.0412	4.31
LALL-B OUF H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	5.24E-05	2.32E-05	3.08E-05	5.12E-06	5.09E-04	1.78E-04	9.12E-04	0.014	0.412	0.0445	6.93
LALL-B PPR1 H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	2.29E-04	3.30E-04	5.74E-04	4.53E-05	5.09E-04	1.78E-04	9.12E-04	0.1	0.4	0.244	4
LALL-B PPR2 H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	2.29E-04	3.37E-04	6.09E-04	4.81E-05	5.09E-04	1.78E-04	9.12E-04	0.1	0.4	0.242	4
LALL-B PPR3 H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	2.12E-04	3.21E-04	5.39E-04	4.66E-05	5.09E-04	1.78E-04	9.12E-04	0.1	0.4	0.24	4
SWI LALL-B_0802	8/2/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	4.1	2.2	10	16.05	2.62E-04	3.16E-04	5.57E-04	3.99E-05	4.87E-04	1.90E-04	9.12E-04	0.008	0.39	0.033	22.1
SWI LALL-B_0809	8/9/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	5.1	3.2	10	16.05	2.77E-04	3.21E-04	6.39E-04	4.37E-05	4.93E-04	2.07E-04	9.12E-04	0.017	0.54	0.031	7.4
SWI LALL-B_0816	8/16/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	6.3	4.4	10	16.05	2.82E-04	3.24E-04	5.87E-04	4.25E-05	4.82E-04	1.76E-04	9.12E-04	0.017	0.67	0.044	58.8
LALL-B INF H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	7.09E-05	4.24E-05	1.70E-04	9.57E-06	5.09E-04	1.78E-04	9.12E-04	0.0422	0.366	0.0489	9.52
LALL-B MID H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	8.06E-05	4.53E-05	1.37E-04	5.12E-06	5.09E-04	1.78E-04	9.12E-04	0.038	0.348	0.0266	13.7
LALL-B OUF H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	9.51E-05	4.73E-05	1.32E-04	7.01E-06	5.09E-04	1.78E-04	9.12E-04	0.0505	0.488	0.0266	8.16
LALL-B PPR1 H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	2.47E-04	3.11E-04	5.44E-04	4.91E-05	5.09E-04	1.78E-04	9.12E-04	0.1	0.52	1.71	4
LALL-B PPR2 H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	2.40E-04	3.05E-04	5.48E-04	3.02E-05	5.09E-04	1.78E-04	9.12E-04	0.1	0.4	1.76	4
LALL-B PPR3 H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	2.37E-04	3.07E-04	5.52E-04	4.40E-05	5.09E-04	1.78E-04	9.12E-04	0.1	3.61	1.78	11.3
SWI LALL-B_0823	8/23/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	2.4	1.5	10	16.05	2.72E-04	3.24E-04	6.09E-04	4.48E-05	4.71E-04	1.65E-04	9.12E-04	0.013	0.63	0.028	6.5
SWI LALL-B_0830	8/30/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	3.6	1.7	10	16.05	2.23E-04	3.00E-04	6.05E-04	4.40E-05	4.88E-04	1.58E-04	9.12E-04	0.017	0.66	0.052	16.5
SWI LALL-B_0906	9/6/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	2.7	1.5	10	16.05	2.50E-04	3.30E-04	6.31E-04	4.30E-05	5.08E-04	1.66E-04	9.12E-04	0.022	0.56	0.051	10.5
SWI LALL-B_0913	9/13/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	4.7	2.7	10	16.05	2.75E-04	3.45E-04	6.57E-04	4.71E-05	5.87E-04	1.88E-04	9.12E-04	0.034	0.97	0.045	11.2
LALL-B INF H2O_0919	9/19/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	8.61E-05	3.71E-05	5.09E-05	6.39E-06	5.09E-04	1.78E-04	9.12E-04	0.0308	0.991	0.0277	8.64
LALL-B MID H2O_0919	9/19/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	9.36E-05	4.28E-05	4.48E-05	6.39E-06	5.09E-04	1.78E-04	9.12E-04	0.0217	1.08	0.0357	8.78
LALL-B PPR1 H2O_0919	9/19/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	3.12E-04	3.38E-04	6.09E-04	5.12E-05	5.09E-04	1.78E-04	9.12E-04	0.1	0.4	0.116	4
LALL-B PPR2 H2O_0919	9/19/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	3.24E-04	3.36E-04	6.13E-04	6.70E-05	5.09E-04	1.78E-04	9.12E-04	0.1	0.4	0.1	4
LALL-B PPR3 H2O_0919	9/19/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	3.09E-04	3.41E-04	6.05E-04	5.73E-05	5.09E-04	1.78E-04	9.12E-04	0.1	0.4	0.1	4
LALL0B OUF H2O	9/19/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	8.86E-05	4.08E-05	7.05E-05	6.39E-06	5.09E-04	1.78E-04	9.12E-04	0.0243	1.22	0.0346	10
SWI LALL-B_0920	9/20/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	4.9	3.0	10	16.05	3.29E-04	3.98E-04	7.70E-04	5.42E-05	6.23E-04	1.84E-04	9.12E-04	0.038	0.54	0.065	4.2
OW LALL-C_0723	7/23/2010	LALL	C	Overlying Water	OverWater	7.7169	1.8	1.5	10	15.25	2.80E-04	3.38E-04	5.57E-04	4.07E-05	4.62E-04	1.63E-04	8.82E-04	0.008	0.37	0.044	4.4
OW LALL-C_0726	7/26/2010	LALL	C	Overlying Water	OverWater	7.7169	2.5	1.5	10	15.25	2.82E-04	3.20E-04	5.44E-04	3.86E-05	4.63E-04	1.65E-04	8.82E-04	0.011	0.57	0.022	2.2
OW LALL-C_0802	8/2/2010	LALL	C	Overlying Water	OverWater	7.7169	2.6	1.5	10	15.25	2.62E-04	3.14E-04	5.83E-04	4.04E-05	4.87E-04	1.80E-04	8.82E-04	0.012	0.38	0.038	37.6
OW LALL-C_0809	8/9/2010	LALL	C	Overlying Water	OverWater	7.7169	3.8	1.9	10	15.25	2.67E-04	3.04E-04	6.09E-04	4.32E-05	4.53E-04	1.85E-04	8.82E-04	0.012	0.67	0.042	10.8
OW LALL-C_0816	8/16/2010	LALL	C	Overlying Water	OverWater	7.7169	4.3	2.4	10	15.25	2.80E-04	3.20E-04	6.00E-04	4.43E-05	4.75E-04	1.72E-04	8.82E-04	0.013	0.65	0.052	70.7
OW LALL-C_0823	8/23/2010	LALL	C	Overlying Water	OverWater	7.7169	2.6	1.5	10	15.25	2.84E-04	3.36E-04	6.18E-04	4.60E-05	4.78E-04	1.63E-04	8.82E-04	0.016	0.84	0.057	29.5
OW LALL-C_0830	8/30/2010	LALL	C	Overlying Water	OverWater	7.7169	3.3	1.5	10	15.25	2.55E-04	3.24E-04	6.31E-04	4.58E-05	5.42E-04	1.71E-04	8.82E-04	0.04	0.62	0.054	8
OW LALL-C_0906	9/6/2010	LALL	C	Overlying Water	OverWater	7.7169	28.7	26.8	10	15.25	2.49E-04	3.26E-04	6.00E-04	4.14E-05	5.38E-04	1.77E-04	8.82E-04	0.01	0.43	0.029	4.9
OW LALL-C_0913	9/13/2010	LALL	C	Overlying Water	OverWater	7.7169	3.4	1.5	10	15.25	2.77E-04	3.57E-04	6.57E-04	4.68E-05	5.73E-04	2.44E-04	8.82E-04	0.015	0.52	0.031	4.9
OW LALL-C_0920	9/20/2010	LALL	C	Overlying Water	OverWater	7.7169	3.4	1.5	10	15.25	3.12E-04	3.43E-04	6.83E-04	4.76E-05	5.71E-04	1.67E-04	8.82E-04	0.028	1.06	0.067	4.1
PW LALL-C_0723	7/23/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	12.0	10.1	10	18.55	5.12E-04	1.65E-04	4.83E-04	1.35E-04	3.75E-04	1.67E-04	1.50E-03	0.534	2.5	0.213	31.2
PW LALL-C_0726	7/26/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	11.2	9.3	10	18.55	5.24E-04	1.83E-04	5.00E-04	1.19E-04	3.94E-04	1.51E-04	1.50E-03	0.426	1.27	0.392	28.4
PW LALL-C_0802	8/2/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	11.2	9.3	10	18.55	4.64E-04	1.60E-04	4.28E-04	1.05E-04	4.20E-04	2.02E-04	1.50E-03	0.273	1.63	0.307	168
PW LALL-C_0809	8/9/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	11.1	9.2	10	18.55	5.96E-04	2.00E-04	5.44E-04	1.38E-04	4.49E-04	1.95E-04	1.50E-03	1.03	4.91	0.589	46
PW LALL-C_0816	8/16/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	8.0	6.1	10	18.55	5.09E-04	2.03E-04	5.22E-04	9.82E-05	4.00E-04	1.89E-04	1.50E-03	0.311	2.68	8.07	104
PW LALL-C_0823	8/23/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	7.3	5.3	10	18.55	4.89E-04	2.30E-04	5.79E-04	9.26E-05	4.69E-04	1.86E-04	1.50E-03	0.154	0.7	0.124	78.8
PW LALL-C_0830	8/30/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	12.5	10.6	10	18.55	4.62E-04	2.29E-04	5.83E-04	8.59E-05	5.23E-04	1.89E-04	1.50E-03	0.042	0.88	0.202	106
PW LALL-C_0906	9/6/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	7.4	5.5	10	18.55	5.29E-04	2.62E-04	6.05E-04	9.18E-05	4.80E-04	1.97E-04	1.50E-03	0.013	0.39	0.091	187
PW LALL-C_0913	9/13/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	7.9	5.9	10	18.55	5.09E-04	2.57E-04	5.57E-04	8.31E-05	5.15E-04	2.34E-04	1.50E-03	0.048	0.47	0.195	95.1
PW LALL-C_0920	9/20/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	7.1	5.2	10	18.55	5.37E-04	2.66E-04	5.96E-04	8.77E-05	5.43E-04	1.78E-04	1.50E-03	0.023	0.36	0.143	84
SWI LALL-C_0726	7/26/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	2.5	1.5	10	16.65	2.89E-04	3.34E-04	5.39E-04	3.84E-05	4.66E-04	1.62E-04	8.78E-04	0.013	0.7	0.028	44.1
SWI LALL-C_0802	8/2/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	4.1	2.1	10	16.65	2.60E-04	3.14E-04	5.48E-04	3.94E-05	4.63E-04	1.83E-04	8.78E-04	0.02	0.8	0.048	10
SWI LALL-C_0809	8/9/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	5.6	3.6	10	16.65	2.80E-04	3.16E-04	6.13E-04	4.27E-05	4.78E-04	1.95E-04	8.78E-04	0.017	0.57	0.036	9.3

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
SWI LALL-C_0816	8/16/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	3.5	1.6	10	16.65	2.82E-04	3.23E-04	5.96E-04	4.40E-05	4.93E-04	1.68E-04	8.78E-04	0.014	0.58	0.047	8.6
SWI LALL-C_0823	8/23/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	3.9	1.9	10	16.65	2.75E-04	3.24E-04	6.13E-04	4.43E-05	4.79E-04	1.63E-04	8.78E-04	0.008	0.86	0.03	5.2
SWI LALL-C_0830	8/30/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	3.0	1.5	10	16.65	2.42E-04	3.16E-04	6.31E-04	4.58E-05	5.21E-04	1.68E-04	8.78E-04	0.043	0.64	0.08	14.1
SWI LALL-C_0906	9/6/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	4.3	2.4	10	16.65	2.60E-04	3.48E-04	6.39E-04	4.45E-05	5.31E-04	1.68E-04	8.78E-04	0.019	0.46	0.031	7.1
SWI LALL-C_0913	9/13/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	3.0	1.5	10	16.65	2.65E-04	3.40E-04	6.26E-04	4.27E-05	5.76E-04	1.79E-04	8.78E-04	0.013	0.47	0.028	3.9
SWI LALL-C_0920	9/20/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	3.9	2.0	10	16.65	2.99E-04	3.47E-04	6.44E-04	4.43E-05	5.91E-04	1.69E-04	8.78E-04	0.008	0.43	0.026	5.5
OW LALL-D_0723	7/23/2010	LALL	D	Overlying Water	OverWater	7.7007	2.2	1.5	10	15.25	3.04E-04	3.59E-04	5.92E-04	4.50E-05	4.84E-04	1.77E-04	8.61E-04	0.022	0.51	0.034	13.6
OW LALL-D_0726	7/26/2010	LALL	D	Overlying Water	OverWater	7.7007	2.2	1.5	10	15.25	2.92E-04	3.33E-04	5.61E-04	3.96E-05	4.70E-04	1.68E-04	8.61E-04	0.018	0.35	0.021	2.2
OW LALL-D_0802	8/2/2010	LALL	D	Overlying Water	OverWater	7.7007	3.6	1.7	10	15.25	2.65E-04	3.20E-04	6.09E-04	3.99E-05	5.10E-04	1.92E-04	8.61E-04	0.011	0.41	0.334	9.4
OW LALL-D_0802_2	8/2/2010	LALL	D	Overlying Water	OverWater	7.7007	2.7	1.5	10	15.25	2.80E-04	3.28E-04	6.61E-04	4.53E-05	4.93E-04	1.98E-04	8.61E-04	0.011	0.37	0.039	10
OW LALL-D_0809	8/9/2010	LALL	D	Overlying Water	OverWater	7.7007	9.8	7.9	10	15.25	3.12E-04	3.49E-04	6.48E-04	4.78E-05	5.18E-04	2.22E-04	8.61E-04	0.016	0.61	0.047	7.8
OW LALL-D_0816	8/16/2010	LALL	D	Overlying Water	OverWater	7.7007	21.1	19.2	10	15.25	2.80E-04	3.21E-04	6.09E-04	4.48E-05	4.69E-04	1.69E-04	8.61E-04	0.017	0.93	0.056	15.6
OW LALL-D_0823	8/23/2010	LALL	D	Overlying Water	OverWater	7.7007	2.8	1.5	10	15.25	2.70E-04	3.32E-04	6.09E-04	4.50E-05	4.99E-04	1.68E-04	8.61E-04	0.02	0.75	0.062	1280
OW LALL-D_0830	8/30/2010	LALL	D	Overlying Water	OverWater	7.7007	3.4	1.5	10	15.25	2.89E-04	3.88E-04	7.35E-04	5.14E-05	6.24E-04	1.99E-04	8.61E-04	0.007	0.69	0.048	13.8
OW LALL-D_0906	9/6/2010	LALL	D	Overlying Water	OverWater	7.7007	3.6	1.6	10	15.25	2.42E-04	3.05E-04	5.87E-04	4.53E-05	4.93E-04	1.62E-04	8.61E-04	0.027	1.43	0.08	10.5
OW LALL-D_0913	9/13/2010	LALL	D	Overlying Water	OverWater	7.7007	3.8	1.9	10	15.25	2.52E-04	3.26E-04	5.79E-04	4.12E-05	5.06E-04	1.74E-04	8.61E-04	0.012	0.34	0.024	2.1
OW LALL-D_0920	9/20/2010	LALL	D	Overlying Water	OverWater	7.7007	4.0	2.1	10	15.25	3.14E-04	3.61E-04	6.53E-04	4.50E-05	6.09E-04	1.73E-04	8.61E-04	0.005	1.8	0.025	7.3
LALL-D INF SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	7.04E-05	4.20E-05	1.60E-04	5.12E-06	5.13E-04	2.01E-04	1.55E-03	0.0446	0.34	0.0468	8.52
LALL-D MID SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	6.86E-05	4.65E-05	2.03E-04	5.12E-06	5.13E-04	2.01E-04	1.55E-03	0.0382	0.376	0.0415	5.76
LALL-D OUF SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	6.76E-05	4.77E-05	2.26E-04	5.12E-06	5.13E-04	2.01E-04	1.55E-03	0.037	0.298	0.045	4.58
LALL-D PPR1 SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	3.19E-04	2.47E-04	5.18E-04	6.80E-05	5.13E-04	2.01E-04	1.55E-03	0.282	0.42	0.364	6.1
LALL-D PPR2 SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	2.97E-04	3.09E-04	5.31E-04	5.45E-05	5.13E-04	2.01E-04	1.55E-03	0.162	0.4	0.238	4
LALL-D PPR3 SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	3.17E-04	2.34E-04	5.35E-04	6.91E-05	5.13E-04	2.01E-04	1.55E-03	0.144	0.68	0.266	6.7
LALL-D INF SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	6.66E-05	3.51E-05	7.61E-05	5.12E-06	5.13E-04	2.01E-04	1.55E-03	0.03	0.262	0.294	11.9
LALL-D MID SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	7.39E-05	3.87E-05	9.22E-05	5.99E-06	5.13E-04	2.01E-04	1.55E-03	0.0339	0.292	0.138	8.45
LALL-D OUF SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	6.59E-05	3.38E-05	8.22E-05	6.50E-06	5.13E-04	2.01E-04	1.55E-03	0.0255	0.311	0.23	13.8
LALL-D PPR1 SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	3.52E-04	1.65E-04	5.09E-04	7.21E-05	5.13E-04	2.01E-04	1.55E-03	0.1	0.55	1.69	4
LALL-D PPR2 SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	2.94E-04	3.17E-04	5.61E-04	6.86E-05	5.13E-04	2.01E-04	1.55E-03	0.122	0.4	1.51	4
LALL-D PPR3 SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	2.39E-04	2.93E-04	5.00E-04	3.89E-05	5.13E-04	2.01E-04	1.55E-03	0.1	0.68	1.66	9.1
LALL-D INF SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	7.09E-05	4.40E-05	1.08E-04	6.39E-06	5.13E-04	2.01E-04	1.55E-03	0.0306	1.12	0.0871	9.85
LALL-D MID SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	8.78E-05	5.64E-05	1.32E-04	6.39E-06	5.13E-04	2.01E-04	1.55E-03	0.0398	0.943	0.0956	9.32
LALL-D OUF SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	8.96E-05	5.23E-05	1.29E-04	6.39E-06	5.13E-04	2.01E-04	1.55E-03	0.0341	1.12	0.0956	10.2
LALL-D PPR1 SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	3.69E-04	2.55E-04	5.92E-04	7.14E-05	5.13E-04	2.01E-04	1.55E-03	0.1	0.4	0.1	4
LALL-D PPR2 SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	3.39E-04	3.25E-04	6.05E-04	6.60E-05	5.13E-04	2.01E-04	1.55E-03	0.1	0.4	0.186	4
LALL-D PPR3 SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	2.65E-04	3.24E-04	6.05E-04	7.14E-05	5.13E-04	2.01E-04	1.55E-03	0.1	0.4	0.1	5.2
PW LALL-D_0723	7/23/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	9.2	7.3	10	18.75	5.02E-04	1.71E-04	5.05E-04	1.29E-04	5.13E-04	2.01E-04	1.55E-03	0.368	1.38	0.216	21.4
PW LALL-D_0726	7/26/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	8.2	6.3	10	18.75	5.04E-04	1.85E-04	5.48E-04	1.06E-04	4.42E-04	1.68E-04	1.55E-03	0.306	1.09	0.314	29
PW LALL-D_0802	8/2/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	10.7	8.8	10	18.75	5.51E-04	1.93E-04	5.39E-04	1.24E-04	4.71E-04	3.22E-04	1.55E-03	0.176	0.71	0.234	319
PW LALL-D_0809	8/9/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	10.1	8.2	10	18.75	5.91E-04	2.05E-04	5.79E-04	1.23E-04	3.42E-04	2.18E-04	1.55E-03	0.187	0.68	0.215	17.5
PW LALL-D_0816	8/16/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	6.1	4.2	10	18.75	5.17E-04	2.38E-04	5.57E-04	1.00E-04	4.45E-04	1.92E-04	1.55E-03	0.415	2.71	10.9	91.5
PW LALL-D_0823	8/23/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	5.5	3.6	10	18.75	4.84E-04	2.46E-04	6.00E-04	9.31E-05	6.17E-04	1.84E-04	1.55E-03	0.27	0.67	0.306	18.2
PW LALL-D_0830	8/30/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	5.6	3.7	10	18.75	4.79E-04	2.34E-04	5.83E-04	8.49E-05	7.53E-04	1.86E-04	1.55E-03	0.052	0.53	0.214	28.1
PW LALL-D_0906	9/6/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	6.2	4.2	10	18.75	5.44E-04	2.77E-04	6.13E-04	9.39E-05	5.50E-04	1.81E-04	1.55E-03	0.027	0.42	0.091	11.7
PW LALL-D_0913	9/13/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	7.0	5.0	10	18.75	5.41E-04	2.67E-04	5.66E-04	8.65E-05	4.85E-04	1.90E-04	1.55E-03	0.043	0.41	1.06	18.9
PW LALL-D_0920	9/20/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	7.9	5.9	10	18.75	6.16E-04	2.54E-04	5.87E-04	9.90E-05	5.16E-04	1.68E-04	1.55E-03	0.024	0.3	0.173	28.8
SWI LALL-D_0726	7/26/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	2.2	1.5	10	16.45	2.82E-04	3.45E-04	5.70E-04	3.63E-05	4.76E-04	1.70E-04	8.86E-04	0.019	0.4	0.036	88.5
LALL-D INF H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	9.88E-05	4.57E-05	1.11E-04	5.12E-06	5.21E-04	1.78E-04	8.86E-04	0.0148	0.207	0.0243	10.6
LALL-D MID H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	1.08E-04	5.14E-05	1.28E-04	5.12E-06	5.21E-04	1.78E-04	8.86E-04	0.0198	0.22	0.0361	9.35
LALL-D OUF H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	1.09E-04	5.23E-05	1.34E-04	5.12E-06	5.21E-04	1.78E-04	8.86E-04	0.0186	0.227	0.0273	4.56
LALL-D PPR1 H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	2.17E-04	3.15E-04	5.44E-04	4.25E-05	5.21E-04	1.78E-04	8.86E-04	0.1	0.4	0.17	4
LALL-D PPR2 H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	2.25E-04	3.20E-04	5.52E-04	5.32E-05	5.21E-04	1.78E-04	8.86E-04	0.1	1.07	0.384	5.4
LALL-D PPR3 H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	2.29E-04	3.21E-04	5.52E-04	3.96E-05	5.21E-04	1.78E-04	8.86E-04	0.1	0.4	0.51	4
SWI LALL-D_0802	8/2/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	3.5	1.5	10	16.45	2.72E-04	3.27E-04	5.66E-04	4.07E-05	4.94E-04	1.96E-04	8.86E-04	0.02	2.69	0.054	5.2
SWI LALL-D_0809	8/9/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	5.2	3.2	10	16.45	3.17E-04	3.73E-04	7.13E-04	4.94E-05	5.26E-04	2.25E-04	8.86E-04	0.032	0.71	0.053	16
SWI LALL-D_0816	8/16/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	2.8	1.5	10	16.45	3.54E-04	3.24E-04	7.05E-04	4.68E-05	4.79E-04	1.76E-04	8.86E-04	0.084	1.6	0.248	103
LALL-D INF H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	7.94E-05	3.73E-05	5.52E-05	5.12E-06	5.21E-04	1.78E-04	8.86E-04	0.015	0.275	0.0281	6.02

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
LALL-D MID H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	8.56E-05	3.97E-05	6.22E-05	5.12E-06	5.21E-04	1.78E-04	8.86E-04	0.0182	0.261	0.0151	6.03
LALL-D OUF H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	7.49E-05	3.51E-05	6.53E-05	5.12E-06	5.21E-04	1.78E-04	8.86E-04	0.0231	0.294	0.02	7.49
LALL-D PPR1 H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	2.41E-04	3.04E-04	5.39E-04	4.14E-05	5.21E-04	1.78E-04	8.86E-04	0.1	0.4	1.72	4
LALL-D PPR2 H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	2.45E-04	3.13E-04	5.66E-04	3.43E-05	5.21E-04	1.78E-04	8.86E-04	0.1	0.4	1.89	4
LALL-D PPR3 H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	2.45E-04	3.12E-04	5.61E-04	3.79E-05	5.21E-04	1.78E-04	8.86E-04	0.1	0.65	1.55	4
SWI LALL-D_0823	8/23/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	3.6	1.7	10	16.45	2.84E-04	3.31E-04	6.22E-04	4.45E-05	4.93E-04	1.66E-04	8.86E-04	0.016	0.73	0.045	16.5
SWI LALL-D_0830	8/30/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	3.0	1.5	10	16.45	2.84E-04	3.93E-04	7.22E-04	5.17E-05	6.22E-04	1.95E-04	8.86E-04	0.014	0.57	0.045	15.8
SWI LALL-D_0906	9/6/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	3.8	1.9	10	16.45	2.35E-04	2.94E-04	5.74E-04	4.43E-05	4.82E-04	1.63E-04	8.86E-04	0.026	0.9	0.12	9.8
SWI LALL-D_0913	9/13/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	2.5	1.5	10	16.45	2.52E-04	3.23E-04	6.00E-04	4.22E-05	5.19E-04	1.57E-04	8.86E-04	0.023	0.5	0.045	6.8
LALL-D INF H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	1.17E-04	5.47E-05	8.57E-05	6.39E-06	5.21E-04	1.78E-04	8.86E-04	0.0346	1.42	0.0403	11.8
LALL-D MID H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	1.26E-04	5.93E-05	8.22E-05	6.39E-06	5.21E-04	1.78E-04	8.86E-04	0.0378	1.38	0.0724	12.6
LALL-D OUF H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	1.04E-04	4.65E-05	8.00E-05	6.39E-06	5.21E-04	1.78E-04	8.86E-04	0.0266	1.1	0.0256	10.2
LALL-D PPR1 H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	2.87E-04	3.46E-04	6.26E-04	5.63E-05	5.21E-04	1.78E-04	8.86E-04	0.1	0.4	0.59	4
LALL-D PPR2 H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	2.89E-04	3.48E-04	6.44E-04	6.42E-05	5.21E-04	1.78E-04	8.86E-04	0.1	0.4	0.132	4
LALL-D PPR3 H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	2.89E-04	3.43E-04	6.18E-04	6.01E-05	5.21E-04	1.78E-04	8.86E-04	0.1	0.4	0.134	4
SWI LALL-D_0920	9/20/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	4.1	2.2	10	16.45	2.99E-04	3.40E-04	6.39E-04	4.12E-05	6.01E-04	1.73E-04	8.86E-04	0.008	0.93	0.026	9.9
OW LALL-E_0723	7/23/2010	LALL	E	Overlying Water	OverWater	7.7769	2.0	1.5	10	14.95	3.04E-04	3.60E-04	5.83E-04	4.27E-05	4.72E-04	1.73E-04	8.96E-04	0.016	0.4	0.024	10.6
OW LALL-E_0726	7/26/2010	LALL	E	Overlying Water	OverWater	7.7769	2.2	1.5	10	14.95	3.02E-04	3.65E-04	5.92E-04	3.91E-05	5.01E-04	1.79E-04	8.96E-04	0.019	0.36	0.032	4
OW LALL-E_0802	8/2/2010	LALL	E	Overlying Water	OverWater	7.7769	2.9	1.5	10	14.95	2.92E-04	3.37E-04	6.44E-04	4.35E-05	4.95E-04	2.05E-04	8.96E-04	0.01	0.49	0.027	12.9
OW LALL-E_0809	8/9/2010	LALL	E	Overlying Water	OverWater	7.7769	4.8	2.9	10	14.95	2.57E-04	2.98E-04	6.05E-04	4.25E-05	4.59E-04	1.98E-04	8.96E-04	0.017	0.77	0.086	6
OW LALL-E_0816	8/16/2010	LALL	E	Overlying Water	OverWater	7.7769	3.6	1.7	10	14.95	2.65E-04	3.08E-04	5.92E-04	4.35E-05	4.16E-04	1.72E-04	8.96E-04	0.014	0.72	0.052	12.2
OW LALL-E_0823	8/23/2010	LALL	E	Overlying Water	OverWater	7.7769	3.2	1.5	10	14.95	2.72E-04	3.20E-04	6.00E-04	4.53E-05	4.84E-04	1.79E-04	8.96E-04	0.018	1.33	0.046	20.2
OW LALL-E_0830	8/30/2010	LALL	E	Overlying Water	OverWater	7.7769	2.9	1.5	10	14.95	2.52E-04	3.22E-04	6.22E-04	4.40E-05	4.75E-04	1.65E-04	8.96E-04	0.034	0.69	0.102	17.8
OW LALL-E_0906	9/6/2010	LALL	E	Overlying Water	OverWater	7.7769	3.1	1.5	10	14.95	2.41E-04	3.19E-04	5.87E-04	4.09E-05	5.26E-04	1.67E-04	8.96E-04	0.017	0.77	0.051	12.1
OW LALL-E_0913	9/13/2010	LALL	E	Overlying Water	OverWater	7.7769	3.0	1.5	10	14.95	2.57E-04	3.40E-04	5.87E-04	4.27E-05	5.25E-04	1.61E-04	8.96E-04	0.022	1.33	0.061	2.8
OW LALL-E_0920	9/20/2010	LALL	E	Overlying Water	OverWater	7.7769	3.5	1.6	10	14.95	3.19E-04	3.51E-04	6.70E-04	4.73E-05	5.65E-04	1.75E-04	8.96E-04	0.018	0.66	0.047	2.5
PW LALL-E_0723	7/23/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	11.4	9.5	10	19.15	5.96E-04	1.98E-04	5.31E-04	1.44E-04	4.12E-04	1.52E-04	2.11E-03	0.316	1.8	1.09	56.6
PW LALL-E_0726	7/26/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	20.2	18.3	10	19.15	3.22E-04	1.10E-04	3.19E-04	9.16E-05	4.80E-04	1.62E-04	2.11E-03	0.328	0.76	0.436	29.8
PW LALL-E_0802	8/2/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	13.0	11.1	10	19.15	7.01E-04	2.28E-04	5.83E-04	1.40E-04	4.67E-04	2.28E-04	2.11E-03	0.168	0.61	0.496	140
PW LALL-E_0809	8/9/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	11.1	9.2	10	19.15	7.21E-04	2.38E-04	5.92E-04	1.44E-04	4.64E-04	1.81E-04	2.11E-03	0.278	0.39	0.297	30.2
PW LALL-E_0816	8/16/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	7.5	5.5	10	19.15	6.34E-04	2.39E-04	5.61E-04	1.18E-04	4.69E-04	2.08E-04	2.11E-03	0.6	4.27	18.9	67
PW LALL-E_0823	8/23/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	8.1	6.2	10	19.15	8.23E-04	2.32E-04	7.57E-04	1.37E-04	4.64E-04	1.90E-04	2.11E-03	0.323	1.23	0.322	125
PW LALL-E_0830	8/30/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	7.8	5.9	10	19.15	5.46E-04	2.05E-04	5.48E-04	9.54E-05	4.78E-04	1.82E-04	2.11E-03	0.042	0.43	0.222	28
PW LALL-E_0906	9/6/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	8.7	6.8	10	19.15	6.36E-04	2.53E-04	6.22E-04	1.15E-04	4.58E-04	1.77E-04	2.11E-03	0.025	0.29	0.109	17.6
PW LALL-E_0913	9/13/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	6.9	5.0	10	19.15	6.44E-04	2.53E-04	5.70E-04	1.05E-04	4.83E-04	2.32E-04	2.11E-03	0.032	0.37	0.212	27.2
PW LALL-E_0920	9/20/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	8.0	6.0	10	19.15	5.51E-04	2.71E-04	6.09E-04	9.16E-05	3.96E-04	1.72E-04	2.11E-03	0.025	0.34	0.197	15.5
SWI LALL-E_0726	7/26/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	1.8	1.5	10	16.35	3.02E-04	3.72E-04	6.09E-04	3.81E-05	5.06E-04	1.80E-04	9.05E-04	0.015	0.35	0.02	2.9
SWI LALL-E_0802	8/2/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	2.8	1.5	10	16.35	2.87E-04	3.35E-04	6.09E-04	4.14E-05	4.63E-04	2.15E-04	9.05E-04	0.017	0.79	0.039	12
SWI LALL-E_0809	8/9/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	6.4	4.5	10	16.35	2.60E-04	3.00E-04	5.92E-04	4.20E-05	4.51E-04	1.99E-04	9.05E-04	0.018	0.73	0.054	11
SWI LALL-E_0816	8/16/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	4.3	2.4	10	16.35	2.72E-04	3.25E-04	6.13E-04	4.43E-05	4.95E-04	1.89E-04	9.05E-04	0.022	1.08	0.113	29.6
SWI LALL-E_0823	8/23/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	4.0	2.1	10	16.35	2.98E-04	3.42E-04	6.46E-04	4.83E-05	5.12E-04	1.57E-04	9.05E-04	0.023	0.6	0.071	26
SWI LALL-E_0830	8/30/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	2.7	1.5	10	16.35	2.31E-04	3.05E-04	6.39E-04	4.60E-05	4.92E-04	1.59E-04	9.05E-04	0.018	0.62	0.062	15.4
SWI LALL-E_0906	9/6/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	2.9	1.5	10	16.35	2.43E-04	3.25E-04	6.22E-04	4.25E-05	5.08E-04	1.66E-04	9.05E-04	0.027	0.47	0.134	6.4
SWI LALL-E_0913	9/13/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	3.6	1.7	10	16.35	2.37E-04	3.13E-04	5.92E-04	4.14E-05	5.30E-04	1.61E-04	9.05E-04	0.016	0.6	0.042	67.9
SWI LALL-E_0920	9/20/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	4.2	2.3	10	16.35	3.17E-04	3.74E-04	7.22E-04	5.14E-05	5.66E-04	1.72E-04	9.05E-04	0.059	0.65	0.536	16.9
OW LALL-F_0723	7/23/2010	LALL	F	Overlying Water	OverWater	7.7201	2.0	1.5	10	15.25	2.92E-04	3.47E-04	5.74E-04	4.14E-05	4.58E-04	1.68E-04	9.15E-04	0.005	0.35	0.027	10.1
OW LALL-F_0726	7/26/2010	LALL	F	Overlying Water	OverWater	7.7201	2.4	1.5	10	15.25	2.97E-04	3.32E-04	5.39E-04	3.86E-05	4.78E-04	1.77E-04	9.15E-04	0.005	0.48	0.021	13.3
OW LALL-F_0802	8/2/2010	LALL	F	Overlying Water	OverWater	7.7201	2.4	1.5	10	15.25	2.94E-04	3.34E-04	6.35E-04	4.35E-05	4.89E-04	1.87E-04	9.15E-04	0.008	0.59	0.049	20.4
OW LALL-F_0809	8/9/2010	LALL	F	Overlying Water	OverWater	7.7201	4.4	2.4	10	15.25	2.94E-04	3.32E-04	6.09E-04	4.35E-05	4.87E-04	2.00E-04	9.15E-04	0.005	0.57	0.036	12.6
OW LALL-F_0816	8/16/2010	LALL	F	Overlying Water	OverWater	7.7201	4.0	2.1	10	15.25	2.87E-04	3.29E-04	6.18E-04	4.55E-05	4.71E-04	1.72E-04	9.15E-04	0.01	0.87	0.042	11.6
OW LALL-F_0823	8/23/2010	LALL	F	Overlying Water	OverWater	7.7201	2.8	1.5	10	15.25	2.75E-04	3.16E-04	6.00E-04	4.32E-05	5.31E-04	1.75E-04	9.15E-04	0.041	1.06	0.099	10.1
OW LALL-F_0830	8/30/2010	LALL	F	Overlying Water	OverWater	7.7201	3.9	2.0	10	15.25	2.94E-04	3.79E-04	6.96E-04	5.12E-05	6.17E-04	1.99E-04	9.15E-04	0.007	0.65	0.038	19.4
OW LALL-F_0906	9/6/2010	LALL	F	Overlying Water	OverWater	7.7201	2.9	1.5	10	15.25	2.75E-04	3.60E-04	6.61E-04	4.66E-05	5.88E-04	1.88E-04	9.15E-04	0.007	0.67	0.016	2.7
OW LALL-F_0913	9/13/2010	LALL	F	Overlying Water	OverWater	7.7201	2.8	1.5	10	15.25	4.37E-04	3.27E-04	6.26E-04	4.66E-05	5.12E-04	1.61E-04	9.15E-04	0.228	0.91	0.625	103
OW LALL-F_0920	9/20/2010	LALL	F	Overlying Water	OverWater	7.7201	3.5	1.6	10	15.25	3.07E-04	3.51E-04	6.61E-04	4.43E-05	5.90E-04	1.67E-04	9.15E-04	0.008	0.46	0.028	5.5
PW LALL-F_0723	7/23/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	9.9	8.0	10	18.15	5.02E-04	1.70E-04	5.44E-04	1.33E-04	4.52E-04	1.85E-04	1.31E-03	0.696	2.45	1.9	20.4

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
PW LALL-F_0726	7/26/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	9.1	7.2	10	18.15	4.94E-04	1.78E-04	5.52E-04	1.19E-04	4.37E-04	1.82E-04	1.31E-03	0.307	0.76	0.18	17.3
PW LALL-F_0802	8/2/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	9.1	7.2	10	18.15	5.24E-04	1.91E-04	5.70E-04	1.13E-04	5.34E-04	2.85E-04	1.31E-03	0.223	1.26	0.418	108
PW LALL-F_0809	8/9/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	9.5	7.5	10	18.15	5.34E-04	1.97E-04	5.57E-04	1.09E-04	2.69E-04	1.90E-04	1.31E-03	0.122	0.55	0.196	12.6
PW LALL-F_0816	8/16/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	8.4	6.5	10	18.15	5.14E-04	2.09E-04	5.70E-04	1.04E-04	4.58E-04	2.26E-04	1.31E-03	0.5	9	13	66.1
PW LALL-F_0823	8/23/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	6.7	4.8	10	18.15	5.38E-04	2.37E-04	6.20E-04	1.01E-04	5.16E-04	1.92E-04	1.31E-03	0.165	0.53	0.244	16.6
PW LALL-F_0830	8/30/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	6.6	4.6	10	18.15	4.94E-04	2.33E-04	6.05E-04	8.52E-05	4.98E-04	2.06E-04	1.31E-03	0.039	0.48	0.193	20.8
PW LALL-F_0906	9/6/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	10.7	8.8	10	18.15	5.24E-04	2.64E-04	6.48E-04	9.34E-05	4.79E-04	2.01E-04	1.31E-03	0.037	0.35	0.121	8.5
PW LALL-F_0913	9/13/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	6.5	4.6	10	18.15	4.72E-04	2.42E-04	6.26E-04	8.80E-05	7.96E-04	2.60E-04	1.31E-03	0.029	0.43	0.514	18.4
PW LALL-F_0920	9/20/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	7.4	5.4	10	18.15	4.69E-04	2.56E-04	6.09E-04	7.65E-05	5.38E-04	1.78E-04	1.31E-03	0.114	0.51	0.183	17.2
SWI LALL-F_0726	7/26/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	2.4	1.5	10	16.35	2.80E-04	3.48E-04	5.74E-04	3.71E-05	4.75E-04	1.66E-04	9.41E-04	0.009	0.97	0.031	109
SWI LALL-F_0802	8/2/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	2.7	1.5	10	16.35	2.89E-04	3.32E-04	6.00E-04	4.04E-05	4.71E-04	1.89E-04	9.41E-04	0.006	0.36	0.025	6
SWI LALL-F_0809	8/9/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	4.8	2.9	10	16.35	2.82E-04	3.28E-04	6.35E-04	4.55E-05	4.91E-04	2.02E-04	9.41E-04	0.007	0.5	0.04	11.1
SWI LALL-F_0816	8/16/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	2.8	1.5	10	16.35	2.80E-04	3.34E-04	6.18E-04	4.37E-05	4.95E-04	1.39E-04	9.41E-04	0.018	0.75	0.052	30.3
SWI LALL-F_0823	8/23/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	4.5	2.6	10	16.35	2.45E-04	2.86E-04	5.35E-04	3.71E-05	5.01E-04	1.70E-04	9.41E-04	0.017	0.92	0.046	12.5
SWI LALL-F_0830	8/30/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	2.9	1.5	10	16.35	2.94E-04	3.81E-04	6.92E-04	5.14E-05	5.62E-04	1.82E-04	9.41E-04	0.01	0.61	0.061	8.3
SWI LALL-F_0906	9/6/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	3.6	1.7	10	16.35	2.70E-04	3.79E-04	6.87E-04	4.81E-05	5.85E-04	1.96E-04	9.41E-04	0.022	0.43	0.027	4.6
SWI LALL-F_0913	9/13/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	3.4	1.5	10	16.35	2.37E-04	3.14E-04	5.79E-04	4.07E-05	5.12E-04	1.59E-04	9.41E-04	0.015	0.55	0.033	4.8
SWI LALL-F_0920	9/20/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	3.6	1.7	10	16.35	3.14E-04	3.47E-04	6.96E-04	5.01E-05	5.68E-04	1.74E-04	9.41E-04	0.027	0.64	0.059	15.5
OW LD-01-A_0723	7/23/2010	LD	A	Overlying Water	OverWater	7.7367	2.1	1.5	10	15.65	2.97E-04	3.53E-04	5.74E-04	4.20E-05	4.65E-04	1.72E-04	8.56E-04	0.008	0.84	0.027	13.3
OW LD-01-A_0726	7/26/2010	LD	A	Overlying Water	OverWater	7.7367	2.3	1.5	10	15.65	2.94E-04	3.31E-04	5.44E-04	3.73E-05	4.67E-04	1.72E-04	8.56E-04	0.009	1.29	0.035	12.5
OW LD-01-A_0802	8/2/2010	LD	A	Overlying Water	OverWater	7.7367	3.1	1.5	10	15.65	3.32E-04	3.99E-04	7.18E-04	4.94E-05	5.66E-04	2.23E-04	8.56E-04	0.009	1.42	0.036	8.5
OW LD-01-A_0809	8/9/2010	LD	A	Overlying Water	OverWater	7.7367	4.6	2.7	10	15.65	2.65E-04	3.07E-04	6.09E-04	4.27E-05	5.09E-04	2.06E-04	8.56E-04	0.042	2.76	0.09	9.6
OW LD-01-A_0816	8/16/2010	LD	A	Overlying Water	OverWater	7.7367	3.8	1.9	10	15.65	3.12E-04	3.46E-04	6.57E-04	4.81E-05	4.94E-04	1.74E-04	8.56E-04	0.016	3.48	0.093	864
OW LD-01-A_0823	8/23/2010	LD	A	Overlying Water	OverWater	7.7367	3.6	1.7	10	15.65	3.17E-04	3.87E-04	7.00E-04	5.09E-05	5.96E-04	1.88E-04	8.56E-04	0.015	2.82	0.074	21.2
OW LD-01-A_0830	8/30/2010	LD	A	Overlying Water	OverWater	7.7367	3.7	1.7	10	15.65	2.42E-04	3.03E-04	6.18E-04	4.40E-05	4.99E-04	1.79E-04	8.56E-04	0.028	2.56	0.109	17.3
OW LD-01-A_0906	9/6/2010	LD	A	Overlying Water	OverWater	7.7367	2.5	1.5	10	15.65	2.48E-04	3.26E-04	6.00E-04	4.25E-05	5.07E-04	1.70E-04	8.56E-04	0.012	2.44	0.126	9.3
OW LD-01-A_0913	9/13/2010	LD	A	Overlying Water	OverWater	7.7367	2.4	1.5	10	15.65	2.36E-04	3.09E-04	5.66E-04	4.12E-05	4.90E-04	1.55E-04	8.56E-04	0.025	2.36	0.112	9
OW LD-01-A_0920	9/20/2010	LD	A	Overlying Water	OverWater	7.7367	3.3	1.5	10	15.65	4.09E-04	4.53E-04	8.27E-04	5.88E-05	7.31E-04	2.28E-04	8.56E-04	0.01	2.58	0.047	6.9
LD-01-A INF SED_0801	8/1/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	8.33E-05	2.99E-05	4.65E-05	5.12E-06	6.55E-04	2.00E-04	3.76E-03	0.0371	4.67	0.125	29.3
LD-01-A MID SED_0801	8/1/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	8.21E-05	2.72E-05	3.29E-05	5.12E-06	6.55E-04	2.00E-04	3.76E-03	0.0425	6.35	0.0861	32.7
LD-01-A OUF SED_0801	8/1/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	7.76E-05	2.22E-05	2.57E-05	5.12E-06	6.55E-04	2.00E-04	3.76E-03	0.0436	5.22	0.0921	31.7
LD01-A PPR1 SED_0801	8/1/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	3.49E-04	2.83E-04	5.48E-04	4.09E-05	6.55E-04	2.00E-04	3.76E-03	0.1	3.14	0.348	11.2
LD01-A PPR2 SED_0801	8/1/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	7.24E-04	3.75E-04	4.70E-04	5.86E-05	6.55E-04	2.00E-04	3.76E-03	0.1	7.86	0.198	15.7
LD01-A PPR3 SED_0801	8/1/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	7.51E-04	3.67E-04	4.52E-04	5.27E-05	6.55E-04	2.00E-04	3.76E-03	0.1	7.03	0.13	15.8
LD-01-A INF SED_0820	8/20/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	8.61E-05	3.64E-05	6.18E-05	5.12E-06	6.55E-04	2.00E-04	3.76E-03	0.0655	1.43	0.0194	17.2
LD-01-A MID SED_0820	8/20/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	9.11E-05	3.91E-05	6.83E-05	5.12E-06	6.55E-04	2.00E-04	3.76E-03	0.066	1.42	0.0224	16.8
LD-01-A OUF SED_0820	8/20/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	8.61E-05	3.69E-05	7.83E-05	5.12E-06	6.55E-04	2.00E-04	3.76E-03	0.0695	1.31	0.0277	20.7
LD01-A PPR1 SED_0820	8/20/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	1.17E-03	4.36E-04	5.35E-04	7.39E-05	6.55E-04	2.00E-04	3.76E-03	0.1	11.9	0.318	16.3
LD01-A PPR2 SED_0820	8/20/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	4.39E-04	3.19E-04	5.61E-04	4.22E-05	6.55E-04	2.00E-04	3.76E-03	0.756	14.8	0.21	48.4
LD01-A PPR3 SED_0820	8/20/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	7.71E-04	3.74E-04	5.48E-04	6.16E-05	6.55E-04	2.00E-04	3.76E-03	0.1	4.95	0.184	4
LD-01-A MID SED_0919	9/19/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	7.49E-05	3.08E-05	4.52E-05	6.39E-06	6.55E-04	2.00E-04	3.76E-03	0.0623	5.25	0.0481	43
LD-01-A OUF SED_0919	9/19/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	7.86E-05	3.11E-05	5.48E-05	6.39E-06	6.55E-04	2.00E-04	3.76E-03	0.0498	5.81	0.0358	40.9
LD01-A PPR1 SED_0919	9/19/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	4.79E-04	3.30E-04	6.09E-04	5.29E-05	6.55E-04	2.00E-04	3.76E-03	0.1	5.81	0.166	53.9
LD01-A PPR2 SED_0919	9/19/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	5.96E-04	3.23E-04	5.83E-04	7.09E-05	6.55E-04	2.00E-04	3.76E-03	0.128	6.83	0.212	26.7
LD01-A PPR3 SED_0919	9/19/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	5.24E-04	3.58E-04	6.22E-04	7.65E-05	6.55E-04	2.00E-04	3.76E-03	0.1	6.38	0.186	45.9
PW LD-01-A_0723	7/23/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	18.0	16.1	10	19.35	1.31E-03	5.31E-04	3.17E-04	8.98E-05	5.91E-04	1.52E-04	3.76E-03	0.105	48	0.373	54.2
PW LD-01-A_0726	7/26/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	28.4	26.5	10	19.35	1.39E-03	5.72E-04	5.70E-04	2.84E-04	5.53E-04	1.64E-04	3.76E-03	0.154	43.9	0.58	38.7
PW LD-01-A_0802	8/2/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	16.6	14.7	10	19.35	1.47E-03	6.01E-04	3.83E-04	8.72E-05	6.06E-04	2.56E-04	3.76E-03	0.14	35	0.183	561
PW LD-01-A_0809	8/9/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	12.1	10.2	10	19.35	1.47E-03	5.64E-04	4.29E-04	8.88E-05	6.50E-04	1.92E-04	3.76E-03	0.126	24.4	0.287	33.5
PW LD-01-A_0816	8/16/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	9.7	7.8	10	19.35	1.30E-03	4.98E-04	4.79E-04	8.03E-05	6.24E-04	2.07E-04	3.76E-03	0.121	18.7	0.239	730
PW LD-01-A_0823	8/23/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	8.0	6.0	10	19.35	1.29E-03	4.86E-04	5.44E-04	8.21E-05	6.46E-04	1.99E-04	3.76E-03	0.091	16	0.29	17
PW LD-01-A_0830	8/30/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	7.9	6.0	10	19.35	1.15E-03	4.40E-04	5.44E-04	7.57E-05	9.31E-04	2.31E-04	3.76E-03	0.121	20	0.306	54.3
PW LD-01-A_0906	9/6/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	8.9	7.0	10	19.35	1.12E-03	4.36E-04	5.79E-04	7.44E-05	6.35E-04	1.87E-04	3.76E-03	0.058	14.3	0.127	10.9
PW LD-01-A_0913	9/13/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	7.4	5.4	10	19.35	1.13E-03	4.28E-04	6.09E-04	7.75E-05	6.67E-04	2.30E-04	3.76E-03	0.146	15.1	0.299	20.5
PW LD-01-A_0920	9/20/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	12.6	10.7	10	19.35	1.10E-03	3.86E-04	5.79E-04	7.16E-05	6.43E-04	1.80E-04	3.76E-03	0.058	14	0.208	11.7
SWI LD-01-A_0726	7/26/2010	LD	A	Sediment-Water Interface	SWI	7.4756	2.2	1.5	10	16.85	2.89E-04	3.30E-04	5.39E-04	3.89E-05	4.75E-04	1.66E-04	9.04E-04	0.006	1.18	0.031	11.5

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Measured (mol/L) Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Measured (ug/L) Cadmium	Copper	Lead	Zinc
LD-01-A INF H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	6.86E-05	2.70E-05	4.96E-05	5.12E-06	5.36E-04	1.90E-04	9.04E-04	0.0107	0.634	0.0638	4.88
LD-01-A MID H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	8.43E-05	3.35E-05	3.82E-05	5.12E-06	5.36E-04	1.90E-04	9.04E-04	0.0128	0.956	0.0495	8.09
LD-01-A OUF H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	9.31E-05	3.77E-05	4.44E-05	5.12E-06	5.36E-04	1.90E-04	9.04E-04	0.0121	0.987	0.0469	6.8
LD01-A PPR1 H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	2.43E-04	3.37E-04	5.87E-04	4.04E-05	5.36E-04	1.90E-04	9.04E-04	0.1	1	0.134	61.9
LD01-A PPR2 H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	2.39E-04	3.35E-04	5.92E-04	4.81E-05	5.36E-04	1.90E-04	9.04E-04	0.1	0.74	0.126	4.8
LD01-A PPR3 H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	2.49E-04	3.40E-04	5.79E-04	3.94E-05	5.36E-04	1.90E-04	9.04E-04	0.1	1.09	0.11	4.3
SWI LD-01-A_0802	8/2/2010	LD	A	Sediment-Water Interface	SWI	7.4756	3.9	2.0	10	16.85	3.22E-04	3.86E-04	6.92E-04	4.68E-05	5.71E-04	2.50E-04	9.04E-04	0.009	1.52	0.034	8.1
SWI LD-01-A_0809	8/9/2010	LD	A	Sediment-Water Interface	SWI	7.4756	13.8	11.9	10	16.85	2.65E-04	3.09E-04	6.22E-04	4.32E-05	4.95E-04	2.07E-04	9.04E-04	0.046	2.75	0.098	12.3
SWI LD-01-A_0816	8/16/2010	LD	A	Sediment-Water Interface	SWI	7.4756	2.9	1.5	10	16.85	2.99E-04	3.44E-04	6.31E-04	4.58E-05	4.96E-04	1.74E-04	9.04E-04	0.032	3.61	0.148	26.9
LD-01-A INF H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	6.39E-05	2.38E-05	5.83E-05	5.12E-06	5.36E-04	1.90E-04	9.04E-04	0.0723	4.27	0.0258	32.3
LD-01-A MID H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	7.66E-05	3.13E-05	7.05E-05	5.12E-06	5.36E-04	1.90E-04	9.04E-04	0.0854	6.97	0.0477	41.2
LD-01-A OUF H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	7.94E-05	2.74E-05	8.87E-05	5.12E-06	5.36E-04	1.90E-04	9.04E-04	0.084	5.04	0.0355	41.7
LD01-A PPR1 H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	2.67E-04	3.25E-04	5.79E-04	4.32E-05	5.36E-04	1.90E-04	9.04E-04	0.1	1.37	0.28	13.9
LD01-A PPR2 H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	2.67E-04	3.30E-04	5.79E-04	4.60E-05	5.36E-04	1.90E-04	9.04E-04	0.1	1.06	0.208	12.5
LD01-A PPR3 H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	2.72E-04	3.30E-04	5.87E-04	4.58E-05	5.36E-04	1.90E-04	9.04E-04	0.1	1.34	0.218	15.9
SWI LD-01-A_0823	8/23/2010	LD	A	Sediment-Water Interface	SWI	7.4756	3.3	1.5	10	16.85	3.07E-04	3.74E-04	6.44E-04	4.73E-05	5.25E-04	1.86E-04	9.04E-04	0.014	2.99	0.083	11.1
SWI LD-01-A_0906	9/6/2010	LD	A	Sediment-Water Interface	SWI	7.4756	4.1	2.2	10	16.85	2.92E-04	3.26E-04	5.96E-04	4.40E-05	5.13E-04	1.69E-04	9.04E-04	0.049	75.3	24	770
SWI LD-01-A_0913	9/13/2010	LD	A	Sediment-Water Interface	SWI	7.4756	3.3	1.5	10	16.85	2.33E-04	2.95E-04	5.61E-04	3.91E-05	4.78E-04	1.48E-04	9.04E-04	0.255	2.19	0.087	9.8
LD-01-A INF H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	9.88E-05	4.24E-05	4.92E-05	6.39E-06	5.36E-04	1.90E-04	9.04E-04	0.0347	1.64	0.0246	14.9
LD-01-A MID H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	9.83E-05	4.11E-05	5.57E-05	6.39E-06	5.36E-04	1.90E-04	9.04E-04	0.033	1.72	0.039	15.2
LD-01-A OUF H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	1.02E-04	3.90E-05	7.92E-05	6.39E-06	5.36E-04	1.90E-04	9.04E-04	0.0334	1.98	0.0422	18.3
LD01-A PPR1 H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	3.04E-04	3.44E-04	6.31E-04	5.63E-05	5.36E-04	1.90E-04	9.04E-04	0.1	1.32	0.184	8.3
LD01-A PPR2 H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	3.32E-04	3.49E-04	6.26E-04	5.91E-05	5.36E-04	1.90E-04	9.04E-04	0.1	1.41	0.104	7.2
LD01-A PPR3 H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	3.17E-04	3.48E-04	6.39E-04	6.34E-05	5.36E-04	1.90E-04	9.04E-04	0.1	1.26	0.158	7.5
SWI LD-01-A_0920	9/20/2010	LD	A	Sediment-Water Interface	SWI	7.4756	2.8	1.5	10	16.85	3.89E-04	4.40E-04	8.18E-04	5.53E-05	7.35E-04	2.20E-04	9.04E-04	0.012	2.03	0.046	9.3
OW LD-01-B_0723	7/23/2010	LD	B	Overlying Water	OverWater	7.7287	1.6	1.5	10	15.35	2.97E-04	3.54E-04	5.85E-04	4.14E-05	4.57E-04	1.61E-04	8.36E-04	0.011	0.77	0.026	5
OW LD-01-B_0726	7/26/2010	LD	B	Overlying Water	OverWater	7.7287	2.6	1.5	10	15.35	2.84E-04	3.50E-04	5.79E-04	3.68E-05	4.60E-04	1.67E-04	8.36E-04	0.012	1.22	0.063	11.9
OW LD-01-B_0802	8/2/2010	LD	B	Overlying Water	OverWater	7.7287	2.7	1.5	10	15.35	2.60E-04	3.09E-04	6.31E-04	4.20E-05	4.63E-04	1.85E-04	8.36E-04	0.007	1.2	0.025	9
OW LD-01-B_0809	8/9/2010	LD	B	Overlying Water	OverWater	7.7287	4.2	2.3	10	15.35	2.55E-04	2.92E-04	5.79E-04	4.07E-05	4.72E-04	1.97E-04	8.36E-04	0.026	2.82	0.086	10.8
OW LD-01-B_0816	8/16/2010	LD	B	Overlying Water	OverWater	7.7287	4.9	2.9	10	15.35	2.87E-04	3.24E-04	6.13E-04	4.50E-05	4.46E-04	1.68E-04	8.36E-04	0.014	2.56	0.048	8.2
OW LD-01-B_0823	8/23/2010	LD	B	Overlying Water	OverWater	7.7287	2.8	1.5	10	15.35	2.80E-04	3.28E-04	6.05E-04	4.40E-05	4.89E-04	1.61E-04	8.36E-04	0.015	2.4	0.077	12.9
OW LD-01-B_0830	8/30/2010	LD	B	Overlying Water	OverWater	7.7287	2.6	1.5	10	15.35	2.50E-04	3.16E-04	6.00E-04	4.45E-05	5.00E-04	1.71E-04	8.36E-04	0.014	2.47	0.079	16.2
OW LD-01-B_0906	9/6/2010	LD	B	Overlying Water	OverWater	7.7287	2.8	1.5	10	15.35	2.57E-04	3.36E-04	6.18E-04	4.30E-05	5.24E-04	1.79E-04	8.36E-04	0.013	2.91	0.068	17.6
OW LD-01-B_0913	9/13/2010	LD	B	Overlying Water	OverWater	7.7287	3.9	1.9	10	15.35	3.39E-04	4.44E-04	7.79E-04	5.55E-05	5.67E-04	1.96E-04	8.36E-04	0.015	1.41	0.034	6.1
OW LD-01-B_0920	9/20/2010	LD	B	Overlying Water	OverWater	7.7287	3.1	1.5	10	15.35	2.89E-04	3.24E-04	7.35E-04	4.78E-05	5.79E-04	1.69E-04	8.36E-04	0.014	1.63	0.066	5.9
LD-01-B INF SED_0801	8/1/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	7.09E-05	2.84E-05	8.09E-05	5.12E-06	6.34E-04	2.26E-04	2.98E-03	0.0216	2.55	0.0421	21.5
LD-01-B MID SED_0801	8/1/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	8.98E-05	3.21E-05	6.39E-05	5.12E-06	6.34E-04	2.26E-04	2.98E-03	0.061	3.82	0.0411	25.6
LD-01-B OUF SED_0801	8/1/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	8.06E-05	3.22E-05	5.48E-05	5.12E-06	6.34E-04	2.26E-04	2.98E-03	0.0267	2.99	0.0354	24.1
LD01-B PPR1 SED_0801	8/1/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	4.52E-04	3.45E-04	5.39E-04	5.17E-05	6.34E-04	2.26E-04	2.98E-03	0.1	2.99	0.234	9.1
LD01-B PPR2 SED_0801	8/1/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	6.14E-04	3.36E-04	5.05E-04	5.01E-05	6.34E-04	2.26E-04	2.98E-03	0.1	5.2	0.398	12.2
LD01-B PPR3 SED_0801	8/1/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	6.19E-04	3.38E-04	4.96E-04	4.48E-05	6.34E-04	2.26E-04	2.98E-03	0.1	5.71	0.374	12.4
LD-01-B INF SED_0820	8/20/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	1.51E-04	4.73E-05	1.14E-04	7.57E-06	6.34E-04	2.26E-04	2.98E-03	0.0854	18.2	0.369	45.8
LD-01-B MID SED_0820	8/20/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	1.16E-04	4.11E-05	1.02E-04	6.09E-06	6.34E-04	2.26E-04	2.98E-03	0.07	7.48	0.0609	48.2
LD-01-B OUF SED_0820	8/20/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	1.07E-04	3.52E-05	1.04E-04	5.12E-06	6.34E-04	2.26E-04	2.98E-03	0.0735	14.2	0.0497	50.2
LD01-B PPR1 SED_0820	8/20/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	8.66E-04	3.77E-04	5.83E-04	8.80E-05	6.34E-04	2.26E-04	2.98E-03	1.09	12.3	0.336	53.5
LD01-B PPR2 SED_0820	8/20/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	1.09E-03	3.29E-04	5.52E-04	7.85E-05	6.34E-04	2.26E-04	2.98E-03	0.1	7.09	0.178	4
LD01-B PPR3 SED_0820	8/20/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	8.71E-04	3.47E-04	5.74E-04	6.09E-05	6.34E-04	2.26E-04	2.98E-03	0.1	20.3	0.302	4
LD-01-B INF SED_0919	9/19/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	1.37E-04	6.83E-05	1.60E-04	6.39E-06	6.34E-04	2.26E-04	2.98E-03	0.0657	8.95	0.0422	37.9
LD-01-B MID SED_0919	9/19/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	1.29E-04	5.51E-05	1.22E-04	6.39E-06	6.34E-04	2.26E-04	2.98E-03	0.0488	8.31	0.0773	34
LD-01-B OUF SED_0919	9/19/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	9.78E-05	5.18E-05	1.38E-04	6.39E-06	6.34E-04	2.26E-04	2.98E-03	0.043	5.14	0.0388	29.9
LD01-B PPR1 SED_0919	9/19/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	4.52E-04	3.30E-04	6.53E-04	5.86E-05	6.34E-04	2.26E-04	2.98E-03	0.1	6.46	0.352	34.5
LD01-B PPR2 SED_0919	9/19/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	5.19E-04	3.28E-04	5.74E-04	5.01E-05	6.34E-04	2.26E-04	2.98E-03	0.1	5.95	0.134	31.8
LD01-B PPR3 SED_0919	9/19/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	4.54E-04	3.39E-04	6.00E-04	6.39E-05	6.34E-04	2.26E-04	2.98E-03	0.1	4.39	0.1	34.6
PW LD-01-B_0723	7/23/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	14.4	12.5	10	19.15	4.89E-04	2.18E-04	2.52E-04	3.96E-05	5.41E-04	2.78E-04	2.98E-03	0.361	101	28	320
PW LD-01-B_0726	7/26/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	14.7	12.8	10	19.15	1.20E-03	4.98E-04	4.44E-04	7.42E-05	5.72E-04	2.67E-04	2.98E-03	0.008	1.86	0.035	2.3
PW LD-01-B_0802	8/2/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	15.7	13.8	10	19.15	1.22E-03	4.98E-04	4.65E-04	7.95E-05	6.20E-04	2.23E-04	2.98E-03	0.142	22.2	0.216	82

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
PW LD-01-B_0809	8/9/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	10.6	8.7	10	19.15	1.23E-03	4.94E-04	5.00E-04	8.01E-05	7.97E-04	2.54E-04	2.98E-03	0.209	18	0.264	42.3
PW LD-01-B_0816	8/16/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	13.6	11.7	10	19.15	1.20E-03	4.73E-04	5.39E-04	7.75E-05	6.23E-04	2.31E-04	2.98E-03	0.142	17.4	0.425	28
PW LD-01-B_0823	8/23/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	6.3	4.4	10	19.15	1.13E-03	4.40E-04	5.74E-04	7.67E-05	5.96E-04	2.04E-04	2.98E-03	0.079	15.4	0.283	40.7
PW LD-01-B_0830	8/30/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	6.5	4.6	10	19.15	9.81E-04	3.98E-04	5.66E-04	6.55E-05	6.59E-04	2.00E-04	2.98E-03	0.088	17.8	0.36	55.7
PW LD-01-B_0906	9/6/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	10.0	8.1	10	19.15	9.96E-04	4.06E-04	5.87E-04	6.83E-05	6.18E-04	2.10E-04	2.98E-03	0.084	13.9	0.065	61.6
PW LD-01-B_0913	9/13/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	6.1	4.2	10	19.15	8.98E-04	3.46E-04	5.92E-04	6.45E-05	6.46E-04	2.03E-04	2.98E-03	0.125	12.9	0.262	23.2
PW LD-01-B_0920	9/20/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	6.3	4.4	10	19.15	9.38E-04	3.54E-04	6.13E-04	6.37E-05	6.72E-04	1.94E-04	2.98E-03	0.097	13.7	0.191	36.8
SWI LD-01-B_0726	7/26/2010	LD	B	Sediment-Water Interface	SWI	7.4211	2.5	1.5	10	16.65	2.82E-04	3.32E-04	5.48E-04	3.89E-05	4.72E-04	1.64E-04	9.27E-04	0.007	1.27	0.051	5
LD-01-B INF H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	1.08E-04	4.86E-05	9.53E-05	5.12E-06	5.06E-04	1.75E-04	9.27E-04	0.0149	1.25	0.0345	18.8
LD-01-B MID H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	1.08E-04	4.77E-05	6.66E-05	5.12E-06	5.06E-04	1.75E-04	9.27E-04	0.014	1.22	0.0236	8.91
LD-01-B OUF H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	8.96E-05	4.04E-05	5.35E-05	5.12E-06	5.06E-04	1.75E-04	9.27E-04	0.00858	0.704	0.0323	5.98
LD01-B PPR1 H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	2.34E-04	3.27E-04	5.70E-04	3.76E-05	5.06E-04	1.75E-04	9.27E-04	0.1	0.67	0.716	4
LD01-B PPR2 H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	2.27E-04	3.21E-04	5.61E-04	4.14E-05	5.06E-04	1.75E-04	9.27E-04	0.1	0.6	0.552	4
LD01-B PPR3 H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	2.29E-04	3.21E-04	5.57E-04	3.48E-05	5.06E-04	1.75E-04	9.27E-04	0.1	1.06	0.452	4.2
SWI LD-01-B_0802	8/2/2010	LD	B	Sediment-Water Interface	SWI	7.4211	3.1	1.5	10	16.65	2.67E-04	3.13E-04	5.96E-04	3.91E-05	4.65E-04	1.88E-04	9.27E-04	0.007	1.29	0.034	4.6
SWI LD-01-B_0809	8/9/2010	LD	B	Sediment-Water Interface	SWI	7.4211	5.2	3.3	10	16.65	2.50E-04	2.91E-04	6.00E-04	4.12E-05	4.70E-04	2.03E-04	9.27E-04	0.03	2.93	0.086	13.2
SWI LD-01-B_0816	8/16/2010	LD	B	Sediment-Water Interface	SWI	7.4211	2.8	1.5	10	16.65	3.14E-04	3.73E-04	6.70E-04	4.83E-05	4.73E-04	1.65E-04	9.27E-04	0.036	7.22	0.265	103
LD-01-B INF H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	1.01E-04	4.16E-05	7.57E-05	7.47E-06	5.06E-04	1.75E-04	9.27E-04	0.0403	4.42	0.039	20.9
LD-01-B MID H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	1.07E-04	4.36E-05	8.61E-05	5.12E-06	5.06E-04	1.75E-04	9.27E-04	0.0332	1.4	0.0215	15
LD-01-B OUF H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	1.00E-04	3.96E-05	9.27E-05	5.12E-06	5.06E-04	1.75E-04	9.27E-04	0.0311	1.64	0.0536	15.4
LD01-B PPR1 H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	2.52E-04	3.23E-04	5.57E-04	4.48E-05	5.06E-04	1.75E-04	9.27E-04	0.1	1.1	0.138	5.8
LD01-B PPR2 H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	2.52E-04	3.24E-04	5.61E-04	3.81E-05	5.06E-04	1.75E-04	9.27E-04	0.1	0.86	0.122	7.7
LD01-B PPR3 H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	2.52E-04	3.25E-04	5.70E-04	3.50E-05	5.06E-04	1.75E-04	9.27E-04	0.1	2.59	0.226	9.5
SWI LD-01-B_0823	8/23/2010	LD	B	Sediment-Water Interface	SWI	7.4211	3.1	1.5	10	16.65	3.22E-04	3.56E-04	6.66E-04	4.94E-05	5.05E-04	1.65E-04	9.27E-04	0.017	2.47	0.071	32
SWI LD-01-B_0830	8/30/2010	LD	B	Sediment-Water Interface	SWI	7.4211	3.1	1.5	10	16.65	2.60E-04	3.26E-04	6.13E-04	4.50E-05	4.80E-04	1.67E-04	9.27E-04	0.021	2.4	0.088	26.2
SWI LD-01-B_0906	9/6/2010	LD	B	Sediment-Water Interface	SWI	7.4211	3.6	1.7	10	16.65	2.55E-04	3.36E-04	6.18E-04	4.37E-05	5.37E-04	1.81E-04	9.27E-04	0.019	1.55	0.046	18.1
SWI LD-01-B_0913	9/13/2010	LD	B	Sediment-Water Interface	SWI	7.4211	3.7	1.7	10	16.65	2.65E-04	3.38E-04	6.39E-04	4.50E-05	5.73E-04	1.78E-04	9.27E-04	0.138	1.35	0.189	15.9
LD-01-B INF H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	1.60E-04	7.53E-05	1.43E-04	6.39E-06	5.06E-04	1.75E-04	9.27E-04	0.0336	1.88	0.0241	16
LD-01-B MID H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	1.72E-04	8.11E-05	1.20E-04	6.39E-06	5.06E-04	1.75E-04	9.27E-04	0.0293	1.67	0.024	14.4
LD-01-B OUF H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	1.70E-04	8.52E-05	1.28E-04	6.39E-06	5.06E-04	1.75E-04	9.27E-04	0.0336	2.31	0.0263	18.3
LD01-B PPR1 H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	2.89E-04	3.38E-04	6.83E-04	5.76E-05	5.06E-04	1.75E-04	9.27E-04	0.1	0.52	0.278	4.2
LD01-B PPR2 H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	2.92E-04	3.27E-04	6.05E-04	4.50E-05	5.06E-04	1.75E-04	9.27E-04	0.1	0.65	0.1	4
LD01-B PPR3 H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	2.97E-04	3.43E-04	5.96E-04	5.45E-05	5.06E-04	1.75E-04	9.27E-04	0.1	0.99	0.186	5.2
SWI LD-01-B_0920	9/20/2010	LD	B	Sediment-Water Interface	SWI	7.4211	4.4	2.5	10	16.65	2.99E-04	3.35E-04	6.31E-04	4.22E-05	5.80E-04	1.69E-04	9.27E-04	0.012	1.79	0.066	11.7
OW LD-01-C_0723	7/23/2010	LD	C	Overlying Water	OverWater	7.7391	1.7	1.5	10	15.35	3.04E-04	3.65E-04	5.96E-04	4.37E-05	4.99E-04	1.79E-04	8.65E-04	0.009	0.85	0.022	7.8
OW LD-01-C_0726	7/26/2010	LD	C	Overlying Water	OverWater	7.7391	9.1	7.2	10	15.35	3.09E-04	3.64E-04	5.96E-04	3.76E-05	4.81E-04	1.70E-04	8.65E-04	0.01	1.32	0.091	9.2
OW LD-01-C_0802	8/2/2010	LD	C	Overlying Water	OverWater	7.7391	3.2	1.5	10	15.35	2.84E-04	3.32E-04	6.13E-04	4.17E-05	4.96E-04	1.92E-04	8.65E-04	0.007	1.09	0.026	11.7
OW LD-01-C_0809	8/9/2010	LD	C	Overlying Water	OverWater	7.7391	5.5	3.5	10	15.35	2.75E-04	3.13E-04	5.92E-04	4.27E-05	5.04E-04	2.03E-04	8.65E-04	0.032	2.71	0.092	7.7
OW LD-01-C_0816	8/16/2010	LD	C	Overlying Water	OverWater	7.7391	3.9	2.0	10	15.35	2.97E-04	3.16E-04	5.87E-04	4.30E-05	4.71E-04	1.70E-04	8.65E-04	0.018	4.54	0.096	17.2
OW LD-01-C_0823	8/23/2010	LD	C	Overlying Water	OverWater	7.7391	3.4	1.5	10	15.35	2.70E-04	3.00E-04	6.05E-04	3.99E-05	4.59E-04	1.71E-04	8.65E-04	0.054	3.46	0.103	36
OW LD-01-C_0830	8/30/2010	LD	C	Overlying Water	OverWater	7.7391	3.5	1.6	10	15.35	2.28E-04	2.87E-04	5.87E-04	4.14E-05	4.57E-04	1.50E-04	8.65E-04	0.034	2.79	0.086	61.1
OW LD-01-C_0906	9/6/2010	LD	C	Overlying Water	OverWater	7.7391	3.2	1.5	10	15.35	2.19E-04	2.79E-04	5.18E-04	3.58E-05	4.55E-04	1.70E-04	8.65E-04	0.012	1.94	0.097	15
OW LD-01-C_0913	9/13/2010	LD	C	Overlying Water	OverWater	7.7391	3.7	1.8	10	15.35	2.43E-04	3.16E-04	5.70E-04	4.07E-05	4.96E-04	1.59E-04	8.65E-04	0.011	1.73	0.06	9.4
OW LD-01-C_0920	9/20/2010	LD	C	Overlying Water	OverWater	7.7391	2.2	1.5	10	15.35	2.62E-04	2.93E-04	6.18E-04	4.14E-05	5.33E-04	1.45E-04	8.65E-04	0.024	2.57	0.074	10.9
LD-01-C INF SED	9/19/2010	LD	C	Porewater (1 cm)	DGT	7.8315	9.2	7.3	10	18.45	9.23E-04	2.56E-04	4.39E-05	6.39E-06	6.08E-04	2.06E-04	3.05E-03	0.208	6.66	0.568	68.4
LD-01-C MID SED	9/19/2010	LD	C	Porewater (1 cm)	DGT	7.8315	9.2	7.3	10	18.45	8.48E-04	2.61E-04	3.66E-05	6.39E-06	6.08E-04	2.06E-04	3.05E-03	0.167	5.85	0.318	57.3
LD-01-C OUF SED	9/19/2010	LD	C	Porewater (1 cm)	DGT	7.8315	9.2	7.3	10	18.45	7.36E-04	2.43E-04	2.91E-05	6.39E-06	6.08E-04	2.06E-04	3.05E-03	0.131	5.44	0.276	53.3
PW LD-01-C_0723	7/23/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	13.2	11.3	10	18.45	6.06E-04	2.27E-04	2.14E-04	4.17E-05	5.89E-04	1.50E-04	3.05E-03	0.971	244	79.4	692
PW LD-01-C_0726	7/26/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	15.8	13.9	10	18.45	1.15E-03	4.65E-04	4.29E-04	7.03E-05	5.75E-04	1.55E-04	3.05E-03	0.107	36.5	1.91	38.3
PW LD-01-C_0802	8/2/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	9.1	7.2	10	18.45	1.08E-03	4.20E-04	4.48E-04	7.14E-05	5.89E-04	2.60E-04	3.05E-03	0.111	23.6	0.245	214
PW LD-01-C_0809	8/9/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	10.1	8.2	10	18.45	1.21E-03	4.61E-04	4.87E-04	7.52E-05	4.33E-04	2.05E-04	3.05E-03	0.089	18.5	0.377	29
PW LD-01-C_0816	8/16/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	6.2	4.2	10	18.45	1.05E-03	4.36E-04	5.61E-04	7.06E-05	5.80E-04	2.42E-04	3.05E-03	0.113	15.5	0.319	460
PW LD-01-C_0823	8/23/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	6.0	4.1	10	18.45	1.01E-03	4.20E-04	5.79E-04	6.73E-05	5.79E-04	2.30E-04	3.05E-03	0.114	15.4	0.436	350
PW LD-01-C_0830	8/30/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	5.8	3.8	10	18.45	8.18E-04	3.66E-04	5.70E-04	5.63E-05	5.80E-04	1.81E-04	3.05E-03	0.072	13.2	0.466	28.9
PW LD-01-C_0906	9/6/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	14.9	13.0	10	18.45	1.01E-03	4.20E-04	6.05E-04	6.91E-05	5.63E-04	1.77E-04	3.05E-03	0.058	12.3	0.094	27.2
PW LD-01-C_0913	9/13/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	5.6	3.6	10	18.45	9.98E-04	3.87E-04	6.09E-04	6.80E-05	9.79E-04	2.75E-04	3.05E-03	0.092	14.3	0.297	51.7

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
PW LD-01-C_0920	9/20/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	5.6	3.6	10	18.45	8.98E-04	3.64E-04	6.13E-04	6.24E-05	6.15E-04	1.84E-04	3.05E-03	0.082	12.6	0.23	68.7
SWI LD-01-C_0726	7/26/2010	LD	C	Sediment-Water Interface	SWI	7.4138	10.7	8.8	10	16.55	2.89E-04	3.61E-04	6.18E-04	3.84E-05	4.92E-04	1.66E-04	8.90E-04	0.016	1.35	0.062	16.3
SWI LD-01-C_0802	8/2/2010	LD	C	Sediment-Water Interface	SWI	7.4138	3.4	1.5	10	16.55	2.55E-04	3.08E-04	5.52E-04	3.94E-05	4.62E-04	2.01E-04	8.90E-04	0.02	1.21	0.056	12.1
SWI LD-01-C_0809	8/9/2010	LD	C	Sediment-Water Interface	SWI	7.4138	4.9	2.9	10	16.55	2.87E-04	3.20E-04	6.13E-04	4.35E-05	5.91E-04	2.05E-04	8.90E-04	0.025	3.42	0.089	33.4
SWI LD-01-C_0816	8/16/2010	LD	C	Sediment-Water Interface	SWI	7.4138	3.9	1.9	10	16.55	2.99E-04	3.17E-04	5.83E-04	4.25E-05	4.73E-04	1.67E-04	8.90E-04	0.024	4.6	0.101	18.9
SWI LD-01-C_0823	8/23/2010	LD	C	Sediment-Water Interface	SWI	7.4138	3.5	1.6	10	16.55	2.80E-04	3.14E-04	5.92E-04	4.25E-05	4.52E-04	1.59E-04	8.90E-04	0.019	3.37	0.095	15.9
SWI LD-01-C_0830	8/30/2010	LD	C	Sediment-Water Interface	SWI	7.4138	3.3	1.5	10	16.55	2.35E-04	2.88E-04	5.83E-04	4.12E-05	4.72E-04	1.45E-04	8.90E-04	0.023	2.65	0.1	24.1
SWI LD-01-C_0830X	8/30/2010	LD	C	Sediment-Water Interface	SWI	7.4138	3.0	1.5	10	16.55	2.36E-04	3.06E-04	6.18E-04	4.43E-05	5.02E-04	1.64E-04	8.90E-04	0.018	2.59	0.086	18.9
SWI LD-01-C_0906	9/6/2010	LD	C	Sediment-Water Interface	SWI	7.4138	4.9	3.0	10	16.55	2.19E-04	2.91E-04	5.61E-04	3.86E-05	4.82E-04	1.55E-04	8.90E-04	0.055	2.47	0.145	13.9
SWI LD-01-C_0913	9/13/2010	LD	C	Sediment-Water Interface	SWI	7.4138	4.7	2.7	10	16.55	2.49E-04	3.12E-04	5.96E-04	4.17E-05	5.12E-04	1.62E-04	8.90E-04	0.018	4.09	0.13	18
LD-01-C INF H2O	9/19/2010	LD	C	Sediment-Water Interface	DGT	7.4138	4.9	3.0	10	16.55	7.29E-04	3.09E-04	4.83E-05	6.39E-06	4.94E-04	1.67E-04	8.90E-04	0.151	6.11	0.22	65.3
LD-01-C MID H2O	9/19/2010	LD	C	Sediment-Water Interface	DGT	7.4138	4.9	3.0	10	16.55	6.79E-04	2.95E-04	3.47E-05	6.39E-06	4.94E-04	1.67E-04	8.90E-04	0.145	5.66	0.166	54.1
LD-01-C OUF H2O	9/19/2010	LD	C	Sediment-Water Interface	DGT	7.4138	4.9	3.0	10	16.55	6.81E-04	3.03E-04	3.91E-05	6.39E-06	4.94E-04	1.67E-04	8.90E-04	0.152	5.38	0.198	53.5
SWI LD-01-C_0920	9/20/2010	LD	C	Sediment-Water Interface	SWI	7.4138	7.2	5.2	10	16.55	2.82E-04	3.05E-04	6.18E-04	4.40E-05	5.05E-04	1.47E-04	8.90E-04	0.043	2.62	0.116	11.5
OW LD-01-D_0723	7/23/2010	LD	D	Overlying Water	OverWater	7.6361	1.9	1.5	10	15.65	2.87E-04	3.44E-04	5.66E-04	3.56E-05	4.66E-04	1.71E-04	9.31E-04	0.008	0.73	0.035	6.4
OW LD-01-D_0726	7/26/2010	LD	D	Overlying Water	OverWater	7.6361	2.0	1.5	10	15.65	2.89E-04	3.39E-04	5.61E-04	4.02E-05	4.79E-04	1.71E-04	9.31E-04	0.011	2.24	0.041	10.8
OW LD-01-D_0802	8/2/2010	LD	D	Overlying Water	OverWater	7.6361	3.3	1.5	10	15.65	2.87E-04	3.37E-04	6.70E-04	4.53E-05	4.97E-04	1.98E-04	9.31E-04	0.008	1.39	0.04	6.5
OW LD-01-D_0816	8/16/2010	LD	D	Overlying Water	OverWater	7.6361	3.3	1.5	10	15.65	2.80E-04	3.11E-04	5.92E-04	4.27E-05	4.58E-04	1.71E-04	9.31E-04	0.015	2.69	0.056	28.4
OW LD-01-D_0823	8/23/2010	LD	D	Overlying Water	OverWater	7.6361	3.8	1.8	10	15.65	2.65E-04	2.93E-04	5.48E-04	3.79E-05	4.81E-04	1.66E-04	9.31E-04	0.014	2.65	0.051	16
OW LD-01-D_0830	8/30/2010	LD	D	Overlying Water	OverWater	7.6361	2.9	1.5	10	15.65	2.97E-04	3.96E-04	7.40E-04	5.37E-05	6.64E-04	1.98E-04	9.31E-04	0.022	2.96	0.109	17.9
OW LD-01-D_0830_2	8/30/2010	LD	D	Overlying Water	OverWater	7.6361	2.7	1.5	10	15.65	3.02E-04	3.94E-04	7.44E-04	5.27E-05	5.88E-04	2.00E-04	9.31E-04	0.046	2.94	0.212	24.3
OW LD-01-D_0906	9/6/2010	LD	D	Overlying Water	OverWater	7.6361	2.8	1.5	10	15.65	2.46E-04	3.24E-04	6.05E-04	4.25E-05	5.22E-04	1.67E-04	9.31E-04	0.012	1.61	0.052	12.4
OW LD-01-D_0913	9/13/2010	LD	D	Overlying Water	OverWater	7.6361	2.6	1.5	10	15.65	2.48E-04	3.21E-04	5.79E-04	4.14E-05	5.30E-04	1.68E-04	9.31E-04	0.02	1.99	0.063	7.6
OW LD-01-D_0920	9/20/2010	LD	D	Overlying Water	OverWater	7.6361	4.3	2.4	10	15.65	2.89E-04	3.31E-04	6.92E-04	4.66E-05	5.81E-04	1.82E-04	9.31E-04	0.026	2.27	0.065	10
LD-01-D INF SED	9/19/2010	LD	D	Porewater (1 cm)	DGT	7.8777	8.7	6.8	10	18.75	5.04E-04	2.72E-04	6.13E-05	6.39E-06	5.93E-04	2.31E-04	3.02E-03	0.34	33.9	0.452	252
PW LD-01-D_0723	7/23/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	11.0	9.1	10	18.75	1.15E-03	4.69E-04	3.72E-04	7.98E-05	5.22E-04	1.92E-04	3.02E-03	0.074	35.5	0.195	31.9
PW LD-01-D_0726	7/26/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	15.0	13.1	10	18.75	1.16E-03	4.73E-04	3.92E-04	7.42E-05	5.51E-04	1.96E-04	3.02E-03	0.194	36.3	0.856	34
PW LD-01-D_0802	8/2/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	11.5	9.6	10	18.75	1.23E-03	4.94E-04	4.52E-04	8.03E-05	5.94E-04	3.10E-04	3.02E-03	0.088	26	0.165	35.3
PW LD-01-D_0809	8/9/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	10.4	8.5	10	18.75	1.24E-03	4.81E-04	4.87E-04	8.01E-05	5.93E-04	2.31E-04	3.02E-03	0.154	20.7	0.275	22.2
PW LD-01-D_0816	8/16/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	8.7	6.7	10	18.75	1.08E-03	4.61E-04	5.48E-04	7.78E-05	5.91E-04	3.02E-04	3.02E-03	0.13	19.3	0.249	348
PW LD-01-D_0823	8/23/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	7.4	5.5	10	18.75	1.11E-03	4.44E-04	9.40E-04	7.98E-05	5.87E-04	2.10E-04	3.02E-03	0.46	14.9	0.48	82.5
PW LD-01-D_0830	8/30/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	8.8	6.8	10	18.75	9.51E-04	4.07E-04	6.05E-04	6.80E-05	7.14E-04	2.29E-04	3.02E-03	0.3	16.4	4.4	235
PW LD-01-D_0906	9/6/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	5.2	3.3	10	18.75	7.86E-04	3.33E-04	5.83E-04	6.14E-05	5.68E-04	1.84E-04	3.02E-03	0.064	12.4	0.172	22.6
PW LD-01-D_0913	9/13/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	3.9	2.0	10	18.75	8.91E-04	3.59E-04	6.29E-04	6.61E-05	6.00E-04	1.91E-04	3.02E-03	0.098	14.9	0.188	43
PW LD-01-D_0920	9/20/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	5.4	3.4	10	18.75	8.18E-04	3.33E-04	6.39E-04	6.24E-05	6.13E-04	1.92E-04	3.02E-03	0.068	13.4	0.148	66.7
SWI LD-01-D_0726	7/26/2010	LD	D	Sediment-Water Interface	SWI	7.5062	3.2	1.5	10	16.75	7.98E-04	3.46E-04	6.00E-04	3.79E-05	4.77E-04	1.70E-04	9.02E-04	0.021	2.43	0.094	22.9
SWI LD-01-D_0802	8/2/2010	LD	D	Sediment-Water Interface	SWI	7.5062	2.5	1.5	10	16.75	2.87E-04	3.29E-04	6.13E-04	4.14E-05	4.91E-04	1.95E-04	9.02E-04	0.008	1.57	0.043	8.3
SWI LD-01-D_0816	8/16/2010	LD	D	Sediment-Water Interface	SWI	7.5062	3.4	1.5	10	16.75	2.62E-04	3.07E-04	6.39E-04	4.53E-05	4.87E-04	1.70E-04	9.02E-04	0.021	2.96	0.066	13.8
SWI LD-01-D_0823	8/23/2010	LD	D	Sediment-Water Interface	SWI	7.5062	3.0	1.5	10	16.75	2.94E-04	3.42E-04	6.18E-04	4.17E-05	4.73E-04	1.71E-04	9.02E-04	0.02	5.91	0.113	36.6
SWI LD-01-D_0830	8/30/2010	LD	D	Sediment-Water Interface	SWI	7.5062	3.2	1.5	10	16.75	3.17E-04	4.06E-04	7.35E-04	5.50E-05	5.65E-04	1.89E-04	9.02E-04	0.015	2.77	0.092	28.9
SWI LD-01-D_0906	9/6/2010	LD	D	Sediment-Water Interface	SWI	7.5062	4.2	2.3	10	16.75	2.44E-04	3.22E-04	6.05E-04	4.25E-05	5.29E-04	1.63E-04	9.02E-04	0.018	1.78	0.059	10.6
SWI LD-01-D_0913	9/13/2010	LD	D	Sediment-Water Interface	SWI	7.5062	4.1	2.2	10	16.75	2.52E-04	3.20E-04	5.87E-04	4.12E-05	5.20E-04	1.60E-04	9.02E-04	0.022	2	0.073	9.6
SWI LD-01-D_0920	9/20/2010	LD	D	Sediment-Water Interface	SWI	7.5062	2.4	1.5	10	16.75	3.14E-04	3.58E-04	6.53E-04	4.40E-05	4.96E-04	1.72E-04	9.02E-04	0.01	2.12	0.041	8.6
OW LD-01-E_0723	7/23/2010	LD	E	Overlying Water	OverWater	7.7321	1.8	1.5	10	15.35	2.99E-04	3.51E-04	5.70E-04	4.14E-05	4.67E-04	1.68E-04	8.52E-04	0.01	1.07	0.043	12
OW LD-01-E_0726	7/26/2010	LD	E	Overlying Water	OverWater	7.7321	1.6	1.5	10	15.35	2.96E-04	3.36E-04	5.66E-04	3.99E-05	4.69E-04	1.73E-04	8.52E-04	0.01	1.455	0.0345	8.7
OW LD-01-E_0802	8/2/2010	LD	E	Overlying Water	OverWater	7.7321	2.9	1.5	10	15.35	3.32E-04	3.89E-04	6.79E-04	4.81E-05	5.91E-04	2.25E-04	8.52E-04	0.011	1.46	0.036	12.8
OW LD-01-E_0809	8/9/2010	LD	E	Overlying Water	OverWater	7.7321	5.2	3.3	10	15.35	2.89E-04	3.25E-04	6.48E-04	4.76E-05	5.02E-04	2.06E-04	8.52E-04	0.013	2.32	0.042	17.8
OW LD-01-E_0816	8/16/2010	LD	E	Overlying Water	OverWater	7.7321	3.1	1.5	10	15.35	2.82E-04	3.23E-04	6.22E-04	4.43E-05	4.88E-04	1.76E-04	8.52E-04	0.009	2.24	0.051	8.8
OW LD-01-E_0823	8/23/2010	LD	E	Overlying Water	OverWater	7.7321	18.0	16.1	10	15.35	3.22E-04	3.87E-04	6.92E-04	4.96E-05	5.71E-04	1.87E-04	8.52E-04	0.014	2.45	0.054	683
OW LD-01-E_0830	8/30/2010	LD	E	Overlying Water	OverWater	7.7321	2.5	1.5	10	15.35	2.39E-04	3.07E-04	6.44E-04	4.40E-05	5.04E-04	1.66E-04	8.52E-04	0.037	3.21	0.123	15.5
OW LD-01-E_0906	9/6/2010	LD	E	Overlying Water	OverWater	7.7321	2.6	1.5	10	15.35	2.49E-04	3.26E-04	6.00E-04	4.14E-05	5.25E-04	1.67E-04	8.52E-04	0.013	1.92	0.107	15.6
OW LD-01-E_0913	9/13/2010	LD	E	Overlying Water	OverWater	7.7321	4.2	2.2	10	15.35	2.30E-04	2.96E-04	5.57E-04	3.84E-05	4.75E-04	1.51E-04	8.52E-04	0.018	1.99	0.058	7.6
OW LD-01-E_0920	9/20/2010	LD	E	Overlying Water	OverWater	7.7321	3.7	1.7	10	15.35	3.67E-04	4.49E-04	9.05E-04	6.04E-05	7.18E-04	2.18E-04	8.52E-04	0.021	1.99	0.064	7.9
PW LD-01-E_0723	7/23/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	59.6	57.7	10	19.25	1.28E-03	5.23E-04	3.65E-04	9.00E-05	5.45E-04	1.55E-04	3.65E-03	0.534	160	41	454
PW LD-01-E_0726	7/26/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	18.0	16.1	10	19.25	1.23E-03	5.14E-04	3.91E-04	7.98E-05	5.97E-04	1.77E-04	3.65E-03	0.1	37.3	0.55	29.5
PW LD-01-E_0802	8/2/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	14.6	12.7	10	19.25	1.30E-03	5.14E-04	3.95E-04	8.24E-05	5.94E-04	2.80E-04	3.65E-03	0.136	33.1	0.189	271

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
PW LD-01-E_0809	8/9/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	12.8	10.9	10	19.25	1.41E-03	5.47E-04	4.52E-04	8.85E-05	6.40E-04	1.96E-04	3.65E-03	0.126	27.2	0.211	22.4
PW LD-01-E_0816	8/16/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	9.3	7.4	10	19.25	1.33E-03	5.18E-04	4.79E-04	8.16E-05	4.23E-04	2.06E-04	3.65E-03	0.237	20.2	0.354	104
PW LD-01-E_0823	8/23/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	9.0	7.1	10	19.25	1.33E-03	5.06E-04	5.31E-04	8.13E-05	6.20E-04	2.09E-04	3.65E-03	0.079	20.5	0.231	35.8
PW LD-01-E_0830	8/30/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	11.2	9.3	10	19.25	1.20E-03	4.69E-04	5.44E-04	7.26E-05	6.72E-04	1.94E-04	3.65E-03	0.071	21.9	0.191	39.9
PW LD-01-E_0906	9/6/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	8.0	6.1	10	19.25	1.24E-03	4.61E-04	5.66E-04	7.88E-05	6.29E-04	1.87E-04	3.65E-03	0.069	17	0.087	16.6
PW LD-01-E_0913	9/13/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	7.2	5.2	10	19.25	1.15E-03	4.40E-04	5.87E-04	7.62E-05	1.14E-03	2.49E-04	3.65E-03	0.175	17.7	0.198	29.1
PW LD-01-E_0920	9/20/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	7.1	5.2	10	19.25	1.14E-03	3.88E-04	5.57E-04	7.03E-05	6.30E-04	1.79E-04	3.65E-03	0.076	16.6	0.175	16
SWI LD-01-E_0726	7/26/2010	LD	E	Sediment-Water Interface	SWI	7.5437	2.4	1.5	10	16.45	2.82E-04	3.34E-04	5.52E-04	3.91E-05	4.59E-04	1.67E-04	9.09E-04	0.018	2.79	0.532	13
SWI LD-01-E_0802	8/2/2010	LD	E	Sediment-Water Interface	SWI	7.5437	3.5	1.5	10	16.45	3.37E-04	3.97E-04	6.83E-04	4.68E-05	5.83E-04	2.32E-04	9.09E-04	0.008	1.48	0.032	6.7
SWI LD-01-E_0809	8/9/2010	LD	E	Sediment-Water Interface	SWI	7.5437	5.1	3.2	10	16.45	2.94E-04	3.21E-04	6.31E-04	4.66E-05	3.37E-04	2.04E-04	9.09E-04	0.082	2.13	0.098	12.8
SWI LD-01-E_0816	8/16/2010	LD	E	Sediment-Water Interface	SWI	7.5437	3.0	1.5	10	16.45	2.99E-04	3.39E-04	6.13E-04	4.35E-05	5.01E-04	1.75E-04	9.09E-04	0.022	2.92	0.105	30.2
SWI LD-01-E_0823	8/23/2010	LD	E	Sediment-Water Interface	SWI	7.5437	3.6	1.7	10	16.45	3.02E-04	3.71E-04	6.92E-04	5.01E-05	5.20E-04	1.80E-04	9.09E-04	0.012	2.31	0.075	15.2
SWI LD-01-E_0830	8/30/2010	LD	E	Sediment-Water Interface	SWI	7.5437	3.0	1.5	10	16.45	2.49E-04	3.13E-04	6.39E-04	4.55E-05	5.19E-04	1.67E-04	9.09E-04	0.015	3.12	0.084	20.5
SWI LD-01-E_0906	9/6/2010	LD	E	Sediment-Water Interface	SWI	7.5437	3.3	1.5	10	16.45	2.48E-04	3.26E-04	5.83E-04	4.09E-05	5.16E-04	1.63E-04	9.09E-04	0.011	1.97	0.084	10.6
SWI LD-01-E_0913	9/13/2010	LD	E	Sediment-Water Interface	SWI	7.5437	4.8	2.8	10	16.45	2.24E-04	2.90E-04	5.48E-04	3.84E-05	4.85E-04	1.48E-04	9.09E-04	0.037	2.12	0.09	7.7
SWI LD-01-E_0920	9/20/2010	LD	E	Sediment-Water Interface	SWI	7.5437	4.0	2.1	10	16.45	3.74E-04	4.24E-04	7.70E-04	5.35E-05	7.23E-04	2.15E-04	9.09E-04	0.016	1.99	0.044	10.6
OW LD-01-F_0723	7/23/2010	LD	F	Overlying Water	OverWater	7.7557	1.9	1.5	10	15.75	2.84E-04	3.51E-04	5.70E-04	4.17E-05	4.38E-04	1.66E-04	8.68E-04	0.01	1.1	0.034	7.9
OW LD-01-F_0726	7/26/2010	LD	F	Overlying Water	OverWater	7.7557	1.9	1.5	10	15.75	2.89E-04	3.56E-04	5.85E-04	3.77E-05	4.78E-04	1.67E-04	8.68E-04	0.0125	1.6	0.1395	9.3
OW LD-01-F_0802	8/2/2010	LD	F	Overlying Water	OverWater	7.7557	2.8	1.5	10	15.75	2.92E-04	3.37E-04	6.39E-04	4.35E-05	5.03E-04	1.99E-04	8.68E-04	0.01	1.24	0.037	10.8
OW LD-01-F_0809	8/9/2010	LD	F	Overlying Water	OverWater	7.7557	4.7	2.8	10	15.75	1.70E-03	3.53E-04	8.87E-04	5.83E-05	5.09E-04	2.19E-04	8.68E-04	1.54	5.86	0.625	61.4
OW LD-01-F_0816	8/16/2010	LD	F	Overlying Water	OverWater	7.7557	14.8	12.9	10	15.75	2.94E-04	3.25E-04	6.00E-04	4.40E-05	4.75E-04	1.69E-04	8.68E-04	0.018	3.03	0.074	8.8
OW LD-01-F_0823	8/23/2010	LD	F	Overlying Water	OverWater	7.7557	3.6	1.6	10	15.75	2.70E-04	3.03E-04	5.74E-04	3.96E-05	4.63E-04	1.53E-04	8.68E-04	0.02	2.35	0.06	15.4
OW LD-01-F_0830	8/30/2010	LD	F	Overlying Water	OverWater	7.7557	2.1	1.5	10	15.75	2.57E-04	3.19E-04	6.26E-04	4.48E-05	5.02E-04	1.70E-04	8.68E-04	0.031	2.52	0.11	13.8
OW LD-01-F_0906	9/6/2010	LD	F	Overlying Water	OverWater	7.7557	3.1	1.5	10	15.75	2.46E-04	3.24E-04	5.96E-04	4.17E-05	5.22E-04	1.68E-04	8.68E-04	0.019	2.61	0.069	7.3
OW LD-01-F_0913	9/13/2010	LD	F	Overlying Water	OverWater	7.7557	2.2	1.5	10	15.75	2.72E-04	3.43E-04	6.26E-04	4.45E-05	5.54E-04	1.64E-04	8.68E-04	0.027	2.3	0.077	8.3
OW LD-01-F_0920	9/20/2010	LD	F	Overlying Water	OverWater	7.7557	2.2	1.5	10	15.75	2.92E-04	3.37E-04	7.18E-04	4.76E-05	5.76E-04	1.71E-04	8.68E-04	0.021	2.21	0.073	8.2
PW LD-01-F_0723	7/23/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	12.7	10.8	10	19.85	1.20E-03	4.94E-04	3.46E-04	8.47E-05	5.83E-04	1.53E-04	3.92E-03	0.086	41.5	0.214	33.7
PW LD-01-F_0726	7/26/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	24.3	22.4	10	19.85	1.29E-04	4.86E-05	4.02E-05	1.01E-05	6.30E-04	2.37E-04	3.92E-03	0.155	46.9	1.36	33.6
PW LD-01-F_0802	8/2/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	15.8	13.9	10	19.85	1.29E-03	5.14E-04	4.06E-04	7.90E-05	6.41E-04	3.08E-04	3.92E-03	0.162	32.7	0.142	151
PW LD-01-F_0809	8/9/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	14.9	13.0	10	19.85	1.36E-03	5.14E-04	4.57E-04	8.06E-05	6.27E-04	1.92E-04	3.92E-03	0.068	23	0.187	16.4
PW LD-01-F_0816	8/16/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	9.8	7.9	10	19.85	1.20E-03	4.77E-04	5.31E-04	7.90E-05	6.54E-04	2.08E-04	3.92E-03	0.082	19.9	0.253	23
PW LD-01-F_0823	8/23/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	9.2	7.2	10	19.85	1.21E-03	4.57E-04	5.70E-04	7.75E-05	6.37E-04	5.39E-04	3.92E-03	0.372	19.2	0.35	62.1
PW LD-01-F_0830	8/30/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	8.8	6.9	10	19.85	1.06E-03	4.32E-04	5.66E-04	6.88E-05	6.19E-04	1.83E-04	3.92E-03	0.071	19.7	0.239	22
PW LD-01-F_0906	9/6/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	7.3	5.4	10	19.85	9.98E-04	3.91E-04	5.61E-04	6.80E-05	5.98E-04	1.77E-04	3.92E-03	0.06	15.9	0.157	11.8
PW LD-01-F_0913	9/13/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	6.9	4.9	10	19.85	1.03E-03	3.75E-04	6.22E-04	7.34E-05	6.56E-04	1.90E-04	3.92E-03	0.175	17.3	0.322	25.2
PW LD-01-F_0920	9/20/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	6.9	5.0	10	19.85	1.02E-03	3.62E-04	6.00E-04	6.75E-05	6.59E-04	1.82E-04	3.92E-03	0.23	15.9	0.224	17.1
SWI LD-01-F_0726	7/26/2010	LD	F	Sediment-Water Interface	SWI	7.4012	1.7	1.5	10	17.35	2.92E-04	3.33E-04	5.35E-04	3.84E-05	4.67E-04	1.67E-04	9.19E-04	0.008	1.61	0.046	8.1
SWI LD-01-F_0802	8/2/2010	LD	F	Sediment-Water Interface	SWI	7.4012	3.0	1.5	10	17.35	2.77E-04	3.23E-04	5.96E-04	3.96E-05	5.26E-04	2.00E-04	9.19E-04	0.006	1.27	0.034	6.2
SWI LD-01-F_0809	8/9/2010	LD	F	Sediment-Water Interface	SWI	7.4012	3.7	1.8	10	17.35	3.19E-04	3.46E-04	6.48E-04	4.66E-05	4.93E-04	2.14E-04	9.19E-04	0.011	2.63	0.042	10.1
SWI LD-01-F_0816	8/16/2010	LD	F	Sediment-Water Interface	SWI	7.4012	13.2	11.3	10	17.35	6.94E-03	4.32E-04	1.10E-03	6.47E-05	4.78E-04	1.67E-04	9.19E-04	0.652	16.1	2.99	261
SWI LD-01-F_0823	8/23/2010	LD	F	Sediment-Water Interface	SWI	7.4012	4.3	2.3	10	17.35	2.75E-04	3.21E-04	5.83E-04	4.02E-05	4.71E-04	1.52E-04	9.19E-04	0.016	2.38	0.055	10.8
SWI LD-01-F_0830	8/30/2010	LD	F	Sediment-Water Interface	SWI	7.4012	3.6	1.7	10	17.35	2.75E-04	3.35E-04	6.22E-04	4.55E-05	4.49E-04	1.68E-04	9.19E-04	0.014	2.13	0.07	21.2
SWI LD-01-F_0906	9/6/2010	LD	F	Sediment-Water Interface	SWI	7.4012	3.6	1.7	10	17.35	2.52E-04	3.32E-04	6.09E-04	4.30E-05	5.18E-04	1.72E-04	9.19E-04	0.018	2.72	0.066	13.4
SWI LD-01-F_0913	9/13/2010	LD	F	Sediment-Water Interface	SWI	7.4012	4.0	2.1	10	17.35	2.65E-04	3.30E-04	6.35E-04	4.50E-05	5.33E-04	1.69E-04	9.19E-04	0.018	2.16	0.052	9.4
SWI LD-01-F_0920	9/20/2010	LD	F	Sediment-Water Interface	SWI	7.4012	4.2	2.3	10	17.35	2.99E-04	3.45E-04	6.35E-04	4.17E-05	5.23E-04	1.72E-04	9.19E-04	0.013	2.24	0.056	8.2
OW LMF-02-A_0723	7/23/2010	LMF	A	Overlying Water	OverWater	7.6597	2.1	1.5	10	15.85	2.67E-04	3.34E-04	5.52E-04	3.66E-05	4.73E-04	1.66E-04	8.98E-04	0.005	0.33	0.042	4.9
OW LMF-02-A_0726	7/26/2010	LMF	A	Overlying Water	OverWater	7.6597	2.2	1.5	10	15.85	2.97E-04	3.32E-04	5.48E-04	3.89E-05	4.99E-04	1.70E-04	8.98E-04	0.012	0.53	0.042	13.3
OW LMF-02-A_0802	8/2/2010	LMF	A	Overlying Water	OverWater	7.6597	3.9	1.9	10	15.85	2.82E-04	3.32E-04	6.39E-04	4.35E-05	5.00E-04	1.98E-04	8.98E-04	0.01	0.94	0.095	41.3
OW LMF-02-A_0809	8/9/2010	LMF	A	Overlying Water	OverWater	7.6597	3.7	1.8	10	15.85	3.17E-04	3.51E-04	6.39E-04	4.73E-05	5.16E-04	2.20E-04	8.98E-04	0.015	0.86	0.077	25.6
OW LMF-02-A_0816	8/16/2010	LMF	A	Overlying Water	OverWater	7.6597	2.6	1.5	10	15.85	2.67E-04	3.07E-04	5.70E-04	4.17E-05	4.65E-04	1.70E-04	8.98E-04	0.015	0.98	0.079	14.8
OW LMF-02-A_0823	8/23/2010	LMF	A	Overlying Water	OverWater	7.6597	1.7	1.5	10	15.85	2.80E-04	3.28E-04	6.00E-04	4.25E-05	5.16E-04	1.64E-04	8.98E-04	0.013	1.72	0.112	14.7
OW LMF-02-A_0830	8/30/2010	LMF	A	Overlying Water	OverWater	7.6597	4.1	2.2	10	15.85	2.92E-04	3.91E-04	7.22E-04	5.32E-05	6.30E-04	1.98E-04	8.98E-04	0.018	2.02	0.154	22.3
OW LMF-02-A_0913	9/13/2010	LMF	A	Overlying Water	OverWater	7.6597	2.5	1.5	10	15.85	2.55E-04	3.27E-04	5.87E-04	4.25E-05	5.30E-04	1.71E-04	8.98E-04	0.024	0.74	0.103	14.5
OW LMF-02-A_0920	9/20/2010	LMF	A	Overlying Water	OverWater	7.6597	3.7	1.8	10	15.85	2.94E-04	3.35E-04	7.00E-04	4.76E-05	5.95E-04	1.86E-04	8.98E-04	0.029	1.72	0.178	29.4
OW LMF-02-A_0920_2	9/20/2010	LMF	A	Overlying Water	OverWater	7.6597	3.5	1.6	10	15.85	2.80E-04	3.22E-04	7.05E-04	4.76E-05	5.84E-04	1.73E-04	8.98E-04	0.014	0.92	0.126	16.6
LMF02-A INF SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	1.02E-04	3.15E-05	6.00E-05	5.12E-06	4.77E-04	2.31E-04	3.49E-03	0.0354	0.694	0.163	59.9

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
LMF02-A MID SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	1.16E-04	3.82E-05	1.10E-04	5.12E-06	4.77E-04	2.31E-04	3.49E-03	0.0382	0.981	0.121	115
LMF02-A OUF SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	1.36E-04	4.24E-05	1.10E-04	5.12E-06	4.77E-04	2.31E-04	3.49E-03	0.0316	0.742	0.131	52.9
LMF02A PPR1 SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	1.33E-03	5.14E-04	5.35E-04	1.12E-04	4.77E-04	2.31E-04	3.49E-03	0.1	0.4	0.344	9.7
LMF02A PPR2 SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	1.00E-03	4.44E-04	5.52E-04	9.67E-05	4.77E-04	2.31E-04	3.49E-03	0.1	1.08	0.348	14.7
LMF02A PPR3 SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	1.26E-03	5.23E-04	5.83E-04	1.20E-04	4.77E-04	2.31E-04	3.49E-03	0.1	0.4	0.302	13.7
LMF-02-A INF SED	8/20/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	1.03E-04	3.19E-05	6.18E-05	6.09E-06	4.77E-04	2.31E-04	3.49E-03	0.0313	0.556	0.219	51.2
LMF-02-A OUF SED	8/20/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	1.29E-04	3.82E-05	5.26E-05	7.16E-06	4.77E-04	2.31E-04	3.49E-03	0.0452	0.883	0.297	77.7
LMF02-A MID SED_0820	8/20/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	1.42E-04	4.24E-05	6.96E-05	8.57E-06	4.77E-04	2.31E-04	3.49E-03	0.0368	0.723	0.346	57.6
LMF02A PPR1 SED_0820	8/20/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	1.12E-03	5.10E-04	5.79E-04	8.57E-05	4.77E-04	2.31E-04	3.49E-03	0.1	0.61	1.7	5.2
LMF02A PPR2 SED_0820	8/20/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	1.28E-03	5.27E-04	5.83E-04	1.01E-04	4.77E-04	2.31E-04	3.49E-03	0.1	3	1.79	21.2
LMF02A PPR3 SED_0820	8/20/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	1.58E-03	6.17E-04	6.00E-04	1.10E-04	4.77E-04	2.31E-04	3.49E-03	0.1	1.24	2.1	12.7
LMF02-A INF SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	1.08E-04	5.51E-05	6.39E-05	6.39E-06	4.77E-04	2.31E-04	3.49E-03	0.0579	1.82	0.0548	87.3
LMF02-A MID SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	1.18E-04	5.55E-05	4.74E-05	6.39E-06	4.77E-04	2.31E-04	3.49E-03	0.0533	1.65	0.0827	75.7
LMF02-A OUF SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	1.23E-04	5.55E-05	5.22E-05	6.39E-06	4.77E-04	2.31E-04	3.49E-03	0.0572	1.79	0.0691	71.6
LMF02A PPR1 SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	7.81E-04	4.28E-04	6.57E-04	9.49E-05	4.77E-04	2.31E-04	3.49E-03	0.1	1.02	0.274	21.9
LMF02A PPR2 SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	1.39E-03	5.27E-04	6.39E-04	9.72E-05	4.77E-04	2.31E-04	3.49E-03	0.1	0.56	0.314	50.5
LMF02A PPR3 SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	9.11E-04	4.32E-04	6.53E-04	9.21E-05	4.77E-04	2.31E-04	3.49E-03	0.1	0.47	0.286	15.4
PW LMF-02-A_0723	7/23/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	50.8	48.9	10	19.75	1.27E-03	5.10E-04	5.48E-04	1.34E-04	3.78E-04	1.57E-04	3.49E-03	0.172	2.59	3.48	56
PW LMF-02-A_0726	7/26/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	41.3	39.4	10	19.75	1.49E-03	5.93E-04	6.66E-04	1.72E-04	3.56E-04	2.96E-04	3.49E-03	0.031	1.56	1.24	28.8
PW LMF-02-A_0802	8/2/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	49.6	47.7	10	19.75	1.98E-03	7.20E-04	6.00E-04	1.72E-04	3.57E-04	3.81E-04	3.49E-03	0.039	2.08	1.2	103
PW LMF-02-A_0809	8/9/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	36.8	34.9	10	19.75	2.22E-03	7.90E-04	6.83E-04	1.89E-04	4.26E-04	2.50E-04	3.49E-03	0.037	1.5	0.658	14
PW LMF-02-A_0816	8/16/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	25.3	23.4	10	19.75	2.13E-03	7.41E-04	6.74E-04	1.78E-04	4.74E-04	2.14E-04	3.49E-03	0.034	1.06	0.466	775
PW LMF-02-A_0823	8/23/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	16.9	15.0	10	19.75	1.98E-03	6.38E-04	6.87E-04	1.73E-04	4.93E-04	1.95E-04	3.49E-03	0.133	1.34	1.02	54
PW LMF-02-A_0830	8/30/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	21.4	19.5	10	19.75	1.94E-03	6.34E-04	6.74E-04	1.62E-04	6.44E-04	2.35E-04	3.49E-03	0.024	0.93	0.224	50.1
PW LMF-02-A_0906	9/6/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	18.3	16.4	10	19.75	1.67E-03	5.43E-04	6.79E-04	1.50E-04	3.16E-04	1.85E-04	3.49E-03	0.051	0.66	0.282	13.7
PW LMF-02-A_0913	9/13/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	17.8	15.9	10	19.75	1.71E-03	5.27E-04	7.00E-04	1.60E-04	5.56E-04	2.14E-04	3.49E-03	0.011	0.92	0.34	27.5
PW LMF-02-A_0920	9/20/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	18.0	16.1	10	19.75	1.67E-03	4.90E-04	7.03E-04	1.53E-04	6.21E-04	1.85E-04	3.49E-03	0.005	0.66	0.04	10.9
SWI LMF-02-A_0726	7/26/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	2.3	1.5	10	17.05	2.77E-04	3.42E-04	5.70E-04	3.66E-05	4.95E-04	1.69E-04	8.65E-04	0.012	0.59	0.059	19.5
LMF02-A INF H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	1.43E-04	5.84E-05	7.22E-05	5.12E-06	5.27E-04	1.80E-04	8.65E-04	0.0176	0.558	0.218	19.5
LMF02-A MID H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	1.37E-04	5.76E-05	8.18E-05	5.55E-06	5.27E-04	1.80E-04	8.65E-04	0.0136	0.401	0.165	13.2
LMF02-A OUF H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	1.25E-04	5.39E-05	6.31E-05	5.12E-06	5.27E-04	1.80E-04	8.65E-04	0.0124	0.411	0.169	13.1
LMF02A PPR1 H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	2.26E-04	3.11E-04	5.44E-04	4.35E-05	5.27E-04	1.80E-04	8.65E-04	0.1	0.4	0.212	6.9
LMF02A PPR2 H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	2.13E-04	3.02E-04	5.35E-04	4.37E-05	5.27E-04	1.80E-04	8.65E-04	0.1	0.4	0.206	6.3
LMF02A PPR3 H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	2.15E-04	3.05E-04	5.57E-04	4.12E-05	5.27E-04	1.80E-04	8.65E-04	0.1	0.4	0.404	13.7
SWI LMF-02-A_0802	8/2/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	4.0	2.1	10	17.05	2.80E-04	3.19E-04	5.92E-04	4.02E-05	4.81E-04	1.91E-04	8.65E-04	0.009	0.79	0.058	18.7
SWI LMF-02-A_0809	8/9/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	5.3	3.4	10	17.05	3.12E-04	3.46E-04	6.44E-04	4.81E-05	5.17E-04	2.15E-04	8.65E-04	0.017	0.88	0.082	19
SWI LMF-02-A_0816	8/16/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	3.7	1.7	10	17.05	2.80E-04	3.27E-04	5.92E-04	4.45E-05	4.81E-04	1.70E-04	8.65E-04	0.025	1.57	0.12	23.1
SWI LMF-02-A_0816_2	8/16/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	4.0	2.1	10	17.05	2.75E-04	3.13E-04	5.96E-04	4.37E-05	4.70E-04	1.69E-04	8.65E-04	0.022	0.99	0.101	60.9
LMF-02-A INF H2O	8/20/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	7.01E-05	3.14E-05	3.35E-05	5.12E-06	5.27E-04	1.80E-04	8.65E-04	0.0172	0.346	0.0777	16.1
LMF-02-A OUF H2O	8/20/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	4.97E-05	1.81E-05	3.03E-05	5.32E-06	5.27E-04	1.80E-04	8.65E-04	0.0143	0.241	0.023	8.81
LMF02-A MID H2O_0820	8/20/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	6.94E-05	3.02E-05	3.46E-05	6.27E-06	5.27E-04	1.80E-04	8.65E-04	0.0162	0.286	0.0411	10.5
LMF02A PPR1 H2O_0820	8/20/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	2.52E-04	3.16E-04	5.48E-04	4.53E-05	5.27E-04	1.80E-04	8.65E-04	0.1	1.92	2.04	24.4
LMF02A PPR2 H2O_0820	8/20/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	2.62E-04	3.20E-04	5.57E-04	4.45E-05	5.27E-04	1.80E-04	8.65E-04	0.13	2.78	2.13	52.8
LMF02A PPR3 H2O_0820	8/20/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	2.52E-04	3.08E-04	5.48E-04	4.78E-05	5.27E-04	1.80E-04	8.65E-04	0.1	1.45	2.19	18.7
SWI LMF-02-A_0823	8/23/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	2.9	1.5	10	17.05	2.92E-04	3.29E-04	6.18E-04	4.45E-05	4.82E-04	1.64E-04	8.65E-04	0.026	3.07	0.395	57.2
SWI LMF-02-A_0830	8/30/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	3.5	1.6	10	17.05	2.94E-04	3.87E-04	7.18E-04	5.17E-05	6.02E-04	2.15E-04	8.65E-04	0.039	1.27	0.208	17
SWI LMF-02-A_0830_2	8/30/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	4.9	3.0	10	17.05	3.02E-04	3.90E-04	7.40E-04	5.47E-05	5.71E-04	1.92E-04	8.65E-04	0.018	1.31	0.174	16.2
SWI LMF-02-A_0906	9/6/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	3.0	1.5	10	17.05	2.40E-04	3.23E-04	5.92E-04	4.12E-05	5.15E-04	1.67E-04	8.65E-04	0.027	0.59	0.092	22.7
SWI LMF-02-A_0913	9/13/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	3.1	1.5	10	17.05	2.60E-04	3.33E-04	6.00E-04	4.32E-05	5.37E-04	1.67E-04	8.65E-04	0.028	0.78	0.1	16.1
LMF02-A INF H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	1.26E-04	5.88E-05	5.96E-05	6.39E-06	5.27E-04	1.80E-04	8.65E-04	0.033	1.29	0.0412	21.1
LMF02-A MID H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	1.29E-04	6.30E-05	3.72E-05	6.39E-06	5.27E-04	1.80E-04	8.65E-04	0.0281	1.2	0.0491	20.8
LMF02-A OUF H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	1.23E-04	5.72E-05	4.65E-05	6.39E-06	5.27E-04	1.80E-04	8.65E-04	0.0272	2.11	0.113	19.9
LMF02A PPR1 H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	3.09E-04	3.44E-04	6.39E-04	5.45E-05	5.27E-04	1.80E-04	8.65E-04	0.1	0.45	0.154	17.3
LMF02A PPR2 H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	2.99E-04	3.47E-04	6.35E-04	5.78E-05	5.27E-04	1.80E-04	8.65E-04	0.1	0.4	0.144	18.1
LMF02A PPR3 H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	2.92E-04	3.44E-04	6.09E-04	5.01E-05	5.27E-04	1.80E-04	8.65E-04	0.1	0.56	0.12	15.2
SWI LMF-02-A_0920	9/20/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	3.7	1.8	10	17.05	3.19E-04	3.80E-04	7.00E-04	4.96E-05	5.81E-04	1.76E-04	8.65E-04	0.038	1.17	0.174	19

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Measured (mol/L) Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Measured (ug/L) Cadmium	Copper	Lead	Zinc
SWI LMF-02-A_0920_2	9/20/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	4.4	2.4	10	17.05	3.02E-04	3.36E-04	6.39E-04	4.32E-05	6.19E-04	1.73E-04	8.65E-04	0.011	0.89	0.129	16.8
OW LMF-02-B_0723	7/23/2010	LMF	B	Overlying Water	OverWater	7.7193	2.8	1.5	10	15.15	2.87E-04	3.46E-04	5.70E-04	3.63E-05	4.59E-04	1.61E-04	8.86E-04	0.008	0.59	0.074	16.9
OW LMF-02-B_0726	7/26/2010	LMF	B	Overlying Water	OverWater	7.7193	2.3	1.5	10	15.15	2.92E-04	3.32E-04	5.66E-04	3.91E-05	4.71E-04	1.71E-04	8.86E-04	0.013	0.45	0.028	15.4
OW LMF-02-B_0802	8/2/2010	LMF	B	Overlying Water	OverWater	7.7193	2.2	1.5	10	15.15	2.75E-04	3.21E-04	5.79E-04	4.02E-05	4.83E-04	1.84E-04	8.86E-04	0.016	0.82	0.079	162
OW LMF-02-B_0809	8/9/2010	LMF	B	Overlying Water	OverWater	7.7193	3.9	2.0	10	15.15	2.84E-04	3.14E-04	5.92E-04	4.55E-05	4.68E-04	1.88E-04	8.86E-04	0.024	0.87	0.109	27.8
OW LMF-02-B_0816	8/16/2010	LMF	B	Overlying Water	OverWater	7.7193	2.8	1.5	10	15.15	2.82E-04	3.19E-04	5.96E-04	4.35E-05	4.74E-04	1.71E-04	8.86E-04	0.011	0.72	0.076	25.8
OW LMF-02-B_0823	8/23/2010	LMF	B	Overlying Water	OverWater	7.7193	4.2	2.3	10	15.15	2.77E-04	3.18E-04	5.96E-04	4.12E-05	4.75E-04	1.72E-04	8.86E-04	0.015	0.75	0.083	11.1
OW LMF-02-B_0830	8/30/2010	LMF	B	Overlying Water	OverWater	7.7193	2.8	1.5	10	15.15	2.60E-04	3.21E-04	6.74E-04	4.96E-05	5.38E-04	1.72E-04	8.86E-04	0.012	1.07	0.141	16.8
OW LMF-02-B_0906	9/6/2010	LMF	B	Overlying Water	OverWater	7.7193	3.0	1.5	10	15.15	2.60E-04	3.38E-04	6.18E-04	4.30E-05	5.37E-04	1.74E-04	8.86E-04	0.012	0.74	0.103	13
OW LMF-02-B_0913	9/13/2010	LMF	B	Overlying Water	OverWater	7.7193	8.0	6.1	10	15.15	2.77E-04	3.53E-04	6.26E-04	4.50E-05	5.66E-04	1.84E-04	8.86E-04	0.022	0.71	0.107	12.1
OW LMF-02-B_0920	9/20/2010	LMF	B	Overlying Water	OverWater	7.7193	3.8	1.9	10	15.15	3.12E-04	3.52E-04	6.44E-04	4.27E-05	5.92E-04	1.70E-04	8.86E-04	0.051	0.96	0.102	20.5
PW LMF-02-B_0723	7/23/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	41.0	39.1	10	19.05	1.36E-03	5.06E-04	5.18E-04	1.53E-04	3.39E-04	1.88E-04	3.48E-03	0.489	8.94	15.4	222
PW LMF-02-B_0726	7/26/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	45.1	43.2	10	19.05	1.70E-03	6.25E-04	5.87E-04	1.51E-04	3.09E-04	2.34E-04	3.48E-03	0.044	2.29	1.63	50.4
PW LMF-02-B_0802	8/2/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	51.1	49.2	10	19.05	1.85E-03	6.83E-04	5.74E-04	1.74E-04	6.16E-04	3.61E-04	3.48E-03	0.028	2.3	1.19	94.3
PW LMF-02-B_0809	8/9/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	42.1	40.2	10	19.05	2.38E-03	8.27E-04	6.09E-04	1.87E-04	4.05E-04	2.25E-04	3.48E-03	0.1	1.53	0.681	9.2
PW LMF-02-B_0816	8/16/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	26.2	24.3	10	19.05	2.03E-03	7.12E-04	6.53E-04	1.72E-04	5.69E-04	2.67E-04	3.48E-03	0.052	1.11	0.497	254
PW LMF-02-B_0823	8/23/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	22.1	20.2	10	19.05	2.35E-03	7.12E-04	9.61E-04	1.96E-04	5.45E-04	4.54E-04	3.48E-03	0.245	2.36	0.819	111
PW LMF-02-B_0830	8/30/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	23.4	21.5	10	19.05	1.92E-03	6.30E-04	6.39E-04	1.58E-04	5.52E-04	2.16E-04	3.48E-03	0.019	1.25	0.295	30.6
PW LMF-02-B_0906	9/6/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	23.6	21.7	10	19.05	1.73E-03	5.68E-04	6.53E-04	1.52E-04	8.95E-04	2.03E-04	3.48E-03	0.045	1.13	0.252	10.6
PW LMF-02-B_0913	9/13/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	16.7	14.8	10	19.05	1.63E-03	5.27E-04	6.74E-04	1.46E-04	5.99E-04	2.62E-04	3.48E-03	0.02	1.09	0.462	61.5
PW LMF-02-B_0920	9/20/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	16.7	14.8	10	19.05	1.60E-03	4.98E-04	6.79E-04	1.42E-04	6.39E-04	1.77E-04	3.48E-03	0.015	0.85	0.03	45.2
SWI LMF-02-B_0726	7/26/2010	LMF	B	Sediment-Water Interface	SWI	7.445	2.7	1.5	10	16.55	2.89E-04	3.26E-04	5.26E-04	3.79E-05	4.78E-04	1.64E-04	8.80E-04	0.025	0.68	0.27	43.5
SWI LMF-02-B_0802	8/2/2010	LMF	B	Sediment-Water Interface	SWI	7.445	4.4	2.5	10	16.55	2.48E-04	3.03E-04	5.35E-04	3.79E-05	4.60E-04	1.79E-04	8.80E-04	0.02	0.65	0.062	44.3
SWI LMF-02-B_0809	8/9/2010	LMF	B	Sediment-Water Interface	SWI	7.445	4.8	2.9	10	16.55	2.55E-04	2.96E-04	6.05E-04	4.04E-05	4.70E-04	1.97E-04	8.80E-04	0.018	0.88	0.095	16.9
SWI LMF-02-B_0816	8/16/2010	LMF	B	Sediment-Water Interface	SWI	7.445	4.4	2.5	10	16.55	2.87E-04	3.26E-04	5.70E-04	4.14E-05	4.77E-04	1.66E-04	8.80E-04	0.028	0.89	0.09	15.5
SWI LMF-02-B_0823	8/23/2010	LMF	B	Sediment-Water Interface	SWI	7.445	2.9	1.5	10	16.55	2.72E-04	3.23E-04	6.00E-04	4.43E-05	4.73E-04	1.68E-04	8.80E-04	0.023	1.17	0.086	15
SWI LMF-02-B_0830	8/30/2010	LMF	B	Sediment-Water Interface	SWI	7.445	3.2	1.5	10	16.55	2.63E-04	3.38E-04	6.42E-04	4.40E-05	5.15E-04	1.69E-04	8.80E-04	0.012	1.09	0.144	27.8
SWI LMF-02-B_0906	9/6/2010	LMF	B	Sediment-Water Interface	SWI	7.445	2.4	1.5	10	16.55	2.55E-04	3.36E-04	6.18E-04	4.30E-05	5.59E-04	1.78E-04	8.80E-04	0.043	0.72	0.126	16
SWI LMF-02-B_0913	9/13/2010	LMF	B	Sediment-Water Interface	SWI	7.445	3.7	1.8	10	16.55	2.80E-04	3.47E-04	6.70E-04	4.73E-05	5.73E-04	1.80E-04	8.80E-04	0.019	0.78	0.097	88
SWI LMF-02-B_0920	9/20/2010	LMF	B	Sediment-Water Interface	SWI	7.445	4.1	2.2	10	16.55	2.94E-04	3.34E-04	6.39E-04	4.09E-05	5.90E-04	1.70E-04	8.80E-04	0.01	0.82	0.079	13.1
OW LMF-02-C_0723	7/23/2010	LMF	C	Overlying Water	OverWater	7.7696	1.6	1.5	10	15.05	2.99E-04	3.49E-04	5.79E-04	4.20E-05	4.69E-04	1.71E-04	8.84E-04	0.008	0.44	0.03	25.2
OW LMF-02-C_0726	7/26/2010	LMF	C	Overlying Water	OverWater	7.7696	2.6	1.5	10	15.05	3.09E-04	3.81E-04	6.26E-04	4.09E-05	5.07E-04	1.78E-04	8.84E-04	0.02	0.68	0.069	21.9
OW LMF-02-C_0802	8/2/2010	LMF	C	Overlying Water	OverWater	7.7696	3.7	1.7	10	15.05	2.92E-04	3.37E-04	6.22E-04	4.35E-05	5.00E-04	2.05E-04	8.84E-04	0.014	0.74	0.042	22.2
OW LMF-02-C_0809	8/9/2010	LMF	C	Overlying Water	OverWater	7.7696	5.4	3.5	10	15.05	2.55E-04	2.91E-04	5.52E-04	3.99E-05	4.43E-04	2.01E-04	8.84E-04	0.029	0.98	0.103	15.9
OW LMF-02-C_0816	8/16/2010	LMF	C	Overlying Water	OverWater	7.7696	10.8	8.9	10	15.05	3.39E-03	3.84E-04	8.35E-04	5.12E-05	4.84E-04	1.72E-04	8.84E-04	0.114	3	0.321	38.9
OW LMF-02-C_0823	8/23/2010	LMF	C	Overlying Water	OverWater	7.7696	2.8	1.5	10	15.05	2.72E-04	3.26E-04	5.87E-04	4.50E-05	4.92E-04	1.66E-04	8.84E-04	0.017	0.78	0.086	11.3
OW LMF-02-C_0830	8/30/2010	LMF	C	Overlying Water	OverWater	7.7696	2.8	1.5	10	15.05	2.41E-04	3.08E-04	6.35E-04	4.55E-05	5.14E-04	1.63E-04	8.84E-04	0.014	1.39	0.456	19.7
OW LMF-02-C_0906	9/6/2010	LMF	C	Overlying Water	OverWater	7.7696	2.9	1.5	10	15.05	2.38E-04	3.14E-04	5.83E-04	4.12E-05	4.80E-04	1.66E-04	8.84E-04	0.02	1.55	0.1	13.3
OW LMF-02-C_0913	9/13/2010	LMF	C	Overlying Water	OverWater	7.7696	3.5	1.6	10	15.05	2.62E-04	3.39E-04	5.96E-04	4.43E-05	5.22E-04	1.63E-04	8.84E-04	0.031	0.89	0.104	12.7
OW LMF-02-C_0920	9/20/2010	LMF	C	Overlying Water	OverWater	7.7696	3.6	1.7	10	15.05	3.32E-04	3.71E-04	6.79E-04	4.83E-05	5.76E-04	1.74E-04	8.84E-04	0.037	0.85	0.173	18.1
PW LMF-02-C_0723	7/23/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	34.0	32.1	10	18.95	1.37E-03	5.31E-04	5.79E-04	1.35E-04	4.05E-04	1.66E-04	3.80E-03	0.102	1.61	0.485	25.1
PW LMF-02-C_0726	7/26/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	30.7	28.8	10	18.95	1.33E-03	5.10E-04	5.87E-04	1.31E-04	4.20E-04	1.68E-04	3.80E-03	0.096	1.26	0.719	34.9
PW LMF-02-C_0802	8/2/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	30.9	29.0	10	18.95	1.80E-03	6.91E-04	6.48E-04	1.58E-04	4.20E-04	2.42E-04	3.80E-03	0.037	1.24	0.552	324
PW LMF-02-C_0809	8/9/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	29.1	27.2	10	18.95	2.01E-03	7.24E-04	7.00E-04	1.79E-04	4.63E-04	2.14E-04	3.80E-03	0.072	1.11	0.324	11.3
PW LMF-02-C_0816	8/16/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	20.4	18.5	10	18.95	1.88E-03	6.62E-04	6.96E-04	1.63E-04	4.94E-04	2.16E-04	3.80E-03	0.15	1.21	0.4	130
PW LMF-02-C_0823	8/23/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	17.0	15.1	10	18.95	1.39E-03	4.86E-04	5.74E-04	1.24E-04	5.43E-04	2.16E-04	3.80E-03	0.212	2.5	1.08	1070
PW LMF-02-C_0830	8/30/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	18.5	16.6	10	18.95	1.60E-03	5.55E-04	6.53E-04	1.40E-04	6.68E-04	1.90E-04	3.80E-03	0.03	0.85	0.327	23
PW LMF-02-C_0906	9/6/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	10.0	8.0	10	18.95	1.16E-03	4.44E-04	6.44E-04	1.12E-04	9.10E-04	1.73E-04	3.80E-03	0.081	0.57	0.141	18.7
PW LMF-02-C_0913	9/13/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	10.8	8.9	10	18.95	1.32E-03	4.61E-04	6.70E-04	1.24E-04	7.01E-04	2.61E-04	3.80E-03	0.018	0.74	0.298	41.2
PW LMF-02-C_0920	9/20/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	11.6	9.7	10	18.95	1.35E-03	4.53E-04	6.92E-04	1.22E-04	6.02E-04	1.70E-04	3.80E-03	0.045	0.86	0.271	12.7
SWI LMF-02-C_0726	7/26/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	2.0	1.5	10	16.35	3.02E-04	3.63E-04	5.92E-04	3.73E-05	5.02E-04	1.77E-04	9.07E-04	0.013	0.62	0.056	10.8
SWI LMF-02-C_0802	8/2/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	3.9	2.0	10	16.35	2.72E-04	3.24E-04	5.66E-04	4.04E-05	4.89E-04	2.06E-04	9.07E-04	0.023	0.66	0.078	18.5
SWI LMF-02-C_0809	8/9/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	5.9	3.9	10	16.35	2.52E-04	2.97E-04	6.09E-04	4.20E-05	4.48E-04	1.94E-04	9.07E-04	0.017	1	0.076	13.6
SWI LMF-02-C_0809_2	8/9/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	5.2	3.3	10	16.35	2.65E-04	3.01E-04	6.05E-04	4.45E-05	4.54E-04	1.99E-04	9.07E-04	0.011	1.39	0.072	12
SWI LMF-02-C_0816	8/16/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	4.6	2.7	10	16.35	2.72E-04	3.30E-04	6.61E-04	4.76E-05	4.84E-04	1.73E-04	9.07E-04	0.027	1.05	0.099	21.2
SWI LMF-02-C_0823	8/23/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	4.7	2.8	10	16.35	2.75E-04	3.28E-04	5.96E-04	4.37E-05	4.95E-04	1.68E-04	9.07E-04	0.017	0.78	0.088	15.2

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
SWI LMF-02-C_0830	8/30/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	3.6	1.7	10	16.35	2.41E-04	3.12E-04	6.00E-04	4.43E-05	4.77E-04	1.65E-04	9.07E-04	0.017	1.01	0.105	18.5
SWI LMF-02-C_0906	9/6/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	3.6	1.6	10	16.35	2.44E-04	3.22E-04	5.96E-04	4.17E-05	5.09E-04	1.69E-04	9.07E-04	0.01	0.57	0.078	13.9
SWI LMF-02-C_0913	9/13/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	3.2	1.5	10	16.35	2.60E-04	3.28E-04	6.13E-04	4.37E-05	5.49E-04	1.63E-04	9.07E-04	0.023	0.79	0.074	13.4
SWI LMF-02-C_0920	9/20/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	3.4	1.5	10	16.35	3.34E-04	3.87E-04	7.13E-04	5.01E-05	5.76E-04	1.73E-04	9.07E-04	0.046	0.94	0.196	19.2
OW LMF-02-D_0723	7/23/2010	LMF	D	Overlying Water	OverWater	7.7218	1.6	1.5	10	15.65	3.03E-04	3.56E-04	5.70E-04	3.65E-05	4.54E-04	1.70E-04	8.67E-04	0.0075	0.385	0.0345	3.95
OW LMF-02-D_0726	7/26/2010	LMF	D	Overlying Water	OverWater	7.7218	2.1	1.5	10	15.65	2.92E-04	3.26E-04	5.48E-04	3.89E-05	1.99E-04	1.70E-04	8.67E-04	0.012	0.4	0.032	13.3
OW LMF-02-D_0802	8/2/2010	LMF	D	Overlying Water	OverWater	7.7218	3.4	1.5	10	15.65	3.47E-04	4.11E-04	7.13E-04	5.12E-05	5.90E-04	2.31E-04	8.67E-04	0.016	0.78	0.049	1040
OW LMF-02-D_0809	8/9/2010	LMF	D	Overlying Water	OverWater	7.7218	10.4	8.5	10	15.65	2.65E-04	3.13E-04	6.48E-04	4.35E-05	4.79E-04	1.98E-04	8.67E-04	0.022	0.93	0.078	987
OW LMF-02-D_0816	8/16/2010	LMF	D	Overlying Water	OverWater	7.7218	2.3	1.5	10	15.65	2.92E-04	3.36E-04	6.05E-04	4.35E-05	4.89E-04	1.72E-04	8.67E-04	0.014	0.81	0.07	12.7
OW LMF-02-D_0823	8/23/2010	LMF	D	Overlying Water	OverWater	7.7218	3.1	1.5	10	15.65	3.17E-04	3.94E-04	6.87E-04	5.04E-05	5.60E-04	1.97E-04	8.67E-04	0.024	0.8	0.104	25.8
OW LMF-02-D_0830	8/30/2010	LMF	D	Overlying Water	OverWater	7.7218	2.9	1.5	10	15.65	2.55E-04	3.23E-04	6.35E-04	4.60E-05	5.21E-04	1.66E-04	8.67E-04	0.018	1	0.149	20.6
OW LMF-02-D_0913	9/13/2010	LMF	D	Overlying Water	OverWater	7.7218	5.4	3.5	10	15.65	2.47E-04	3.16E-04	5.74E-04	4.14E-05	4.76E-04	1.74E-04	8.67E-04	0.033	0.82	0.42	20.1
OW LMF-02-D_0920	9/20/2010	LMF	D	Overlying Water	OverWater	7.7218	4.5	2.5	10	15.65	2.21E-03	8.85E-04	1.86E-03	1.27E-04	7.18E-04	2.23E-04	8.67E-04	0.33	12.7	0.94	257
PW LMF-02-D_0723	7/23/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	46.0	44.1	10	19.25	1.51E-03	5.64E-04	5.52E-04	1.44E-04	3.47E-04	1.84E-04	3.05E-03	0.024	1.93	0.838	22.6
PW LMF-02-D_0802	8/2/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	42.7	40.8	10	19.25	1.93E-03	7.04E-04	6.39E-04	1.76E-04	3.79E-04	4.18E-04	3.05E-03	0.034	2.51	1.08	110
PW LMF-02-D_0809	8/9/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	38.6	36.7	10	19.25	2.26E-03	7.90E-04	7.05E-04	1.91E-04	4.43E-04	3.08E-04	3.05E-03	0.069	2.25	0.762	24.4
PW LMF-02-D_0816	8/16/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	25.3	23.4	10	19.25	2.09E-03	6.95E-04	6.61E-04	1.69E-04	4.68E-04	2.24E-04	3.05E-03	0.039	1.05	0.46	527
PW LMF-02-D_0823	8/23/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	24.9	23.0	10	19.25	2.09E-03	6.83E-04	7.09E-04	1.76E-04	5.40E-04	2.27E-04	3.05E-03	0.612	1.2	0.459	25.2
PW LMF-02-D_0830	8/30/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	22.1	20.2	10	19.25	1.88E-03	6.01E-04	6.66E-04	1.59E-04	5.24E-04	2.24E-04	3.05E-03	0.099	1.19	0.369	33.7
PW LMF-02-D_0906	9/6/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	17.6	15.7	10	19.25	1.56E-03	4.86E-04	6.79E-04	1.44E-04	7.18E-04	1.90E-04	3.05E-03	0.043	0.99	0.237	8.6
PW LMF-02-D_0913	9/13/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	15.5	13.6	10	19.25	1.56E-03	4.81E-04	6.79E-04	1.46E-04	5.60E-04	2.88E-04	3.05E-03	0.026	1.14	1.19	37.5
PW LMF-02-D_0920	9/20/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	14.7	12.8	10	19.25	1.58E-03	4.61E-04	7.00E-04	1.39E-04	6.67E-04	1.98E-04	3.05E-03	0.014	1	0.284	7.8
SWI LMF-02-D_0726	7/26/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	2.5	1.5	10	16.75	2.75E-04	3.42E-04	5.66E-04	3.68E-05	4.76E-04	2.13E-04	9.10E-04	0.01	0.43	0.04	21.7
SWI LMF-02-D_0802	8/2/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	4.3	2.4	10	16.75	3.34E-04	4.16E-04	6.79E-04	4.86E-05	5.87E-04	2.33E-04	9.10E-04	0.018	0.57	0.056	20.5
SWI LMF-02-D_0809	8/9/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	5.0	3.0	10	16.75	2.70E-04	3.16E-04	6.53E-04	4.40E-05	4.97E-04	2.15E-04	9.10E-04	0.013	1.05	0.091	15.7
SWI LMF-02-D_0816	8/16/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	3.3	1.5	10	16.75	2.99E-04	3.44E-04	5.92E-04	4.35E-05	4.97E-04	1.74E-04	9.10E-04	0.017	0.86	0.071	22.7
SWI LMF-02-D_0823	8/23/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	3.9	2.0	10	16.75	3.14E-04	3.93E-04	7.44E-04	5.32E-05	5.32E-04	1.87E-04	9.10E-04	0.014	1.26	0.093	17.4
SWI LMF-02-D_0830	8/30/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	2.7	1.5	10	16.75	2.65E-04	3.35E-04	6.48E-04	4.81E-05	4.81E-04	1.59E-04	9.10E-04	0.025	0.97	0.176	31.7
SWI LMF-02-D_0906	9/6/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	3.4	1.5	10	16.75	2.41E-04	3.22E-04	6.09E-04	4.25E-05	5.16E-04	1.69E-04	9.10E-04	0.019	0.71	0.129	13.1
SWI LMF-02-D_0913	9/13/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	2.7	1.5	10	16.75	2.40E-04	2.98E-04	5.66E-04	3.91E-05	4.88E-04	1.53E-04	9.10E-04	0.016	0.84	0.125	16.6
SWI LMF-02-D_0920	9/20/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	2.9	1.5	10	16.75	1.74E-03	4.73E-04	1.15E-03	8.77E-05	7.21E-04	2.16E-04	9.10E-04	0.454	4.29	0.79	513
OW NP-03-A_0723	7/23/2010	NP	A	Overlying Water	OverWater	7.7273	2.3	1.5	10	15.05	3.27E-04	3.53E-04	5.92E-04	4.35E-05	5.08E-04	1.80E-04	8.65E-04	0.025	1.48	0.06	17.4
OW NP-03-A_0726	7/26/2010	NP	A	Overlying Water	OverWater	7.7273	2.4	1.5	10	15.05	2.82E-04	3.11E-04	5.31E-04	3.71E-05	5.08E-04	1.68E-04	8.65E-04	0.005	0.92	0.025	9
OW NP-03-A_0802	8/2/2010	NP	A	Overlying Water	OverWater	7.7273	2.4	1.5	10	15.05	2.80E-04	3.22E-04	5.92E-04	4.14E-05	5.01E-04	1.83E-04	8.65E-04	0.015	1.05	0.068	55.4
OW NP-03-A_0809	8/9/2010	NP	A	Overlying Water	OverWater	7.7273	4.9	3.0	10	15.05	2.97E-04	3.07E-04	6.13E-04	4.25E-05	4.60E-04	1.90E-04	8.65E-04	0.023	1.41	0.075	16.3
OW NP-03-A_0816	8/16/2010	NP	A	Overlying Water	OverWater	7.7273	3.7	1.8	10	15.05	2.89E-04	3.10E-04	5.87E-04	4.43E-05	4.72E-04	1.76E-04	8.65E-04	0.017	1.59	0.106	14.3
OW NP-03-A_0823	8/23/2010	NP	A	Overlying Water	OverWater	7.7273	2.6	1.5	10	15.05	2.84E-04	3.30E-04	6.13E-04	4.20E-05	5.03E-04	1.62E-04	8.65E-04	0.015	1.64	0.082	8.9
OW NP-03-A_0830	8/30/2010	NP	A	Overlying Water	OverWater	7.7273	4.1	2.2	10	15.05	2.55E-04	3.18E-04	6.57E-04	4.78E-05	5.51E-04	1.80E-04	8.65E-04	0.02	1.8	0.098	22
OW NP-03-A_0906	9/6/2010	NP	A	Overlying Water	OverWater	7.7273	3.0	1.5	10	15.05	2.55E-04	3.33E-04	6.09E-04	4.30E-05	5.35E-04	1.76E-04	8.65E-04	0.013	1.12	0.071	8.5
OW NP-03-A_0913	9/13/2010	NP	A	Overlying Water	OverWater	7.7273	3.9	2.0	10	15.05	2.87E-04	3.77E-04	6.57E-04	4.71E-05	5.73E-04	1.89E-04	8.65E-04	0.017	1.06	0.056	9.9
OW NP-03-A_0920	9/20/2010	NP	A	Overlying Water	OverWater	7.7273	4.3	2.4	10	15.05	3.27E-04	3.63E-04	6.61E-04	4.68E-05	6.34E-04	1.72E-04	8.65E-04	0.038	1.62	0.058	7.3
PW NP-03-A_0723	7/23/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	12.9	11.0	10	17.95	1.64E-03	5.93E-04	3.79E-04	1.05E-04	9.12E-04	2.16E-04	3.30E-03	0.309	9.03	0.442	49.1
PW NP-03-A_0726	7/26/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	11.9	10.0	10	17.95	1.69E-03	6.05E-04	4.02E-04	9.95E-05	8.68E-04	2.25E-04	3.30E-03	0.658	8.27	0.573	38.9
PW NP-03-A_0802	8/2/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	11.5	9.6	10	17.95	1.89E-03	6.42E-04	4.57E-04	1.06E-04	9.30E-04	3.44E-04	3.30E-03	0.126	5.46	0.558	787
PW NP-03-A_0809	8/9/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	8.2	6.3	10	17.95	1.88E-03	6.30E-04	4.92E-04	1.06E-04	9.67E-04	2.23E-04	3.30E-03	0.076	2.73	0.171	16.1
PW NP-03-A_0816	8/16/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	3.9	2.0	10	17.95	1.09E-03	3.42E-04	5.44E-04	8.11E-05	6.05E-04	1.93E-04	3.30E-03	0.08	1.75	0.289	1250
PW NP-03-A_0823	8/23/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	7.3	5.4	10	17.95	1.61E-03	5.10E-04	5.96E-04	9.90E-05	8.82E-04	2.13E-04	3.30E-03	0.246	1.85	0.345	11.4
PW NP-03-A_0830	8/30/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	7.2	5.3	10	17.95	1.40E-03	4.24E-04	5.87E-04	8.36E-05	7.93E-04	2.14E-04	3.30E-03	0.03	1.54	0.602	48.7
PW NP-03-A_0906	9/6/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	6.4	4.4	10	17.95	1.40E-03	4.57E-04	6.09E-04	8.80E-05	8.25E-04	1.87E-04	3.30E-03	0.089	1	0.13	5.8
PW NP-03-A_0913	9/13/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	6.0	4.1	10	17.95	1.36E-03	4.36E-04	6.22E-04	9.08E-05	8.03E-04	3.05E-04	3.30E-03	0.047	1.63	0.582	13.7
PW NP-03-A_0920	9/20/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	6.8	4.9	10	17.95	1.31E-03	4.04E-04	6.31E-04	8.13E-05	7.89E-04	1.92E-04	3.30E-03	0.028	1.25	0.074	4.9
SWI NP-03-A_0726	7/26/2010	NP	A	Sediment-Water Interface	SWI	7.5275	2.3	1.5	10	16.45	2.77E-04	3.42E-04	5.74E-04	3.53E-05	4.69E-04	1.76E-04	8.64E-04	0.011	1.55	0.034	19
SWI NP-03-A_0802	8/2/2010	NP	A	Sediment-Water Interface	SWI	7.5275	2.3	1.5	10	16.45	2.75E-04	3.16E-04	5.70E-04	3.86E-05	4.70E-04	1.75E-04	8.64E-04	0.008	1.06	0.038	6.5
SWI NP-03-A_0809	8/9/2010	NP	A	Sediment-Water Interface	SWI	7.5275	4.7	2.8	10	16.45	2.77E-04	3.10E-04	5.96E-04	4.27E-05	4.68E-04	1.87E-04	8.64E-04	0.011	1.24	0.05	16.2
SWI NP-03-A_0816	8/16/2010	NP	A	Sediment-Water Interface	SWI	7.5275	4.3	2.4	10	16.45	2.92E-04	3.26E-04	6.18E-04	4.43E-05	4.68E-04	1.66E-04	8.64E-04	0.021	2.41	0.117	9.9
SWI NP-03-A_0823	8/23/2010	NP	A	Sediment-Water Interface	SWI	7.5275	4.5	2.5	10	16.45	2.87E-04	3.23E-04	6.48E-04	4.63E-05	4.81E-04	1.64E-04	8.64E-04	0.018	1.78	0.136	8.2

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
SWI NP-03-A_0830	8/30/2010	NP	A	Sediment-Water Interface	SWI	7.5275	3.8	1.8	10	16.45	2.65E-04	3.27E-04	6.35E-04	4.73E-05	5.19E-04	1.62E-04	8.64E-04	0.019	1.76	0.122	21.1
SWI NP-03-A_0906	9/6/2010	NP	A	Sediment-Water Interface	SWI	7.5275	3.1	1.5	10	16.45	2.50E-04	3.34E-04	6.26E-04	4.30E-05	5.23E-04	1.81E-04	8.64E-04	0.028	1.35	0.105	13.2
SWI NP-03-A_0913	9/13/2010	NP	A	Sediment-Water Interface	SWI	7.5275	4.1	2.2	10	16.45	2.77E-04	3.47E-04	6.53E-04	4.66E-05	6.39E-04	1.78E-04	8.64E-04	0.024	1.14	0.064	7.6
SWI NP-03-A_0920	9/20/2010	NP	A	Sediment-Water Interface	SWI	7.5275	3.9	1.9	10	16.45	2.97E-04	3.31E-04	7.22E-04	4.83E-05	5.95E-04	1.77E-04	8.64E-04	0.027	1.54	0.068	7.7
OW NP-03-B_0723	7/23/2010	NP	B	Overlying Water	OverWater	7.7272	1.8	1.5	10	15.35	3.02E-04	3.51E-04	5.74E-04	4.30E-05	3.54E-04	1.63E-04	8.84E-04	0.012	0.7	0.074	11.9
OW NP-03-B_0726	7/26/2010	NP	B	Overlying Water	OverWater	7.7272	2.5	1.5	10	15.35	2.77E-04	3.42E-04	5.61E-04	3.61E-05	4.74E-04	1.73E-04	8.84E-04	0.02	1.23	0.519	15.6
OW NP-03-B_0802	8/2/2010	NP	B	Overlying Water	OverWater	7.7272	3.0	1.5	10	15.35	2.84E-04	3.29E-04	6.22E-04	4.22E-05	5.47E-04	2.09E-04	8.84E-04	0.014	1.17	0.035	11.7
OW NP-03-B_0809	8/9/2010	NP	B	Overlying Water	OverWater	7.7272	4.6	2.6	10	15.35	2.87E-04	3.18E-04	6.05E-04	4.40E-05	4.84E-04	1.97E-04	8.84E-04	0.026	1.84	0.087	10.6
OW NP-03-B_0816	8/16/2010	NP	B	Overlying Water	OverWater	7.7272	3.4	1.5	10	15.35	2.72E-04	3.06E-04	5.74E-04	4.17E-05	4.79E-04	2.48E-04	8.84E-04	0.017	1.3	0.068	96.4
OW NP-03-B_0823	8/23/2010	NP	B	Overlying Water	OverWater	7.7272	2.7	1.5	10	15.35	2.77E-04	3.23E-04	6.00E-04	4.30E-05	5.38E-04	1.71E-04	8.84E-04	0.019	1.41	0.084	12
OW NP-03-B_0830	8/30/2010	NP	B	Overlying Water	OverWater	7.7272	4.2	2.2	10	15.35	2.97E-04	3.82E-04	7.13E-04	5.19E-05	6.05E-04	1.92E-04	8.84E-04	0.014	1.68	0.375	12.7
OW NP-03-B_0906	9/6/2010	NP	B	Overlying Water	OverWater	7.7272	2.6	1.5	10	15.35	2.77E-04	3.60E-04	6.66E-04	4.66E-05	5.90E-04	1.84E-04	8.84E-04	0.018	2.97	0.097	9.2
OW NP-03-B_0913	9/13/2010	NP	B	Overlying Water	OverWater	7.7272	5.0	3.0	10	15.35	3.04E-04	3.16E-04	6.05E-04	4.25E-05	5.25E-04	1.78E-04	8.84E-04	0.58	2.15	0.151	36
OW NP-03-B_0920	9/20/2010	NP	B	Overlying Water	OverWater	7.7272	3.8	1.9	10	15.35	3.12E-04	3.50E-04	6.44E-04	4.35E-05	5.59E-04	1.71E-04	8.84E-04	0.014	2.84	0.07	7.7
PW NP-03-B_0723	7/23/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	16.9	15.0	10	18.45	1.81E-03	6.54E-04	3.71E-04	1.12E-04	9.74E-04	2.02E-04	3.50E-03	0.279	9.7	0.412	37.3
PW NP-03-B_0726	7/26/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	16.2	14.3	10	18.45	1.87E-03	6.79E-04	4.39E-04	9.87E-05	9.69E-04	2.06E-04	3.50E-03	0.389	10.9	0.613	47
PW NP-03-B_0802	8/2/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	12.5	10.6	10	18.45	1.96E-03	6.95E-04	4.39E-04	1.14E-04	1.03E-03	2.54E-04	3.50E-03	0.178	6	0.52	213
PW NP-03-B_0809	8/9/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	48.7	46.8	10	18.45	1.99E-03	6.91E-04	4.65E-04	1.08E-04	1.06E-03	2.24E-04	3.50E-03	0.272	3.12	0.329	16.3
PW NP-03-B_0816	8/16/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	7.1	5.2	10	18.45	1.61E-03	5.64E-04	9.09E-04	1.20E-04	8.54E-04	2.29E-04	3.50E-03	0.564	3.26	0.919	102
PW NP-03-B_0823	8/23/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	7.0	5.0	10	18.45	1.67E-03	6.95E-04	1.66E-03	1.24E-04	8.67E-04	2.51E-04	3.50E-03	0.23	4.6	0.279	174
PW NP-03-B_0830	8/30/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	7.0	5.1	10	18.45	1.22E-03	3.71E-04	6.09E-04	7.78E-05	7.30E-04	2.11E-04	3.50E-03	0.05	1.46	0.292	19.2
PW NP-03-B_0906	9/6/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	5.9	4.0	10	18.45	1.27E-03	4.03E-04	6.35E-04	8.42E-05	7.93E-04	1.92E-04	3.50E-03	0.04	1.07	0.094	5.9
PW NP-03-B	9/13/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	5.1	3.2	10	18.45	1.22E-03	3.56E-04	6.61E-04	8.36E-05	6.81E-04	2.82E-04	3.50E-03	0.048	1.42	0.287	10.2
PW NP-03-B_0920	9/20/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	6.5	4.5	10	18.45	1.18E-03	3.63E-04	6.44E-04	7.80E-05	7.30E-04	1.81E-04	3.50E-03	0.139	1.21	0.203	7
SWI NP-03-B_0726	7/26/2010	NP	B	Sediment-Water Interface	SWI	7.54	2.8	1.5	10	16.55	2.94E-04	3.53E-04	5.83E-04	3.76E-05	4.82E-04	1.76E-04	9.40E-04	0.013	1.26	0.042	12.4
SWI NP-03-B_0802	8/2/2010	NP	B	Sediment-Water Interface	SWI	7.54	3.2	1.5	10	16.55	2.72E-04	3.13E-04	5.79E-04	3.91E-05	4.92E-04	1.89E-04	9.40E-04	0.01	1.14	0.03	8.5
SWI NP-03-B_0802_2	8/2/2010	NP	B	Sediment-Water Interface	SWI	7.54	2.3	1.5	10	16.55	2.67E-04	3.16E-04	5.57E-04	4.04E-05	4.81E-04	1.93E-04	9.40E-04	0.018	1.1	0.055	6.8
SWI NP-03-B_0809	8/9/2010	NP	B	Sediment-Water Interface	SWI	7.54	4.8	2.8	10	16.55	3.02E-04	3.28E-04	6.26E-04	4.53E-05	4.92E-04	1.94E-04	9.40E-04	0.018	1.8	0.068	17.1
SWI NP-03-B_0816	8/16/2010	NP	B	Sediment-Water Interface	SWI	7.54	2.7	1.5	10	16.55	2.84E-04	3.33E-04	6.31E-04	4.45E-05	4.60E-04	1.68E-04	9.40E-04	0.047	1.31	0.101	11.6
SWI NP-03-B_0823	8/23/2010	NP	B	Sediment-Water Interface	SWI	7.54	8.0	6.0	10	16.55	2.94E-04	3.35E-04	6.53E-04	4.73E-05	4.91E-04	1.69E-04	9.40E-04	0.02	1.79	0.104	17.8
SWI NP-03-B_0830	8/30/2010	NP	B	Sediment-Water Interface	SWI	7.54	3.0	1.5	10	16.55	2.94E-04	3.73E-04	6.87E-04	5.06E-05	5.64E-04	1.85E-04	9.40E-04	0.018	1.77	0.119	14.8
SWI NP-03-B_0906	9/6/2010	NP	B	Sediment-Water Interface	SWI	7.54	3.5	1.6	10	16.55	2.70E-04	3.58E-04	6.61E-04	4.63E-05	5.70E-04	1.90E-04	9.40E-04	0.029	1.48	0.104	18.7
SWI NP-03-B_0913	9/13/2010	NP	B	Sediment-Water Interface	SWI	7.54	4.1	2.2	10	16.55	2.41E-04	3.07E-04	5.61E-04	3.91E-05	5.06E-04	1.61E-04	9.40E-04	0.038	1.72	0.078	101
SWI NP-03-B_0920	9/20/2010	NP	B	Sediment-Water Interface	SWI	7.54	3.6	1.7	10	16.55	2.97E-04	3.39E-04	6.48E-04	4.22E-05	5.77E-04	1.68E-04	9.40E-04	0.018	1.78	0.084	12.1
OW UMF-01-A_0723	7/23/2010	UMF	A	Overlying Water	OverWater	7.7367	2.5	1.5	10	15.55	3.09E-04	3.63E-04	5.83E-04	4.50E-05	4.65E-04	1.68E-04	8.89E-04	0.01	0.61	0.023	14.2
OW UMF-01-A_0726	7/26/2010	UMF	A	Overlying Water	OverWater	7.7367	3.1	1.5	10	15.55	2.87E-04	3.31E-04	5.61E-04	4.02E-05	4.68E-04	1.66E-04	8.89E-04	0.009	0.95	0.036	16.6
OW UMF-01-A_0802	8/2/2010	UMF	A	Overlying Water	OverWater	7.7367	3.3	1.5	10	15.55	3.27E-04	3.99E-04	7.31E-04	4.94E-05	5.85E-04	2.29E-04	8.89E-04	0.011	0.93	0.039	8.3
OW UMF-01-A_0809	8/9/2010	UMF	A	Overlying Water	OverWater	7.7367	3.9	1.9	10	15.55	2.97E-04	3.32E-04	6.61E-04	4.48E-05	4.97E-04	2.07E-04	8.89E-04	0.024	1.25	0.059	8.5
OW UMF-01-A_0816	8/16/2010	UMF	A	Overlying Water	OverWater	7.7367	3.6	1.7	10	15.55	2.94E-04	3.33E-04	6.18E-04	4.58E-05	4.91E-04	1.77E-04	8.89E-04	0.025	1.44	0.066	16.2
OW UMF-01-A_0823	8/23/2010	UMF	A	Overlying Water	OverWater	7.7367	4.5	2.6	10	15.55	3.24E-04	3.60E-04	6.74E-04	4.76E-05	5.29E-04	1.90E-04	8.89E-04	0.019	2.11	0.065	27.9
OW UMF-01-A_0830	8/30/2010	UMF	A	Overlying Water	OverWater	7.7367	2.5	1.5	10	15.55	2.55E-04	3.18E-04	6.13E-04	4.50E-05	4.92E-04	1.71E-04	8.89E-04	0.041	1.7	0.119	19
OW UMF-01-A_0906	9/6/2010	UMF	A	Overlying Water	OverWater	7.7367	1.8	1.5	10	15.55	2.49E-04	3.30E-04	5.92E-04	4.09E-05	5.24E-04	1.73E-04	8.89E-04	0.015	0.84	0.066	12.3
OW UMF-01-A_0913	9/13/2010	UMF	A	Overlying Water	OverWater	7.7367	4.9	3.0	10	15.55	2.32E-04	3.05E-04	5.61E-04	3.91E-05	4.92E-04	1.52E-04	8.89E-04	0.012	1.02	0.055	5.5
OW UMF-01-A_0920	9/20/2010	UMF	A	Overlying Water	OverWater	7.7367	3.2	1.5	10	15.55	3.99E-04	4.44E-04	8.18E-04	5.53E-05	7.12E-04	2.16E-04	8.89E-04	0.01	1.28	0.034	5.1
PW UMF-01-A_0723	7/23/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	27.1	25.2	10	18.45	1.48E-03	3.67E-04	4.20E-04	2.02E-04	4.94E-04	1.81E-04	3.62E-03	0.321	29	5.84	64.7
PW UMF-01-A_0726	7/26/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	28.8	26.9	10	18.45	1.67E-03	4.44E-04	4.70E-04	2.19E-04	5.23E-04	1.88E-04	3.62E-03	0.278	18.1	0.831	15.9
PW UMF-01-A_0802	8/2/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	22.6	20.7	10	18.45	1.54E-03	4.24E-04	5.05E-04	1.78E-04	5.56E-04	2.47E-04	3.62E-03	0.242	12.1	0.532	627
PW UMF-01-A_0809	8/9/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	15.6	13.7	10	18.45	1.53E-03	3.77E-04	5.57E-04	1.70E-04	5.68E-04	2.07E-04	3.62E-03	0.122	11	0.576	12.4
PW UMF-01-A_0816	8/16/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	9.8	7.9	10	18.45	1.29E-03	3.57E-04	6.18E-04	1.46E-04	5.09E-04	2.14E-04	3.62E-03	0.203	7.89	0.785	876
PW UMF-01-A_0823	8/23/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	7.5	5.5	10	18.45	1.18E-03	3.15E-04	6.66E-04	1.35E-04	6.53E-04	1.96E-04	3.62E-03	0.187	4.08	0.514	15.8
PW UMF-01-A_0830	8/30/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	5.8	3.8	10	18.45	1.01E-03	3.12E-04	6.18E-04	1.10E-04	5.59E-04	1.90E-04	3.62E-03	0.08	3.5	0.273	22.2
PW UMF-01-A_0906	9/6/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	6.6	4.7	10	18.45	9.03E-04	2.70E-04	6.13E-04	1.03E-04	5.08E-04	1.74E-04	3.62E-03	0.063	2.46	0.113	5.9
PW UMF-01-A_0913	9/13/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	5.9	4.0	10	18.45	1.01E-03	2.79E-04	6.79E-04	1.16E-04	6.09E-04	2.71E-04	3.62E-03	0.155	3.65	0.922	23.7
PW UMF-01-A_0920	9/20/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	6.8	4.8	10	18.45	1.02E-03	2.74E-04	6.53E-04	1.08E-04	6.31E-04	1.75E-04	3.62E-03	0.02	2.5	0.229	5.1
SWI UMF-01-A_0726	7/26/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	2.1	1.5	10	16.75	2.70E-04	3.35E-04	5.48E-04	3.56E-05	4.73E-04	1.67E-04	8.81E-04	0.018	0.97	0.05	8.3
SWI UMF-01-A_0802	8/2/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	3.9	1.9	10	16.75	3.37E-04	3.93E-04	6.79E-04	4.58E-05	4.72E-04	2.41E-04	8.81E-04	0.011	1	0.053	20.4

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
SWI UMF-01-A_0809	8/9/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	6.5	4.6	10	16.75	3.69E-04	3.35E-04	7.09E-04	4.81E-05	5.01E-04	2.11E-04	8.81E-04	0.249	2	0.16	77.9
SWI UMF-01-A_0816	8/16/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	4.9	2.9	10	16.75	2.99E-04	3.29E-04	5.70E-04	4.17E-05	4.89E-04	1.76E-04	8.81E-04	0.056	1.51	0.053	8.5
SWI UMF-01-A_0823	8/23/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	4.0	2.1	10	16.75	3.12E-04	3.61E-04	6.53E-04	4.68E-05	5.16E-04	1.80E-04	8.81E-04	0.018	1.76	0.054	23.4
SWI UMF-01-A_0830	8/30/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	3.8	1.9	10	16.75	2.55E-04	3.14E-04	6.26E-04	4.66E-05	5.33E-04	1.63E-04	8.81E-04	0.022	1.79	0.091	26.4
SWI UMF-01-A_0906	9/6/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	4.0	2.1	10	16.75	2.52E-04	3.24E-04	5.96E-04	4.17E-05	5.13E-04	1.73E-04	8.81E-04	0.038	9.41	0.96	56.4
SWI UMF-01-A_0913	9/13/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	3.0	1.5	10	16.75	2.36E-04	2.99E-04	5.79E-04	4.07E-05	4.87E-04	1.51E-04	8.81E-04	0.015	1.14	0.059	29
SWI UMF-01-A_0920	9/20/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	4.4	2.4	10	16.75	3.69E-04	4.16E-04	7.66E-04	5.37E-05	7.48E-04	2.14E-04	8.81E-04	0.024	1.02	0.039	9.6
OW UMF-01-B_0723	7/23/2010	UMF	B	Overlying Water	OverWater	7.7572	1.9	1.5	10	15.15	3.17E-04	3.77E-04	6.13E-04	4.50E-05	4.81E-04	1.72E-04	8.52E-04	0.023	0.73	0.035	18.1
OW UMF-01-B_0726	7/26/2010	UMF	B	Overlying Water	OverWater	7.7572	2.7	1.5	10	15.15	2.77E-04	3.56E-04	5.83E-04	4.02E-05	4.83E-04	1.72E-04	8.52E-04	0.028	1.42	0.388	12.3
OW UMF-01-B_0802	8/2/2010	UMF	B	Overlying Water	OverWater	7.7572	4.4	2.5	10	15.15	2.87E-04	3.34E-04	6.18E-04	4.30E-05	4.92E-04	1.88E-04	8.52E-04	0.015	1.2	0.048	7.6
OW UMF-01-B_0809	8/9/2010	UMF	B	Overlying Water	OverWater	7.7572	4.4	2.5	10	15.15	2.65E-04	3.16E-04	6.66E-04	4.53E-05	5.08E-04	2.02E-04	8.52E-04	0.015	1.49	0.066	6.8
OW UMF-01-B_0816	8/16/2010	UMF	B	Overlying Water	OverWater	7.7572	4.4	2.5	10	15.15	2.84E-04	3.13E-04	5.92E-04	4.48E-05	4.69E-04	1.70E-04	8.52E-04	0.022	1.49	0.094	11.2
OW UMF-01-B_0823	8/23/2010	UMF	B	Overlying Water	OverWater	7.7572	3.2	1.5	10	15.15	2.62E-04	3.09E-04	5.70E-04	4.50E-05	4.28E-04	1.55E-04	8.52E-04	0.025	1.15	0.098	28.3
OW UMF-01-B_0830	8/30/2010	UMF	B	Overlying Water	OverWater	7.7572	3.2	1.5	10	15.15	2.26E-04	2.88E-04	5.70E-04	4.14E-05	4.75E-04	1.44E-04	8.52E-04	0.014	1.31	0.08	16
OW UMF-01-B_0906	9/6/2010	UMF	B	Overlying Water	OverWater	7.7572	2.1	1.5	10	15.15	2.16E-04	2.84E-04	5.39E-04	3.76E-05	4.66E-04	1.46E-04	8.52E-04	0.019	1.23	0.092	26.3
OW UMF-01-B_0913	9/13/2010	UMF	B	Overlying Water	OverWater	7.7572	5.0	3.1	10	15.15	2.36E-04	3.10E-04	5.83E-04	3.99E-05	5.39E-04	1.59E-04	8.52E-04	0.021	1.03	0.042	9.3
OW UMF-01-B_0920	9/20/2010	UMF	B	Overlying Water	OverWater	7.7572	2.1	1.5	10	15.15	2.97E-04	3.24E-04	6.26E-04	4.50E-05	5.06E-04	1.52E-04	8.52E-04	0.03	1.22	0.085	7.5
UMF01-B INF SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	6.46E-05	2.07E-05	3.09E-05	5.12E-06	5.24E-04	1.84E-04	4.24E-03	0.0535	2.6	0.135	33.3
UMF01-B MID SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	6.99E-05	2.30E-05	2.92E-05	5.12E-06	5.24E-04	1.84E-04	4.24E-03	0.0404	2.17	0.114	19.7
UMF01-B OUF SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	6.76E-05	2.23E-05	2.93E-05	5.12E-06	5.24E-04	1.84E-04	4.24E-03	0.0543	2.66	0.129	32.2
UMF01B PPR1 SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	5.99E-04	2.84E-04	5.00E-04	8.70E-05	5.24E-04	1.84E-04	4.24E-03	0.1	3.71	0.266	9.2
UMF01B PPR2 SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	7.96E-04	3.41E-04	4.87E-04	9.95E-05	5.24E-04	1.84E-04	4.24E-03	0.1	6.72	0.266	11.1
UMF01B PPR3 SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	8.81E-04	3.22E-04	4.83E-04	1.03E-04	5.24E-04	1.84E-04	4.24E-03	0.1	6.96	0.47	8.9
UMF01-B INF SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	1.03E-04	3.81E-05	1.63E-04	6.52E-06	5.24E-04	1.84E-04	4.24E-03	0.106	4.83	0.0521	37.9
UMF01-B MID SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	1.22E-04	4.94E-05	2.15E-04	8.75E-06	5.24E-04	1.84E-04	4.24E-03	0.113	3.24	0.0705	35.2
UMF01-B OUF SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	1.27E-04	4.57E-05	1.82E-04	6.96E-06	5.24E-04	1.84E-04	4.24E-03	0.1	3.31	0.109	32.7
UMF01B PPR1 SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	6.94E-04	1.88E-04	5.87E-04	9.82E-05	5.24E-04	1.84E-04	4.24E-03	0.26	4.55	2.08	10
UMF01B PPR2 SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	1.01E-03	3.95E-04	5.74E-04	8.31E-05	5.24E-04	1.84E-04	4.24E-03	0.168	2.7	2.18	11.6
UMF01B PPR3 SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	6.16E-04	3.48E-04	5.70E-04	6.16E-05	5.24E-04	1.84E-04	4.24E-03	0.122	4.1	1.94	6.9
UMF01-B INF SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	6.71E-05	2.51E-05	6.48E-05	6.39E-06	5.24E-04	1.84E-04	4.24E-03	0.075	4.63	0.0711	38.2
UMF01-B MID SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	6.96E-05	2.63E-05	6.79E-05	6.39E-06	5.24E-04	1.84E-04	4.24E-03	0.0579	2.38	0.0306	30.5
UMF01-B OUF SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	7.21E-05	3.12E-05	7.66E-05	6.39E-06	5.24E-04	1.84E-04	4.24E-03	0.0528	2.26	0.0221	29.2
UMF01B PPR1 SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	4.52E-04	3.37E-04	6.39E-04	6.06E-05	5.24E-04	1.84E-04	4.24E-03	0.132	3.96	0.228	44.7
UMF01B PPR2 SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	3.04E-04	3.54E-04	6.26E-04	5.93E-05	5.24E-04	1.84E-04	4.24E-03	0.102	1.98	0.62	19.3
UMF01B PPR3 SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	5.19E-04	2.72E-04	6.22E-04	7.14E-05	5.24E-04	1.84E-04	4.24E-03	0.122	4.69	0.102	32.8
PW UMF-01-B_0723	7/23/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	40.4	38.5	10	18.85	1.71E-03	4.65E-04	4.14E-04	2.25E-04	4.79E-04	1.51E-04	4.24E-03	0.854	75.2	16.2	186
PW UMF-01-B_0726	7/26/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	40.6	38.7	10	18.85	1.67E-03	4.57E-04	4.25E-04	1.90E-04	5.03E-04	1.56E-04	4.24E-03	0.6	48.4	17.8	169
PW UMF-01-B_0802	8/2/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	29.1	27.2	10	18.85	1.87E-03	5.06E-04	4.96E-04	2.11E-04	5.46E-04	2.29E-04	4.24E-03	0.226	18.4	0.732	113
PW UMF-01-B_0809	8/9/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	30.3	28.4	10	18.85	1.78E-03	4.65E-04	5.18E-04	2.08E-04	5.65E-04	1.91E-04	4.24E-03	0.129	13.3	0.726	14.5
PW UMF-01-B_0816	8/16/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	16.4	14.5	10	18.85	1.74E-03	4.44E-04	5.57E-04	1.77E-04	6.19E-05	1.95E-04	4.24E-03	2.83	190	150	1080
PW UMF-01-B_0823	8/23/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	11.5	9.6	10	18.85	1.52E-03	3.55E-04	6.26E-04	1.61E-04	6.01E-04	1.92E-04	4.24E-03	0.178	7.75	0.492	11.3
PW UMF-01-B_0830	8/30/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	10.8	8.9	10	18.85	1.25E-03	3.18E-04	5.83E-04	1.35E-04	5.78E-04	1.80E-04	4.24E-03	0.137	6.75	0.377	20.2
PW UMF-01-B_0906	9/6/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	9.3	7.4	10	18.85	1.26E-03	2.99E-04	5.83E-04	1.38E-04	5.20E-04	1.73E-04	4.24E-03	0.112	6.29	0.302	10.9
PW UMF-01-B_0913	9/13/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	11.3	9.4	10	18.85	1.31E-03	2.95E-04	6.57E-04	1.49E-04	7.80E-04	2.03E-04	4.24E-03	0.199	6.31	0.52	23.9
PW UMF-01-B_0920	9/20/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	8.9	7.0	10	18.85	1.22E-03	2.63E-04	6.44E-04	1.35E-04	6.13E-04	1.78E-04	4.24E-03	0.088	5.19	0.408	14.5
SWI UMF-01-B_0726	7/26/2010	UMF	B	Sediment-Water Interface	SWI	7.56	2.6	1.5	10	16.35	2.92E-04	3.41E-04	5.52E-04	4.02E-05	4.75E-04	1.71E-04	8.83E-04	0.02	1.35	0.044	7.2
UMF01-B INF H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	5.41E-05	2.18E-05	3.24E-05	5.12E-06	4.86E-04	1.66E-04	8.83E-04	0.0141	0.636	0.0829	8.81
UMF01-B MID H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	5.66E-05	2.30E-05	3.12E-05	5.12E-06	4.86E-04	1.66E-04	8.83E-04	0.0137	0.673	0.0894	9.74
UMF01-B OUF H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	5.86E-05	2.38E-05	3.06E-05	5.12E-06	4.86E-04	1.66E-04	8.83E-04	0.0452	0.682	0.121	632
UMF01B PPR1 H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	2.31E-04	3.18E-04	5.35E-04	3.86E-05	4.86E-04	1.66E-04	8.83E-04	0.1	0.4	0.276	5.7
UMF01B PPR2 H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	2.35E-04	3.21E-04	5.48E-04	4.37E-05	4.86E-04	1.66E-04	8.83E-04	0.1	0.4	0.422	6.9
UMF01B PPR3 H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	2.41E-04	3.29E-04	5.96E-04	3.40E-05	4.86E-04	1.66E-04	8.83E-04	0.1	0.48	0.348	8.9
SWI UMF-01-B_0802	8/2/2010	UMF	B	Sediment-Water Interface	SWI	7.56	3.2	1.5	10	16.35	2.67E-04	3.23E-04	5.83E-04	4.09E-05	4.84E-04	1.93E-04	8.83E-04	0.029	1.66	0.096	24.3
SWI UMF-01-B_0809	8/9/2010	UMF	B	Sediment-Water Interface	SWI	7.56	6.5	4.5	10	16.35	2.77E-04	3.21E-04	6.48E-04	4.63E-05	5.16E-04	2.19E-04	8.83E-04	0.026	1.86	0.083	8.2
SWI UMF-01-B_0816	8/16/2010	UMF	B	Sediment-Water Interface	SWI	7.56	4.0	2.1	10	16.35	2.00E-03	3.45E-04	7.22E-04	4.83E-05	4.73E-04	1.69E-04	8.83E-04	0.131	4.35	0.396	64.6
UMF01-B INF H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	1.03E-04	4.49E-05	5.74E-05	5.12E-06	4.86E-04	1.66E-04	8.83E-04	0.0714	1.23	0.0459	19.1

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Measured (mol/L) Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Measured (ug/L) Cadmium	Copper	Lead	Zinc
UMF01-B MID H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	1.00E-04	4.40E-05	6.48E-05	5.12E-06	4.86E-04	1.66E-04	8.83E-04	0.0714	0.991	0.0289	18.3
UMF01-B OUF H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	1.21E-04	5.84E-05	6.83E-05	5.12E-06	4.86E-04	1.66E-04	8.83E-04	0.0838	1.25	0.0362	22.6
UMF01B PPR1 H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	2.65E-04	3.17E-04	5.66E-04	4.07E-05	4.86E-04	1.66E-04	8.83E-04	0.122	0.84	3.08	6.9
UMF01B PPR2 H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	2.65E-04	3.21E-04	5.79E-04	5.19E-05	4.86E-04	1.66E-04	8.83E-04	0.102	1.9	2.81	9.3
UMF01B PPR3 H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	2.52E-04	3.17E-04	5.66E-04	4.71E-05	4.86E-04	1.66E-04	8.83E-04	0.1	0.49	2.33	6.4
SWI UMF-01-B_0823	8/23/2010	UMF	B	Sediment-Water Interface	SWI	7.56	3.9	2.0	10	16.35	2.75E-04	3.20E-04	5.83E-04	3.96E-05	4.71E-04	1.57E-04	8.83E-04	0.02	1.17	0.086	15.2
SWI UMF-01-B_0830	8/30/2010	UMF	B	Sediment-Water Interface	SWI	7.56	2.4	1.5	10	16.35	2.34E-04	2.89E-04	5.83E-04	4.14E-05	4.53E-04	1.47E-04	8.83E-04	0.017	1.44	0.101	23.4
SWI UMF-01-B_0906	9/6/2010	UMF	B	Sediment-Water Interface	SWI	7.56	4.3	2.4	10	16.35	2.25E-04	2.98E-04	5.52E-04	3.81E-05	4.75E-04	1.49E-04	8.83E-04	0.037	1.3	0.095	10.7
SWI UMF-01-B_0913	9/13/2010	UMF	B	Sediment-Water Interface	SWI	7.56	2.5	1.5	10	16.35	2.57E-04	3.25E-04	6.31E-04	4.40E-05	5.16E-04	1.57E-04	8.83E-04	0.023	1.08	0.044	7.1
UMF01-B INF H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	8.48E-05	3.44E-05	6.92E-05	6.39E-06	4.86E-04	1.66E-04	8.83E-04	0.0443	1.57	0.056	17.2
UMF01-B MID H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	1.04E-04	4.06E-05	7.79E-05	6.39E-06	4.86E-04	1.66E-04	8.83E-04	0.033	1.45	0.0302	15.4
UMF01-B OUF H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	8.56E-05	3.45E-05	7.05E-05	6.39E-06	4.86E-04	1.66E-04	8.83E-04	0.0367	1.27	0.0242	14.1
UMF01B PPR1 H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	3.07E-04	3.53E-04	6.39E-04	5.53E-05	4.86E-04	1.66E-04	8.83E-04	0.1	0.61	0.1	6.7
UMF01B PPR2 H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	3.04E-04	3.46E-04	6.22E-04	6.09E-05	4.86E-04	1.66E-04	8.83E-04	0.1	0.58	0.1	8
UMF01B PPR3 H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	3.09E-04	3.53E-04	6.57E-04	5.55E-05	4.86E-04	1.66E-04	8.83E-04	0.1	0.56	0.144	5.9
SWI UMF-01-B_0920	9/20/2010	UMF	B	Sediment-Water Interface	SWI	7.56	2.9	1.5	10	16.35	2.87E-04	3.14E-04	6.35E-04	4.48E-05	5.40E-04	1.50E-04	8.83E-04	0.046	1.42	0.113	7.9
OW UMF-01-C_0723	7/23/2010	UMF	C	Overlying Water	OverWater	7.7381	1.8	1.5	10	15.15	2.94E-04	3.55E-04	5.87E-04	4.09E-05	4.65E-04	1.60E-04	8.87E-04	0.011	0.53	0.03	5.7
OW UMF-01-C_0726	7/26/2010	UMF	C	Overlying Water	OverWater	7.7381	2.1	1.5	10	15.15	2.67E-04	3.36E-04	5.57E-04	3.53E-05	4.72E-04	1.71E-04	8.87E-04	0.012	0.64	0.032	4.9
OW UMF-01-C_0802	8/2/2010	UMF	C	Overlying Water	OverWater	7.7381	2.5	1.5	10	15.15	2.72E-04	3.19E-04	6.26E-04	4.30E-05	4.70E-04	1.90E-04	8.87E-04	0.01	0.68	0.034	13.3
OW UMF-01-C_0809	8/9/2010	UMF	C	Overlying Water	OverWater	7.7381	4.8	2.8	10	15.15	2.87E-04	3.15E-04	6.00E-04	4.32E-05	4.82E-04	2.01E-04	8.87E-04	0.019	1.41	0.047	20.1
OW UMF-01-C_0816	8/16/2010	UMF	C	Overlying Water	OverWater	7.7381	4.5	2.6	10	15.15	2.84E-04	3.12E-04	5.87E-04	4.37E-05	4.76E-04	1.66E-04	8.87E-04	0.028	1.5	0.109	15.3
OW UMF-01-C_0823	8/23/2010	UMF	C	Overlying Water	OverWater	7.7381	4.1	2.1	10	15.15	2.84E-04	3.36E-04	6.13E-04	4.40E-05	4.88E-04	1.65E-04	8.87E-04	0.027	1.04	0.072	12.7
OW UMF-01-C_0830	8/30/2010	UMF	C	Overlying Water	OverWater	7.7381	3.2	1.5	10	15.15	2.67E-04	3.30E-04	6.61E-04	4.83E-05	5.50E-04	1.68E-04	8.87E-04	0.022	1.44	0.084	20.9
OW UMF-01-C_0906	9/6/2010	UMF	C	Overlying Water	OverWater	7.7381	2.1	1.5	10	15.15	2.65E-04	3.42E-04	6.35E-04	4.43E-05	5.47E-04	1.72E-04	8.87E-04	0.02	0.87	0.076	10.8
OW UMF-01-C_0913	9/13/2010	UMF	C	Overlying Water	OverWater	7.7381	4.9	3.0	10	15.15	2.80E-04	3.61E-04	6.53E-04	4.71E-05	5.66E-04	1.87E-04	8.87E-04	0.022	0.92	0.043	6.6
OW UMF-01-C_0920	9/20/2010	UMF	C	Overlying Water	OverWater	7.7381	4.1	2.1	10	15.15	2.82E-04	3.19E-04	7.09E-04	4.68E-05	6.10E-04	1.70E-04	8.87E-04	0.021	1.03	0.048	9.3
PW UMF-01-C_0723	7/23/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	20.5	18.6	10	18.25	1.29E-03	3.52E-04	4.79E-04	1.67E-04	5.07E-04	1.75E-04	3.11E-03	0.154	12.9	0.21	16.5
PW UMF-01-C_0726	7/26/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	18.9	17.0	10	18.25	1.38E-03	3.72E-04	4.87E-04	1.66E-04	5.08E-04	1.83E-04	3.11E-03	0.188	10.2	0.568	20.9
PW UMF-01-C_0802	8/2/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	16.9	15.0	10	18.25	1.49E-03	3.93E-04	5.31E-04	1.82E-04	5.54E-04	4.77E-04	3.11E-03	0.296	7.89	0.743	398
PW UMF-01-C_0809	8/9/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	20.5	18.6	10	18.25	1.56E-03	3.70E-04	5.57E-04	1.80E-04	5.62E-04	2.20E-04	3.11E-03	0.408	6.83	1.48	32.8
PW UMF-01-C_0816	8/16/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	13.9	12.0	10	18.25	1.55E-03	3.77E-04	5.39E-04	1.59E-04	5.23E-04	2.27E-04	3.11E-03	1.97	137	110	776
PW UMF-01-C_0823	8/23/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	13.0	11.1	10	18.25	1.43E-03	3.53E-04	6.26E-04	1.54E-04	5.64E-04	1.98E-04	3.11E-03	0.06	4.58	0.692	8.4
PW UMF-01-C_0830	8/30/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	9.6	7.7	10	18.25	1.21E-03	3.15E-04	5.96E-04	1.24E-04	5.93E-04	2.03E-04	3.11E-03	0.148	4.29	0.516	34
PW UMF-01-C_0906	9/6/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	10.4	8.5	10	18.25	1.12E-03	3.03E-04	6.26E-04	1.26E-04	5.37E-04	1.92E-04	3.11E-03	0.049	3.09	0.191	5.4
PW UMF-01-C_0913	9/13/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	9.7	7.7	10	18.25	2.38E-03	3.27E-04	8.31E-04	1.45E-04	6.22E-04	3.10E-04	3.11E-03	2.26	4.82	1.01	164
PW UMF-01-C_0920	9/20/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	8.5	6.5	10	18.25	1.09E-03	2.77E-04	6.53E-04	1.18E-04	6.28E-04	1.89E-04	3.11E-03	0.039	2.81	0.335	7.1
SWI UMF-01-C_0726	7/26/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	2.5	1.5	10	16.25	2.80E-04	3.41E-04	5.66E-04	3.56E-05	4.66E-04	1.68E-04	9.31E-04	0.014	0.65	0.035	18.7
SWI UMF-01-C_0802	8/2/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	2.9	1.5	10	16.25	2.55E-04	3.04E-04	5.39E-04	3.89E-05	4.66E-04	1.87E-04	9.31E-04	0.02	0.8	0.048	6.2
SWI UMF-01-C_0809	8/9/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	5.7	3.8	10	16.25	2.80E-04	3.05E-04	5.92E-04	4.20E-05	4.65E-04	1.99E-04	9.31E-04	0.02	1.38	0.05	8.3
SWI UMF-01-C_0816	8/16/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	4.4	2.5	10	16.25	2.94E-04	3.34E-04	6.48E-04	4.78E-05	4.84E-04	1.69E-04	9.31E-04	0.062	3.28	0.39	68.3
SWI UMF-01-C_0823	8/23/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	4.2	2.3	10	16.25	2.99E-04	3.37E-04	6.39E-04	4.68E-05	4.64E-04	1.64E-04	9.31E-04	0.022	1.26	0.068	13.6
SWI UMF-01-C_0830	8/30/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	3.0	1.5	10	16.25	2.62E-04	3.29E-04	6.96E-04	5.06E-05	5.26E-04	1.63E-04	9.31E-04	0.026	1.5	0.081	18.4
SWI UMF-01-C_0906	9/6/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	3.0	1.5	10	16.25	2.57E-04	3.38E-04	6.22E-04	4.30E-05	5.32E-04	1.74E-04	9.31E-04	0.012	0.91	0.041	8.2
SWI UMF-01-C_0913	9/13/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	4.5	2.5	10	16.25	2.80E-04	3.46E-04	6.48E-04	4.63E-05	5.87E-04	1.81E-04	9.31E-04	0.111	0.98	0.125	5.4
SWI UMF-01-C_0920	9/20/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	4.4	2.4	10	16.25	3.09E-04	3.45E-04	6.44E-04	4.45E-05	5.90E-04	1.73E-04	9.31E-04	0.011	0.98	0.035	10
OW UMF-01-D_0723	7/23/2010	UMF	D	Overlying Water	OverWater	7.6893	2.4	1.5	10	15.65	2.82E-04	3.46E-04	5.74E-04	3.68E-05	4.68E-04	1.58E-04	8.72E-04	0.01	0.65	0.047	12.1
OW UMF-01-D_0726	7/26/2010	UMF	D	Overlying Water	OverWater	7.6893	2.0	1.5	10	15.65	2.99E-04	3.34E-04	5.66E-04	4.02E-05	4.81E-04	1.69E-04	8.72E-04	0.007	0.64	0.021	4.7
OW UMF-01-D_0802	8/2/2010	UMF	D	Overlying Water	OverWater	7.6893	4.2	2.3	10	15.65	2.72E-04	3.20E-04	6.09E-04	4.12E-05	4.82E-04	1.93E-04	8.72E-04	0.011	0.86	0.067	294
OW UMF-01-D_0809	8/9/2010	UMF	D	Overlying Water	OverWater	7.6893	4.5	2.6	10	15.65	3.14E-04	3.47E-04	6.44E-04	4.76E-05	5.19E-04	2.11E-04	8.72E-04	0.01	1.26	0.048	45.2
OW UMF-01-D_0816	8/16/2010	UMF	D	Overlying Water	OverWater	7.6893	3.2	1.5	10	15.65	2.82E-04	3.16E-04	5.87E-04	4.17E-05	4.72E-04	1.63E-04	8.72E-04	0.015	1.09	0.085	40.6
OW UMF-01-D_0823	8/23/2010	UMF	D	Overlying Water	OverWater	7.6893	2.4	1.5	10	15.65	2.82E-04	3.22E-04	6.09E-04	4.30E-05	5.02E-04	1.66E-04	8.72E-04	0.01	0.47	0.021	15.3
OW UMF-01-D_0830	8/30/2010	UMF	D	Overlying Water	OverWater	7.6893	3.3	1.5	10	15.65	3.12E-04	4.08E-04	7.79E-04	5.70E-05	6.34E-04	2.02E-04	8.72E-04	0.013	1.31	0.055	15.5
OW UMF-01-D_0906	9/6/2010	UMF	D	Overlying Water	OverWater	7.6893	2.4	1.5	10	15.65	2.46E-04	3.26E-04	6.00E-04	4.22E-05	5.24E-04	1.76E-04	8.72E-04	0.028	0.78	0.059	7.9
OW UMF-01-D_0913	9/13/2010	UMF	D	Overlying Water	OverWater	7.6893	2.6	1.5	10	15.65	2.97E-04	3.32E-04	6.05E-04	4.40E-05	5.28E-04	1.65E-04	8.72E-04	0.069	0.94	0.061	24.5
OW UMF-01-D_0920	9/20/2010	UMF	D	Overlying Water	OverWater	7.6893	3.8	1.9	10	15.65	2.92E-04	3.32E-04	6.96E-04	4.71E-05	5.83E-04	1.86E-04	8.72E-04	0.026	0.97	0.062	56.6
UMF-01-D MID SED	9/19/2010	UMF	D	Porewater (1 cm)	DGT	8.1158	17.3	15.4	10	18.55	1.11E-04	5.23E-05	1.09E-04	6.39E-06	5.58E-04	4.73E-04	4.04E-03	0.0642	3.76	0.0357	38

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
UMF-01-D PPR 1 SED	9/19/2010	UMF	D	Porewater (1 cm)	Peeper	8.1158	17.3	15.4	10	18.55	5.99E-04	3.67E-04	6.26E-04	7.24E-05	5.58E-04	4.73E-04	4.04E-03	0.1	2.37	0.164	10.1
UMF-01-D PPR 2 SED	9/19/2010	UMF	D	Porewater (1 cm)	Peeper	8.1158	17.3	15.4	10	18.55	4.47E-04	2.65E-04	6.26E-04	7.16E-05	5.58E-04	4.73E-04	4.04E-03	0.1	1.88	0.224	13
UMF01-D INF SED_0919	9/19/2010	UMF	D	Porewater (1 cm)	DGT	8.1158	17.3	15.4	10	18.55	1.15E-04	5.06E-05	1.34E-04	6.39E-06	5.58E-04	4.73E-04	4.04E-03	0.0628	3.33	0.0467	35.4
UMF01-D OUF SED_0919	9/19/2010	UMF	D	Porewater (1 cm)	DGT	8.1158	17.3	15.4	10	18.55	9.63E-05	3.92E-05	8.48E-05	6.39E-06	5.58E-04	4.73E-04	4.04E-03	0.0621	3.47	0.04	40.1
PW UMF-01-D_0723	7/23/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	29.2	27.3	10	18.55	1.48E-03	3.72E-04	4.25E-04	2.05E-04	4.78E-04	1.83E-04	4.04E-03	0.216	22.9	0.283	20.1
PW UMF-01-D_0726	7/26/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	28.1	26.2	10	18.55	1.55E-03	4.24E-04	5.00E-04	2.21E-04	5.16E-04	1.92E-04	4.04E-03	0.247	16.5	0.814	32.2
PW UMF-01-D_0802	8/2/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	23.0	21.1	10	18.55	1.62E-03	4.32E-04	5.05E-04	1.90E-04	5.33E-04	2.62E-03	4.04E-03	0.927	15.6	2.01	148
PW UMF-01-D_0809	8/9/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	17.9	16.0	10	18.55	1.65E-03	3.79E-04	5.57E-04	1.92E-04	5.81E-04	2.31E-04	4.04E-03	0.075	8.02	0.568	11.3
PW UMF-01-D_0816	8/16/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	14.6	12.7	10	18.55	1.47E-03	3.54E-04	6.22E-04	1.59E-04	5.67E-04	2.22E-04	4.04E-03	0.319	5.55	0.512	461
PW UMF-01-D_0823	8/23/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	15.9	14.0	10	18.55	1.60E-03	3.67E-04	6.79E-04	1.77E-04	5.69E-04	2.45E-04	4.04E-03	0.257	4.11	0.515	18.4
PW UMF-01-D_0830	8/30/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	12.1	10.2	10	18.55	1.40E-03	3.17E-04	6.26E-04	1.49E-04	5.71E-04	2.07E-04	4.04E-03	0.281	4.59	0.354	68.9
PW UMF-01-D_0906	9/6/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	11.4	9.5	10	18.55	1.35E-03	2.80E-04	6.39E-04	1.47E-04	5.53E-04	2.11E-04	4.04E-03	0.094	4.05	0.209	8.9
PW UMF-01-D_0913	9/13/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	12.3	10.4	10	18.55	1.20E-03	2.28E-04	6.79E-04	1.40E-04	5.83E-04	4.15E-04	4.04E-03	0.094	3.63	0.454	21.1
PW UMF-01-D_0920	9/20/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	8.5	6.6	10	18.55	1.19E-03	2.26E-04	6.57E-04	1.27E-04	6.29E-04	1.97E-04	4.04E-03	0.111	3.5	0.394	48.4
SWI UMF-01-D_0726	7/26/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	3.0	1.5	10	16.85	2.89E-04	3.51E-04	5.83E-04	3.84E-05	4.71E-04	1.68E-04	8.96E-04	0.01	0.67	0.038	111
SWI UMF-01-D_0802	8/2/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	4.8	2.9	10	16.85	2.75E-04	3.25E-04	5.79E-04	4.14E-05	4.90E-04	1.89E-04	8.96E-04	0.022	1.9	0.066	11.3
SWI UMF-01-D_0809	8/9/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	5.4	3.4	10	16.85	2.94E-04	3.33E-04	6.66E-04	4.58E-05	5.25E-04	2.20E-04	8.96E-04	0.017	1.12	0.052	7
SWI UMF-01-D_0816	8/16/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	4.3	2.4	10	16.85	2.87E-04	3.21E-04	5.79E-04	4.09E-05	4.93E-04	1.65E-04	8.96E-04	0.031	1.24	0.08	14.9
SWI UMF-01-D_0823	8/23/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	3.4	1.5	10	16.85	2.84E-04	3.22E-04	6.44E-04	4.55E-05	4.96E-04	1.68E-04	8.96E-04	0.027	1.33	0.057	20.8
SWI UMF-01-D_0830	8/30/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	3.5	1.5	10	16.85	2.92E-04	4.00E-04	7.40E-04	5.35E-05	6.34E-04	1.96E-04	8.96E-04	0.014	1.66	0.056	13
SWI UMF-01-D_0906	9/6/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	2.6	1.5	10	16.85	2.37E-04	3.17E-04	5.79E-04	4.07E-05	5.09E-04	1.67E-04	8.96E-04	0.019	0.72	0.035	5.1
SWI UMF-01-D_0913	9/13/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	3.0	1.5	10	16.85	2.60E-04	3.30E-04	5.96E-04	4.27E-05	5.24E-04	1.63E-04	8.96E-04	0.036	0.9	0.079	9
UMF-01-D INF H2O	9/19/2010	UMF	D	Sediment-Water Interface	DGT	7.5525	3.8	1.8	10	16.85	1.21E-04	5.43E-05	1.08E-04	6.39E-06	5.23E-04	1.78E-04	8.96E-04	0.031	1.55	0.0251	16.4
UMF-01-D MID H2O	9/19/2010	UMF	D	Sediment-Water Interface	DGT	7.5525	3.8	1.8	10	16.85	1.55E-04	7.57E-05	1.12E-04	6.39E-06	5.23E-04	1.78E-04	8.96E-04	0.0425	1.89	0.0329	20.4
UMF-01-D OUF H2O	9/19/2010	UMF	D	Sediment-Water Interface	DGT	7.5525	3.8	1.8	10	16.85	1.23E-04	5.55E-05	8.13E-05	6.39E-06	5.23E-04	1.78E-04	8.96E-04	0.0397	1.84	0.0355	19.2
UMF-01-D PPR 1 H2O	9/19/2010	UMF	D	Sediment-Water Interface	Peeper	7.5525	3.8	1.8	10	16.85	2.97E-04	3.45E-04	6.31E-04	6.37E-05	5.23E-04	1.78E-04	8.96E-04	0.1	0.61	0.1	6.9
UMF-01-D PPR 2 H2O	9/19/2010	UMF	D	Sediment-Water Interface	Peeper	7.5525	3.8	1.8	10	16.85	2.99E-04	3.46E-04	6.57E-04	5.83E-05	5.23E-04	1.78E-04	8.96E-04	0.1	1.47	0.194	10.7
SWI UMF-01-D_0920	9/20/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	4.4	2.4	10	16.85	2.92E-04	3.32E-04	7.09E-04	4.78E-05	5.94E-04	1.78E-04	8.96E-04	0.028	1.18	0.059	10.3
OW UMF-01-E_0723	7/23/2010	UMF	E	Overlying Water	OverWater	7.7501	2.3	1.5	10	15.35	2.84E-04	3.46E-04	5.66E-04	3.63E-05	4.78E-04	1.71E-04	8.71E-04	0.007	0.66	0.03	3.7
OW UMF-01-E_0726	7/26/2010	UMF	E	Overlying Water	OverWater	7.7501	2.6	1.5	10	15.35	3.04E-04	3.51E-04	5.74E-04	3.84E-05	4.89E-04	1.72E-04	8.71E-04	0.013	0.9	0.214	13.9
OW UMF-01-E_0802	8/2/2010	UMF	E	Overlying Water	OverWater	7.7501	2.7	1.5	10	15.35	2.92E-04	3.33E-04	6.53E-04	4.63E-05	4.29E-04	1.95E-04	8.71E-04	0.014	0.99	0.052	12.7
OW UMF-01-E_0809	8/9/2010	UMF	E	Overlying Water	OverWater	7.7501	5.2	3.3	10	15.35	3.12E-04	3.37E-04	6.53E-04	4.91E-05	5.06E-04	2.05E-04	8.71E-04	0.013	1.35	0.061	8.5
OW UMF-01-E_0816	8/16/2010	UMF	E	Overlying Water	OverWater	7.7501	3.8	1.9	10	15.35	2.80E-04	3.24E-04	6.05E-04	4.40E-05	4.76E-04	1.68E-04	8.71E-04	0.021	1.43	0.072	8.4
OW UMF-01-E_0823	8/23/2010	UMF	E	Overlying Water	OverWater	7.7501	3.1	1.5	10	15.35	2.65E-04	2.98E-04	5.66E-04	4.02E-05	4.72E-04	1.67E-04	8.71E-04	0.005	0.2	0.009	3.4
OW UMF-01-E_0830	8/30/2010	UMF	E	Overlying Water	OverWater	7.7501	2.9	1.5	10	15.35	2.82E-04	3.45E-04	6.44E-04	4.73E-05	5.00E-04	1.75E-04	8.71E-04	0.038	1.48	0.141	18.5
OW UMF-01-E_0906	9/6/2010	UMF	E	Overlying Water	OverWater	7.7501	4.0	2.1	10	15.35	2.52E-04	3.28E-04	6.05E-04	4.25E-05	5.22E-04	1.81E-04	8.71E-04	0.02	1.48	0.072	28.1
OW UMF-01-E_0913	9/13/2010	UMF	E	Overlying Water	OverWater	7.7501	3.8	1.9	10	15.35	2.62E-04	3.34E-04	6.13E-04	4.30E-05	5.49E-04	1.77E-04	8.71E-04	0.016	1.17	0.055	6.3
OW UMF-01-E_0920	9/20/2010	UMF	E	Overlying Water	OverWater	7.7501	3.1	1.5	10	15.35	3.29E-04	3.78E-04	7.00E-04	4.99E-05	5.76E-04	1.74E-04	8.71E-04	0.031	1.56	0.094	8
UMF01-E INF SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	1.02E-04	3.91E-05	5.18E-05	5.22E-06	5.57E-04	1.96E-04	3.25E-03	0.0507	2.63	0.109	28
UMF01-E MID SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	1.01E-04	3.77E-05	5.74E-05	5.17E-06	5.57E-04	1.96E-04	3.25E-03	0.0447	2.1	0.105	21.7
UMF01-E OUF SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	9.51E-05	3.25E-05	7.57E-05	7.37E-06	5.57E-04	1.96E-04	3.25E-03	0.0438	2.28	0.11	23
UMF01E PPR1 SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	4.82E-04	3.01E-04	5.31E-04	7.42E-05	5.57E-04	1.96E-04	3.25E-03	0.1	3.13	0.362	9.6
UMF01E PPR2 SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	6.34E-04	3.26E-04	5.44E-04	8.31E-05	5.57E-04	1.96E-04	3.25E-03	0.1	4.2	0.36	11.5
UMF01E PPR3 SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	6.24E-04	2.96E-04	5.31E-04	7.19E-05	5.57E-04	1.96E-04	3.25E-03	0.1	3.57	0.466	11.2
UMF01-E INF SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	9.53E-05	2.58E-05	4.30E-05	5.12E-06	5.57E-04	1.96E-04	3.25E-03	0.0907	1.82	0.125	38.2
UMF01-E MID SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	7.79E-05	1.68E-05	3.26E-05	5.12E-06	5.57E-04	1.96E-04	3.25E-03	0.0406	0.435	0.0772	8.41
UMF01-E OUF SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	6.46E-05	1.65E-05	4.52E-05	5.12E-06	5.57E-04	1.96E-04	3.25E-03	0.0566	0.77	0.0713	19
UMF01E PPR1 SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	1.40E-03	3.95E-04	5.09E-04	1.12E-04	5.57E-04	1.96E-04	3.25E-03	0.108	2.74	1.66	16.4
UMF01E PPR2 SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	6.96E-04	3.61E-04	5.79E-04	7.85E-05	5.57E-04	1.96E-04	3.25E-03	0.194	2.64	1.65	20.6
UMF01E PPR3 SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	2.72E-04	3.24E-04	5.61E-04	5.37E-05	5.57E-04	1.96E-04	3.25E-03	0.128	1.56	1.69	28.1
UMF01-E INF SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	6.84E-05	2.60E-05	7.00E-05	6.39E-06	5.57E-04	1.96E-04	3.25E-03	0.0682	6.21	0.0513	37.9
UMF01-E MID SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	7.19E-05	2.93E-05	7.79E-05	6.39E-06	5.57E-04	1.96E-04	3.25E-03	0.0648	2.85	0.0377	31.5
UMF01-E OUF SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	7.98E-05	3.55E-05	9.31E-05	6.39E-06	5.57E-04	1.96E-04	3.25E-03	0.0699	3.05	0.043	38.9
UMF01E PPR1 SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	2.77E-04	3.21E-04	6.05E-04	5.81E-05	5.57E-04	1.96E-04	3.25E-03	0.1	1.16	0.168	10.6
UMF01E PPR2 SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	3.34E-04	3.23E-04	6.31E-04	5.45E-05	5.57E-04	1.96E-04	3.25E-03	0.1	3.44	0.124	46.5
UMF01E PPR3 SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	3.19E-04	3.29E-04	5.92E-04	6.65E-05	5.57E-04	1.96E-04	3.25E-03	0.1	2.47	0.108	6.5

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
PW UMF-01-E_0723	7/23/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	36.2	34.3	10	19.05	1.59E-03	4.36E-04	4.01E-04	2.05E-04	4.99E-04	1.43E-04	3.25E-03	0.286	26.7	0.251	38.5
PW UMF-01-E_0726	7/26/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	34.6	32.7	10	19.05	1.58E-03	4.28E-04	4.31E-04	2.06E-04	5.05E-04	1.50E-04	3.25E-03	0.273	21.2	1.11	19.6
PW UMF-01-E_0802	8/2/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	26.1	24.2	10	19.05	1.78E-03	4.73E-04	5.00E-04	1.98E-04	5.46E-04	2.60E-04	3.25E-03	0.267	17.3	0.584	37.7
PW UMF-01-E_0809	8/9/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	23.3	21.4	10	19.05	1.64E-03	4.24E-04	5.39E-04	1.98E-04	5.88E-04	1.84E-04	3.25E-03	0.178	15.2	0.787	15.1
PW UMF-01-E_0816	8/16/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	17.8	15.9	10	19.05	1.68E-03	4.36E-04	5.61E-04	1.67E-04	5.46E-04	2.09E-04	3.25E-03	2.26	139	104	914
PW UMF-01-E_0823	8/23/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	10.9	9.0	10	19.05	1.33E-03	3.38E-04	5.92E-04	1.41E-04	5.48E-04	1.80E-04	3.25E-03	0.145	8.85	0.558	24.3
PW UMF-01-E_0830	8/30/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	10.5	8.6	10	19.05	1.26E-03	3.19E-04	5.96E-04	1.34E-04	6.02E-04	1.86E-04	3.25E-03	0.176	7.18	0.486	26.1
PW UMF-01-E_0906	9/6/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	11.1	9.2	10	19.05	1.36E-03	3.16E-04	6.39E-04	1.45E-04	5.31E-04	1.77E-04	3.25E-03	0.083	5.06	0.262	14.7
PW UMF-01-E_0913	9/13/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	9.4	7.5	10	19.05	1.29E-03	2.86E-04	6.48E-04	1.43E-04	6.00E-04	2.93E-04	3.25E-03	0.181	6.17	0.554	32
PW UMF-01-E_0920	9/20/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	8.5	6.6	10	19.05	1.08E-03	2.49E-04	6.48E-04	1.19E-04	6.07E-04	1.81E-04	3.25E-03	0.127	5.03	0.453	10
SWI UMF-01-E_0726	7/26/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	2.1	1.5	10	16.95	2.87E-04	3.51E-04	5.79E-04	3.68E-05	4.76E-04	1.69E-04	8.70E-04	0.007	0.82	0.026	6.4
UMF01-E INF H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	9.18E-05	4.32E-05	5.48E-05	7.62E-06	4.98E-04	1.75E-04	8.70E-04	0.0193	1.2	0.133	23.3
UMF01-E MID H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	1.10E-04	4.98E-05	5.57E-05	5.12E-06	4.98E-04	1.75E-04	8.70E-04	0.013	0.559	0.0201	7.5
UMF01-E OUF H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	1.12E-04	4.69E-05	7.18E-05	5.12E-06	4.98E-04	1.75E-04	8.70E-04	0.0181	0.704	0.0252	9.2
UMF01E PPR1 H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	2.40E-04	3.21E-04	5.66E-04	3.48E-05	4.98E-04	1.75E-04	8.70E-04	0.1	0.4	0.352	4.6
UMF01E PPR2 H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	2.30E-04	3.15E-04	5.61E-04	3.96E-05	4.98E-04	1.75E-04	8.70E-04	0.1	0.4	0.37	40.7
UMF01E PPR3 H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	2.32E-04	3.17E-04	5.57E-04	3.53E-05	4.98E-04	1.75E-04	8.70E-04	0.1	0.4	0.344	4
SWI UMF-01-E_0802	8/2/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	3.5	1.5	10	16.95	2.65E-04	3.16E-04	5.61E-04	4.04E-05	4.97E-04	1.99E-04	8.70E-04	0.024	0.98	0.081	14.4
SWI UMF-01-E_0809	8/9/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	5.5	3.6	10	16.95	9.13E-04	3.40E-04	7.13E-04	4.94E-05	5.01E-04	2.04E-04	8.70E-04	0.151	1.79	0.128	20
SWI UMF-01-E_0816	8/16/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	3.1	1.5	10	16.95	2.70E-04	3.21E-04	5.92E-04	4.17E-05	4.82E-04	1.66E-04	8.70E-04	0.292	1.22	0.08	7.8
UMF01-E INF H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	7.54E-05	3.16E-05	4.22E-05	5.12E-06	4.98E-04	1.75E-04	8.70E-04	0.0524	0.709	0.0449	11
UMF01-E MID H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	8.33E-05	2.78E-05	4.08E-05	5.12E-06	4.98E-04	1.75E-04	8.70E-04	0.0517	0.55	0.0322	9.3
UMF01-E OUF H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	7.69E-05	2.56E-05	5.39E-05	5.12E-06	4.98E-04	1.75E-04	8.70E-04	0.0558	0.62	0.0274	10.1
UMF01E PPR1 H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	2.67E-04	3.23E-04	5.57E-04	4.53E-05	4.98E-04	1.75E-04	8.70E-04	0.1	1.59	2.08	11.2
UMF01E PPR2 H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	2.62E-04	3.21E-04	5.70E-04	3.91E-05	4.98E-04	1.75E-04	8.70E-04	0.128	0.95	2.14	7.1
UMF01E PPR3 H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	2.52E-04	3.19E-04	5.66E-04	4.14E-05	4.98E-04	1.75E-04	8.70E-04	0.1	0.73	2.03	7.2
SWI UMF-01-E_0823	8/23/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	3.8	1.9	10	16.95	2.62E-04	3.06E-04	5.66E-04	4.17E-05	4.28E-04	1.56E-04	8.70E-04	0.022	1.33	0.066	15.4
SWI UMF-01-E_0830	8/30/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	4.0	2.1	10	16.95	2.82E-04	3.42E-04	6.35E-04	4.78E-05	4.67E-04	1.62E-04	8.70E-04	0.021	1.33	0.098	19
SWI UMF-01-E_0906	9/6/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	3.0	1.5	10	16.95	2.48E-04	3.27E-04	6.00E-04	4.20E-05	5.22E-04	1.79E-04	8.70E-04	0.023	1.33	0.068	8.6
SWI UMF-01-E_0913	9/13/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	4.3	2.4	10	16.95	2.62E-04	3.28E-04	6.18E-04	4.40E-05	5.42E-04	1.67E-04	8.70E-04	0.022	1.2	0.058	8.9
UMF01-E INF H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	9.91E-05	4.24E-05	8.61E-05	6.39E-06	4.98E-04	1.75E-04	8.70E-04	0.0396	1.7	0.0318	17.8
UMF01-E MID H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	9.36E-05	3.91E-05	7.61E-05	8.34E-06	4.98E-04	1.75E-04	8.70E-04	0.0357	1.51	0.025	14.9
UMF01-E OUF H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	8.41E-05	3.62E-05	8.09E-05	6.39E-06	4.98E-04	1.75E-04	8.70E-04	0.0343	1.36	0.029	13.8
UMF01E PPR1 H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	2.65E-04	3.29E-04	6.09E-04	5.42E-05	4.98E-04	1.75E-04	8.70E-04	0.1	1.58	0.194	79.9
UMF01E PPR2 H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	2.94E-04	3.37E-04	6.35E-04	5.40E-05	4.98E-04	1.75E-04	8.70E-04	0.1	1.19	0.19	8.5
UMF01E PPR3 H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	2.94E-04	3.35E-04	6.05E-04	5.55E-05	4.98E-04	1.75E-04	8.70E-04	0.1	0.75	0.1	7.8
SWI UMF-01-E_0920	9/20/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	2.4	1.5	10	16.95	3.24E-04	3.73E-04	6.87E-04	4.94E-05	5.69E-04	1.74E-04	8.70E-04	0.036	1.43	0.135	13.7
OW UMF-01-F_0723	7/23/2010	UMF	F	Overlying Water	OverWater	7.737	2.0	1.5	10	15.35	3.02E-04	3.60E-04	5.96E-04	4.35E-05	4.89E-04	1.79E-04	8.72E-04	0.018	1.58	0.09	13.9
OW UMF-01-F_0726	7/26/2010	UMF	F	Overlying Water	OverWater	7.737	2.6	1.5	10	15.35	2.92E-04	3.56E-04	5.87E-04	3.79E-05	4.87E-04	1.72E-04	8.72E-04	0.03	3.12	0.168	15.9
OW UMF-01-F_0802	8/2/2010	UMF	F	Overlying Water	OverWater	7.737	3.4	1.5	10	15.35	2.75E-04	3.28E-04	6.48E-04	4.37E-05	5.02E-04	1.96E-04	8.72E-04	0.017	2.03	0.069	10.6
OW UMF-01-F_0809	8/9/2010	UMF	F	Overlying Water	OverWater	7.737	4.1	2.2	10	15.35	2.94E-04	3.33E-04	6.57E-04	4.76E-05	5.05E-04	2.16E-04	8.72E-04	0.029	1.9	0.087	8
OW UMF-01-F_0816	8/16/2010	UMF	F	Overlying Water	OverWater	7.737	3.5	1.5	10	15.35	2.92E-04	3.25E-04	6.13E-04	4.55E-05	4.81E-04	1.70E-04	8.72E-04	0.024	2.12	0.14	15.9
OW UMF-01-F_0823	8/23/2010	UMF	F	Overlying Water	OverWater	7.737	2.6	1.5	10	15.35	2.65E-04	3.04E-04	5.74E-04	3.91E-05	4.60E-04	1.61E-04	8.72E-04	0.028	2.31	0.064	10.6
OW UMF-01-F_0830	8/30/2010	UMF	F	Overlying Water	OverWater	7.737	3.0	1.5	10	15.35	2.11E-04	2.70E-04	5.61E-04	3.99E-05	4.44E-04	1.44E-04	8.72E-04	0.022	1.05	0.087	14.1
OW UMF-01-F_0906	9/6/2010	UMF	F	Overlying Water	OverWater	7.737	2.8	1.5	10	15.35	2.10E-04	2.79E-04	5.26E-04	3.66E-05	4.63E-04	1.44E-04	8.72E-04	0.034	1.26	0.121	10.4
OW UMF-01-F_0913	9/13/2010	UMF	F	Overlying Water	OverWater	7.737	3.1	1.5	10	15.35	2.44E-04	3.17E-04	5.96E-04	4.09E-05	5.24E-04	1.76E-04	8.72E-04	0.019	0.99	0.056	8.1
OW UMF-01-F_0920	9/20/2010	UMF	F	Overlying Water	OverWater	7.737	3.3	1.5	10	15.35	2.82E-04	3.03E-04	5.79E-04	4.04E-05	4.83E-04	1.44E-04	8.72E-04	0.027	1.15	0.086	6.2
PW UMF-01-F_0723	7/23/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	38.7	36.8	10	19.25	1.65E-03	4.53E-04	4.35E-04	2.02E-04	4.79E-04	1.49E-04	3.73E-03	0.606	41.9	9.64	131
PW UMF-01-F_0726	7/26/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	33.2	31.3	10	19.25	1.60E-03	4.44E-04	4.83E-04	2.23E-04	4.92E-04	1.86E-04	3.73E-03	0.29	25.5	1.01	30
PW UMF-01-F_0802	8/2/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	29.4	27.5	10	19.25	1.81E-03	4.86E-04	5.05E-04	2.07E-04	5.35E-04	2.91E-04	3.73E-03	0.284	17.1	0.552	343
PW UMF-01-F_0809	8/9/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	31.2	29.3	10	19.25	1.77E-03	4.57E-04	5.48E-04	2.09E-04	5.96E-04	2.06E-04	3.73E-03	0.233	17.2	0.775	17.4
PW UMF-01-F_0816	8/16/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	16.7	14.8	10	19.25	1.60E-03	3.70E-04	5.74E-04	1.72E-04	5.58E-04	2.31E-04	3.73E-03	0.181	12.6	1.25	44
PW UMF-01-F_0823	8/23/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	14.2	12.3	10	19.25	1.53E-03	3.89E-04	6.22E-04	1.60E-04	7.20E-04	1.99E-04	3.73E-03	0.196	8.25	0.583	51.7
PW UMF-01-F_0830	8/30/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	12.0	10.1	10	19.25	1.37E-03	3.25E-04	5.87E-04	1.47E-04	5.44E-04	1.98E-04	3.73E-03	0.161	8.09	0.492	24.4
PW UMF-01-F_0906	9/6/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	11.1	9.2	10	19.25	1.39E-03	3.13E-04	6.22E-04	1.50E-04	5.25E-04	1.74E-04	3.73E-03	0.126	5.65	0.26	8.8
PW UMF-01-F_0913	9/13/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	10.4	8.5	10	19.25	1.33E-03	2.91E-04	6.44E-04	1.51E-04	6.08E-04	3.86E-04	3.73E-03	0.205	7.48	0.632	28.7

Table H3. Input/Output Summary

							mg/L				Measured (mol/L)							Measured (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (^{o}C)	Calcium	Magnesium	Sodium	Potassium	Sulfate	Chloride	DIC	Cadmium	Copper	Lead	Zinc
PW UMF-01-F_0920	9/20/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	9.6	7.7	10	19.25	1.11E-03	2.41E-04	6.44E-04	1.25E-04	6.24E-04	1.77E-04	3.73E-03	0.066	4.97	0.411	9
SWI UMF-01-F_0726	7/26/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	2.1	1.5	10	16.55	2.92E-04	3.37E-04	5.66E-04	4.07E-05	4.89E-04	1.73E-04	8.76E-04	0.027	2.13	0.101	8.9
SWI UMF-01-F_0802	8/2/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	2.9	1.5	10	16.55	2.84E-04	3.28E-04	6.31E-04	4.12E-05	4.15E-04	1.99E-04	8.76E-04	0.019	1.89	0.086	19.3
SWI UMF-01-F_0809	8/9/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	6.4	4.5	10	16.55	2.62E-04	3.07E-04	6.26E-04	4.53E-05	4.98E-04	2.11E-04	8.76E-04	0.036	2.11	0.103	9.7
SWI UMF-01-F_0816	8/16/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	5.1	3.2	10	16.55	2.94E-04	3.18E-04	6.05E-04	4.48E-05	4.68E-04	1.73E-04	8.76E-04	0.052	1.88	0.174	31.9
SWI UMF-01-F_0823	8/23/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	2.4	1.5	10	16.55	2.70E-04	3.15E-04	5.79E-04	3.99E-05	4.78E-04	1.61E-04	8.76E-04	0.022	1.35	0.086	15.5
SWI UMF-01-F_0830	8/30/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	2.7	1.5	10	16.55	4.52E-04	2.91E-04	6.66E-04	4.91E-05	4.53E-04	1.45E-04	8.76E-04	0.474	1.78	0.21	118
SWI UMF-01-F_0906	9/6/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	3.2	1.5	10	16.55	2.23E-04	3.02E-04	5.48E-04	3.81E-05	4.74E-04	1.59E-04	8.76E-04	0.032	1.17	0.115	13.5
SWI UMF-01-F_0913	9/13/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	3.5	1.6	10	16.55	2.32E-04	3.07E-04	5.83E-04	3.99E-05	5.09E-04	1.56E-04	8.76E-04	0.018	1.01	0.057	6.4
SWI UMF-01-F_0920	9/20/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	3.4	1.5	10	16.55	2.75E-04	3.01E-04	6.13E-04	4.27E-05	5.04E-04	1.44E-04	8.76E-04	0.035	1.2	0.115	6.9

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
OW Ctrl-A_0723	7/23/2010	CTRL	A	Overlying Water	OverWater	7.7789	2.3	1.5	10	15.25	est	est	cont	none	2.634	4.807	260.658	141.962	2.333	3.170	182.212	115.152
OW Ctrl-A_0726	7/26/2010	CTRL	A	Overlying Water	OverWater	7.7789	1.9	1.5	10	15.25	cont	cont	cont	cont	2.507	3.973	223.362	128.361	2.349	3.135	182.522	114.498
OW Ctrl-A_0802	8/2/2010	CTRL	A	Overlying Water	OverWater	7.7789	4.2	2.3	10	15.25	cont	cont	cont	cont	3.355	9.112	460.813	208.267	2.606	4.927	265.216	141.308
OW Ctrl-A_0809	8/9/2010	CTRL	A	Overlying Water	OverWater	7.7789	5.5	3.5	10	15.25	cont	none	none	est	4.159	11.794	604.195	256.002	3.358	7.556	402.797	188.062
OW Ctrl-A_0816	8/16/2010	CTRL	A	Overlying Water	OverWater	7.7789	2.9	1.5	10	15.25	est	est	none	none	2.911	6.100	326.754	161.906	2.355	3.159	184.325	113.648
OW Ctrl-A_0823	8/23/2010	CTRL	A	Overlying Water	OverWater	7.7789	2.3	1.5	10	15.25	est	est	est	est	2.757	4.751	266.459	141.504	2.440	3.145	187.164	114.890
OW Ctrl-A_0823_2	8/23/2010	CTRL	A	Overlying Water	OverWater	7.7789	3.7	1.8	10	15.25	none	est	est	est	2.990	7.994	400.103	186.558	2.262	3.805	206.682	119.860
OW Ctrl-A_0830	8/30/2010	CTRL	A	Overlying Water	OverWater	7.7789	2.3	1.5	10	15.25	cont	none	cont	cont	2.609	4.851	265.216	139.215	2.285	3.140	182.274	111.098
OW Ctrl-A_0906	9/6/2010	CTRL	A	Overlying Water	OverWater	7.7789	1.4	1.5	10	15.25	cont	cont	cont	cont	1.833	2.856	153.929	99.131	1.882	3.153	167.397	103.970
OW Ctrl-A_0913	9/13/2010	CTRL	A	Overlying Water	OverWater	7.7789	3.4	1.5	10	15.25	cont	cont	cont	none	2.804	7.314	365.294	175.114	2.101	3.189	175.416	109.267
OW Ctrl-A_0920	9/20/2010	CTRL	A	Overlying Water	OverWater	7.7789	3.6	1.7	10	15.25	cont	none	cont	est	2.844	7.765	386.635	179.626	2.127	3.602	195.224	113.255
PW Ctrl-A_0723	7/23/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	4.8	2.9	10	18.05	cont	cont	cont	cont	5.335	10.803	660.968	288.762	4.291	6.450	438.228	217.553
PW Ctrl-A_0726	7/26/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	10.5	8.6	10	18.05	cont	cont	cont	cont	7.331	24.484	1251.902	480.159	6.405	19.820	1040.973	409.472
PW Ctrl-A_0802	8/2/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	6.0	4.1	10	18.05	cont	none	cont	cont	5.916	13.408	790.261	331.593	4.889	9.049	570.007	260.383
PW Ctrl-A_0809	8/9/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	5.6	3.7	10	18.05	est	cont	cont	cont	6.913	12.824	811.810	346.763	5.733	8.388	577.674	273.461
PW Ctrl-A_0816	8/16/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	8.6	6.6	10	18.05	cont	cont	none	cont	10.423	20.017	1258.947	496.572	9.078	15.467	1013.415	420.785
PW Ctrl-A_0823	8/23/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	9.1	7.2	10	18.05	cont	cont	cont	cont	10.289	21.466	1304.946	507.165	9.001	16.859	1062.522	432.032
PW Ctrl-A_0830	8/30/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	9.5	7.5	10	18.05	cont	cont	cont	cont	9.722	21.892	1305.153	502.522	8.497	17.348	1069.152	428.239
PW Ctrl-A_0906	9/6/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	10.9	9.0	10	18.05	bdl	cont	cont	cont	10.927	25.501	1501.578	565.624	9.677	20.900	1263.298	490.752
PW Ctrl-A_0913	9/13/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	6.8	4.8	10	18.05	none	cont	none	none	7.825	15.435	963.273	394.367	6.617	11.000	728.101	320.607
PW Ctrl-A_0920	9/20/2010	CTRL	A	Porewater (2.5 cm)	PoreWater	7.8215	5.1	3.1	10	18.05	cont	cont	cont	cont	6.550	11.521	746.334	324.661	5.368	7.136	512.198	251.555
SWI Ctrl-A_0726	7/26/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	2.0	1.5	10	16.45	cont	cont	cont	cont	2.312	3.079	206.413	121.495	2.184	2.342	162.693	107.501
SWI Ctrl-A_0802	8/2/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	3.7	1.7	10	16.45	cont	cont	cont	cont	2.549	5.685	350.997	165.437	2.046	2.667	177.115	108.613
SWI Ctrl-A_0809	8/9/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	4.0	2.0	10	16.45	cont	cont	cont	cont	2.961	6.324	401.346	181.523	2.415	3.233	218.803	124.045
SWI Ctrl-A_0816	8/16/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	11.6	9.7	10	16.45	cont	cont	cont	cont	5.042	19.096	1111.214	412.611	4.499	15.778	931.571	353.433
SWI Ctrl-A_0823	8/23/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	3.1	1.5	10	16.45	cont	cont	cont	cont	2.816	4.852	322.610	157.590	2.343	2.335	168.930	109.463
SWI CTRL-A_0823_2	8/23/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	2.9	1.5	10	16.45	cont	cont	cont	cont	2.751	4.493	301.683	150.659	2.339	2.319	168.474	108.809
SWI Ctrl-A_0830	8/30/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	3.3	1.5	10	16.45	cont	cont	cont	cont	2.639	5.170	332.142	157.721	2.132	2.325	162.880	103.905
SWI Ctrl-A_0906	9/6/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	3.7	1.8	10	16.45	cont	cont	cont	cont	2.401	5.821	347.267	163.671	1.915	2.760	176.576	107.174
SWI Ctrl-A_0913	9/13/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	3.5	1.6	10	16.45	cont	cont	cont	cont	2.499	5.561	340.430	161.383	1.995	2.501	165.967	104.755
SWI Ctrl-A_0920	9/20/2010	CTRL	A	Sediment-Water Interface	SWI	7.5425	1.9	1.5	10	16.45	cont	cont	cont	cont	2.209	3.017	202.186	116.067	2.085	2.332	161.264	103.120
OW Ctrl-B_0723	7/23/2010	CTRL	B	Overlying Water	OverWater	7.7539	1.6	1.5	10	15.15	bdl	none	cont	est	2.348	3.310	190.292	117.506	2.308	3.083	179.207	113.779
OW Ctrl-B_0726	7/26/2010	CTRL	B	Overlying Water	OverWater	7.7539	1.7	1.5	10	15.15	bdl	cont	cont	cont	2.360	3.454	197.006	119.598	2.291	3.083	178.917	113.386
OW Ctrl-B_0802	8/2/2010	CTRL	B	Overlying Water	OverWater	7.7539	3.2	1.5	10	15.15	bdl	cont	cont	cont	2.892	6.723	353.690	170.537	2.245	3.089	178.358	111.098
OW Ctrl-B_0809	8/9/2010	CTRL	B	Overlying Water	OverWater	7.7539	6.6	4.7	10	15.15	cont	none	cont	est	4.395	13.942	707.588	289.678	3.642	9.754	509.919	222.784
OW Ctrl-B_0816	8/16/2010	CTRL	B	Overlying Water	OverWater	7.7539	3.4	1.5	10	15.15	est	est	none	cont	3.203	6.920	379.798	179.496	2.444	3.036	184.553	114.106
OW Ctrl-B_0823	8/23/2010	CTRL	B	Overlying Water	OverWater	7.7539	2.7	1.5	10	15.15	est	none	cont	est	2.823	5.570	306.242	154.713	2.346	3.059	181.569	112.732
OW Ctrl-B_0830	8/30/2010	CTRL	B	Overlying Water	OverWater	7.7539	3.9	2.0	10	15.15	cont	none	cont	cont	2.906	8.083	408.598	187.604	2.214	4.045	219.010	121.952
OW Ctrl-B_0906	9/6/2010	CTRL	B	Overlying Water	OverWater	7.7539	2.2	1.5	10	15.15	cont	none	cont	cont	2.135	4.585	236.622	127.511	1.886	3.073	166.527	102.858
OW Ctrl-B_0913	9/13/2010	CTRL	B	Overlying Water	OverWater	7.7539	2.6	1.5	10	15.15	cont	cont	cont	cont	2.437	5.435	282.621	145.362	2.038	3.073	171.064	106.716
OW Ctrl-B_0920	9/20/2010	CTRL	B	Overlying Water	OverWater	7.7539	3.4	1.5	10	15.15	bdl	none	cont	none	2.805	6.901	359.699	171.191	2.114	3.042	174.214	107.174
Ctrl-B INF SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	cont	cont	cont	cont	2.899	13.821	504.118	273.657	2.253	9.329	363.843	201.140
Ctrl-B MID SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	cont	cont	cont	cont	2.873	13.764	496.658	273.657	2.231	9.284	358.663	201.074
Ctrl-B OUF SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	cont	cont	cont	cont	2.870	13.770	495.208	273.788	2.229	9.284	357.627	201.074
Ctrl-B PPR1 SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	bdl	bdl	cont	cont	2.864	14.921	591.970	278.561	2.299	10.269	423.931	212.125
Ctrl-B PPR2 SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	bdl	bdl	cont	bdl	4.611	14.546	732.866	313.414	3.779	10.047	531.882	243.905
Ctrl-B PPR3 SED_0801	8/1/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	bdl	bdl	cont	cont	4.629	14.419	731.830	312.826	3.792	9.958	531.054	243.316
Ctrl-B INF SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	cont	cont	none	cont	2.646	15.766	437.192	284.577	2.000	10.447	317.430	204.867
Ctrl-B MID SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	cont	cont	cont	cont	2.574	15.454	444.651	279.673	1.956	10.307	321.367	202.382
Ctrl-B OUF SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	DGT	7.8277	6.4	4.4	10	17.85	cont	cont	cont	cont	2.642	15.035	467.029	276.600	2.022	10.072	336.907	201.074
Ctrl-B PPR1 SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	bdl	bdl	cont	bdl	5.917	14.323	813.260	335.778	4.895	9.920	594.871	264.372
Ctrl-B PPR2 SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	bdl	bdl	cont	bdl	6.691	14.304	854.286	352.125	5.571	9.920	627.609	279.477
Ctrl-B PPR3 SED_0820	8/20/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	bdl	bdl	cont	bdl	7.337	14.342	888.059	364.549	6.135	9.958	654.752	290.986
Ctrl-B PPR1 SED_0919	9/19/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	bdl	bdl	cont	bdl	5.885	14.819	819.890	338.720	4.879	10.263	599.844	267.249
Ctrl-B PPR2 SED_0919	9/19/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	bdl	bdl	cont	bdl	7.099	14.463	878.528	359.907	5.927	10.034	646.878	286.735
Ctrl-B PPR3 SED_0919	9/19/2010	CTRL	B	Porewater (1 cm)	Peeper	7.8277	6.4	4.4	10	17.85	bdl	bdl	cont	bdl	5.759	14.666	809.323	335.974	4.768	10.155	591.556	264.764

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
PW Ctrl-B_0723	7/23/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	4.5	2.6	10	17.85	cont	cont	cont	cont	4.867	10.015	601.502	263.456	3.835	5.708	381.870	192.247
PW Ctrl-B_0726	7/26/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	10.5	8.6	10	17.85	cont	cont	cont	cont	7.759	24.230	1265.370	481.401	6.771	19.617	1051.126	409.734
PW Ctrl-B_0802	8/2/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	4.4	2.5	10	17.85	cont	cont	cont	cont	5.216	9.812	608.132	270.453	4.148	5.546	385.806	198.851
PW Ctrl-B_0809	8/9/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	5.5	3.6	10	17.85	cont	cont	cont	cont	7.533	12.728	821.755	350.817	6.252	8.261	580.574	276.142
PW Ctrl-B_0816	8/16/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	8.0	6.1	10	17.85	cont	cont	cont	cont	9.111	18.695	1131.934	447.268	7.844	14.145	892.410	372.461
PW Ctrl-B_0823	8/23/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	7.4	5.5	10	17.85	cont	cont	cont	cont	8.684	17.291	1051.540	420.196	7.431	12.728	812.224	345.848
PW Ctrl-B_0830	8/30/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	7.5	5.5	10	17.85	cont	cont	cont	cont	8.474	17.354	1050.918	420.196	7.231	12.824	813.260	345.390
PW Ctrl-B_0906	9/6/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	6.0	4.1	10	17.85	cont	cont	cont	cont	7.271	13.739	855.943	355.722	6.041	9.297	620.150	281.962
PW Ctrl-B_0913	9/13/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	4.5	2.6	10	17.85	none	cont	none	none	6.692	10.282	686.868	306.352	5.437	5.915	448.381	232.331
PW CTRL-B_0920	9/20/2010	CTRL	B	Porewater (2.5 cm)	PoreWater	7.8277	5.2	3.3	10	17.85	cont	cont	cont	cont	6.842	11.826	757.316	326.950	5.621	7.416	521.108	253.190
SWI Ctrl-B_0726	7/26/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	2.3	1.5	10	16.45	cont	cont	cont	cont	4.991	4.232	332.763	182.569	4.559	2.764	236.830	154.386
Ctrl-B INF H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	cont	cont	cont	cont	1.612	6.273	255.685	148.174	1.098	2.780	123.988	83.503
Ctrl-B MID H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	cont	cont	cont	cont	1.612	6.207	254.234	148.043	1.100	2.754	123.450	83.568
Ctrl-B OUF H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	cont	cont	cont	cont	1.620	6.204	255.892	148.043	1.107	2.754	124.258	83.634
Ctrl-B PPR1 H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	bdl	bdl	cont	cont	2.127	6.340	326.133	157.132	1.579	2.870	159.627	95.993
Ctrl-B PPR2 H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	bdl	bdl	cont	bdl	2.730	6.621	367.158	174.853	2.118	3.020	182.875	112.667
Ctrl-B PPR3 H2O_0801	8/1/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	bdl	bdl	cont	bdl	2.724	6.653	368.609	173.937	2.108	3.032	183.413	111.817
SWI Ctrl-B_0802	8/2/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	4.2	2.3	10	16.45	cont	cont	cont	cont	2.888	7.816	425.174	193.358	2.279	4.177	241.595	131.172
SWI Ctrl-B_0809	8/9/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	3.5	1.5	10	16.45	none	cont	cont	cont	4.534	6.418	437.399	204.082	3.643	2.847	220.046	138.234
SWI Ctrl-B_0816	8/16/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	5.0	3.0	10	16.45	cont	none	none	cont	3.697	9.240	533.126	228.930	3.005	5.605	338.772	165.437
Ctrl-B INF H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	cont	cont	cont	cont	2.347	5.584	325.097	155.824	1.713	2.518	159.523	93.442
Ctrl-B MID H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	cont	cont	none	cont	2.408	5.509	328.412	155.628	1.749	2.481	161.347	92.919
Ctrl-B OUF H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	DGT	7.6722	3.6	1.6	10	16.45	cont	cont	none	cont	2.185	5.582	309.971	152.751	1.566	2.504	151.774	89.846
Ctrl-B PPR1 H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	bdl	bdl	cont	bdl	2.870	6.571	375.032	176.095	2.228	2.996	187.122	113.648
Ctrl-B PPR2 H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	bdl	cont	cont	bdl	2.823	6.571	372.338	175.572	2.189	2.996	185.672	113.059
Ctrl-B PPR3 H2O_0820	8/20/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	bdl	cont	cont	bdl	2.779	6.596	370.474	174.591	2.153	3.003	184.553	112.340
SWI Ctrl-B_0823	8/23/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	2.9	1.5	10	16.45	cont	cont	cont	cont	2.802	5.469	322.610	159.094	2.303	2.776	178.834	112.078
SWI Ctrl-B_0830	8/30/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	3.5	1.5	10	16.45	cont	none	cont	cont	2.610	6.501	357.420	167.595	1.999	2.853	172.328	105.605
SWI Ctrl-B_0906	9/6/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	4.0	2.0	10	16.45	cont	cont	cont	cont	2.673	7.429	396.581	183.157	2.083	3.770	215.281	121.233
SWI Ctrl-B_0913	9/13/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	3.8	1.8	10	16.45	cont	cont	cont	cont	2.706	7.104	384.978	178.449	2.102	3.437	201.046	116.525
Ctrl-B PPR1 H2O_0919	9/19/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	bdl	bdl	cont	bdl	3.556	6.660	408.806	190.220	2.815	3.044	207.014	126.268
Ctrl-B PPR2 H2O_0919	9/19/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	cont	bdl	cont	bdl	3.216	6.768	395.752	184.465	2.529	3.092	199.161	121.233
Ctrl-B PPR3 H2O_0919	9/19/2010	CTRL	B	Sediment-Water Interface	Peeper	7.6722	3.6	1.6	10	16.45	bdl	bdl	bdl	bdl	3.315	6.647	397.617	185.969	2.611	3.037	200.383	122.541
SWI Ctrl-B_0920	9/20/2010	CTRL	B	Sediment-Water Interface	SWI	7.6722	3.0	1.5	10	16.45	cont	cont	cont	cont	2.615	5.623	321.574	156.151	2.113	2.773	173.033	107.043
OW Ctrl-C_0723	7/23/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.2	1.5	10	15.25	cont	none	cont	none	2.510	4.528	249.883	136.469	2.237	3.040	176.824	111.686
OW Ctrl-C_0726	7/26/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.7	1.5	10	15.25	bdl	cont	cont	cont	2.733	5.445	295.674	153.013	2.298	3.059	178.751	113.321
OW Ctrl-C_0802	8/2/2010	CTRL	C	Overlying Water	OverWater	7.7496	4.0	2.1	10	15.25	bdl	cont	cont	cont	3.167	8.388	432.634	196.759	2.454	4.331	238.902	131.042
OW Ctrl-C_0809	8/9/2010	CTRL	C	Overlying Water	OverWater	7.7496	4.3	2.4	10	15.25	est	none	none	none	3.405	9.017	470.966	208.529	2.671	4.961	274.747	142.550
OW Ctrl-C_0816	8/16/2010	CTRL	C	Overlying Water	OverWater	7.7496	4.1	2.2	10	15.25	est	none	none	cont	3.487	8.515	455.011	205.128	2.726	4.476	255.892	138.692
OW Ctrl-C_0823	8/23/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.5	1.5	10	15.25	est	none	cont	est	2.733	5.042	280.549	146.474	2.363	3.051	181.549	113.321
OW Ctrl-C_0830	8/30/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.5	1.5	10	15.25	cont	none	cont	cont	2.610	5.141	279.306	144.381	2.239	3.074	178.399	110.378
OW Ctrl-C_0906	9/6/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.3	1.5	10	15.25	cont	cont	cont	cont	2.308	4.649	245.532	132.676	2.043	3.074	171.168	107.043
OW Ctrl-C_0913	9/13/2010	CTRL	C	Overlying Water	OverWater	7.7496	4.3	2.4	10	15.25	cont	cont	cont	none	3.371	9.030	463.921	210.556	2.662	4.945	269.153	144.773
OW Ctrl-C_0920	9/20/2010	CTRL	C	Overlying Water	OverWater	7.7496	2.7	1.5	10	15.25	cont	est	cont	cont	2.834	5.628	306.242	154.124	2.382	3.112	183.040	113.386
Ctrl-C INF SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	cont	cont	cont	cont	2.956	14.444	486.506	273.069	2.261	9.570	345.610	197.870
Ctrl-C MID SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	cont	cont	cont	cont	3.125	14.164	514.685	272.807	2.402	9.418	364.879	198.786
Ctrl-C OUF SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	cont	cont	cont	cont	2.900	14.654	480.290	273.134	2.212	9.697	341.051	197.609
Ctrl-C PPR1 SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	bdl	bdl	cont	bdl	4.839	15.410	726.858	316.095	3.910	10.453	520.901	243.578
Ctrl-C PPR2 SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	bdl	bdl	cont	bdl	4.910	15.404	732.038	316.618	3.968	10.453	524.838	244.035
Ctrl-C PPR3 SED_0801	8/1/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	bdl	bdl	cont	bdl	5.130	15.397	745.713	321.588	4.156	10.453	535.405	248.613
Ctrl-C INF SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	cont	cont	cont	cont	2.783	15.048	453.146	275.161	2.109	9.907	322.610	197.870
Ctrl-C MID SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	cont	cont	cont	cont	2.757	15.073	447.552	275.292	2.087	9.926	318.674	197.805
Ctrl-C OUF SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	cont	cont	cont	cont	2.773	14.965	457.290	273.984	2.104	9.875	324.890	197.347
Ctrl-C PPR1 SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	bdl	bdl	cont	bdl	8.423	15.283	917.896	381.485	6.981	10.428	672.364	303.737
Ctrl-C PPR2 SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	bdl	cont	cont	bdl	7.927	15.137	891.789	372.788	6.552	10.320	651.437	295.628
Ctrl-C PPR3 SED_0820	8/20/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	cont	cont	cont	cont	6.068	15.022	796.270	336.301	4.947	10.218	574.980	261.952

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
Ctrl-C INF SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	cont	cont	cont	cont	2.896	14.552	470.758	273.853	2.208	9.621	335.042	197.870
Ctrl-C MID SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	cont	cont	cont	cont	2.925	14.546	476.560	273.853	2.231	9.621	338.979	198.066
Ctrl-C OUF SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	DGT	7.9023	6.1	4.2	10	17.85	cont	cont	cont	cont	2.809	15.181	455.218	276.142	2.126	9.983	324.061	198.393
Ctrl-C PPR1 SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	bdl	bdl	bdl	bdl	7.163	15.264	857.808	358.468	5.891	10.396	623.879	282.485
Ctrl-C PPR2 SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	bdl	bdl	bdl	bdl	7.840	15.384	892.618	371.350	6.477	10.485	651.437	294.386
Ctrl-C PPR3 SED_0919	9/19/2010	CTRL	C	Porewater (1 cm)	Peeper	7.9023	6.1	4.2	10	17.85	bdl	bdl	cont	bdl	7.500	15.416	877.078	365.269	6.184	10.504	639.212	288.762
PW Ctrl-C_0723	7/23/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	6.5	4.6	10	17.85	cont	cont	cont	cont	6.777	15.975	872.312	355.918	5.563	11.171	644.806	280.785
PW Ctrl-C_0726	7/26/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	4.1	2.2	10	17.85	cont	cont	cont	cont	5.083	10.174	580.574	261.822	3.918	5.387	354.105	187.408
PW Ctrl-C_0802	8/2/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	8.6	6.6	10	17.85	none	cont	cont	cont	8.467	21.377	1136.492	448.248	7.235	16.458	906.914	372.396
PW Ctrl-C_0809	8/9/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	7.0	5.0	10	17.85	est	cont	est	cont	9.117	17.888	1033.721	422.616	7.684	12.900	787.982	344.605
PW Ctrl-C_0816	8/16/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	8.1	6.1	10	17.85	cont	cont	none	cont	10.571	20.767	1202.589	479.832	9.074	15.747	952.913	400.775
PW Ctrl-C_0823	8/23/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	7.4	5.4	10	17.85	cont	cont	cont	cont	8.012	18.733	1015.280	409.538	6.749	13.764	781.351	333.489
PW Ctrl-C_0830	8/30/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	5.3	3.3	10	17.85	cont	cont	cont	cont	6.595	13.179	754.622	326.231	5.337	8.331	520.694	250.378
PW Ctrl-C_0906	9/6/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	5.6	3.7	10	17.85	none	cont	cont	cont	7.084	14.317	814.503	348.202	5.785	9.392	577.881	271.695
PW Ctrl-C_0913	9/13/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	4.0	2.1	10	17.85	none	cont	none	none	6.229	10.142	624.915	287.912	4.893	5.297	385.392	211.406
PW CTRL-C_0920	9/20/2010	CTRL	C	Porewater (2.5 cm)	PoreWater	7.9023	4.5	2.6	10	17.85	cont	cont	cont	cont	6.212	11.387	669.463	300.271	4.944	6.507	433.670	224.288
SWI Ctrl-C_0726	7/26/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	2.5	1.5	10	16.35	bdl	cont	cont	cont	2.435	3.916	253.613	136.338	2.163	2.372	163.129	107.370
Ctrl-C INF H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	cont	cont	cont	cont	1.419	5.466	229.992	139.477	0.987	2.438	111.847	79.057
Ctrl-C MID H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	cont	cont	cont	cont	1.552	5.290	251.748	139.281	1.108	2.375	122.497	80.560
Ctrl-C OUF H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	cont	cont	cont	cont	1.546	5.314	251.955	139.215	1.103	2.386	122.538	80.495
Ctrl-C PPR1 H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	bdl	bdl	cont	bdl	2.554	5.706	347.267	165.371	2.045	2.623	172.535	108.286
Ctrl-C PPR2 H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	bdl	cont	cont	cont	2.581	5.696	348.718	165.764	2.068	2.619	173.447	108.678
Ctrl-C PPR3 H2O_0801	8/1/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	bdl	bdl	cont	bdl	2.410	5.751	340.222	162.690	1.922	2.642	168.599	105.932
SWI Ctrl-C_0802	8/2/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	2.6	1.5	10	16.35	cont	cont	cont	cont	2.427	4.180	268.117	138.954	2.113	2.373	162.652	105.213
SWI Ctrl-C_0809	8/9/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	6.3	4.4	10	16.35	cont	cont	cont	cont	3.532	10.282	618.492	249.594	2.986	7.054	436.778	191.397
SWI Ctrl-C_0816	8/16/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	3.5	1.5	10	16.35	cont	cont	cont	cont	2.823	5.480	352.654	166.614	2.265	2.410	169.738	108.744
Ctrl-C INF H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	cont	cont	cont	cont	1.613	5.178	250.712	140.523	1.142	2.314	122.414	80.560
Ctrl-C MID H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	cont	cont	none	cont	1.598	5.180	248.226	140.523	1.129	2.314	121.212	80.364
Ctrl-C OUF H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	cont	cont	none	cont	1.690	5.100	261.279	140.719	1.208	2.287	127.573	81.345
Ctrl-C PPR1 H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	bdl	cont	cont	cont	2.825	5.579	360.321	169.099	2.275	2.566	179.870	111.425
Ctrl-C PPR2 H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	bdl	cont	cont	bdl	2.762	5.607	357.627	167.725	2.217	2.578	178.337	110.248
Ctrl-C PPR3 H2O_0820	8/20/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	bdl	cont	cont	cont	2.624	5.658	351.411	165.371	2.099	2.600	174.690	108.155
SWI Ctrl-C_0823	8/23/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	3.1	1.5	10	16.35	cont	cont	cont	cont	2.689	4.873	314.737	153.928	2.241	2.384	167.086	107.501
SWI Ctrl-C_0830	8/30/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	2.7	1.5	10	16.35	cont	cont	cont	cont	2.360	4.247	267.910	137.384	2.046	2.394	161.347	103.316
SWI Ctrl-C_0906	9/6/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	2.7	1.5	10	16.35	cont	cont	cont	cont	2.281	4.282	264.802	137.384	1.973	2.394	158.011	102.728
SWI Ctrl-C_0913	9/13/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	5.1	3.2	10	16.35	cont	cont	cont	cont	3.056	8.337	496.037	212.779	2.539	5.148	318.466	155.367
Ctrl-C INF H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	cont	cont	cont	cont	1.419	5.347	220.461	140.131	0.983	2.378	107.744	79.122
Ctrl-C MID H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	cont	cont	cont	cont	1.443	5.317	226.055	139.869	1.005	2.369	110.375	79.318
Ctrl-C OUF H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	DGT	7.5522	3.6	1.7	10	16.35	cont	cont	cont	cont	1.460	5.337	229.992	139.935	1.017	2.379	112.261	79.383
Ctrl-C PPR1 H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	bdl	cont	bdl	bdl	3.063	5.684	373.167	174.918	2.483	2.617	187.081	116.721
Ctrl-C PPR2 H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	bdl	cont	cont	bdl	2.856	5.674	363.014	170.864	2.304	2.611	181.383	113.059
Ctrl-C PPR3 H2O_0919	9/19/2010	CTRL	C	Sediment-Water Interface	Peeper	7.5522	3.6	1.7	10	16.35	bdl	bdl	cont	bdl	2.836	5.707	362.393	170.668	2.286	2.626	180.989	112.994
SWI Ctrl-C_0920	9/20/2010	CTRL	C	Sediment-Water Interface	SWI	7.5522	3.9	2.0	10	16.35	cont	cont	cont	cont	3.181	6.456	408.806	187.800	2.619	3.267	221.704	129.734
OW Ctrl-D_0723	7/23/2010	CTRL	D	Overlying Water	OverWater	7.7519	1.9	1.5	10	15.25	bdl	none	cont	est	2.482	3.861	220.875	127.314	2.333	3.046	180.285	113.648
OW Ctrl-D_0726	7/26/2010	CTRL	D	Overlying Water	OverWater	7.7519	4.4	2.4	10	15.25	cont	cont	cont	cont	3.425	9.106	470.966	213.629	2.701	5.032	275.783	147.389
OW Ctrl-D_0802	8/2/2010	CTRL	D	Overlying Water	OverWater	7.7519	4.5	2.5	10	15.25	cont	cont	cont	cont	3.463	9.513	485.884	217.095	2.735	5.359	289.251	150.789
OW Ctrl-D_0809	8/9/2010	CTRL	D	Overlying Water	OverWater	7.7519	5.8	3.8	10	15.25	cont	none	none	none	4.315	11.889	635.275	263.652	3.520	7.835	434.291	196.497
OW Ctrl-D_0816	8/16/2010	CTRL	D	Overlying Water	OverWater	7.7519	4.5	2.6	10	15.25	est	none	none	cont	3.812	9.367	506.190	222.653	3.027	5.342	304.998	155.824
OW Ctrl-D_0823	8/23/2010	CTRL	D	Overlying Water	OverWater	7.7519	2.4	1.5	10	15.25	est	none	none	none	2.833	4.960	280.756	147.062	2.472	3.079	186.211	115.740
OW Ctrl-D_0830	8/30/2010	CTRL	D	Overlying Water	OverWater	7.7519	3.6	1.6	10	15.25	cont	none	cont	cont	2.816	7.390	377.726	177.534	2.127	3.368	187.723	112.078
OW Ctrl-D_0906	9/6/2010	CTRL	D	Overlying Water	OverWater	7.7519	4.7	2.8	10	15.25	cont	none	cont	cont	3.197	9.837	487.334	217.160	2.525	5.764	299.404	151.770
OW Ctrl-D_0913	9/13/2010	CTRL	D	Overlying Water	OverWater	7.7519	4.9	3.0	10	15.25	cont	cont	cont	cont	3.642	10.383	528.982	233.181	2.927	6.272	334.421	167.071
OW Ctrl-D_0920	9/20/2010	CTRL	D	Overlying Water	OverWater	7.7519	3.8	1.9	10	15.25	bdl	none	cont	cont	3.475	7.918	426.625	198.132	2.718	3.883	226.884	131.957
Ctrl-d INF SED	9/19/2010	CTRL	D	Porewater (1 cm)	DGT	7.69	8.7	6.8	10	17.95	cont	cont	none	cont	3.384	15.505	675.265	337.151	2.843	11.750	539.756	271.042
Ctrl-D MID SED	9/19/2010	CTRL	D	Porewater (1 cm)	DGT	7.69	8.7	6.8	10	17.95	cont	cont	cont	cont	3.431	15.251	681.274	336.889	2.888	11.572	544.522	271.238
Ctrl-D OUF SED	9/19/2010	CTRL	D	Porewater (1 cm)	DGT	7.69	8.7	6.8	10	17.95	cont	cont	none	cont	3.258	15.620	645.635	337.412	2.732	11.820	517.171	270.649

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
Ctrl-D PPR 1 SED	9/19/2010	CTRL	D	Porewater (1 cm)	Peeper	7.69	8.7	6.8	10	17.95	bdl	cont	cont	cont	6.914	16.547	1078.683	419.085	6.053	12.824	865.889	353.106
Ctrl-D PPR 2 SED	9/19/2010	CTRL	D	Porewater (1 cm)	Peeper	7.69	8.7	6.8	10	17.95	bdl	bdl	cont	bdl	6.884	16.547	1075.575	419.085	6.027	12.811	863.195	353.106
PW Ctrl-D_0723	7/23/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	4.0	2.1	10	17.95	cont	cont	cont	cont	4.154	7.498	526.702	242.989	3.346	3.895	318.674	178.384
PW Ctrl-D_0726	7/26/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	3.7	1.8	10	17.95	cont	cont	cont	cont	3.924	6.869	487.956	229.454	3.124	3.304	281.585	164.979
PW Ctrl-D_0802	8/2/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	4.7	2.8	10	17.95	cont	cont	cont	cont	4.690	8.846	614.141	274.049	3.862	5.219	404.040	208.921
PW Ctrl-D_0809	8/9/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	4.8	2.8	10	17.95	cont	cont	cont	cont	5.945	9.030	680.859	307.595	4.985	5.372	457.083	240.374
PW Ctrl-D_0816	8/16/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	15.9	14.0	10	17.95	cont	none	none	cont	13.208	31.207	2080.288	736.291	12.140	27.312	1849.467	666.324
PW Ctrl-D_0823	8/23/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	9.7	7.8	10	17.95	cont	none	none	cont	10.274	17.933	1268.271	487.417	9.331	14.323	1045.531	421.177
PW Ctrl-D_0830	8/30/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	12.7	10.8	10	17.95	cont	cont	cont	cont	10.420	24.662	1636.880	597.926	9.410	20.818	1411.239	529.463
PW Ctrl-D_0906	9/6/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	19.0	17.1	10	17.95	cont	cont	cont	cont	13.208	37.810	2345.504	818.029	12.242	33.806	2123.800	748.716
PW Ctrl-D_0913	9/13/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	7.3	5.4	10	17.95	none	none	none	none	7.473	14.088	998.082	403.783	6.477	10.345	771.613	335.581
PW CTRL-D_0920	9/20/2010	CTRL	D	Porewater (2.5 cm)	PoreWater	7.69	5.5	3.6	10	17.95	cont	cont	cont	cont	6.021	10.498	759.595	326.623	5.080	6.838	538.513	259.664
SWI Ctrl-D_0726	7/26/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	2.3	1.5	10	16.75	bdl	cont	cont	cont	2.386	3.663	236.208	131.172	2.173	2.438	165.511	108.417
SWI Ctrl-D_0802	8/2/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	4.0	2.0	10	16.75	bdl	cont	cont	cont	2.890	6.545	399.896	182.438	2.334	3.329	217.353	123.849
SWI Ctrl-D_0809	8/9/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	4.7	2.8	10	16.75	cont	cont	cont	cont	3.686	7.727	502.874	215.198	3.054	4.538	310.593	155.497
SWI Ctrl-D_0816	8/16/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	3.7	1.8	10	16.75	cont	cont	cont	cont	3.079	6.020	386.635	179.234	2.485	2.863	199.451	120.252
SWI Ctrl-D_0823	8/23/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	5.2	3.3	10	16.75	cont	cont	cont	cont	3.349	8.483	520.279	220.364	2.774	5.279	336.700	161.448
SWI Ctrl-D_0830	8/30/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	3.9	2.0	10	16.75	cont	cont	cont	cont	2.730	6.507	390.572	178.122	2.190	3.292	211.137	119.925
SWI Ctrl-D_0906	9/6/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	3.8	1.9	10	16.75	cont	cont	cont	cont	2.572	6.288	369.645	171.780	2.055	3.070	193.380	113.975
SWI Ctrl-D_0913	9/13/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	3.1	1.5	10	16.75	cont	cont	cont	cont	2.614	5.155	316.809	156.217	2.165	2.480	165.884	108.024
Ctrl-D INF H2O	9/19/2010	CTRL	D	Sediment-Water Interface	DGT	7.5725	3.6	1.7	10	16.75	cont	cont	cont	cont	1.730	5.353	274.540	143.400	1.252	2.446	135.633	84.484
Ctrl-D MID H2O	9/19/2010	CTRL	D	Sediment-Water Interface	DGT	7.5725	3.6	1.7	10	16.75	cont	cont	cont	cont	1.756	5.279	275.576	143.727	1.277	2.415	136.317	85.007
Ctrl-D OUF H2O	9/19/2010	CTRL	D	Sediment-Water Interface	DGT	7.5725	3.6	1.7	10	16.75	cont	cont	cont	cont	1.792	5.252	279.513	144.120	1.308	2.405	138.368	85.530
Ctrl-D Peeper 1 H2O	9/19/2010	CTRL	D	Sediment-Water Interface	Peeper	7.5725	3.6	1.7	10	16.75	bdl	bdl	cont	bdl	2.878	5.926	371.717	173.153	2.307	2.764	188.303	114.694
Ctrl-D Peeper 2 H2O	9/19/2010	CTRL	D	Sediment-Water Interface	Peeper	7.5725	3.6	1.7	10	16.75	bdl	bdl	cont	bdl	2.911	5.990	374.410	174.657	2.343	2.795	189.837	116.067
SWI Ctrl-D_0920	9/20/2010	CTRL	D	Sediment-Water Interface	SWI	7.5725	2.6	1.5	10	16.75	bdl	cont	cont	cont	2.727	4.207	274.333	145.297	2.415	2.469	172.515	113.386
OW Ctrl-E_0723	7/23/2010	CTRL	E	Overlying Water	OverWater	7.7864	1.9	1.5	10	15.15	est	est	none	none	2.576	4.050	226.470	131.892	2.418	3.213	186.252	118.225
OW Ctrl-E_0726	7/26/2010	CTRL	E	Overlying Water	OverWater	7.7864	1.9	1.5	10	15.15	cont	cont	cont	cont	2.464	3.951	218.803	128.034	2.326	3.200	183.061	115.806
OW Ctrl-E_0802	8/2/2010	CTRL	E	Overlying Water	OverWater	7.7864	3.7	1.8	10	15.15	cont	none	cont	cont	3.189	8.000	409.427	192.247	2.429	3.831	213.416	124.895
OW Ctrl-E_0809	8/9/2010	CTRL	E	Overlying Water	OverWater	7.7864	4.8	2.8	10	15.15	none	none	none	none	4.141	10.345	548.251	236.319	3.288	6.113	341.880	167.856
OW Ctrl-E_0816	8/16/2010	CTRL	E	Overlying Water	OverWater	7.7864	3.7	1.8	10	15.15	none	est	none	cont	7.662	8.178	569.593	267.184	6.238	3.951	316.394	192.050
OW Ctrl-E_0823	8/23/2010	CTRL	E	Overlying Water	OverWater	7.7864	5.9	4.0	10	15.15	none	none	none	none	4.838	12.976	683.760	281.635	3.961	8.693	474.902	212.583
OW Ctrl-E_0830	8/30/2010	CTRL	E	Overlying Water	OverWater	7.7864	2.7	1.5	10	15.15	cont	none	cont	cont	2.629	5.812	299.611	151.770	2.181	3.255	181.238	111.294
OW Ctrl-E_0906	9/6/2010	CTRL	E	Overlying Water	OverWater	7.7864	4.0	2.0	10	15.15	cont	none	cont	cont	2.965	8.547	416.886	194.012	2.259	4.354	227.713	127.511
OW Ctrl-E_0913	9/13/2010	CTRL	E	Overlying Water	OverWater	7.7864	3.2	1.5	10	15.15	cont	none	cont	cont	2.842	6.774	345.817	169.752	2.211	3.203	179.642	112.405
OW Ctrl-E_0920	9/20/2010	CTRL	E	Overlying Water	OverWater	7.7864	3.9	2.0	10	15.15	cont	none	none	cont	3.449	8.515	440.922	201.009	2.661	4.291	240.352	133.592
PW Ctrl-E_0723	7/23/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	5.4	3.5	10	18.05	cont	cont	cont	cont	6.832	15.302	768.505	330.285	5.384	9.799	532.504	250.444
PW Ctrl-E_0726	7/26/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	6.0	4.1	10	18.05	cont	cont	cont	cont	7.002	17.221	832.322	349.052	5.601	11.616	598.186	269.472
PW Ctrl-E_0802	8/2/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	4.6	2.6	10	18.05	cont	cont	cont	cont	5.460	12.963	628.852	283.204	4.166	7.473	402.175	204.605
PW Ctrl-E_0809	8/9/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	7.7	5.8	10	18.05	none	cont	cont	cont	9.423	22.877	1103.340	448.837	7.900	17.088	859.880	367.361
PW Ctrl-E_0816	8/16/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	6.5	4.5	10	18.05	cont	cont	cont	cont	9.254	19.293	983.164	413.134	7.623	13.497	731.830	330.481
PW Ctrl-E_0823	8/23/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	6.4	4.4	10	18.05	cont	cont	cont	cont	9.615	19.159	990.416	418.692	7.929	13.326	735.353	335.385
PW Ctrl-E_0830	8/30/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	5.2	3.2	10	18.05	cont	cont	cont	cont	7.584	15.016	785.702	342.905	6.018	9.386	539.549	261.298
PW Ctrl-E_0906	9/6/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	4.4	2.4	10	18.05	cont	cont	cont	cont	6.501	12.563	662.211	299.355	4.996	6.996	420.409	218.730
PW Ctrl-E_0913	9/13/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	4.9	3.0	10	18.05	est	cont	cont	cont	7.303	14.336	751.307	332.247	5.762	8.725	506.604	250.836
PW CTRL-E_0920	9/20/2010	CTRL	E	Porewater (2.5 cm)	PoreWater	8.01	3.6	1.6	10	18.05	cont	cont	cont	cont	6.567	10.460	593.421	282.746	4.957	4.817	342.916	200.747
SWI Ctrl-E_0726	7/26/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	2.2	1.5	10	16.25	cont	cont	cont	cont	2.234	2.957	212.794	122.868	2.068	1.978	148.873	102.793
SWI Ctrl-E_0802	8/2/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	4.9	3.0	10	16.25	bdl	est	cont	cont	2.815	6.564	444.444	193.816	2.376	3.951	278.062	141.308
SWI Ctrl-E_0809	8/9/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	4.3	2.3	10	16.25	cont	cont	cont	cont	2.888	5.619	401.554	178.449	2.418	3.053	229.785	125.680
SWI Ctrl-E_0816	8/16/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	5.5	3.6	10	16.25	cont	cont	cont	cont	3.752	7.378	547.215	224.876	3.230	4.762	365.708	170.864
SWI Ctrl-E_0823	8/23/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	6.9	5.0	10	16.25	cont	none	cont	cont	4.105	9.354	676.508	265.876	3.590	6.691	496.244	211.602
SWI Ctrl-E_0830	8/30/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	3.3	1.5	10	16.25	cont	cont	cont	cont	2.391	4.364	301.062	147.716	1.993	1.993	148.604	100.047
SWI Ctrl-E_0906	9/6/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	3.1	1.5	10	16.25	cont	cont	cont	cont	2.558	4.079	297.539	146.604	2.165	1.936	152.520	101.943
SWI Ctrl-E_0913	9/13/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	3.2	1.5	10	16.25	cont	cont	cont	cont	2.373	4.308	296.503	146.147	1.987	1.993	147.982	99.851
SWI Ctrl-E_0920	9/20/2010	CTRL	E	Sediment-Water Interface	SWI	7.4225	2.5	1.5	10	16.25	cont	cont	cont	cont	2.556	3.329	244.910	134.769	2.326	2.020	157.244	108.286
OW Ctrl-F_0723	7/23/2010	CTRL	F	Overlying Water	OverWater	7.7599	2.1	1.5	10	15.35	est	none	none	est	2.540	4.268	238.073	134.442	2.321	3.044	178.130	114.106

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
OW Ctrl-F_0726	7/26/2010	CTRL	F	Overlying Water	OverWater	7.7599	2.0	1.5	10	15.35	cont	cont	cont	cont	2.456	4.167	231.650	131.303	2.261	3.090	179.497	113.517
OW Ctrl-F_0802	8/2/2010	CTRL	F	Overlying Water	OverWater	7.7599	2.1	1.5	10	15.35	cont	cont	cont	est	2.521	4.412	245.118	134.050	2.288	3.118	181.901	112.798
OW Ctrl-F_0809	8/9/2010	CTRL	F	Overlying Water	OverWater	7.7599	6.5	4.6	10	15.35	cont	none	none	est	4.790	13.828	727.065	295.824	3.979	9.659	523.594	228.276
OW Ctrl-F_0816	8/16/2010	CTRL	F	Overlying Water	OverWater	7.7599	3.7	1.8	10	15.35	est	none	none	cont	3.554	7.581	423.310	194.862	2.742	3.604	220.254	127.707
OW Ctrl-F_0823	8/23/2010	CTRL	F	Overlying Water	OverWater	7.7599	3.3	1.5	10	15.35	est	none	none	none	3.187	6.793	370.888	177.665	2.476	3.093	187.247	116.394
OW Ctrl-F_0830	8/30/2010	CTRL	F	Overlying Water	OverWater	7.7599	3.4	1.5	10	15.35	bdl	none	cont	cont	2.645	7.117	358.663	170.210	1.962	3.086	171.168	104.755
OW Ctrl-F_0906	9/6/2010	CTRL	F	Overlying Water	OverWater	7.7599	3.2	1.5	10	15.35	cont	cont	cont	cont	2.678	6.679	340.430	166.352	2.075	3.118	173.986	108.809
OW Ctrl-F_0913	9/13/2010	CTRL	F	Overlying Water	OverWater	7.7599	3.3	1.5	10	15.35	cont	none	cont	cont	2.833	6.882	356.384	172.630	2.174	3.111	177.550	111.228
OW Ctrl-F_0920	9/20/2010	CTRL	F	Overlying Water	OverWater	7.7599	4.7	2.7	10	15.35	bdl	none	cont	cont	4.212	10.059	538.098	238.281	3.409	5.865	331.727	170.995
PW Ctrl-F_0723	7/23/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	9.8	7.9	10	18.45	cont	cont	cont	cont	10.256	28.513	1298.108	503.045	8.801	22.749	1061.278	422.223
PW Ctrl-F_0726	7/26/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	8.4	6.5	10	18.45	none	cont	cont	cont	8.539	24.827	1100.025	436.086	7.172	18.988	866.303	356.245
PW Ctrl-F_0802	8/2/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	5.1	3.2	10	18.45	cont	cont	cont	cont	6.691	14.914	720.642	311.976	5.255	9.278	481.947	231.808
PW Ctrl-F_0809	8/9/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	6.9	5.0	10	18.45	cont	cont	cont	cont	10.127	20.678	1034.342	424.708	8.425	14.863	778.036	341.401
PW Ctrl-F_0816	8/16/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	6.4	4.5	10	18.45	cont	cont	cont	cont	8.598	18.949	921.626	383.382	7.025	13.192	674.436	301.448
PW Ctrl-F_0823	8/23/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	4.4	2.5	10	18.45	cont	cont	cont	cont	6.567	12.925	648.329	291.116	5.071	7.263	404.662	210.163
PW Ctrl-F_0830	8/30/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	6.3	4.4	10	18.45	cont	cont	cont	cont	8.423	18.460	901.320	376.581	6.892	12.779	655.995	295.367
PW Ctrl-F_0906	9/6/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	7.8	5.9	10	18.45	cont	cont	cont	cont	10.136	23.283	1117.844	451.191	8.525	17.437	867.546	368.538
PW Ctrl-F_0913	9/13/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	5.1	3.2	10	18.45	est	cont	none	none	7.766	14.940	760.010	332.116	6.175	9.271	510.748	250.182
PW Ctrl-F_0920	9/20/2010	CTRL	F	Porewater (2.5 cm)	PoreWater	8.0046	5.4	3.5	10	18.45	cont	cont	cont	cont	7.636	15.969	784.459	338.524	6.108	10.212	538.098	257.244
SWI Ctrl-F_0726	7/26/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	2.3	1.5	10	16.55	cont	cont	cont	cont	2.536	4.395	257.757	139.673	2.262	2.860	178.275	113.321
SWI Ctrl-F_0802	8/2/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	4.8	2.9	10	16.55	cont	cont	cont	cont	3.263	9.354	500.181	219.122	2.619	5.555	311.629	155.694
SWI Ctrl-F_0809	8/9/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	3.2	1.5	10	16.55	cont	cont	cont	cont	3.707	6.109	382.491	185.577	3.009	2.863	200.507	128.230
SWI Ctrl-F_0816	8/16/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	4.0	2.1	10	16.55	cont	cont	cont	cont	3.565	7.575	448.588	202.317	2.826	3.912	249.883	137.908
SWI Ctrl-F_0823	8/23/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	2.7	1.5	10	16.55	cont	none	cont	cont	2.931	5.214	310.593	157.132	2.488	2.876	186.439	117.048
SWI Ctrl-F_0830	8/30/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	3.7	1.7	10	16.55	cont	none	cont	cont	2.582	7.035	372.338	173.153	1.965	3.294	189.277	110.444
SWI Ctrl-F_0906	9/6/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	4.1	2.2	10	16.55	cont	cont	cont	cont	2.774	8.032	418.130	190.939	2.167	4.228	234.550	128.295
SWI Ctrl-F_0913	9/13/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	2.6	1.5	10	16.55	cont	cont	cont	cont	2.567	5.096	289.458	147.912	2.182	2.884	176.783	110.640
SWI Ctrl-F_0920	9/20/2010	CTRL	F	Sediment-Water Interface	SWI	7.6925	2.6	1.5	10	16.55	cont	cont	cont	cont	3.411	5.135	313.494	167.268	3.000	3.005	200.010	131.630
OW DE-A_0723	7/23/2010	DE	A	Overlying Water	OverWater	7.5506	1.8	1.5	10	15.25	est	est	cont	none	2.114	2.882	187.454	113.779	2.026	2.359	157.348	103.970
OW DE-A_0726	7/26/2010	DE	A	Overlying Water	OverWater	7.5506	2.6	1.5	10	15.25	none	cont	cont	cont	5.671	4.131	364.258	196.824	5.112	2.352	229.370	158.898
OW DE-A_0802	8/2/2010	DE	A	Overlying Water	OverWater	7.5506	4.0	2.1	10	15.25	cont	cont	cont	cont	2.784	6.431	393.473	179.234	2.258	3.308	214.866	121.822
OW DE-A_0809	8/9/2010	DE	A	Overlying Water	OverWater	7.5506	3.2	1.5	10	15.25	none	none	none	est	2.642	5.125	323.854	156.151	2.161	2.363	162.196	104.689
OW DE-A_0816	8/16/2010	DE	A	Overlying Water	OverWater	7.5506	3.1	1.5	10	15.25	none	est	none	cont	2.417	4.841	300.026	147.781	1.999	2.363	158.011	101.681
OW DE-A_0823	8/23/2010	DE	A	Overlying Water	OverWater	7.5506	2.5	1.5	10	15.25	none	none	none	none	2.199	3.873	243.253	128.818	1.941	2.341	155.504	100.177
OW De-A_0830	8/30/2010	DE	A	Overlying Water	OverWater	7.5506	3.1	1.5	10	15.25	cont	none	cont	cont	2.448	5.022	308.935	150.920	2.012	2.382	158.384	102.335
OW DE-A_0906	9/6/2010	DE	A	Overlying Water	OverWater	7.5506	2.1	1.5	10	15.25	cont	est	cont	cont	2.113	3.286	207.179	118.814	1.966	2.389	156.395	102.335
OW DE-A_0913	9/13/2010	DE	A	Overlying Water	OverWater	7.5506	2.6	1.5	10	15.25	cont	none	cont	cont	2.246	4.134	255.063	134.638	1.960	2.374	155.711	102.139
OW DE-A_0913_2	9/13/2010	DE	A	Overlying Water	OverWater	7.5506	3.8	1.8	10	15.25	cont	none	cont	cont	2.527	6.074	361.150	168.641	2.031	2.949	187.330	111.752
OW DE-A_0920	9/20/2010	DE	A	Overlying Water	OverWater	7.5506	4.1	2.2	10	15.25	none	none	none	none	2.775	6.710	404.040	180.346	2.259	3.527	224.812	123.326
PW DE-A_0723	7/23/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	19.6	17.7	10	18.65	none	none	cont	cont	25.191	60.331	3014.760	1082.205	23.292	54.243	2749.544	997.198
PW DE-A_0726	7/26/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	7.4	5.5	10	18.65	none	none	cont	cont	12.950	22.552	1326.909	546.268	11.041	16.694	1058.585	461.457
PW DE-A_0802	8/2/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	9.4	7.5	10	18.65	none	none	cont	cont	15.299	28.602	1613.881	638.860	13.366	22.699	1345.350	553.853
PW DE-A_0809	8/9/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	9.5	7.5	10	18.65	cont	none	cont	cont	15.749	29.460	1660.915	657.170	13.725	23.417	1388.033	570.789
PW DE-A_0816	8/16/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	12.7	10.8	10	18.65	none	none	none	cont	18.390	39.723	2094.792	788.603	16.367	33.603	1824.189	701.635
PW DE-A_0823	8/23/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	10.7	8.8	10	18.65	none	none	cont	cont	15.794	32.777	1769.902	680.056	13.894	26.804	1503.650	595.049
PW DE-A_0830	8/30/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	8.5	6.6	10	18.65	cont	none	cont	cont	11.904	25.368	1376.015	541.887	10.166	19.547	1118.880	459.169
PW DE-A_0906	9/6/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	10.2	8.3	10	18.65	none	none	none	cont	12.815	30.343	1571.819	595.180	11.128	24.491	1318.414	513.050
PW DE-A_0913	9/13/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	10.2	8.3	10	18.65	none	none	none	cont	12.905	30.413	1577.414	587.791	11.201	24.535	1322.972	506.249
PW DE-A_0920	9/20/2010	DE	A	Porewater (2.5 cm)	PoreWater	8.01	8.5	6.6	10	18.65	cont	none	none	cont	11.084	24.897	1333.539	504.615	9.386	19.165	1080.962	423.596
SWI DE-A_0726	7/26/2010	DE	A	Sediment-Water Interface	SWI	7.6156	2.5	1.5	10	16.25	cont	cont	cont	cont	2.334	4.369	258.793	136.861	2.034	2.580	162.341	104.886
SWI DE-A_0802	8/2/2010	DE	A	Sediment-Water Interface	SWI	7.6156	3.9	2.0	10	16.25	cont	cont	cont	cont	2.775	6.793	390.572	178.711	2.206	3.393	208.236	118.683
SWI DE-A_0809	8/9/2010	DE	A	Sediment-Water Interface	SWI	7.6156	3.5	1.6	10	16.25	cont	none	cont	cont	2.829	6.202	366.537	171.060	2.237	2.811	180.637	110.901
SWI DE-A_0816	8/16/2010	DE	A	Sediment-Water Interface	SWI	7.6156	4.8	2.9	10	16.25	cont	none	cont	cont	3.086	8.369	477.596	208.529	2.506	4.954	295.260	147.978
SWI De-A_0823	8/23/2010	DE	A	Sediment-Water Interface	SWI	7.6156	3.3	1.5	10	16.25	cont	none	none	cont	2.566	5.754	334.006	159.944	2.032	2.600	164.330	104.035
SWI DE-A_0830	8/30/2010	DE	A	Sediment-Water Interface	SWI	7.6156	3.4	1.5	10	16.25	cont	none	cont	cont	2.624	6.005	346.231	164.129	2.062	2.626	165.304	104.886
SWI DE-A_0906	9/6/2010	DE	A	Sediment-Water Interface	SWI	7.6156	16.2	14.3	10	16.25	cont	cont	cont	cont	5.958	30.852	1504.272	566.735	5.419	26.924	1329.395	504.353

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
SWI DE-A_0913	9/13/2010	DE	A	Sediment-Water Interface	SWI	7.6156	3.0	1.5	10	16.25	cont	none	cont	cont	2.494	5.308	307.485	152.686	2.053	2.619	163.729	105.474
SWI DE-A_0913_2	9/13/2010	DE	A	Sediment-Water Interface	SWI	7.6156	2.6	1.5	10	16.25	cont	none	cont	est	2.264	4.488	260.036	136.077	1.960	2.607	160.518	103.055
SWI DE-A_0920	9/20/2010	DE	A	Sediment-Water Interface	SWI	7.6156	2.6	1.5	10	16.25	cont	cont	cont	cont	2.643	4.549	276.819	144.839	2.310	2.635	171.458	111.032
OW DE-B_0723	7/23/2010	DE	B	Overlying Water	OverWater	7.7519	2.2	1.5	10	15.25	est	est	cont	none	2.502	4.491	245.739	135.488	2.247	3.069	176.534	111.817
OW DE-B_0726	7/26/2010	DE	B	Overlying Water	OverWater	7.7519	1.5	1.5	10	15.25	cont	cont	cont	cont	2.108	3.039	171.002	108.351	2.113	3.059	171.997	108.744
OW DE-B_0802	8/2/2010	DE	B	Overlying Water	OverWater	7.7519	3.4	1.5	10	15.25	cont	cont	cont	cont	2.892	7.092	367.158	174.330	2.195	3.110	176.866	109.724
OW DE-B_0809	8/9/2010	DE	B	Overlying Water	OverWater	7.7519	21.1	19.2	10	15.25	none	none	none	est	9.801	47.933	2161.096	802.989	9.076	43.211	1968.814	733.676
OW DE-B_0816	8/16/2010	DE	B	Overlying Water	OverWater	7.7519	3.4	1.5	10	15.25	none	none	none	cont	2.897	6.914	362.393	172.760	2.208	3.059	176.037	109.267
OW DE-B_0823	8/23/2010	DE	B	Overlying Water	OverWater	7.7519	3.3	1.5	10	15.25	none	none	none	est	2.862	6.844	356.384	171.322	2.201	3.097	176.576	110.051
OW DE-B_0830	8/30/2010	DE	B	Overlying Water	OverWater	7.7519	2.4	1.5	10	15.25	cont	none	cont	cont	2.109	5.056	252.784	131.826	1.800	3.106	164.040	100.570
OW DE-B_0906	9/6/2010	DE	B	Overlying Water	OverWater	7.7519	4.4	2.5	10	15.25	cont	none	cont	cont	2.995	9.227	450.660	204.082	2.336	5.124	263.558	138.954
OW DE-B_0913	9/13/2010	DE	B	Overlying Water	OverWater	7.7519	3.4	1.5	10	15.25	cont	none	cont	cont	2.639	7.054	352.447	169.818	1.987	3.081	168.309	105.605
OW DE-B_0920	9/20/2010	DE	B	Overlying Water	OverWater	7.7519	4.3	2.3	10	15.25	cont	none	none	none	3.974	9.170	490.442	221.934	3.190	5.004	284.900	155.105
DE-B INF SED	8/1/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	cont	none	cont	cont	7.496	14.774	959.543	421.112	6.445	10.816	739.911	349.052
DE-B MID SED	8/1/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	cont	none	cont	cont	8.083	15.207	993.524	441.644	6.980	11.146	768.712	368.473
DE-B OUF SED	8/1/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	cont	none	cont	cont	8.751	15.651	1033.928	461.261	7.588	11.476	802.278	386.913
DE-B PPR 1 SED_0801	8/1/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	bdl	cont	cont	cont	6.054	15.143	904.221	367.688	5.119	11.038	692.255	298.767
DE-B PPR 2 SED_0801	8/1/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	bdl	cont	cont	cont	5.631	15.632	877.492	370.369	4.771	11.400	670.914	301.579
DE-B PPR 3 SED_0801	8/1/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	bdl	cont	cont	cont	4.826	15.276	819.683	341.990	4.043	11.114	623.465	274.769
DE-B INF SED_0820	8/20/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	cont	cont	none	cont	2.589	15.861	472.416	303.279	2.049	11.197	358.870	230.238
DE-B MID SED_0820	8/20/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	cont	none	cont	cont	2.745	15.130	518.622	299.355	2.198	10.758	392.644	229.257
DE-B OUF SED_0820	8/20/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	cont	none	cont	cont	2.591	16.020	477.803	303.475	2.048	11.318	362.600	230.304
DE-B PPR 1 SED_0820	8/20/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	bdl	none	cont	cont	8.048	15.588	1025.433	414.900	6.893	11.387	792.747	342.840
DE-B PPR 2 SED_0820	8/20/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	est	none	cont	cont	6.169	15.378	914.788	373.508	5.227	11.210	700.750	304.194
DE-B PPR 3 SED_0820	8/20/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	cont	none	cont	cont	4.544	15.778	802.900	344.017	3.813	11.483	609.997	276.992
DE-B INF SED_0919	9/19/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	cont	none	cont	cont	2.670	17.431	555.503	302.167	2.108	12.360	417.094	229.911
DE-B MID SED_0919	9/19/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	cont	cont	cont	cont	2.724	16.541	560.890	299.355	2.168	11.762	421.652	228.930
DE-B OUF SED_0919	9/19/2010	DE	B	Porewater (1 cm)	DGT	7.7908	7.2	5.3	10	18.15	cont	cont	cont	cont	2.605	16.903	519.865	302.560	2.054	11.959	391.401	229.911
DE-B PPR 1 SED_0919	9/19/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	bdl	none	cont	cont	5.191	15.804	854.907	356.833	4.377	11.515	651.437	288.762
DE-B PPR 2 SED_0919	9/19/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	cont	cont	cont	cont	6.784	15.499	954.778	387.501	5.780	11.305	733.695	317.272
DE-B PPR 3 SED_0919	9/19/2010	DE	B	Porewater (1 cm)	Peeper	7.7908	7.2	5.3	10	18.15	bdl	est	bdl	bdl	4.473	16.033	805.386	341.205	3.749	11.661	611.654	274.376
PW DE-B_0723	7/23/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	11.8	9.9	10	18.15	none	none	cont	cont	13.793	27.223	1751.462	650.107	12.444	22.692	1501.164	574.974
PW DE-B_0726	7/26/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	13.6	11.7	10	18.15	none	none	none	cont	13.793	30.585	1912.870	690.518	12.523	26.143	1669.825	616.628
PW DE-B_0802	8/2/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	7.1	5.2	10	18.15	none	none	cont	cont	9.395	15.499	1082.827	440.794	8.090	11.260	838.124	366.903
PW DE-B_0809	8/9/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	6.6	4.7	10	18.15	cont	none	cont	cont	8.933	14.495	1018.802	420.000	7.625	10.231	773.892	345.978
PW DE-B_0816	8/16/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	7.0	5.1	10	18.15	none	none	none	cont	8.536	15.315	1034.342	423.531	7.317	11.082	796.270	350.490
PW DE-B_0823	8/23/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	4.8	2.9	10	18.15	cont	none	cont	cont	6.428	10.441	729.344	321.457	5.283	6.264	496.037	249.855
PW DE-B_0830	8/30/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	6.4	4.5	10	18.15	cont	none	cont	cont	7.141	13.866	908.779	377.235	6.032	9.678	679.202	305.698
PW DE-B_0906	9/6/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	5.5	3.5	10	18.15	none	none	cont	cont	6.600	11.934	796.891	343.755	5.487	7.702	566.070	272.153
PW DE-B_0913	9/13/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	4.5	2.6	10	18.15	none	none	none	none	5.897	9.583	665.941	298.440	4.818	5.472	437.814	228.080
PW DE-B_0920	9/20/2010	DE	B	Porewater (2.5 cm)	PoreWater	7.7908	5.0	3.0	10	18.15	cont	none	none	cont	6.261	10.733	734.524	320.542	5.152	6.571	504.325	249.397
SWI DE-B_0726	7/26/2010	DE	B	Sediment-Water Interface	SWI	7.4688	4.9	2.9	10	16.45	cont	cont	cont	cont	2.831	6.914	446.516	194.012	2.363	4.131	277.026	139.542
DE-B inflow H2O	8/1/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	cont	cont	cont	cont	4.469	4.337	381.455	192.704	3.783	1.914	185.216	134.311
DE-B middle H2O	8/1/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	cont	cont	cont	cont	4.929	4.455	393.680	204.867	4.212	1.970	192.592	145.493
DE-B outflow H2O	8/1/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	cont	cont	cont	cont	5.315	4.580	403.626	215.525	4.575	2.028	198.518	155.170
DE-B PPR 1 H2O_0801	8/1/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	bdl	bdl	cont	cont	2.122	4.871	300.647	146.539	1.704	2.126	140.668	93.377
DE-B PPR 2 H2O_0801	8/1/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	bdl	bdl	cont	bdl	2.055	4.877	296.503	145.297	1.647	2.128	138.492	92.331
DE-B PPR 3 H2O_0801	8/1/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	bdl	bdl	cont	bdl	2.148	4.885	301.890	147.651	1.730	2.133	141.393	94.489
SWI DE-B_0802	8/2/2010	DE	B	Sediment-Water Interface	SWI	7.4688	3.3	1.5	10	16.45	cont	cont	cont	cont	2.397	4.709	308.314	149.024	1.962	2.106	148.314	97.954
SWI DE-B_0809	8/9/2010	DE	B	Sediment-Water Interface	SWI	7.4688	4.0	2.1	10	16.45	cont	none	cont	cont	3.071	5.720	395.959	178.253	2.554	2.952	216.317	123.260
SWI DE-B_0816	8/16/2010	DE	B	Sediment-Water Interface	SWI	7.4688	2.7	1.5	10	16.45	cont	none	cont	cont	2.376	3.801	257.964	133.919	2.087	2.126	152.789	100.962
DE-B INF H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	cont	none	cont	none	1.362	4.562	215.488	128.099	0.966	1.941	99.497	71.733
DE-B MID H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	none	none	none	none	1.397	4.591	222.326	128.361	0.993	1.953	102.626	71.864
DE-B OUF H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	none	none	none	cont	1.322	4.737	209.686	129.080	0.918	2.004	96.907	71.079
DE-B PPR 1 H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	bdl	cont	cont	cont	2.317	4.857	311.836	150.266	1.873	2.122	146.490	96.712
DE-B PPR 2 H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	bdl	cont	cont	cont	2.266	4.895	310.178	149.482	1.832	2.138	145.558	95.993

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
DE-B PPR 3 H2O_0820	8/20/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	cont	cont	cont	cont	2.292	4.885	311.214	150.005	1.853	2.133	146.035	96.516
SWI DE-B_0823	8/23/2010	DE	B	Sediment-Water Interface	SWI	7.4688	3.9	2.0	10	16.45	cont	none	none	cont	2.620	5.662	367.987	167.333	2.153	2.842	195.472	113.125
SWI DE-B_0830	8/30/2010	DE	B	Sediment-Water Interface	SWI	7.4688	3.1	1.5	10	16.45	cont	none	cont	cont	1.967	4.431	272.261	133.788	1.620	2.136	139.756	90.042
SWI DE-B_0906	9/6/2010	DE	B	Sediment-Water Interface	SWI	7.4688	4.3	2.3	10	16.45	cont	cont	cont	cont	2.446	6.157	381.455	172.499	2.012	3.339	216.524	118.879
SWI DE-B_0913	9/13/2010	DE	B	Sediment-Water Interface	SWI	7.4688	2.1	1.5	10	16.45	cont	none	cont	cont	1.937	2.933	192.800	110.248	1.812	2.131	144.646	94.750
DE-B INF H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	cont	cont	cont	cont	1.431	4.571	230.199	128.099	1.031	1.952	106.169	72.583
DE-B MID H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	cont	cont	cont	cont	1.625	4.362	249.676	129.734	1.208	1.875	115.535	75.722
DE-B OUF H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	DGT	7.4688	3.4	1.5	10	16.45	cont	cont	cont	cont	1.791	4.305	265.838	132.088	1.355	1.859	123.243	78.272
DE-B PPR 1 H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	bdl	cont	cont	cont	2.514	4.914	323.439	154.582	2.046	2.149	152.603	100.570
De-B PPR 2 H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	bdl	cont	cont	bdl	2.628	4.992	331.520	157.132	2.150	2.184	156.747	102.924
DE-B PPR 3 H2O_0919	9/19/2010	DE	B	Sediment-Water Interface	Peeper	7.4688	3.4	1.5	10	16.45	bdl	none	cont	cont	3.530	4.801	365.501	173.087	2.938	2.108	175.457	116.852
SWI DE-B_0920	9/20/2010	DE	B	Sediment-Water Interface	SWI	7.4688	2.9	1.5	10	16.45	cont	cont	cont	cont	2.823	4.202	291.116	149.482	2.464	2.173	161.347	110.182
OW DE-C_0723	7/23/2010	DE	C	Overlying Water	OverWater	7.7161	1.5	1.5	10	15.25	est	none	none	est	2.240	2.901	172.908	110.640	2.248	2.942	174.918	111.359
OW DE-C_0726	7/26/2010	DE	C	Overlying Water	OverWater	7.7161	2.5	1.5	10	15.25	cont	cont	est	cont	2.456	4.829	264.802	140.719	2.130	2.934	170.919	108.744
OW DE-C_0726_2	7/26/2010	DE	C	Overlying Water	OverWater	7.7161	2.0	1.5	10	15.25	cont	cont	cont	cont	2.343	3.849	218.389	125.287	2.182	2.943	173.033	109.921
OW DE-C_0802	8/2/2010	DE	C	Overlying Water	OverWater	7.7161	3.5	1.5	10	15.25	cont	none	cont	cont	2.819	6.907	367.158	173.480	2.155	3.053	177.570	109.463
OW DE-C_0809	8/9/2010	DE	C	Overlying Water	OverWater	7.7161	4.9	2.9	10	15.25	none	none	none	est	3.541	9.818	520.279	224.353	2.844	5.879	325.926	159.617
OW DE-C_0816	8/16/2010	DE	C	Overlying Water	OverWater	7.7161	4.5	2.5	10	15.25	none	none	none	cont	3.300	8.916	472.830	208.529	2.611	5.009	279.927	143.989
OW DE-C_0823	8/23/2010	DE	C	Overlying Water	OverWater	7.7161	3.3	1.5	10	15.25	none	none	none	est	3.764	7.409	420.616	181.523	2.952	3.310	210.308	119.010
OW DE-C_0830	8/30/2010	DE	C	Overlying Water	OverWater	7.7161	2.6	1.5	10	15.25	none	none	cont	none	19.222	6.160	602.538	432.032	17.963	3.659	433.670	385.278
OW DE-C_0906	9/6/2010	DE	C	Overlying Water	OverWater	7.7161	4.5	2.6	10	15.25	cont	none	cont	cont	2.941	9.138	457.498	204.540	2.315	5.195	272.882	140.850
OW DE-C_0913	9/13/2010	DE	C	Overlying Water	OverWater	7.7161	2.2	1.5	10	15.25	cont	none	cont	cont	2.234	4.349	235.794	128.818	2.002	2.943	167.293	105.343
OW DE-C_0920	9/20/2010	DE	C	Overlying Water	OverWater	7.7161	3.7	1.8	10	15.25	cont	none	none	none	3.517	7.511	416.472	195.581	2.795	3.585	216.524	130.715
PW DE-C_0723	7/23/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	6.8	4.9	10	17.85	none	none	cont	cont	10.084	16.681	1098.160	446.221	8.530	11.934	845.583	367.950
PW DE-C_0726	7/26/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	9.7	7.7	10	17.85	none	none	none	cont	11.601	23.823	1433.410	547.576	10.114	18.988	1186.634	469.762
PW DE-C_0802	8/2/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	6.3	4.3	10	17.85	none	none	cont	cont	9.052	15.289	1000.362	410.061	7.559	10.561	751.514	332.377
PW DE-C_0809	8/9/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	6.7	4.8	10	17.85	cont	none	cont	cont	9.685	16.528	1071.846	436.609	8.158	11.743	820.926	358.533
PW DE-C_0816	8/16/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	7.5	5.5	10	17.85	none	none	none	cont	8.959	18.358	1103.340	442.560	7.590	13.567	863.195	365.988
PW DE-C_0823	8/23/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	5.0	3.0	10	17.85	cont	none	cont	cont	6.540	12.194	759.802	329.631	5.259	7.454	524.009	254.171
PW DE-C_0830	8/30/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	42.4	40.5	10	17.85	cont	none	cont	cont	29.542	116.734	5146.848	1826.343	28.395	110.824	4927.216	1747.875
PW DE-C_0906	9/6/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	5.5	3.6	10	17.85	none	none	cont	cont	6.840	13.631	823.827	351.864	5.573	8.846	589.070	276.404
PW DE-C_0913	9/13/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	4.3	2.3	10	17.85	none	none	none	none	6.202	10.599	682.102	305.175	4.909	5.811	443.822	229.715
PW DE-C_0920	9/20/2010	DE	C	Porewater (2.5 cm)	PoreWater	7.8938	5.2	3.3	10	17.85	cont	none	none	cont	6.568	12.785	782.180	333.424	5.309	8.020	547.422	258.487
SWI DE-C_0726	7/26/2010	DE	C	Sediment-Water Interface	SWI	7.4062	2.3	1.5	10	16.35	cont	cont	cont	cont	7.129	3.083	325.926	209.183	6.768	2.046	233.514	184.792
SWI DE-C_0726_2	7/26/2010	DE	C	Sediment-Water Interface	SWI	7.4062	2.7	1.5	10	16.35	cont	cont	cont	cont	6.310	3.779	355.555	212.321	5.814	2.117	219.010	175.441
SWI DE-C_0802	8/2/2010	DE	C	Sediment-Water Interface	SWI	7.4062	3.5	1.6	10	16.35	cont	cont	cont	cont	2.390	4.572	313.908	150.201	1.969	2.044	150.220	98.870
SWI DE-C_0809	8/9/2010	DE	C	Sediment-Water Interface	SWI	7.4062	4.2	2.2	10	16.35	cont	none	cont	cont	2.445	5.488	366.744	164.783	2.031	2.912	204.009	113.517
SWI DE-C_0816	8/16/2010	DE	C	Sediment-Water Interface	SWI	7.4062	4.2	2.2	10	16.35	cont	none	cont	cont	2.745	5.435	381.041	172.368	2.301	2.890	212.794	120.318
SWI DE-C_0823	8/23/2010	DE	C	Sediment-Water Interface	SWI	7.4062	3.7	1.8	10	16.35	cont	none	none	cont	2.644	4.844	341.258	160.009	2.202	2.301	172.618	108.090
SWI DE-C_0830	8/30/2010	DE	C	Sediment-Water Interface	SWI	7.4062	3.9	1.9	10	16.35	cont	none	cont	cont	2.114	5.032	324.475	151.312	1.726	2.488	169.096	100.374
SWI DE-C_0906	9/6/2010	DE	C	Sediment-Water Interface	SWI	7.4062	3.9	2.0	10	16.35	cont	cont	cont	cont	2.315	5.206	341.466	158.505	1.912	2.624	181.321	107.436
SWI DE-C_0913	9/13/2010	DE	C	Sediment-Water Interface	SWI	7.4062	2.1	1.5	10	16.35	cont	cont	cont	cont	1.963	2.774	192.820	110.836	1.831	1.949	140.192	94.162
SWI DE-C_0920	9/20/2010	DE	C	Sediment-Water Interface	SWI	7.4062	2.3	1.5	10	16.35	cont	cont	cont	cont	2.778	3.144	234.758	134.900	2.579	2.026	158.964	112.471
OW GE-A_0723	7/23/2010	GE	A	Overlying Water	OverWater	7.7218	2.1	1.5	10	15.15	est	est	cont	none	2.625	4.185	243.460	134.115	2.389	2.943	179.497	112.863
OW GE-A_0726	7/26/2010	GE	A	Overlying Water	OverWater	7.7218	1.7	1.5	10	15.15	cont	cont	cont	cont	2.298	3.426	197.213	118.291	2.212	2.953	173.447	110.248
OW GE-A_0802	8/2/2010	GE	A	Overlying Water	OverWater	7.7218	2.5	1.5	10	15.15	cont	cont	cont	cont	2.501	4.938	269.982	140.392	2.161	2.990	173.634	108.024
OW GE-A_0809	8/9/2010	GE	A	Overlying Water	OverWater	7.7218	4.7	2.8	10	15.15	cont	none	cont	none	3.095	9.487	480.911	210.621	2.444	5.544	294.017	146.408
OW GE-A_0816	8/16/2010	GE	A	Overlying Water	OverWater	7.7218	3.3	1.5	10	15.15	est	none	none	cont	2.750	6.634	352.447	167.922	2.109	2.952	171.313	106.390
OW Ge-A_0823	8/23/2010	GE	A	Overlying Water	OverWater	7.7218	3.9	2.0	10	15.15	est	none	cont	est	2.916	7.772	403.833	186.688	2.258	3.881	215.695	122.410
OW GE-A_0906	9/6/2010	GE	A	Overlying Water	OverWater	7.7218	3.6	1.6	10	15.15	cont	cont	cont	cont	2.783	7.212	371.717	176.488	2.146	3.289	183.931	112.602
OW GE-A_0913	9/13/2010	GE	A	Overlying Water	OverWater	7.7218	3.6	1.7	10	15.15	cont	cont	cont	cont	2.597	7.200	364.050	173.087	1.977	3.332	181.777	109.463
OW GE-A_0920	9/20/2010	GE	A	Overlying Water	OverWater	7.7218	2.1	1.5	10	15.15	cont	est	cont	est	2.429	4.254	237.244	129.407	2.211	3.004	175.250	108.874
PW GE-A_0723	7/23/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	45.6	43.7	10	17.95	cont	cont	none	cont	20.953	49.077	4929.288	1486.315	20.369	46.884	4730.376	1434.657
PW GE-A_0726	7/26/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	37.9	36.0	10	17.95	none	none	none	cont	19.897	40.708	4231.024	1324.148	19.278	38.547	4027.968	1271.836
PW GE-A_0802	8/2/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	32.5	30.6	10	17.95	cont	cont	cont	cont	18.840	34.861	3713.024	1201.214	18.188	32.720	3505.824	1148.248
PW GE-A_0809	8/9/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	29.7	27.8	10	17.95	cont	cont	cont	cont	16.446	30.947	3313.128	1080.243	15.827	28.869	3110.072	1027.931

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
PW GE-A_0816	8/16/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	14.4	12.5	10	17.95	cont	cont	cont	cont	9.538	13.986	1588.602	596.553	8.969	12.080	1394.870	546.072
PW GE-A_0823	8/23/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	11.0	9.1	10	17.95	cont	cont	cont	cont	6.006	10.180	1078.683	422.877	5.554	8.356	905.878	376.385
PW GE-A_0830	8/30/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	30.2	28.3	10	17.95	cont	cont	cont	cont	9.473	28.983	2641.800	866.418	9.066	26.988	2482.256	818.683
PW GE-A_0906	9/6/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	8.3	6.4	10	17.95	cont	cont	cont	cont	4.812	7.581	800.206	342.905	4.387	5.800	633.203	297.328
PW GE-A_0913	9/13/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	8.0	6.0	10	17.95	cont	none	none	cont	4.418	7.092	740.533	322.111	4.013	5.354	578.917	277.254
PW GE-A_0920	9/20/2010	GE	A	Porewater (2.5 cm)	PoreWater	7.1708	6.1	4.2	10	17.95	cont	cont	cont	cont	3.715	5.458	569.593	267.707	3.326	3.735	411.085	223.568
SWI GE-A_0726	7/26/2010	GE	A	Sediment-Water Interface	SWI	7.5225	2.1	1.5	10	16.55	cont	cont	cont	cont	2.235	3.207	211.344	120.383	2.073	2.281	156.042	102.728
SWI GE-A_0802	8/2/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.9	2.0	10	16.55	cont	cont	cont	cont	2.575	6.009	369.023	170.014	2.086	3.023	196.674	113.975
SWI GE-A_0809	8/9/2010	GE	A	Sediment-Water Interface	SWI	7.5225	5.6	3.7	10	16.55	cont	cont	cont	cont	3.143	8.801	534.369	221.345	2.634	5.706	357.627	164.587
SWI GE-A_0816	8/16/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.8	1.8	10	16.55	cont	cont	cont	cont	2.585	5.804	361.150	166.418	2.085	2.816	186.584	110.117
SWI GE-A_0823	8/23/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.3	1.5	10	16.55	cont	cont	cont	cont	2.558	5.103	321.574	154.909	2.092	2.315	157.741	102.924
SWI GE-A_0830	8/30/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.4	1.5	10	16.55	cont	cont	cont	cont	2.633	5.421	335.457	160.925	2.143	2.373	159.337	105.539
SWI GE-A_0906	9/6/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.7	1.8	10	16.55	cont	cont	cont	cont	2.510	5.875	354.312	165.371	2.035	2.820	181.196	109.659
SWI GE-A_0913	9/13/2010	GE	A	Sediment-Water Interface	SWI	7.5225	3.0	1.5	10	16.55	cont	cont	cont	cont	2.207	4.542	278.270	139.019	1.848	2.292	149.930	97.104
SWI GE-A_0920	9/20/2010	GE	A	Sediment-Water Interface	SWI	7.5225	5.3	3.4	10	16.55	cont	cont	cont	cont	3.141	8.394	511.370	216.441	2.636	5.307	334.214	159.944
OW GE-B_0723	7/23/2010	GE	B	Overlying Water	OverWater	7.7196	1.9	1.5	10	14.95	cont	none	cont	none	11.112	13.561	274.333	140.915	8.411	10.542	217.353	114.825
OW GE-B_0726	7/26/2010	GE	B	Overlying Water	OverWater	7.7196	2.4	1.5	10	14.95	cont	cont	cont	cont	2.558	4.745	267.495	141.831	2.223	2.907	174.359	110.378
OW GE-B_0802	8/2/2010	GE	B	Overlying Water	OverWater	7.7196	2.8	1.5	10	14.95	cont	cont	cont	cont	2.610	5.583	303.341	152.228	2.155	2.964	173.862	108.547
OW GE-B_0809	8/9/2010	GE	B	Overlying Water	OverWater	7.7196	4.1	2.1	10	14.95	est	none	none	none	3.078	8.121	428.904	194.601	2.400	4.242	238.694	130.257
OW GE-B_0816	8/16/2010	GE	B	Overlying Water	OverWater	7.7196	4.7	2.8	10	14.95	est	none	none	cont	3.254	9.570	494.172	216.179	2.590	5.621	304.377	151.639
OW GE-B_0823	8/23/2010	GE	B	Overlying Water	OverWater	7.7196	2.7	1.5	10	14.95	none	none	none	none	2.816	5.320	300.440	152.686	2.382	2.976	181.259	113.386
OW GE-B_0830	8/30/2010	GE	B	Overlying Water	OverWater	7.7196	3.4	1.5	10	14.95	cont	none	cont	cont	2.911	6.946	366.951	176.226	2.261	3.041	177.011	112.929
OW GE-B_0906	9/6/2010	GE	B	Overlying Water	OverWater	7.7196	2.8	1.5	10	14.95	cont	est	cont	cont	2.526	5.597	296.503	151.312	2.099	2.994	170.857	108.678
OW GE-B_0913	9/13/2010	GE	B	Overlying Water	OverWater	7.7196	3.2	1.5	10	14.95	cont	cont	cont	none	2.487	6.249	323.646	159.225	1.951	2.951	165.988	104.689
OW GE-B_0920	9/20/2010	GE	B	Overlying Water	OverWater	7.7196	4.3	2.3	10	14.95	cont	none	cont	none	3.297	8.496	453.354	204.605	2.612	4.606	260.865	140.196
PW GE-B_0723	7/23/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	29.9	28.0	10	17.65	cont	cont	none	cont	15.142	31.837	3209.528	1012.891	14.568	29.689	3012.688	961.887
PW GE-B_0726	7/26/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	32.1	30.2	10	17.65	none	cont	none	cont	17.143	34.849	3547.264	1114.900	16.536	32.663	3344.208	1063.241
PW GE-B_0802	8/2/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	28.4	26.5	10	17.65	cont	cont	cont	cont	16.457	30.756	3201.240	1032.508	15.816	28.596	2994.040	979.542
PW GE-B_0809	8/9/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	22.3	20.4	10	17.65	cont	cont	cont	cont	12.568	23.163	2426.312	811.490	11.983	21.091	2227.400	759.832
PW GE-B_0816	8/16/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	14.4	12.5	10	17.65	cont	cont	cont	cont	8.767	14.349	1533.902	556.796	8.217	12.385	1343.278	506.576
PW GE-B_0823	8/23/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	12.9	11.0	10	17.65	cont	cont	cont	cont	8.216	12.760	1376.637	512.919	7.671	10.816	1186.842	462.961
PW GE-B_0830	8/30/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	12.3	10.4	10	17.65	cont	cont	cont	cont	7.349	12.004	1272.622	477.282	6.833	10.078	1088.629	428.108
PW GE-B_0906	9/6/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	11.3	9.4	10	17.65	cont	cont	cont	cont	6.650	10.924	1151.618	438.505	6.150	9.017	970.318	389.921
PW GE-B_0913	9/13/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	8.3	6.4	10	17.65	none	none	none	none	6.008	8.007	875.420	364.026	5.504	6.128	692.255	315.768
PW GE-B_0920	9/20/2010	GE	B	Porewater (2.5 cm)	PoreWater	7.1915	7.4	5.5	10	17.65	cont	cont	cont	cont	4.792	6.984	735.146	314.199	4.339	5.157	563.170	267.314
SWI GE-B_0726	7/26/2010	GE	B	Sediment-Water Interface	SWI	7.54	2.2	1.5	10	16.15	cont	cont	cont	cont	2.281	3.401	221.497	124.699	2.095	2.336	159.005	104.624
SWI GE-B_0802	8/2/2010	GE	B	Sediment-Water Interface	SWI	7.54	3.2	1.5	10	16.15	bdl	cont	cont	cont	2.500	5.008	313.494	152.489	2.049	2.336	158.280	102.532
SWI GE-B_0809	8/9/2010	GE	B	Sediment-Water Interface	SWI	7.54	4.6	2.7	10	16.15	bdl	cont	cont	cont	2.927	7.365	449.417	196.170	2.408	4.266	272.054	139.019
SWI GE-B_0816	8/16/2010	GE	B	Sediment-Water Interface	SWI	7.54	4.6	2.7	10	16.15	cont	cont	cont	cont	2.873	7.263	442.786	194.993	2.358	4.193	267.081	137.777
SWI GE-B_0823	8/23/2010	GE	B	Sediment-Water Interface	SWI	7.54	3.4	1.5	10	16.15	cont	none	cont	cont	2.510	5.480	335.457	158.702	2.001	2.397	159.399	102.074
SWI GE-B_0830	8/30/2010	GE	B	Sediment-Water Interface	SWI	7.54	4.1	2.1	10	16.15	cont	none	cont	cont	2.788	6.583	398.446	181.457	2.282	3.440	220.461	124.568
SWI GE-B_0906	9/6/2010	GE	B	Sediment-Water Interface	SWI	7.54	3.5	1.6	10	16.15	cont	cont	cont	cont	2.487	5.609	335.664	161.317	2.002	2.491	161.347	104.951
SWI GE-B_0913	9/13/2010	GE	B	Sediment-Water Interface	SWI	7.54	3.0	1.5	10	16.15	cont	cont	cont	cont	2.214	4.663	282.206	140.785	1.848	2.348	152.023	98.150
SWI GE-B_0920	9/20/2010	GE	B	Sediment-Water Interface	SWI	7.54	4.4	2.4	10	16.15	cont	cont	cont	cont	2.998	6.907	429.733	191.070	2.471	3.824	250.090	134.050
OW GE-C_0723	7/23/2010	GE	C	Overlying Water	OverWater	7.726	1.6	1.5	10	15.05	est	none	none	est	2.276	3.245	188.324	115.283	2.227	2.967	174.338	110.574
OW GE-C_0726	7/26/2010	GE	C	Overlying Water	OverWater	7.726	1.9	1.5	10	15.05	cont	cont	cont	cont	2.439	3.872	220.875	126.791	2.281	2.992	176.617	111.948
OW GE-C_0802	8/2/2010	GE	C	Overlying Water	OverWater	7.726	2.9	1.5	10	15.05	cont	cont	cont	none	2.621	5.730	307.485	153.536	2.147	2.987	172.867	107.959
OW GE-C_0809	8/9/2010	GE	C	Overlying Water	OverWater	7.726	4.7	2.8	10	15.05	cont	none	cont	none	3.167	9.506	483.605	212.387	2.505	5.543	295.260	147.781
OW GE-C_0816	8/16/2010	GE	C	Overlying Water	OverWater	7.726	3.4	1.5	10	15.05	est	none	none	cont	2.888	6.742	360.528	172.564	2.222	2.983	175.001	109.921
OW GE-C_0823	8/23/2010	GE	C	Overlying Water	OverWater	7.726	2.8	1.5	10	15.05	est	none	none	none	2.566	5.678	301.683	151.312	2.109	2.992	171.126	106.978
OW GE-C_0830	8/30/2010	GE	C	Overlying Water	OverWater	7.726	3.8	1.9	10	15.05	none	none	cont	cont	2.712	7.810	392.022	181.523	2.076	3.845	206.661	117.375
OW GE-C_0906	9/6/2010	GE	C	Overlying Water	OverWater	7.726	2.3	1.5	10	15.05	cont	est	cont	cont	2.201	4.647	243.874	130.976	1.936	2.994	165.304	103.905
OW GE-C_0913	9/13/2010	GE	C	Overlying Water	OverWater	7.726	3.8	1.9	10	15.05	cont	cont	cont	cont	2.956	7.765	401.346	187.539	2.300	3.832	212.380	123.260
OW GE-C_0920	9/20/2010	GE	C	Overlying Water	OverWater	7.726	3.6	1.6	10	15.05	none	none	none	none	3.408	7.301	400.518	189.566	2.675	3.323	200.217	124.176
PW GE-C_0723	7/23/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	32.5	30.6	10	17.75	cont	cont	none	cont	18.132	36.609	3686.088	1163.288	17.491	34.347	3478.888	1109.668
PW GE-C_0726	7/26/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	36.1	34.2	10	17.75	none	none	none	cont	18.042	40.034	3957.520	1220.831	17.435	37.791	3756.536	1168.519

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
PW GE-C_0802	8/2/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	36.8	34.9	10	17.75	cont	cont	cont	cont	21.201	42.226	4272.464	1334.610	20.515	39.926	4059.048	1280.336
PW GE-C_0809	8/9/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	26.6	24.7	10	17.75	cont	cont	cont	cont	16.783	29.816	3105.928	1024.007	16.097	27.592	2894.584	969.734
PW GE-C_0816	8/16/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	14.7	12.8	10	17.75	cont	cont	cont	none	9.481	15.079	1622.376	586.156	8.894	13.059	1425.950	534.890
PW GE-C_0823	8/23/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	11.9	10.0	10	17.75	cont	cont	cont	cont	7.823	11.978	1286.090	487.025	7.272	9.996	1095.674	436.936
PW GE-C_0830	8/30/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	9.3	7.4	10	17.75	cont	cont	cont	cont	6.264	9.182	980.263	396.917	5.757	7.263	797.098	348.136
PW GE-C_0906	9/6/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	10.7	8.8	10	17.75	cont	cont	cont	cont	6.702	10.568	1119.087	435.170	6.185	8.630	934.679	385.866
PW GE-C_0913	9/13/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	8.3	6.4	10	17.75	cont	cont	none	cont	6.350	8.172	901.942	382.924	5.821	6.264	715.462	333.424
PW GE-C_0920	9/20/2010	GE	C	Porewater (2.5 cm)	PoreWater	7.2069	9.6	7.7	10	17.75	cont	cont	cont	cont	6.065	9.437	990.623	396.263	5.569	7.517	810.152	347.679
SWI GE-C_0726	7/26/2010	GE	C	Sediment-Water Interface	SWI	7.4612	2.1	1.5	10	16.75	cont	cont	cont	cont	2.122	2.943	203.180	117.440	1.976	2.080	149.080	100.308
SWI GE-C_0802	8/2/2010	GE	C	Sediment-Water Interface	SWI	7.4612	2.9	1.5	10	16.75	cont	cont	cont	cont	2.204	4.071	267.702	136.338	1.886	2.101	147.423	97.823
SWI GE-C_0809	8/9/2010	GE	C	Sediment-Water Interface	SWI	7.4612	5.1	3.1	10	16.75	cont	cont	cont	cont	2.662	7.225	453.354	195.058	2.222	4.419	287.594	141.373
SWI GE-C_0816	8/16/2010	GE	C	Sediment-Water Interface	SWI	7.4612	3.3	1.5	10	16.75	cont	cont	cont	cont	2.497	4.666	312.458	152.163	2.065	2.112	153.017	102.139
SWI GE-C_0823	8/23/2010	GE	C	Sediment-Water Interface	SWI	7.4612	4.2	2.3	10	16.75	cont	none	cont	cont	2.666	6.043	393.266	176.880	2.207	3.250	222.533	122.999
SWI GE-C_0830	8/30/2010	GE	C	Sediment-Water Interface	SWI	7.4612	2.8	1.5	10	16.75	cont	cont	cont	cont	2.037	4.046	257.135	131.107	1.746	2.131	143.983	94.685
SWI GE-C_0906	9/6/2010	GE	C	Sediment-Water Interface	SWI	7.4612	3.4	1.5	10	16.75	cont	cont	cont	cont	2.288	4.846	310.386	150.201	1.859	2.117	146.698	97.693
SWI GE-C_0913	9/13/2010	GE	C	Sediment-Water Interface	SWI	7.4612	3.3	1.5	10	16.75	cont	cont	cont	cont	2.426	4.709	309.142	150.986	2.009	2.124	150.697	101.158
SWI GE-C_0920	9/20/2010	GE	C	Sediment-Water Interface	SWI	7.4612	3.4	1.5	10	16.75	cont	cont	cont	cont	2.768	4.878	329.655	160.925	2.310	2.172	159.689	109.005
OW GE-D_0723	7/23/2010	GE	D	Overlying Water	OverWater	7.5973	1.9	1.5	10	15.85	est	est	cont	none	2.265	3.233	203.180	119.794	2.145	2.534	164.351	107.109
OW GE-D_0726	7/26/2010	GE	D	Overlying Water	OverWater	7.5973	1.9	1.5	10	15.85	cont	cont	cont	cont	2.182	3.135	196.881	115.871	2.074	2.509	162.134	104.493
OW GE-D_0802	8/2/2010	GE	D	Overlying Water	OverWater	7.5973	2.5	1.5	10	15.85	cont	cont	cont	cont	2.407	4.240	257.964	134.900	2.127	2.577	166.050	105.343
OW GE-D_0809	8/9/2010	GE	D	Overlying Water	OverWater	7.5973	4.5	2.6	10	15.85	none	none	cont	est	3.116	7.702	454.597	199.636	2.539	4.357	269.982	140.000
OW GE-D_0816	8/16/2010	GE	D	Overlying Water	OverWater	7.5973	3.2	1.5	10	15.85	none	est	none	cont	2.452	5.395	316.809	153.013	1.972	2.523	160.228	101.420
OW GE-D_0823	8/23/2010	GE	D	Overlying Water	OverWater	7.5973	2.3	1.5	10	15.85	est	none	none	none	2.256	3.857	234.965	127.053	2.029	2.519	161.119	102.924
OW GE-D_0906	9/6/2010	GE	D	Overlying Water	OverWater	7.5973	2.2	1.5	10	15.85	cont	est	cont	cont	2.081	3.808	223.983	122.868	1.881	2.543	156.250	100.374
OW GE-D_0906_2	9/6/2010	GE	D	Overlying Water	OverWater	7.5973	4.9	2.9	10	15.85	cont	cont	cont	cont	2.757	8.388	460.606	202.120	2.239	5.001	285.729	143.269
OW GE-D_0913	9/13/2010	GE	D	Overlying Water	OverWater	7.5973	3.7	1.8	10	15.85	cont	cont	cont	none	2.533	6.283	357.627	168.314	2.005	2.971	181.341	109.659
OW GE-D_0920	9/20/2010	GE	D	Overlying Water	OverWater	7.5973	4.0	2.1	10	15.85	cont	none	cont	none	2.826	6.996	404.869	180.673	2.271	3.604	221.497	121.756
GE-D INF SED_0801	8/1/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	cont	cont	cont	cont	3.018	15.048	557.161	426.212	2.567	12.309	488.370	359.056
GE-D MID SED_0801	8/1/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	cont	cont	cont	cont	2.973	14.711	559.026	420.458	2.545	12.055	490.442	355.068
GE-D OUF SED_0801	8/1/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	cont	cont	cont	cont	3.427	16.694	502.253	468.846	2.779	13.427	441.958	387.436
GE-D PPR 1 SED_0801	8/1/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	est	cont	cont	cont	4.072	13.599	1043.459	400.121	3.731	11.527	898.005	353.760
GE-D PPR 2 SED_0801	8/1/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	bdl	cont	cont	cont	5.435	13.357	1188.499	433.863	5.016	11.337	1024.604	386.128
GE-D PPR 3 SED_0801	8/1/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	bdl	bdl	cont	cont	4.422	13.592	1087.800	408.557	4.060	11.527	937.373	361.803
GE-D INF SED_0820	8/20/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	cont	cont	cont	cont	2.989	14.692	560.062	421.046	2.558	12.048	491.686	355.460
GE-D MID SED_0820	8/20/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	cont	cont	cont	cont	2.991	14.590	546.179	421.831	2.558	11.953	480.704	356.049
GE-D OUF SED_0820	8/20/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	cont	cont	cont	cont	3.623	16.878	462.678	483.494	2.880	13.472	411.706	396.656
GE-D PPR 1 SED_0820	8/20/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	bdl	cont	cont	bdl	5.124	13.523	1160.942	428.239	4.724	11.476	1000.569	380.504
GE-D PPR 2 SED_0820	8/20/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	bdl	cont	cont	bdl	5.559	13.535	1199.274	441.579	5.138	11.495	1034.135	393.909
GE-D PPR 3 SED_0820	8/20/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	bdl	cont	cont	bdl	4.387	13.592	1084.070	407.510	4.028	11.527	933.643	360.822
GE-D INF SED_0919	9/19/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	cont	cont	cont	cont	3.076	15.588	563.377	433.666	2.596	12.735	492.514	364.222
GE-D MID SED_0919	9/19/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	cont	cont	cont	cont	3.631	17.119	469.308	485.259	2.877	13.669	415.436	398.029
GE-D OUF SED_0919	9/19/2010	GE	D	Porewater (1 cm)	DGT	7.2315	13.3	11.4	10	18.25	cont	cont	cont	cont	3.364	16.382	509.919	461.980	2.753	13.224	449.210	383.055
GE-D PPR 1 SED_0919	9/19/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	bdl	cont	cont	bdl	4.004	13.974	1047.189	401.364	3.670	11.839	901.113	355.068
GE-D PPR 2 SED_0919	9/19/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	bdl	cont	cont	bdl	4.575	13.662	1108.520	412.153	4.204	11.578	954.778	365.269
GE-D PPR 3 SED_0919	9/19/2010	GE	D	Porewater (1 cm)	Peeper	7.2315	13.3	11.4	10	18.25	bdl	est	cont	bdl	3.855	13.999	1026.469	398.356	3.530	11.858	883.086	352.125
PW GE-D_0723	7/23/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	24.5	22.6	10	18.25	cont	cont	cont	cont	11.309	26.105	2505.048	795.142	10.770	23.938	2316.496	744.138
PW GE-D_0726	7/26/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	15.1	13.2	10	18.25	cont	cont	cont	cont	5.745	14.349	1309.090	464.073	5.325	12.417	1150.789	416.665
PW GE-D_0802	8/2/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	17.5	15.6	10	18.25	cont	cont	cont	cont	9.749	18.625	1851.332	628.659	9.185	16.503	1658.843	577.198
PW GE-D_0809	8/9/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	16.9	15.0	10	18.25	cont	cont	cont	cont	9.432	17.933	1789.586	609.435	8.866	15.817	1597.098	557.907
PW GE-D_0816	8/16/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	11.9	10.0	10	18.25	cont	cont	cont	none	6.990	12.372	1232.633	452.237	6.461	10.314	1046.360	401.560
PW GE-D_0823	8/23/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	17.1	15.2	10	18.25	cont	cont	cont	cont	7.985	17.926	1697.797	575.824	7.479	15.804	1515.875	525.539
PW GE-D_0830	8/30/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	10.0	8.1	10	18.25	cont	cont	cont	cont	5.326	9.761	941.724	361.999	4.882	7.829	772.234	314.526
PW GE-D_0906	9/6/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	7.8	5.8	10	18.25	cont	cont	cont	cont	4.544	7.765	751.100	305.371	4.091	5.805	579.538	257.440
PW GE-D_0913	9/13/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	6.6	4.7	10	18.25	cont	cont	none	cont	4.330	6.520	648.536	277.581	3.875	4.604	476.767	229.846
PW GE-D_0920	9/20/2010	GE	D	Porewater (2.5 cm)	PoreWater	7.2315	5.3	3.4	10	18.25	cont	cont	cont	cont	3.619	5.234	508.469	232.985	3.197	3.326	342.502	186.492
SWI GE-D_0726	7/26/2010	GE	D	Sediment-Water Interface	SWI	7.6125	2.2	1.5	10	16.85	bdl	cont	cont	cont	2.240	3.722	223.776	125.091	2.050	2.591	162.548	104.951

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
GE-D INF H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	cont	cont	cont	cont	1.506	5.872	244.496	142.550	1.041	2.616	118.104	80.430
GE-D MID H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	cont	cont	cont	cont	1.539	5.762	247.397	142.485	1.073	2.571	119.762	80.822
GE-D OUF H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	cont	cont	cont	cont	1.448	6.064	235.379	143.269	0.984	2.689	113.794	79.841
GE-D PPR 1 H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	bdl	bdl	cont	cont	2.330	6.268	340.637	162.102	1.817	2.863	167.190	103.185
GE-D PPR 2 H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	bdl	cont	cont	cont	2.294	6.256	337.943	161.513	1.787	2.857	165.801	102.597
GE-D PPR 3 H2O_0801	8/1/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	bdl	bdl	cont	bdl	2.262	6.252	335.457	160.990	1.760	2.854	164.475	102.205
SWI GE-D_0802	8/2/2010	GE	D	Sediment-Water Interface	SWI	7.6125	4.3	2.4	10	16.85	cont	cont	cont	cont	2.736	7.562	421.238	188.519	2.190	4.146	242.838	128.884
SWI GE-D_0809	8/9/2010	GE	D	Sediment-Water Interface	SWI	7.6125	4.6	2.7	10	16.85	cont	cont	cont	cont	3.182	8.191	472.623	205.455	2.593	4.741	286.350	145.100
SWI GE-D_0816	8/16/2010	GE	D	Sediment-Water Interface	SWI	7.6125	4.0	2.0	10	16.85	cont	cont	cont	cont	2.752	6.946	396.166	179.888	2.182	3.543	214.659	120.056
GE-D INF H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	cont	cont	none	cont	1.314	6.577	216.317	145.166	0.861	2.895	104.263	79.187
GE-D MID H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	cont	cont	cont	cont	1.301	6.583	209.272	145.950	0.848	2.891	101.093	79.318
GE-D OUF H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	cont	cont	cont	none	1.283	7.181	186.584	153.340	0.788	3.100	90.609	80.691
GE-D PPR 1 H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	cont	cont	cont	none	2.534	6.197	350.790	165.829	1.987	2.832	172.846	106.390
GE-D PPR 2 H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	cont	cont	cont	cont	2.155	6.092	326.340	156.413	1.657	2.776	159.461	97.758
GE-D PPR 3 H2O_0820	8/20/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	bdl	cont	cont	cont	2.518	6.203	350.375	165.633	1.976	2.836	172.618	106.193
SWI Ge-D_0823	8/23/2010	GE	D	Sediment-Water Interface	SWI	7.6125	3.1	1.5	10	16.85	cont	cont	cont	cont	2.476	5.382	311.422	152.228	2.014	2.610	163.066	103.382
SWI GE-D_0830	8/30/2010	GE	D	Sediment-Water Interface	SWI	7.6125	3.5	1.6	10	16.85	cont	cont	cont	cont	2.814	6.344	364.879	172.303	2.241	2.858	178.627	112.340
SWI GE-D_0906	9/6/2010	GE	D	Sediment-Water Interface	SWI	7.6125	2.8	1.5	10	16.85	cont	cont	cont	cont	2.247	4.939	279.306	141.504	1.882	2.611	157.762	100.897
SWI GE-D_0906_2	9/6/2010	GE	D	Sediment-Water Interface	SWI	7.6125	4.2	2.3	10	16.85	cont	cont	cont	cont	2.600	7.467	406.319	183.942	2.072	4.026	230.614	124.699
SWI GE-D_0913	9/13/2010	GE	D	Sediment-Water Interface	SWI	7.6125	4.8	2.9	10	16.85	cont	cont	cont	cont	2.759	8.458	458.534	200.617	2.226	4.993	281.999	141.046
GE-D INF H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	cont	cont	cont	cont	1.484	6.055	245.946	142.681	1.020	2.692	118.622	80.168
GE-D MID H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	cont	cont	cont	cont	1.516	5.814	244.289	142.550	1.051	2.591	118.208	80.626
GE-D OUF H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	DGT	7.6125	3.6	1.6	10	16.85	cont	cont	cont	cont	1.532	5.851	248.433	142.616	1.063	2.607	120.052	80.691
GE-D PPR 1 H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	bdl	cont	cont	cont	2.725	6.264	362.807	170.014	2.156	2.866	179.394	110.117
GE-D PPR 2 H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	bdl	bdl	bdl	bdl	2.834	6.284	368.402	172.499	2.248	2.877	182.647	112.405
Ge-D PPR 3 H2O_0919	9/19/2010	GE	D	Sediment-Water Interface	Peeper	7.6125	3.6	1.6	10	16.85	bdl	cont	bdl	bdl	2.733	6.301	363.843	170.406	2.161	2.882	180.098	110.509
SWI GE-D_0920	9/20/2010	GE	D	Sediment-Water Interface	SWI	7.6125	2.9	1.5	10	16.85	cont	cont	cont	cont	2.754	5.153	309.350	155.040	2.320	2.662	172.515	111.359
OW H2O-A_0723	7/23/2010	H2O	A	Overlying Water	OverWater	7.7346	2.9	1.5	10	15.25	est	est	none	none	2.725	5.941	318.259	160.009	2.206	3.016	175.125	111.098
OW H2O-A_0726	7/26/2010	H2O	A	Overlying Water	OverWater	7.7346	2.7	1.5	10	15.25	cont	cont	cont	cont	2.578	5.339	287.386	149.089	2.170	3.008	173.613	110.313
OW H2O-A_0802	8/2/2010	H2O	A	Overlying Water	OverWater	7.7346	3.1	1.5	10	15.25	cont	cont	cont	cont	2.746	6.290	333.799	163.148	2.180	3.033	175.229	109.594
OW H2O-A_0809	8/9/2010	H2O	A	Overlying Water	OverWater	7.7346	5.3	3.4	10	15.25	cont	none	cont	none	3.261	11.000	539.963	232.331	2.605	6.952	354.105	167.595
OW H2O-A_0816	8/16/2010	H2O	A	Overlying Water	OverWater	7.7346	2.6	1.5	10	15.25	est	est	none	cont	2.524	5.169	279.098	143.989	2.149	3.027	174.566	108.547
OW H2O-A_0823	8/23/2010	H2O	A	Overlying Water	OverWater	7.7346	2.7	1.5	10	15.25	est	none	none	none	2.887	5.489	305.827	155.432	2.434	3.050	183.413	114.890
OW H2O-A_0830	8/30/2010	H2O	A	Overlying Water	OverWater	7.7346	3.4	1.5	10	15.25	cont	none	cont	cont	2.897	7.022	364.879	175.114	2.241	3.099	177.218	112.209
OW H2O-A_0906	9/6/2010	H2O	A	Overlying Water	OverWater	7.7346	2.6	1.5	10	15.25	bdl	est	cont	cont	2.491	5.206	275.369	144.773	2.130	3.051	172.245	109.659
OW H2O-A_0913	9/13/2010	H2O	A	Overlying Water	OverWater	7.7346	4.8	2.8	10	15.25	cont	cont	cont	cont	3.016	9.831	480.911	213.433	2.380	5.788	295.882	148.893
OW H2O-A_0920	9/20/2010	H2O	A	Overlying Water	OverWater	7.7346	2.4	1.5	10	15.25	none	est	none	est	2.643	5.035	275.990	142.092	2.302	3.110	181.611	111.098
PW H2O-A_0723	7/23/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	4.4	2.5	10	17.55	cont	cont	cont	cont	2.651	5.807	401.554	182.177	2.223	3.239	236.208	130.453
PW H2O-A_0726	7/26/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	5.2	3.3	10	17.55	cont	cont	cont	cont	2.843	6.901	471.380	204.801	2.415	4.305	305.827	152.686
PW H2O-A_0802	8/2/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	7.0	5.1	10	17.55	cont	cont	cont	cont	3.128	9.341	614.348	249.986	2.711	6.691	451.489	197.805
PW H2O-A_0809	8/9/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	7.1	5.2	10	17.55	cont	cont	cont	cont	3.372	9.653	648.329	260.056	2.932	6.965	479.461	207.025
PW H2O-A_0816	8/16/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	3.6	1.7	10	17.55	cont	cont	cont	cont	2.479	4.787	335.457	162.298	2.053	2.238	169.987	110.574
PW H2O-A_0823	8/23/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	5.6	3.7	10	17.55	none	cont	cont	none	3.035	7.524	507.226	217.814	2.619	4.910	342.502	166.287
PW H2O-A_0830	8/30/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	6.4	4.4	10	17.55	cont	cont	cont	cont	3.180	8.547	569.386	237.496	2.769	5.899	404.247	186.165
PW H2O-A_0906	9/6/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	9.7	7.8	10	17.55	cont	cont	cont	cont	3.909	13.395	864.438	331.135	3.481	10.631	697.850	278.234
PW H2O-A_0913	9/13/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	2.9	1.5	10	17.55	none	cont	none	cont	2.230	3.824	268.117	141.177	1.927	1.957	148.272	103.447
PW H2O-A_0920	9/20/2010	H2O	A	Porewater (2.5 cm)	PoreWater	7.41	3.6	1.7	10	17.55	cont	cont	cont	cont	2.624	4.766	339.808	165.175	2.189	2.223	172.308	113.582
OW H2O-B_0723	7/23/2010	H2O	B	Overlying Water	OverWater	7.7521	2.9	1.5	10	15.05	bdl	est	cont	none	2.753	5.977	316.809	159.682	2.231	3.063	175.788	111.359
OW H2O-B_0726	7/26/2010	H2O	B	Overlying Water	OverWater	7.7521	2.3	1.5	10	15.05	cont	cont	cont	cont	2.485	4.763	257.135	138.104	2.177	3.042	173.758	109.463
OW H2O-B_0802	8/2/2010	H2O	B	Overlying Water	OverWater	7.7521	3.4	1.5	10	15.05	cont	cont	cont	cont	2.823	6.952	358.456	171.583	2.152	3.084	174.317	108.547
OW H2O-B_0809	8/9/2010	H2O	B	Overlying Water	OverWater	7.7521	4.0	2.1	10	15.05	none	none	none	none	12.287	8.852	693.291	347.482	10.462	4.599	414.193	267.903
OW H2O-B_0816	8/16/2010	H2O	B	Overlying Water	OverWater	7.7521	2.8	1.5	10	15.05	est	est	none	cont	2.806	5.816	312.250	156.282	2.316	3.111	180.430	112.078
OW H2O-B_0823	8/23/2010	H2O	B	Overlying Water	OverWater	7.7521	4.4	2.5	10	15.05	none	none	none	none	3.357	9.303	474.902	210.163	2.636	5.182	279.306	144.185
OW H2O-B_0830	8/30/2010	H2O	B	Overlying Water	OverWater	7.7521	3.0	1.5	10	15.05	cont	none	cont	cont	2.402	6.229	309.557	152.686	1.904	3.119	167.293	103.055
OW H2O-B_0906	9/6/2010	H2O	B	Overlying Water	OverWater	7.7521	1.4	1.5	10	15.05	cont	none	cont	cont	1.908	2.802	153.556	99.916	1.958	3.114	168.143	105.016
OW H2O-B_0913	9/13/2010	H2O	B	Overlying Water	OverWater	7.7521	4.8	2.9	10	15.05	cont	none	cont	cont	3.406	10.294	508.883	225.269	2.720	6.128	316.394	159.617

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
OW H2O-B_0920	9/20/2010	H2O	B	Overlying Water	OverWater	7.7521	3.4	1.5	10	15.05	cont	est	cont	cont	2.919	7.212	367.366	175.245	2.250	3.194	178.731	112.013
PW H2O-B_0723	7/23/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	4.1	2.2	10	17.25	cont	cont	cont	cont	2.588	5.096	363.843	167.464	2.180	2.682	201.502	117.244
PW H2O-B_0802	8/2/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	5.1	3.1	10	17.25	none	cont	cont	cont	2.687	6.334	438.228	189.827	2.288	3.883	278.062	139.608
PW H2O-B_0809	8/9/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	4.6	2.6	10	17.25	cont	cont	cont	cont	2.754	5.763	409.634	182.111	2.337	3.301	244.703	131.303
PW H2O-B_0816	8/16/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	5.4	3.5	10	17.25	cont	cont	cont	cont	2.913	6.869	480.704	203.690	2.499	4.383	316.602	152.947
PW H2O-B_0823	8/23/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	6.7	4.8	10	17.25	none	cont	cont	cont	3.179	8.426	579.331	235.142	2.777	5.933	417.715	184.661
PW H2O-B_0830	8/30/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	5.0	3.1	10	17.25	cont	cont	cont	cont	2.538	6.343	427.661	186.885	2.154	3.872	270.189	136.861
PW H2O-B_0906	9/6/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	5.5	3.5	10	17.25	none	cont	cont	cont	2.751	6.939	472.209	202.382	2.351	4.443	311.629	151.639
PW H2O-B_0913	9/13/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	3.8	1.9	10	17.25	none	cont	none	cont	2.539	4.762	337.114	161.121	2.143	2.347	176.348	111.294
PW H2O-B_0920	9/20/2010	H2O	B	Porewater (2.5 cm)	PoreWater	7.3692	4.8	2.9	10	17.25	cont	cont	cont	cont	2.958	6.086	435.742	192.508	2.542	3.630	269.982	141.962
OW H2O-C_0723	7/23/2010	H2O	C	Overlying Water	OverWater	7.7542	1.6	1.5	10	15.55	bdl	none	none	est	2.244	3.209	182.336	113.582	2.222	3.085	176.369	111.621
OW-H2O-C	7/26/2010	H2O	C	Overlying Water	OverWater	7.7542	2.5	1.5	10	15.55	bdl	cont	cont	cont	2.547	5.146	275.162	144.316	2.177	3.063	174.752	109.790
OW H2O-C_0802	8/2/2010	H2O	C	Overlying Water	OverWater	7.7542	3.9	2.0	10	15.55	cont	cont	cont	cont	3.353	8.261	429.318	198.916	2.623	4.135	231.235	132.742
OW H2O-C_0809	8/9/2010	H2O	C	Overlying Water	OverWater	7.7542	3.8	1.8	10	15.55	est	none	none	none	3.040	7.931	406.112	187.342	2.321	3.827	211.551	121.233
OW H2O-C_0816	8/16/2010	H2O	C	Overlying Water	OverWater	7.7542	4.1	2.2	10	15.55	est	none	none	cont	3.104	8.515	432.426	197.216	2.401	4.456	240.974	131.434
OW H2O-C_0816_2	8/16/2010	H2O	C	Overlying Water	OverWater	7.7542	3.5	1.6	10	15.55	est	none	none	cont	2.914	7.219	373.374	177.338	2.209	3.204	181.507	111.686
OW H2O-C_0823	8/23/2010	H2O	C	Overlying Water	OverWater	7.7542	2.9	1.5	10	15.55	est	none	cont	est	2.792	6.025	317.638	159.748	2.284	3.133	179.000	112.929
OW H2O-C_0830	8/30/2010	H2O	C	Overlying Water	OverWater	7.7542	4.3	2.4	10	15.55	cont	none	cont	cont	2.938	9.144	443.615	199.766	2.272	4.976	255.063	134.311
OW H2O-C_0906	9/6/2010	H2O	C	Overlying Water	OverWater	7.7542	2.5	1.5	10	15.55	cont	est	cont	cont	2.388	5.323	272.882	142.289	2.030	3.129	170.981	107.109
OW H2O-C_0913	9/13/2010	H2O	C	Overlying Water	OverWater	7.7542	4.1	2.2	10	15.55	cont	cont	cont	cont	2.816	8.566	416.472	192.247	2.159	4.479	231.235	126.987
OW H2O-C_0920	9/20/2010	H2O	C	Overlying Water	OverWater	7.7542	4.3	2.4	10	15.55	cont	none	cont	cont	4.048	9.329	498.730	225.138	3.260	5.150	292.774	158.244
PW H2O-C_0723	7/23/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	6.3	4.4	10	17.85	cont	cont	cont	cont	3.090	8.560	567.935	231.219	2.654	5.879	400.932	178.842
PW H2O-C_0726	7/26/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	9.6	7.7	10	17.85	none	cont	cont	cont	2.929	12.976	735.146	301.121	2.556	10.218	591.349	248.286
PW H2O-C_0802	8/2/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	6.0	4.1	10	17.85	none	none	cont	none	3.255	8.210	555.296	231.023	2.814	5.537	385.392	178.384
PW H2O-C_0809	8/9/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	8.7	6.8	10	17.85	cont	none	none	cont	3.894	12.239	807.251	307.398	3.432	9.443	634.654	253.386
PW H2O-C_0816	8/16/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	5.2	3.3	10	17.85	cont	cont	cont	cont	2.907	7.003	475.524	204.801	2.474	4.389	308.728	152.489
PW H2O-C_0823	8/23/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	6.0	4.1	10	17.85	none	cont	none	none	3.179	8.185	551.359	228.342	2.738	5.514	382.491	175.964
PW H2O-C_0830	8/30/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	4.1	2.2	10	17.85	cont	cont	cont	cont	2.685	5.466	377.518	173.741	2.253	2.866	209.686	122.018
PW H2O-C_0906	9/6/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	4.1	2.2	10	17.85	cont	cont	cont	cont	2.526	5.469	368.402	171.322	2.110	2.867	204.051	119.664
PW H2O-C_0913	9/13/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	2.4	1.5	10	17.85	cont	cont	none	cont	2.049	3.099	215.902	121.625	1.863	1.917	140.419	97.562
PW H2O-C_0920	9/20/2010	H2O	C	Porewater (2.5 cm)	PoreWater	7.4108	4.5	2.6	10	17.85	cont	cont	cont	cont	3.281	6.112	438.021	198.786	2.816	3.488	262.315	146.147
OW H2O-D_0723	7/23/2010	H2O	D	Overlying Water	OverWater	7.7551	1.8	1.5	10	15.05	est	est	cont	none	2.390	3.627	204.589	122.149	2.292	3.090	178.420	113.255
OW H2O-D_0726	7/26/2010	H2O	D	Overlying Water	OverWater	7.7551	4.3	2.4	10	15.05	cont	cont	cont	cont	3.234	8.935	452.732	207.417	2.529	4.882	261.901	141.373
OW H2O-D_0802	8/2/2010	H2O	D	Overlying Water	OverWater	7.7551	3.5	1.6	10	15.05	cont	cont	cont	est	2.991	7.365	381.662	179.823	2.279	3.315	187.765	114.106
OW H2O-D_0809	8/9/2010	H2O	D	Overlying Water	OverWater	7.7551	30.8	28.9	10	15.05	none	none	none	none	48.899	76.764	4964.512	1626.903	46.673	71.807	4668.216	1542.550
OW H2O-D_0816	8/16/2010	H2O	D	Overlying Water	OverWater	7.7551	3.9	1.9	10	15.05	none	est	none	cont	3.887	8.064	455.011	204.017	3.036	4.027	245.946	136.534
OW H2O-D_0823	8/23/2010	H2O	D	Overlying Water	OverWater	7.7551	2.8	1.5	10	15.05	est	none	none	none	2.589	5.787	301.062	152.293	2.127	3.104	174.027	108.678
OW H2O-D_0830	8/30/2010	H2O	D	Overlying Water	OverWater	7.7551	3.2	1.5	10	15.05	cont	none	cont	cont	2.579	6.876	341.466	164.325	1.977	3.154	170.671	105.278
OW H2O-D_0906	9/6/2010	H2O	D	Overlying Water	OverWater	7.7551	3.0	1.5	10	15.05	cont	none	none	cont	2.464	6.265	312.872	156.086	1.951	3.098	167.397	105.016
OW H2O-D_0913	9/13/2010	H2O	D	Overlying Water	OverWater	7.7551	3.1	1.5	10	15.05	cont	cont	cont	cont	2.574	6.463	325.718	161.252	2.021	3.100	169.780	106.978
OW H2O-D_0920	9/20/2010	H2O	D	Overlying Water	OverWater	7.7551	3.1	1.5	10	15.05	cont	none	cont	cont	3.081	6.615	353.690	172.172	2.448	3.142	184.201	115.740
H2O-D INF bottom	8/1/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	cont	cont	cont	cont	1.901	7.346	363.429	203.951	1.536	4.922	257.342	148.958
H2O-D MID bottom	8/1/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	cont	cont	cont	cont	1.931	7.263	369.852	203.559	1.566	4.874	261.694	149.024
H2O-D OUF bottom	8/1/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	cont	cont	cont	cont	1.877	7.384	357.213	204.213	1.514	4.943	253.198	148.828
H2O-D PPR 1 BTM_0801	8/1/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	bdl	bdl	cont	bdl	2.657	8.255	520.694	219.907	2.276	5.637	365.086	168.837
H2O-D PPR 2 BTM_0801	8/1/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	bdl	bdl	cont	bdl	2.599	8.293	516.342	218.926	2.225	5.665	361.771	167.987
H2O-D PPR 3 BTM_0801	8/1/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	bdl	bdl	cont	cont	2.691	8.242	522.558	220.953	2.308	5.629	366.330	169.818
H2O-D INF BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	cont	cont	cont	cont	1.785	7.721	333.592	207.025	1.419	5.141	237.037	149.612
H2O-D MID BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	cont	cont	cont	cont	1.785	7.772	333.385	207.417	1.416	5.171	236.830	149.808
H2O-D OUF BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	cont	cont	cont	cont	1.757	8.318	309.142	215.002	1.361	5.481	220.668	153.209
H2O-D PPR 1 BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	bdl	cont	cont	bdl	2.781	8.248	530.846	222.457	2.389	5.637	372.338	171.322
H2O-D PPR 2 BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	est	cont	cont	cont	2.063	7.937	447.966	204.082	1.724	5.393	313.494	153.340
H2O-D PPR 3 BTM_0820	8/20/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	bdl	cont	cont	cont	2.798	8.172	529.603	222.718	2.404	5.575	371.510	171.518
H2O-D INF BTM_0919	9/19/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	cont	cont	cont	cont	1.842	7.657	348.510	206.436	1.470	5.103	247.397	149.612
H2O-D MID BTM_0919	9/19/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	cont	cont	cont	cont	1.871	7.568	358.456	205.259	1.501	5.057	254.027	149.285
H2O-D OUF BTM_0919	9/19/2010	H2O	D	Porewater (1 cm)	DGT	7.3977	6.2	4.3	10	17.45	cont	cont	cont	cont	1.838	7.746	349.339	206.894	1.464	5.163	247.811	149.743

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
H2O-D PPR 1 BTM_0919	9/19/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	bdl	cont	cont	bdl	3.210	8.166	562.962	230.434	2.774	5.584	395.545	178.449
H2O-D PPR 2 BTM_0919	9/19/2010	H2O	D	Porewater (1 cm)	Peeper	7.3977	6.2	4.3	10	17.45	bdl	bdl	cont	bdl	3.209	8.197	563.170	230.827	2.775	5.607	395.752	178.907
PW H2O-D_0723	7/23/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	6.5	4.6	10	17.45	cont	cont	cont	cont	3.314	8.642	589.898	241.224	2.883	6.025	421.859	189.042
PW H2O-D_0726	7/26/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	7.2	5.3	10	17.45	none	cont	cont	cont	3.278	9.653	641.077	253.779	2.853	6.996	475.524	201.859
PW H2O-D_0802	8/2/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	8.8	6.9	10	17.45	cont	cont	cont	cont	3.689	11.889	782.180	299.748	3.266	9.201	616.627	247.436
PW H2O-D_0809	8/9/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	8.5	6.6	10	17.45	cont	none	cont	cont	3.605	11.337	751.929	290.005	3.178	8.680	586.790	237.758
PW H2O-D_0816	8/16/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	9.0	7.0	10	17.45	cont	cont	cont	cont	3.620	12.042	784.459	301.317	3.201	9.348	620.357	248.874
PW H2O-D_0823	8/23/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	4.9	3.0	10	17.45	none	cont	cont	cont	2.822	6.431	441.543	192.966	2.401	3.867	276.198	141.504
PW H2O-D_0830	8/30/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	6.0	4.0	10	17.45	cont	cont	cont	cont	2.959	7.842	528.982	219.580	2.538	5.256	364.879	167.856
PW H2O-D_0906	9/6/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	4.3	2.3	10	17.45	cont	cont	cont	cont	2.547	5.587	379.383	174.264	2.134	3.031	216.317	123.064
PW H2O-D_0913	9/13/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	3.0	1.5	10	17.45	cont	cont	none	cont	2.270	3.890	271.846	140.262	1.949	1.923	144.253	100.177
PW H2O-D_0920	9/20/2010	H2O	D	Porewater (2.5 cm)	PoreWater	7.3977	4.1	2.2	10	17.45	cont	cont	cont	cont	2.780	5.344	380.005	175.703	2.347	2.827	212.380	124.241
H2O-D inflow top	8/1/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	cont	cont	cont	cont	1.842	7.657	348.510	206.436	1.470	5.103	247.397	149.612
H2O-D middle top	8/1/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	cont	cont	cont	cont	1.871	7.568	358.456	205.259	1.501	5.057	254.027	149.285
H2O-D OUF top	8/1/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	cont	cont	cont	none	1.838	7.746	349.339	206.894	1.464	5.163	247.811	149.743
H2O-D Peeper 1 Top	8/1/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	bdl	bdl	cont	bdl	1.838	7.746	349.339	206.894	1.464	5.163	247.811	149.743
H2O-D Peeper 2 Top	8/1/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	bdl	bdl	cont	bdl	1.838	7.746	349.339	206.894	1.464	5.163	247.811	149.743
H2O-D PPR 3 Top_0801	8/1/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	cont	cont	cont	cont	2.798	8.172	529.603	222.718	2.404	5.575	371.510	171.518
H2O-D INF top_0820	8/20/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	cont	cont	cont	cont	1.842	7.657	348.510	206.436	1.470	5.103	247.397	149.612
H2O-D MID top_0820	8/20/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	cont	cont	cont	cont	1.871	7.568	358.456	205.259	1.501	5.057	254.027	149.285
H2O-D OUF top_0820	8/20/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	cont	cont	cont	cont	1.838	7.746	349.339	206.894	1.464	5.163	247.811	149.743
H2O-D PPR 1 top_0820	8/20/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	cont	bdl	cont	bdl	3.210	8.166	562.962	230.434	2.774	5.584	395.545	178.449
H2O-D PPR 2 top_0820	8/20/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	bdl	cont	cont	bdl	3.209	8.197	563.170	230.827	2.775	5.607	395.752	178.907
H2O-D PPR 3 TOP_0820	8/20/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	bdl	cont	cont	cont	2.798	8.172	529.603	222.718	2.404	5.575	371.510	171.518
H2O-D INF Top_0919	9/19/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	cont	cont	cont	cont	1.842	7.657	348.510	206.436	1.470	5.103	247.397	149.612
H2O-D MID Top_0919	9/19/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	cont	cont	cont	cont	1.871	7.568	358.456	205.259	1.501	5.057	254.027	149.285
H2O-D OUF Top_0919	9/19/2010	H2O	D	Sediment-Water Interface	DGT	0	NA	0.0	10	-1272.15	cont	cont	cont	cont	1.838	7.746	349.339	206.894	1.464	5.163	247.811	149.743
H2O-D PPR 1 Top_0919	9/19/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	bdl	cont	cont	bdl	3.210	8.166	562.962	230.434	2.774	5.584	395.545	178.449
H2O-D PPR 2 Top_0919	9/19/2010	H2O	D	Sediment-Water Interface	Peeper	0	NA	0.0	10	-1272.15	bdl	bdl	cont	bdl	3.209	8.197	563.170	230.827	2.775	5.607	395.752	178.907
OW H2O-E_0723	7/23/2010	H2O	E	Overlying Water	OverWater	7.76	3.0	1.5	10	15.05	est	cont	none	est	2.788	6.256	327.376	163.671	2.232	3.109	176.907	112.144
OW H2O-E_0726	7/26/2010	H2O	E	Overlying Water	OverWater	7.76	2.5	1.5	10	15.05	cont	cont	cont	cont	2.569	5.091	272.675	144.381	2.208	3.092	176.576	111.359
OW H2O-E_0802	8/2/2010	H2O	E	Overlying Water	OverWater	7.76	3.5	1.6	10	15.05	cont	cont	cont	cont	2.817	7.397	373.374	176.684	2.128	3.326	183.268	111.032
OW H2O-E_0809	8/9/2010	H2O	E	Overlying Water	OverWater	7.76	8.3	6.4	10	15.05	cont	none	cont	est	4.790	18.053	866.303	346.502	4.066	13.713	672.157	279.281
OW H2O-E_0816	8/16/2010	H2O	E	Overlying Water	OverWater	7.76	4.6	2.7	10	15.05	est	est	none	cont	3.278	9.703	484.226	215.460	2.573	5.593	293.188	149.285
OW H2O-E_0823	8/23/2010	H2O	E	Overlying Water	OverWater	7.76	3.1	1.5	10	15.05	est	none	none	none	2.706	6.463	332.763	163.017	2.126	3.112	174.566	108.613
OW H2O-E_0830	8/30/2010	H2O	E	Overlying Water	OverWater	7.76	2.6	1.5	10	15.05	cont	none	cont	cont	2.181	5.387	267.288	137.123	1.822	3.140	165.636	101.289
OW H2O-E_0906	9/6/2010	H2O	E	Overlying Water	OverWater	7.76	3.1	1.5	10	15.05	cont	cont	cont	cont	2.509	6.399	319.088	158.702	1.977	3.121	168.889	106.063
OW H2O-E_0913	9/13/2010	H2O	E	Overlying Water	OverWater	7.76	3.6	1.7	10	15.05	cont	cont	cont	cont	2.677	7.530	370.266	176.291	2.017	3.463	184.615	111.032
OW H2O-E_0920	9/20/2010	H2O	E	Overlying Water	OverWater	7.76	4.0	2.0	10	15.05	cont	none	none	cont	3.770	8.579	454.390	210.687	2.996	4.385	250.298	143.793
PW H2O-E_0723	7/23/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	7.2	5.3	10	-1272.15	none	cont	cont	cont	2.780	5.344	380.005	175.703	2.347	2.827	212.380	124.241
PW H2O-E_0726	7/26/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	7.7	5.8	10	-1272.15	none	cont	cont	cont	2.780	5.344	380.005	175.703	2.347	2.827	212.380	124.241
PW H2O-E_0802	8/2/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	5.7	3.8	10	-1272.15	none	none	cont	cont	2.780	5.344	380.005	175.703	2.347	2.827	212.380	124.241
PW H2O-E_0809	8/9/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	6.1	4.2	10	-1272.15	cont	cont	cont	cont	2.780	5.344	380.005	175.703	2.347	2.827	212.380	124.241
PW H2O-E_0816	8/16/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	24.9	23.0	10	-1272.15	cont	cont	cont	cont	2.780	5.344	380.005	175.703	2.347	2.827	212.380	124.241
PW H2O-E_0823	8/23/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	7.0	5.1	10	-1272.15	none	cont	cont	cont	2.780	5.344	380.005	175.703	2.347	2.827	212.380	124.241
PW H2O-E_0830	8/30/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	3.4	1.5	10	-1272.15	cont	cont	cont	cont	2.780	5.344	380.005	175.703	2.347	2.827	212.380	124.241
PW H2O-E_0906	9/6/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	5.9	4.0	10	-1272.15	cont	cont	cont	none	2.780	5.344	380.005	175.703	2.347	2.827	212.380	124.241
PW H2O-E_0913	9/13/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	4.0	2.1	10	-1272.15	none	cont	none	none	2.780	5.344	380.005	175.703	2.347	2.827	212.380	124.241
PW H2O-E_0920	9/20/2010	H2O	E	Porewater (2.5 cm)	PoreWater	7.117	4.2	2.3	10	-1272.15	cont	cont	cont	none	2.780	5.344	380.005	175.703	2.347	2.827	212.380	124.241
OW H2O-F_0723	7/23/2010	H2O	F	Overlying Water	OverWater	7.98	2.0	1.5	10	16.85	est	none	none	est	2.702	5.570	250.298	142.419	2.439	4.151	195.452	122.410
PW H2O-F	7/23/2010	H2O	F	Porewater (2.5 cm)	PoreWater	7.7575	7.3	5.4	10	19.35	none	cont	cont	cont	4.200	15.963	761.460	311.910	3.506	11.623	570.214	245.409
OW LALL-A_0723	7/23/2010	LALL	A	Overlying Water	OverWater	7.7624	2.1	1.5	10	15.25	est	none	cont	est	2.438	4.279	232.893	130.911	2.228	3.111	176.804	111.621
OW LALL-A_0726	7/26/2010	LALL	A	Overlying Water	OverWater	7.7624	2.2	1.5	10	15.25	cont	cont	cont	cont	2.524	4.585	247.190	136.927	2.266	3.136	177.819	113.190
OW LALL-A_0802	8/2/2010	LALL	A	Overlying Water	OverWater	7.7624	3.3	1.5	10	15.25	cont	cont	cont	cont	2.897	6.907	357.006	171.649	2.232	3.145	178.192	110.836
OW LALL-A_0809	8/9/2010	LALL	A	Overlying Water	OverWater	7.7624	5.5	3.5	10	15.25	none	none	none	none	3.579	11.642	570.214	244.232	2.869	7.460	378.762	177.730
OW LALL-A_0816	8/16/2010	LALL	A	Overlying Water	OverWater	7.7624	3.9	2.0	10	15.25	est	none	none	cont	3.089	8.312	419.580	192.639	2.370	4.172	225.848	126.399

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
OW LALL-A_0823	8/23/2010	LALL	A	Overlying Water	OverWater	7.7624	2.9	1.5	10	15.25	est	none	none	none	2.716	6.069	315.980	157.786	2.202	3.142	177.011	110.509
OW LALL-A_0830	8/30/2010	LALL	A	Overlying Water	OverWater	7.7624	17.8	15.9	10	15.25	cont	none	cont	cont	7.755	41.343	1764.515	677.440	7.073	36.507	1577.414	608.192
OW LALL-A_0906	9/6/2010	LALL	A	Overlying Water	OverWater	7.7624	2.6	1.5	10	15.25	cont	none	cont	cont	2.339	5.505	276.405	143.008	1.959	3.146	168.682	105.343
OW LALL-A_0913	9/13/2010	LALL	A	Overlying Water	OverWater	7.7624	3.1	1.5	10	15.25	cont	none	cont	cont	2.545	6.545	325.718	160.729	1.985	3.130	169.262	105.866
OW LALL-A_0920	9/20/2010	LALL	A	Overlying Water	OverWater	7.7624	3.1	1.5	10	15.25	cont	none	none	cont	3.040	6.520	347.889	169.556	2.419	3.148	183.745	114.694
PW LALL-A_0723	7/23/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	12.6	10.7	10	19.05	none	cont	cont	cont	4.822	8.045	932.814	337.412	4.491	6.761	795.234	298.505
PW LALL-A_0726	7/26/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	19.8	17.9	10	19.05	none	none	none	est	6.049	13.300	1457.445	485.586	5.716	11.909	1319.864	445.633
PW LALL-A_0802	8/2/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	9.0	7.0	10	19.05	cont	cont	cont	cont	4.511	5.670	692.462	271.499	4.169	4.419	549.702	232.854
PW LALL-A_0809	8/9/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	10.0	8.0	10	19.05	cont	cont	cont	cont	4.853	6.418	780.730	296.544	4.511	5.139	635.482	257.571
PW LALL-A_0816	8/16/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	7.1	5.2	10	19.05	cont	none	none	cont	3.740	4.509	527.738	226.053	3.422	3.259	390.779	188.258
PW LALL-A_0823	8/23/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	5.9	4.0	10	19.05	cont	cont	cont	cont	3.649	3.830	452.525	205.390	3.330	2.574	313.494	167.856
PW LALL-A_0830	8/30/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	5.0	3.1	10	19.05	cont	cont	cont	cont	3.369	3.219	377.726	185.642	3.059	1.973	240.974	148.370
PW LALL-A_0906	9/6/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	5.7	3.8	10	19.05	cont	cont	cont	cont	3.191	3.676	411.706	193.162	2.896	2.418	279.306	156.086
PW LALL-A_0913	9/13/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	4.7	2.8	10	19.05	none	none	none	cont	3.018	3.019	338.565	175.899	2.730	1.779	208.029	139.019
PW LALL-A_0920	9/20/2010	LALL	A	Porewater (2.5 cm)	PoreWater	6.9731	6.2	4.2	10	19.05	cont	cont	cont	none	3.415	3.958	449.210	205.782	3.114	2.701	315.358	168.510
SWI LALL-A_0726	7/26/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	11.8	9.9	10	16.55	cont	cont	cont	cont	4.668	17.952	1077.026	401.691	4.186	14.870	905.464	345.259
SWI LALL-A_0802	8/2/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	3.7	1.8	10	16.55	cont	cont	cont	cont	2.558	5.352	347.267	162.167	2.089	2.534	175.706	107.828
SWI LALL-A_0809	8/9/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	6.0	4.1	10	16.55	cont	cont	cont	cont	2.989	8.865	546.594	224.811	2.524	5.950	377.104	169.949
SWI LALL-A_0816	8/16/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	4.8	2.9	10	16.55	none	none	none	cont	17.514	8.325	825.899	455.441	15.974	5.032	547.630	382.858
SWI LALL-A_0823	8/23/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	4.2	2.3	10	16.55	cont	none	cont	cont	2.681	6.225	396.995	178.057	2.213	3.360	225.226	123.587
SWI LALL-A_0830	8/30/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	3.5	1.6	10	16.55	cont	cont	cont	cont	2.277	5.099	317.845	151.639	1.841	2.277	152.458	98.020
SWI LALL-A_0906	9/6/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	3.2	1.5	10	16.55	cont	cont	cont	cont	2.177	4.678	291.738	143.793	1.792	2.168	145.019	96.058
SWI LALL-A_0913	9/13/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	2.5	1.5	10	16.55	cont	cont	cont	cont	2.116	3.652	236.622	126.203	1.880	2.165	147.775	97.758
SWI LALL-A_0920	9/20/2010	LALL	A	Sediment-Water Interface	SWI	7.4788	3.7	1.7	10	16.55	cont	cont	cont	cont	2.677	5.363	353.276	163.802	2.198	2.532	178.669	109.463
OW LALL-B_0723	7/23/2010	LALL	B	Overlying Water	OverWater	7.744	1.1	1.5	10	15.05	est	none	cont	est	2.163	2.187	135.985	99.000	2.322	3.048	179.000	113.517
OW LALL-B_0726	7/26/2010	LALL	B	Overlying Water	OverWater	7.744	2.3	1.5	10	15.05	cont	cont	cont	cont	2.498	4.701	255.685	138.561	2.203	3.044	175.084	110.967
OW LALL-B_0802	8/2/2010	LALL	B	Overlying Water	OverWater	7.744	2.9	1.5	10	15.05	cont	cont	cont	none	2.656	6.002	315.566	156.347	2.152	3.076	174.898	108.613
OW LALL-B_0809	8/9/2010	LALL	B	Overlying Water	OverWater	7.744	5.2	3.2	10	15.05	est	none	none	none	3.489	10.822	542.035	232.854	2.795	6.704	349.339	167.333
OW LALL-B_0816	8/16/2010	LALL	B	Overlying Water	OverWater	7.744	3.2	1.5	10	15.05	est	none	none	cont	2.859	6.564	347.682	169.033	2.232	3.044	176.410	110.771
OW LALL-B_0823	8/23/2010	LALL	B	Overlying Water	OverWater	7.744	3.5	1.6	10	15.05	est	none	cont	est	2.836	7.187	370.059	176.030	2.154	3.188	179.684	110.771
OW LALL-B_0830	8/30/2010	LALL	B	Overlying Water	OverWater	7.744	2.8	1.5	10	15.05	cont	none	cont	cont	2.395	5.790	294.431	148.174	1.959	3.072	167.791	104.428
OW LALL-B_0906	9/6/2010	LALL	B	Overlying Water	OverWater	7.744	2.7	1.5	10	15.05	cont	cont	cont	cont	2.382	5.598	286.350	146.604	1.969	3.054	167.563	105.278
OW LALL-B_0913	9/13/2010	LALL	B	Overlying Water	OverWater	7.744	3.5	1.5	10	15.05	cont	cont	cont	cont	2.863	7.187	367.987	176.880	2.191	3.157	177.446	111.948
OW LALL-B_0920	9/20/2010	LALL	B	Overlying Water	OverWater	7.744	3.6	1.7	10	15.05	cont	est	cont	cont	3.068	7.543	391.194	183.811	2.374	3.465	196.053	118.617
LALL-B INF SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	cont	cont	cont	cont	2.383	5.305	201.170	283.989	1.766	3.832	161.450	213.760
LALL-B MID SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	cont	cont	cont	cont	2.444	5.311	194.146	288.043	1.794	3.824	156.768	215.918
LALL-B OUF SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	cont	cont	cont	cont	2.898	5.660	176.141	315.311	1.974	4.001	143.030	230.696
LALL-B PPR1 SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	bdl	bdl	cont	bdl	2.633	4.911	482.569	226.576	2.402	3.757	376.690	191.920
LALL-B PPR2 SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	est	cont	cont	bdl	2.862	4.800	503.082	229.323	2.617	3.674	393.058	194.339
LALL-B PPR3 SED_0801	8/1/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	cont	cont	cont	cont	2.923	4.799	509.712	230.042	2.669	3.674	398.238	195.058
LALL-B INF SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	cont	cont	none	cont	1.939	5.197	364.258	221.411	1.640	3.904	283.450	177.599
LALL-B MID SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	cont	cont	none	cont	1.871	4.719	332.763	216.245	1.603	3.553	260.243	174.526
LALL-B OUF SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	cont	cont	none	cont	1.873	4.666	329.241	216.114	1.604	3.514	257.757	174.461
LALL-B PPR1 SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	bdl	bdl	cont	bdl	2.804	4.926	498.730	231.481	2.569	3.774	389.329	196.889
LALL-B PPR2 SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	bdl	cont	cont	cont	2.855	4.949	503.496	233.508	2.617	3.792	393.058	198.851
LALL-B PPR3 SED_0820	8/20/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	bdl	bdl	cont	bdl	3.388	4.920	545.558	247.305	3.131	3.777	426.625	211.994
LALL-B INF SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	cont	cont	none	cont	1.890	4.488	250.712	231.742	1.568	3.344	199.720	183.354
LALL-B MID SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	cont	cont	none	cont	1.856	4.413	259.414	226.315	1.556	3.299	206.060	180.149
LALL-B OUF SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	DGT	6.91	8.5	6.6	10	18.65	cont	cont	none	cont	1.949	4.786	233.929	245.147	1.569	3.537	186.190	191.135
LALL-B PPR1 SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	bdl	cont	cont	bdl	2.882	4.954	509.505	232.592	2.642	3.794	397.824	197.805
LALL-B PPR2 SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	bdl	bdl	cont	bdl	2.964	4.965	514.063	236.450	2.725	3.806	401.554	201.597
LALL-B PPR3 SED_0919	9/19/2010	LALL	B	Porewater (1 cm)	Peeper	6.91	8.5	6.6	10	18.65	bdl	est	cont	bdl	2.691	5.035	491.271	230.696	2.465	3.857	383.320	196.170
PW LALL-B_0723	7/23/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	9.2	7.3	10	18.65	none	cont	cont	cont	3.703	5.051	615.177	255.413	3.407	3.958	491.686	219.383
PW LALL-B_0726	7/26/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	8.9	7.0	10	18.65	none	none	none	est	3.951	4.964	621.393	258.094	3.647	3.864	492.929	221.868
PW LALL-B_0802	8/2/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	9.9	8.0	10	18.65	none	cont	cont	cont	4.348	5.617	705.309	282.419	4.037	4.493	574.358	245.997
PW LALL-B_0809	8/9/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	8.5	6.5	10	18.65	cont	cont	cont	cont	4.217	4.807	614.348	258.356	3.904	3.689	481.118	222.064

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
PW LALL-B_0816	8/16/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	12.6	10.7	10	18.65	cont	none	none	cont	4.790	7.276	887.230	337.739	4.486	6.119	756.694	300.925
PW LALL-B_0823	8/23/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	6.9	4.9	10	18.65	cont	none	none	cont	3.806	3.900	492.722	225.726	3.504	2.789	361.564	189.827
PW LALL-B_0830	8/30/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	5.3	3.4	10	18.65	cont	cont	cont	cont	3.377	3.001	378.969	192.704	3.083	1.913	250.505	157.394
PW LALL-B_0906	9/6/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	7.6	5.7	10	18.65	cont	cont	cont	none	3.840	4.363	540.999	238.739	3.542	3.240	410.670	202.840
PW LALL-B_0913	9/13/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	7.2	5.3	10	18.65	none	none	none	none	3.784	4.038	504.532	230.107	3.491	2.943	376.690	194.601
PW LALL-B_0920	9/20/2010	LALL	B	Porewater (2.5 cm)	PoreWater	6.91	8.7	6.7	10	18.65	cont	cont	cont	none	4.085	4.968	611.654	260.383	3.792	3.838	481.740	224.484
SWI LALL-B_0726	7/26/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	1.9	1.5	10	16.05	cont	cont	cont	cont	2.155	2.648	187.122	113.452	2.056	2.073	150.614	101.943
LALL-B INF H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	cont	cont	cont	cont	1.235	5.817	175.934	148.108	0.803	2.664	90.629	81.934
LALL-B MID H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	cont	cont	cont	cont	1.233	5.466	187.454	142.746	0.834	2.530	96.162	80.626
LALL-B OUF H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	cont	cont	cont	cont	1.220	5.583	180.119	144.512	0.812	2.574	92.556	81.018
LALL-B PPR1 H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	bdl	bdl	cont	bdl	2.221	5.290	329.448	157.132	1.813	2.561	169.137	104.428
LALL-B PPR2 H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	bdl	bdl	cont	bdl	2.231	5.341	331.727	157.525	1.822	2.586	170.318	104.820
LALL-B PPR3 H2O_0801	8/1/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	bdl	bdl	cont	bdl	2.112	5.264	321.367	154.778	1.717	2.546	164.869	102.401
SWI LALL-B_0802	8/2/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	4.1	2.2	10	16.05	cont	cont	cont	cont	2.482	5.699	369.023	169.164	2.043	2.994	203.885	115.936
SWI LALL-B_0809	8/9/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	5.1	3.2	10	16.05	cont	cont	cont	cont	2.836	7.314	470.137	200.290	2.385	4.524	301.269	146.539
SWI LALL-B_0816	8/16/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	6.3	4.4	10	16.05	cont	none	cont	cont	3.126	8.966	572.079	234.489	2.675	6.168	404.040	180.411
LALL-B INF H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	cont	cont	cont	cont	1.297	5.448	229.578	137.646	0.915	2.560	116.053	80.037
LALL-B MID H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	cont	cont	cont	cont	1.331	5.221	230.199	136.992	0.953	2.461	116.633	80.364
LALL-B OUF H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	cont	cont	cont	cont	1.407	5.048	239.730	136.665	1.022	2.385	121.606	81.018
LALL-B PPR1 H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	bdl	cont	cont	bdl	2.312	5.210	333.799	157.917	1.887	2.522	171.644	104.951
LALL-B PPR2 H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	bdl	bdl	cont	bdl	2.276	5.224	332.349	157.001	1.854	2.528	170.816	104.166
LALL-B PPR3 H2O_0820	8/20/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	bdl	cont	cont	cont	2.259	5.230	331.520	156.674	1.841	2.531	170.277	103.970
SWI LALL-B_0823	8/23/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	2.4	1.5	10	16.05	cont	none	cont	cont	2.148	3.304	224.605	122.672	1.946	2.085	148.749	98.674
SWI LALL-B_0830	8/30/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	3.6	1.7	10	16.05	cont	cont	cont	cont	2.157	5.068	316.602	150.135	1.743	2.322	154.965	97.627
SWI LALL-B_0906	9/6/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	2.7	1.5	10	16.05	cont	cont	cont	cont	2.112	3.790	247.604	129.668	1.847	2.103	145.558	97.039
SWI LALL-B_0913	9/13/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	4.7	2.7	10	16.05	cont	none	cont	cont	2.701	6.602	423.517	186.754	2.262	3.832	255.892	133.592
LALL-B INF H2O_0919	9/19/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	cont	cont	cont	cont	1.344	4.974	217.767	137.646	0.962	2.338	111.059	80.560
LALL-B MID H2O_0919	9/19/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	cont	cont	cont	cont	1.374	4.858	222.326	136.992	0.994	2.291	113.359	80.822
LALL-B PPR1 H2O_0919	9/19/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	bdl	bdl	cont	bdl	2.697	5.241	355.970	165.960	2.228	2.542	184.097	112.275
LALL-B PPR2 H2O_0919	9/19/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	bdl	bdl	bdl	bdl	2.764	5.227	359.492	167.071	2.285	2.537	186.148	113.255
LALL-B PPR3 H2O_0919	9/19/2010	LALL	B	Sediment-Water Interface	Peeper	7.4533	3.8	1.8	10	16.05	bdl	bdl	bdl	bdl	2.683	5.234	354.726	165.829	2.212	2.541	183.496	112.144
LALL0B OUF H2O	9/19/2010	LALL	B	Sediment-Water Interface	DGT	7.4533	3.8	1.8	10	16.05	cont	cont	cont	cont	1.359	4.981	223.569	137.188	0.977	2.345	113.877	80.560
SWI LALL-B_0920	9/20/2010	LALL	B	Sediment-Water Interface	SWI	7.4533	4.9	3.0	10	16.05	cont	cont	cont	cont	3.124	7.168	472.002	203.559	2.655	4.334	296.503	149.678
OW LALL-C_0723	7/23/2010	LALL	C	Overlying Water	OverWater	7.7169	1.8	1.5	10	15.25	est	none	none	est	2.210	3.418	195.224	116.525	2.125	2.928	170.650	108.220
OW LALL-C_0726	7/26/2010	LALL	C	Overlying Water	OverWater	7.7169	2.5	1.5	10	15.25	cont	cont	cont	cont	2.487	4.905	271.018	141.504	2.131	2.906	171.023	107.567
OW LALL-C_0802	8/2/2010	LALL	C	Overlying Water	OverWater	7.7169	2.6	1.5	10	15.25	cont	cont	cont	cont	2.417	5.164	277.648	142.550	2.040	2.943	168.806	105.409
OW LALL-C_0809	8/9/2010	LALL	C	Overlying Water	OverWater	7.7169	3.8	1.9	10	15.25	est	none	none	none	2.871	7.632	399.274	182.830	2.209	3.751	210.308	118.748
OW LALL-C_0816	8/16/2010	LALL	C	Overlying Water	OverWater	7.7169	4.3	2.4	10	15.25	est	est	none	cont	3.117	8.642	451.489	201.990	2.447	4.751	261.901	137.581
OW LALL-C_0823	8/23/2010	LALL	C	Overlying Water	OverWater	7.7169	2.6	1.5	10	15.25	est	none	cont	est	2.560	5.240	286.143	146.670	2.165	2.963	173.302	108.613
OW LALL-C_0830	8/30/2010	LALL	C	Overlying Water	OverWater	7.7169	3.3	1.5	10	15.25	cont	none	cont	cont	2.621	6.685	346.853	166.091	2.016	2.976	168.267	105.213
OW LALL-C_0906	9/6/2010	LALL	C	Overlying Water	OverWater	7.7169	28.7	26.8	10	15.25	cont	cont	cont	cont	10.900	65.643	2751.616	1045.586	10.266	60.648	2571.352	976.927
OW LALL-C_0913	9/13/2010	LALL	C	Overlying Water	OverWater	7.7169	3.4	1.5	10	15.25	cont	cont	cont	cont	2.777	6.755	355.348	170.799	2.148	2.982	171.707	108.874
OW LALL-C_0920	9/20/2010	LALL	C	Overlying Water	OverWater	7.7169	3.4	1.5	10	15.25	cont	none	none	cont	3.002	6.787	369.438	174.526	2.322	2.977	178.233	111.294
PW LALL-C_0723	7/23/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	12.0	10.1	10	18.55	none	cont	cont	cont	4.607	7.333	867.546	315.245	4.278	6.104	732.659	276.730
PW LALL-C_0726	7/26/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	11.2	9.3	10	18.55	none	none	none	cont	4.527	6.876	816.161	301.383	4.200	5.642	680.238	262.999
PW LALL-C_0802	8/2/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	11.2	9.3	10	18.55	none	cont	cont	cont	4.199	6.691	778.658	292.555	3.884	5.488	649.158	254.498
PW LALL-C_0809	8/9/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	11.1	9.2	10	18.55	est	est	cont	cont	4.911	6.876	838.124	307.725	4.574	5.636	697.435	269.341
PW LALL-C_0816	8/16/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	8.0	6.1	10	18.55	cont	none	none	cont	3.914	4.892	585.547	237.300	3.594	3.686	450.038	199.636
PW LALL-C_0823	8/23/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	7.3	5.3	10	18.55	cont	none	cont	none	3.697	4.475	525.045	221.018	3.388	3.261	391.194	183.811
PW LALL-C_0830	8/30/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	12.5	10.6	10	18.55	cont	cont	cont	cont	4.389	7.873	871.069	319.822	4.081	6.602	740.740	281.962
PW LALL-C_0906	9/6/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	7.4	5.5	10	18.55	cont	cont	cont	none	3.929	4.627	546.801	229.911	3.614	3.400	410.256	192.508
PW LALL-C_0913	9/13/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	7.9	5.9	10	18.55	cont	none	none	cont	3.892	4.847	567.935	235.993	3.584	3.633	434.084	198.720
PW LALL-C_0920	9/20/2010	LALL	C	Porewater (2.5 cm)	PoreWater	6.9523	7.1	5.2	10	18.55	cont	cont	cont	none	3.913	4.416	525.252	224.811	3.599	3.200	388.914	187.539
SWI LALL-C_0726	7/26/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	2.5	1.5	10	16.65	cont	cont	cont	cont	2.246	3.377	232.478	126.791	2.018	2.061	149.163	100.374
SWI LALL-C_0802	8/2/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	4.1	2.1	10	16.65	cont	cont	cont	cont	2.458	5.666	364.672	167.529	2.018	2.944	199.534	114.106
SWI LALL-C_0809	8/9/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	5.6	3.6	10	16.65	cont	cont	cont	cont	2.950	7.937	507.847	212.125	2.493	5.131	338.565	158.178

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
SWI LALL-C_0816	8/16/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	3.5	1.6	10	16.65	cont	cont	cont	cont	2.474	4.951	328.205	155.497	2.019	2.236	159.150	102.205
SWI LALL-C_0823	8/23/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	3.9	1.9	10	16.65	cont	none	cont	cont	2.512	5.451	355.555	163.998	2.062	2.702	186.894	110.509
SWI LALL-C_0830	8/30/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	3.0	1.5	10	16.65	cont	cont	cont	cont	2.139	4.231	271.639	136.011	1.813	2.114	144.667	95.404
SWI LALL-C_0906	9/6/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	4.3	2.4	10	16.65	cont	cont	cont	cont	2.543	6.191	390.986	176.553	2.109	3.398	224.605	123.260
SWI LALL-C_0913	9/13/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	3.0	1.5	10	16.65	cont	cont	cont	cont	2.277	4.284	279.927	140.850	1.929	2.100	146.780	98.477
SWI LALL-C_0920	9/20/2010	LALL	C	Sediment-Water Interface	SWI	7.4563	3.9	2.0	10	16.65	cont	cont	cont	cont	2.682	5.564	368.609	169.622	2.223	2.823	198.000	116.198
OW LALL-D_0723	7/23/2010	LALL	D	Overlying Water	OverWater	7.7007	2.2	1.5	10	15.25	none	est	cont	none	2.488	4.200	240.559	133.069	2.252	2.884	173.198	110.509
OW LALL-D_0726	7/26/2010	LALL	D	Overlying Water	OverWater	7.7007	2.2	1.5	10	15.25	cont	cont	cont	cont	2.407	4.148	236.830	130.257	2.177	2.858	171.044	108.090
OW LALL-D_0802	8/2/2010	LALL	D	Overlying Water	OverWater	7.7007	3.6	1.7	10	15.25	cont	cont	cont	cont	2.755	7.104	375.239	175.376	2.122	3.321	189.174	112.209
OW LALL-D_0802_2	8/2/2010	LALL	D	Overlying Water	OverWater	7.7007	2.7	1.5	10	15.25	cont	cont	cont	cont	2.530	5.200	285.729	144.643	2.141	2.928	171.976	106.847
OW LALL-D_0809	8/9/2010	LALL	D	Overlying Water	OverWater	7.7007	9.8	7.9	10	15.25	est	none	none	none	5.232	19.864	1006.992	389.659	4.555	15.810	815.332	324.465
OW LALL-D_0816	8/16/2010	LALL	D	Overlying Water	OverWater	7.7007	21.1	19.2	10	15.25	est	none	none	cont	8.807	45.404	2082.360	775.525	8.153	40.885	1897.330	708.174
OW LALL-D_0823	8/23/2010	LALL	D	Overlying Water	OverWater	7.7007	2.8	1.5	10	15.25	est	none	cont	est	2.511	5.488	297.125	149.416	2.075	2.901	168.682	106.128
OW LALL-D_0830	8/30/2010	LALL	D	Overlying Water	OverWater	7.7007	3.4	1.5	10	15.25	cont	none	cont	cont	2.863	6.857	364.465	174.068	2.225	2.991	174.110	110.901
OW LALL-D_0906	9/6/2010	LALL	D	Overlying Water	OverWater	7.7007	3.6	1.6	10	15.25	cont	est	cont	cont	2.584	6.958	360.528	169.752	1.972	3.166	177.322	106.847
OW LALL-D_0913	9/13/2010	LALL	D	Overlying Water	OverWater	7.7007	3.8	1.9	10	15.25	cont	cont	cont	cont	2.716	7.409	384.563	179.692	2.101	3.622	201.005	116.590
OW LALL-D_0920	9/20/2010	LALL	D	Overlying Water	OverWater	7.7007	4.0	2.1	10	15.25	cont	none	cont	none	3.182	7.772	422.481	193.424	2.512	3.982	230.821	129.799
LALL-D INF SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	cont	cont	cont	cont	1.766	4.536	262.730	208.398	1.443	3.267	200.052	160.402
LALL-D MID SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	cont	cont	cont	cont	1.749	4.622	274.333	206.567	1.434	3.336	208.029	159.355
LALL-D OUF SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	cont	cont	cont	cont	1.748	4.681	280.342	206.240	1.434	3.377	212.173	159.159
LALL-D PPR1 SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	est	cont	cont	cont	2.842	4.510	469.308	208.594	2.585	3.340	354.726	173.022
LALL-D PPR2 SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	est	bdl	cont	bdl	2.712	4.593	456.254	209.117	2.475	3.404	344.781	173.807
LALL-D PPR3 SED_0801	8/1/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	cont	cont	cont	cont	2.835	4.522	471.173	207.744	2.579	3.348	355.970	172.106
LALL-D INF SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	cont	cont	none	cont	1.785	4.429	228.956	215.198	1.438	3.177	176.265	164.260
LALL-D MID SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	cont	cont	none	cont	1.767	4.364	243.874	209.575	1.446	3.143	186.998	160.925
LALL-D OUF SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	cont	cont	none	cont	1.795	4.463	230.614	216.245	1.446	3.200	177.363	164.848
LALL-D PPR1 SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	bdl	cont	cont	bdl	3.037	4.412	488.992	208.594	2.757	3.264	369.852	172.368
LALL-D PPR2 SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	est	bdl	cont	bdl	2.706	4.639	457.912	209.117	2.467	3.438	345.817	174.003
LALL-D PPR3 SED_0820	8/20/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	bdl	cont	cont	cont	2.398	4.572	426.210	201.924	2.172	3.384	321.782	166.810
LALL-D INF SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	cont	cont	none	cont	1.733	4.395	245.739	207.940	1.419	3.170	187.889	160.075
LALL-D MID SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	cont	cont	none	cont	1.729	4.265	271.432	198.720	1.451	3.095	206.765	155.040
LALL-D OUF SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	DGT	6.9323	7.6	5.7	10	18.75	cont	cont	none	cont	1.750	4.260	272.468	199.505	1.467	3.090	207.822	155.563
LALL-D PPR1 SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	bdl	bdl	bdl	bdl	3.121	4.592	496.658	214.414	2.852	3.404	375.654	178.776
LALL-D PPR2 SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	bdl	bdl	cont	bdl	2.955	4.683	481.118	214.675	2.703	3.473	363.636	179.299
LALL-D PPR3 SED_0919	9/19/2010	LALL	D	Porewater (1 cm)	Peeper	6.9323	7.6	5.7	10	18.75	bdl	bdl	bdl	est	2.557	4.715	448.381	206.240	2.327	3.492	338.565	171.191
PW LALL-D_0723	7/23/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	9.2	7.3	10	18.75	none	cont	cont	cont	4.049	5.321	647.707	254.694	3.737	4.169	516.964	217.683
PW LALL-D_0726	7/26/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	8.2	6.3	10	18.75	none	none	none	cont	3.906	4.836	588.655	237.627	3.593	3.671	455.633	200.682
PW LALL-D_0802	8/2/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	10.7	8.8	10	18.75	cont	cont	cont	cont	4.583	6.330	773.892	290.789	4.264	5.148	639.212	253.386
PW LALL-D_0809	8/9/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	10.1	8.2	10	18.75	cont	cont	cont	cont	4.683	6.117	758.766	286.539	4.350	4.913	618.906	248.613
PW LALL-D_0816	8/16/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	6.1	4.2	10	18.75	cont	none	none	cont	3.615	3.592	440.714	200.551	3.307	2.440	307.485	163.867
PW LALL-D_0823	8/23/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	5.5	3.6	10	18.75	cont	none	none	cont	3.393	3.258	392.230	186.296	3.098	2.114	262.315	150.462
PW LALL-D_0830	8/30/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	5.6	3.7	10	18.75	cont	cont	cont	cont	3.386	3.258	393.058	186.296	3.098	2.135	265.216	150.789
PW LALL-D_0906	9/6/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	6.2	4.2	10	18.75	cont	cont	cont	none	3.777	3.695	450.867	206.502	3.471	2.526	316.394	170.014
PW LALL-D_0913	9/13/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	7.0	5.0	10	18.75	cont	none	none	cont	3.879	4.156	505.982	221.476	3.572	2.987	371.924	184.661
PW LALL-D_0920	9/20/2010	LALL	D	Porewater (2.5 cm)	PoreWater	6.9323	7.9	5.9	10	18.75	cont	cont	cont	none	4.408	4.720	592.385	246.193	4.083	3.541	453.146	208.856
SWI LALL-D_0726	7/26/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	2.2	1.5	10	16.45	cont	cont	cont	cont	2.232	3.509	224.398	125.026	2.034	2.342	156.830	103.120
LALL-D INF H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	cont	cont	cont	cont	1.397	4.948	224.190	129.080	0.995	2.168	106.252	73.760
LALL-D MID H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	cont	cont	cont	cont	1.449	4.894	231.857	129.211	1.044	2.150	110.002	74.479
LALL-D OUF H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	cont	cont	cont	cont	1.453	4.902	233.100	129.211	1.047	2.154	110.500	74.545
LALL-D PPR1 H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	bdl	bdl	cont	bdl	2.137	5.230	301.683	148.501	1.710	2.345	145.703	95.796
LALL-D PPR2 H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	bdl	cont	cont	cont	2.185	5.231	304.584	149.547	1.750	2.347	147.236	96.777
LALL-D PPR3 H2O_0801	8/1/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	bdl	bdl	cont	bdl	2.207	5.227	305.827	150.005	1.768	2.345	147.920	97.104
SWI LALL-D_0802	8/2/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	3.5	1.5	10	16.45	cont	cont	cont	cont	2.497	5.436	332.763	159.159	1.994	2.396	158.860	102.466
SWI LALL-D_0809	8/9/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	5.2	3.2	10	16.45	cont	cont	cont	cont	3.262	8.413	510.955	216.899	2.728	5.220	328.826	159.225
SWI LALL-D_0816	8/16/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	2.8	1.5	10	16.45	none	none	none	cont	2.791	4.430	296.089	146.931	2.409	2.380	170.919	108.547
LALL-D INF H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	cont	cont	cont	cont	1.279	5.042	200.590	129.603	0.889	2.196	95.271	72.648

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
LALL-D MID H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	cont	cont	cont	cont	1.313	4.977	206.661	129.211	0.921	2.172	98.130	72.975
LALL-D OUF H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	cont	cont	cont	cont	1.263	5.140	199.140	129.995	0.870	2.235	94.504	72.518
LALL-D PPR1 H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	bdl	bdl	cont	bdl	2.272	5.180	309.142	150.332	1.820	2.324	149.702	97.366
LALL-D PPR2 H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	bdl	bdl	cont	bdl	2.301	5.215	311.629	151.247	1.848	2.340	151.049	98.216
LALL-D PPR3 H2O_0820	8/20/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	bdl	cont	cont	bdl	2.300	5.208	311.422	151.182	1.847	2.337	150.924	98.150
SWI LALL-D_0823	8/23/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	3.6	1.7	10	16.45	cont	none	cont	cont	2.619	5.732	352.654	164.979	2.104	2.647	175.395	108.024
SWI LALL-D_0830	8/30/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	3.0	1.5	10	16.45	cont	cont	cont	cont	2.476	4.785	293.188	148.370	2.100	2.420	159.254	105.736
SWI LALL-D_0906	9/6/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	3.8	1.9	10	16.45	cont	cont	cont	cont	2.367	6.026	353.690	163.606	1.887	2.936	183.351	107.240
SWI LALL-D_0913	9/13/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	2.5	1.5	10	16.45	cont	cont	cont	cont	2.148	3.968	243.874	128.949	1.891	2.361	153.183	99.393
LALL-D INF H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	cont	cont	cont	cont	1.484	4.727	230.821	129.472	1.076	2.080	109.609	75.133
LALL-D MID H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	cont	cont	cont	cont	1.530	4.659	235.172	129.995	1.118	2.055	111.805	75.852
LALL-D OUF H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	DGT	7.5422	3.3	1.5	10	16.45	cont	cont	cont	cont	1.415	4.824	222.326	129.211	1.014	2.116	105.631	74.087
LALL-D PPR1 H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	bdl	cont	cont	bdl	2.556	5.269	325.718	157.198	2.074	2.366	158.715	103.643
LALL-D PPR2 H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	bdl	bdl	cont	bdl	2.574	5.287	327.169	157.525	2.090	2.377	159.544	103.905
LALL-D PPR3 H2O_0919	9/19/2010	LALL	D	Sediment-Water Interface	Peeper	7.5422	3.3	1.5	10	16.45	bdl	bdl	cont	bdl	2.567	5.250	325.926	157.263	2.083	2.359	158.860	103.643
SWI LALL-D_0920	9/20/2010	LALL	D	Sediment-Water Interface	SWI	7.5422	4.1	2.2	10	16.45	cont	cont	cont	cont	2.845	6.545	403.211	181.850	2.327	3.456	225.019	124.895
OW LALL-E_0723	7/23/2010	LALL	E	Overlying Water	OverWater	7.7769	2.0	1.5	10	14.95	est	est	cont	none	2.498	4.205	229.578	130.976	2.308	3.166	179.870	113.975
OW LALL-E_0726	7/26/2010	LALL	E	Overlying Water	OverWater	7.7769	2.2	1.5	10	14.95	cont	cont	cont	cont	2.557	4.596	247.190	137.254	2.300	3.171	179.290	113.975
OW LALL-E_0802	8/2/2010	LALL	E	Overlying Water	OverWater	7.7769	2.9	1.5	10	14.95	cont	cont	cont	cont	2.782	6.137	318.259	158.898	2.258	3.203	179.912	111.686
OW LALL-E_0809	8/9/2010	LALL	E	Overlying Water	OverWater	7.7769	4.8	2.9	10	14.95	est	none	none	none	3.300	10.466	505.154	221.868	2.585	6.224	314.322	155.236
OW LALL-E_0816	8/16/2010	LALL	E	Overlying Water	OverWater	7.7769	3.6	1.7	10	14.95	est	none	none	cont	2.882	7.689	383.320	180.084	2.157	3.525	191.163	113.321
OW LALL-E_0823	8/23/2010	LALL	E	Overlying Water	OverWater	7.7769	3.2	1.5	10	14.95	est	none	none	none	2.792	6.920	349.754	169.164	2.140	3.177	175.685	109.005
OW LALL-E_0830	8/30/2010	LALL	E	Overlying Water	OverWater	7.7769	2.9	1.5	10	14.95	cont	none	cont	cont	2.537	6.167	307.899	154.190	2.043	3.215	173.198	107.370
OW LALL-E_0906	9/6/2010	LALL	E	Overlying Water	OverWater	7.7769	3.1	1.5	10	14.95	cont	none	cont	cont	2.557	6.717	329.034	162.298	1.978	3.182	169.469	106.063
OW LALL-E_0913	9/13/2010	LALL	E	Overlying Water	OverWater	7.7769	3.0	1.5	10	14.95	cont	none	cont	cont	2.590	6.323	315.358	158.832	2.063	3.179	171.852	108.613
OW LALL-E_0920	9/20/2010	LALL	E	Overlying Water	OverWater	7.7769	3.5	1.6	10	14.95	cont	none	none	cont	3.189	7.479	388.500	183.681	2.430	3.323	190.085	116.787
PW LALL-E_0723	7/23/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	11.4	9.5	10	19.15	none	cont	none	cont	4.894	6.876	852.628	323.027	4.563	5.671	714.218	285.035
PW LALL-E_0726	7/26/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	20.2	18.3	10	19.15	none	cont	none	cont	4.702	11.883	1171.509	461.588	4.414	10.631	1066.458	421.766
PW LALL-E_0802	8/2/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	13.0	11.1	10	19.15	cont	cont	cont	cont	5.753	8.013	1012.379	369.584	5.407	6.787	868.375	331.070
PW LALL-E_0809	8/9/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	11.1	9.2	10	19.15	none	cont	cont	cont	5.508	6.844	877.492	334.993	5.160	5.621	731.623	296.544
PW LALL-E_0816	8/16/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	7.5	5.5	10	19.15	cont	none	none	cont	4.414	4.495	576.638	251.882	4.084	3.320	435.742	214.414
PW LALL-E_0823	8/23/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	8.1	6.2	10	19.15	cont	none	none	none	5.512	5.133	686.039	287.258	5.138	3.895	532.090	248.482
PW LALL-E_0830	8/30/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	7.8	5.9	10	19.15	cont	cont	cont	cont	4.041	4.655	578.502	246.520	3.723	3.488	443.201	209.510
PW LALL-E_0906	9/6/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	8.7	6.8	10	19.15	cont	cont	cont	none	4.650	5.361	672.571	277.777	4.320	4.151	530.846	240.047
PW LALL-E_0913	9/13/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	6.9	5.0	10	19.15	cont	none	none	cont	4.378	4.181	538.513	243.251	4.048	3.007	397.617	205.782
PW LALL-E_0920	9/20/2010	LALL	E	Porewater (2.5 cm)	PoreWater	6.9408	8.0	6.0	10	19.15	cont	cont	cont	none	4.086	4.905	592.385	254.432	3.774	3.695	455.840	217.160
SWI LALL-E_0726	7/26/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	1.8	1.5	10	16.35	cont	cont	cont	cont	2.223	2.796	187.993	115.283	2.137	2.305	158.674	105.932
SWI LALL-E_0802	8/2/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	2.8	1.5	10	16.35	cont	cont	cont	cont	2.399	4.315	276.612	140.785	2.058	2.300	157.576	102.793
SWI LALL-E_0809	8/9/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	6.4	4.5	10	16.35	est	cont	cont	cont	3.161	10.072	593.421	242.074	2.670	6.946	420.823	185.315
SWI LALL-E_0816	8/16/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	4.3	2.4	10	16.35	cont	none	cont	cont	2.706	6.730	410.670	183.288	2.213	3.693	236.830	126.987
SWI LALL-E_0823	8/23/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	4.0	2.1	10	16.35	cont	none	none	cont	2.779	6.224	389.950	177.207	2.268	3.194	212.380	120.710
SWI LALL-E_0830	8/30/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	2.7	1.5	10	16.35	cont	cont	cont	cont	2.068	4.197	254.856	130.322	1.783	2.335	150.365	96.385
SWI LALL-E_0906	9/6/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	2.9	1.5	10	16.35	cont	cont	cont	cont	2.181	4.486	273.504	138.300	1.845	2.320	151.173	98.477
SWI LALL-E_0913	9/13/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	3.6	1.7	10	16.35	cont	cont	cont	cont	2.310	5.584	333.385	157.786	1.845	2.576	164.890	102.335
SWI LALL-E_0920	9/20/2010	LALL	E	Sediment-Water Interface	SWI	7.5237	4.2	2.3	10	16.35	cont	cont	cont	cont	2.962	6.653	416.886	186.819	2.445	3.574	236.415	130.257
OW LALL-F_0723	7/23/2010	LALL	F	Overlying Water	OverWater	7.7201	2.0	1.5	10	15.25	est	none	cont	est	2.366	3.918	222.533	126.857	2.195	2.951	174.193	110.509
OW LALL-F_0726	7/26/2010	LALL	F	Overlying Water	OverWater	7.7201	2.4	1.5	10	15.25	bdl	cont	cont	cont	2.533	4.691	263.766	140.589	2.212	2.911	173.862	110.051
OW LALL-F_0802	8/2/2010	LALL	F	Overlying Water	OverWater	7.7201	2.4	1.5	10	15.25	cont	cont	cont	cont	2.545	4.799	267.288	140.589	2.222	2.977	176.348	110.051
OW LALL-F_0809	8/9/2010	LALL	F	Overlying Water	OverWater	7.7201	4.4	2.4	10	15.25	bdl	none	none	none	3.227	8.706	459.362	205.652	2.547	4.805	268.117	140.981
OW LALL-F_0816	8/16/2010	LALL	F	Overlying Water	OverWater	7.7201	4.0	2.1	10	15.25	est	none	none	cont	3.062	8.045	424.346	193.358	2.385	4.146	233.514	128.884
OW LALL-F_0823	8/23/2010	LALL	F	Overlying Water	OverWater	7.7201	2.8	1.5	10	15.25	none	none	none	none	2.569	5.617	303.134	151.705	2.111	2.949	171.810	107.240
OW LALL-F_0830	8/30/2010	LALL	F	Overlying Water	OverWater	7.7201	3.9	2.0	10	15.25	cont	none	cont	cont	3.073	7.918	414.814	192.312	2.413	3.981	223.569	128.164
OW LALL-F_0906	9/6/2010	LALL	F	Overlying Water	OverWater	7.7201	2.9	1.5	10	15.25	cont	est	cont	cont	2.617	5.915	313.701	157.198	2.136	2.999	172.370	109.463
OW LALL-F_0913	9/13/2010	LALL	F	Overlying Water	OverWater	7.7201	2.8	1.5	10	15.25	none	none	none	none	3.480	5.454	336.700	166.875	2.922	2.910	196.301	122.214
OW LALL-F_0920	9/20/2010	LALL	F	Overlying Water	OverWater	7.7201	3.5	1.6	10	15.25	cont	none	cont	cont	3.022	7.092	382.284	180.149	2.336	3.215	189.567	115.871
PW LALL-F_0723	7/23/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	9.9	8.0	10	18.15	none	cont	none	cont	4.152	5.606	687.490	261.364	3.842	4.474	557.782	224.876

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
PW LALL-F_0726	7/26/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	9.1	7.2	10	18.15	none	cont	cont	cont	3.986	5.168	632.582	246.063	3.679	4.038	502.874	209.640
PW LALL-F_0802	8/2/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	9.1	7.2	10	18.15	none	cont	cont	cont	4.148	5.131	635.482	248.090	3.840	4.008	504.739	211.667
PW LALL-F_0809	8/9/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	9.5	7.5	10	18.15	cont	cont	cont	cont	4.245	5.485	679.202	259.664	3.925	4.329	544.729	222.718
PW LALL-F_0816	8/16/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	8.4	6.5	10	18.15	cont	none	none	cont	3.974	4.784	588.241	235.666	3.668	3.655	457.290	199.374
PW LALL-F_0823	8/23/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	6.7	4.8	10	18.15	cont	cont	none	cont	3.829	3.857	480.290	207.613	3.524	2.732	347.474	171.649
PW LALL-F_0830	8/30/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	6.6	4.6	10	18.15	cont	cont	cont	cont	3.590	3.755	458.326	200.224	3.294	2.634	328.826	164.521
PW LALL-F_0906	9/6/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	10.7	8.8	10	18.15	cont	cont	cont	cont	4.386	6.351	750.893	283.335	4.086	5.165	619.321	246.782
PW LALL-F_0913	9/13/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	6.5	4.6	10	18.15	cont	none	none	cont	3.490	3.640	436.778	194.862	3.208	2.540	311.836	159.944
PW LALL-F_0920	9/20/2010	LALL	F	Porewater (2.5 cm)	PoreWater	6.9085	7.4	5.4	10	18.15	none	cont	cont	none	3.580	4.243	501.838	213.498	3.294	3.108	375.032	177.861
SWI LALL-F_0726	7/26/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	2.4	1.5	10	16.35	cont	cont	cont	cont	2.081	2.530	199.575	116.983	1.918	1.578	129.894	95.535
SWI LALL-F_0802	8/2/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	2.7	1.5	10	16.35	cont	cont	cont	cont	2.184	2.834	224.812	123.914	1.967	1.582	132.090	95.600
SWI LALL-F_0809	8/9/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	4.8	2.9	10	16.35	cont	cont	cont	cont	2.547	5.189	392.022	174.330	2.194	3.081	240.974	127.968
SWI LALL-F_0816	8/16/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	2.8	1.5	10	16.35	cont	none	cont	cont	2.156	2.978	232.686	125.876	1.924	1.589	131.075	94.816
SWI LALL-F_0823	8/23/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	4.5	2.6	10	16.35	cont	none	cont	cont	2.253	4.711	348.510	160.271	1.919	2.657	204.382	114.433
SWI LALL-F_0830	8/30/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	2.9	1.5	10	16.35	cont	cont	cont	cont	2.277	3.095	240.974	131.042	2.029	1.617	133.333	98.477
SWI LALL-F_0906	9/6/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	3.6	1.7	10	16.35	cont	cont	cont	cont	2.282	3.925	293.395	146.343	1.949	1.822	144.584	100.701
SWI LALL-F_0913	9/13/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	3.4	1.5	10	16.35	cont	cont	cont	cont	2.034	3.566	263.766	134.115	1.718	1.578	124.444	90.173
SWI LALL-F_0920	9/20/2010	LALL	F	Sediment-Water Interface	SWI	7.2675	3.6	1.7	10	16.35	cont	cont	cont	cont	2.502	3.857	304.170	148.501	2.140	1.774	149.184	102.335
OW LD-01-A_0723	7/23/2010	LD	A	Overlying Water	OverWater	7.7367	2.1	1.5	10	15.65	est	none	cont	est	2.454	4.239	235.172	131.303	2.237	3.025	175.167	111.032
OW LD-01-A_0726	7/26/2010	LD	A	Overlying Water	OverWater	7.7367	2.3	1.5	10	15.65	cont	cont	cont	cont	2.503	4.599	253.820	136.730	2.213	2.990	174.193	109.659
OW LD-01-A_0802	8/2/2010	LD	A	Overlying Water	OverWater	7.7367	3.1	1.5	10	15.65	cont	cont	cont	cont	3.049	6.386	344.366	169.883	2.462	3.104	182.730	116.394
OW LD-01-A_0809	8/9/2010	LD	A	Overlying Water	OverWater	7.7367	4.6	2.7	10	15.65	cont	none	cont	none	3.155	9.456	475.731	209.902	2.487	5.432	286.558	144.970
OW LD-01-A_0816	8/16/2010	LD	A	Overlying Water	OverWater	7.7367	3.8	1.9	10	15.65	est	none	none	none	3.196	7.886	416.472	191.070	2.479	3.882	220.461	125.614
OW LD-01-A_0823	8/23/2010	LD	A	Overlying Water	OverWater	7.7367	3.6	1.7	10	15.65	est	none	none	none	3.160	7.568	397.824	187.081	2.456	3.543	202.206	121.822
OW LD-01-A_0830	8/30/2010	LD	A	Overlying Water	OverWater	7.7367	3.7	1.7	10	15.65	cont	none	cont	cont	2.691	7.594	379.176	176.357	2.044	3.576	192.406	111.948
OW LD-01-A_0906	9/6/2010	LD	A	Overlying Water	OverWater	7.7367	2.5	1.5	10	15.65	cont	est	cont	cont	2.315	5.027	261.072	137.319	1.990	3.051	168.018	105.278
OW LD-01-A_0913	9/13/2010	LD	A	Overlying Water	OverWater	7.7367	2.4	1.5	10	15.65	cont	none	none	none	2.208	4.835	249.676	132.742	1.915	3.031	165.304	103.316
OW LD-01-A_0920	9/20/2010	LD	A	Overlying Water	OverWater	7.7367	3.3	1.5	10	15.65	cont	none	none	none	3.626	7.015	389.950	188.846	2.889	3.141	193.504	125.680
LD-01-A INF SED_0801	8/1/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	cont	none	cont	cont	4.323	33.203	729.966	563.793	3.665	26.874	645.014	475.320
LD-01-A MID SED_0801	8/1/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	cont	none	cont	cont	4.365	33.552	703.444	569.874	3.680	27.064	624.708	479.178
LD-01-A OUF SED_0801	8/1/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	cont	none	cont	cont	4.535	35.033	668.013	586.548	3.758	28.011	597.150	489.771
LD01-A PPR1 SED_0801	8/1/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	bdl	cont	cont	cont	6.951	28.653	1438.175	568.370	6.202	24.198	1244.650	500.822
LD01-A PPR2 SED_0801	8/1/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	bdl	cont	cont	cont	10.592	28.100	1727.012	659.785	9.548	23.823	1504.686	588.575
LD01-A PPR3 SED_0801	8/1/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	bdl	cont	cont	cont	10.852	27.986	1743.795	665.016	9.780	23.728	1519.605	593.218
LD-01-A INF SED_0820	8/20/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	cont	cont	cont	cont	4.237	32.370	764.361	552.611	3.622	26.353	671.950	468.192
LD-01-A MID SED_0820	8/20/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	cont	cont	cont	cont	4.228	31.652	789.639	545.745	3.635	25.863	692.670	463.811
LD-01-A OUF SED_0820	8/20/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	cont	cont	cont	cont	4.255	32.542	784.252	551.434	3.639	26.518	687.490	467.539
LD01-A PPR1 SED_0820	8/20/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	bdl	cont	cont	cont	14.434	29.562	2001.345	755.908	13.085	25.113	1753.948	680.056
LD01-A PPR2 SED_0820	8/20/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	none	none	cont	cont	7.885	28.551	1524.163	592.499	7.055	24.160	1321.936	524.035
LD01-A PPR3 SED_0820	8/20/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	bdl	cont	cont	bdl	11.080	28.602	1773.839	670.248	9.982	24.249	1546.541	598.384
LD-01-A MID SED_0919	9/19/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	cont	none	cont	cont	4.350	34.442	698.057	574.190	3.642	27.751	617.663	482.055
LD-01-A OUF SED_0919	9/19/2010	LD	A	Porewater (1 cm)	DGT	7.7985	13.0	11.0	10	19.35	cont	none	cont	cont	4.329	33.889	725.407	567.847	3.652	27.395	640.248	477.805
LD01-A PPR1 SED_0919	9/19/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	bdl	cont	cont	none	8.318	28.850	1569.126	602.830	7.451	24.402	1361.926	533.909
LD01-A PPR2 SED_0919	9/19/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	cont	cont	cont	cont	9.500	28.469	1659.050	627.679	8.529	24.097	1442.734	557.581
LD01-A PPR3 SED_0919	9/19/2010	LD	A	Porewater (1 cm)	Peeper	7.7985	13.0	11.0	10	19.35	bdl	none	cont	none	8.746	29.002	1607.250	615.581	7.844	24.541	1396.114	546.203
PW LD-01-A_0723	7/23/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	18.0	16.1	10	19.35	cont	none	cont	cont	19.076	41.216	2699.816	995.236	17.671	36.755	2451.176	918.076
PW LD-01-A_0726	7/26/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	28.4	26.5	10	19.35	none	none	cont	cont	27.788	69.265	4166.792	1439.234	26.349	64.436	3914.008	1361.420
PW LD-01-A_0802	8/2/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	16.6	14.7	10	19.35	cont	none	cont	cont	19.447	39.240	2614.864	977.581	17.963	34.639	2357.936	899.766
PW LD-01-A_0809	8/9/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	12.1	10.2	10	19.35	cont	none	cont	cont	15.974	28.450	2017.092	789.911	14.479	23.900	1759.335	712.097
PW LD-01-A_0816	8/16/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	9.7	7.8	10	19.35	cont	none	cont	cont	12.983	22.311	1629.214	656.516	11.556	17.863	1376.430	580.402
PW LD-01-A_0823	8/23/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	8.0	6.0	10	19.35	cont	none	cont	cont	11.724	18.435	1406.266	586.483	10.293	13.986	1152.239	510.304
PW LD-01-A_0830	8/30/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	7.9	6.0	10	19.35	cont	none	cont	cont	10.668	17.710	1323.594	548.884	9.351	13.395	1077.440	474.666
PW LD-01-A_0906	9/6/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	8.9	7.0	10	19.35	none	none	cont	none	11.286	20.373	1468.219	590.472	9.952	15.963	1220.615	515.600
PW LD-01-A_0913	9/13/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	7.4	5.4	10	19.35	cont	none	none	cont	10.270	16.795	1269.100	529.005	8.928	12.411	1020.667	454.330
PW LD-01-A_0920	9/20/2010	LD	A	Porewater (2.5 cm)	PoreWater	7.7985	12.6	10.7	10	19.35	cont	none	cont	cont	13.770	28.564	1932.969	725.175	12.433	24.116	1686.194	650.238
SWI LD-01-A_0726	7/26/2010	LD	A	Sediment-Water Interface	SWI	7.4756	2.2	1.5	10	16.85	cont	cont	cont	cont	2.188	3.039	209.065	119.533	2.027	2.117	151.567	101.289

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
LD-01-A INF H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	cont	cont	cont	cont	1.419	6.380	234.343	160.859	1.012	3.386	135.716	99.066
LD-01-A MID H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	cont	cont	cont	cont	1.474	6.011	247.604	157.590	1.078	3.214	143.196	98.477
LD-01-A OUF H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	cont	cont	cont	cont	1.515	5.889	257.550	156.609	1.120	3.159	148.687	98.543
LD01-A PPR1 H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	bdl	cont	cont	cont	2.460	6.334	388.500	176.945	2.029	3.491	224.398	123.129
LD01-A PPR2 H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	bdl	cont	cont	cont	2.436	6.346	387.671	176.357	2.007	3.497	223.362	122.606
LD01-A PPR3 H2O_0801	8/1/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	bdl	cont	cont	cont	2.490	6.313	389.950	177.665	2.055	3.480	224.812	123.783
SWI LD-01-A_0802	8/2/2010	LD	A	Sediment-Water Interface	SWI	7.4756	3.9	2.0	10	16.85	cont	est	cont	cont	2.840	5.720	376.482	174.787	2.361	2.870	200.984	120.187
SWI LD-01-A_0809	8/9/2010	LD	A	Sediment-Water Interface	SWI	7.4756	13.8	11.9	10	16.85	cont	none	cont	cont	4.872	21.377	1234.083	451.518	4.410	18.206	1065.630	395.152
SWI LD-01-A_0816	8/16/2010	LD	A	Sediment-Water Interface	SWI	7.4756	2.9	1.5	10	16.85	cont	none	cont	cont	2.443	4.185	280.549	142.158	2.099	2.161	155.068	102.924
LD-01-A INF H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	cont	none	cont	cont	1.415	6.558	231.857	162.625	0.999	3.470	134.328	99.654
LD-01-A MID H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	cont	none	cont	none	1.452	6.258	248.433	158.767	1.052	3.337	143.424	98.674
LD-01-A OUF H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	cont	none	cont	none	1.487	6.304	256.514	159.094	1.077	3.362	147.920	98.870
LD01-A PPR1 H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	bdl	cont	cont	cont	2.600	6.272	396.788	178.842	2.148	3.458	229.370	124.764
LD01-A PPR2 H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	bdl	cont	cont	cont	2.599	6.275	396.581	179.103	2.148	3.460	229.163	125.026
LD01-A PPR3 H2O_0820	8/20/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	bdl	cont	cont	cont	2.632	6.278	398.860	179.626	2.176	3.461	230.614	125.483
SWI LD-01-A_0823	8/23/2010	LD	A	Sediment-Water Interface	SWI	7.4756	3.3	1.5	10	16.85	cont	none	cont	cont	2.599	4.854	320.953	156.936	2.147	2.172	155.649	105.082
SWI LD-01-A_0906	9/6/2010	LD	A	Sediment-Water Interface	SWI	7.4756	4.1	2.2	10	16.85	cont	none	none	est	2.688	5.901	384.563	174.526	2.216	3.096	213.002	120.121
SWI LD-01-A_0913	9/13/2010	LD	A	Sediment-Water Interface	SWI	7.4756	3.3	1.5	10	16.85	none	none	none	none	2.161	4.760	298.161	144.773	1.752	2.142	144.356	94.619
LD-01-A INF H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	cont	cont	cont	cont	1.541	5.815	263.558	156.021	1.148	3.126	152.023	98.674
LD-01-A MID H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	cont	cont	cont	cont	1.543	5.846	264.802	156.151	1.148	3.142	152.706	98.674
LD-01-A OUF H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	DGT	7.4756	4.3	2.4	10	16.85	cont	cont	cont	cont	1.580	5.882	273.918	156.282	1.178	3.163	157.721	98.870
LD01-A PPR1 H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	bdl	cont	cont	cont	2.833	6.317	411.914	183.811	2.354	3.486	238.487	129.276
LD01-A PPR2 H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	bdl	cont	cont	cont	2.991	6.275	419.580	186.885	2.496	3.468	243.460	132.022
LD01-A PPR3 H2O_0919	9/19/2010	LD	A	Sediment-Water Interface	Peeper	7.4756	4.3	2.4	10	16.85	bdl	cont	cont	cont	2.904	6.318	416.058	185.315	2.421	3.487	241.181	130.649
SWI LD-01-A_0920	9/20/2010	LD	A	Sediment-Water Interface	SWI	7.4756	2.8	1.5	10	16.85	cont	cont	cont	cont	2.960	4.191	292.774	153.143	2.609	2.224	167.148	115.413
OW LD-01-B_0723	7/23/2010	LD	B	Overlying Water	OverWater	7.7287	1.6	1.5	10	15.35	est	none	cont	est	2.275	3.236	186.086	114.302	2.231	2.997	174.131	110.313
OW LD-01-B_0726	7/26/2010	LD	B	Overlying Water	OverWater	7.7287	2.6	1.5	10	15.35	cont	cont	cont	cont	2.540	5.133	276.819	144.708	2.167	2.997	172.038	109.005
OW LD-01-B_0802	8/2/2010	LD	B	Overlying Water	OverWater	7.7287	2.7	1.5	10	15.35	cont	cont	cont	cont	2.445	5.385	283.657	143.335	2.048	3.033	170.463	104.820
OW LD-01-B_0809	8/9/2010	LD	B	Overlying Water	OverWater	7.7287	4.2	2.3	10	15.35	cont	none	cont	none	2.934	8.496	431.183	193.881	2.275	4.551	244.082	129.407
OW LD-01-B_0816	8/16/2010	LD	B	Overlying Water	OverWater	7.7287	4.9	2.9	10	15.35	est	none	none	cont	3.396	9.932	510.334	221.803	2.705	5.936	318.259	156.544
OW LD-01-B_0823	8/23/2010	LD	B	Overlying Water	OverWater	7.7287	2.8	1.5	10	15.35	est	none	none	est	2.612	5.697	303.962	152.163	2.144	3.001	172.121	107.436
OW LD-01-B_0830	8/30/2010	LD	B	Overlying Water	OverWater	7.7287	2.6	1.5	10	15.35	cont	none	cont	cont	2.374	5.330	277.855	142.158	1.991	3.012	167.210	104.166
OW LD-01-B_0906	9/6/2010	LD	B	Overlying Water	OverWater	7.7287	2.8	1.5	10	15.35	cont	est	cont	cont	2.487	5.758	298.782	150.528	2.037	3.022	168.350	105.801
OW LD-01-B_0913	9/13/2010	LD	B	Overlying Water	OverWater	7.7287	3.9	1.9	10	15.35	cont	none	cont	cont	3.389	8.134	428.282	199.374	2.679	4.062	229.785	133.853
OW LD-01-B_0920	9/20/2010	LD	B	Overlying Water	OverWater	7.7287	3.1	1.5	10	15.35	cont	est	none	est	2.802	6.412	339.808	161.971	2.226	3.067	176.762	108.155
LD-01-B INF SED_0801	8/1/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	cont	none	cont	cont	3.862	30.045	643.356	474.731	3.163	23.283	542.242	385.409
LD-01-B MID SED_0801	8/1/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	cont	none	cont	cont	3.866	27.414	680.859	457.926	3.232	21.434	573.530	375.339
LD-01-B OUF SED_0801	8/1/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	cont	none	cont	cont	3.798	28.208	646.671	463.550	3.153	22.000	545.972	378.543
LD01-B PPR1 SED_0801	8/1/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	bdl	cont	cont	cont	7.543	25.348	1279.253	513.377	6.584	20.519	1068.738	441.056
LD01-B PPR2 SED_0801	8/1/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	bdl	cont	cont	cont	9.114	25.005	1387.204	543.718	7.996	20.297	1162.806	469.762
LD01-B PPR3 SED_0801	8/1/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	bdl	cont	cont	cont	9.154	24.974	1388.033	544.895	8.032	20.252	1164.257	470.873
LD-01-B INF SED_0820	8/20/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	cont	none	none	none	4.459	24.116	850.556	441.448	3.805	19.178	710.074	367.688
LD-01-B MID SED_0820	8/20/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	cont	none	cont	none	4.079	25.679	773.892	445.371	3.457	20.284	646.878	368.538
LD-01-B OUF SED_0820	8/20/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	cont	none	cont	none	4.034	26.422	755.451	449.295	3.409	20.805	632.374	370.696
LD01-B PPR1 SED_0820	8/20/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	none	cont	cont	cont	11.342	25.844	1539.703	594.264	10.005	20.989	1298.108	517.823
LD01-B PPR2 SED_0820	8/20/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	bdl	cont	cont	bdl	13.231	25.851	1646.411	628.267	11.702	21.015	1393.213	550.126
LD01-B PPR3 SED_0820	8/20/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	bdl	none	cont	bdl	11.432	25.666	1543.226	592.368	10.075	20.843	1301.009	515.992
LD-01-B INF SED_0919	9/19/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	cont	none	cont	cont	4.262	24.853	849.727	439.094	3.633	19.782	707.381	365.988
LD-01-B MID SED_0919	9/19/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	cont	none	none	cont	4.184	24.916	814.710	440.859	3.560	19.795	679.616	366.446
LD-01-B OUF SED_0919	9/19/2010	LD	B	Porewater (1 cm)	DGT	7.8746	10.4	8.5	10	19.15	cont	none	cont	cont	3.879	26.816	760.424	445.437	3.270	21.174	634.239	368.015
LD01-B PPR1 SED_0919	9/19/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	bdl	cont	cont	cont	7.630	25.978	1301.423	512.265	6.657	21.027	1087.800	440.140
LD01-B PPR2 SED_0919	9/19/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	bdl	cont	cont	cont	8.254	25.399	1335.404	525.016	7.217	20.576	1118.051	452.237
LD01-B PPR3 SED_0919	9/19/2010	LD	B	Porewater (1 cm)	Peeper	7.8746	10.4	8.5	10	19.15	bdl	none	bdl	none	7.610	25.673	1292.928	513.508	6.641	20.792	1080.755	441.383
PW LD-01-B_0723	7/23/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	14.4	12.5	10	19.15	none	none	none	none	10.108	32.199	1694.067	660.439	9.095	27.706	1489.561	587.202
PW LD-01-B_0726	7/26/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	14.7	12.8	10	19.15	cont	cont	cont	cont	17.367	37.645	2250.192	842.223	15.816	32.637	1995.336	762.447
PW LD-01-B_0802	8/2/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	15.7	13.8	10	19.15	cont	none	cont	cont	18.301	40.377	2391.088	886.035	16.749	35.344	2136.232	806.259

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
PW LD-01-B_0809	8/9/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	10.6	8.7	10	19.15	cont	none	cont	cont	14.153	26.975	1705.878	670.901	12.601	22.038	1449.986	591.453
PW LD-01-B_0816	8/16/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	13.6	11.7	10	19.15	cont	none	cont	cont	16.479	35.052	2111.368	791.873	14.906	30.013	1854.026	712.097
PW LD-01-B_0823	8/23/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	6.3	4.4	10	19.15	cont	none	cont	none	10.151	16.007	1117.015	477.674	8.617	11.127	860.294	398.748
PW LD-01-B_0830	8/30/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	6.5	4.6	10	19.15	cont	none	cont	cont	9.341	16.083	1083.863	457.338	7.911	11.305	835.223	380.177
PW LD-01-B_0906	9/6/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	10.0	8.1	10	19.15	none	none	cont	none	12.084	25.158	1550.270	603.354	10.651	20.258	1301.423	525.670
PW LD-01-B_0913	9/13/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	6.1	4.2	10	19.15	cont	none	none	none	8.566	14.978	1010.100	425.297	7.181	10.250	764.154	348.921
PW LD-01-B_0920	9/20/2010	LD	B	Porewater (2.5 cm)	PoreWater	7.8746	6.3	4.4	10	19.15	cont	none	cont	none	8.985	15.632	1053.819	440.663	7.573	10.873	806.008	364.092
SWI LD-01-B_0726	7/26/2010	LD	B	Sediment-Water Interface	SWI	7.4211	2.5	1.5	10	16.65	cont	cont	cont	cont	2.183	3.232	227.506	125.222	1.968	1.965	145.558	99.262
LD-01-B INF H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	cont	cont	cont	cont	1.380	4.207	218.389	125.810	1.006	1.803	101.238	72.125
LD-01-B MID H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	cont	cont	cont	cont	1.369	4.151	213.416	125.745	0.997	1.778	99.145	72.060
LD-01-B OUF H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	cont	cont	cont	cont	1.275	4.275	198.850	125.876	0.908	1.822	92.390	70.883
LD01-B PPR1 H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	bdl	cont	cont	cont	2.149	4.615	298.990	146.801	1.755	2.025	141.062	95.469
LD01-B PPR2 H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	bdl	cont	cont	bdl	2.105	4.611	296.710	145.754	1.715	2.022	139.694	94.554
LD01-B PPR3 H2O_0801	8/1/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	bdl	cont	cont	cont	2.117	4.603	297.125	145.950	1.724	2.018	139.881	94.685
SWI LD-01-B_0802	8/2/2010	LD	B	Sediment-Water Interface	SWI	7.4211	3.1	1.5	10	16.65	cont	est	cont	cont	2.268	4.191	285.314	141.308	1.906	1.989	145.185	97.104
SWI LD-01-B_0809	8/9/2010	LD	B	Sediment-Water Interface	SWI	7.4211	5.2	3.3	10	16.65	cont	none	cont	cont	2.627	7.054	456.254	194.339	2.208	4.389	293.810	142.223
SWI LD-01-B_0816	8/16/2010	LD	B	Sediment-Water Interface	SWI	7.4211	2.8	1.5	10	16.65	cont	none	none	cont	2.460	3.782	267.081	139.542	2.158	2.026	152.603	104.362
LD-01-B INF H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	cont	none	cont	cont	1.342	4.233	210.722	125.810	0.967	1.809	97.861	71.602
LD-01-B MID H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	cont	cont	cont	cont	1.377	4.206	216.524	125.941	0.999	1.802	100.492	71.929
LD-01-B OUF H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	cont	cont	cont	cont	1.347	4.277	213.416	126.007	0.968	1.829	98.979	71.471
LD01-B PPR1 H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	bdl	cont	cont	cont	2.244	4.571	303.755	148.435	1.836	2.006	143.465	96.908
LD01-B PPR2 H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	bdl	cont	cont	cont	2.245	4.579	303.962	148.566	1.837	2.010	143.548	96.973
LD01-B PPR3 H2O_0820	8/20/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	bdl	cont	cont	cont	2.247	4.592	304.377	148.631	1.839	2.016	143.818	97.039
SWI LD-01-B_0823	8/23/2010	LD	B	Sediment-Water Interface	SWI	7.4211	3.1	1.5	10	16.65	cont	none	cont	none	2.560	4.136	293.188	146.931	2.189	2.009	153.390	104.035
SWI LD-01-B_0830	8/30/2010	LD	B	Sediment-Water Interface	SWI	7.4211	3.1	1.5	10	16.65	cont	cont	cont	cont	2.221	4.136	278.477	139.673	1.876	2.002	144.232	97.104
SWI LD-01-B_0906	9/6/2010	LD	B	Sediment-Water Interface	SWI	7.4211	3.6	1.7	10	16.65	cont	none	cont	cont	2.302	4.822	318.052	152.882	1.896	2.213	156.250	101.355
SWI LD-01-B_0913	9/13/2010	LD	B	Sediment-Water Interface	SWI	7.4211	3.7	1.7	10	16.65	cont	cont	cont	cont	2.382	4.949	329.034	156.282	1.968	2.336	165.677	104.689
LD-01-B INF H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	cont	cont	cont	cont	1.664	4.042	250.712	128.818	1.266	1.749	116.736	76.833
LD-01-B MID H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	cont	cont	cont	cont	1.715	3.969	252.991	129.734	1.314	1.720	117.980	77.945
LD-01-B OUF H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	DGT	7.4211	3.4	1.5	10	16.65	cont	cont	cont	cont	1.708	3.988	252.991	129.734	1.310	1.728	117.876	78.010
LD01-B PPR1 H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	bdl	cont	cont	cont	2.476	4.688	320.538	153.143	2.044	2.060	152.230	101.093
LD01-B PPR2 H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	bdl	cont	bdl	bdl	2.471	4.592	317.430	152.686	2.034	2.018	150.593	100.635
LD01-B PPR3 H2O_0919	9/19/2010	LD	B	Sediment-Water Interface	Peeper	7.4211	3.4	1.5	10	16.65	bdl	cont	cont	cont	2.498	4.592	317.430	153.993	2.062	2.016	150.738	101.878
SWI LD-01-B_0920	9/20/2010	LD	B	Sediment-Water Interface	SWI	7.4211	4.4	2.5	10	16.65	cont	cont	cont	cont	2.739	5.911	402.590	179.757	2.303	3.300	235.172	127.576
OW LD-01-C_0723	7/23/2010	LD	C	Overlying Water	OverWater	7.7391	1.7	1.5	10	15.35	est	none	cont	est	2.357	3.438	196.446	119.141	2.284	3.034	176.410	112.340
OW LD-01-C_0726	7/26/2010	LD	C	Overlying Water	OverWater	7.7391	9.1	7.2	10	15.35	cont	cont	cont	cont	5.121	19.159	941.724	374.685	4.410	14.959	748.821	307.922
OW LD-01-C_0802	8/2/2010	LD	C	Overlying Water	OverWater	7.7391	3.2	1.5	10	15.35	cont	cont	cont	cont	2.786	6.494	341.880	165.764	2.182	3.041	174.483	108.874
OW LD-01-C_0809	8/9/2010	LD	C	Overlying Water	OverWater	7.7391	5.5	3.5	10	15.35	cont	none	none	none	3.529	11.222	562.962	240.831	2.845	7.181	372.960	175.507
OW LD-01-C_0816	8/16/2010	LD	C	Overlying Water	OverWater	7.7391	3.9	2.0	10	15.35	est	est	none	cont	3.126	7.931	417.301	190.939	2.411	3.981	224.398	125.418
OW LD-01-C_0823	8/23/2010	LD	C	Overlying Water	OverWater	7.7391	3.4	1.5	10	15.35	none	none	none	est	2.772	6.914	359.492	169.556	2.099	3.038	172.867	106.063
OW LD-01-C_0830	8/30/2010	LD	C	Overlying Water	OverWater	7.7391	3.5	1.6	10	15.35	cont	none	none	none	2.544	7.225	358.042	168.772	1.903	3.220	173.198	104.297
OW LD-01-C_0906	9/6/2010	LD	C	Overlying Water	OverWater	7.7391	3.2	1.5	10	15.35	cont	none	cont	cont	2.364	6.444	319.917	156.544	1.815	3.006	161.554	100.374
OW LD-01-C_0913	9/13/2010	LD	C	Overlying Water	OverWater	7.7391	3.7	1.8	10	15.35	cont	none	cont	none	2.693	7.575	378.140	178.253	2.048	3.601	193.318	113.713
OW LD-01-C_0920	9/20/2010	LD	C	Overlying Water	OverWater	7.7391	2.2	1.5	10	15.35	cont	est	none	est	2.318	4.530	243.253	129.341	2.060	3.036	171.354	104.886
LD-01-C INF SED	9/19/2010	LD	C	Porewater (1 cm)	DGT	7.8315	9.2	7.3	10	18.45	cont	cont	cont	cont	10.489	18.689	1334.368	533.452	9.169	14.755	1100.646	458.776
LD-01-C MID SED	9/19/2010	LD	C	Porewater (1 cm)	DGT	7.8315	9.2	7.3	10	18.45	cont	cont	cont	cont	9.889	18.517	1294.793	520.897	8.631	14.609	1066.251	446.941
LD-01-C OUF SED	9/19/2010	LD	C	Porewater (1 cm)	DGT	7.8315	9.2	7.3	10	18.45	cont	cont	cont	cont	8.997	18.149	1232.840	499.318	7.828	14.311	1013.001	426.539
PW LD-01-C_0723	7/23/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	13.2	11.3	10	18.45	none	none	none	none	10.224	27.223	1626.313	624.344	9.158	23.105	1414.554	552.676
PW LD-01-C_0726	7/26/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	15.8	13.9	10	18.45	none	none	none	cont	17.042	37.359	2322.712	857.917	15.614	32.720	2076.144	780.103
PW LD-01-C_0802	8/2/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	9.1	7.2	10	18.45	cont	none	cont	cont	11.545	21.002	1425.536	570.462	10.150	16.522	1178.346	494.087
PW LD-01-C_0809	8/9/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	10.1	8.2	10	18.45	cont	none	cont	cont	13.321	24.147	1625.898	640.103	11.826	19.509	1371.457	562.027
PW LD-01-C_0816	8/16/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	6.2	4.2	10	18.45	cont	none	cont	cont	9.262	14.469	1047.396	451.387	7.873	9.958	798.756	375.469
PW LD-01-C_0823	8/23/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	6.0	4.1	10	18.45	cont	none	cont	none	8.878	14.044	1012.794	437.132	7.516	9.545	766.018	361.411
PW LD-01-C_0830	8/30/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	5.8	3.8	10	18.45	cont	none	cont	cont	7.527	13.135	914.581	393.844	6.288	8.731	677.544	320.019
PW LD-01-C_0906	9/6/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	14.9	13.0	10	18.45	none	none	cont	none	15.198	35.618	2156.952	790.565	13.838	30.915	1911.627	714.059
PW LD-01-C_0913	9/13/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	5.6	3.6	10	18.45	cont	none	none	none	8.479	12.747	938.409	409.865	7.164	8.356	694.120	335.516

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
PW LD-01-C_0920	9/20/2010	LD	C	Porewater (2.5 cm)	PoreWater	7.8315	5.6	3.6	10	18.45	cont	none	cont	none	7.917	12.805	921.004	397.833	6.618	8.363	678.580	323.419
SWI LD-01-C_0726	7/26/2010	LD	C	Sediment-Water Interface	SWI	7.4138	10.7	8.8	10	16.55	cont	cont	cont	cont	4.075	14.870	939.445	353.041	3.645	12.067	773.685	299.552
SWI LD-01-C_0802	8/2/2010	LD	C	Sediment-Water Interface	SWI	7.4138	3.4	1.5	10	16.55	cont	none	cont	cont	2.240	4.447	298.990	145.493	1.836	1.950	140.896	94.881
SWI LD-01-C_0809	8/9/2010	LD	C	Sediment-Water Interface	SWI	7.4138	4.9	2.9	10	16.55	cont	none	cont	cont	2.760	6.444	434.913	188.716	2.333	3.858	269.982	136.992
SWI LD-01-C_0816	8/16/2010	LD	C	Sediment-Water Interface	SWI	7.4138	3.9	1.9	10	16.55	cont	none	cont	cont	2.597	5.072	353.069	163.148	2.155	2.522	186.066	111.098
SWI LD-01-C_0823	8/23/2010	LD	C	Sediment-Water Interface	SWI	7.4138	3.5	1.6	10	16.55	cont	none	cont	none	2.415	4.669	320.331	152.163	1.984	2.106	155.110	100.374
SWI LD-01-C_0830	8/30/2010	LD	C	Sediment-Water Interface	SWI	7.4138	3.3	1.5	10	16.55	cont	none	cont	cont	2.123	4.418	291.323	140.981	1.740	1.971	139.238	92.265
SWI LD-01-C_0830X	8/30/2010	LD	C	Sediment-Water Interface	SWI	7.4138	3.0	1.5	10	16.55	cont	none	cont	cont	2.063	3.946	261.279	132.022	1.760	1.986	139.819	93.246
SWI LD-01-C_0906	9/6/2010	LD	C	Sediment-Water Interface	SWI	7.4138	4.9	3.0	10	16.55	cont	none	none	cont	2.360	6.615	415.850	182.700	1.968	3.989	259.622	131.238
SWI LD-01-C_0913	9/13/2010	LD	C	Sediment-Water Interface	SWI	7.4138	4.7	2.7	10	16.55	cont	none	cont	cont	2.487	6.218	404.662	178.972	2.080	3.601	243.874	127.380
LD-01-C INF H2O	9/19/2010	LD	C	Sediment-Water Interface	DGT	7.4138	4.9	3.0	10	16.55	cont	cont	cont	cont	5.103	5.681	530.225	235.142	4.440	3.454	336.493	178.449
LD-01-C MID H2O	9/19/2010	LD	C	Sediment-Water Interface	DGT	7.4138	4.9	3.0	10	16.55	cont	cont	cont	cont	4.831	5.618	519.036	229.519	4.191	3.414	328.826	173.349
LD-01-C OUF H2O	9/19/2010	LD	C	Sediment-Water Interface	DGT	7.4138	4.9	3.0	10	16.55	cont	cont	cont	cont	4.845	5.637	519.243	230.173	4.205	3.426	329.034	173.937
SWI LD-01-C_0920	9/20/2010	LD	C	Sediment-Water Interface	SWI	7.4138	7.2	5.2	10	16.55	cont	cont	cont	cont	3.252	9.710	635.897	251.032	2.818	7.022	470.137	198.459
OW LD-01-D_0723	7/23/2010	LD	D	Overlying Water	OverWater	7.6361	1.9	1.5	10	15.65	cont	none	cont	none	2.227	3.317	202.724	119.206	2.109	2.644	166.444	107.240
OW LD-01-D_0726	7/26/2010	LD	D	Overlying Water	OverWater	7.6361	2.0	1.5	10	15.65	cont	cont	cont	cont	2.274	3.519	214.452	122.933	2.121	2.635	166.672	107.240
OW LD-01-D_0802	8/2/2010	LD	D	Overlying Water	OverWater	7.6361	3.3	1.5	10	15.65	cont	cont	cont	cont	2.703	6.064	347.474	165.110	2.137	2.700	169.448	106.913
OW LD-01-D_0816	8/16/2010	LD	D	Overlying Water	OverWater	7.6361	3.3	1.5	10	15.65	est	est	none	cont	2.634	5.922	341.051	162.494	2.072	2.650	166.858	104.951
OW LD-01-D_0823	8/23/2010	LD	D	Overlying Water	OverWater	7.6361	3.8	1.8	10	15.65	est	none	none	none	2.666	6.634	374.825	173.414	2.085	3.198	194.126	112.863
OW LD-01-D_0830	8/30/2010	LD	D	Overlying Water	OverWater	7.6361	2.9	1.5	10	15.65	cont	none	cont	cont	2.651	5.363	308.521	155.628	2.219	2.732	170.173	110.705
OW LD-01-D_0830_2	8/30/2010	LD	D	Overlying Water	OverWater	7.6361	2.7	1.5	10	15.65	cont	none	cont	est	2.607	4.941	288.008	148.762	2.244	2.746	171.893	111.098
OW LD-01-D_0906	9/6/2010	LD	D	Overlying Water	OverWater	7.6361	2.8	1.5	10	15.65	cont	est	cont	cont	2.292	5.043	282.828	143.466	1.912	2.676	160.891	102.532
OW LD-01-D_0913	9/13/2010	LD	D	Overlying Water	OverWater	7.6361	2.6	1.5	10	15.65	cont	none	cont	cont	2.230	4.604	261.279	136.469	1.917	2.654	160.290	102.532
OW LD-01-D_0920	9/20/2010	LD	D	Overlying Water	OverWater	7.6361	4.3	2.4	10	15.65	cont	none	none	none	3.016	7.835	440.922	195.058	2.422	4.287	254.856	134.376
LD-01-D INF SED	9/19/2010	LD	D	Porewater (1 cm)	DGT	7.8777	8.7	6.8	10	18.75	cont	cont	cont	cont	7.052	18.308	1055.477	452.172	6.039	14.183	853.250	379.851
PW LD-01-D_0723	7/23/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	11.0	9.1	10	18.75	cont	none	cont	cont	13.984	27.407	1729.291	678.094	12.444	22.572	1476.922	598.972
PW LD-01-D_0726	7/26/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	15.0	13.1	10	18.75	none	none	cont	cont	17.233	37.734	2258.480	845.493	15.704	32.809	2006.318	766.371
PW LD-01-D_0802	8/2/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	11.5	9.6	10	18.75	cont	none	cont	cont	15.063	29.257	1835.585	714.059	13.489	24.313	1579.486	634.021
PW LD-01-D_0809	8/9/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	10.4	8.5	10	18.75	cont	none	cont	cont	14.231	26.537	1697.175	668.940	12.635	21.587	1439.626	588.706
PW LD-01-D_0816	8/16/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	8.7	6.7	10	18.75	cont	none	cont	cont	11.724	21.917	1408.546	569.482	10.228	17.024	1156.383	491.079
PW LD-01-D_0823	8/23/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	7.4	5.5	10	18.75	est	none	cont	none	11.077	19.922	1292.306	523.055	9.538	14.743	1032.892	444.325
PW LD-01-D_0830	8/30/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	8.8	6.8	10	18.75	bdl	none	bdl	none	10.800	21.796	1362.962	543.979	9.402	16.954	1117.015	466.950
PW LD-01-D_0906	9/6/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	5.2	3.3	10	18.75	none	none	cont	none	7.243	12.646	858.637	372.723	5.927	7.988	618.906	297.525
PW LD-01-D_0913	9/13/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	3.9	2.0	10	18.75	cont	none	none	none	6.978	9.723	734.524	340.159	5.586	5.023	487.956	263.849
PW LD-01-D_0920	9/20/2010	LD	D	Porewater (2.5 cm)	PoreWater	7.8777	5.4	3.4	10	18.75	cont	none	cont	none	7.553	13.097	889.510	382.597	6.213	8.388	647.293	307.006
SWI LD-01-D_0726	7/26/2010	LD	D	Sediment-Water Interface	SWI	7.5062	3.2	1.5	10	16.75	cont	cont	cont	cont	5.134	4.688	399.896	199.570	4.426	2.213	210.930	146.212
SWI LD-01-D_0802	8/2/2010	LD	D	Sediment-Water Interface	SWI	7.5062	2.5	1.5	10	16.75	cont	est	cont	cont	2.303	3.756	246.775	130.715	2.048	2.248	156.042	102.008
SWI LD-01-D_0816	8/16/2010	LD	D	Sediment-Water Interface	SWI	7.5062	3.4	1.5	10	16.75	cont	none	cont	cont	2.404	5.217	326.340	153.928	1.927	2.267	153.680	98.804
SWI LD-01-D_0823	8/23/2010	LD	D	Sediment-Water Interface	SWI	7.5062	3.0	1.5	10	16.75	cont	none	none	none	2.472	4.534	294.224	146.801	2.087	2.253	157.265	103.382
SWI LD-01-D_0830	8/30/2010	LD	D	Sediment-Water Interface	SWI	7.5062	3.2	1.5	10	16.75	cont	none	cont	cont	2.681	4.950	318.674	157.590	2.240	2.314	161.512	108.547
SWI LD-01-D_0906	9/6/2010	LD	D	Sediment-Water Interface	SWI	7.5062	4.2	2.3	10	16.75	cont	cont	cont	cont	2.489	6.469	389.329	176.161	2.032	3.497	220.875	121.168
SWI LD-01-D_0913	9/13/2010	LD	D	Sediment-Water Interface	SWI	7.5062	4.1	2.2	10	16.75	cont	cont	cont	cont	2.506	6.264	381.248	173.741	2.041	3.312	212.380	118.617
SWI LD-01-D_0920	9/20/2010	LD	D	Sediment-Water Interface	SWI	7.5062	2.4	1.5	10	16.75	cont	none	cont	cont	2.428	3.620	243.046	131.761	2.192	2.267	160.476	105.932
OW LD-01-E_0723	7/23/2010	LD	E	Overlying Water	OverWater	7.7321	1.8	1.5	10	15.35	est	est	cont	none	2.339	3.524	201.088	119.664	2.245	2.992	174.587	110.771
OW LD-01-E_0726	7/26/2010	LD	E	Overlying Water	OverWater	7.7321	1.6	1.5	10	15.35	cont	cont	cont	cont	2.255	3.163	183.103	112.667	2.221	2.983	174.193	109.659
OW LD-01-E_0802	8/2/2010	LD	E	Overlying Water	OverWater	7.7321	2.9	1.5	10	15.35	cont	cont	cont	cont	2.982	6.005	328.205	164.325	2.446	3.043	180.533	115.413
OW LD-01-E_0809	8/9/2010	LD	E	Overlying Water	OverWater	7.7321	5.2	3.3	10	15.35	est	none	none	none	3.559	10.816	551.152	235.142	2.869	6.768	358.456	169.883
OW LD-01-E_0816	8/16/2010	LD	E	Overlying Water	OverWater	7.7321	3.1	1.5	10	15.35	est	none	none	cont	2.744	6.355	336.286	162.756	2.163	3.022	173.799	107.763
OW LD-01-E_0823	8/23/2010	LD	E	Overlying Water	OverWater	7.7321	18.0	16.1	10	15.35	est	none	none	none	8.474	39.850	1854.026	686.595	7.766	35.293	1659.879	618.786
OW LD-01-E_0830	8/30/2010	LD	E	Overlying Water	OverWater	7.7321	2.5	1.5	10	15.35	cont	none	cont	cont	2.267	5.067	261.901	135.423	1.945	3.062	167.687	103.185
OW LD-01-E_0906	9/6/2010	LD	E	Overlying Water	OverWater	7.7321	2.6	1.5	10	15.35	cont	none	cont	cont	2.348	5.208	270.810	140.654	1.991	3.024	167.252	105.016
OW LD-01-E_0913	9/13/2010	LD	E	Overlying Water	OverWater	7.7321	4.2	2.2	10	15.35	cont	none	cont	cont	2.750	8.452	416.058	190.416	2.116	4.482	233.100	126.072
OW LD-01-E_0920	9/20/2010	LD	E	Overlying Water	OverWater	7.7321	3.7	1.7	10	15.35	cont	est	none	est	3.517	7.842	418.958	195.451	2.784	3.707	215.902	130.061
PW LD-01-E_0723	7/23/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	59.6	57.7	10	19.25	none	none	none	none	58.622	176.594	8298.360	2882.391	57.026	170.621	8055.936	2798.038
PW LD-01-E_0726	7/26/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	18.0	16.1	10	19.25	none	none	cont	cont	21.628	51.072	2813.776	1049.510	19.919	45.524	2558.920	966.464
PW LD-01-E_0802	8/2/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	14.6	12.7	10	19.25	cont	none	cont	cont	19.267	41.483	2397.304	914.806	17.502	35.954	2134.160	831.761

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
PW LD-01-E_0809	8/9/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	12.8	10.9	10	19.25	cont	none	cont	cont	18.514	37.130	2214.968	861.186	16.682	31.506	1947.887	776.833
PW LD-01-E_0816	8/16/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	9.3	7.4	10	19.25	cont	none	cont	cont	14.703	26.880	1709.607	695.096	12.882	21.301	1442.734	611.070
PW LD-01-E_0823	8/23/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	9.0	7.1	10	19.25	cont	none	cont	cont	14.411	25.990	1663.194	677.440	12.613	20.430	1396.528	594.134
PW LD-01-E_0830	8/30/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	11.2	9.3	10	19.25	cont	none	cont	cont	15.400	31.830	1898.988	742.830	13.669	26.308	1638.952	660.439
PW LD-01-E_0906	9/6/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	8.0	6.1	10	19.25	none	none	cont	none	12.905	22.915	1493.705	614.666	11.146	17.418	1229.732	532.078
PW LD-01-E_0913	9/13/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	7.2	5.2	10	19.25	cont	none	none	none	11.376	19.801	1305.153	548.884	9.746	14.482	1048.639	468.454
PW LD-01-E_0920	9/20/2010	LD	E	Porewater (2.5 cm)	PoreWater	7.9523	7.1	5.2	10	19.25	cont	none	cont	cont	11.398	19.731	1321.936	548.884	9.689	14.374	1061.693	467.146
SWI LD-01-E_0726	7/26/2010	LD	E	Sediment-Water Interface	SWI	7.5437	2.4	1.5	10	16.45	cont	cont	cont	cont	2.261	3.705	236.830	128.818	2.028	2.338	157.327	103.055
SWI LD-01-E_0802	8/2/2010	LD	E	Sediment-Water Interface	SWI	7.5437	3.5	1.5	10	16.45	cont	est	cont	cont	2.900	5.568	353.483	169.818	2.363	2.469	170.981	112.405
SWI LD-01-E_0809	8/9/2010	LD	E	Sediment-Water Interface	SWI	7.5437	5.1	3.2	10	16.45	none	none	none	none	3.109	8.274	501.631	211.929	2.570	5.091	320.538	153.863
SWI LD-01-E_0816	8/16/2010	LD	E	Sediment-Water Interface	SWI	7.5437	3.0	1.5	10	16.45	cont	none	cont	cont	2.533	4.714	298.990	148.697	2.128	2.359	161.119	104.820
SWI LD-01-E_0823	8/23/2010	LD	E	Sediment-Water Interface	SWI	7.5437	3.6	1.7	10	16.45	cont	none	cont	none	2.736	5.803	358.042	168.641	2.209	2.666	177.923	111.490
SWI LD-01-E_0830	8/30/2010	LD	E	Sediment-Water Interface	SWI	7.5437	3.0	1.5	10	16.45	cont	none	cont	cont	2.254	4.746	286.558	141.831	1.883	2.387	154.675	99.066
SWI LD-01-E_0906	9/6/2010	LD	E	Sediment-Water Interface	SWI	7.5437	3.3	1.5	10	16.45	cont	cont	cont	cont	2.319	5.224	312.250	152.163	1.869	2.361	152.541	99.589
SWI LD-01-E_0913	9/13/2010	LD	E	Sediment-Water Interface	SWI	7.5437	4.8	2.8	10	16.45	cont	cont	cont	cont	2.539	7.626	434.706	191.723	2.064	4.493	266.666	135.096
SWI LD-01-E_0920	9/20/2010	LD	E	Sediment-Water Interface	SWI	7.5437	4.0	2.1	10	16.45	cont	cont	cont	cont	3.281	6.494	414.400	190.416	2.726	3.348	227.713	132.807
OW LD-01-F_0723	7/23/2010	LD	F	Overlying Water	OverWater	7.7557	1.9	1.5	10	15.75	est	est	cont	none	2.325	3.899	213.209	123.849	2.185	3.107	175.270	110.836
OW LD-01-F_0726	7/26/2010	LD	F	Overlying Water	OverWater	7.7557	1.9	1.5	10	15.75	cont	cont	cont	cont	2.373	4.006	219.010	126.203	2.216	3.107	176.058	111.425
OW LD-01-F_0802	8/2/2010	LD	F	Overlying Water	OverWater	7.7557	2.8	1.5	10	15.75	cont	cont	cont	cont	2.738	5.940	312.872	156.217	2.244	3.133	178.151	110.771
OW LD-01-F_0809	8/9/2010	LD	F	Overlying Water	OverWater	7.7557	4.7	2.8	10	15.75	none	none	none	none	11.803	10.549	774.306	358.926	10.086	6.223	499.766	280.523
OW LD-01-F_0816	8/16/2010	LD	F	Overlying Water	OverWater	7.7557	14.8	12.9	10	15.75	est	est	none	cont	7.260	32.961	1516.290	576.674	6.534	28.392	1324.008	508.080
OW LD-01-F_0823	8/23/2010	LD	F	Overlying Water	OverWater	7.7557	3.6	1.6	10	15.75	none	none	none	none	2.853	7.422	378.554	177.468	2.152	3.381	187.454	111.752
OW LD-01-F_0830	8/30/2010	LD	F	Overlying Water	OverWater	7.7557	2.1	1.5	10	15.75	cont	none	cont	cont	2.273	4.448	233.722	127.641	2.055	3.139	172.432	106.716
OW LD-01-F_0906	9/6/2010	LD	F	Overlying Water	OverWater	7.7557	3.1	1.5	10	15.75	cont	none	cont	cont	2.528	6.418	321.160	158.767	1.992	3.121	169.158	105.997
OW LD-01-F_0913	9/13/2010	LD	F	Overlying Water	OverWater	7.7557	2.2	1.5	10	15.75	cont	none	cont	cont	2.379	4.558	241.388	132.219	2.135	3.129	173.820	109.136
OW LD-01-F_0920	9/20/2010	LD	F	Overlying Water	OverWater	7.7557	2.2	1.5	10	15.75	cont	est	none	est	2.502	4.585	247.190	133.199	2.257	3.175	179.787	110.705
PW LD-01-F_0723	7/23/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	12.7	10.8	10	19.85	cont	none	cont	cont	16.805	36.317	2125.872	831.107	15.086	30.769	1867.286	748.062
PW LD-01-F_0726	7/26/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	24.3	22.4	10	19.85	none	none	cont	cont	9.695	79.814	1501.164	1120.131	8.837	70.600	1424.086	1016.815
PW LD-01-F_0802	8/2/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	15.8	13.9	10	19.85	cont	none	cont	cont	20.425	46.115	2598.288	983.466	18.660	40.428	2337.216	899.766
PW LD-01-F_0809	8/9/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	14.9	13.0	10	19.85	cont	none	cont	cont	20.268	44.126	2527.840	959.271	18.435	38.369	2262.624	874.918
PW LD-01-F_0816	8/16/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	9.8	7.9	10	19.85	cont	none	cont	cont	14.276	28.621	1753.534	702.289	12.534	22.991	1491.840	619.570
PW LD-01-F_0823	8/23/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	9.2	7.2	10	19.85	cont	none	cont	none	13.849	26.696	1669.618	672.209	12.107	21.053	1406.681	589.360
PW LD-01-F_0830	8/30/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	8.8	6.9	10	19.85	cont	none	cont	cont	12.331	25.272	1549.649	626.829	10.686	19.712	1293.135	545.287
PW LD-01-F_0906	9/6/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	7.3	5.4	10	19.85	none	none	cont	none	10.684	20.652	1323.594	548.622	9.050	15.194	1069.152	467.669
PW LD-01-F_0913	9/13/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	6.9	4.9	10	19.85	cont	none	none	none	10.549	19.547	1283.811	533.255	8.901	14.063	1026.676	452.237
PW LD-01-F_0920	9/20/2010	LD	F	Porewater (2.5 cm)	PoreWater	7.9654	6.9	5.0	10	19.85	none	none	cont	cont	10.516	19.509	1282.775	531.948	8.871	14.063	1026.676	450.929
SWI LD-01-F_0726	7/26/2010	LD	F	Sediment-Water Interface	SWI	7.4012	1.7	1.5	10	17.35	cont	cont	cont	cont	2.046	2.135	160.311	104.493	2.007	1.906	144.895	99.654
SWI LD-01-F_0802	8/2/2010	LD	F	Sediment-Water Interface	SWI	7.4012	3.0	1.5	10	17.35	cont	est	cont	cont	2.263	3.810	266.874	136.338	1.954	1.927	143.983	97.954
SWI LD-01-F_0809	8/9/2010	LD	F	Sediment-Water Interface	SWI	7.4012	3.7	1.8	10	17.35	cont	none	cont	cont	2.679	4.862	345.402	162.298	2.236	2.325	176.472	110.574
SWI LD-01-F_0816	8/16/2010	LD	F	Sediment-Water Interface	SWI	7.4012	13.2	11.3	10	17.35	none	none	none	none	42.323	24.866	2318.568	1077.627	40.423	21.256	2014.606	999.813
SWI LD-01-F_0823	8/23/2010	LD	F	Sediment-Water Interface	SWI	7.4012	4.3	2.3	10	17.35	cont	none	cont	cont	2.527	5.546	377.104	171.060	2.110	3.005	214.245	119.664
SWI LD-01-F_0830	8/30/2010	LD	F	Sediment-Water Interface	SWI	7.4012	3.6	1.7	10	17.35	cont	none	cont	cont	2.393	4.713	322.610	153.993	1.977	2.164	158.653	102.662
SWI LD-01-F_0906	9/6/2010	LD	F	Sediment-Water Interface	SWI	7.4012	3.6	1.7	10	17.35	cont	none	cont	cont	2.272	4.723	315.566	151.705	1.875	2.182	155.690	100.962
SWI LD-01-F_0913	9/13/2010	LD	F	Sediment-Water Interface	SWI	7.4012	4.0	2.1	10	17.35	cont	none	cont	cont	2.435	5.297	355.970	163.998	2.031	2.736	193.773	112.994
SWI LD-01-F_0920	9/20/2010	LD	F	Sediment-Water Interface	SWI	7.4012	4.2	2.3	10	17.35	cont	none	cont	cont	2.677	5.570	384.978	174.395	2.248	3.015	218.596	122.868
OW LMF-02-A_0723	7/23/2010	LMF	A	Overlying Water	OverWater	7.6597	2.1	1.5	10	15.85	bdl	none	cont	none	2.197	3.772	218.596	123.456	2.021	2.728	164.558	105.278
OW LMF-02-A_0726	7/26/2010	LMF	A	Overlying Water	OverWater	7.6597	2.2	1.5	10	15.85	cont	cont	cont	cont	2.408	4.046	240.352	131.565	2.170	2.703	168.868	107.763
OW LMF-02-A_0802	8/2/2010	LMF	A	Overlying Water	OverWater	7.6597	3.9	1.9	10	15.85	cont	cont	cont	cont	2.872	7.232	399.482	182.765	2.262	3.604	213.002	120.972
OW LMF-02-A_0809	8/9/2010	LMF	A	Overlying Water	OverWater	7.6597	3.7	1.8	10	15.85	est	none	none	none	3.044	6.952	396.166	183.223	2.406	3.356	206.164	120.972
OW LMF-02-A_0816	8/16/2010	LMF	A	Overlying Water	OverWater	7.6597	2.6	1.5	10	15.85	est	est	none	cont	2.371	4.792	272.675	139.738	2.020	2.729	165.677	103.970
OW LMF-02-A_0823	8/23/2010	LMF	A	Overlying Water	OverWater	7.6597	1.7	1.5	10	15.85	est	none	none	none	2.162	3.127	187.910	112.798	2.094	2.743	167.687	106.063
OW LMF-02-A_0830	8/30/2010	LMF	A	Overlying Water	OverWater	7.6597	4.1	2.2	10	15.85	cont	none	cont	none	3.020	7.835	426.418	194.274	2.424	4.139	239.109	132.676
OW LMF-02-A_0913	9/13/2010	LMF	A	Overlying Water	OverWater	7.6597	2.5	1.5	10	15.85	cont	none	none	none	2.265	4.558	255.478	134.900	1.968	2.745	163.087	103.774
OW LMF-02-A_0920	9/20/2010	LMF	A	Overlying Water	OverWater	7.6597	3.7	1.8	10	15.85	cont	est	est	est	2.897	6.907	386.014	177.534	2.282	3.269	197.441	116.067
OW LMF-02-A_0920_2	9/20/2010	LMF	A	Overlying Water	OverWater	7.6597	3.5	1.6	10	15.85	cont	est	est	est	2.756	6.615	366.537	170.014	2.148	2.963	178.938	108.678
LMF02-A INF SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	cont	cont	cont	none	34.420	154.607	1525.614	1762.261	20.020	128.172	1448.950	1547.781

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
LMF02-A MID SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	cont	cont	cont	none	14.827	120.420	1809.892	1511.163	12.657	105.741	1732.192	1366.651
LMF02-A OUF SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	cont	cont	cont	none	12.568	105.232	1939.185	1398.692	11.387	93.985	1855.269	1280.990
LMF02A PPR1 SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	bdl	bdl	cont	cont	32.284	84.135	4452.728	1549.089	30.610	78.352	4191.656	1466.698
LMF02A PPR2 SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	bdl	cont	cont	cont	27.541	81.911	4150.216	1456.235	26.079	76.255	3903.648	1375.806
LMF02A PPR3 SED_0801	8/1/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	bdl	bdl	cont	cont	31.273	84.516	4403.000	1532.742	29.643	78.733	4146.072	1450.350
LMF-02-A INF SED	8/20/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	cont	cont	none	none	29.485	149.714	1536.181	1730.873	18.492	125.059	1465.318	1525.549
LMF-02-A OUF SED	8/20/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	cont	cont	none	none	13.557	111.841	1681.014	1464.736	11.814	98.242	1627.142	1328.725
LMF02-A MID SED_0820	8/20/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	cont	cont	none	none	12.320	102.182	1849.053	1389.538	11.209	91.189	1777.569	1273.143
LMF02A PPR1 SED_0820	8/20/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	bdl	cont	cont	cont	29.216	83.563	4272.464	1496.123	27.687	77.907	4021.752	1415.040
LMF02A PPR2 SED_0820	8/20/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	bdl	cont	cont	cont	31.520	84.580	4417.504	1537.973	29.879	78.924	4158.504	1455.581
LMF02A PPR3 SED_0820	8/20/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	bdl	cont	cont	cont	35.353	87.503	4657.856	1621.018	33.543	81.657	4388.496	1536.665
LMF02-A INF SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	cont	cont	cont	none	13.635	115.590	1647.862	1479.122	11.702	101.547	1585.287	1340.495
LMF02-A MID SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	cont	cont	none	none	12.635	108.727	1653.249	1435.311	11.150	96.082	1596.269	1306.492
LMF02-A OUF SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	DGT	7.9092	29.6	27.7	10	19.75	cont	cont	none	none	12.298	105.931	1705.256	1413.732	10.995	93.985	1643.718	1290.145
LMF02A PPR1 SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	bdl	cont	cont	cont	23.977	82.864	3936.800	1394.115	22.685	77.208	3702.664	1315.647
LMF02A PPR2 SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	bdl	cont	cont	none	33.206	85.914	4529.392	1566.091	31.486	80.132	4264.176	1483.045
LMF02A PPR3 SED_0919	9/19/2010	LMF	A	Porewater (1 cm)	Peeper	7.9092	29.6	27.7	10	19.75	bdl	est	cont	none	26.192	83.118	4085.984	1430.733	24.798	77.399	3843.560	1350.957
PW LMF-02-A_0723	7/23/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	50.8	48.9	10	19.75	cont	cont	none	cont	49.450	147.935	7225.064	2450.817	47.853	142.089	6974.352	2367.772
PW LMF-02-A_0726	7/26/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	41.3	39.4	10	19.75	cont	cont	cont	cont	45.200	123.915	6236.720	2113.405	43.447	117.941	5971.504	2029.052
PW LMF-02-A_0802	8/2/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	49.6	47.7	10	19.75	cont	cont	cont	cont	61.039	154.735	7844.592	2629.986	59.049	148.571	7569.016	2543.017
PW LMF-02-A_0809	8/9/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	36.8	34.9	10	19.75	cont	cont	cont	cont	50.518	117.306	6160.056	2108.828	48.415	111.015	5874.120	2021.205
PW LMF-02-A_0816	8/16/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	25.3	23.4	10	19.75	cont	cont	cont	cont	37.006	78.988	4386.424	1556.282	34.915	72.887	4100.488	1469.313
PW LMF-02-A_0823	8/23/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	16.9	15.0	10	19.75	none	cont	none	cont	26.743	51.326	3066.560	1137.132	24.697	45.429	2782.696	1050.817
PW LMF-02-A_0830	8/30/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	21.4	19.5	10	19.75	cont	cont	cont	cont	31.082	64.563	3696.448	1326.109	29.036	58.659	3412.584	1240.448
PW LMF-02-A_0906	9/6/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	18.3	16.4	10	19.75	none	none	none	none	25.899	54.154	3149.440	1140.402	23.955	48.378	2871.792	1055.395
PW LMF-02-A_0913	9/13/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	17.8	15.9	10	19.75	cont	none	none	none	25.551	52.298	3074.848	1114.900	23.618	46.567	2797.200	1030.546
PW LMF-02-A_0920	9/20/2010	LMF	A	Porewater (2.5 cm)	PoreWater	7.9092	18.0	16.1	10	19.75	bdl	cont	cont	cont	25.349	52.298	3074.848	1109.668	23.438	46.649	2801.344	1025.315
SWI LMF-02-A_0726	7/26/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	2.3	1.5	10	17.05	cont	cont	cont	cont	2.199	3.478	224.398	124.306	2.000	2.282	154.012	101.681
LMF02-A INF H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	cont	cont	cont	cont	1.699	4.997	268.738	141.569	1.261	2.352	135.612	85.072
LMF02-A MID H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	cont	cont	cont	cont	1.667	5.054	266.459	141.242	1.233	2.377	134.390	84.615
LMF02-A OUF H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	cont	cont	cont	cont	1.594	5.084	256.306	140.654	1.170	2.386	129.231	83.699
LMF02A PPR1 H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	bdl	bdl	cont	cont	2.261	5.720	336.700	159.290	1.810	2.734	171.209	104.101
LMF02A PPR2 H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	bdl	bdl	cont	cont	2.184	5.724	332.142	157.525	1.743	2.736	168.619	102.532
LMF02A PPR3 H2O_0801	8/1/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	bdl	bdl	cont	cont	2.203	5.756	334.214	158.048	1.760	2.751	169.800	102.924
SWI LMF-02-A_0802	8/2/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	4.0	2.1	10	17.05	cont	cont	cont	cont	2.656	6.142	381.041	173.218	2.157	3.142	206.475	117.048
SWI LMF-02-A_0809	8/9/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	5.3	3.4	10	17.05	cont	cont	cont	cont	3.222	8.344	517.378	217.749	2.705	5.277	338.565	160.990
SWI LMF-02-A_0816	8/16/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	3.7	1.7	10	17.05	cont	est	cont	cont	2.571	5.645	351.618	164.260	2.074	2.655	177.177	108.155
SWI LMF-02-A_0816_2	8/16/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	4.0	2.1	10	17.05	cont	cont	cont	cont	2.633	6.191	382.284	173.153	2.135	3.181	207.822	116.917
LMF-02-A INF H2O	8/20/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	cont	cont	none	cont	1.307	5.667	207.179	142.681	0.898	2.615	104.843	81.018
LMF-02-A OUF H2O	8/20/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	cont	cont	cont	cont	1.272	6.304	184.346	150.462	0.822	2.856	93.965	82.522
LMF02-A MID H2O_0820	8/20/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	cont	cont	cont	cont	1.307	5.694	206.848	143.008	0.896	2.625	104.698	81.084
LMF02A PPR1 H2O_0820	8/20/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	bdl	cont	cont	cont	2.416	5.684	345.195	162.363	1.944	2.720	176.058	106.716
LMF02A PPR2 H2O_0820	8/20/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	cont	cont	cont	none	2.476	5.685	348.925	163.606	1.998	2.721	178.068	107.894
LMF02A PPR3 H2O_0820	8/20/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	bdl	cont	cont	cont	2.416	5.682	345.610	161.971	1.941	2.718	176.265	106.390
SWI LMF-02-A_0823	8/23/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	2.9	1.5	10	17.05	cont	none	cont	cont	2.446	4.455	285.936	143.073	2.078	2.298	158.011	102.466
SWI LMF-02-A_0830	8/30/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	3.5	1.6	10	17.05	cont	cont	cont	cont	2.662	5.598	346.853	164.914	2.168	2.539	169.800	108.940
SWI LMF-02-A_0830_2	8/30/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	4.9	3.0	10	17.05	cont	cont	cont	cont	3.074	7.924	481.118	207.286	2.574	4.791	302.305	150.724
SWI LMF-02-A_0906	9/6/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	3.0	1.5	10	17.05	cont	cont	cont	cont	2.177	4.609	279.306	140.196	1.821	2.303	149.143	97.496
SWI LMF-02-A_0913	9/13/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	3.1	1.5	10	17.05	cont	cont	cont	cont	2.328	4.846	298.368	147.193	1.922	2.297	152.043	99.720
LMF02-A INF H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	cont	cont	cont	cont	1.598	5.059	256.306	140.719	1.176	2.378	129.251	83.895
LMF02-A MID H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	cont	cont	cont	cont	1.604	4.979	254.234	140.785	1.184	2.341	128.340	84.157
LMF02-A OUF H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	DGT	7.5211	3.7	1.8	10	17.05	cont	cont	none	cont	1.577	5.043	252.162	140.654	1.157	2.367	127.242	83.699
LMF02A PPR1 H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	bdl	cont	cont	cont	2.771	5.770	366.744	169.752	2.256	2.765	188.138	113.452
LMF02A PPR2 H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	bdl	bdl	cont	cont	2.711	5.778	363.636	168.902	2.202	2.768	186.376	112.667
LMF02A PPR3 H2O_0919	9/19/2010	LMF	A	Sediment-Water Interface	Peeper	7.5211	3.7	1.8	10	17.05	bdl	cont	cont	cont	2.660	5.746	360.114	167.922	2.162	2.753	184.408	111.817
SWI LMF-02-A_0920	9/20/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	3.7	1.8	10	17.05	cont	cont	cont	cont	2.843	5.860	371.095	172.695	2.328	2.818	191.059	116.329

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
SWI LMF-02-A_0920_2	9/20/2010	LMF	A	Sediment-Water Interface	SWI	7.5211	4.4	2.4	10	17.05	cont	cont	cont	cont	2.891	6.742	421.652	186.819	2.386	3.730	244.910	130.715
OW LMF-02-B_0723	7/23/2010	LMF	B	Overlying Water	OverWater	7.7193	2.8	1.5	10	15.15	cont	none	none	none	2.633	5.586	303.548	153.993	2.171	2.943	172.453	109.397
OW LMF-02-B_0726	7/26/2010	LMF	B	Overlying Water	OverWater	7.7193	2.3	1.5	10	15.15	cont	cont	cont	cont	2.460	4.423	248.433	134.507	2.193	2.927	173.198	109.005
OW LMF-02-B_0802	8/2/2010	LMF	B	Overlying Water	OverWater	7.7193	2.2	1.5	10	15.15	cont	cont	cont	none	2.347	4.325	239.316	130.322	2.105	2.941	170.795	107.043
OW LMF-02-B_0809	8/9/2010	LMF	B	Overlying Water	OverWater	7.7193	3.9	2.0	10	15.15	none	none	none	none	3.017	7.829	414.814	189.304	2.340	3.967	224.605	124.895
OW LMF-02-B_0816	8/16/2010	LMF	B	Overlying Water	OverWater	7.7193	2.8	1.5	10	15.15	est	est	none	cont	2.617	5.617	305.206	152.293	2.147	2.949	172.763	107.632
OW LMF-02-B_0823	8/23/2010	LMF	B	Overlying Water	OverWater	7.7193	4.2	2.3	10	15.15	est	none	none	none	3.053	8.344	435.949	196.824	2.383	4.458	246.775	132.415
OW LMF-02-B_0830	8/30/2010	LMF	B	Overlying Water	OverWater	7.7193	2.8	1.5	10	15.15	cont	none	cont	cont	2.478	5.591	295.467	147.716	2.054	3.009	170.857	105.670
OW LMF-02-B_0906	9/6/2010	LMF	B	Overlying Water	OverWater	7.7193	3.0	1.5	10	15.15	cont	est	cont	cont	2.528	5.934	311.214	155.236	2.041	2.976	168.702	106.520
OW LMF-02-B_0913	9/13/2010	LMF	B	Overlying Water	OverWater	7.7193	8.0	6.1	10	15.15	cont	none	none	none	4.346	16.477	808.702	327.669	3.694	12.385	621.600	262.475
OW LMF-02-B_0920	9/20/2010	LMF	B	Overlying Water	OverWater	7.7193	3.8	1.9	10	15.15	none	none	none	none	3.133	7.556	406.734	188.454	2.446	3.689	214.038	124.045
PW LMF-02-B_0723	7/23/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	41.0	39.1	10	19.05	none	none	none	none	46.898	128.681	6124.832	2125.829	45.032	122.263	5863.760	2039.514
PW LMF-02-B_0726	7/26/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	45.1	43.2	10	19.05	cont	cont	cont	cont	56.936	148.698	7065.520	2425.315	54.868	142.152	6792.016	2337.039
PW LMF-02-B_0802	8/2/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	51.1	49.2	10	19.05	cont	cont	cont	cont	64.693	169.223	7985.488	2726.109	62.624	162.678	7711.984	2637.833
PW LMF-02-B_0809	8/9/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	42.1	40.2	10	19.05	cont	cont	cont	cont	63.085	147.109	7160.832	2469.780	60.702	140.310	6870.752	2377.580
PW LMF-02-B_0816	8/16/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	26.2	24.3	10	19.05	cont	cont	cont	cont	39.625	87.630	4527.320	1618.403	37.388	81.148	4241.384	1528.164
PW LMF-02-B_0823	8/23/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	22.1	20.2	10	19.05	none	none	none	none	38.366	77.590	4121.208	1487.623	35.949	70.790	3822.840	1396.077
PW LMF-02-B_0830	8/30/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	23.4	21.5	10	19.05	cont	cont	cont	cont	35.567	76.827	4059.048	1458.851	33.352	70.345	3773.112	1369.921
PW LMF-02-B_0906	9/6/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	23.6	21.7	10	19.05	none	none	none	cont	33.341	75.048	3938.872	1407.847	31.273	68.820	3661.224	1320.878
PW LMF-02-B_0913	9/13/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	16.7	14.8	10	19.05	cont	none	none	none	25.360	52.775	2921.520	1080.897	23.280	46.611	2643.872	993.928
PW LMF-02-B_0920	9/20/2010	LMF	B	Porewater (2.5 cm)	PoreWater	7.9818	16.7	14.8	10	19.05	cont	cont	cont	none	25.124	52.406	2907.016	1071.742	23.055	46.287	2629.368	985.427
SWI LMF-02-B_0726	7/26/2010	LMF	B	Sediment-Water Interface	SWI	7.445	2.7	1.5	10	16.55	cont	cont	cont	cont	2.285	3.618	250.090	132.088	2.009	2.016	147.630	99.524
SWI LMF-02-B_0802	8/2/2010	LMF	B	Sediment-Water Interface	SWI	7.445	4.4	2.5	10	16.55	cont	cont	cont	cont	2.462	6.118	390.986	175.638	2.035	3.428	228.542	122.672
SWI LMF-02-B_0809	8/9/2010	LMF	B	Sediment-Water Interface	SWI	7.445	4.8	2.9	10	16.55	cont	cont	cont	cont	2.608	6.755	431.598	186.492	2.172	4.010	266.045	133.461
SWI LMF-02-B_0816	8/16/2010	LMF	B	Sediment-Water Interface	SWI	7.445	4.4	2.5	10	16.55	cont	cont	cont	cont	2.687	6.069	401.968	179.692	2.236	3.381	234.136	126.399
SWI LMF-02-B_0823	8/23/2010	LMF	B	Sediment-Water Interface	SWI	7.445	2.9	1.5	10	16.55	cont	cont	cont	cont	2.265	4.019	269.982	136.730	1.944	2.060	147.402	97.954
SWI LMF-02-B_0830	8/30/2010	LMF	B	Sediment-Water Interface	SWI	7.445	3.2	1.5	10	16.55	cont	none	cont	cont	2.297	4.478	293.810	144.577	1.915	2.084	146.656	97.954
SWI LMF-02-B_0906	9/6/2010	LMF	B	Sediment-Water Interface	SWI	7.445	2.4	1.5	10	16.55	cont	cont	cont	cont	2.076	3.353	223.154	122.214	1.872	2.065	144.211	97.104
SWI LMF-02-B_0913	9/13/2010	LMF	B	Sediment-Water Interface	SWI	7.445	3.7	1.8	10	16.55	cont	cont	cont	cont	2.505	5.177	340.637	159.879	2.064	2.459	172.473	107.174
SWI LMF-02-B_0920	9/20/2010	LMF	B	Sediment-Water Interface	SWI	7.445	4.1	2.2	10	16.55	cont	cont	cont	cont	2.681	5.734	381.870	172.760	2.234	3.034	212.587	119.794
OW LMF-02-C_0723	7/23/2010	LMF	C	Overlying Water	OverWater	7.7696	1.6	1.5	10	15.05	est	none	cont	est	2.309	3.324	187.495	115.610	2.275	3.135	178.420	112.536
OW LMF-02-C_0726	7/26/2010	LMF	C	Overlying Water	OverWater	7.7696	2.6	1.5	10	15.05	cont	cont	cont	cont	2.775	5.584	295.467	154.255	2.343	3.176	180.513	115.021
OW LMF-02-C_0802	8/2/2010	LMF	C	Overlying Water	OverWater	7.7696	3.7	1.7	10	15.05	cont	cont	cont	cont	3.072	7.803	398.031	186.296	2.343	3.684	203.595	119.794
OW LMF-02-C_0809	8/9/2010	LMF	C	Overlying Water	OverWater	7.7696	5.4	3.5	10	15.05	cont	none	none	none	3.453	11.489	554.053	239.916	2.753	7.301	365.501	173.284
OW LMF-02-C_0816	8/16/2010	LMF	C	Overlying Water	OverWater	7.7696	10.8	8.9	10	15.05	none	none	none	cont	27.934	27.426	1908.519	780.757	25.562	22.527	1602.692	693.788
OW LMF-02-C_0823	8/23/2010	LMF	C	Overlying Water	OverWater	7.7696	2.8	1.5	10	15.05	est	none	none	est	2.593	5.795	298.782	151.836	2.132	3.143	174.338	108.874
OW LMF-02-C_0830	8/30/2010	LMF	C	Overlying Water	OverWater	7.7696	2.8	1.5	10	15.05	cont	none	cont	cont	2.442	6.024	299.611	149.874	1.981	3.194	170.816	105.213
OW LMF-02-C_0906	9/6/2010	LMF	C	Overlying Water	OverWater	7.7696	2.9	1.5	10	15.05	cont	none	cont	cont	2.442	6.162	304.791	153.078	1.954	3.165	168.785	105.213
OW LMF-02-C_0913	9/13/2010	LMF	C	Overlying Water	OverWater	7.7696	3.5	1.6	10	15.05	cont	none	none	none	2.797	7.397	367.366	176.553	2.107	3.282	178.233	110.640
OW LMF-02-C_0920	9/20/2010	LMF	C	Overlying Water	OverWater	7.7696	3.6	1.7	10	15.05	cont	none	none	none	3.295	7.657	400.310	188.781	2.530	3.518	201.357	121.952
PW LMF-02-C_0723	7/23/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	34.0	32.1	10	18.95	cont	cont	cont	cont	40.513	108.918	5223.512	1838.767	38.602	102.563	4960.368	1751.798
PW LMF-02-C_0726	7/26/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	30.7	28.8	10	18.95	cont	cont	cont	cont	36.736	97.607	4738.664	1676.600	34.836	91.252	4475.520	1589.631
PW LMF-02-C_0802	8/2/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	30.9	29.0	10	18.95	cont	cont	cont	cont	42.952	104.343	5148.920	1821.765	40.794	97.734	4867.128	1732.181
PW LMF-02-C_0809	8/9/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	29.1	27.2	10	18.95	cont	cont	cont	cont	43.492	100.339	5032.888	1787.109	41.221	93.603	4744.880	1696.217
PW LMF-02-C_0816	8/16/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	20.4	18.5	10	18.95	cont	cont	cont	cont	31.992	68.693	3657.080	1343.111	29.766	62.110	3373.216	1253.526
PW LMF-02-C_0823	8/23/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	17.0	15.1	10	18.95	none	none	none	none	23.674	52.826	2869.720	1065.857	21.707	46.751	2600.360	980.196
PW LMF-02-C_0830	8/30/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	18.5	16.6	10	18.95	cont	cont	cont	cont	27.147	59.447	3203.312	1180.943	25.090	53.175	2925.664	1093.321
PW LMF-02-C_0906	9/6/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	10.0	8.0	10	18.95	none	cont	cont	none	14.490	29.803	1745.660	693.788	12.714	24.001	1484.795	610.416
PW LMF-02-C_0913	9/13/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	10.8	8.9	10	18.95	cont	none	none	none	16.749	33.235	1960.734	767.679	14.838	27.274	1691.788	682.672
PW LMF-02-C_0920	9/20/2010	LMF	C	Porewater (2.5 cm)	PoreWater	7.9982	11.6	9.7	10	18.95	cont	cont	none	none	17.851	36.043	2101.008	810.836	15.895	30.013	1828.954	725.175
SWI LMF-02-C_0726	7/26/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	2.0	1.5	10	16.35	cont	cont	cont	cont	2.188	2.588	188.801	114.825	2.082	1.960	147.319	101.878
SWI LMF-02-C_0802	8/2/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	3.9	2.0	10	16.35	cont	cont	cont	cont	2.444	5.088	344.366	161.252	2.026	2.542	182.046	109.594
SWI LMF-02-C_0809	8/9/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	5.9	3.9	10	16.35	cont	cont	cont	cont	2.777	7.924	512.198	212.060	2.362	5.264	349.754	160.009
SWI LMF-02-C_0809_2	8/9/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	5.2	3.3	10	16.35	cont	cont	cont	cont	2.710	6.996	462.056	196.170	2.288	4.371	298.161	144.120
SWI LMF-02-C_0816	8/16/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	4.6	2.7	10	16.35	cont	cont	cont	cont	2.625	6.216	412.742	181.261	2.203	3.578	247.397	129.407
SWI LMF-02-C_0823	8/23/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	4.7	2.8	10	16.35	cont	cont	none	cont	2.642	6.231	416.058	183.681	2.221	3.639	252.577	131.761

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
SWI LMF-02-C_0830	8/30/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	3.6	1.7	10	16.35	cont	cont	cont	cont	2.223	4.832	317.430	150.855	1.821	2.251	157.534	99.654
SWI LMF-02-C_0906	9/6/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	3.6	1.6	10	16.35	cont	cont	cont	cont	2.223	4.737	311.836	149.939	1.827	2.166	152.271	98.804
SWI LMF-02-C_0913	9/13/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	3.2	1.5	10	16.35	cont	cont	cont	cont	2.245	4.254	286.765	142.289	1.877	1.967	142.201	96.450
SWI LMF-02-C_0920	9/20/2010	LMF	C	Sediment-Water Interface	SWI	7.4125	3.4	1.5	10	16.35	cont	cont	cont	cont	2.701	4.514	319.502	156.413	2.268	2.004	153.535	105.932
OW LMF-02-D_0723	7/23/2010	LMF	D	Overlying Water	OverWater	7.7218	1.6	1.5	10	15.65	cont	none	cont	none	2.273	3.062	180.119	112.994	2.257	2.963	175.167	111.359
OW LMF-02-D_0726	7/26/2010	LMF	D	Overlying Water	OverWater	7.7218	2.1	1.5	10	15.65	cont	cont	cont	cont	2.415	4.244	239.316	130.584	2.185	2.999	176.783	109.463
OW LMF-02-D_0802	8/2/2010	LMF	D	Overlying Water	OverWater	7.7218	3.4	1.5	10	15.65	cont	cont	cont	est	3.216	6.844	374.618	180.869	2.529	3.039	183.227	117.964
OW LMF-02-D_0809	8/9/2010	LMF	D	Overlying Water	OverWater	7.7218	10.4	8.5	10	15.65	none	none	none	none	5.143	22.089	1050.297	407.118	4.478	17.799	860.709	341.205
OW LMF-02-D_0816	8/16/2010	LMF	D	Overlying Water	OverWater	7.7218	2.3	1.5	10	15.65	est	est	none	cont	2.493	4.617	256.099	136.796	2.203	2.976	174.380	109.332
OW LMF-02-D_0823	8/23/2010	LMF	D	Overlying Water	OverWater	7.7218	3.1	1.5	10	15.65	none	none	none	none	2.928	6.240	337.736	167.268	2.363	3.032	178.834	114.433
OW LMF-02-D_0830	8/30/2010	LMF	D	Overlying Water	OverWater	7.7218	2.9	1.5	10	15.65	cont	none	cont	none	2.482	5.842	304.791	151.509	2.019	3.009	169.262	105.343
OW LMF-02-D_0913	9/13/2010	LMF	D	Overlying Water	OverWater	7.7218	5.4	3.5	10	15.65	cont	none	none	none	3.262	11.019	543.693	235.404	2.626	7.022	359.078	170.799
OW LMF-02-D_0920	9/20/2010	LMF	D	Overlying Water	OverWater	7.7218	4.5	2.5	10	15.65	none	none	none	none	14.130	11.349	787.360	415.030	12.433	6.482	504.118	335.255
PW LMF-02-D_0723	7/23/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	46.0	44.1	10	19.25	cont	cont	none	cont	55.846	152.447	6993.000	2405.698	53.834	145.902	6723.640	2317.422
PW LMF-02-D_0802	8/2/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	42.7	40.8	10	19.25	cont	cont	cont	cont	59.038	148.443	6916.336	2373.003	56.813	141.580	6634.544	2282.111
PW LMF-02-D_0809	8/9/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	38.6	36.7	10	19.25	cont	none	cont	cont	58.555	138.530	6547.520	2259.878	56.161	131.477	6253.296	2167.679
PW LMF-02-D_0816	8/16/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	25.3	23.4	10	19.25	cont	cont	cont	cont	40.322	87.693	4417.504	1578.515	37.972	80.958	4125.352	1486.969
PW LMF-02-D_0823	8/23/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	24.9	23.0	10	19.25	none	cont	cont	cont	39.771	86.423	4353.272	1554.974	37.422	79.623	4061.120	1463.428
PW LMF-02-D_0830	8/30/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	22.1	20.2	10	19.25	cont	cont	cont	cont	34.499	74.412	3822.840	1375.806	32.228	67.804	3536.904	1286.221
PW LMF-02-D_0906	9/6/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	17.6	15.7	10	19.25	none	none	cont	cont	26.158	56.480	2981.608	1089.397	24.078	50.208	2703.960	1001.775
PW LMF-02-D_0913	9/13/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	15.5	13.6	10	19.25	cont	none	none	none	24.045	49.852	2689.456	997.198	21.943	43.580	2409.736	908.921
PW LMF-02-D_0920	9/20/2010	LMF	D	Porewater (2.5 cm)	PoreWater	7.9967	14.7	12.8	10	19.25	cont	cont	none	cont	23.280	47.164	2577.568	959.271	21.167	40.911	2297.848	871.649
SWI LMF-02-D_0726	7/26/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	2.5	1.5	10	16.75	cont	cont	cont	cont	2.081	2.682	207.407	118.683	1.902	1.612	130.412	94.816
SWI LMF-02-D_0802	8/2/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	4.3	2.4	10	16.75	cont	cont	cont	cont	2.765	4.762	365.915	171.976	2.399	2.607	209.272	124.764
SWI LMF-02-D_0809	8/9/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	5.0	3.0	10	16.75	cont	cont	cont	cont	2.530	5.520	406.319	177.272	2.176	3.343	254.234	130.453
SWI LMF-02-D_0816	8/16/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	3.3	1.5	10	16.75	cont	cont	cont	cont	2.365	3.608	279.927	141.569	2.021	1.615	134.079	97.039
SWI LMF-02-D_0823	8/23/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	3.9	2.0	10	16.75	cont	cont	cont	cont	2.598	4.424	336.700	160.140	2.231	2.237	179.394	113.125
SWI LMF-02-D_0830	8/30/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	2.7	1.5	10	16.75	cont	cont	cont	cont	2.082	2.975	225.641	122.672	1.865	1.646	131.468	93.769
SWI LMF-02-D_0906	9/6/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	3.4	1.5	10	16.75	cont	cont	cont	cont	2.078	3.716	271.432	136.338	1.750	1.628	127.096	91.023
SWI LMF-02-D_0913	9/13/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	2.7	1.5	10	16.75	cont	cont	cont	cont	1.944	2.945	220.046	119.271	1.727	1.610	126.496	89.846
SWI LMF-02-D_0920	9/20/2010	LMF	D	Sediment-Water Interface	SWI	7.2825	2.9	1.5	10	16.75	cont	est	cont	est	9.186	3.531	400.310	259.925	8.599	1.858	237.244	218.795
OW NP-03-A_0723	7/23/2010	NP	A	Overlying Water	OverWater	7.7273	2.3	1.5	10	15.05	none	none	none	est	2.663	4.450	254.442	138.365	2.384	2.960	178.524	113.059
OW NP-03-A_0726	7/26/2010	NP	A	Overlying Water	OverWater	7.7273	2.4	1.5	10	15.05	cont	cont	cont	cont	2.437	4.591	253.820	135.357	2.138	2.921	170.463	106.913
OW NP-03-A_0802	8/2/2010	NP	A	Overlying Water	OverWater	7.7273	2.4	1.5	10	15.05	cont	cont	cont	cont	2.466	4.835	263.766	138.496	2.138	2.973	171.893	107.305
OW NP-03-A_0809	8/9/2010	NP	A	Overlying Water	OverWater	7.7273	4.9	3.0	10	15.05	none	none	none	none	3.478	9.920	518.207	223.372	2.773	5.957	325.097	158.113
OW NP-03-A_0816	8/16/2010	NP	A	Overlying Water	OverWater	7.7273	3.7	1.8	10	15.05	est	est	none	cont	2.976	7.371	392.022	181.523	2.283	3.498	200.777	116.721
OW NP-03-A_0823	8/23/2010	NP	A	Overlying Water	OverWater	7.7273	2.6	1.5	10	15.05	est	none	none	none	2.562	5.205	282.414	145.100	2.171	2.989	173.261	108.220
OW NP-03-A_0830	8/30/2010	NP	A	Overlying Water	OverWater	7.7273	4.1	2.2	10	15.05	cont	none	cont	none	2.908	8.413	424.553	191.985	2.259	4.429	236.830	127.837
OW NP-03-A_0906	9/6/2010	NP	A	Overlying Water	OverWater	7.7273	3.0	1.5	10	15.05	cont	est	cont	cont	2.509	5.964	309.142	154.190	2.021	3.001	167.749	105.670
OW NP-03-A_0913	9/13/2010	NP	A	Overlying Water	OverWater	7.7273	3.9	2.0	10	15.05	cont	none	cont	none	3.047	8.039	414.814	192.704	2.388	4.078	224.605	128.164
OW NP-03-A_0920	9/20/2010	NP	A	Overlying Water	OverWater	7.7273	4.3	2.4	10	15.05	none	none	none	none	3.432	8.680	462.885	207.940	2.727	4.753	268.117	143.008
PW NP-03-A_0723	7/23/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	12.9	11.0	10	17.95	none	none	cont	cont	16.738	26.804	2040.091	794.489	15.344	22.781	1785.028	719.290
PW NP-03-A_0726	7/26/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	11.9	10.0	10	17.95	none	none	cont	cont	16.333	24.974	1927.996	764.409	14.906	20.913	1671.482	689.211
PW NP-03-A_0802	8/2/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	11.5	9.6	10	17.95	cont	none	cont	cont	17.457	24.713	1943.743	782.064	15.962	20.589	1681.221	705.558
PW NP-03-A_0809	8/9/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	8.2	6.3	10	17.95	cont	est	cont	cont	14.771	17.666	1492.462	648.473	13.276	13.548	1229.318	572.293
PW NP-03-A_0816	8/16/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	3.9	2.0	10	17.95	cont	none	cont	cont	7.410	7.714	734.110	352.321	6.190	3.998	491.478	281.308
PW NP-03-A_0823	8/23/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	7.3	5.4	10	17.95	none	none	none	cont	12.556	15.296	1304.117	564.512	11.143	11.279	1046.153	489.967
PW NP-03-A_0830	8/30/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	7.2	5.3	10	17.95	cont	cont	cont	cont	11.309	14.743	1239.263	524.951	9.967	10.828	987.308	451.780
PW NP-03-A_0906	9/6/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	6.4	4.4	10	17.95	none	cont	cont	cont	10.668	13.040	1122.610	493.695	9.337	9.112	870.862	420.523
PW NP-03-A_0913	9/13/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	6.0	4.1	10	17.95	none	none	none	none	10.289	12.271	1069.152	474.012	8.969	8.363	817.818	401.168
PW NP-03-A_0920	9/20/2010	NP	A	Porewater (2.5 cm)	PoreWater	7.72	6.8	4.9	10	17.95	cont	none	cont	cont	10.531	13.872	1164.878	495.591	9.228	9.970	915.202	423.073
SWI NP-03-A_0726	7/26/2010	NP	A	Sediment-Water Interface	SWI	7.5275	2.3	1.5	10	16.45	cont	cont	cont	cont	2.216	3.578	229.370	125.810	2.003	2.302	154.654	101.681
SWI NP-03-A_0802	8/2/2010	NP	A	Sediment-Water Interface	SWI	7.5275	2.3	1.5	10	16.45	cont	cont	cont	cont	2.200	3.569	229.785	124.437	1.984	2.290	154.654	100.243
SWI NP-03-A_0809	8/9/2010	NP	A	Sediment-Water Interface	SWI	7.5275	4.7	2.8	10	16.45	cont	none	none	cont	2.851	7.390	450.453	195.058	2.348	4.336	275.369	138.496
SWI NP-03-A_0816	8/16/2010	NP	A	Sediment-Water Interface	SWI	7.5275	4.3	2.4	10	16.45	cont	cont	cont	cont	2.828	6.723	416.472	184.727	2.313	3.674	239.109	127.968
SWI NP-03-A_0823	8/23/2010	NP	A	Sediment-Water Interface	SWI	7.5275	4.5	2.5	10	16.45	cont	none	none	cont	2.856	7.054	433.255	189.173	2.340	3.976	255.478	132.480

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
SWI NP-03-A_0830	8/30/2010	NP	A	Sediment-Water Interface	SWI	7.5275	3.8	1.8	10	16.45	est	none	none	none	2.528	5.891	358.042	165.502	2.039	2.842	184.159	109.463
SWI NP-03-A_0906	9/6/2010	NP	A	Sediment-Water Interface	SWI	7.5275	3.1	1.5	10	16.45	cont	cont	cont	cont	2.286	4.908	297.125	146.212	1.884	2.333	151.629	98.935
SWI NP-03-A_0913	9/13/2010	NP	A	Sediment-Water Interface	SWI	7.5275	4.1	2.2	10	16.45	cont	none	cont	cont	2.691	6.425	390.572	177.403	2.203	3.376	216.524	121.495
SWI NP-03-A_0920	9/20/2010	NP	A	Sediment-Water Interface	SWI	7.5275	3.9	1.9	10	16.45	cont	cont	cont	cont	2.766	6.137	381.870	172.237	2.254	3.057	202.455	116.002
OW NP-03-B_0723	7/23/2010	NP	B	Overlying Water	OverWater	7.7272	1.8	1.5	10	15.35	est	est	none	none	2.345	3.520	203.118	120.318	2.249	2.998	176.990	111.621
OW NP-03-B_0726	7/26/2010	NP	B	Overlying Water	OverWater	7.7272	2.5	1.5	10	15.35	cont	cont	cont	cont	2.469	4.974	269.153	142.158	2.123	2.970	171.147	108.613
OW NP-03-B_0802	8/2/2010	NP	B	Overlying Water	OverWater	7.7272	3.0	1.5	10	15.35	cont	cont	cont	cont	2.715	6.100	326.133	160.075	2.176	2.990	173.613	108.547
OW NP-03-B_0809	8/9/2010	NP	B	Overlying Water	OverWater	7.7272	4.6	2.6	10	15.35	none	none	none	none	3.273	9.214	479.046	211.406	2.587	5.273	287.801	146.539
OW NP-03-B_0816	8/16/2010	NP	B	Overlying Water	OverWater	7.7272	3.4	1.5	10	15.35	est	est	none	cont	2.760	6.761	356.798	169.622	2.101	2.963	171.147	106.324
OW NP-03-B_0823	8/23/2010	NP	B	Overlying Water	OverWater	7.7272	2.7	1.5	10	15.35	est	none	none	none	2.554	5.429	292.152	148.305	2.129	2.980	172.017	107.567
OW NP-03-B_0830	8/30/2010	NP	B	Overlying Water	OverWater	7.7272	4.2	2.2	10	15.35	cont	none	cont	cont	3.205	8.610	444.651	202.120	2.533	4.596	251.955	137.450
OW NP-03-B_0906	9/6/2010	NP	B	Overlying Water	OverWater	7.7272	2.6	1.5	10	15.35	cont	est	cont	cont	2.528	5.276	281.378	146.016	2.153	3.031	172.784	109.463
OW NP-03-B_0913	9/13/2010	NP	B	Overlying Water	OverWater	7.7272	5.0	3.0	10	15.35	none	none	none	none	3.532	9.983	524.423	226.380	2.829	6.046	331.520	161.448
OW NP-03-B_0920	9/20/2010	NP	B	Overlying Water	OverWater	7.7272	3.8	1.9	10	15.35	cont	none	none	none	3.167	7.714	412.121	190.285	2.469	3.799	218.389	125.418
PW NP-03-B_0723	7/23/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	16.9	15.0	10	18.45	none	none	cont	cont	22.921	42.023	2780.624	1046.240	21.234	37.200	2515.408	965.156
PW NP-03-B_0726	7/26/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	16.2	14.3	10	18.45	none	none	cont	cont	22.864	40.987	2722.608	1031.200	21.145	36.081	2453.248	950.117
PW NP-03-B_0802	8/2/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	12.5	10.6	10	18.45	cont	none	cont	cont	20.155	31.735	2229.472	887.996	18.402	26.842	1957.833	806.259
PW NP-03-B_0809	8/9/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	48.7	46.8	10	18.45	cont	est	cont	cont	53.024	127.092	7295.512	2436.431	51.316	121.945	7034.440	2354.694
PW NP-03-B_0816	8/16/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	7.1	5.2	10	18.45	none	none	none	cont	13.366	18.289	1403.366	599.365	11.702	13.338	1133.384	519.916
PW NP-03-B_0823	8/23/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	7.0	5.0	10	18.45	none	none	none	none	13.793	19.884	1453.715	616.628	12.118	14.419	1176.274	536.394
PW NP-03-B_0830	8/30/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	7.0	5.1	10	18.45	cont	cont	cont	cont	10.900	16.465	1249.830	519.262	9.417	11.959	995.389	442.690
PW NP-03-B_0906	9/6/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	5.9	4.0	10	18.45	cont	cont	cont	cont	10.314	13.993	1116.394	484.344	8.813	9.462	859.673	407.445
PW NP-03-B	9/13/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	5.1	3.2	10	18.45	none	none	none	cont	9.482	12.023	1001.398	442.167	7.983	7.530	744.677	365.595
PW NP-03-B_0920	9/20/2010	NP	B	Porewater (2.5 cm)	PoreWater	7.8308	6.5	4.5	10	18.45	none	none	cont	cont	10.252	15.143	1165.500	490.425	8.785	10.644	911.473	414.115
SWI NP-03-B_0726	7/26/2010	NP	B	Sediment-Water Interface	SWI	7.54	2.8	1.5	10	16.55	cont	cont	cont	cont	2.452	4.408	280.342	144.381	2.099	2.342	159.751	105.605
SWI NP-03-B_0802	8/2/2010	NP	B	Sediment-Water Interface	SWI	7.54	3.2	1.5	10	16.55	cont	cont	cont	cont	2.427	5.013	311.422	151.574	1.981	2.331	156.830	101.485
SWI NP-03-B_0802_2	8/2/2010	NP	B	Sediment-Water Interface	SWI	7.54	2.3	1.5	10	16.55	cont	cont	cont	cont	2.154	3.526	225.019	123.783	1.953	2.323	155.462	101.158
SWI NP-03-B_0809	8/9/2010	NP	B	Sediment-Water Interface	SWI	7.54	4.8	2.8	10	16.55	cont	none	none	cont	3.033	7.568	465.993	201.597	2.505	4.455	286.558	144.316
SWI NP-03-B_0816	8/16/2010	NP	B	Sediment-Water Interface	SWI	7.54	2.7	1.5	10	16.55	cont	cont	cont	cont	2.383	4.332	274.126	140.065	2.053	2.369	160.331	103.774
SWI NP-03-B_0823	8/23/2010	NP	B	Sediment-Water Interface	SWI	7.54	8.0	6.0	10	16.55	cont	none	cont	cont	3.870	13.059	765.397	298.375	3.346	9.805	586.583	240.374
SWI NP-03-B_0830	8/30/2010	NP	B	Sediment-Water Interface	SWI	7.54	3.0	1.5	10	16.55	cont	none	cont	cont	2.538	4.877	304.584	152.032	2.129	2.393	161.616	106.586
SWI NP-03-B_0906	9/6/2010	NP	B	Sediment-Water Interface	SWI	7.54	3.5	1.6	10	16.55	cont	cont	cont	cont	2.511	5.612	339.394	162.298	2.022	2.510	164.538	105.932
SWI NP-03-B_0913	9/13/2010	NP	B	Sediment-Water Interface	SWI	7.54	4.1	2.2	10	16.55	cont	cont	cont	cont	2.481	6.539	384.978	175.703	2.002	3.463	215.074	119.337
SWI NP-03-B_0920	9/20/2010	NP	B	Sediment-Water Interface	SWI	7.54	3.6	1.7	10	16.55	cont	cont	cont	cont	2.693	5.723	357.006	167.268	2.176	2.654	178.793	110.509
OW UMF-01-A_0723	7/23/2010	UMF	A	Overlying Water	OverWater	7.7367	2.5	1.5	10	15.55	est	est	cont	none	2.660	4.995	275.576	146.147	2.301	3.024	177.923	113.190
OW UMF-01-A_0726	7/26/2010	UMF	A	Overlying Water	OverWater	7.7367	3.1	1.5	10	15.55	cont	cont	cont	cont	2.742	6.191	329.862	162.690	2.179	3.002	174.172	109.528
OW UMF-01-A_0802	8/2/2010	UMF	A	Overlying Water	OverWater	7.7367	3.3	1.5	10	15.55	cont	cont	cont	cont	3.110	6.907	368.816	178.057	2.439	3.108	182.937	116.525
OW UMF-01-A_0809	8/9/2010	UMF	A	Overlying Water	OverWater	7.7367	3.9	1.9	10	15.55	cont	none	cont	est	3.125	7.994	418.337	190.939	2.419	3.984	223.983	125.680
OW UMF-01-A_0816	8/16/2010	UMF	A	Overlying Water	OverWater	7.7367	3.6	1.7	10	15.55	none	est	none	cont	3.009	7.448	391.815	182.896	2.310	3.481	198.912	117.702
OW UMF-01-A_0823	8/23/2010	UMF	A	Overlying Water	OverWater	7.7367	4.5	2.6	10	15.55	est	none	none	none	3.530	9.303	488.785	216.376	2.802	5.265	291.945	150.659
OW UMF-01-A_0830	8/30/2010	UMF	A	Overlying Water	OverWater	7.7367	2.5	1.5	10	15.55	cont	none	cont	cont	2.368	5.132	269.360	139.869	2.022	3.053	170.443	105.997
OW UMF-01-A_0906	9/6/2010	UMF	A	Overlying Water	OverWater	7.7367	1.8	1.5	10	15.55	cont	est	cont	cont	2.080	3.548	192.427	114.367	1.994	3.038	168.246	105.997
OW UMF-01-A_0913	9/13/2010	UMF	A	Overlying Water	OverWater	7.7367	4.9	3.0	10	15.55	cont	none	cont	cont	3.024	10.167	492.514	218.403	2.390	6.124	309.142	153.667
OW UMF-01-A_0920	9/20/2010	UMF	A	Overlying Water	OverWater	7.7367	3.2	1.5	10	15.55	cont	none	cont	cont	3.529	6.806	378.762	184.792	2.836	3.135	193.318	125.091
PW UMF-01-A_0723	7/23/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	27.1	25.2	10	18.45	none	none	none	cont	36.871	84.389	4332.552	1537.973	34.757	78.225	4063.192	1449.696
PW UMF-01-A_0726	7/26/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	28.8	26.9	10	18.45	none	none	cont	cont	40.929	92.777	4715.872	1668.099	38.714	86.423	4440.296	1578.515
PW UMF-01-A_0802	8/2/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	22.6	20.7	10	18.45	none	none	cont	cont	32.262	71.680	3739.960	1347.034	30.115	65.452	3466.456	1258.758
PW UMF-01-A_0809	8/9/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	15.6	13.7	10	18.45	cont	est	cont	cont	24.472	49.077	2743.328	1018.776	22.291	42.944	2467.752	931.154
PW UMF-01-A_0816	8/16/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	9.8	7.9	10	18.45	none	none	cont	cont	16.153	30.324	1813.829	711.443	14.119	24.344	1543.226	625.325
PW UMF-01-A_0823	8/23/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	7.5	5.5	10	18.45	none	none	cont	cont	12.837	22.616	1427.194	577.786	10.884	16.770	1160.320	493.237
PW UMF-01-A_0830	8/30/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	5.8	3.8	10	18.45	cont	cont	cont	cont	9.990	17.088	1121.366	474.928	8.164	11.387	861.123	391.555
PW UMF-01-A_0906	9/6/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	6.6	4.7	10	18.45	none	none	cont	cont	10.146	19.401	1195.958	491.275	8.388	13.739	940.895	408.688
PW UMF-01-A_0913	9/13/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	5.9	4.0	10	18.45	none	none	none	cont	10.282	17.647	1151.618	479.701	8.434	11.928	890.546	396.460
PW UMF-01-A_0920	9/20/2010	UMF	A	Porewater (2.5 cm)	PoreWater	8.0231	6.8	4.8	10	18.45	cont	none	none	cont	11.061	20.068	1263.920	515.927	9.208	14.349	1002.848	432.686
SWI UMF-01-A_0726	7/26/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	2.1	1.5	10	16.75	cont	cont	cont	cont	2.091	3.083	204.879	117.571	1.941	2.167	149.536	99.720
SWI UMF-01-A_0802	8/2/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	3.9	1.9	10	16.75	cont	cont	cont	cont	2.932	5.785	381.248	176.880	2.427	2.881	202.310	121.233

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
SWI UMF-01-A_0809	8/9/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	6.5	4.6	10	16.75	cont	cont	cont	cont	3.859	9.805	646.050	254.236	3.319	6.825	462.263	197.936
SWI UMF-01-A_0816	8/16/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	4.9	2.9	10	16.75	cont	cont	cont	cont	2.938	7.124	457.083	198.393	2.452	4.258	284.071	143.073
SWI UMF-01-A_0823	8/23/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	4.0	2.1	10	16.75	cont	none	cont	cont	2.814	5.949	386.428	176.488	2.324	3.062	210.515	121.364
SWI UMF-01-A_0830	8/30/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	3.8	1.9	10	16.75	cont	none	cont	cont	2.435	5.674	353.483	162.886	1.976	2.787	184.512	108.613
SWI UMF-01-A_0906	9/6/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	4.0	2.1	10	16.75	cont	none	none	cont	2.449	5.889	364.672	167.791	2.000	3.012	196.923	113.452
SWI UMF-01-A_0913	9/13/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	3.0	1.5	10	16.75	cont	cont	cont	cont	2.118	4.347	272.054	136.142	1.779	2.186	145.952	95.142
SWI UMF-01-A_0920	9/20/2010	UMF	A	Sediment-Water Interface	SWI	7.4875	4.4	2.4	10	16.75	cont	cont	cont	cont	3.258	6.533	433.048	194.143	2.750	3.616	251.955	138.888
OW UMF-01-B_0723	7/23/2010	UMF	B	Overlying Water	OverWater	7.7572	1.9	1.5	10	15.15	none	est	cont	none	2.508	3.888	217.560	127.184	2.366	3.115	179.870	114.433
OW UMF-01-B_0726	7/26/2010	UMF	B	Overlying Water	OverWater	7.7572	2.7	1.5	10	15.15	cont	cont	cont	cont	2.593	5.660	293.810	151.574	2.155	3.105	172.971	109.855
OW UMF-01-B_0802	8/2/2010	UMF	B	Overlying Water	OverWater	7.7572	4.4	2.5	10	15.15	cont	cont	cont	cont	3.287	9.265	467.443	209.313	2.573	5.162	274.333	143.139
OW UMF-01-B_0809	8/9/2010	UMF	B	Overlying Water	OverWater	7.7572	4.4	2.5	10	15.15	est	none	none	none	3.145	9.367	461.849	205.128	2.452	5.192	269.982	139.411
OW UMF-01-B_0816	8/16/2010	UMF	B	Overlying Water	OverWater	7.7572	4.4	2.5	10	15.15	none	none	none	cont	3.270	9.214	466.614	208.136	2.552	5.129	273.918	141.896
OW UMF-01-B_0823	8/23/2010	UMF	B	Overlying Water	OverWater	7.7572	3.2	1.5	10	15.15	none	none	none	est	2.661	6.558	334.835	162.756	2.064	3.097	171.624	106.259
OW UMF-01-B_0830	8/30/2010	UMF	B	Overlying Water	OverWater	7.7572	3.2	1.5	10	15.15	cont	none	cont	cont	2.449	6.660	326.962	158.832	1.878	3.111	165.366	101.943
OW UMF-01-B_0906	9/6/2010	UMF	B	Overlying Water	OverWater	7.7572	2.1	1.5	10	15.15	cont	none	cont	cont	2.027	4.430	223.362	122.279	1.814	3.094	162.528	100.766
OW UMF-01-B_0913	9/13/2010	UMF	B	Overlying Water	OverWater	7.7572	5.0	3.1	10	15.15	cont	none	cont	none	3.131	10.625	505.568	223.307	2.476	6.475	320.331	157.786
OW UMF-01-B_0920	9/20/2010	UMF	B	Overlying Water	OverWater	7.7572	2.1	1.5	10	15.15	cont	none	none	none	2.496	4.420	241.802	131.565	2.259	3.105	177.881	109.986
UMF01-B INF SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	cont	cont	cont	cont	369.158	192.926	1194.094	1673.330	55.868	141.708	965.345	1350.957
UMF01-B MID SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	cont	cont	cont	cont	90.052	164.203	1075.161	1502.008	22.853	123.216	947.526	1246.987
UMF01-B OUF SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	cont	none	cont	cont	162.321	175.451	1113.078	1561.513	30.104	129.697	946.075	1282.952
UMF01B PPR1 SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	bdl	cont	cont	cont	22.201	78.162	2873.864	1144.325	20.459	70.600	2641.800	1056.702
UMF01B PPR2 SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	bdl	cont	cont	cont	25.585	79.051	3101.784	1210.369	23.618	71.489	2857.288	1120.131
UMF01B PPR3 SED_0801	8/1/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	bdl	cont	cont	cont	27.192	79.115	3197.096	1231.294	25.090	71.553	2944.312	1141.056
UMF01-B INF SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	cont	none	none	none	11.938	99.513	1558.144	1112.938	10.641	86.550	1440.869	996.544
UMF01-B MID SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	cont	none	none	none	11.837	92.269	1719.967	1064.549	10.755	81.212	1584.666	960.579
UMF01-B OUF SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	cont	none	none	none	11.871	90.490	1686.608	1063.895	10.786	79.560	1557.315	960.579
UMF01B PPR1 SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	est	none	none	none	24.854	78.670	3035.480	1159.365	22.909	71.044	2793.056	1070.434
UMF01B PPR2 SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	est	none	none	none	29.002	82.292	3346.280	1278.375	26.776	74.476	3085.208	1186.175
UMF01B PPR3 SED_0820	8/20/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	est	none	none	est	22.291	80.322	2917.376	1160.019	20.537	72.570	2681.168	1071.088
UMF01-B INF SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	cont	cont	none	cont	33.622	146.283	1163.428	1438.580	17.885	117.878	1062.936	1217.562
UMF01-B MID SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	cont	cont	cont	cont	25.158	138.594	1173.374	1384.960	15.468	112.731	1081.377	1182.251
UMF01-B OUF SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	DGT	8.2083	20.9	19.0	10	18.85	cont	cont	cont	cont	17.592	126.647	1211.706	1302.569	12.894	105.042	1124.682	1127.324
UMF01B PPR1 SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	cont	cont	cont	none	19.042	82.101	2720.536	1109.014	17.514	74.095	2498.832	1022.046
UMF01B PPR2 SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	cont	cont	cont	cont	15.513	83.754	2476.040	1065.857	14.242	75.493	2268.840	980.196
UMF01B PPR3 SED_0919	9/19/2010	UMF	B	Porewater (1 cm)	Peeper	8.2083	20.9	19.0	10	18.85	cont	none	cont	none	20.852	80.703	2817.920	1119.477	19.189	72.824	2587.928	1031.854
PW UMF-01-B_0723	7/23/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	40.4	38.5	10	18.85	none	none	none	none	66.705	168.333	6783.728	2453.433	63.894	160.136	6504.008	2355.348
PW UMF-01-B_0726	7/26/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	40.6	38.7	10	18.85	none	none	none	est	66.154	168.651	6771.296	2449.509	63.422	160.517	6491.576	2352.078
PW UMF-01-B_0802	8/2/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	29.1	27.2	10	18.85	none	none	cont	cont	52.249	123.661	5244.232	1921.812	49.360	115.400	4954.152	1824.381
PW UMF-01-B_0809	8/9/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	30.3	28.4	10	18.85	cont	est	cont	cont	53.092	127.664	5362.336	1955.161	50.248	119.403	5074.328	1857.730
PW UMF-01-B_0816	8/16/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	16.4	14.5	10	18.85	none	none	none	cont	32.689	69.583	3304.840	1260.719	29.721	61.373	3008.544	1162.634
PW UMF-01-B_0823	8/23/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	11.5	9.6	10	18.85	none	none	cont	cont	23.089	46.649	2382.800	935.077	20.335	38.814	2094.792	839.608
PW UMF-01-B_0830	8/30/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	10.8	8.9	10	18.85	cont	cont	cont	cont	19.807	42.220	2121.728	838.954	17.266	34.645	1843.251	745.446
PW UMF-01-B_0906	9/6/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	9.3	7.4	10	18.85	none	none	none	none	18.031	36.444	1920.744	768.986	15.457	28.907	1641.438	676.133
PW UMF-01-B_0913	9/13/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	11.3	9.4	10	18.85	none	none	none	cont	20.897	44.431	2217.040	865.110	18.301	36.799	1937.113	772.256
PW UMF-01-B_0920	9/20/2010	UMF	B	Porewater (2.5 cm)	PoreWater	8.2083	8.9	7.0	10	18.85	cont	none	none	cont	17.154	34.683	1836.828	732.368	14.602	27.179	1558.351	640.168
SWI UMF-01-B_0726	7/26/2010	UMF	B	Sediment-Water Interface	SWI	7.56	2.6	1.5	10	16.35	cont	cont	cont	cont	2.391	4.150	261.279	137.319	2.086	2.385	159.461	104.297
UMF01-B INF H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	cont	cont	cont	cont	1.267	6.240	190.210	146.016	0.817	2.726	92.908	78.730
UMF01-B MID H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	cont	cont	cont	cont	1.271	6.152	192.447	145.100	0.826	2.695	94.027	78.533
UMF01-B OUF H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	cont	cont	cont	none	1.277	6.085	194.436	144.447	0.834	2.671	95.001	78.468
UMF01B PPR1 H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	bdl	bdl	cont	cont	2.303	5.792	333.178	159.617	1.822	2.659	164.040	102.597
UMF01B PPR2 H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	bdl	bdl	cont	cont	2.327	5.807	335.250	160.140	1.844	2.666	165.138	103.120
UMF01B PPR3 H2O_0801	8/1/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	bdl	cont	cont	cont	2.376	5.875	340.015	161.252	1.885	2.698	167.791	104.101
SWI UMF-01-B_0802	8/2/2010	UMF	B	Sediment-Water Interface	SWI	7.56	3.2	1.5	10	16.35	cont	none	cont	cont	2.434	5.221	314.944	152.882	1.972	2.406	156.809	101.224
SWI UMF-01-B_0809	8/9/2010	UMF	B	Sediment-Water Interface	SWI	7.56	6.5	4.5	10	16.35	cont	cont	cont	cont	3.390	10.758	619.942	250.967	2.864	7.454	441.543	192.770
SWI UMF-01-B_0816	8/16/2010	UMF	B	Sediment-Water Interface	SWI	7.56	4.0	2.1	10	16.35	cont	none	none	cont	11.724	7.047	651.022	337.478	10.331	3.700	386.014	266.072
UMF01-B INF H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	cont	cont	cont	cont	1.487	5.354	239.316	139.281	1.048	2.400	116.198	79.580

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
UMF01-B MID H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	cont	cont	cont	cont	1.473	5.408	238.487	139.281	1.035	2.422	115.763	79.383
UMF01-B OUF H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	cont	cont	cont	cont	1.579	5.210	252.370	139.542	1.136	2.346	122.580	81.018
UMF01B PPR1 H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	est	est	none	est	2.509	5.783	346.024	163.017	1.995	2.659	170.961	105.605
UMF01B PPR2 H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	est	est	none	est	2.515	5.807	346.646	163.279	2.001	2.666	171.209	105.801
UMF01B PPR3 H2O_0820	8/20/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	bdl	est	none	est	2.435	5.803	342.087	161.840	1.932	2.664	168.847	104.428
SWI UMF-01-B_0823	8/23/2010	UMF	B	Sediment-Water Interface	SWI	7.56	3.9	2.0	10	16.35	cont	none	cont	cont	2.654	6.311	378.347	173.414	2.130	3.160	201.461	115.740
SWI UMF-01-B_0830	8/30/2010	UMF	B	Sediment-Water Interface	SWI	7.56	2.4	1.5	10	16.35	cont	none	cont	cont	2.019	3.841	230.821	122.410	1.795	2.420	152.665	96.712
SWI UMF-01-B_0906	9/6/2010	UMF	B	Sediment-Water Interface	SWI	7.56	4.3	2.4	10	16.35	cont	cont	cont	cont	2.446	6.990	395.130	178.842	1.963	3.801	225.641	121.625
SWI UMF-01-B_0913	9/13/2010	UMF	B	Sediment-Water Interface	SWI	7.56	2.5	1.5	10	16.35	cont	cont	cont	cont	2.207	4.143	251.334	131.369	1.931	2.436	156.395	100.504
UMF01-B INF H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	cont	cont	cont	cont	1.401	5.644	228.127	140.131	0.964	2.513	110.686	78.599
UMF01-B MID H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	cont	cont	cont	cont	1.506	5.418	244.082	139.542	1.060	2.426	118.498	79.645
UMF01-B OUF H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	DGT	7.56	3.6	1.7	10	16.35	cont	cont	cont	cont	1.406	5.637	228.956	140.065	0.967	2.510	111.101	78.664
UMF01B PPR1 H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	bdl	cont	bdl	cont	2.769	5.867	360.942	169.295	2.227	2.698	179.352	111.228
UMF01B PPR2 H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	bdl	cont	bdl	cont	2.752	5.837	359.492	168.641	2.208	2.685	178.524	110.640
UMF01B PPR3 H2O_0919	9/19/2010	UMF	B	Sediment-Water Interface	Peeper	7.56	3.6	1.7	10	16.35	bdl	cont	cont	cont	2.792	5.888	362.600	169.556	2.245	2.708	180.243	111.490
SWI UMF-01-B_0920	9/20/2010	UMF	B	Sediment-Water Interface	SWI	7.56	2.9	1.5	10	16.35	cont	cont	cont	cont	2.455	4.646	289.044	143.466	2.075	2.413	160.974	102.532
OW UMF-01-C_0723	7/23/2010	UMF	C	Overlying Water	OverWater	7.7381	1.8	1.5	10	15.15	est	none	cont	est	2.339	3.655	206.413	121.756	2.226	3.028	175.478	111.228
OW UMF-01-C_0726	7/26/2010	UMF	C	Overlying Water	OverWater	7.7381	2.1	1.5	10	15.15	cont	cont	cont	cont	2.299	4.305	232.686	129.341	2.078	3.008	170.153	107.763
OW UMF-01-C_0802	8/2/2010	UMF	C	Overlying Water	OverWater	7.7381	2.5	1.5	10	15.15	cont	cont	cont	cont	2.462	5.042	269.982	140.131	2.117	3.050	173.675	107.370
OW UMF-01-C_0809	8/9/2010	UMF	C	Overlying Water	OverWater	7.7381	4.8	2.8	10	15.15	cont	cont	cont	cont	3.376	9.761	501.424	219.449	2.678	5.762	309.764	154.124
OW UMF-01-C_0816	8/16/2010	UMF	C	Overlying Water	OverWater	7.7381	4.5	2.6	10	15.15	none	est	none	cont	3.253	9.163	472.209	209.640	2.556	5.177	281.170	144.250
OW UMF-01-C_0823	8/23/2010	UMF	C	Overlying Water	OverWater	7.7381	4.1	2.1	10	15.15	none	none	none	est	3.098	8.331	429.733	196.170	2.409	4.340	238.487	130.976
OW UMF-01-C_0830	8/30/2010	UMF	C	Overlying Water	OverWater	7.7381	3.2	1.5	10	15.15	cont	none	cont	none	2.707	6.672	344.366	165.698	2.103	3.067	172.846	107.436
OW UMF-01-C_0906	9/6/2010	UMF	C	Overlying Water	OverWater	7.7381	2.1	1.5	10	15.15	cont	none	cont	cont	2.291	4.287	230.406	127.903	2.085	3.055	171.417	107.763
OW UMF-01-C_0913	9/13/2010	UMF	C	Overlying Water	OverWater	7.7381	4.9	3.0	10	15.15	cont	none	cont	cont	3.368	10.250	513.234	226.053	2.697	6.186	323.232	160.925
OW UMF-01-C_0920	9/20/2010	UMF	C	Overlying Water	OverWater	7.7381	4.1	2.1	10	15.15	cont	est	cont	none	3.107	8.464	434.498	194.666	2.421	4.417	241.595	129.930
PW UMF-01-C_0723	7/23/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	20.5	18.6	10	18.25	cont	none	cont	cont	31.104	72.887	3333.848	1235.217	28.743	65.897	3060.344	1143.671
PW UMF-01-C_0726	7/26/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	18.9	17.0	10	18.25	none	none	cont	cont	30.171	67.931	3166.016	1179.636	27.732	60.858	2888.368	1087.436
PW UMF-01-C_0802	8/2/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	16.9	15.0	10	18.25	none	none	cont	cont	28.845	61.506	2940.168	1105.745	26.338	54.408	2658.376	1012.237
PW UMF-01-C_0809	8/9/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	20.5	18.6	10	18.25	cont	est	cont	cont	34.454	75.429	3518.256	1292.760	31.880	68.248	3234.392	1199.253
PW UMF-01-C_0816	8/16/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	13.9	12.0	10	18.25	none	none	none	cont	25.596	50.799	2542.344	973.003	23.011	43.701	2256.408	879.496
PW UMF-01-C_0823	8/23/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	13.0	11.1	10	18.25	cont	none	none	cont	23.303	47.361	2355.864	903.036	20.796	40.237	2074.072	810.836
PW UMF-01-C_0830	8/30/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	9.6	7.7	10	18.25	cont	cont	cont	cont	17.109	33.870	1756.849	697.711	14.782	27.052	1482.723	607.342
PW UMF-01-C_0906	9/6/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	10.4	8.5	10	18.25	none	none	cont	cont	17.323	36.501	1829.369	717.328	15.063	29.670	1558.351	627.679
PW UMF-01-C_0913	9/13/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	9.7	7.7	10	18.25	none	none	none	none	26.113	38.585	2235.688	893.881	22.966	30.915	1924.681	796.450
PW UMF-01-C_0920	9/20/2010	UMF	C	Porewater (2.5 cm)	PoreWater	8.1369	8.5	6.5	10	18.25	cont	none	none	cont	14.793	29.377	1538.667	616.628	12.545	22.635	1268.478	527.370
SWI UMF-01-C_0726	7/26/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	2.5	1.5	10	16.25	cont	cont	cont	cont	2.118	2.816	212.380	120.448	1.931	1.720	135.820	96.581
SWI UMF-01-C_0802	8/2/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	2.9	1.5	10	16.25	cont	cont	cont	cont	2.073	3.349	245.118	128.230	1.802	1.703	132.194	92.592
SWI UMF-01-C_0809	8/9/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	5.7	3.8	10	16.25	cont	cont	cont	cont	2.769	6.710	480.704	201.532	2.385	4.398	324.268	152.686
SWI UMF-01-C_0816	8/16/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	4.4	2.5	10	16.25	cont	none	none	cont	2.600	5.188	379.798	170.929	2.213	2.891	220.875	122.214
SWI UMF-01-C_0823	8/23/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	4.2	2.3	10	16.25	cont	none	cont	cont	2.587	4.968	366.330	167.137	2.198	2.680	206.765	118.356
SWI UMF-01-C_0830	8/30/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	3.0	1.5	10	16.25	cont	cont	cont	cont	2.163	3.553	257.964	131.892	1.876	1.769	136.545	94.685
SWI UMF-01-C_0906	9/6/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	3.0	1.5	10	16.25	cont	cont	cont	cont	2.128	3.529	255.063	132.415	1.842	1.741	133.644	94.489
SWI UMF-01-C_0913	9/13/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	4.5	2.5	10	16.25	cont	cont	cont	cont	2.530	5.256	377.311	171.191	2.163	2.965	221.704	122.999
SWI UMF-01-C_0920	9/20/2010	UMF	C	Sediment-Water Interface	SWI	7.3263	4.4	2.4	10	16.25	cont	cont	cont	cont	2.669	5.077	376.275	171.191	2.282	2.807	217.353	122.606
OW UMF-01-D_0723	7/23/2010	UMF	D	Overlying Water	OverWater	7.6893	2.4	1.5	10	15.65	cont	none	cont	none	2.424	4.589	257.757	137.581	2.126	2.846	169.303	107.828
OW UMF-01-D_0726	7/26/2010	UMF	D	Overlying Water	OverWater	7.6893	2.0	1.5	10	15.65	cont	cont	cont	cont	2.366	3.701	217.560	123.979	2.207	2.820	171.831	108.744
OW UMF-01-D_0802	8/2/2010	UMF	D	Overlying Water	OverWater	7.6893	4.2	2.3	10	15.65	cont	cont	cont	none	2.980	8.210	435.949	195.385	2.348	4.436	248.847	132.349
OW UMF-01-D_0809	8/9/2010	UMF	D	Overlying Water	OverWater	7.6893	4.5	2.6	10	15.65	est	none	none	none	3.341	8.680	473.452	209.117	2.675	4.904	281.585	145.558
OW UMF-01-D_0816	8/16/2010	UMF	D	Overlying Water	OverWater	7.6893	3.2	1.5	10	15.65	est	none	none	cont	2.697	6.148	338.565	162.690	2.120	2.840	170.215	106.324
OW UMF-01-D_0823	8/23/2010	UMF	D	Overlying Water	OverWater	7.6893	2.4	1.5	10	15.65	est	none	cont	none	2.422	4.540	256.721	135.357	2.128	2.853	170.463	106.586
OW UMF-01-D_0830	8/30/2010	UMF	D	Overlying Water	OverWater	7.6893	3.3	1.5	10	15.65	cont	none	cont	cont	2.928	6.450	352.654	170.995	2.339	2.958	176.970	113.582
OW UMF-01-D_0906	9/6/2010	UMF	D	Overlying Water	OverWater	7.6893	2.4	1.5	10	15.65	cont	est	cont	cont	2.214	4.528	245.739	131.369	1.947	2.868	163.978	103.578
OW UMF-01-D_0913	9/13/2010	UMF	D	Overlying Water	OverWater	7.6893	2.6	1.5	10	15.65	none	none	cont	none	2.582	4.963	281.585	144.708	2.204	2.840	172.121	108.351
OW UMF-01-D_0920	9/20/2010	UMF	D	Overlying Water	OverWater	7.6893	3.8	1.9	10	15.65	cont	none	none	none	2.991	7.492	405.698	184.465	2.344	3.705	215.074	121.560
UMF-01-D MID SED	9/19/2010	UMF	D	Porewater (1 cm)	DGT	8.1158	17.3	15.4	10	18.55	cont	cont	cont	cont	8.173	63.000	1258.947	835.684	7.302	54.167	1143.744	740.215

Table H3. Input/Output Summary

Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	mg/L DOC (un-corrected)	mg/L DOC (corrected)	Humic Acid (%)	Temperature (°C)	Qualifiers for metal measurements: Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc	BLM-predicted EC20 (ug/L): Cadmium	Copper	Lead	Zinc
UMF-01-D PPR 1 SED	9/19/2010	UMF	D	Porewater (1 cm)	Peeper	8.1158	17.3	15.4	10	18.55	bdl	cont	cont	cont	16.828	59.002	2391.088	939.654	15.288	52.184	2159.024	855.955
UMF-01-D PPR 2 SED	9/19/2010	UMF	D	Porewater (1 cm)	Peeper	8.1158	17.3	15.4	10	18.55	bdl	cont	cont	cont	14.670	58.608	2229.472	885.381	13.321	51.682	2010.254	802.989
UMF01-D INF SED_0919	9/19/2010	UMF	D	Porewater (1 cm)	DGT	8.1158	17.3	15.4	10	18.55	cont	cont	cont	cont	8.320	63.203	1306.603	834.376	7.442	54.389	1184.977	739.561
UMF01-D OUF SED_0919	9/19/2010	UMF	D	Porewater (1 cm)	DGT	8.1158	17.3	15.4	10	18.55	cont	cont	cont	cont	8.231	67.867	1150.789	869.033	7.247	57.668	1051.126	763.755
PW UMF-01-D_0723	7/23/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	29.2	27.3	10	18.55	none	none	cont	cont	43.065	103.008	4784.248	1725.642	40.693	96.082	4512.816	1634.096
PW UMF-01-D_0726	7/26/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	28.1	26.2	10	18.55	none	none	cont	cont	42.480	101.483	4701.368	1696.871	40.075	94.429	4423.720	1604.671
PW UMF-01-D_0802	8/2/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	23.0	21.1	10	18.55	none	none	none	cont	36.961	81.847	3961.664	1448.389	34.578	74.921	3684.016	1356.843
PW UMF-01-D_0809	8/9/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	17.9	16.0	10	18.55	cont	none	cont	cont	30.891	64.499	3290.336	1220.831	28.316	57.490	3006.472	1128.631
PW UMF-01-D_0816	8/16/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	14.6	12.7	10	18.55	none	none	cont	cont	24.888	51.968	2708.104	1022.046	22.460	45.035	2428.384	931.154
PW UMF-01-D_0823	8/23/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	15.9	14.0	10	18.55	none	none	cont	cont	27.878	57.852	2985.752	1113.592	25.360	50.767	2699.816	1021.392
PW UMF-01-D_0830	8/30/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	12.1	10.2	10	18.55	cont	cont	cont	cont	21.189	42.455	2308.208	884.727	18.806	35.643	2027.659	793.835
PW UMF-01-D_0906	9/6/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	11.4	9.5	10	18.55	none	none	cont	none	19.975	39.672	2181.816	836.338	17.604	32.891	1903.339	746.754
PW UMF-01-D_0913	9/13/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	12.3	10.4	10	18.55	none	none	none	cont	19.829	42.048	2225.328	839.608	17.570	35.370	1954.518	750.677
PW UMF-01-D_0920	9/20/2010	UMF	D	Porewater (2.5 cm)	PoreWater	8.1158	8.5	6.6	10	18.55	none	none	none	none	15.322	28.901	1688.266	664.362	13.062	22.355	1415.590	575.890
SWI UMF-01-D_0726	7/26/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	3.0	1.5	10	16.85	cont	cont	cont	cont	2.489	4.813	298.575	149.678	2.081	2.391	159.813	104.820
SWI UMF-01-D_0802	8/2/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	4.8	2.9	10	16.85	cont	none	cont	cont	2.900	7.816	463.506	201.924	2.383	4.660	287.594	144.316
SWI UMF-01-D_0809	8/9/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	5.4	3.4	10	16.85	cont	cont	cont	cont	3.191	8.833	525.874	220.299	2.663	5.605	345.402	162.494
SWI UMF-01-D_0816	8/16/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	4.3	2.4	10	16.85	cont	cont	cont	cont	2.825	6.869	416.679	186.100	2.298	3.742	239.109	128.557
SWI UMF-01-D_0823	8/23/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	3.4	1.5	10	16.85	cont	none	cont	cont	2.594	5.573	341.673	160.663	2.068	2.434	162.466	103.382
SWI UMF-01-D_0830	8/30/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	3.5	1.5	10	16.85	cont	cont	cont	cont	2.670	5.744	345.610	165.894	2.161	2.540	166.237	108.809
SWI UMF-01-D_0906	9/6/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	2.6	1.5	10	16.85	cont	cont	cont	cont	2.093	4.190	250.298	131.042	1.814	2.398	151.629	98.412
SWI UMF-01-D_0913	9/13/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	3.0	1.5	10	16.85	cont	cont	cont	cont	2.324	4.823	291.323	145.427	1.933	2.395	155.441	101.093
UMF-01-D INF H2O	9/19/2010	UMF	D	Sediment-Water Interface	DGT	7.5525	3.8	1.8	10	16.85	cont	cont	cont	cont	1.628	5.502	268.324	144.120	1.184	2.603	136.255	85.792
UMF-01-D MID H2O	9/19/2010	UMF	D	Sediment-Water Interface	DGT	7.5525	3.8	1.8	10	16.85	cont	cont	cont	cont	1.813	5.294	287.179	146.147	1.353	2.520	146.262	88.930
UMF-01-D OUF H2O	9/19/2010	UMF	D	Sediment-Water Interface	DGT	7.5525	3.8	1.8	10	16.85	cont	cont	cont	cont	1.623	5.419	264.594	144.120	1.183	2.565	134.556	85.792
UMF-01-D PPR 1 H2O	9/19/2010	UMF	D	Sediment-Water Interface	Peeper	7.5525	3.8	1.8	10	16.85	bdl	cont	bdl	cont	2.746	6.065	371.924	172.368	2.218	2.929	192.510	114.890
UMF-01-D PPR 2 H2O	9/19/2010	UMF	D	Sediment-Water Interface	Peeper	7.5525	3.8	1.8	10	16.85	bdl	cont	cont	cont	2.768	6.099	374.203	172.695	2.236	2.947	193.815	115.217
SWI UMF-01-D_0920	9/20/2010	UMF	D	Sediment-Water Interface	SWI	7.5525	4.4	2.4	10	16.85	cont	cont	cont	cont	2.901	7.155	430.769	188.912	2.375	3.951	250.090	131.630
OW UMF-01-E_0723	7/23/2010	UMF	E	Overlying Water	OverWater	7.7501	2.3	1.5	10	15.35	cont	none	cont	none	2.484	4.789	257.342	138.692	2.181	3.060	173.903	110.117
OW UMF-01-E_0726	7/26/2010	UMF	E	Overlying Water	OverWater	7.7501	2.6	1.5	10	15.35	cont	cont	cont	cont	2.703	5.361	289.873	150.528	2.284	3.057	177.177	112.144
OW UMF-01-E_0802	8/2/2010	UMF	E	Overlying Water	OverWater	7.7501	2.7	1.5	10	15.35	cont	cont	cont	cont	2.675	5.586	297.539	150.528	2.237	3.123	178.772	110.378
OW UMF-01-E_0809	8/9/2010	UMF	E	Overlying Water	OverWater	7.7501	5.2	3.3	10	15.35	est	none	none	none	3.746	10.898	557.368	238.674	3.011	6.780	360.942	172.368
OW UMF-01-E_0816	8/16/2010	UMF	E	Overlying Water	OverWater	7.7501	3.8	1.9	10	15.35	none	none	none	cont	3.001	7.924	405.490	187.539	2.301	3.887	213.623	121.822
OW UMF-01-E_0823	8/23/2010	UMF	E	Overlying Water	OverWater	7.7501	3.1	1.5	10	15.35	bdl	none	cont	none	2.657	6.425	332.349	161.252	2.072	3.052	171.582	105.932
OW UMF-01-E_0830	8/30/2010	UMF	E	Overlying Water	OverWater	7.7501	2.9	1.5	10	15.35	cont	none	cont	cont	2.703	6.126	319.088	158.636	2.185	3.114	175.809	109.921
OW UMF-01-E_0906	9/6/2010	UMF	E	Overlying Water	OverWater	7.7501	4.0	2.1	10	15.35	cont	none	cont	cont	2.875	8.325	411.499	190.350	2.213	4.256	224.190	125.156
OW UMF-01-E_0913	9/13/2010	UMF	E	Overlying Water	OverWater	7.7501	3.8	1.9	10	15.35	cont	none	cont	cont	2.893	8.013	400.932	186.688	2.222	3.960	212.380	121.560
OW UMF-01-E_0920	9/20/2010	UMF	E	Overlying Water	OverWater	7.7501	3.1	1.5	10	15.35	cont	none	none	none	3.050	6.463	346.231	169.883	2.444	3.128	183.331	115.740
UMF01-E INF SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	cont	none	cont	cont	10.198	82.864	1234.705	988.043	9.056	70.981	1143.744	874.264
UMF01-E MID SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	cont	cont	cont	cont	10.275	83.944	1236.984	993.274	9.099	71.871	1145.194	878.188
UMF01-E OUF SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	cont	none	cont	cont	10.643	88.329	1238.849	1016.161	9.307	75.238	1146.438	894.535
UMF01E PPR1 SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	bdl	cont	cont	cont	18.031	70.473	2447.032	991.966	16.468	62.885	2223.256	904.998
UMF01E PPR2 SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	bdl	cont	cont	cont	20.819	70.727	2629.368	1035.124	19.054	63.196	2389.016	946.193
UMF01E PPR3 SED_0801	8/1/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	bdl	cont	cont	cont	20.785	70.218	2616.936	1028.585	19.031	62.682	2378.656	940.308
UMF01-E INF SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	cont	cont	none	cont	11.026	90.998	1145.194	1042.317	9.465	76.573	1069.981	912.191
UMF01-E MID SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	cont	cont	none	cont	18.525	116.798	985.236	1203.176	12.005	92.650	923.076	1017.468
UMF01-E OUF SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	cont	cont	none	cont	52.878	142.152	1022.946	1367.305	19.234	108.981	908.779	1120.785
UMF01E PPR1 SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	est	none	none	none	31.790	74.667	3250.968	1223.447	29.193	66.914	2969.176	1128.631
UMF01E PPR2 SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	est	none	none	none	21.808	71.807	2701.888	1055.395	19.942	64.181	2457.392	966.464
UMF01E PPR3 SED_0820	8/20/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	est	est	none	none	13.444	73.459	2150.736	938.347	12.230	65.452	1948.923	853.340
UMF01-E INF SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	cont	none	cont	cont	15.524	112.604	1094.430	1172.443	11.320	91.951	1007.406	1001.121
UMF01-E MID SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	cont	cont	cont	cont	13.118	105.232	1134.213	1120.785	10.377	87.312	1045.324	967.118
UMF01-E OUF SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	DGT	8.1908	18.8	16.9	10	19.05	cont	cont	cont	cont	11.124	95.128	1216.057	1050.163	9.457	80.449	1119.502	918.730
UMF01E PPR1 SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	bdl	cont	cont	cont	13.647	74.158	2181.816	939.654	12.421	66.151	1976.274	853.993
UMF01E PPR2 SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	bdl	cont	cont	none	14.996	73.840	2283.344	955.348	13.658	65.770	2069.514	869.687
UMF01E PPR3 SED_0919	9/19/2010	UMF	E	Porewater (1 cm)	Peeper	8.1908	18.8	16.9	10	19.05	bdl	none	cont	est	14.546	73.269	2241.904	952.078	13.253	65.325	2032.010	866.418

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (°C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
PW UMF-01-E_0723	7/23/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	36.2	34.3	10	19.05	none	none	cont	cont	58.420	146.601	5927.992	2141.523	55.756	138.657	5646.200	2044.745
PW UMF-01-E_0726	7/26/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	34.6	32.7	10	19.05	none	none	none	cont	56.014	140.373	5687.640	2055.862	53.328	132.430	5405.848	1959.738
PW UMF-01-E_0802	8/2/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	26.1	24.2	10	19.05	none	none	cont	cont	46.707	108.346	4583.264	1677.907	43.874	100.276	4293.184	1581.130
PW UMF-01-E_0809	8/9/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	23.3	21.4	10	19.05	cont	none	cont	cont	40.929	95.192	4071.480	1498.739	38.175	87.249	3783.472	1401.962
PW UMF-01-E_0816	8/16/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	17.8	15.9	10	19.05	none	none	none	cont	33.543	73.141	3277.904	1235.217	30.733	65.135	2985.752	1139.094
PW UMF-01-E_0823	8/23/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	10.9	9.0	10	19.05	none	none	cont	cont	20.605	42.677	2062.469	812.798	18.008	35.084	1779.434	719.290
PW UMF-01-E_0830	8/30/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	10.5	8.6	10	19.05	cont	cont	cont	cont	19.503	40.695	1967.986	777.487	16.963	33.184	1687.230	684.633
PW UMF-01-E_0906	9/6/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	11.1	9.2	10	19.05	none	none	none	none	21.291	43.790	2117.584	827.837	18.649	36.139	1832.062	733.676
PW UMF-01-E_0913	9/13/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	9.4	7.5	10	19.05	none	none	none	none	18.402	36.526	1826.054	725.175	15.816	29.009	1543.226	631.929
PW UMF-01-E_0920	9/20/2010	UMF	E	Porewater (2.5 cm)	PoreWater	8.1908	8.5	6.6	10	19.05	none	none	none	cont	15.524	32.148	1595.854	638.860	13.096	24.815	1320.693	547.641
SWI UMF-01-E_0726	7/26/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	2.1	1.5	10	16.95	cont	cont	cont	cont	2.217	3.274	209.686	120.514	2.071	2.392	158.922	104.166
UMF01-E INF H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	cont	cont	cont	cont	1.395	5.298	224.190	136.338	0.971	2.311	106.397	76.376
UMF01-E MID H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	cont	cont	cont	cont	1.497	5.113	237.658	136.404	1.062	2.240	112.841	77.553
UMF01-E OUF H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	cont	cont	cont	cont	1.518	5.145	242.217	136.534	1.077	2.254	114.892	77.683
UMF01E PPR1 H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	bdl	bdl	cont	cont	2.339	5.660	330.691	157.982	1.856	2.536	159.565	101.158
UMF01E PPR2 H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	bdl	bdl	cont	cont	2.276	5.667	327.169	156.544	1.800	2.537	157.638	99.916
UMF01E PPR3 H2O_0801	8/1/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	bdl	bdl	cont	bdl	2.286	5.659	327.376	156.805	1.809	2.534	157.907	100.177
SWI UMF-01-E_0802	8/2/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	3.5	1.5	10	16.95	cont	cont	cont	cont	2.469	5.529	333.178	158.636	1.962	2.436	158.922	101.551
SWI UMF-01-E_0809	8/9/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	5.5	3.6	10	16.95	cont	cont	cont	cont	6.973	8.909	703.030	290.070	6.042	5.774	475.317	225.988
SWI UMF-01-E_0816	8/16/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	3.1	1.5	10	16.95	none	cont	cont	cont	2.409	5.003	304.791	149.089	1.978	2.394	157.099	101.158
UMF01-E INF H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	cont	cont	cont	cont	1.320	5.539	208.650	137.908	0.893	2.396	99.166	75.722
UMF01-E MID H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	cont	cont	cont	cont	1.373	5.444	215.902	137.908	0.935	2.358	102.668	76.049
UMF01-E OUF H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	cont	cont	cont	cont	1.349	5.595	213.209	138.627	0.908	2.417	101.362	75.918
UMF01E PPR1 H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	bdl	est	none	none	2.492	5.610	337.943	160.729	1.984	2.513	163.522	103.578
UMF01E PPR2 H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	est	est	none	est	2.470	5.631	337.529	160.206	1.964	2.524	163.170	103.120
UMF01E PPR3 H2O_0820	8/20/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	bdl	est	none	est	2.408	5.638	334.214	159.094	1.912	2.527	161.471	102.139
SWI UMF-01-E_0823	8/23/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	3.8	1.9	10	16.95	cont	none	cont	cont	2.543	6.109	365.086	168.248	2.029	2.979	189.878	110.836
SWI UMF-01-E_0830	8/30/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	4.0	2.1	10	16.95	cont	none	cont	cont	2.741	6.596	395.545	179.234	2.218	3.416	216.938	121.560
SWI UMF-01-E_0906	9/6/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	3.0	1.5	10	16.95	cont	none	cont	cont	2.263	4.848	288.422	143.793	1.881	2.406	153.494	99.524
SWI UMF-01-E_0913	9/13/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	4.3	2.4	10	16.95	cont	cont	cont	cont	2.683	6.971	409.220	183.354	2.179	3.797	234.343	126.203
UMF01-E INF H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	cont	cont	cont	cont	1.450	5.316	235.586	136.469	1.016	2.323	111.702	76.833
UMF01-E MID H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	cont	cont	cont	cont	1.421	5.359	230.199	136.600	0.987	2.335	109.132	76.441
UMF01-E OUF H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	DGT	7.5533	3.5	1.6	10	16.95	cont	cont	cont	cont	1.374	5.501	223.983	136.927	0.943	2.391	106.128	76.049
UMF01E PPR1 H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	bdl	cont	cont	none	2.492	5.696	340.222	160.925	1.984	2.551	164.724	103.839
UMF01E PPR2 H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	bdl	cont	cont	cont	2.673	5.698	349.961	164.390	2.140	2.556	170.008	106.847
UMF01E PPR3 H2O_0919	9/19/2010	UMF	E	Sediment-Water Interface	Peeper	7.5533	3.5	1.6	10	16.95	bdl	cont	bdl	cont	2.659	5.651	348.303	164.194	2.132	2.535	169.096	106.716
SWI UMF-01-E_0920	9/20/2010	UMF	E	Sediment-Water Interface	SWI	7.5533	2.4	1.5	10	16.95	cont	cont	cont	cont	2.527	3.832	247.811	134.311	2.282	2.430	165.843	108.547
OW UMF-01-F_0723	7/23/2010	UMF	F	Overlying Water	OverWater	7.737	2.0	1.5	10	15.35	est	none	none	est	2.431	3.938	221.290	127.184	2.270	3.027	176.244	111.948
OW UMF-01-F_0726	7/26/2010	UMF	F	Overlying Water	OverWater	7.737	2.6	1.5	10	15.35	cont	cont	cont	cont	2.591	5.161	279.098	146.408	2.214	3.024	174.525	110.836
OW UMF-01-F_0802	8/2/2010	UMF	F	Overlying Water	OverWater	7.737	3.4	1.5	10	15.35	cont	none	cont	cont	2.798	6.920	359.078	170.603	2.138	3.064	173.965	107.894
OW UMF-01-F_0809	8/9/2010	UMF	F	Overlying Water	OverWater	7.737	4.1	2.2	10	15.35	cont	none	none	est	3.200	8.502	441.336	198.786	2.500	4.488	247.604	133.526
OW UMF-01-F_0816	8/16/2010	UMF	F	Overlying Water	OverWater	7.737	3.5	1.5	10	15.35	none	none	none	cont	2.935	7.073	373.582	176.095	2.235	3.128	180.865	110.967
OW UMF-01-F_0823	8/23/2010	UMF	F	Overlying Water	OverWater	7.737	2.6	1.5	10	15.35	none	none	none	none	2.448	5.250	279.098	142.812	2.063	3.015	170.961	105.801
OW UMF-01-F_0830	8/30/2010	UMF	F	Overlying Water	OverWater	7.737	3.0	1.5	10	15.35	cont	none	cont	cont	2.270	6.187	305.827	150.005	1.778	3.046	162.051	99.327
OW UMF-01-F_0906	9/6/2010	UMF	F	Overlying Water	OverWater	7.737	2.8	1.5	10	15.35	cont	none	cont	cont	2.176	5.652	280.756	142.550	1.764	3.015	160.083	99.654
OW UMF-01-F_0913	9/13/2010	UMF	F	Overlying Water	OverWater	7.737	3.1	1.5	10	15.35	cont	none	cont	cont	2.489	6.247	317.845	156.674	1.967	3.039	167.169	104.559
OW UMF-01-F_0920	9/20/2010	UMF	F	Overlying Water	OverWater	7.737	3.3	1.5	10	15.35	cont	none	none	none	2.801	6.660	352.862	168.118	2.150	3.000	173.675	107.240
PW UMF-01-F_0723	7/23/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	38.7	36.8	10	19.25	none	none	none	none	57.397	143.932	6309.240	2229.799	54.969	136.624	6027.448	2135.637
PW UMF-01-F_0726	7/26/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	33.2	31.3	10	19.25	none	none	none	cont	49.742	123.216	5478.368	1947.968	47.314	115.908	5198.648	1855.114
PW UMF-01-F_0802	8/2/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	29.4	27.5	10	19.25	none	none	cont	cont	47.572	111.206	5078.472	1816.534	45.009	103.834	4792.536	1722.373
PW UMF-01-F_0809	8/9/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	31.2	29.3	10	19.25	cont	est	cont	cont	49.528	117.941	5322.968	1889.117	46.977	110.506	5037.032	1795.609
PW UMF-01-F_0816	8/16/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	16.7	14.8	10	19.25	cont	none	none	cont	28.822	61.011	3066.560	1139.094	26.315	53.893	2780.624	1046.240
PW UMF-01-F_0823	8/23/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	14.2	12.3	10	19.25	none	none	cont	cont	24.697	51.631	2643.872	1001.775	22.280	44.565	2362.080	910.229
PW UMF-01-F_0830	8/30/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	12.0	10.1	10	19.25	cont	cont	cont	cont	20.807	42.544	2250.192	863.802	18.413	35.662	1971.715	772.910
PW UMF-01-F_0906	9/6/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	11.1	9.2	10	19.25	none	none	none	none	19.964	39.602	2140.376	825.876	17.559	32.656	1859.206	734.984
PW UMF-01-F_0913	9/13/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	10.4	8.5	10	19.25	none	none	none	cont	18.638	36.653	2002.174	775.525	16.300	29.822	1723.075	685.287

Table H3. Input/Output Summary

							mg/L				Qualifiers for metal measurements				BLM-predicted EC20 (ug/L)				BLM-predicted EC20 (ug/L)			
Sample Description	Sample Date	Site	Tank	Depth Category	Measurement Type	pH	DOC (un-corrected)	DOC (corrected)	Humic Acid (%)	Temperature (^{o}C)	Cadmium_flag	Copper_flag	Lead_flag	Zinc_flag	Cadmium	Copper	Lead	Zinc	Cadmium	Copper	Lead	Zinc
PW UMF-01-F_0920	9/20/2010	UMF	F	Porewater (2.5 cm)	PoreWater	8.1131	9.6	7.7	10	19.25	cont	none	none	cont	15.940	33.006	1780.884	691.826	13.759	26.353	1510.695	603.746
SWI UMF-01-F_0726	7/26/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	2.1	1.5	10	16.55	cont	cont	cont	cont	2.158	2.748	198.601	115.871	2.022	1.941	145.413	99.197
SWI UMF-01-F_0802	8/2/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	2.9	1.5	10	16.55	cont	est	cont	cont	2.299	3.785	264.387	134.769	1.995	1.982	147.112	98.412
SWI UMF-01-F_0809	8/9/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	6.4	4.5	10	16.55	cont	cont	cont	cont	2.962	8.712	563.377	228.211	2.544	6.031	400.103	175.964
SWI UMF-01-F_0816	8/16/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	5.1	3.2	10	16.55	cont	cont	cont	cont	2.864	6.831	463.506	197.151	2.426	4.227	296.710	144.904
SWI UMF-01-F_0823	8/23/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	2.4	1.5	10	16.55	cont	none	cont	cont	2.101	3.104	217.974	119.729	1.909	1.950	143.154	96.254
SWI UMF-01-F_0830	8/30/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	2.7	1.5	10	16.55	none	none	cont	none	3.114	3.538	286.765	145.035	2.765	1.938	168.018	110.705
SWI UMF-01-F_0906	9/6/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	3.2	1.5	10	16.55	cont	cont	cont	cont	2.012	4.139	269.567	135.292	1.678	1.955	135.612	91.546
SWI UMF-01-F_0913	9/13/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	3.5	1.6	10	16.55	cont	cont	cont	cont	2.143	4.629	302.098	145.689	1.749	2.067	144.190	94.685
SWI UMF-01-F_0920	9/20/2010	UMF	F	Sediment-Water Interface	SWI	7.4113	3.4	1.5	10	16.55	cont	cont	cont	cont	2.358	4.493	308.728	147.193	1.935	1.958	144.874	96.058

APPENDIX I

STUDY BIOLOGICAL DATA – LOG BOOKS AND FISH TERMINATION PHOTOS

APPENDIX I-1

LENGTH WEIGHT LOG BOOK

"Rite in the Rain"®

ALL-WEATHER

UNIVERSAL

No. 374-MX

UCR 2010

White Sturgeon

Toxicity Stud

Material

2010 White Sturgeon Sediment Toxicity Study

Personnel Involved:

Markus Hecker	(MH)
David Vardy	(DV)
Jon Doering	(JD)
Eric Higley	(EH)
Jeff Tomsen	(JT)
Shaun Beitel	(SB)
Sara Pryce	(SP)
Jordon Steeg	(JS)
Tim Tse	(TT)
Brett Tendler	(BT)
Erica Yuzak	(EY)
Lucy Lu	(LL)
Toney Redford	(TR)
Christine Schonlau	(CS)
Melanie Mackrey	(MM)
Su Ouanyong	(SO)
Wei Sun	(WS)
Jordan Bolt	(JB)
Sita Araffi	(SA)
Dana Friesen	(DF)
Jill Arnott	(JA)

Scale: 1 square =

07/24/10 JD
• 100 fish seeded in each exposure system
07/24/10 JD
07/25/10 JD
24hrs dead removal and replacement:
DE-A: 1 removed and replaced
LMF-B: 1 removed and replaced
LD-B: 1 removed and replaced
LALL-B: 2 removed and replaced
H_2O-A: 1 removed and replaced
NP-B: 1 removed and replaced
LALL-F: 2 removed and replaced
LD-A: 1 removed and replaced
H_2O-C: 1 removed and replaced
UMF-A: 1 removed and replaced
LD-E: 1 removed and replaced
UMF-F: 2 removed and replaced
CTRL-B: 2 removed and replaced
H_2O-E: 1 removed and replaced
CTRL-E: 3 removed and replaced
LALL-E: 1 removed and replaced
LD-F: 2 removed and replaced
07/25/10 JD
07/26/10 JD
Fish replacement for H_2O only - stuck in tubing
H_2O-E: 1 removed and replaced
H_2O-C: 1 removed and replaced.
H_2O-A: 2 removed and replaced
07/26/10 JD
07/27/10 JD

ID	length (mm)	weight (g)	comment	initial
De-C 1.	16.19	0.033	on filter	JD
UMF-A 1.	15.93	0.039	on filter	JD
UMF-A 2.	17.41	0.044	on filter	JD
LMF-B 1.	too decomposed	0.071 (pooled	pushed out from	JD
expose JD 2.	too decomposed	all 3)	screen?	JD
3.	too decomposed	"	"	JD
H_2O-A 1.	too decomposed	0.043	on filter	JD
Ge-C 1.	16.63	0.040	on filter (alone)	JD
2.	18.12	0.042	on filter (alone	JD

07/27/10 JD

ID		length (mm)	weight (g)	comment	initial
H_2O-B	1.	16.95	0.043	on back (alive)	JD
	2.	15.84	0.045	"	JD
	3.	16.57	0.044	"	JD
	4.	17.15	0.046	"	JD
	5.	16.38	0.046 JD 07/27/10	"	JD
	6.	16.58	~~0.049~~ 0.049	"	JD
	7.	17.17	0.051	"	JD
LMF-D	1.	14.70	0.028	dead	JD
	2.	13.30	0.011	decomposed	JD
	3.	14.31	0.041	decomposed	JD
	4.	too decomposed	too decomposed	decomposed	JD

07/27/10 JD

07/29/10 DV

Scale: 1 square = _____

07/27/10 aly / T.T

100 culled for test initiation.

ID	length (mm)	weight (g)	ID	length (mm)	weight (g)
1	16.07	0.032	38	15.03	0.035
2	16.09	0.031	39	15.48	0.033
3	16.74	0.033	40	15.75	0.035
4	16.62	0.033	41	16.24	0.037
5	16.37	0.031	42	16.65	0.034
6	15.16	0.031	43	17.03	0.036
7	16.50	0.032	44	16.74	0.032
8	15.43	0.032	45	17.27	0.034
9	16.80	0.031	46	16.85	0.034
10	18.16	0.034	47	16.23	0.038
11	16.73	0.035	48	16.03	0.036
12	17.18	0.032	49	16.58	0.034
13	16.76	0.033	50	16.75	0.033
14	16.80	0.034	51	16.27	0.035
15	16.08	0.031	52	16.54	0.034
16	16.65	0.029	53	15.93	0.035
17	16.19	0.031	54	16.59	0.029
18	16.87	0.036	55	17.07	0.036
19	16.03	0.030	56	16.64	0.034
20	15.78	0.030	57	16.34	0.030
21	16.53	0.036	58	16.01	0.034
22	17.23	0.034	59	16.91	0.036
23	16.80	0.031	60	16.00	0.034
24	16.51	0.037	61	15.17	0.032
25	16.75	0.033	62	16.52	0.035
26	16.29	0.037	63	16.45	0.036
27	16.14	0.033	64	15.91	0.035
28	17.37	0.036	65	15.93	0.030
29	16.38	0.033	66	16.28	0.036
30	16.21	0.036	67	16.60	0.032
31	16.64	0.032	68	15.24	0.032
32	16.79	0.035	69	16.81	0.034
33	15.87	0.033	70	17.00	0.035
34	15.46	0.030	71	15.85	0.033
35	16.45	0.035	72	15.87	0.033
36	16.25	0.037	73	16.91	0.037
37	16.21	0.033	74	17.07	0.036

ID	length (mm)	weight (g)
75	16.59	0.036
76	16.79	0.036
77	17.23	0.033
78	16.87	0.035
79	16.45	0.036
80	16.33	0.034
81	16.42	0.033
82	17.46	0.038
83	17.35	0.038
84	16.38	0.036
85	16.79	0.032
86	15.83	0.036
87	16.28	0.034
88	16.63	0.036
89	15.21	0.034
90	17.03	0.036
91	17.69	0.036
92	16.48	0.033
93	16.61	0.032
94	17.03	0.034
95	16.55	0.034
96	15.61	0.036
97	17.05	0.038
98	16.58	0.035
99	17.07	0.032
100	16.53	0.034

July 27/10 ely IT.T

07/29/10 DV

07/28/10 JD

July 27/10

- 2 ws dead in filter → Tank DE-A @ 8:20pm
- 2 ws dead in filter → Tank ALL-B @ 8:34pm
- 3 ws passed primary screen at back → placed back in exposure area.

07/28/10 JD

Scale: 1 square =

07/28/10 JD (9:00 am Deads)

ID	length (mm)	weight (g)	comment	initial
H_2O-C 1.	too decomposed	too decomposed	in filter	JD
UMF-E 1.	too decomposed	too decomposed	in filter	JD
H_2O-D 1.	17.74	0.056	in filter	JD
LALL-B 1.	too decomposed	too decomposed	in filter	JD
LALL-F 1.	too decomposed	too decomposed	in filter	JD
LD-D 1.	18.12	0.062	in filter	JD
LMF-A 1.	18.45	0.040	in filter	JD

07/28/10 JD

07/28/10 SB (4:00 pm Deads)

ID	length (mm)	weight (g)	comment	initial
LALL-F-2	Decomposed		in filter	JT
LMF-A-2	20.33	0.044	in filter	JT
LMF-A-3	16.47	0.034	in filter	JT
LMF-A-4	19.00	42	in filter	JT
JT ~~LMF-A-5~~ LD-D-2	17.70	34	in filter	JT
JT ~~LMF-A-6~~ LD-D-3	18.87	38	in filter	JT
JT ~~LMF-A-7~~ LD-D-4	17.55	33	in filter	JT
LD-D-5 t JT	17.28	31	in filter	JT
LD-D-6	16.87	39	in filter	JT
LD-D-7	Decomposed		in filter	JT
H_2O-D-2	Decomposed		in filter	JT
H_2O-D-3	17.75	44	in filter	JT
H_2O-D-4	17.94	45	in filter	JT

07/28/10 SB

07/29/10 DV

07/28/10 TT (7:10pm Deads)

ID	Length (mm)	Weight (g)	Comment	Initial
H_2O-E 1.	Decomposed		In filter	TT
LMF-02-D	18.46	0.040	In filter	TT

07/29/10

07/29/10 ely.

10:30 deads

ID	length (mm)	weight (g) ely	comment	initial
				07/29/10 JD
LALLF (1)	decomposed	decomposed	filter	ely
LALL-F(2)	15.80	0.041	filter	ely.

07/29/10 JD

12:00 deads

ID	length (mm)	weight (g)	comment	initial
Ge-C 1.	15.93	0.074		JD

2:00pm deads

ID	length (mm)	weight (g)	comment	initial
H_2O-E 1.	18.65	0.055		JD
UMF-D 1	15.84	0.068	curved spine	JD

10:10pm Deads

ID	length (mm)	weight (g)	Comment	initial
H_2O-A	17.44	0.038	Curved spine	TT

07/29/10 JD

07/30/10 JD 9:00 am deads

ID	length (mm)	weight (g)	comment	initial
Ge-D 1.	19.76	0.054	on filter	JD
2.	17.68	0.059	on filter	JD
H_2O-C 1.	bent spine	0.052	on filter	JD
2.	17.13	0.065		JD
UMF-A 1.	16.99	0.051	on filter	JD

07/30/10 BT	4:00 PM Deads			
H_2O-D-1	18.84	0.049g	got under screen	BT
H_2O-D-2	too decomposed	too decomposed	got under screen	BT
LALL-B 1	19.34mm	0.044g	on filter	SB
UMF-01-A-1	unretrievable	unretrievable	under screen	SB
UMF-01-A-2	unretrievable	unretrievable	undergereen	SB
UMF-01-A-3	unretrevable	unretrievable	under screen	SB
ALL 1-1	20.48mm	0.053g	on filter	SB

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07/30/10 SB 4:00 Pm Deads continued.

ID	length (mm)	weight (g)	Comment	Initial
LALL-F-2.	18.42	0.050	on filter	SB
LALL-F-3.	22.90	0.053	on filter	SB

07/30/10 SB

07/30/10 SB 7:00 pm Deads.

ID	length (mm)	weight (g)	comment	Initial
GE-D-1	16.91	0.067	between screen and wall	SB
Ctrl-D 1.	15.21	0.043	between screen and wall	SB
H_2O-C 3.	decomposed	decomposed	under screen	SB
H_2O-C 4.	decomposed	decomposed	under screen	SB
H_2O-C 5.	decomposed	decomposed	under screen	SB
H_2O-C 6.	decomposed	decomposed	under screen	SB
H_2O-C 7.	decomposed	decomposed	under screen	SB
LMF-02-C-1	18.08	0.065	on filter	SB
LMF-02-C-2	19.46	0.064	on filter	SB
LMF-02-C-3	18.81	0.066	on filter	SB

07/31/10 JT 11:00 am Deads

ID	length (mm)	weight (g)	comment JT on filter	Initial
CTRL-F	20.33	0.063	on filter	JT
CTRL-A	19.37	0.056	btw screen & wall	JT
LMF-02-C	19.94	0.066	scoliosis	JT
LALL-F	17.37	57	filter	
H_2O-C-1	17.26	42	filter	
H_2O-C-2	18.84	53	filter	
H_2O-C-3	19.58	45	filter	
H_2O-C-4		decomposed/unretrievable	under screen	
H_2O-C-5		decomposed/unretrievable	under screen	
GE-D-1	20.25	63	filter	
GE-D-2	20.08	68	under screen	

10/08/10 DF

• no deads found @ 7:00 pm

07/31/10 JD

08/01/10 JD 11:00 am deads

ID	length (mm)	weight (g)	comment	Initial
H_2O-E 1	19.26	0.043	on filter	JT
H_2O-E 2	18.46	0.036	on filter	JT
H_2O-E 3	decomposed		on filter	JT
LALL-B 1	decomposed		on filter	JT
LALL-B 2	decomposed		on filter	JT
LD-01-D	20.69	0.062	on filter	JT

08/01/10 11:00 am deeds continued

ID	length (mm)	weight (g)	comment	initial
LALL-F 1	18.75	0.037	on filter	JT
LALL-F 2	20.08	0.058	on filter	JT
LALL-F 3	20.66	0.056	on filter	JT
LALL-F 4	decomposed		on filter	JT
DE-A 1	19.80	0.050	on filter	JT
DE-A 2	21.82	0.054	on filter	JT
DE-A 3	20.78	0.029	on filter	JT
DE-A 4	17.22	0.038	on filter	JT

10/08/10 DF

08/01/10 JD

08/02/10 JD

- De-A had a peice of a Fish in screen, peice not Kept JD
- 200 dead in S1, S2, and S3 SP

ID	length (mm)	weight (g)	comment	initial 9:30am
CTRL-F 6	20.17	0.052	on filter	JD
UMF-E-1	19.78	0.079	Curved spine in filter	
UMF-E-2	18.65	0.018	relatively small in filter	
UMF-E-3	22.80	0.079	curved spine in filter	
UMF-E-4	19.95	0.032	in filter	
LALL-F-1	20.27	0.075	in filter	
LALL-F-2	17.90	0.069	curved spine in filter	
LALL-F-3	19.16	0.092	curved spine in filter	

ID	length (mm)	weight (g)	comment	Init. at 4:00pm
H_2O-D	Decomposed		Stuck in silicone by screen	TT

08/02/10 JD

08/03/10 JD

ID	length (mm)	weight (g)	comment	Initials 9:00AM
DE-A 1	18.65	0.076	Curved spine in Filter	EH
H_2O-A-1	18.06	0.055	~~in filter~~ under front screen	TT
H_2O-A-2	19.40	0.079	~~in filter~~ under front screen	TT
H_2O-A-3	19.60	0.068	~~in filter~~ under front screen	TT
H_2O-A-4	Decomposed		~~in filter~~ under front screen	TT
H_2O-A-5	Decomposed		~~in filter~~ under front screen	TT
H_2O-A-6	17.95	0.061	~~in filter~~ under front screen	TT
H_2O-A-7	18.98	0.062	~~in filter~~ under front screen	TT
H_2O-A-8	17.84	0.056	~~in filter~~ under front screen	TT
H_2O-A-9	Decomposed		~~in filter~~ under front screen	TT

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08/03/10

ID	Length(mm)	Weight(g)	Comment	Initials
H_2O-A-10	17.19	0.054	~~in filter~~ under front screen	TT
H_2O-A-11	Decomposed		~~in filter~~ under front screen	TT
H_2O-A-12	18.87	0.090	under front screen	TT
H_2O-A-13	Decomposed		3 stuck together decomposed under front screen	TT
H_2O-A-14	Decomposed		under front screen	TT
H_2O-A-15	18.56	0.077	under front screen	TT
H_2O-A-16	12.70	0.031	under front screen	TT
H_2O-A-17	16.82	0.029	under front screen	TT
H_2O-A-18	19.23	0.060	under front screen	TT
H_2O-A-19	17.82	0.026	under front screen	TT
H_2O-A-20	19.50	0.070	spine curved under front screen	TT
H_2O-A-21	Decomposed		under front screen	TT
H_2O-A-22	Decomposed		under front screen	TT
H_2O-A-23	Decomposed		under front screen	TT
H_2O-A-24	Decomposed		under front screen	TT
H_2O-A-25	Decomposed		under front screen	TT
H_2O-A-26	Decomposed		under front screen	TT
H_2O-A-27	Decomposed		under front screen	TT

08/03/10 SG

- Sturgeon tank #1 → 20 deads
- Sturgeon tank #2 → 65 deads
- Sturgeon tank #3 → 40 deads.

8/3/10 EL

ID	length (mm)	Weight (g)	Comment	Initials
H_2O-C1	—	—	decomposed	EL
H_2O-C2	—	—	decomposed	EL

11:30 AM

8/4/10 TT @ 10:15cm

ID	length (mm)	Weight (g)	Comments	Initials
LMF-02-A-1	18.91	0.057	curved spine in Tank euthanized	TT
LMF-02-B-1	19.44	0.070	curved spine in Tank euthanized	TT
LMF-02-C-1	18.62	0.058	curved spine in Tank euthanized	TT
LD-01-A-1	21.21	0.091	Dead in Tank – curved spine	TT
LMF-02-C-2	20.85	0.098	Dead in Tank	TT
UMF-D-1	18.48	0.062	Dead in Tank	TT
H_2O-C	18.05	0.052	Dead in Tank	TT
UMF-01-E-1	17.70	0.067	Dead in Tank	TT

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08/04/10 Deads 1:45pm TT

ID	Length (mm)	Weight (g)	Comments	Initials
LALL-F-1	20.04	0.064	curved spine euthanized	TT
H_2O-A-1	16.88	0.155	under screen dead (covered in feed)	TT

08/04/10 deads 9:00pm DV

ID	length (mm)	weight (g)	initials
UMF-01-D	22.34	0.085	DV

8/4/10

8/5/10 deads 9:00AM EH

ID	length (mm)	weight (g)	Initials	comment
UMF-01-A	20.44	0.097	EH	—
LD-F 1	21.11	0.099	EH	—
LD-F 2	21.25	0.081	EH	—
LALL-C	19.69	0.071	EH	—
LALL-D	18.85	0.085	EH	—
CTRL-C	—	—	EH	decomposed
CTRL-E	20.10	0.078	EH	—

10/08/10 DF

deads 2:00pm JD

ID	length (mm)	weight (g)	Initial	comments
H_2O-C 1	19.39	0.061	JD	—
CTRL-E1	—	—	JD	decomposed/eaten

Culture Tanks Mortality – 08/05/2010 @ 4:00PM

ST1 → 270 removed total. 70 of those formalin preserved.
ST2 → 391 removed total. 191 of those formalin preserved.
ST3 → 300 removed total. 70 of those formalin preserved.

10/08/10 DF

ID	weight (g)	length (mm)	Initials	Comment
No 1	0.054	20.09	M. M	no
No 2	0.054	20.41	M M	"
No 3	0.053	20.23	M M	"
No 4	0.052	21.55	M M	"
No 5	0.053	21.33	M M	"
No 6	0.054	23.06	M M	"
No 7	0.042	20.89	M M	"
No 8	0.048	20.19	M M	"
No 9	0.048	21.73	M M	"
No 10	0.047	21.72	M M	"
No 11	0.050	20.71	M M	"
No 12	0.053	20.70	M M	"
No 13	0.042	20.06	M M	"
No 14	0.049	21.45	M M	"
No 15	0.047	21.28	M M	"
No 16	0.046	21.31	M M	"
No 17	0.045	22.6	M M	"
No 18	0.040	20.56	M M	"
* No 20	0.055	22.26	M M	"
No 21	0.026	18.80	M M	"
No 22	0.040	21.09	M M	"
No 23	0.055	22.72	M M	"
No 24	0.039	19.06	M M	"
No 25	0.045	21.19	M M	"
No 26	0.050	21.19	M M	"
No 27	0.053	22.22	M M	"
No 28	0.049	22.24	M M	"
No 29	0.048	21.68	M M	"
No 30	0.053	21.62	M M	"
No 31	0.056	23.18	M M	"
No 32	0.046	21.52	M M	"
No 33	0.050	21.14	M M	"
* No 19	0.055	21.50	M M	"

10/05/10 DF

B

08/05/10

ID	weight (g)	length (mm)	Initials	Comments
Std. 2 No1	0.067	19.97	MM	no
" No2	0.052	18.41	MM	"
" No3	0.063	19.44	MM	"
" No4	0.056	18.50	MM	"
" No5	0.052	17.50	MM	"
" No6	0.057	18.99	MM	"
" No7	0.054	18.37	MM	"
" No8	0.049	21.22	MM	"
" No9	0.047	17.14	MM	"
" No10	0.053	21.07	MM	"
" No11	0.043	17.68	MM	"
" No12	0.058	20.72	MM	"
" No13	0.061	19.90	MM	"
" No14	0.048	20.07	MM	"
" No15	0.057	20.58	MM	"
" No16	0.045	19.45	MM	"
" No17	0.052	—	MM	curved ↕
" No18	0.052	—	MM	too curved to measure
" No19	0.050	19.68	MM	no
" No20	0.053	—	MM	too curved to measure
" No21	0.047	19.46	MM	no
" No22	0.054	19.95	MM	"
" No23	0.057	19.47	MM	"
" No24	0.048	19.23	MM	"
" No25	0.037	19.58	MM	"
" No26	0.043	19.93	MM	"
" No27	0.056	20.49	MM	"
" No28	0.050	18.11	MM	"
" No29	0.061	20.13	MM	"
" No30	0.058	20.33	MM	"
" No31	0.049	20.27	MM	"
" No32	0.039	18.95	MM	"
" No33	0.057	20.92	MM	"

Fish were already kind of stiff and curved, measurement of length ~~and weight~~ could be inexactly.
M. M.

08/05/10

ID	weight (g)	length (mm)	(initials)	Comments
Std 3 No1	0.054	19.25	M.M.	HO
No2	0.066	21.28	M.M	"
No3	0.056	21.17	M.M	"
No4	0.064	21.25	M.M.	"
No5	0.065	21.17	M.M	"
No6	0.053	20.02	M.M.	"
No7	0.060	20.67	M.M.	"
No8	0.050	18.59	M.M	"
No9	0.061	20.39	M.M.	"
No10	0.063	21.73	M.M	"
No11	0.064	21.91	M.M.	"
No12	0.049	19.98	M.M	"
No13	0.060	20.82	M.M	"
No14	0.064	22.19	M.M	"
No15	0.066	22.19	M.M	"
No16	0.054	20.85	M.M	"
No17	0.054	19.46	M.M	"
No18	0.062	21.64	M.M	"
No20	0.064	20.94	M.M.	"
No21	0.062	20.86	M.M	"
No22	0.062	20.62	M.M	"
No23	0.052	20.52	M.M	"
No24	0.064	21.79	M.M.	"
No25	0.065	20.26	M.M.	"
No26	0.069	20.84	M.M.	"
No27	0.063	20.74	M.M	"
No28	0.053	20.86	M.M.	"
No29	0.054	20.61	M.M.	"
No30	0.053	19.18	M.M	"
No31	0.048	20.72	M.M	"
No32	0.070	21.86	M.M	"
No33	0.063	22.12	M.M	"
No34	0.070	20.32	M.M	"
× No 19	0.060	20.92	M.M	"

Mortality - 08/05/2010 @ 9:00PM

LMF

ID	Length (mm)	Weight (g)	Initials	Comments
LMF-02-A-1	20.96	0.098	BT, JS	=
LMF-02-A-2	23.04	0.078	BT, JS	—

08/05/2010

08/06/10 JT Mortality @ 10:00 am

ID	length (mm)	weight (g)	comments	Initials
H_2O-A	22.02	0.057	—	JT
CTRL-F 1	18.16	0.055	—	JT
CTRL-F 2	18.56	0.059	—	JT
LD-01-F	19.99	0.059	—	JT
CTRL-E 1	17.87	0.048	—	JT
CTRL-E 2	17.93	0.061	—	JT
UMF-01-F 1	19.83	0.049	—	JT
UMF-01-F 2	18.34	0.056	—	JT
CTRL-D	Unretrievable			JT

08/06/10 JT

- H_2O-A-23 dead from 8/03/10 was accidently pored down the drain when being exchanged from Formalin to 70% ethanol Liz 8-6-10
- Also H_2O-A-4 was pored into large waste container and lost when being exchange from Formalin to 70% ethanol - Liz

ST 1 43 mortalities
ST 2 33 mortalities
ST 3 15 mortalities

Morts - 08/07/2010 @ 1:00PM

Tank-ID	Length (mm)	Weight (g)	Comments	Initials
Ctrl-D 1	17.55mm	0.034	Slightly curved spine	
Ctrl-D 2	18.77mm	0.082	—	
H_2O-D 1	20.50	0.074	—	
H_2O-D 2	20.55	0.069	—	
UMF-C 1	18.50	0.088	—	
H_2O-E 1	20.11	0.060	—	
LD-01-A 1	20.42	0.108	Curved spine	
Ge-B 1	18.04	0.112	—	
Ge-B 2	16.50	0.076	—	

Tank-ID	Length (mm)	Weight (g)	Comments	Initials
UMF-F-1	16.24	0.083	—	JS
H_2O-B-1	15.23	0.088	Caudal fin severed.	JS
H_2O-B 2	18.72	0.067	—	JS
LALL-F1	20.33	0.083	Slightly curved spine.	JS
LALL-F2	16.78	0.067	Curved spine.	JS
LALL-D 1	21.31	0.082	—	
LALL-D 2	16.40	0.111	Curved Spine	JS
LALL-D 3	17.90	0.076	Slightly curved spine	JS
LALL-D 4	17.28	0.082	—	JS
LALL-D5	19.40	0.091	Curved spine - 180°	JS
LALL-D6	16.01	0.087	—	JS
LMF-A1	16.77	0.200	Had white film covering body	JS
LMF-A2	17.30	0.158	White film covering body	JS
LMF-A3	17.04	0.130	White film covering body	JS
LMF-A4	17.66		White film covering body	JS
LMF-A5	17.18		White film covering body	JS
LD-E 1	18.89	0.073	—	JS
UMF-01-A 1	20.13	0.070	—	JS
UMF-01-A 2	18.42	0.061	—	JS
UMF-01-A 3	18.00	0.078	—	JS
UMF-D1	14.94	0.042	missing end of tail	L.L
UMF-D2	17.44	0.055	—	L.L
UMF-D3	19.96	0.043	curved spine	L.L
UMF-D4	20.02	0.057	curved spine	L.L
UMF-D5	20.85	0.053	curved spine	L.L
CtrlF-1	18.07	0.050	curved spine	L.L
~~CtrlE-1~~	~~18.60~~		red color under neck	L.L
CtrlE-2	18.60	0.059	—	L.L
CtrlE-2	14.65	0.058	twisted spine	L.L
LMF-D1	18.47	0.058	slightly curved spine	L.L
LMF-D2	15.77	0.050	slightly curved spine	L.L
LALL-C1	17.49	0.034	curved spine - 180°	L.L
LALL-C2	17.93	0.055	—	L.L

08/07/10 JD

08/07/10 JD

08/07/10 JD

Mortalities 9:00 pm

ID	length	weight	comment	initial
CTRL-B 1.	22.14	0.083	—	JD
LALL-A 1.	18.91	0.070	—	
2.	20.83	0.095	—	
UMF-E 1.	—	—	eaten	
2.	—	—	eaten	
LD-F 1.	19.45	0.075	~~eaten~~ 08/07/10 JD	
CTRL-E 1.	—	—	eaten tail	
Ge-B 1.	—	—	eaten	
NP-B 1.	21.94	0.087	Full belly	
Ge-C 1.	20.58	0.067	—	
2.	20.11	0.080	—	
UMF-C 1.	19.39	0.068	—	
LD-B 1.	19.71	0.080	—	
UMF-D 1.	—	—	Fungus covered	
LMF-A 1.	—	—	eaten tail	
De-A 1.	21.52	0.108	—	

08/03/10 JD

8/7/10

8/8/10 EH

Mortalities @ 9:00 AM

ID	length	Weight	Comments
CTRL - A	22.31	0.061	—
LMF - D	20.91	0.076	—
Ge-B 1	20.70	0.077	—
Ge-B 2	18.73	0.058	—
Ge-B 3	—	—	decomposed
NP-A	20.36	0.064	—
LD-B	20.60	0.059	—
UMF-C	20.23	0.062	—
H_2O-A	22.42	0.083	—
H_2O-B 1	—	—	decomposed

8/8/10 Elt

mortalities @ 900 AM

ID	length	Weight	Comments
H_2O B2	19.03	0.051	—
H_2O B3	18.17	0.052	—
CTRL D	22.27	0.066	—
H_2O E 1	—	—	decomposed
H_2O E 2	—	—	decomposed
H_2O E 3	20.31	0.059	—
H_2O E 4	19.61	0.063	—
CTRL F 1	—	—	decomposed
CTRL F 2	—	—	decomposed
CTRL F 3	—	—	decomposed
CTRL F 4	—	—	eaten tail
CTRL F 5	—	—	eaten tail
CTRL F 6	—	—	eaten tail
CTRL F 7	—	—	eaten tail
CTRL F 8	18.52	0.062	—
CTRL F 9	18.60	0.053	—
CTRL F 10	18.02	0.048	—
CTRL F 11	18.71	0.058	—
CTRL F 12	18.28	0.053	—
UMF-01-A 1	21.10	0.074	—
UMF-01-A 2	22.04	0.081	—
LMF A 1	—	—	decomposed
LMF A 2	—	—	decomposed
LMF A 3	—	—	half eaten
LMF A 4	23.05	0.085	—
LD D 1	—	—	decomposed
LD D 2	—	—	tail n eaten
LD D 3	20.88	0.066	—
H_2O D 1	—	—	eaten
H_2O D 2	—	—	eaten
H_2O D 3	22.75	0.069	—
H_2O D 4	20.40	0.060	—
UMF-E 1	21.25	0.083	—
UMF-E 2	—	—	decomposed
UMF-E 3	—	—	eaten
CTRL E 1	—	—	decomposed
CTRL E 2	—	—	decomposed

10/08/10 DF

8/8/10 EH

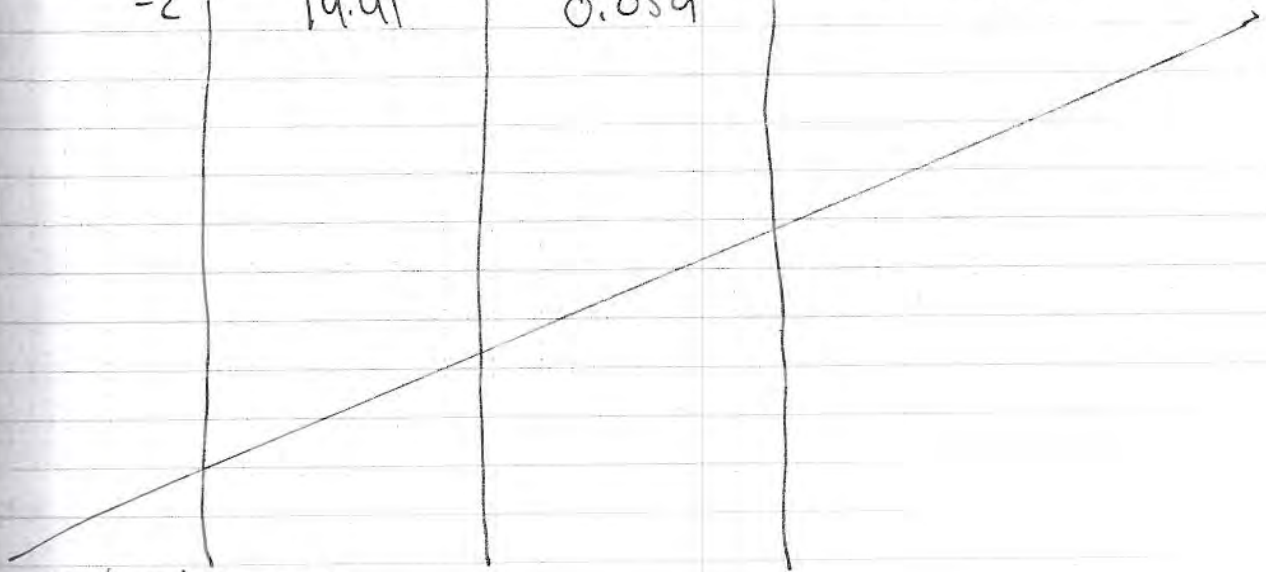
mortality @ 9:00 AM

ID	length	weight	comments
CTRL E 3	17.95	0.032	—
DE C 1	—	—	decomposed
DE C 2	—	—	tail eaten
LD C 1	21.57	0.070	—
LD C 2	—	—	decomposed
CTRL B 1	—	—	decomposed
CTRL B 2	—	—	decomposed
UMF-F	20.26	0.059	—
UMF B 1	—	—	decomposed
UMF B 2	19.88	0.057	—
LD E	19.85	0.069	—
LALL A 1	—	—	decomposed
LALL A 2	20.63	0.077	—
DE A 1	21.49	0.075	—
DE A2	18.97	0.057	—
mortality	@ 8:30pm		—
Ctrl-F-1	17.74	0.058	—
-2	16.64	0.068	—
-3	18.53	0.070	—
-4	17.06	0.050	—
LALL-A-1	19.60	0.059	—
-2	20.19	0.076	—
DE B-1	18.14	0.053	—
-2	20.96	0.059	—
H2O-D-1	20.13	0.061	—
-2	16.16	0.042	—
-3	18.89	0.053	—
LD-F-1	18.24	0.070	—
UMF-B-1	N/A	N/A	eaten partially
DE-C-1	18.09	0.045	—
-2	19.07	0.062	—
LALL-E-1	18.76	0.059	—
Ctrl A-1	16.25	0.074	—
H2O-C-1	N/A	N/A	decomposed
UMF-OL-A-1	21.27	0.057	—
-2	22.67	0.090	—
CE-B-1	17.40	0.048	—

08/08/10 DV

Mortality @ 830pm

ID	length	weight	Comments
GE-B-2	22.85	0.067	—
H20-B-1	N/A	N/A	partially eaten
Ctrl-C-1	19.56	0.056	—
-2	18.94	0.049	—
LMF-A-1	N/A	N/A	decomposed
-2	19.91	0.059	



08/08/10 DV

Mortality @ 11:00 AM – 08/09/2010

ID	Length (mm)	Weight (g)	Comments	Initials
LALL-A1	21.91	0.071	—	
LALL-A2	23.66	0.063	—	
LALL-A3	21.70	0.066	—	
LALL-A4	20.87	0.065	—	
Ctrl-C1	17.56	0.054	—	
Ctrl-C2	15.67	0.065	—	
Ctrl-C3	16.43	0.058	—	
Ctrl-C4	15.92	0.043	—	
Ge-B1	17.33	0.073	—	
Ge-B2	18.62	0.060	—	
Ge-B3	18.41	0.058	—	
Ctrl-B1	18.94	0.077	—	
Ctrl-B2	20.91	0.076	—	
Ctrl-E1	20.87	0.065	—	

~~Ctrl E2~~

ID	Length (mm)	Weight (g)	Comments	Initials
Ctrl-E2	18.47	0.066	—	
Ctrl-F1	21.75	0.077	—	
Ctrl-F2	17.30	0.050	—	
Ctrl-F3	20.81	0.069	—	
H_2O-B	19.10	0.112	Had film covering body	
UMF-E1	15.59	0.060	—	
UMF-E2	18.23	0.063	—	
UMF-E3	22.59	0.079	—	
UMF-E4	20.62	0.059	—	
LMF-A1	21.72	0.101	—	
H_2O-D1	15.99	0.048	Missing caudal fin	
H_2O-D2	20.95	0.065	—	
H_2O-D3	21.63	0.061	—	
H_2O-D4	8.97	0.030	Missing most of body	
H_2O-D5	17.08	0.073	White film covering body.	
Ge-A1	18.93	0.056	—	
Ge-A2	16.21	0.071	—	
Ge-A3	17.84	0.064	—	
UMF-C1	18.02	0.210	Covered in film on body	
LD-E	20.30	0.079	—	
LMF-C1	13.26	0.040	Missing caudal fin	
LMF-C2	14.86	0.069	Missing caudal fin. Covered in film.	
De-C1	20.06	0.068	—	
De-C2	16.17	0.054	Missing caudal fin.	
UMF-A1	18.41	0.078	—	
UMF-A2	22.95	0.079	—	
Ge-C1	17.06	0.077	Covered in white film.	
Ge-C2	15.33	0.069	Covered in white film	
Ge-C3	18.81	0.068	—	
Ge-C4	22.28	0.083	—	
UMF-D1	16.81	0.062	—	
UMF-D2	17.38	0.065	—	
UMF-D3	20.51	0.077	—	
H_2O-C1	19.85	0.051	Covered in a film.	
H_2O-C2	18.95	0.067	—	
H_2O-C3	19.47	0.057	—	
H_2O-C4	18.11	0.060	—	
Ctrl-A1	17.02	0.072	—	

ID	Length (mm)	Weight (g)	Comments	Initials
Ctrl-A2	21.06	0.088	—	
Ctrl-A3	17.75	0.069	—	
H_2O-B1	16.66	0.074	Covered in film.	
H_2O-B2	20.30	0.083	—	
LAll-C1	16.77	0.070	—	
LAll-C2	17.90	0.116	Entire body covered in film.	
LD-B1	20.13	0.090	—	
LD-B2	17.71	0.058	—	
NP-A1	22.74	0.056	—	
LAll-D1	20.21	0.064	Body covered in film.	
LAll-D2	20.18	0.078	Body covered in film.	
LAll-D3	20.17	0.084	Body covered in film.	
LAll-D4	19.56	0.073	—	
~~LAll-D5~~ [illegible]-09/09/2010	~~20.79~~	~~0.043~~	—	
LAll-D5	20.94	~~0.076~~ 0.043	—	
LAll-D6	20.58	~~0.068~~ 0.076	—	
LAll-D7	20.12	0.068	—	
LAll-D8	19.85	0.089	—	
LAll-D9	20.10	0.084	—	
LAll-D10	21.34	0.070	—	
LAll-D11	21.22	0.054	—	
H_2O-E1	17.31	0.070	—	
LMF-D1	19.57	0.067	—	
LAll-E1	20.02	0.077	—	
LAll-E2	17.57	0.066	—	
LD-A1	18.29	0.070	—	
LD-A2	18.42	0.074	—	
LD-A3	20.58	0.078	—	
LD-A4	16.76	0.064	—	
H_2O-A1	20.23	0.080	—	
H_2O-A2	22.25	0.075	—	
H_2O-A3	18.33	0.077	—	
H_2O-A4	17.93	0.076	—	
H_2O-A5	17.33	0.066	—	
H_2O-A6	19.20	0.068	—	
LAll-F1	17.48	0.076	—	
Ctrl-D1	17.78	0.082	—	
Ctrl-D2	17.72	0.073	—	
Ctrl-D3	15.17	0.021	—	
Ctrl-D4	16.09	0.058		

Mortality @ 3:15pm 08/09/10

ID	length (mm)	Weight (g)	Comments	Initials
UMF-01-F	18.91	0.083	Spine bent twice	TT

Mortality @ 8:00 pm 08/09/10 JT

ID	length (mm)	Weight (g)	Comments	Initial
LALL-A	22.27	0.049	—	JT
LALL-E	19.18	0.075	—	JT
LALL-F	17.13	0.056	—	JT
LD-A	19.39	0.064	—	JT
LD-E1	19.08	0.071	—	JT
LD-E2	19.50	0.061	—	JT
LD-E3	20.44	0.084	—	JT
LD-F1	19.18	0.031	—	JT
LD-F2	19.39	0.073	—	JT
UMF-A1	18.66	0.057	—	JT
UMF-A2	N/A	N/A	eaten	JT
UMF-E	24.34	0.103	—	JT
GE-A	20.22	0.067	—	JT
GE-B1	19.23	0.059	—	JT
GE-B2	18.47	0.062	—	JT
GE-B3	17.91	0.055	—	JT
GE-B4	19.18	0.070	—	JT
GE-C	18.60	0.076	—	JT
LMF-C1	17.63	0.070	—	JT
LMF-C2	17.84	0.081	—	JT
LMF-C3	19.62	0.052	—	JT
H_2O-B	17.79	0.067	—	JT
H_2O-C	18.21	0.082	—	JT
H_2O-D1	18.34	0.071	—	JT
H_2O-D2	18.67	0.059	—	JT
H_2O-E	19.41	0.046	—	JT
CTRL-D	18.16	0.055	—	JT
CTRL-F	21.74	0.051	—	JT
08/09/10	Mortalities	JT	—	

08/09/10 JT

04

Mortality @ 10:00am 08/10/10

- ST1 and ST3 overflowed; ~125 dead ws and ~50 dead ws respectively

ST2 ~ 34 dead and ST1 ~ 50 dead TT

Mortality @ 3:20pm 08/10/10 TT

ID	length (mm)	Weight (g)	Comments	Initials
H_2O-C-1	17.69	0.043		TT
H_2O-C-2	22.91	0.076		TT
CTRL-A-1	17.61	0.030	Fungus present	TT
CTRL-A-2	16.51	0.048	Fungus present	TT
CTRL-A-3	19.32	0.076	Fungus present	TT
CTRL-A-4	18.06	0.035	Spine bent/rolled multiple times	TT
CTRL-A-5	23.30	0.078		TT
CTRL-A-6	17.96	0.067		TT
CTRL-A-7	20.29	0.084		TT
CTRL-A-8	18.98	0.057		TT
CTRL-A-9	24.56	0.083		TT
CTRL-A-10	22.03	0.070		TT
CTRL-A-11	22.68	0.066		TT
CTRL-A-12	23.38	0.076		TT
CTRL-A-13	17.17	0.056		TT
CTRL-A-14	19.83	0.063		TT
CTRL-A-15	22.62	0.074		TT
CTRL-A-16	22.27	0.069		TT
CTRL-B-1	22.30	0.116	Fungus present	TT
CTRL-B-2	20.63	0.096	Fungus present	TT
UMF-01-F-1	17.64	0.054		TT
UMF-01-F-2	20.83	0.075		TT
LD-01-F-1	20.81	0.056		TT
DE-C-1	17.40	0.058		TT
LAU-C-1	18.47	0.067		TT
Ge-D-1	19.10	0.084		TT
LD-01-C-1	24.85	0.113		TT
LD-01-C-2	23.05	0.067		TT
H_2O-B-1	19.85	0.079		TT
H_2O-B-2	17.89	0.075		TT
UMF-02-B-1	16.96	0.055		TT
Ge-A-1	19.18	0.058		TT
Ge-A-2	20.44	0.073		TT
DE-B-1	19.55	0.068		TT
UMF-01-D-1	20.41	0.067		TT

ID	Length (mm)	Weight (g)	Comments	Initials
UMF-01-D-2	19.66	0.082		TT
LD-01-B-1	24.74	0.086		TT
LD-01-B-2	18.89	0.055		TT
H_2O-A-1	20.35	0.058		TT
UMF-01-C-1	23.43	0.095		TT
UMF-01-C-2	20.35	0.040		TT
LD-01-A-1	23.30	0.120		TT
LD-01-A-2	17.79	0.068		TT
LD-01-A-3	16.88	0.052		TT
H_2O-E-1	16.34	0.052		TT
LMF-02-C-1	18.70	0.064		TT
LMF-02-C-2	14.58	0.041		TT
LMF-02-C-3	15.63	0.062		TT
LMF-02-C-4	17.78	0.067		TT
UMF-01-E-1	16.80	0.055		TT
UMF-01-E-2	14.88	0.055		TT
UMF-01-E-3	15.14	0.035		TT
UMF-01-E-4	17.57	0.051		TT
LMF-02-D-1	18.48	0.083		TT
LMF-02-D-2	19.52	0.109	Fungus Present	TT
LMF-02-D-3	17.78	0.062		TT
Ge-B-1	18.52	0.079		TT
Ge-B-2	17.90	0.094		TT
Ge-B-3	18.04	0.071		TT
Ge-B-4	22.26	0.083		TT
Ge-D-2	18.59	0.058	Behind screen	TT
CTRL-E-1	21.29	0.104		TT
CTRL-E-2	17.14	0.090		TT
CTRL-E-3	20.14	0.092		TT
CTRL-E-4	17.86	0.087		TT
CTRL-E-5	17.78	0.090		TT

Mortality 08/10/10 8:00pm ST

ID	length (mm)	weight (g)	comments	Initials
UMF-D	25.43	0.126		ST
H_2O-A1	21.70	0.086		ST
H_2O-A2	20.83	0.060		ST
LD-B	19.50	0.064		ST
H_2O-B1	17.76	0.065		ST
H_2O-B2	17.74	0.056		ST

ID	length (mm)	weight (g)	comments	Initials
LALL-C1	17.11	0.066	—	JT
LALL-C2	24.97	0.085	—	JT
LALL-C3	24.51	0.094	—	JT
LALL-C4	23.24	0.080	—	JT
LALL-C5	17.14	0.052	—	JT
CTRL-C1	17.02	0.062	—	JT
CTRL-C2	15.41	0.056	—	JT
CTRL-C3	15.20	0.056	—	JT
GE-B1	21.81	0.090	—	JT
GE-B2	N/A	N/A	Missing tail	JT
GE-B3	19.22	0.088	—	JT
GE-C1	16.95	0.070	—	JT
GE-C2	N/A	N/A	fungus, curved spine	JT
H_2O-C1	19.22	0.067	—	JT
H_2O-C2	20.62	0.082	—	JT
UMF-F1	16.75	0.064	—	JT
UMF-F2	21.28	0.070	—	JT
UMF-F3	16.38	0.062	—	JT
CTRL-B1	19.51	0.064	—	JT
CTRL-B2	N/A	N/A	Cannot separate from biofilm	JT
H_2O-E	16.82	0.069	—	JT
UMF-C	16.71	0.061	—	JT

08/10/10 JT

August 11, 2010

- ST1 culture tank crashed due to high ammonia level. ~8000 larval sturgeon removed (mort)
- ST2 & ST3 culture tanks cleaned
  - ST2: 40 dead larval sturgeon removed → frozen
  - ST3: 50 dead larval sturgeon removed → frozen

Mortality @ 10:00 am

ID	length (mm)	weight (g)	comments	Initials
GE-B1	20.69	0.069	—	JB
GE-B2	23.67	0.097	—	JB
GE-B3	24.62	0.095	—	JB
UMF-D1	19.30	0.084	—	JB
UMF-D2	24.08	0.075	—	JB
LALL-F1	19.68	0.081	—	JB
LALL-F2	19.33	0.059	—	JB
LALL-F3	22.18	0.053	—	JB
LALL-F4	19.32	0.097	—	JB

ID	length (mm)	weight (g)	comments	Initials
LMF-B	19.90	0.110		JB
H_2O-D1	22.25	0.088		JB
H_2O-D2	22.36	0.108		JB
H_2O-D3	21.95	0.088		JB
H_2O-D4	21.61	0.072		JB
CTRL-C1	23.50	0.057		JT
CTRL-C2	17.06	0.081		JT
LMF-C1	18.38	0.069		JT
LMF-C2	21.69	0.062		JT
LALL-A	21.16	0.080		JT
UMF-B1	21.62	0.065		JT
UMF-B2	18.97	0.067		JT
LD-B1	19.18	0.134		JT
CTRL-D1	19.26	0.106		JT
CTRL-D2	23.12	0.077		JT
CTRL-D3	24.83	0.088		JT
CTRL-D4	23.85	0.081		JT
GE-D	17.22	0.067		JT
H_2O-A1	18.94	0.077		JT
H_2O-A2	18.95	0.119		JT
GE-A	20.39	0.088		JT
GE-C	17.80	0.113		JT
LALL-C1	21.78	0.106		JT
LALL-C2	22.85	0.183		JT
LALL-C3	23.76	0.120		JT
LALL-C4	24.47	0.100		JT
LALL-C5	23.78	0.093		JT
LALL-C6	23.88	0.123		JT
LALL-C7	21.99	0.079		JT
LALL-C8	24.25	0.119		JT
LALL-C9	22.44	0.164		JT
LALL-C10	23.67	0.101		JT
LALL-C11	21.74	0.083		JT
LALL-C12	21.27	0.077		JT
CTRL-A1	24.99	0.118		JT
CTRL-A2	22.59	0.071		JT
CTRL-A3	23.28	0.071		JT
CTRL-A4	22.06	0.098		JT
CTRL-A5	22.00	0.068		JT

ID	length (mm)	weight (g)	comments	Initials
CTRL-A6	20.94	0.082	—	JT
CTRL-A7	22.55	0.059	—	JT
CTRL-A8	22.43	0.072	—	JT
CTRL-A9	20.94	0.081	—	JT
CTRL-A10	21.69	0.069	—	JT
CTRL-A11	22.85	0.093	—	JT
CTRL-A12	22.87	0.087	—	JT
CTRL-A13	22.79	0.067	—	JT
CTRL-A14	21.85	0090	—	JT
CTRL-A15	22.18	0.128	—	JT
CTRL-A16	20.92	0.053	—	JT
NP-B1	18.68	0076	—	JT
NP-B2	21.66	0.086	—	JT
LHL-D1	20.92	0.067	—	JT
LAL-D2	21.41	0.068	—	JT
LAL-D3	23.46	0.101	—	JT
UMF-E1	15.67	0.052	—	JT
UMF-E2	15.45	0.048	—	JT
UMF-E3	19.87	0.096	—	JT
UMF-E4	17.55	0.048	—	JT
UMF-E5	23.89	0.081	—	JT
H_2O-C1	24.72	0.086	—	JT
H_2O-C2	21.05	0.095	—	JT
H_2O-C3	19.21	0.079	—	JT
UMF-A1	22.53	0.087	—	JT
LD-D1	26.08	0.150	—	JT
LD-D2	18.28	0.082	—	JT
DE-A1	22.20	0.078	—	JT
DE-A2	20.00	0.101	—	JT
LD-A1	25.53	0.145	—	JT
LD-A2	16.41	0.064	—	JT
LD-A3	16.28	0.068	—	JT
LD-A4	23.00	0.110	—	JT
CTRL-F	18.41	0.089	—	JT
LD-C1	17.76	0.093	—	JT
LD-C2	17.41	0.065	—	JT
UMF-F1	22.14	0.069	—	JT
UMF-F2	22.30	0.068	—	JT
UMF-F3	23.45	0.145	—	JT

ID	length (mm)	weight (g)	comments	Initials
UMF-F4	23.31	0.090	—	JT
UMF-F5	17.34	0.123	—	JT
UMF-F6	20.21	0.071	—	JT
UMF-F7	21.36	0.062	—	JT
UMF-F8	18.48	0078	—	JT
UMF-F9	22.58	0.112	—	JT
UMF-F10	16.35	0.044	—	JT
UMF-F11	17.21	0.075	—	JT
UMF-F12	22.59	0080	—	JT
UMF-F13	20.38	0.080	—	JT
UMF-F14	22.30	0.071	—	JT
H_2O-E1	18.85	0.067	—	JT
H_2O-E2	19.10	0.095	—	JT
H_2OE3	18.08	0080	—	JT
DE-B1	17.34	0.078	—	JT
DE-B2	18.16	0.069	—	JT
UMF-A2	19.13	0.084	—	JT

Mortality 08/11/10 @ 8:00 pm JT

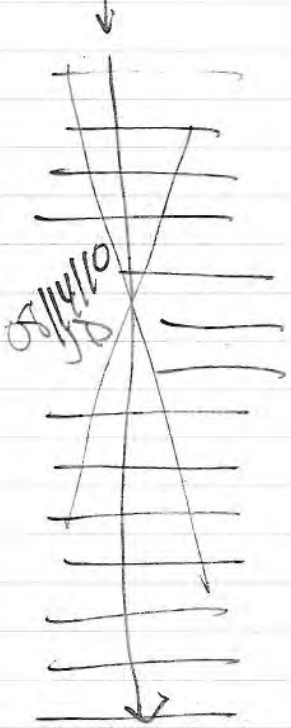
ID	length (mm)	weight (g)	comments	Initials
LD-E1	17.34	0.074	—	JT
LD-E2	21.20	0080	—	JT
LD-E3	18.22	0.067	—	JT
LD-E4	19.63	0.077	—	JT
LD-E5	18.20	0.040	—	JT
LD-E6	22.12	0.099	—	JT
LD-E7	19.38	0.089	—	JT
LD-E8	21.13	0.043	—	JT
LD-E9	20.72	0.076	—	JT
LD-P	12,61	0,058	—	JB
H_2O-D1	20,81	0.085	—	JB
H_2O-D2	17,96	0.110	—	WS
H_2O-D3	22.60	0.090	behind screen	WS
H_2O-D4	19.47	0.084	behind screen	WS
CTRL-A	22.11	0.070	—	WS
DE-A1	20.27	0.077	—	WS
UMF-02-A1	23.77	0.111	—	WS
DE-D1	16.92	0.081	—	WS
DE-A1	20.00	0.062.	—	WS
CTRL-D1	15.32	0.081	—	WS

~~Trout Culture~~ 08/12/10 JP
08/12/10 JD
• water problem - no incoming H_2O - lost 16 trout to low DO in trout culture

Mortality @ 10:15am 08/12/10 TT

ID	Length (mm)	Weight (g)	Comments	Initials
CTRL-D-1	19.96	0.096	stuck in screen / wet wt measured	TT
CTRL-D-2	23.56	0.138	stuck in screen / wet wt measured	TT
CTRL-D-3	22.33	0.128	stuck in screen / wet wt measured	TT
CTRL-D-4	21.42	0.123	stuck in screen / wet wt measured	TT
CTRL-D-5	22.23	0.130	stuck in screen / wet wt measured	TT
CTRL-D-6	21.59	0.123	stuck in screen / wet wt measured	TT
CTRL-D-7	22.64	0.158	stuck in screen / wet wt measured	TT
CTRL-D-8	22.39	0.134	stuck in screen / wet wt measured	TT
CTRL-D-9	18.81	0.128	stuck in screen / wet wt measured	TT
CTRL-D-10	20.01	0.095	stuck in screen / wet wt measured	TT
CTRL-D-11	21.50	0.093	stuck in screen / wet wt measured	TT
CTRL-D-12	19.92	0.130	stuck in screen / wet wt measured	TT
CTRL-D-13	21.23	0.120	stuck in screen / wet wt measured	TT
CTRL-D-14	18.79	0.105	stuck in screen / wet wt measured	TT
CTRL-D-15	23.58	0.158	stuck in screen / wet wt measured	TT
CTRL-D-16	23.21	0.153	wet wt measured	TT
CTRL-D-17	23.81	0.135	wet wt measured	TT
CTRL-D-18	22.75	0.135	wet wt measured	TT
UMF-01-D-1	21.18	0.113	All UMF-01-D TT Mortalities were	TT
UMF-01-D-2	23.33	0.136	stuck under screen	TT
UMF-01-D-3	25.58	0.146	↓	TT
UMF-01-D-4	23.54	0.131		TT
UMF-01-D-5	22.53	0.104		TT
UMF-01-D-6	24.68	0.128		TT
UMF-01-D-7	23.91	0.138		TT
UMF-01-D-8	28.09	0.168		TT
UMF-01-D-9	25.64	0.129		TT
UMF-01-D-10	22.74	0.142		TT
UMF-01-D-11	21.97	0.129		TT
UMF-01-D-12	22.61	0.126		TT
UMF-01-D-13	24.34	0.138		TT
UMF-01-D-14	21.29	0.114		TT
UMF-01-D-15	21.42	0.125		TT
UMF-01-D16	24.22	0.129		TT

ID	Length (mm)	Weight (g)	Comments	Initials
UMF-01-D-17	26.68	0.157		TT
UMF-01-D-18	24.16	0.163		TT
UMF-01-D-19	25.07	0.150		TT
UMF-01-D-20	23.47	0.142		TT
UMF-01-D-21	25.18	0.138		TT
UMF-01-D-22	25.54	0.146		TT
UMF-01-D-23	22.75	0.117		TT
UMF-01-D-24	21.96	0.098		TT
UMF-01-D-25	24.12	0.125		TT
UMF-01-D-26	24.76	0.108		TT
UMF-01-D-27	23.40	0.121		TT
UMF-01-D-28	25.80	0.102		TT
UMF-01-D-29	25.42	0.134		TT
UMF-01-D-30	23.90	0.147		TT
UMF-01-D-31	24.55	0.113		TT
UMF-01-D-32	20.94	0.098		TT
UMF-01-D-33	22.18	0.081		TT
UMF-01-D-34	25.40	0.134		TT
UMF-01-D-35	22.70	0.092		TT
UMF-01-D-36	23.19	0.081		TT
UMF-01-D-37	22.07	0.088		TT
UMF-01-D-38	24.73	0.110		TT
UMF-01-D-39	25.08	0.131		TT
UMF-01-D-40	24.05	0.101		TT
UMF-01-D-41	24.61	0.124		TT
UMF-01-F-1	23.04	0.064		TT, MM, EH
UMF-01-F-2	18.75	0.058		TT, MM, EH
UMF-01-F-3	21.33	0.075		TT, MM, EH
UMF-01-F-4	23.08	0.080		TT, MM, EH
UMF-01-F-5	22.60	0.083		TT, MM, EH
UMF-01-F-6	24.33	0.107		TT, MM, EH
UMF-01-F-7	23.89	0.083		TT, MM, EH
UMF-01-F-8	23.54	0.091		TT, MM, EH
UMF-01-F-9	21.95	0.081		TT, MM, EH
UMF-01-F-10	22.32	0.070		TT, MM, EH
UMF-01-F-11	22.02	0.093		TT, MM, EH
UMF-01-F-12	22.29	0.062		TT, MM, EH
UMF-01-F-13	22.49	0.075		TT, MM, EH
UMF-01-F-14	22.62	0.071		TT, MM, EH



Tank ID	Length (mm)	Weight (g)	Comments	Initials
UMF-01-F-15	19.69	0.052		TT, MM, EH
UMF-01-F-16	22.48	0.087		TT, MM, EH
CTRL-F-1	24.43	0.069	All CTRL-F were stuck between screen and silicone	TT, MM, EH
CTRL-F-2	22.37	0.089		TT, MM, EH
CTRL-F-3	23.58	0.086		TT, MM, EH
CTRL-F-4	22.75	0.102		TT, MM, EH
CTRL-F-5	21.11	0.084		TT, MM, EH
CTRL-F-6	22.48	0.074		TT, MM, EH
CTRL-F-7	22.85	0.084		TT, MM, EH
CTRL-F-8	22.59	0.090		TT, MM, EH
CTRL-F-9	23.10	0.076		TT, MM, EH
CTRL-F-10	21.57	0.067		TT, MM, EH
CTRL-F-11	21.80	0.095		TT, MM, EH
CTRL-F-12	23.49	0.086		TT, MM, EH
CTRL-F-13	21.26	0.073		TT, MM, EH
CTRL-F-14	24.86	0.106		TT, MM, EH
CTRL-F-15	24.58	0.115		TT, MM, EH
CTRL-F-16	22.66	0.064		TT, MM, EH
CTRL-F-17	23.20	0.090		TT, MM, EH
CTRL-F-18	23.37	0.113		TT, MM, EH
CTRL-F-19	23.72	0.082		TT, MM, EH
CTRL-F-20	22.91	0.074		TT, MM, EH
CTRL-F-21	—	—	Decomposed	TT, MM, EH
CTRL-F-22	—	—	Decomposed	TT, MM, EH
DE-C-1	23.04	0.092		TT, MM, EH
DE-C-2	22.94	0.103		TT, MM, EH
DE-C-3	22.40	0.083		TT, MM, EH
DE-C-4	21.87	0.072		TT MM, EH
DE-C-5	22.01	0.069		TT, MM, EH
CTRL-A-1	22.73	0.071		TT, MM, EH
CTRL-A-2	22.79	0.068		TT, MM, EH
CTRL-A-3	22.53	0.075		TT, MM, EH
CTRL-A-4	20.17	0.064		TT, MM, EH
CTRL-A-5	21.11	0.056		TT, MM, EH
CTRL-A-6	22.56	0.072		TT, MM, EH
LALL-C-1	21.09	0.066		TT, MM, EH
LALL-C-2	21.75	0.074		TT, MM, EH
LALL-C-3	20.70	0.080		TT, MM, EH
LALL-C-4	24.01	0.114		TT, MM, EH

ID	Length (mm)	Weight (g)	Comments	Initial
Ge-B-1	21.81	0.074		TT, MM, EH
Ge-B-2	—	—	Decomposed	TT, MM, EH
LALL-A-1	20.41	0.068		TT, MM, EH
LALL-A-2	—	—	Decomposed	TT, MM, EH
LMF-02-C-1	22.30	0.091		TT, MM, EH
H_2O-D-1	19.70	0.068		TT, MM, EH
H_2O-D-2	19.03	0.072		TT, MM, EH
H_2O-D-3	20.96	0.076		TT, MM, EH
H_2O-D-4	19.17	0.057		TT, MM, EH
H_2O-C-1	—	—	Decomposed	TT, MM, EH
H_2O-C-2	—	—	Decomposed	TT, MM, EH
LD-E-1	20.21	0.063		TT, MM, EH
LD-E-2	20.51	0.059		TT, MM, EH
H_2O-A-1	22.40	0.096		TT, MM, EH
H_2O-A-2	—	—	Decomposed	TT, MM, EH
LALL-D-1	19.91	0.067		TT, MM, EH
LALL-D-2	—	—	Decomposed	TT, MM, EH
DE-B-1	19.65	0.065		TT, MM, EH
UMF-01-A-1	20.67	0.059		TT, MM, EH
H_2O-E-1	20.71	0.073		TT, MM, EH
UMF-01-C-1	22.93	0.068		TT, MM, EH
LMF-02-B-1	23.38	0.105		TT, MM, EH
Ge-D-1	19.02	0.045		TT, MM, EH
LD-01-D-1	—	—	Decomposed	TT, MM, EH
CTRL-B-1	22.63	0.068		TT, MM, EH
CTRL-E-1	24.00	0.105		TT, MM, EH
NP-03-B-1	20.99	0.083	Tail eaten	TT, MM, EH
LMF-02-A-1	22.45	0.097		TT, MM, EH
DE-C-1	23.79	0.077		TT, MM, EH

Mortality 09/12/2010 JT 8:00pm

ID	Length (mm)	weight (g)	comments	Initials
LD-C1	23.11	0.108	Stuck in screen	JT
LD-C2	23.12	0.122		JT
LD-C3	24.19	0.116		JT
LD-C4	22.36	0.097		JT
LD-C5	23.11	0.112		JT
LD-C6	23.11	0.122		JT
LD-C7	24.03	0.101		JT
LD-E	21.35	0.063		JT

ID	length	weight	comments	Initials
LD-D	17.79	0.076	———	JT
LD-B1	20.91	0.070	———	JT
LD-B2	22.72	0.103	———	JT
LMF-D1	22.67	0.695	———	JT
LMF-D2	20.78	0.082	———	JT
LALL-E	18.22	0.095	———	JT

08/12/10 JT

Monday @ 10:00am TT 08/13/10

ID	Length (mm)	Weight (g)	Comments	Initials
CTRL-A-1	21.16	0.085	CTRL-A-1 to CTRL-A-10 were stuck in screen	MM
CTRL-A-2	21.95	0.093		MM
CTRL-A-3	19.70	0.051		MM
CTRL-A-4	23.64	0.096		MM
CTRL-A-5	23.00	0.084		MM
CTRL-A-6	22.76	0.080		MM
CTRL-A-7	17.37	0.068	Partially decomposed	MM
CTRL-A-8	21.56	0.081		MM
CTRL-A-9	24.46	0.098		MM
CTRL-A-10	23.00	0.078		MM
CTRL-A-11	20.84	0.095	—	MM
CTRL-A-12	22.52	0.063	—	MM
CTRL-A-13	19.76	0.089	—	MM
CTRL-A-14	21.24	0.088	—	MM
CTRL-A-15	20.89	0.086	—	MM
CTRL-A-16	20.62	0.062	—	MM
LALL-E-1	18.98	0.074	—	MM
LALL-E-2	22.13	0.072	LALL-E-2 to LALL-E-6 were stuck in screen and partially Decomposed	MM
LALL-E-3	20.51	0.078		MM
LALL-E-4	21.47	0.077		MM
LALL-E-5	19.41	0.053		MM
LALL-E-6	20.46	0.064		MM
LMF-D1-E-1	21.15	0.086	—	MM
LD-D1-F-1	22.23	0.091	—	MM
DE-A-1	22.46	0.102	—	MM
LD-D1-D-1	26.75	0.181	—	MM
H_2O-A-1	23.59	0.089	—	MM
DE-C-1	22.45	0.078	—	MM
Ge-C-1	20.12	0.082	—	MM
H_2O-B-1	22.55	0.088	—	M

ID	Length (mm)	Weight (g)	Comments	Initials
H_2O-A-2	22.07	0.080	—	MM
NP-03-A-1	24.33	0.116	—	MM
H_2O-D-1	21.47	0.075	Fungus Present	MM
LMF-02-A-1	22.42	0.069	—	MM
Ge-D-1	23.57	0.101	—	MM
Ge-D-2	—	—	Decomposed	MM
UMF-01-C-1	17.71	0.075	—	MM
LD-01-A-1	24.35	0.137	—	MM
UMF-01-D-1	23.75	0.114	—	MM
UMF-01-D-2	25.76	0.149	—	MM
LD-01-B-1	23.14	0.121	—	MM
LD-01-B-2	21.91	0.111	—	MM
LD-01-B-3	22.17	0.087	—	MM
LD-01-B-4	22.61	0.112	—	MM
NP-03-B-1	23.93	0.133	—	MM
LALL-D-1	22.89	0.079	—	MM
LALL-D-2	20.49	0.096	—	MM
LALL-C-1	21.42	0.094	—	MM
LALL-C-2	21.06	0.083	—	MM
LALL-C-3	19.84	0.078	—	MM
LD-01-C-1	22.44	0.102	—	MM
LD-01-C-2	—	—	Decomposed	MM
LD-01-C-3	23.26	0.084	LD-01-C-2 to LD-01-C-6 were behind screen	MM
LD-01-C-4	24.44	0.017	↓	MM
LD-01-C-5	22.96	0.065		MM
LD-01-C-6	24.49	0.083		MM
LMF-D-1	22.26	0.098	—	MM
LMF-D-2	20.06	0.090	—	MM
Ge-B-1	23.05	0.095	—	MM
Ge-B-2	23.59	0.095	—	MM
CTRL-D-1	23.04	0.129	—	MM
CTRL-D-2	24.23	0.095	—	MM
CTRL-D-3	24.24	0.069	—	MM
CTRL-D-4	19.86	0.065	Piece of tail left	MM
CTRL-D-5	23.42	0.088	—	MM
CTRL-D-6	25.23	0.088	—	MM
CTRL-D-7	22.55	0.106	—	MM
CTRL-D-8	21.46	0.078	—	MM
LD-E-1	27.10	0.106	behind the screen	MM

ID	Length (mm)	Weight (g)	Comments	Initials
LD-E-2	23.33	0.097		MM
LD-E-3	25.09	0.128	behind the screen	MM
LD-E-4	23.69	0.104		MM
LD-E-5	26.02	0.118		MM
LD-E-6	23.09	0.072		MM
LD-E-7	24.91	0.112		MM
LD-E-8	22.87	0.102		MM
LD-E-9	24.43	0.118		MM
LD-E-11	—	0.056	decomposed	MM
LD-E-12	—	0.102	Decomposed	MM
LD-E-10	21.76	0.104		MM
CTRL-B-1	18.46	0.071	—	MM
UMF-F-1	21.42	0.085	—	MM
UMF-F-2	23.25	0.094	—	MM
UMF-F-3	24.89	0.106	—	MM

Mortality @ 7:00 pm JT

ID	length (mm)	weight (g)	comments	Initials
H_2O-B	21.03	0.085	—	JT
LALL-C1	18.99	0.083	—	JT
LALL-C2	20.44	0.057	—	JT
LD-F	24.68	0.112	—	JT

Mortality Aug. 14, 2010 SP

ID	length (mm)	weight (g)	comments	Initials
De-B-1	22.18	0.060	—	WS
De-B-2	25.72	0.135	—	WS
De-C-1	22.09	0.090	—	WS
De-C-2	23.66	0.0133	—	WS
H_2O-D-1	17.96	0.160	—	WS
H_2O-D-2	24.41	0.129	—	WS
H_2O-D-3	18.58	0.098	—	WS
H_2O-E-1	16.76	0.074	—	WS
UMF-C-1	21.04	0.118	—	WS
UMF-C-2	24.66	0.182	—	WS
UMF-C-3	21.04	0.087	—	WS
UMF-E-1	18.17	0.094	—	WS
UMF-E-2	21.91	0.086	—	WS
UMF-E-3	19.97	0.071	—	WS

ID	length	weight	Comments	Initials
NP-A	21.04	0.102	—	WS
NP-B	21.03	0.057	—	WS
GE-B	19.46	0.114	—	WS
GE-D	20.43	0.048	—	WS
LD-A	23.42	0.152	—	WS
LD-F	22.93	0.116	—	WS
LMF-C	15.43	0.028	—	WS
LALL-A	18.57	0.084	—	WS
LALL-B-1	18.52	0.088	—	WS
LALL-B-2	20.70	0.119	—	WS
LALL-B-3	19.06	0.115	—	WS
LALL-C	20.83	0.094	—	WS
LALL-F-1	18.29	0.109	—	WS
LALL-F-2	14.61	0.060	—	WS
UFM-01-A	21.52	0.091	—	WS
H2O-C-1	18.46	0.081	—	WS
H2O-C-2	19.65	0.103	—	WS
UMF-7-1	20.45	0.079	—	WS
UMF-7-2	20.44	0.086	—	WS
UMF-7-3	19.28	0.039	—	WS
UMF-7-4	17.67	0.059	—	WS
UMF-7-5	19.83	0.095	—	WS
UMF-7-6	20.32	0.092	—	WS
CTRL-B-1	19.18	0.056	—	WS
CTRL-B-2	18.46	~~0.136~~ 0.055	—	WS
CTRL-D-1	21.60	0.086	—	WS
CTRL-D-2	21.58	0.122	—	WS
CTRL-D-3	22.05	0.094	—	WS
CTRL-D-4	23.03	0.101	—	WS
CTRL-D-5	18.62	0.086	—	WS
CTRL-D-6	20.74	0.095	—	WS
CTRL-D-7	20.04	0.096	—	WS
CTRL-D-8	22.26	0.126	—	WS
CTRL-D-9	20.23	0.105	—	WS

08/16/10 JD

Mortality Aug. 15, 2010 JB

ID	Length (mm)	weight (g)	comments	Initials
DE-B-1	20.21	0.106		JB
DE-B-2	22.31	0.102		JB
DE-B-3	24.14	0.130		JB
DE-B-4	23.76	0.120		JB
DE-A	24.07	0.101		JB
NP-A	22.54	0.058		JB
GE-A	23.95	0.099		JB
UMF-A	25.78	0.147		JB
UMF-B	19.29	0.043		JB
UMF-E-1	19.28	0.099		JB
UMF-E-2	17.49	0.095		JB
H2O-C	18.15	0.068		JB
H2O-D	17.72	0.079		JB
LMF-A	20.77	0.085		JB
LMF-C-1	20.63	0.099		JB
LMF-C-2	20.69	0.094		JB
LD-A-1	24.64	0.126		JB
LD-A-2	21.47	0.086		JB
LD-A-3	21.47	0.091		JB
LD-A-4	21.86	0.122		JB
LD-E-1	19.58	0.090		JB
LALL-A-1	~~19.74~~ JB 24.35	JB ~~0.08~~ 0.098		JB
LALL-A-2	21.47	0.123		JB
LALL-A-3	20.02	0.121		JB
LALL-D	18.76	0.084		JB
CTRL-A-1	19.10	0.047		JB
CTRL-A-2	20.23	0.091		JB
CTRL-A-3	20.72	0.068		JB
CTRL-A-4	20.72	0.056		JB
CTRL-A-5	19.69	0.051		JB
CTRL-E	21.96	0.121		JB
LD-E-2	19.74	0.089		JB
UMF-F-1	18.58	0.088		JB
UMF-F-2	19.01	0.088		JB
UMF-F-3	21.39	0.101		JB
UMF-F-4	19.36	0.070		JB
CTRL-B-1	24.68	0.112		JB
CTRL-B-2	19.79	0.114		JB

ID	Length (mm)	weight (g)	Comments	Initials
LD-C-1	25.36	0.156	—	JB
LD-C-2	22.13	0.073	—	JB
UMF-B-1	25.47	0.122	—	JB
UMF-B-2	20.79	0.140	—	JB
UMF-B-3	21.72	0.109	—	JB
UMF-B-4	23.66	0.080	—	JB
UMF-B-5	22.95	0.084	—	JB
UMF-B-6	17.87	0.018	in 2 pieces	JB
UMF-B-7	18.25	0.020		JB
LD-E-1	—	—	stuck in screen	JB
CTRL-D-1	—	—		
CTRL-D-2	—	—		
CTRL-D-3	—	—		
CTRL-D-4	—	—		
CTRL-D-5	—	—		
CTRL-D-6	—	—		
CTRL-D-7	—	—		
CTRL-D-8	—	—		
CTRL-D-9	—	—		
CTRL-D-10	—	—		
CTRL-D-11	—	—		
CTRL-D-12	—	—		
CTRL-D-13	—	—		
CTRL-D-14	—	—		
CTRL-D-15	—	—		
CTRL-D-16	—	—		
CTRL-D-17	—	—		
CTRL-D-18	—	—		
CTRL-D-19	—	—		
UMF-D-1	—	—		
UMF-D-2	—	—		
UMF-D-3	—	—		
UMF-D-4	—	—		
UMF-D-5	—	—		
UMF-D-6	—	—		
UMF-D-7	—	—		
UMF-D-8	—	—		
UMF-D-9	—	—		
UMF-D-10	—	—		

ID	Length (mm)	weight (g)	comments	Initials
UMF-D-11	—	—	stuck in screen	JB
UMF-D-12	—	—		
UMF-D-13	—	—		
UMF-D-14	—	—		
UMF-D-15	—	—		
UMF-D-16	—	—		
UMF-D-17	—	—		
UMF-D-18	—	—		
UMF-D-19	—	—		
UMF-D-20	—	—		
UMF-D-21	—	—		
UMF-D-22	—	—		
UMF-D-23	—	—		
UMF-D-24	—	—		
UMF-D-25	—	—		
UMF-D-26	—	—		
LD-E-2	—	—		JB
LD-E-3	—	—		
LD-E-4	—	—		
LD-E-5	—	—		
LD-E6	—	—		

Mortality August 16, 2010 MM

ID	Length (mm)	weight (g)	comments	initials
H_2O-A-1	22.71	0.092	—	MM
LALL-D-1	19.05	0.074	fungus around	MM
LMF-D-1	23.98	0.142	—	MM
GE-B-1	25.02	0.104	—	MM
GE-B-2	24.26	0.139	—	MM
LD-F-1	23.19	0.102	—	MM
UMF-01-A-1	23.77	0.104	—	MM
CTRL-B-1	25.13	0.107	—	MM
LALL-A-1	18.58	0.129	Piece of tail lost	MM
UMF-F-1	18.56	0.067	✓	MM
UMF-E-1	22.14	0.098	—	MM
UMF-B-1	25.39	0.117	—	MM
UMF-B-2	25.35	0.109	—	MM
UMF-B-3	23.22	0.092	—	MM
UMF-B-4	23.98	0.133	—	MM

ID	Length (mm)	Weight (g)	comments	initials
UMF-B-5	22.23	0.100	"	MM
UMF-B-6	25, 75	0.087	"	MM

08/16/2010
Rainbow Trout Avg Weight @ 44dph JD

8/16/10 JD

ID	Weight (g)
RT 1	0.720
RT 2	0.920
RT 3	0.958
RT 4	1.085
RT 5	0.736
RT 6	0.869
RT 7	0.822
RT 8	0.909
RT 9	0.960
RT 10	1.136

Avg =

8/16/10 JD

August 16, 2010 - Mortality @ 7:30PM

ID	Length (mm)	Weight (g)	Comments	Initials
GE-B	19.57	0.076	Decomposing.	~~JS~~
LALL-C	17.36	0.080	Fungus present.	~~JS~~
08/16/10	JT			
08/17/10	JT	Mortality @ 9:00 am		
ID	length (mm)	weight (g)	Comments	Initials
DE-A	23.23	0.090		JT
LALL-B1	N/A		Missing piece of tail	JT
LALL-B2	N/A		missing piece of tail	JT
UMF-C	N/A		Stuck in screen, decomposed	JT
CTRL-F-1	Decomposed		Stuck in screen, decomposed	TT
CTRL-F-2	27.08	0.193	↓	TT
CTRL-F-3	29.57	0.151		TT
UMF-B-1	24.36	0.119		TT
GE-B-1	22.87	0.047	Protrusion under head	TT
H_2O-D-1	Decomposed		in screen, decomposed	TT
CTRL-B-1	27.03	0.132	—	TT
H_2O-E-1	29.21	0.224	—	TT
H_2O-E-2	24.73	0.163	Fungus Present	TT

08/18/10 Mortalities @ 10:00 am JT

ID	length (mm)	weight (g)	Comments	initials
LMF-D	27.85	0.209	—	JT
LALL-B1	23.77	0.098	—	JT
LALL-B2	22.43	0.124	—	JT
H_2O-D1	22.55	0.095	—	JT
H_2O-D2	N/A	N/A	decomposed	JT
CTRL-C1	26.72	0.181	—	JT
CTRL-C2	24.82	0.150	—	JT
LALL-F	24.49	0.193	—	JT
LD-B	21.10	0.111	—	JT
CTRL-D	21.37	0.113	—	JT
UMF-A1	24.19	0.134	—	JT
UMF-B	20.58	0.128	—	JT
CTRL-A	24.36	0.110	—	JT
H_2O-A	25.04	0.130	—	JT

08/18/10 JT

08/19/10 Mortalities @ 11:00 am JT

ID	length (mm)	weight (g)	Comments	initials
LD-A	22.29	0.131	—	JT
UMF-B	23.17	0.154	—	JT
H_2O-C1	20.66	0.058	—	JT
H_2O-C2	20.14	0.123	tail missing	JT
H_2O-D	21.93	0.078	—	JT
UMF-E	19.63	0.065	—	JT
LALL-E	N/A	N/A	unretrievable	JT
LALL-F	18.90	0.051	—	JT
LMF-D	23.94	0.115	—	JT
GE-B	22.67	0.158	—	JT
CTRL-D	23.05	0.085	—	JT

08/19/10

08/20/10 Mortalities @ 2:30pm TT

ID	length (mm)	Weight (g)	Comments	Initials
CTRL-D-1	—	—	Decomposed	TT
CTRL-D-2	—	—	Decomposed	TT
CTRL-D-3	23.11	0.137	—	TT

08/21/10 Mortalities @ 12:30 pm TT

ID	length(mm)	Weight(g)	Comments	Initials
LD-01-A-1	21.02	0.100	—	TT
LD-01-A-2	17.81	0.096	Part of tail missing	TT
Ge-B-1	22.81	0.132	—	TT
H_2O-A-2	—	—	Decomposed -> Part of Tail missing	TT
H_2O-A-1	22.28	0.072	—	TT
UMF-02-B-1	25.38	0.096	—	TT

UMF-D-1	37.10	0.308	fish euthanized due to reseeding of chamber due to screen mortality DV
-2	35.58	0.239	
-3	36.07	0.257	
-4	37.37	0.267	
-5	35.39	0.244	
-6	37.89	0.316	
-7	37.08	0.299	
-8	33.06	0.211	
-9	36.88	0.377	
CTRL-D-1	32.31	0.183	
-2	34.07	0.220	
-3	34.39	0.195	
-4	25.61	0.095	
-5	32.17	0.163	
-6	30.38	0.149	
-7	26.86	0.105	

08/21/10 DV

~~8/22/10~~ 8/21/10 MH/DV

- re-seeded 66 and 78 fish in systems CTR-D & UMF-D, respectively.
- fish were taken randomly from stock-tanks ST1, ST2 and ST3
- removed 25 fish randomly from stock tanks & measured & weighed them:

ID	weight[g]	length[mm]	ID	weight[g]	length[mm]
ST-1-	0.065	24.37	ST-10	0.082	25.67
-2	0.051	21.39	-11	0.125	30.23
-3	0.059	23.96	-12	0.108	28.64
-4	0.088	27.20	-13	0.116	28.99
-5	0.184	32.47	-14	0.085	26.21
-6	0.060	22.92	-15	0.058	23.18
-7	0.062	24.62	-16	0.054	23.23
-8	0.130	27.62	-17	0.077	24.25
-9	0.112	27.97	-18	0.140	29.22

ID	weight [g]	length [mm]
ST-19	0.080	26.12
-20	0.059	24.04
-21	0.066	23.81
-22	0.082	26.23
-23	0.087	26.22
-24	0.055	23.14
-25	0.051	22.48

8/22/10 MH

8/21/10 MH/DV

8/22/10 EH

mortalities

ID	Weight (g)	Length (mm)	Comments	Initials
CTRL B1	0.217	30.51	~~Tail missing~~	EH
UMF-B1	0.145	24.73	tail missing	↓
UMF-A1	—	—	decomposed	↓
LMF-A1	—	—	decomposed	↓
LMF-B1	—	—	decomposed	↓
LALL-C1	0.052	19.21		↓

08/22/10 DV

08/23/10

Mortalities @ 10:40 am TT

ID	Weight (g)	length (mm)	Comments	Initials
CTRL-D-1	0.117	23.18	—	TT
CTRL-D-2	0.099	22.56	—	↓
LMF-A-1	0.142	25.19	—	↓
UMF-D-1	0.066	19.13	—	↓
H_2O-C-1	0.182	28.46	—	↓

08/23/10 TT

08/24/10 TT

Mortalities @ 10:30 am

ID	weight (g)	length (mm)	Comments	Initials
UMF-01-A-1	0.146	23.72	—	TT
H_2O-B-1	—	—	decomposed	TT
CTRL-D-1	0.166	25.80	—	TT

08/24/10 TT

08/25/10 TT

ID	weight (g)	length (mm)	Comments	Initials
DE-A-1	0.182	23.04	missing part of tail	TT
H_2O-C-1	0.145	24.53	—	TT
LMF-02-B-1	0.286	25.41	missing part of Tail	TT

ID	Weight (g)	length (mm)	Comments	Initials
CTRL-D-1	0.155	25.69		TT
CTRL-D-2	0.086	18.38	missing part of Tail	TT

08/26/2010

Mortalities @ 2:00 p.m. JB

ID	Weight (g)	length (mm)	Comments	Initials
H2O-C-1	24.07	0.106	———	JB
H2O-E-1	23.99	0.264	———	JB
CTRL-C-1	28.00	0.236	———	JB
DE-B-1	30.94	0.277	———	JB
UMF-A-1	33.53	0.304	———	JB
UMF-A-2	22.57	0.184	———	JB
UMF-C-1	27.01	0.169	———	JB
UMF-E-1	23.45	0.115	———	JB
LMF-C-1	25.22	0.195	———	JB

Mortality Aug 27/2010 @ 2:00pm L-L

ID	Weight (g)	Length (mm)	Comments	Initials
Ctrl-B	0.256	28.72	———	LL
H2O-D	0.265	23.19	Moldy	LL
H2O-B	0.351	25.35	clear film over tail	L.L
DE-B	0.275	29.04	Moldy	L.L
LD-D	0.552	35.80	———	L.L
UMF-01-A1	0.299	31.35	———	L.L
UMF-01-A2	0.353	28.63	Moldy	L.L

Mortality - 08/28/2010 @ 1pm

ID	Weight (g)	Length (mm)	Comments	Initials
LD-E-1	0.317	31.10	———	
UMF-A-1	0.267	30.60	———	

08/28/10 JD

08/30/10 DV

UMF-01-C 1 fish sucked up modified pipette during SWI sampling - fish was photographed

ID	Weight (g)	Length (mm)
	0.079	24.62

08/30/10 DV

Mortality Aug 31, 2010 SB 11:00 am

ID	Weight (g)	Length (mm)	Photographed	Initials
GE-A	0.169	22.48	✓ yes	SB
GE-B	0.193	30.53	✓ yes	SB
LD-01-A	0.301	34.45	✓ yes	SB

Mortalities continued Aug 31, 2010 SB

ID	Weight	Length	Photographed	Initial
LMF-01-A	0.368	39.88	✓ yes	SB
H_2O-A	0.347	30.23	✓ yes	SB

08/31/10 SB

09/01/10 DV

LMF-A 1 fish w tail eaten; not looking too healthy or mobile; may die

ID	weight	length	Comments	Initial
LALL-B-1	0.177	24.86	—	TT
LO-01-B-1	0.118	22.44	Part of Tail missing	TT
LMF-01-6-1	0.134	26.25	—	TT

Sept 2/10 Mortality 11:00 am

~~H_2O~~ ID	Weight	Length	Photographed	Comments	Initials
H_2O-C	0.241	22.36	✓	Missing Tail	LL
H_2O-B	0.418	40.37	✓	–	LL
H_2O-A	0.274	25.59	✓	Missing Tail	LL
NP-A	0.230	26.78	✓		LL

Sept 3/10 Mortality 11:00 am

Tank ID	Weight	Length	Photographed	Comments	~~Ini~~ Initials
Ctrl-B	0.275	34.03	✓	–	LL
Ge-B	0.222	25.40	✓	Missing tail	LL
LALL-C	0.071	26.88	✓	Curved spine	LL

09/04/10 Mortality @ 10:00am TT

ID	Weight	length	Photographed	Comments	Initials
LMF-02-A	0.260	26.18	✓	missing part of Tail	TT
H_2O-E	0.240	22.48	✓	missing tail	TT

9/5/10 Mortality @ 11:20

Tank ID	Weight	Length	Photographed	Comments	Initials
LMF-C	0.267	26.15	✓	Missing Tail	LL

9/6/10 Mortality 2:30pm LL

Tank ID	Weight	Length	Photographed	Comments	Initials
Ge-C	0.342	38.87	✓	–	LL
H_2O-A	0.166	20.19	✓	White, Missing tail	LL
LALL-B	0.142	27.70	✓	–	LL

9/8/10

09/08/10 Mortality @ 9:45 SP

Tank ID	Weight	Length	Photographed	Comments	Initials
LALL-F	0.306g	30.30	~~White, Mi~~ ✓	White, Missing Tail	SP

09/08/10

09/09/10 SB Mortalities

Tank ID	Length(mm)	Weight(g)	Comments	Initials
CTRL-C	33.57	0.410	Tail bit off	SB
GE-B	43.93	0.355	—	SB
UMF-01-D	18.79	0.108	white	SB

09/09/10 SP

09/10/10 SP Mortalities 9:40

Tank ID	Length(mm)	Weight(g)	Comments	Photograph	Initials
H_2O-A	36.35	0.266	-	✓	SP
UMF-E	32.47	0.242	tail missing	✓	SP
LD-B	36.15	0.291	-	✓	SP
UMF-D	30.04	0.311	-	✓	SP

09/11/10 WS

TankID	length(mm)	Weight(g)	Comments	Photograph	Initials
UMF-01-E	33.75	0.323	—	✓	WS
H_2O-A-1	37.96	0.273	—	✓	WS
H_2O-A-2	32.31	0.199	—	✓	WS
UP-B	35.31	0.286	—	✓	WS

12 Sept 2010

Tank ID	length	wt(g)	Comments	photo	Initial
GE-B	21.86	0.220 gm	No tail	✓	AV
H_2O-C	35.93	0.341		✓	SB
CTRL-C	43.41	0.453		✓	SB

09/12/10 SB

09/13/10 SB

Tank ID	Length(mm)	weight(g)	comments	photo	Initial.
UMF-01-E	29.27	~~0.480~~ 0.206 SB	—	✓	SB
H_2O-D-1	41.35	~~0.206~~ 0.480 SB	—	✓	SB
H_2O-D-2	26.90	0.207	missing tail caught under peepers platform	✓	SB
H_2O-E	too decomposed	too decomposed.	decomposed.	✓	SB
UMF-01-A	41.48	0.403	—	✓	SB

09/14/10 ely.

Tank ID	Length (mm)	weight (g)	comments	photo	initials
DE-A	49.36	0.753	—	✓	ely
DE-B	37.89	0.418	—	✓	ely
LD-B	43.50	0.546	—	✓	ely
UMF-D	43.52	0.368	—	✓	ely
LMF-C	40.78	0.433	—	✓	ely

09/15/10 JA

Tank ID	Length (mm)	weight (g)	comments	photo	Initials
LMF-A	32.87	0.188	-	✓	JA
UMF-E	32.74	0.164	-	✓	JA
DE-C	53.34	1.136	-	✓	JA

09/16/10 DF

TANK ID	Length (mm)	weight (g)	comments	photo	initials
UMF-C	42.25	0.475	—	✓	DF
UMF-D	47.81	0.472	Dissected BT	✓	DF
UMF-E	39.40	0.430	Dissected BT Black grains in stomach	✓	DF
LMF-A	32.36	0.199	Partly decomposed, missing tail	✓	DF
CTRL-F	37.92	0.524	Dissected Black grains in stomach	✓	DF
LD-C	50.73	0.738	missing tail	✓	DF
LD-B	49.75	0.607	—	✓	DF
LD-F	46.79	0.578		✓	JA

09/16/10 DF

09/17/10 SB Mortalities.

Tank ID	length (mm)	weight (g)	comments.	photo	initials.
UMF-01-C	37.76	0.055	Very dry body	✓	WS
NP-03-A	42.97	0.437	dissected, 1 black grain in stomach	✓	WS, BT
LALL-A	34.86	0.478	missing tail (dissected black grains)	✓	WS, BT
GE-D	20.22	0.222	missing tail (dissected black grains)	✓	WS, BT
UMF-01-E	27.53	0.339	missing tail (dissected	✓	WS, BT

18 Sept 2010

Tank ID	length (mm)	weight (g)	Comments	photo	Initials
NP-A	41.94	0.496	insides are mush	✓	AV

19 Sept 2010

Tank ID	length (mm)	weight (gm)	comments	photo	Initial
LALL-B	31.02	0.223		✓	AV

20 sept 201

tank ID	length	weight	comments	photo	Initials
H_2O-C	30.05	0.403	dissected - no grains missing tail	V	WS
PE-B	37.61	0.555	dissected - no grains	✓	WS
H_2O-E	2944	0.344	dissected - no grains	✓	WS
Ge-C	23.55	0.410	dissected - no grains	✓	405

09/20/10 JD
09/21/10 JD
H_2O-A 49.30mm 0.702 g — ✓ JD
09/21/10 JD

09/22/10 DF

Tank ID	length	weight	comments	photo	initials
NP-A	41.79	0.777	dissected	✓	DF
H2O-B	38.28	0.299	dissected	✓	DF
H2O-E	40.50	0.304	dissected	✓	DF
UMF-E-1	25.85	0.203	no tail; dissected	✓	DF
UMF-E-2	28.83	0.374	dissected	✓	DF

09/22/10 DF
9/22/10 TT

Tank-ID				
H_2O-E	39.74	0.411		Initials

10/08/10 DF

50

APPENDIX I-2

GENERAL DAILY LABORATORY ACTIVITIES LOG BOOK

"Rite in the Rain"®

ALL-WEATHER

UNIVERSAL

No. 374-MX

2010

White Sturgeon Sediment

Toxicity Study

General

2010 White Sturgeon Sediment Toxicity Study

Personnel Involved:

Markus Hecker (MH)
David Vardy (DV)
Jon Doering (JD)
Eric Higley (EH)
Jeff Tomsen (JT)
Shawn Beitel (SB)
Sara Pryce (SP)
Jordon Steeg (JS)
Tim Tse (TT)
Brett Tendler (BT)
Erica Yuzak (EY)
Lucy Lu (LL)
Tony Redford (TR)
Christine Schonlau (CS)
Melanie Madeley (MM)
Su Ouanyong (SO)
Wei Sun (WS)
Jordan Bolt (JB)
Sifa Arrafi (SA)
Dana Friesen (DF)
Jill Arnott (JA)

Notes:

1. Daily Duties
   - system check morning (see below)
   - morning, Afternoon, evening Feedings of bloodworms, live worms, dry food, live artemia
   - morning observations (see below)
   - Fill headtanks
   - maintain Food cultures
   - remove deads
   - change filters
   - WQ (pH, temperature, dissolved oxygen, conductivity, hardness)
   - noon mortalities + observations
   - clean systems
   - evening mortalities + observations
   - setup automatic feeders
   - evening system check.

2. System Check - chiller, sump pump, water baths, marching pumps, metering pumps, filters, pore water pots, exposure systems, screens, reservoirs

3. Observations - refer to ASTM guidelines E1711-95

4. WQ kits NH_3-N, NO_2, NO_3, Alkalinity, hardness

5. dry Food - equal parts freeze dried shrimp, brine shrimp, blood worms, tubifex worms and small portion of #0 trout chow

10/04/10 DF

07/07/10 JD
- 2nd white sturgeon spawn
- brought 40,000 WS eggs to UofS
- incubated @ 9°C in McDonald type hatching jars. 4 such jars were used in 2 separate recirculatory systems. (10,000 eggs per jar; 20,000 eggs per system)

07/07/10 JD
07/11/10 JD
- WS eggs begin to neurulate

07/11/10 JD
07/12/10 JD
- flow increased in egg hatching jars

07/12/10 JD
07/12/10 JD
- Don MacDonald arrives
- Oc sediment homogenized and placed back in UofS fridge @ 4°C - pictures taken
- assembly of exposure systems

07/12/10 JD
07/13/10 JD NP-03 07/13/10 JD
- ~~LMF-02~~ homogenized and placed back in UofS fridge @ 4°C - pictures taken
- LD-01 homogenized and placed back in UofS fridge @ 4°C - pictures taken

07/13/10 JD
07/14/10 JD
- UMF-01 homogenized and placed back in UofS fridge @ 4°C - pictures taken
- LMF-02 homogenized and placed back in UofS fridge @ 4°C - pictures taken
- LMF-03 found unsuitable - under 1 bucket of sediment following stone removal - pictures taken

07/14/10 JD
07/15/10 JD
- RO pump not functioning properly
- filled exposure systems with water and finalization of exposure system setup

07/15/10 JD

07/15/10 JD

07/16/10 JD
- All systems with natural sediments were layered with sediment (stones added 120 per tank)
- before use each bucket mixed with auger and cleaned between sediments
- rinsate blank on auger taken
- overlying water in buckets sampled

07/16/10 JD

07/17/10 JD
- DE, CTRL sediment and H_2O only systems were layered with sediment and started (stones added)
- ~~OTW~~ 07/17/10 JD peepers prepared with chelex resin (B. Brumbaugh)
- DE, CTRL mixed with auger

07/17/10 JD

07/18/10 JD
- Day 0 system equilization
- Porewater and overlying water sampled IC, DOC, Alk, probes
- LC50 began (RT 15 dph)
- 1st WS eggs begin to hatch
  (temp increased 1°C per day until 15°C, increase started 07/14/10)

07/18/10 JD

07/19/10 JD
- porewater + overlying water sampled IC, DOC, Alk, probes

07/19/10 JD

07/20/10 JD
- porewater + overlying water sampled IC, DOC, Alk, probes

07/20/10 JD

07/20/10 JD
- not all PW samples filtered - used more filters than expected - none left. Stored at 4°C overnight.

07/20/10 JD

07/21/10 JD
- Daily duties - refer page 2
- Finish filtering remaining PW samples with filter apparatuses. See WQ book for details.
- exposure system maintenance (repaired minor leaks)

07/21/10 JD

07/21/10 JD

07/22/10 JD
- Daily Duties - refer to page 2
- ambient temperatures rose and chillers could not maintain desired water temperatures - replaced chillers with ATRF main chiller recirculating through ATRF pipes

07/22/10 JD
07/23/10 JD
- Daily duties - refer to page 2
- ~~t50 take-down~~ PW sampled for CAS + probes

07/23/10 JD 07/23/10 JD
07/24/10 JD
- Daily duties - refer to page 2
- Day 0 - 100 sturgeon seeded per exposure system
- Kits on OW all systems (NH_3-N, NO_2, NO_3, hard)
- peepers deployed
- some fish escaping through or under screens - especially in H_2O-only - mechanical difficulties - H_2O-F system removed
- repaired exposure systems with aquarium putty, rulers

07/24/10 JD
07/25/10 JD
- Daily duties - refer to page 2
- removed and reseeded dead fish @ 24hrs post addition - refer to mortalities book
- relocated escaped fish from outflow compartment of exposure tanks
- repaired tanks/screens as day previous
- Cam Irvine arrived

07/25/10 JD
07/26/10 JD
- Daily duties - refer to page 2
- PW, SI, OW sampled for CAS + probes + kits
- behavior observations and videos
- note: some fish stuck on spin fittings of H_2O-only tanks - knots tied in tubing and placed over nipple of spin fittings - stuck fish removed and reseeded with new fish

07/26/10 JD

07/28/10 JD

07/27/10 JD
- Daily duties - refer to page 2
- water samples sent to CAS
- behavior videos taken with underwater camera
- Note: fish trapped under outflow screen - suspected fish trapped before repairs

07/27/10 JD
07/28/10 JD
- Daily duties - refer to page 2
- kits (NH_3-N, NO_2, NO_3, hard) performed on all systems OW
- samples sent to CAS (remaining, waters)
- fish digging in bottom corners of exposure systems - resmoothed with sediment
- checked and removed/relocated fish from outflow compartment of all exposure systems

~~07/2~~ 07/28/10 JD
- shade covers placed over all systems
- automatic and artemia feeders installed on all systems

07/28/10 JD
07/29/10 JD
- Deploy DGT's: JD, DV, JT

UMF-01-E	15:47	OW = 16.3°C	PW = 17
LD-01-A	15:56	OW = 16.3°C	PW = ~~17~~ 16
H_2O-D	17:12	OW = 15.8	N/A
De-B	16:11	OW = 15.5	PW = 15.5
UMF-01-B	16:08	OW = 15.6	PW = 15.5
CTRL-B	16:20	OW = 15.4	PW = 15
LALL-B	16:25	OW = 15.6	PW = 15.5
CTRL-C	16:31	OW = 15.7	PW = 16.5
LD-01-B	16:37	OW = 16.5	PW = 16
LALL-D	16:42	OW = 17.0	PW = 17.5
GE-D	16:50	OW = 17.5	PW = 17.5
LMF-02-A	16:59	OW = 17.6	PW = 17.

- Note Ge-C -> 2 ws passed primary screen (10:10pm)
  H_2O-C -> 1 ws passed secondary screen (10:10pm)
- Daily duties see page 2
- SI WQ kits see page 2
- prepared water bottles for mondays sampling

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07/30/10 SB

- Tank H_2O-D - screen #1 was removed because multiple fish were getting past as the seal was compromised.
- Tank LALL-F had 3 fish get past screen, a crack ~~SB SB~~ between wall and screen was filled.
- Checked number of deads at 4:00
- Fed Artemia to all exposure tanks at 7:00 pm.
- Checked number of deads at 7:00 pm.
- GE-B tank has multiple (4-5) fish infront of the inflow screen, since attempts to remove them were unsuccessfull, the fish were left.
- 5 deads found under the screen of H20-C are presumed to be there prior to ~~SB~~ fixing gap between screen and tank.
- flushed water between screen and tank walls to see if any deads were stuck.
- Cut out acrylic coverings for sturgeon tanks - to provide a dark area.
- Filled head tanks and took associated hardness measurements.
- Did system check.

07/30/10 SB

07/31/10 JD

- System check 9:00am
- Setup artemia feeders on exposure systems
- Fed artemia 10:00am - exposure + stock tanks
- Sump pump malfunction - water bath overflow 10:30am
  - problems resolved by 12:00pm
- observations 1:00pm
- artemia + Blood worm (fine chop) fed at 1:30pm - exposure + stock tanks
- deads processed 11:00am
- deads checked - none found 7:00pm
- WQ probes 2:30pm
- Fed BW & artemia 8:30pm
- observations 7:00pm
- daily duties
- system check at end of day

01/31/10 JD

08/01/10 JD

- System check
- Fed dry food - see page 2 8:30am
- Flow rates tested on each system and adjusted to 1.7 L/min if not correct - all flows acceptable ±20%
- Fed BW and artemia 10:30am
- Started new artemia cultures 10:45am

08/01/10 JD

- Observations done on all exposure tanks at 9:15 - 10:45
- DE-A → 6 sturgeon found under outflow screen (back) → returned to exposure chamber.
- LD-01-D → 3 sturgeon found under outflow screen → returned to exposure chamber
- Fed live worms + dry food 12:00pm JD
- Fed artemia + BW 2:00pm JT
- peepers + DGT sampled for CAS - DGT's in fridge BT, DV
- probes + hardness + NH_3-N LQ SB
- automatic feeders filled with dry food - JT, SB
- Fed BW + artemia 5:30pm SB
- prepared bottles for CAS sampling on monday JD
- Fed live worms + dry food 8:00pm JD
- System check 8:30pm JD

08/01/10 JD

08/02/10 JD

- System check 8:00am JD
- Fed dry food + live worms 8:30am JD
- Fed BW + artemia 9:00am DV
- Maintain worm culture: feeding, watering, and cleaning 9:00am JD
- Observation done on all tanks 9:30am TT
- Filters replaced on tanks with dirty/clogged filters 9:15am JD
- Cleaning done on all tanks 9:00 SB
- UMF-E had silicone at 2nd screen broken, 20-30 fish in between 2nd and 3rd screen. 9:30 JT
- Bottles set out and prepared for water sampling 9:30 CS, MM
- Water sampling started at 10:30 with SWI and OW DV, BT, SP, TT, CS, MM, SB, JT
  - probe and hardness done on SWI and OW
  - COC filled out as bottles are collected and placed in coolers JD
- Deads are measured and weighed 12:30pm JS
- Tanks and Stock WS were fed blood worms, worms, and dry food 10:00am TT
- Tanks and Stock WS Fed ~~blood worms~~ ~~artemia~~, JS bloodworms, dry food, and live worms 12:00pm JS
- Filled low head tanks 50:50 RO:FW and did hardness test kits (Through-out the day) SP, SB
- Duplicate OW ALL D - and DE-D MM
- Duplicate SI NP-03-B → SI DE-D SB
- Process Deads 3:15 SB
- Tanks and Stock WS were fed Dry food, Live worms, bloodworms TT 2:00pm
- Porewater sampling started at 2:00pm - SP, BT, JT, MM
  - probe and filtering done on each sample SB, CS, DV

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- COC completed as each sample was completed and stored JD
- Filter refills cut JS, TT (4:00pm)
- Started more artemia (4:00pm) JS
- WS stock cleaned 5:00 JT, BT
- Fed dry food + brine shrimp 6:00pm JS, JD
- observations 8:00pm BT
- cleaning of uneaten food JS 8:00pm
- fed dry food, BW, live worms, artemia 8:00pm DV, JD
- Set autofeeders 8:00 JD
- Replaced filter in Ctrl C due to buildup of red material ~~BT~~ at 7PM BT
- Started new artemia cultures JD
- System check 10:00 pm DV, DD

08/02/10 JD

08/03/10 JD

- System check JD
- Fed dry food + worms + BW 8:00am JD
- culture tank overflowed during night, lost ~100 fish JD
- fed artemia 8:30am JD
- Tank H_2O-B → 3 sturgeon behind inflow screen were replaced to exposure chamber, 1 sturgeon remains under screen, unable to access. SB
- Tank GE-B → 13 sturgeon ~~replaced to exposure~~ SB relocated to exposure chamber from behind inflow screen. 5 remain behind screen. SB
- All H_2O tanks' inflow screen was removed, the sturgeons were relocated to the exposure chamber, and the screen was replaced. SB.
- Observations finished at 10:20am, TT
- Worm cultures taken care of TT/SB
- Fed dry food + artemia 11:00 JD
- Packaged all sample bottles to be sent to CAS 9:30-~~12:30~~ 2:00 SP, JT, MM, TT, SB
- Head tank 9 Filled 10:00am SB
- Sturgeon tanks cleaned and deads removed. 11:00. SB
- Tank WMF-01-E → 1 sturgeon behind 1st outflow screen; relocated to exposure chamber EA
- Tank H_2O-D → 3 sturgeon behind 1st outflow screen; relocated to exposure chamber EA
- DE:A → 1 sturgeon behind 1st outflow screen; relocated to exposure chamber EA
- GE-C → 1 sturgeon behind 1st outflow screen; relocated to exposure chamber EA
- Headtanks Filled and hardness recorded JS
- Probe measurements taken on all Tanks; hardness measurements also taken 2:00pm SB, SP, JS, MM
- Behavior Videos taken 2:00pm BT
- Observations taken 2:00pm TT
- Artemia Feeders / Artemia set up / tested 2:00 DV, JT

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Scale: 1 square =

August 3, 2010 continued SP

- Filter replacements cut 3:30pm SB
- Fed live worms, dry food, and blood worms 2:00 JD, SP
- ~~Observation Videos 3:00 PM BT~~ BT
- Fed dry food + live worms 5:00pm JD
- ~~Observation Videos 3:30PM BT~~ BT
- Removed Deads from Culture tank BT
- Fed dry food, blood worms & artemia @ 6:00 PM
- Observations taken 6:30 PM BT
- Fed dry food, bloodworms, and artemia at 8:00PM BT
- Fed PW, artemia, live worms @ 10:00pm JD, DV
- ran out of dry food, Fed cyclopeez @ 10:00pm JD
- deads - none found - 10:00 pm JD
- System check - 10:00pm JD

08/03/10 SP

08/03/10 SP

August 4, 2010 SP

- System Check 8:30 am SP, DV
  - GE-B Fish behind primary screen - 22 relocated into tank
  - H_2O-A 1 Fish behind primary screen
  - H_2O-B 2 Fish behind primary screen - ~~removed~~ relocated into tank
  - H_2O-D 2 Fish behind primary screen
  - CTRL F ~~15~~ 24 Fish behind primary screen - relocated into tank ov 08/04/10
- Cleaning on all tanks 8:30am SB, EH
- Feeding bloodworms, liveworms, and dry food 8:30am JD, DV, SP
- Observations on all tanks 8:30am TT
- Worm Culture maintained; new cultures started 9:00am SP
- Artemia Culture maintained 9:00am DV
- Sturgeon with curved spine taken out and euthanized: 1 from LMF-02-A, LMF-02-B, LMF-02-C (1 each) TT
- Fed dry food 12:00pm JD
- Fed artemia & blood worms @ 1:00 PM
- made new dry food 2:00pm JD - see pg 2
- no mortalities found - 2:00pm JD
- LALL-F curved spine sturgeon euthanized 2:00pm TT
- observations taken 2:00pm TT
- WQ probe thermometer kits 12:00pm JS, SP, MM, SB, BT, TT
- All head tanks Filled and hardness checked (Through-out pm) MM, SB
- Set up all artemia Feeders (ie: taping to tank) 3:00pm BT
- Observations taken 5:30PM BT

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- Fed artemia, live worms, BW @ 7:00pm JS
- clean all systems 7:00pm JS
- Fed live worms, dry food, BW @ 9:30 pm JD
- setup automatic feeders w/ dry food @ 9:30 JD
- setup artemia feeders @ 9:30pm DV
- Fed artemia @ 9:30pm JD
- deads @ 9:30pm DV SP

Aug, 4, 2010

Aug, 5, 2010 SP

- System check 8:30am SP
  - H_2O-B 1 fish behind primary screen
  - GE-B 1 fish behind primary screen
  - CTRL-F 1 fish behind primary screen
  - H_2O-D 2 fish behind primary screen
- changed Filters 8:30am SP
- cleaned/removed deads from all tanks 9:00am SP, EH, JD, DV, SG
- Filled head tank 8 9:00am JD
- Fed dry food, live worms, and blood worms 9:00am SP, DV, JD artemia DV
- measure and weigh deads 11:30am EH
- maintain worm culture 11:45am SP
- Fed dry food, artemia, bloodworms 11:00 am JD
- observations 12:00 pm BT
- Fed BW, dry food, live worms @ 2:00pm SP
- began culling culture fish JS, MM
- started new artemia cultures BT
- deads removed @ 2:00 pm JD
- LMF-A: 3 fish appeared dead (upside-down) but moved when touched JD
- fed BW, artemia, dry food, (no worms) @ 4:00 JD
- started new artemia cultures 4:00pm JD
- probe 3:00pm SP, BT
- prepared DGT equipment for use tomorrow 3:00pm BT
- observations taken 4:30 PM BT
- Set up LC50 containers 5:00pm SP
- Filled head tanks, cleaned exposure tanks BT, JS
- Fed artemia, dry food and bloodworms 9:00pm DV, BT, JS
- Ctrl-E metering pump broke and delivering constant flow of water from head tank, may have caused elevated temperatures

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Aug. 6, 2010 SP

- System check 8:30 SP
  - H_2O-B 1
  - Ge-B 1
  - CTRL-F 2
  - H_2O-D 1

  } fish behind primary screen; relocated into tanks DV
- changed Filters 8:30 SP
- Fed dry food, blood worms, live worms 8:30 JD, SP
- cleaned all tanks 8:30 SP, JT, ~~FB~~, EH, ES, SG
- fed artemia 9:00 am DV
- 10 fish were removed from behind outflow screen & placed back into main compartment EH - for H_2O B EH
- worm culture maintained 10:30am SP
- deeds weighed and measured 10:30am JT
- ethanol / Formalin exchange 10:30am JT, EH
- Fed live worms, artemia, and bloodworms 11:30 SP, JD
- Observations taken 12:00 PM BT
- Observation behavior videos taken 2:00 PM
- Fed live worms, artemia, BW, + dry food @ 1:00 pm JD, WS
- Fed live worms, artemia, bloodworms, dry food @ 5:00 PM
- Observations taken 6:00 PM BT
- Cleaned tanks 6:30 PM BT, JS
- Fed bloodworms & dry food 8:30 PM / BT
- Fed bloodworms, artemia, and dryfood 10:00 PM DV
- Set up autofeeders 10:00 PM DV

Aug 6, 2010

Aug. 7, 2010

- System check 8:30 AM BT
- ~~EH~~ BT. Fed ~~fl~~ BT artemia, live worms, and dry food 9:00 PM BT
- Changed Filters 9:30 AM BT
- Cleaned tanks 10:00 AM BT, JS, MM, LL, JD, SG
- H_2OE - 2 fish relocated from 1st primary screen to exposure tanks
- Fed bloodworms, artemia, dry food 12 pm
- Removed Deads 1:00 PM BT, LL, MM, JS
- Observations Taken 2:30 PM BT
- Feld bloodworms, live worms, artemia, dry food 2 pm
- clean tanks 4pm LL
- Fed BW, love worms, artemia, dry food 4:30 pm WS
- clean tanks 6pm LL, WS

- Fed BW, dry food, live worms, artemia 8:00pm WS
- deads removed 9:00 pm JD
- fed BW, dry food, artemia 10:00 pm JD
- LALL-B marching pump stopped - water circulation off for <1hr. fixed. JD
- System check JD 11:00pm

August 8, 2010

System check 8:30 AM BT

- Fed dry food, artemia, and bloodworms 8:30 AM BT, LL
- Cleaned tanks 8:30 AM JS, BT, LL
- Fed ~~fish~~ BT dry food, bloodworms, and artemia 11:00 AM BT
- Changed filters ~~JD~~ BT 11:00 AM JD
- Made new Artemia cultures 11:30 AM
- Removed deads 12:00 PM EH, BT, JS, LL, SG
- Fed dry food, artemia, live worms 1:00 PM BT, JS, JB
- H_2O-D, fish went through the first screen., relocated ~50 fish back to exposure chamber, 'hole' covered w/ aquarium putty JD
- Fed dry food, live worms, artemia, bloodworms - 3:00 PM JK, JD, JB
- ~~fed dry food, artemia, live worms, BW @ 3:00pm~~ 08/08/10 JD
- observations at 2:00 pm BT
- Fed dry food, live worms, artemia, bloodworms @ 5:00 PM
- Fed BW @ 6:00pm JB
- Fed BW + artemia + live worms

Aug 8, 2010 SP

Aug 9, 2010 SP

- System Check 8:30am SP
  - chiller system > sump pump failed ∴ ran low
  - LALL-B reservoir low due to clogged filter overflow
- filters changed 8:45 SP
- fed bloodworms, live worms, artemia, dry food 8:30 JS
- observations 8:30 TT
- Fed dry food, live worms, BW
- cleaned all tanks 8:30 SP, BT, JB, CS, MM, SG, JS, TT
- measured and weigh deads 11:00am JS
- set out bottles for water sampling
- maintain worm culture
- Observations 2:30pm TT

Aug 9, 2010 SB

- Duplicate ~~BLII~~ DE-D → LMF-02-C SB
- Fed 2:00pm WS BW + artemia + dry food
- Clean tanks 4:00pm WS.
- Fed BW + dry food @ 4:00pm BT

Aug 9, 2010 SP

Aug 10, 2010 SP

Aug 10, 2010 SP

- System check 8:30am SP
  - LALL-B low reservoir due to filter clog
- Changed filters 8:30am SP
- fed dry food, artemia, ~~blood worms~~, and live worms 8:30am JD, TT
- Observations 9:15am TT
- fed bloodworms 11:00am SP
- cleaning 9:00am - 4:30pm SP, SB, MM, JB
- Fed dry + BW 2:00pm JD, JB
- measure and weigh deads 3:00pm TT
- ~~pre~~ WQ probe 4:00pm SB
- put sample containers ~~into~~ for water quality into acid bath 4:30pm SP
- Fill head tanks
- videos 2:00pm JT
- peepers 3:00pm JT

Observations 2:15pm TT

- fed live worms, artemia, BW, dry 4:30 pm JB
- Water Quality - Temp, DO, Conductivity, pH. - 3:30 SB.
- Fed fish 6:30 JT
- fed dry food & bw 9:00 pm JB
- changed filters 9:30 pm JB
- fed bloodworms 10:15 pm JB

Aug 10, 2010 SP

Aug 10, 2010 SP

August 11, 2010 SP

- System Check 8:30am SP
  - → chiller system ran dry → fixed by SB
- Observations 8:30am TT
- fed dry food, live worms, artemia, BW 8:30 - 9:30 JS
- cleaning 8:30am - 1:00pm SB, SP, JS, TT, SG
- Culture tank ST1 crashed. Approx. 8000 dead fish removed.
- Fed dry food. Live worms. artemia. 2:00 pm WS.
- De-C: 11 WS between secondary and last screen SP 3:00pm
  2 WS in filter

• Fed bloodworms 3:30 pm WS
• LC50 WS LC50 Take down and water quality 9:00-4:30 MM, EH
2:00-4:30 JS, SB, JD, TT
• Weigh and measure deads 2:00 JB, JT
• prepare peepers 10:00am SP, DV, JT
• prob WQ probe 2:00pm SP
• cleaning 4:00pm WS
• LMF-02-C → all fish got past screen through hole in corner as sediment "collapsed". Issue fixed by inserting rocks in corner → fish relocated back into exposure area · 4:30pm TT
~~• Fed artemia, blood~~ BT
• Fed bloodworms, artemia, and dry food 6:00PM WS
• Fed bloodworms, artemia, and dry food 8:00PM WS
• Fed bloodworms 10:00PM BT
• Prepared filters 10:30PM BT
• Fed bloodworms 12:00AM BT
August 11, 2010 BT

August 12, 2010 BT
• ~~12:30 AM~~ BT, Prepared filters 12:30AM BT
• Changed filters 1:30 AM BT
• Fed bloodworms and dry food 2:00 AM BT
• Cleaned tanks 3:00 AM BT
• Fed bloodworms 4:00 AM BT
• Changed formalin to ethanol in deads vials 4:30 AM BT
• Refilled culture head tank 4:20 AM BT
• Fed bloodworms 5:50AM
• System Check 6:00 AM
• change filters 8:30am SP
• fed bloodworms, live worms, artemia, dry food 8:30am- SB
• LMF-02-C 10 fish behind secondary screen - fixed by TT 8:30am
• observations 8:30am TT
• cleaning 8:30am SP, DF, CS, MM, EH, SG
• UMF-D → 39 dead due to screen, 39 on other side of screen replaced into tank
• Finnished feeding - 10:30 am. SB
• Re-stocked Artemia culture - 10:45 am SB
• Fed Bloodworms 12:00 pm. SB
• Fed dry food 12:15 pm TR
• WQ probe 1:00pm DF
• water quality kits 1:00pm SP, SB, TT, JT, TR, CS
• measured and weighed deads 11:00 TT

- fed bloodworms 2:00 SA
- fed bloodworms 5:00 TR
- observations 1:30 TT
- cleaning 4:30 SA, JT, TR
- observations 7:30 TR
- fed bloodworms 8:00pm SA
- Fed bloodworms 10:15pm BT
- adjusted metering pumps; 10% increase 10:30 BT

~~fed bloodworms~~

August 12, 2010 SP

Aug. 13, 2010 SP

August 13, 2010 SP

- fed bloodworms 12:00AM BT
- cleaned 12:30Am BT
- fed bloodworms 2:00AM BT
- cleaned tanks 3:00AM BT
- fed bloodworms 4:00AM BT
- cleaned tanks 4:30AM BT
- changed Filters 5:20AM BT
- Fed bloodworms 5:45AM BT
- system check 6:00AM BT
- cleaned tanks 7:00AM SB, SP
- fed BW + dry food @ 9pm JD, DF
- Started cleaning 9pm JD, DF, MM, CS
- processed dead 9pm TT
- Observations taken at 8:40am TT
- Observations done at 12:00pm TT
- Fill head Tanks 12:00pm TT
- Replaced formalin with ethanol 11:30am CS, MM
- Fed dry food + BW @ 2:00pm SA
- DO / Probe measured for all Tanks @ 2:30pm JT, TR
- Cleaned Tanks @ 1:45pm SG, TT, DF
- Fed dry food + BW @ 4:00pm SA
- Cleaned Tanks @ 5:00pm SA
- Fed dry food + BW @ 6pm SA
- Fill head tanks @ 7:30pm SA
- Fed dry food + BW @ 8:00 pm SA
- Fed Bloodworms @ 10:00pm SA

JT 08/13/10

- Deploy peepers

LD-A	OW = 16.3°C	PW =
LD-B	OW = 16.1°C	PW = 15.6°C
UMF-B	OW = 15.8°C	PW = 15.5°C
UMF-E	OW = 16.7°C	PW = 16.4°C
DE-B	OW = 16.0°C	PW = 15.7°C
GE-D	OW = 16.8°C	PW = 17.0°C
LALL-B	OW = 15.4°C	PW = 15.2°C
LALL-D	OW = 15.9°C	PW = 15.8°C
LMF-A	OW = 16.8°C	PW = 17.0°C
H_2O-D	OW = 15.7°C	PW = 15.8°C
CTRL-B	OW = 15.2°C	PW = 15.1°C
CTRL-C	OW = 15.7°C	PW = 15.8°C

August 14, 2010 SP
- 100 mortalities in ST2
- system check 9:00am SP
- fill head tanks 9:00am TR, SP
- fed bloodworms, dry food, artemia, and live worms 9:00-10:00am SP
- cleaning 9:00am - 3:30pm TR, SP, JB
- fed bloodworms 12:00pm SP
- fed bloodworms & dry food JB, SA 2:00pm
- Processed deads 3:00pm SA, WS
- fed bw & dry food @ 4:00pm SA, WS
- filling headtanks at 5:00pm WS
- fed dry food @ 6:00pm WS
- fed bw @ 7:30pm JB SA
- fed bw @ 9:45pm WS
- WQ probe 3:30pm JB

August 14, 2010 SP

August 15, 2010 SP
- clean stock tanks 8:30am SP, TR
- Fill head tanks 8:30am SP
- system check 8:30am SP
- fed bloodworms, artemia, dry food and live worms 9:00-10:00am SP
- observations 9:00am TR
- cleaning tanks 9:00am SG, 10:00am SP, TR - 3:00pm
- fed bloodworms 12:00pm SP

August 15, 2010 continued SP
- Fed bloodworms 2:00pm SA
- weigh and measure deads 2:00pm JB, SA
- change filters 3:00pm SP
- UMF-01-D, CTRL-D, and LO-01-E Fish found in screen; ~~holes~~ Fixed by DV.
- ~~Processed deads~~
- fed bloodworms 4:00pm SP
- observations 3:30pm TR
- LC50 water quality 4:00 p.m. JB, SA
- fed bloodworms 6:15 p.m. JB
- fed bloodworms 8:00 p.m. SA
- water quality 8:30 p.m. JB, SA
- Fed bloodworms 10:00 p.m. JB, SA
- Chiller maintenance 10:00 PM BT
- ~~CT~~ BT Cleaned tanks 11:30 PM BT
- Fed bloodworms 12:00 AM BT

August 15, 2010 BT

August 16, 2010 BT
- Cleaned Tanks 12:30 AM BT
- Fed bloodworms 2:00 AM BT
- Prepared filters ~~BT~~ 2:30 AM BT
- Fed bloodworms + dry food 4:00 AM BT
- ~~4:30 ABT~~ Cleaned Artemia hatching jars 4:30 AM BT
- Prepared filters 5:00 AM BT
- Fed bloodworms 5:45 AM BT
- System Check 6:00 AM BT
- Fed BW @ 9:00 am JD
- observations 9:00am TR
- clean tanks 8:30am SB, DF, SP, EH, JT, TR, CS
- fill head tanks 9:00am SB
- Fed dry food @ 10:00 am JD
- Fed BW @ 11:00 am JD
- OW sampling done 11:00am
- -duplicate OW H_2O-F = H_2O-C
- Feeding BW @ 1:30 pm JS
- observations 1:00pm TR
- WQ probe 10:30am DF

- Weigh and measure deads 10:30am MM
- SWI water samples taken 1:00pm
- PW samples taken 3:30pm
- checked cracks/sides/bottom of all systems screens using a wooden skewer to see if any trapped dead fish. Pushed skewer into cracks and tried to flush out bodies. No dead fish found. JD
- Duplicate SWF ZMF-02-A → SWF-DE-D SS
- fed bw 4:10 p.m JB
- Fed bloodworms @ 6:15 PM JB
- Observations complete @ 6:30
- Acid bath complete @ 7:10 pm WS
- Fed bloodworms @ 8:10 PM JB
- fed dry food & bloodworms @ 10:00 JB
- ~~8~~ BT System check 10:00PM BT
- ~~Acid bath~~ BT - Prepared bloodworms 10:15 PM BT
- Acid bath 10:45PM BT
- Fed bloodworms 12:00 AM BT

August 16, 2010 BT

August 17, 2010 BT

- ~~12~~ BT Tank maintenance 12:30 AM BT
- Fed bloodworms 2:00 AM BT
- Changed Filters 2:45AM BT
- Prepared filters 3:00AM BT
- Fed bloodworms + dry food 4:00AM BT
- ~~4:30~~ BT Prepared filters 4:30 AM BT
- Cleaned tanks 5:00 AM BT
- ~~5:45~~ BT Fed blood worms 5:45 AM BT
- 6:00AM system check BT
- 8:30am Feed BW DF
- Clean tanks 8:30am DF, SB, EH, JT, SP, CS
- observations 8:30am TR
- fed 12:00pm TT
- Ammonia test kits 1:00pm DF
- WQ probe 1:00pm SB
- behavior videos 1:00pm JT
- Fed bloodworms and dry food 2:00 pm WS
- Overlying water quality → Temp, DO (x.), Conductivity, pH - ended 2:10 pm.
- Cut filters - 2:30 WS

Fed bloodworms 4:00pm WS
fed bloodworms @6:00pm JB
Fed bloodworms @ 8:00 pm WS
Switch the heater @ 9:00 WS JB (LC50)
Fed bloodworms at 10:00pm WS
- Chiller maintenance 10:00PM BT
- Prepared blood worms 10:30PM BT
- Prepared LC50 system covers 11:00PM BT
- Fed bloodworms 12:00AM BT

August 17, 2010BT

August 18, 2010BT
- Placed system covers on LC50 systems 12:45AMBT
- Changed filters 1:15AMBT
- Cleaned Culture tank 1:45AMBT
- Fed bloodworms 2:00AMBT
  Prepared filters 2:30AM BT
- Data entry: Mortalities 3:30AMBT
- Fed bloodworms + dry food 4:00AM BT
- Data entry: Mortalities 4:30AMBT
- Cleaned tanks 5:00AM BT
- Fed bloodworms 5:45AM BT
- System Check 6:00AMBT
- Fed bloodworms and dry Food 8:30am DF
- observations 9:00am TR
- cleaning 8:30am SP, SB, DF, JT, CS
- weigh and measure deads 10:45am JT
- Tank H_2O - D seal to back screen came apart, fixed & returned H_2O WS to tank from between 2nd & 3rd screens.
- Fed bloodworms 11:45 A.m. SB
- water quality probes @ 1:00pm SP
- water quality test kits @ 1:00pm SP
- fed bloodworms 2:00pm JB
- fed BW 4:30pm JB
- fed bloodworms 6:30pm JB
- fed bloodworms 8:30pm JB
- LC50 water change 7:00pm JS
- cleaned 6:30 to 9:30 pm JB, TR

Scale: 1 square =

DGT Placement @ 3:06

ID	Time	Water temp (°C)	Sediment temp (°C)
Ge-D	3:11	16.5	16.0
LMF-02-A	3:14	16.5	16.0
LALL-D	3:16	15.7	16.0
LD-01-B	3:17	15.8	16.0
CTRL-C	3:21	15.3	16.0
LALL-B	3:23	15.1	15.0
LMF-01-E	3:25	15.2	15.0
LD-01-A	3:27	15.8	15.0
LMF-01-B	3:29	15.4	15.0
CTRL-B	3:30	15.6	15.0
DEB	3:32	15.3	15.0
H_2O-D	3:37	14.5	N/A

- Fed bloodworms 10:00 PM BT
- Prepared bloodworms 10:30 PM BT
- Filled Head tanks 11:00 PM BT
- Changed filters 11:30 PM BT
- Fed bloodworms 12:00 AM BT

August 18, 2010 BT

August 19, 2010 BT

~~Prepared~~ BT Chiller maintenance 12:30 AM BT

- Prepared filters 12:45 AM BT
- Fed bbodworms 2:00 AM BT
- Data entry: mortalities 3:00 AM BT
- Filled head tanks 2:45 AM BT
- Fed bloodworms + dry food 4:00 AM BT
- Data entry: mortalities 4:30 AM BT
- 5:00 AM Cleaned tanks BT
- Fed bloodworms 5:45 AM BT
- System Check 6:00 AM BT
- Feed bloodworms, dry food 8:45 A.m. DF
- Cleaning 8:30 A.m. SB, JT, DF
- Fed bloodworms 11:00 Am, JT
- H_2O-O tank had fish that got past back screen - It returned to tank and plug sealed with aquatic epoxy
- Fed bloodworms @ 2pm
- Flow rates on all exposure systems increased to 24 L/min SB, JT, TT, JS SA
- Fed bloodworms @ 4pm

- Fed Bloodworms @ 6pm SA
- Clean Tanks @ 7pm SA
- Fed Bloodworms @ 830pm SA
- Fed bloodworms 10:00PM BT
- ~~Data entry: Mortalities 10:45PM BT~~
- Tank maintenance 10:45PM BT
- Prepare Bloodworms 11:00PM BT
- Fed bloodworms 12:00AM BT

August 19, 2010 BT

August 20, 2010 BT
- Data entry: Mortalities 13:30AM BT
- Fed bloodworms 2:00AM BT
- Fed bloodworms + dry food 4:00AM BT
- Cleaned tanks ~~5:00AM BT~~ 5:30AM BT
- Fed bloodworms 5:45AM BT
- System check 6:00AM BT

Fed bloodworms 8:30AM
Cleaned tanks 8:30AM
Fed dry food @ 11:00AM JD
Fed BW @ 11:30AM JD
Fed BW @ 2:00PM SA
- peepers + DOT's removed DV, JT
- WQ probes done TT
- Fed BW + dry food @ 4:00 pm SA
- Fed BW + dry food @ 6:00 pm SA
- Fed BW + dry food @ 10:00 pm SA
- filled head tanks SA
- LALL-B water level low - marching pump lost suction, fixed by restarting siphon. JD 10:30pm
- changed all filters due to many clogged filters - some minor overflows - JD 10:30pm

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August 21, 2010 JB
- water quality probe 1:30pm JB, SA
- fed BW @ 2:15 p.m. SA
- fed BW @ 4:30pm JT
- fed dry food @ 6:15pm JB

22 Ctrl-D 66 fish re-seeded; UMF-D 78 fish re-seeded due to screen mortality DV

-fed bloodworms 8:00 pm JB
-Cleaned tanks 8:00 pm SB, SA
-Filled Headtanks 8:30 pm JB
-fed bw & dry food 9:45 pm JB, SA

August 21, 2010 JB

08/22/10 JT

- fed bloodworms + dry food 9:00 am JT
- fed bloodworms 11:20 am JT
- Cleaned tanks 12:00 pm JT, TS
- fed bloodworms 2:00 pm
- fed bloodworms 4:00 pm JT
- fed bloodworms 6:00 pm JB
- Fed bloodworms 10:00PM BT
- System check 10:20PM BT
- Prepared bloodworms 10:30PMBT
- General cleaning BT 11:00PMBT
- Fed bloodworms 12:00AMBT

August 22, 2010BT

August 22, 2010BT
- General cleaning 12:30AMBT
- Fed bloodworms 2:00AMBT
- General Cleaning 2:30AMBT
- BT Cleaned Culture tanks 3:30AMBT
- Fed blood worms + dry food 4:00AMBT
- Cleaned tanks 4:30AMBT
- Fed bloodworms 5:45AMBT
- System check 6:00AMBT
- changed/cleaned filters 8:30am EY
- fed BW 9:00am
- cleaning 8:30am EH, JS, SP, EY
- observations 9:30am TT
- weigh and measure deads 10:30am TT
- calibrate pH on probes 10:45am JS
- fed BW 12:00pm
- fed BW 2:00pm
- observations 1:30pm
- fed BW 4:00pm
- Water Samples SWI Duplicate CTRLA=De-D

Aug 23, 2010 SB

- Collected water samples of overlying water, ~~sediment~~ sediment-water-interface, and pore water. Packed samples in bags and sealed. SB
- ~~Packed LCSwater~~ Fed Blood worms 6:00 pm SB
- Did water quality on Pore water and SWI and OW. CS, EY
- fed bloodworms 8:00 pm JB
- Cleaned tanks JB, SA @ 8:30pm
- System Check 10:00PMBT
- Fed bloodworms 10:10PM BT
- Cleaned inflow screens 10:30PMBT
- Artemia takedown 11:00PM BT
- Fed bloodworms 12:00AM BT

August 23, 2010BT

August 24, 2010BT

- Artemia takedown 12:30AMBT
- Data entry: Mortalities 1:00AMBT
- ~~Generat~~ BT · Prepare bloodworms 1:15AM BT
- Fed bloodworms 2:00AM BT
- General cleaning 2:30AMBT
- Fed bloodworms + dryfood 4:00AMBT
- ~~Gene~~ · Cleaned tanks 4:30AMBT
- Fed bloodworms 5:45AM
- System check
- fed bloodworms + dry food 8:30am DF
- observations 8:30am TT
- cleaning 8:30am DF, JS, EY, TT
- weigh and measure deads 10:00am TT
- fed bloodworms 10:40amDF
- WQ probe measurements 10:30am EY
- fed bloodworms 2:00pm JB
- Behavior videos 1:00pm DF
- Observations 1:00pm TT
- Turnover rate checked 1:00pm JS, TT
- Head tanks Filled JB
- Ammonia-Nitrogen samples taken 2:00pm DF
- fed bloodworms 4:00 pm JB
- all tank supplies buckets cleaned 3:30pm DF, EY
- Fed bloodworms 6:00 LL

24

Scale: 1 square =

Aug 24, 2010 SB

- Fed Bloodworms 8:00pm L.L
- Fill Headtanks 9:00 JB
- Fed bloodworms 10:00PM SB BT
- ~~Chiller maint~~ System check 10:00PM
- Chiller maintenance 10:30PM BT
- Fill head tank 11:00PM BT
- Fed bloodworms 12:00AM BT
- August 24, 2010 BT

August 25, 2010

~~Data entry~~ BT • Cleaned screens 12:30AM BT

- Data entry 1:00AM BT
- Fed bloodworms 2:00AM BT
- Data entry 2:30AM BT
- ~~Y.~~ BT Fed bloodworms 4:00AM BT
- Prepared bloodworms 4:30AM BT
- Cleaned tanks 4:45AM BT
- Fed bloodworms 5:45AM BT
- System check 6:00AM BT
- Fed BW and dryFood 9:00am DF
- cleaning all tanks 8:30am JS, EY, DF
- observations 9:00am TT
- DGTs 11:30am DF, EY
- WQ probe 11:00am JS, TT
- weigh and measure deads 10:30 TT
- Feed BW 12:00pm SB
- change Filters 12:00pm LL
- fed BW 2:00pm JB
- Water Quality Kits 1:00pm SP, SB, LL, JB, JS, TT, EY, ~~DF~~
- fed BW 4:00pm DF
- cut Filters 2:30pm WS
- Fed Blood worms 6:00 pm LL

Checked For deads LL

Cleaned tanks L.L 6:30 pm

Checked Flow Rate is at 24L/min and adjusted tanks that were varying in flow rates. SB, JB, WS

- fed blood worms 8:00 pm JB
- filled headtanks/checked Hardness 8:30pm WS
- filled culture tank 9:00pm JB, WS

• System Check: 1 screen was plugged, cleaned it 10:00PM BT
• ~~Cleaned up pool of water~~ BT. • Fed bloodworms ~~10:15~~ BT 10:15PM BT
• Cleaned up pool of water in water treatment room. Source of water is unknown but probably from chiller head tanks. 10:30PM BT
• Prepared bloodworms 11:00PM BT
• setup computer 11:30PM BT
• Fed bloodworms 12:00AM BT
August 25, 2010 BT

August ~~25~~ 26, 2010 BT
12:30AM setup computer BT
~~2:00AM~~ BT Fed bloodworms 2:00AM BT
Computer setup 2:30AM BT
Data entry: Water quality 3:15AM BT
Fed bloodworms + dry Food 4:00AM BT
Data entry: Water quality 4:30AM BT
Clean tanks 5:00AM BT
Fed bloodworms 5:45AM BT
System Check 6:00AM BT
• LALL-B marching pump stopped working, water looks ~~mild~~ cloudy: pump stopped recirculating
• Fed dry food + BW 9:00am DF
• Clean tanks 8:30 DF, SP
• Fed BW 11:00 am DF
• observations 1:00pm SB
• fed BW 2:00pm LL
• WQ probe 2:00pm DF
• weigh and measure deads 2:00pm SA, JB
• change Filters 2:30pm CS
• water test kits done on tanks that were high yesterday 3:00pm LL
• ~~ST2~~ added fish to ST2 from ST1 and ST3, around 300. 4:00pm SP
• switched pumps and adjusted flow rates on LD-01-C and LMF-02-D exposure tanks 2444 JB, SA
• Exposure tank Control-D → spray bars were removed, cleaned and behind inflow screen was cleaned, then the spray bars were replaced and tank flow was returned to normal.
- Fed Bloodworms 4:00 pm JB
• Adjusted flow output on exposure tanks JB, SA
- Changed filters JB, SA
- Fed bloodworms 6:15pm JB

Aug 26, 2010

- Placed air stones in the reservoir of H_2O-A, H_2O-B, LD-01-A, UMF-01-A, LD-01-F and UMF-01-E at 7:00 SB due to prescence of ammonia + Nitrite; refer to water quality log book SB.
- Cut filters and replaced filters - 7:15 SB, LL
- Cut and added a base for the filters - 7:30 SB, LL
- Fed Bloodworms @ 8:00pm SA
- Cleaned tanks @ 8:30pm JB, SA
- Fed Bloodworms @ 10:00 pm SA
- System check 10:00PM BT
- Prepared bloodworms 10:15PM BT
- Prepared filters 10:45 PMBT
- Fed bloodworms 12:00 AMBT

August 26, 2010BT

August 27, 2010BT

- 12:30AM Prepared filters BT
- ~~1:30~~ BT Label water sample botties 1:30AMBT
- Fed bloodworms 2:00 AMBT
- Label water sample bottles 2:30AMBT
- Fed bloodworms + dry food 4:00AMBT
- Label water sample bottles 4:30AMBT
- Clean tanks 5:15AMBT
- Fed bloodworms 5:45AMBT
- System check 6:00AMBT
- Fed bloodworms and dry food 9:00am DF
- cleaning 9:00am DF, SP, LL, CS
- fed bloodworms 11:00am DF
- fed bloodworms 2:00pm DF
- weigh and measure deads 2:00pm LL
- WQ probe 2:00pm SP
- Ammonia and nitrite water tests on all tanks 2:00pm SA, LL
- Fed bloodworms 4:00pm SA
- Fed bloodworms 6:00pm SA
- Added airstones to the necessary reservoirs LL
- Fed bloodworms 8:00pm WS
- Cleaned tanks 8:30pm SA
- Fed bloodworms + dry food 10:00pm SA

Aug 28, 2010SB

- System check 8:30A.mSB
- Fed bloodworms 9:30a.m JS

August 28, 2010

- Cleaned all systems, including the screens: 9:30 SB, JS
- Checked and recorded deads 12:40 JS, SB
- Fed bloodworms and dry food 12:00 LL
- Calibrated scale - JS 12:40
- Fed bloodworms 2:00pm SA
- Calibrated probe - JS, SA
- Water Quality - Probe - SA, Nitrite and Ammonia Nitrate WS
- NP-03-A and LALL-D had one spray bar which was spraying water above exposure water. The spray bars were removed, cleaned and replaced, fixing the problem. 3:00 SB
- Observations JS, SB 2:30 p.m
- Filters replaced 5:00 SB, JS
- Filters prepared 4:30 LL
- Feed bloodworms 6:00pm LL
- Added airstones to LALL-C, LD-B, UMF-C reservoirs 6:00pm SA
- Fed bloodworms 8:00pm LL

Cleaned tanks 7:30pm LL, WS

- Observations 6:00pm LL
- Fed bloodworms 10:00pm SA
- Main water reservoir for ATRF extremely low but filling; left alone to fill overnight SA, DV

08/28/10 SA, DV

08/29/10

- ATRF reservoir still low; RO tank low; water supply to culture side of ATRF turned down to increase water level in main ATRF reservoir
- Chiller system drained of water; possibly due to a hose from the delivery pipes fallen outside of green tank water bath; hose placed back in water bath and chiller system reservoir filled
- ATRF manager contacted in regards to ATRF main reservoir malfunction SA, DV
- Fed bloodworms 9:00 am SB
- Fed blood worms 11:00 am SB
- Cleaned exposure and culture tanks 9:30 am SB, JS
- Checked for deads - No deads
- Observations 1:20pm SB
- Fed bloodworms + dry food 1:30 pm. JS SA

Fed blood worms 4:00pm. WS

Aug 29, 2010 SB

- Acid washed and rinsed 60cc syringes and pippet tips. SB, WS
- Observations 6:00 pm JB
- Water Quality - Probe - Calibrated and recorded SWI. SA
- Placed Airstones in all white reservoirs. JB 4:30 pm
- Labled bottles for Aug 30, 2010 sampling - JS, SB,
- Water Quality - Nitrite and Ammonia Nitrogen tested on all systems - 2:30 pm SA, JB
- Fed bloodworms 6:00pm WS
- Fed bloodworms 7:30 pm WS
- Cleaned tanks 8:30 pm SA, JB
- Fed Bloodworms 10:00 pm JB
- System Check 10:00PM BT
- Prepared bloodworms 10:15PMBT
- Cut pipe for SWI sampling devices 10:45PMBT
- Acid bathed pipe for SWI sampling devices 11:45 PMBT
- Fed bloodworms 12:00 AM

August 29, 2010BT

August 30, 2010BT

- Cut tubes for SWI sampling devices 12:30 AMBT
- Drill a hole for tube in pipe of SWI sampling device 1:00 AMBT
- Fed bloodworms 2:00 AMBT
- Labelled rinsate bottles 2:30 AMBT
- ~~Fill~~ BT Added 400L to head tanks 2, 3, 4, 5 3:00 AM BT
- Data entry: Mortalities 3:30AMBT
- Fed bloodworms + dry food 4:00AMBT
- Data entry - Water quality 4:30 AMBT
- Clean tanks 5:00 AMBT
- Fed bloodworms 5:45AMBT
- System Check 6:00 AMBT

- fed bloodworms 8:30am LL
- observations 8:30am SB

- cleaning 8:30am DF, JA, SP, LL, SB
- fed bloodworms 11:00am DF
- WQ probe 11:30am DF
- fed bloodworms 12:30pm TT
- Observations 12:30 pm TT
- OW-DE-D (Duplicate) = LD-01-D
- Fed at 2:00 pm WS
- Fed 4:00 pm WS

WI-SE-D (Duplicate) = ~~SWF~~ LMF-02-A TT

- Water samples collected and filtered for SWF and OW, packed in bags, sealed and placed in coolers with COC - finished at 5:15 p.m.
- fed bloodworms 8:30 pm WS
- water samples collected and filtered for pw - finished at 9:30 pm
- System Check 10:00PM BT
- Fed bloodworms 10:15PM BT
- Prepared bloodworms 10:30 PM BT
- Moved samples to cooler 11:00PM BT
- Data entry: Water Quality
- Fed bloodworms 12:00AM BT

August 30, 2010 BT

August 31, 2010 BT

- Data entry: Water quality 12:30AM BT
- ~~1:3~~ BT Cleaned tanks 1:30 AM BT
- Fed bloodworms 2:00 AM BT
- ~~2:30~~ BT Cleaned tanks 2:30 AM BT
- Filled head tanks 2:30 AM BT
- Fed bloodworms + dry food 4:00AM BT
- ~~4:3~~ BT Prepared filters 4:30 AM BT
- Fed bloodworms 5:45 AM BT
- System check 6:00 AM BT
- Cleaning 8:30 DF, JA
- Filter Change in all systems ~~BF~~ 9:00 am DF
- Fed bloodworms 9:00 L.L
- Observations 9:00 am SB
- Fed bloodworms 11:00 am DF
- observations 12:00 pm TT
- LC50 → 25 ws sacrificed 1:00pm TT
- Fed Blood worms 1:30pm TT
- WQ probe 11:30am JA
- measure and weigh deads 11:00am SB
- behavior videos 2:00pm DF
- individual tank pictures 2:00pm JA
- calibrate Flow rate 24L/min 2:00pm TT, JB
- calibrate turn over rate 250L/day 3:00pm SP, SB
- changed pump on LMF-01-F 4:30 pm JB, TT
- Fed Bloodworms 4:20 LL

30 • recalibrated turn over rate 375L/day to reduce nitrite levels JB TT

- finished taking pictures 7:30 p.m JB, TT
- fed bloodworms 8:00 p.m. JB
- System Check 10:00PMBT
- Refilled head tank #6, 10:15PMBT
- Prepared filters 10:30 PM BT

August 31, 2010 BT

- September 1, 2010 BT
- Filled head tank # 2 12:30 AMBT
- Filled head tank # 1 2:30 AMBT
- Changed filters 2:30AMBT
- Cleaned tanks 3:30AMBT
- Filled head tank # 5 4:00AMBT
- Filled head tank # 4 5:30 AMBT
- System Check 6:00AMBT

09/01/10 BT

09/01/10 DV

LMF-A 1 fish w tail eaten; not looking very healthy or mobile

- observations - 8:45am SB.
- Water Quality Kits - nitrite and ammonia 9:00am SP
- Water Quality Kits - alkalinity 10:00am SB
- cleaning 8:30am JA, LL, DF
- Fed BW 8:30am DF
- Water Quality Kits - hardness, nitrate DF, LL 11:00am
- WQ probe 2:00pm LL
- Fed BW 1:30pm TT
- observations 12:00pm TT
- Water Quality SWI sampling, hardness 2:00pm TT
- Water Quality SWI ammonia, nitrite, alkalinity 2:00pm SP, JA
  " " nitrate 3:00pm LL
- calibrate turnover rate 1:00pm JA, SB
- Removed and cleaned spraybars to increase flow rate in tanks: GE-C, NP-03-B, UMF-01-F one spraybars were replaced, flow rate was adjusted to 24L/min - video taken. SB, TT
- Fed Bloodworms 6:15pm TT

Fed Bloodworms @ 8:00 WS

Fed Bloodworms @ 10:00 WS

- Sept. 1, 2010 SP

09/02/10

- system check 8:30am SP
- fed BW 9:00am DF
- cleaning 8:30am JA, LL, DF
- water test kits - nitrite and ammonia 9:00am SP
- observations 12:00pm TT
- change pump on UMF-01-F 1:00pm TT
- fed BW 1:00pm TT
- water quality probe 11:00am JA
- weigh and measure deads 11:00am LL
- change manifold tubes, (De-A, Ge-D, LD-01-D) 2:00pm TT, SA
- Fed BW 4:00pm JA
- LABELLED BOTTLES FOR SEPT 6, 2010 SAMPLING DF, JA, SP
- Fed Bloodworms 6:30 pm SA
- Cleaned tanks 7:30pm SA
- Fed bloodworms 8:00pm SA
- Replaced Filters 9:00pm SA
- Fed bloodworms 9:30pm SA

09/02/10 SA

09/03/10 SP

- system check 8:30am
- cleaning 8:30am LL, JA, SB, DF
- fed bloodworms 9:00 am DF
- WQ probe 10:30 am DF
- changed tank filters 11:30 JA
- observations 12:00pm TT
- Fed BW 12:30pm SA
- change tubing on spray bar → manifold on all tanks 1:00pm TT, SA, JA, DF
- fed BW 2:00pm WS
- Fed BW 4:00pm TT
- Observations 4:30 pm TT
- Fed BW 6:00pm TT
- Cleaned Tanks 6:00pm SA, WS

09/04/10 SB

- System check 8:30 am SB
- Fed bloodworms 9:00 am TT
- Observations 9:15 am SB
- Cleaning 8:45 am LL, LZ, TT, SB
- Water Quality - Nitrite and Ammonia Nitrate tested on 6 random exposure chambers - 10:15 - TT

Scale: 1 square = _____

09/04/10 SB

· Fill headtank #1 throug 5 10:00 SB - hardness measured.

· Fed BW 11:00am TT

· Changed Filters 11:00 am SB

· Fed BW 1:00pm SA

· Fed BW 4:00pm & WS

· Clean spray bars / front screens. 2:00pm, SA, TT, LL, LZ, AV

· Fed BW 6:00pm WS

· Feed Dry Food 6:00 PM AV

· Water Probe 1:00pm LL

· Cleaned Tanks 6:00 pm SA, WS, AV

· Feed BW @ 8:00pm WS

· Feed BW @ 10:pm. WS

09/05/10 SB

· System Check 8:30 am SB

· Chiller system ran dry · malfunction with sump pump - fixed by SB 8:40 am.

· Fed bloodworms. 9:30 am LZ

· cleaning 10:00 am LZ. LL. SB.

· Fed BW 11:30 am LZ · Mortalities 11:20 am LL

· Observations 12:00pm SA

· chang filters 1:00 pm LZ

· Fed BW 1:30 pm LZ

· Fed BW 3:30 Pm LZ

· Observations 4:30 PM SA

· Filled LC50 Dose carboys 3:00pm SA Video Captured SB

· cleaning 4:30 AV, WS

· Dry food feeding 6:00 PM AV

· LC50 Water Change 6:30 PM SA

Probe (Water) 7:30 PM AV

· Fed BW 8:00 pm WS

· Fed BW 10:00 pm WS

09/06/10 SB

· Fed BW 1:00pm SA

~~DE-D~~ DE-E is Ge-D ~~for~~ water quality sample ~~test~~ L.L

Fed BW 8:30pm SA

~~Feed~~ Fed @ 10:00pm WS

09/06/10 SA

09/07/10 SA

Observations 12:00pm SA

Fed BW 1:00pm SA

Water Probe 1:30 SA

Cleaned tanks 9:00 AM - SB, DF, JA.

Filled headtanks SB, EY, SA

Put peepers in acid bath 2:45pm SB

Packed coolers with ice for samples to be shipped - SB, JA, DF - 11:00 am

Fed BW - 8:30 am. DF

Fed BW 11:30 am DF

Switched Formalin to Ethanol 2:00 pm. JA

Behaviour videos - 2:00 pm DF

Fed blood worms 3:00 pm SA

Flow rate checked. SB, SA.

Turnover rate checked and turned down to 250 L/min.

Fed BW 5:00pm SA

Observations 7:00pm SA

Cleaned tanks 7:45pm SA

Fed BW 8:00pm SA

System Check 8:30pm SA

09/08/10 SB

- System Check 8:30 am SB
- Observations - 8:30 am. SB

fed BW 9:00 am DF

- cleaning 8:30am EY, WS, SP, DF, JA
- Process deads - SP 9:40
- fill headtanks @ 8:30 WS
- fed BW @ 10:00 WS
- fed BW @ 12:00 WS
- Change the filters @ 11:20 WS
- observations 1:00pm SA
- Water Quality Kits on OW, SWI 10:30 - 4:00 EY, DF, SB, BT, SA, JB, TT, JS
- Fed BW 3:00pm TT
- Fed BW 5:00 pm JB
- Cleaned tanks 6:00pm JB
- LC50 Water Change 7:30pm JB, SA
- Fed BW 8:30pm SA
- System Check 8:30 pm SA, JB

09/08/10

09/09/10 SB

- System Check 8:30 am - one sump pump not working (table with CHAL-C) - Replaced and everything is working. - this malfunction did not affect the chilling system. SB
- Fed bloodworms 9:30 am SB
- Cleaned tanks 8:45am SB, JA
- Processed deads. 11:00 am SB
- Processed deads from LC50 at hour 60. 12:30 pm JB
- fed bloodworms. 12:00 pm DF
- fed bloodworms. 4:00 pm JB
- Prepared peepers - made and placed in nanopure with chelex (5 g) and Nitrogen gas bubbling in the nano pure water. - video recorded. SB, JA, EY.
- Water quality - probe - DF
- Prepared bottles for sampling on monday Sept. 13, 2010.
- observations 7:00 pm JB
- fed bloodworm 9:00 pm JB
- LC 50 water change & observations 9:00 pm JB

09/09/10 SP ☆ 09/13/10 JD see page for 09/13/10 of this log

09/10/10 SP

- system check 8:30am SP, SB
  - -chiller malfunction: tank ran dry after siphion stopped working as sump pump did not work properly; tank refilled and chiller restarted.
- observations 8:30am SB
- Fed bloodworms 9:00am DF
- head tanks Filled 8:30am WS
- cleaning 8:30am WS, EY, SP, JA
- weigh and measure deads 9:40am SP
- cleaning Culture tanks @ 10:00 WS
- Hardness test of Headtanks @ 10:00 WS
- Fed BW @ 11:00am WS
- Fed BW @ 3:00 pm DF
- Fed BW @ 6:00 pm JB.
- Bottles labeled for sampling on monday.
- observations 7:30 pm JB
- fed bloodworms 9:30pm JB
- filled headtanks & hardness test 8:00pm JB
- system check 9:30 pm

SB 09/10/10

09/11/2010 JS

- Fed bloodworms @ 8:30 AM JS
- Cleaned tanks @ 8:30 AM SB
- observations : 10:30 am SB
- Feed Bloodworms 12:00 pm JS
- Change nitrogen tank for peepers - SB, JD
- Prepare small peepers - JS, SB
- Water Quality - probe - 2:30 pm AV
- Observations 3:30 pm JS
- Cut/prepare filters
- Fill head tanks WS.
- PROBE 3:40 PM AV
- DRY food feeding 6:00 PM AV fed BW at 6:00 WS.
- Fill head tanks AV
- Cleaning 7:30 PM AV
- fed BW @ 5:00 WS

09/12/2010 JS

- Fed bloodworms @ 8:30 AM JS
- Cleaned tanks @ 8:30 AM JS
- Fed bloodworms @ 11:00 AM JS
- fed BW @ 1:00 WS
- cleaned culture tank @ 1:15 pm WS
- **Change the filter @ 1:40 pm**
- filled head tanks 12:00 PM AV
- observations @ 2:00 pm JB
- **fed BW @ 3:00 pm WS**
- Deployed peepers 3:00 PM BT, SB
  - Added 3 peepers to systems: Ge-D, LMF-02-A, LALL-D, LD-01-B, Ctrl-C, LALL-B, LD-01-A, UMF-01-B, Ctrl-B, DE-B, UMF-11-F BT, SB
  - Added 2 peepers to H_2O-D, Ctrl-D, UMF-01-D BT, SB
  - ~~4~~ BT. Added 1 peeper and 3 small peepers to method blank BT, SB
- Sampled chelex blank 5:00 PM BT, SB
- observation @ 4:30 PM AV
- filled Head Tank 5:45 PM AV
- feed dry food 6:00 PM AV
- fed BW @ 6:00 pm WS
- fed BW @ 8:00 pm WS.
- fed BW @ 9:30 pm WS.
- Finish placing bottles on tanks @ 9:45 pm WS AX

Scale: 1 square =

09/13/10 SB

- System Check 8:30 am SB
- Feed Blood worms 8:45 am JA
- Observations 8:45 am SB
- Clean tanks - 8:30 am. SP, JA, WS.
- Weigh and measure deads 10:00 am SB
- Feed blood worms 10:30 am WS
- Cleaning 11:00 am WS
- fill head tanks 11:00 am WS

* clamp fell in head tank #9 at 7:00 pm on 09/09/10. clamp was removed on 09/10/10 at 8:45 am.

- Fed bloodworms 12:00 pm. SA
- Water sampling - SWI, PW, OW. bottled water (filtered), packed in coolers with COC
- DED = DE-A for duplicate of SWI and OW.
- Fed Bloodworms 2:00
- Fed blood worms 4:00 JB
- filmed peeper videos 8:00 p.m. JB
- fed bloodworms 8:30 pm SA
- system check 8:30 pm JB
- Changed Filters 8:30 pm SA

09/14/10 SB

- System Check 8:30 am
- Fed Blood worms 9:00 am DF, 10:00 am EY
- Cleaned Tanks 9:00 am DF, SB, JA
- Observations 1:00pm SA
- fed BW 12:00pm JA
- Fed BW 4:00 pm SA
- Water Probe 3:30pm JA
- Fed blood worms 6:30pm JB
- Prepared DGT's 2:00pm. marked the line for soil depth and placed in NaCl - H_2O with nitrogen gas bubbling in id. SB.
- Water Quality - 5:00 pm. SB, JA
- Observations 5:30 pm: JS.
- Changed Filters 6:00 pm SA
- Flow Rates & Turnover Rate Checked 7:00pm JB, JA
- Fed BW 8:30 pm SA.
- Increased Turnover rate, for all H_2O & CTRL tanks due to high nitrite 8:00pm SA, JB 350 L/day LD-C,
- Replaced manifold Tubing on LD-A, H_2O-C, UMF-A, LD-E, CTRL A, UMF-B, UMF-F CTRL B 4:00pm DF, SB

09/14/10 SA
System Check 8:30pm SA
09/14/10 SA
09/15/10
- system check 8:30am SB
- observations 8:30am SB
- Fed BW 9:00am DF
- cleaning 8:30am EY, SP, JA, DF
- WQ probe 10:00am DF
- On tank H_2O-E, the under-water epoxy had fallen out between the tank and screen, revealing a gap. This was fixed so no gap is present 11:00am. SB.
- Fed Bloodworms 11:00 am
- Water Quality Kits for OW and SWI.
- Changed filters - WS 10:00 am.
- Increased turnover rate on H_2O and CTRL systems from 350 L/day to 450 L/day 12:00 pm SB, SA
- changed hose from headtank 9 to metering pumps 1:10 pm SB, SA
- fed bloodworms 2:00 pm SB
- Observations 1:30pm SA
- Labeled bottles for monday's sampling. EY, SA, TT, JB
- Cut filters.
- changed formalin to ethanol 4:00 pm SB
- fed bloodworms 4:30 pm SA
- Fed BW 6:30 pm SA
- Cleaned tanks 7:00 pm SA, JB
- Fed BW 8:00pm SA
- System Check JB 9:05PM

09/16/10 SB
- system check 8:30 am SB
- Fed bloodworms 9:00 am DF
- Clean exposure tanks 8:30 am. DF, JA, SB
- Water Quality - Probe - EY 10:00 am
- Fill head tanks 9:00 am. SB
- Measure and weigh deads 11:00 am DF
- Fed bloodworms 11:15 am SB
- Water Quality (Ammonia, Nitrite) on H_2O + CTRL tanks, 12:30pm SA
- observations 12:30 pm JB
- fed bloodworms 1:15pm SA
- checked to see if circulating pumps were operational. 1:45pm JB

- checked marching pumps to see if they were pumping air 1:45 p.m JB, SA
  - 3 pumps were fired (LALL-B, CTRL-C, and H_2O-B)
- fed bloodworms 3:15pm JB
- Fed BW 5:00pm JB
- observations 6:30 pm JB
- cleaning 6:30 pm JB, SA
- Changed filters 7:15 pm JB, SA
- fed bloodworms 7:30 pm SA
- system check 8:00 pm SA, JB

09/17/10 SB

- System Check 8:30 am SB
- Cleaning 8:30 am JA, SP, DF, EY
- Fed bloodworms 9:00 am DF
- Observations 9:00 am SB
- Fill headtanks 9:00 am SB
- Clamp fell in headtank - removed immediately. 11:30am SB.
- fed ~~@~~ bloodworms @ 11:45 am WS
- Change filters 11:45 am DF
- Disected morts 12:00 PM BT
- Fed bloodworms 1:00 PM BT
- measured nitrite on all systems 12:30 PM JB, SA
- Observations 1:30pm SA
- fed bloodworms 3:00pm JB DGTs deployed BT SB
- changed formalin to ethanol in mortality vials 4:30pm JB
- Fed BW 5:00 pm JB
- took DGT videos 6:00 pm JB
- Fed BW @ 7:00pm JB
- Changed filters 7:30pm JB
- System Check 8:00 p.m

09/17/10 BT

09/18/10 BT

- System check 9:30 AM BT
- Fed bloodworms 10:00 AM BT
- ~~BT~~ Cleaned tanks 11:00 AM BT
- Tanks Cleaning 01:30 PM AV
- Head Tanks filling 12:00 PM AV
- observation 3:00 PM AV

Feed BW at 4:00 pm WS

Feed BW at 6:00pm WS

- feed dry food 6:00 PM AV

18 Sept 2010
observation 6:15PM- AV
Change filters 7:00 PM AV, WS
Cleaning 7:30 PM AV, WS
Fed Bw @ 8:00pm WS
Fed Bw @ 7:50pm WS
September 18, 2010 BT
September 19, 2010 BT
• System Check 9:30 AM BT
• Chiller head tank was ~~x~~ BT empty, Refilled it and re established syphons. 9:30
• Fed blood worms 9:45 AM BT
• Filled head tanks 10:30 AM BT
• Fed blood worms 11:30 AM BT
• Cleaned tanks 12:00 PM BT
• cleaning 1:30 PM AV
• Fed bloodworms 2:00 PM
• observation 2:30 PM AV
• Filled head Tanks AV
• DGTs removed @ 3:30 pm
Peeper removal

Sample ID	Time	Temp (°C) Sediment
CE-D	4:10	16°C
LMF-02-A	4:16	16°C
LALL-D	4:25	15°C
LD-01-A	4:26	16.0°C
LALL-B	4:30	16.0°C
UMF-01-D	4:40	15.5°C
UMF-01-P	4:45	16.1°C
LD-01-B	4:50	15.0°C
CTRL-D	4:50	15.0°C
Ctrl-C	5:05	15.0°C
H_2O-D	5:00	BT 15.1°C
Method Blank	5:15	BT 15.0°C
DE-B	5:15	16.0°C
Ctrl-B	5:25	15.0°C

Feed dry food, Bloodworms 6:00PM AV, WS
Feed Bw @ 8:00 pm WS
Feed Bw @ 10:00 pm WS
Sept 19 2010 / BT

Sept 20, 2010
- fed BW 9:00 AM DF
- cleaning 8:30 AM JA, DF, SP, EY, WS
- observations 8:30 AM SB
- fed BW 11:00 AM JA
- probe 11:00 AM DF
- filled head tanks SB, EY
- change the filters 11:30 am WS
- Head tank #9: bulkhead broke at base and needed to be replaced. 10:00 am. SB. tank was emptied fixed and re-filled - all systems getting water from this head tanks are working normally.
- Water sampling - sampled OW, SWI, PW., bagged and sealed with COC stickers. Done by SB, DF, JA, BT, JD, JB, SA
- SWI duplicate DE-D = ∠MF-02-A SB
- OW duplicate DE-D = ∠MF-02-A SB
- fed ~~B~~ blood worms 6:45 JB
- observations ~~W~~ 8:15 SA
- fed bloodworms 8:30 JB
- system check 8:45 JB, SA

Sept 21, 2010 SB
- System check 8:30 am SB
  - chiller shut off in night due to a siphon malfunction resulting in loss of water.
  - system fixed 9:00 am SB, DV
- Fed blood worms 8:30 am DF
- Cleaning - 8:30 am. DF, JA, SA, JB.
- Packed coolers with ice to ship water samples - 11:00 am SB, EY
- Started take-down - euthenised 10 sturgeon per system at a time. got through 1-40. on all systems.
- Fed blood worms 1:00 pm. EY
- Filled head tanks SB, SA
- Water quality OW and SWI test kits JB, SA, BT, DV, EY.
- Water quality probe EY.
- Fed bloodworms. 6:00 pm.
- System Check. SB.

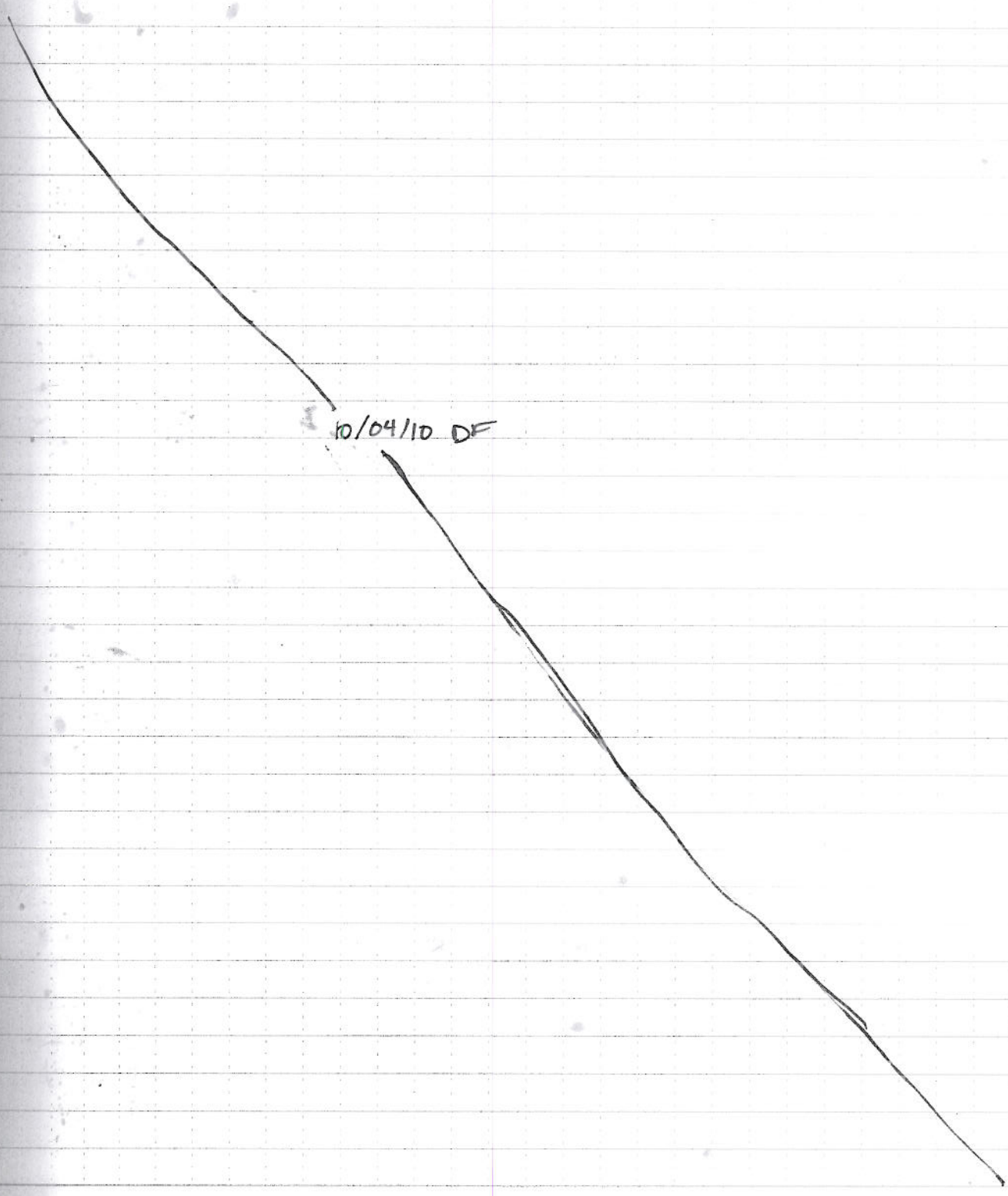
Sept. 22, 2010
- System check 8:30 am - SB - chiller shut off during the night due to loss of circulation - turned back on at 8:30 and is chilling water. SB
- Cleaning - 8:30 am SB, JB, WS, SA, JA, DF
- Fed bloodworms 8:30 am DF
- Processed deads - DF 9:30 am.

Sept. 22 2010
- lost fish down drain from LALL-D 4:40 pm SB
- Euthenized the rest of the sturgeon 10 sturgeon per tank at a time.
- Water Quality - Probe SB 5:00pm
- System Check 5:00pm DV

Sept 23 2010
Sediment Removal

Sample ID	Sediment Depth (inches) Inflow	Middle	Outflow	Comments
DEA	1 3/4	1 3/4	1 1/2	—
GE-D	1 3/4	2	1 3/4	—
LMF-02-A	1 3/4	2	1 1/2	—
UMF-01-D	2	1 3/4	1 3/4	—
LD-D	2	2	1 3/4	—
NP-03-A	1 3/4	2 1/4	2 1/4	—
LALL-D	2	2 1/4	2	—
LMF-02-B	1 5/8	1 3/4	1 3/4	—
LD-B	2	1 7/8	1 3/4	—
LD-A	2	1 3/4	1 1/2	—
LALL-B	1 3/4	1 3/4	1 3/4	—
LALL-C	1 3/4	2	1 3/4	—
UMF-01-C	2	1 3/4	2	—
UMF-01-A	1 3/4	1 3/4	1 3/4	—
CTRL-C	1 1/2	1 3/4	1.5	—
GE-B	2	2	2	—
CTRL-D	1 3/4	1 7/8	1 1/4	—
LD-01-E	2	2	1 1/2	—
GE-C	2	2 1/4	2	—
CTRL-A	1 1/2	1 1/2	1 1/2	—
UMF-01-B	2 1/4	1 3/4	1 3/4	—
LMF-02-D	2	1 1/2	1 7/8	—
NP-03-B	1 3/4	1 3/4	1 1/2	—
GE-A	2	2 1/4	2	—
UMF-01-F	1 3/4	2	1 3/4	—
LALL-E	1 3/4	1 3/4	2	—
LD-01-C	1 1/2	1 1/2	1 3/4	—
LALL-A	2	2	2	—
CTRL-B	2	2	1 1/2	—
DE-C	1 1/2	2	1 1/4	—
LD-01-F	2	2	1 5/8	—

Sample ID	inflow	middle	outflow	Comments
UMF-01-E	2	2	1 3/4	—
LMF-02-C	1 3/4	1 3/4	1 3/4	—
CTAL-E	1 3/4	1 3/4	1 3/4	—
CTRL-F	1 3/4	1 3/4	1 3/4	—
DE-B	1 1/2	1 3/4	1 1/2	—
LALL-E	1 3/4	2	2	—



APPENDIX I-3

BEHAVIORAL OBSERVATION LOG BOOKS

"Write in the Rain"
ALL-WEATHER
UNIVERSAL
No. 374

LCR 2010
Observations
behavior

White Sturgeon Sediment
Toxicity study

"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

INCH

Name _____

Address _____

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Project _____

CONTENTS

PAGE		DATE

This book is printed on "Rite in the Rain" All-Weather Writing Paper - A unique paper created to shed water and enhance the written image. It is widely used throughout the world for recording critical field data in all kinds of weather. For best results, use a pencil or an all-weather pen.

TR July 26, 2010 Sediment Exposure Tank Observations 10:00

Tank ID	Observations
LMF-02-A	-Fish swimming -water a little bit cloudy around bottom, burrowing under rocks and at sides
LD-01-D	-fish burrowing under rocks and at sides
GE-D	-fish burrowing under rocks and into corners
DE-A	-fish swimming around bottom and burrowing at corners/under rocks
UMF-01-D	-fish burrowing at corners and under rocks
LALL-D	-water fairly cloudy -fish swimming on bottom and burrowing at corners and at rocks
NP-03-A	-fish burrowing at rocks and corners
LMF-02-B	-fish swimming around bottom -some burrowing at corners and rocks
LALL-C	-fish almost all burrowing at rocks
LD-01-B	-fish mainly swimming around bottom -some burrowing at corners+rocks
UMF-01-C	-fish burrowing at rocks+corners and swimming on bottom
Ctrl-C	-fish burrowing at rocks + corners
LALL-B	-fish swimming on bottom and burrowing at rocks+corners
Ctrl-D	-~½ fish swimming around bottom and ½ burrowing at rocks+corners
H_2O-B	-Some fish swimming around bottom, most swimming at/into rocks

Scale: 1 square = 1

July 26, 2010 Observations Continued

Tank ID	Observations
Ge-C	-fish mainly burrowing under rocks, some swimming around bottom
Ge-A	-fish mostly burrowing in corners, some under rocks, some swimming along bottom
H_2O-A	-swimming along bottom and into corners/rocks
NP-03-B	-fish mostly swimming along bottom or into corners, a few burrowing under rocks
Ge-B	-fish burrowing under rock and at corners
LALL-F	-fish mostly burrowing at rocks, some in corners, some swimming on bottom
LMF-02-D	-water slightly cloudy -fish all swimming along bottom -rocks seem to have sunken into substrate slightly
LD-01-A	-fish swimming on bottom + burrowing at rocks
H_2O-C	-fish swimming at rocks + into side ports
UMF-01-A	-fish burrowing at rocks + corners
LD-01-E	-fish burrowing at rocks + swimming on bottom
Ctrl-A	-fish swimming along bottom and burrowing at rocks + corners
UMF-01-B	-fish burrowing at corners + rocks and swimming on bottom
UMF-01-F	-Tank very cloudy -fish burrowing at rocks + corners

Scale: 1 square = 2

July 26, 2010 Observations Continued

Tank ID	Observations
Ctrl-B	-fish mostly swimming along bottom, some burrowing at corners and rocks
LD-01-C	-fish swimming on bottom and burrowing at rocks and corners
DE-C	-fish swimming along bottom, burrowing at corners + rocks, a few swimming along top
Ctrl-F	-fish swimming at bottom and burrowing at rocks + corners
DE-B	- ~½ fish swimming along bottom, a few burrowing in 1 corner, the rest at 1 rock
H_2O-E	-fish swimming along bottom and at side ports
Ctrl-E	-fish burrowing at corners + rocks, some swimming along bottom
LALL-E	-fish burrowing at rocks + corners -tank fairly cloudy
H_2O-D	-fish swimming along bottom and at rocks + side ports
LMF-02-C	-fish burrowing at corners + rocks, some swimming along bottom
LALL-A	-fish burrowing mostly at rocks, some at corners
UMF-01-E	-fish burrowing mostly in corners, some at rocks
LD-01-F	-fish burrowing at corners and rocks, some swimming along bottom

TR July 26, 2010 Video Taken of all systems

Scale: 1 square = 3

TR July 27, 2010 Sediment Exposure Tank Observations

Tank ID	Observations 14:00
LMF-02-A	-Fish schooling in corners, hiding at rocks and swimming along bottom individually
LD-01-D	-Fish schooling at corners and rocks -yolk sacs present
Ge-D	-30% schooling in corners, 65% schooling at rocks, 5% swimming on bottom -yolk sacs present
DE-A	-80% schooling at rocks, 20% schooling at corners -yolk sacs present
UMF-01-D	-25% schooling at corners, 75% schooling at rocks -yolk sacs present
Note:	Yolk sacs present in all tanks unless otherwise stated
LALL-D	-80% schooling at rocks, 20% schooling at corners
NP-03-A	-60% schooling at rocks, 40% schooling at corners
LMF02-B	-80% schooling at rocks, 20% schooling at corners
LALL-C	-90% schooling at rocks, 5% schooling at corners, 5% swimming individually along bottom
LD-01-B	-90% schooling at rocks, 10% schooling at corner
UMF-01-C	-60% schooling at rocks, 30% schooling at corners, 10% swimming along bottom
Ctrl-C	-90% schooling at rocks, 10% schooling at corners
LALL-B	-80% schooling at rocks, 18% schooling at corners, 2 swimming along end screen

Scale: 1 square = 4

July 27, 2010 observations Continued 2

Tank ID	Observations
Ctrl-D	50% schooling at corners, 40% schooling at rocks 10% swimming individually on bottom
H_2O-B	-30% schooling at corners, 10% ~~schooling~~ hiding at rocks, 30% schooling at side ports, 30% swimming indiv. on bottom
Ge-C	-80% schooling at rocks, 10% schooling at corners, 10% swimming individually on bottom
Ge-A	-50% schooling at rocks, 50% schooling at corners
H_2O-A	-80% schooling at rocks, 10% schooling at corners, 10% schooling at side ports
NP-03-B	-50% schooling at rocks, 49% schooling at corners 1 swimming along water surface
Ge-B	-90% schooling at rocks, 9% schooling in corners 1 swimming along front screen
LALL-F	-60% schooling at rocks, 40% schooling in corners
LMF-02-D	-30% schooling in corners, 70% swimming indiv. along bottom
LD-01-A	-80% schooling at rocks, 19% schooling in corners, 1 swimming on back in a circle at bottom
H_2O-C	-60% schooling at rocks, 20% schooling at side ports 20% swimming individually on bottom
UMF-01-A	-70% schooling in corners, 30% schooling at rocks
LD-01-E	-90% schooling at rocks, 10% schooling in corners
Ctrl-A	-70% schooling at rocks, 30% schooling in corners
UMF-01-B	-85% schooling at rocks, 15% schooling in corners
UMF-01-F	-70% schooling at rocks, 30% schooling in corners

Scale: 1 square = 5

July 27, 2010 Observations Continued

Tank ID	Observations
Ctrl-B	-70% schooling at rocks, 20% schooling in corners, 10% swimming individually on bottom
LD-01-C	-80% schooling at rocks, 10% schooling in corners, 10% swimming individually along bottom
DE-C	-50% schooling in corners, 40% schooling at rocks, 10% swimming individually on bottom
Ctrl-F	-95% schooling at rocks, 10% schooling in corners
DE-B	-50% schooling at rocks, 20% schooling in corners, 30% swimming on bottom individually
H_2O-E	-40% swimming on bottom individually, 30% schooling at rocks, 20% schooling at side ports, 10% schooling in corners
Ctrl-E	-45% schooling at corners, 45% schooling at rocks, 10% swimming individually along bottom
LALL-E	-80% schooling at rocks, 20% schooling at corners
H_2O-D	-55% schooling at rocks, 5% schooling at side ports, 40% swimming on bottom indiv.
LMF-02-C	-70% schooling in corners, 25% schooling at rocks, 5% swimming individually at bottom
LALL-A	-70% schooling at rocks, 30% schooling in corners
UMF-01-E	-65% schooling in corners, 35% schooling at rocks
LD-01-F	-50% schooling in corners, 50% schooling at rocks

→ All tanks appeared to have clear water today

- Video taken of all tanks

TR July 27, 2010

Scale: 1 square = 6

TT July 28, 2010 Sediment Exposure Tank Observations 15:00

Tank ID	Observations
DE-A	90% schooling at rocks, 1 swimming individually at bottom, 1 swimming at corner
Ctrl-D	5% swimming individually at bottom, 5% swimming at corners, 90% schooling at rocks
LD-01-D	10% swimming at corners, 90% schooling at rocks
UMF-02-A	5% swimming at corners, 10% swimming individually at bottom, 85% schooling at rocks
UMF-01-D	10% swimming at corners, 1 swimming individually at top, 5% swimming individually at bottom, 85% schooling at rocks
LALL-D	5% schooling at corner, 95% schooling at rocks
NSP-03-A	30% schooling at corners, 70% schooling at rocks
LMF-02-B	1 swimming individually at top, 10% swimming individually at bottom, 5% schooling at corners, 85% schooling at rocks
LALL-C	5% schooling at corners, 95% schooling at rocks
LD-01-B	1 swimming individually at bottom, 10% schooling at corners, 90% schooling at rocks
UMF-01-C	1 swimming in circles at bottom, 15% schooling at corners, 10% swimming individually at bottom, 75% schooling at rocks
CTRL-C	1 swimming on back around Tanks, 90% schooling at rocks, 10% swimming individually at bottom
LALL-B	5% swimming at end screen, 5% schooling at

Scale: 1 square = 7

Tank ID	Observations continued
LALL-B	continued... corners, 90% schooling at rocks
CTRL-D	5% swimming at screens 5% swimming individually at bottom, 90% schooling at rocks
H_2O-B	Similiar as written on July 27, 2010
Ge-C	10% swimming individually at bottom, 90% schooling at rocks
Ge-A	25% schooling at corners, 75% schooling at rocks
H_2O-A	5% Swimming at side ports, 40% Swimming individually at bottom, 55% schooling at rocks
NR-03-B	1 swimming on side at bottom, 15% swimming individually at bottom, 15% schooling at corners, 70% schooling at rocks
Ge-B	5% swimming at corners, 95% schooling at rocks
LALL-F	40% schooling at corners, 5% swimming individually at bottom, 1 swimming sideways, 55% schooling at rocks
LMF-02-D	5% schooling at corners, 95% swimming individually at bottom
LD-01-F	5% swimming individually at bottom, 35% schooling at corners, 65% schooling at rocks

Scale: 1 square = 8

Tank ID	Observations
LMF-01-E	90% schooling at corners, 10% schooling at rocks
LALL-A	30% schooling at corners, 5% swimming individually at bottom, 65% schooling at rocks
LMF-02-D	2 swimming on backside in circles, 5% schooling at rocks, 10% swimming individually at bottom, 85% schooling at corners
H_2O-D	5% swimming at ports, 10% swimming individually 85% schooling at rocks
LALL-E	40% schooling at corners, 60% schooling at rocks
CTRL-E	90% schooling at rocks 2 swimming at water surface, 2% swimming individually at bottom 8% schooling at corners
H_2O-E	5% swimming at ports, 15% swimming individually at bottom, 80% schooling at rocks 20% swimming individually at bottom, 10%
DE-B	schooling at corners, 70% schooling at rocks
CTRL-F	10% schooling at corners, 90% schooling at rocks
DE-C	10% swimming at corners, 1 swimming in circles, 20% swimming individually at bottom 70% schooling at rocks
LD-01-C	1 swimming on backside in circles, 10% swimming individually at bottom, 10% schooling at corners, 80% schooling at rocks

Scale: 1 square = 9

Tank ID	Observations
CTRL-B	5% swimming individually, 10% schooling at corners, 85% schooling at rocks
UMF-01-F	80% schooling at corners, 5% swimming individually at bottom, 15% schooling at rocks
UMF-01-B	100% schooling at corners, 5% swimming individually at bottom, 1 swimming in "barrel rolls", 85% schooling at rocks
CTRL-A	95% schooling at rocks, 5% schooling at corners
LD-01-E	5% schooling at corners, 95% schooling at rocks
UMF-01-A	90% schooling at corners, 5% schooling at rocks, 5% swimming individually at bottom
H_2O-C	5% swimming at ports, 5% swimming at corners, 30% swimming individually at bottom, 60% schooling at rocks
LD-01-A	5% swimming individually at bottom, 95% schooling at rocks
Note:	All water in Tanks appear to be clear.

FT July 28, 2010

TR July 29, 2010

Scale: 1 square = 10

July 29, 2010 Sediment Exposure Tank Observations

Time = 9:00

Tank ID	Observations
DE-A	-80% schooling at rocks, 20% swimming indiv. on bottom
Ge-D	-90% schooling at rocks, 10% skimming surface
LD-01-D	-70% schooling at rocks, 30% schooling at corners
Note:	All fish have yolk sacs unless otherwise noted
LMF-02-A	-70% schooling at rocks, 30% swimming indiv. on bottom
UMF-01-D	-90% schooling at rocks, 5% schooling in corners, 5% swimming individually on bottom
LALL-D	-90% schooling at rocks, 10% schooling in corners
NP-03-A	-80% schooling at rocks, 10% schooling in corners, 10% swimming on bottom individually
LMF-02-B	-70% schooling at rocks, 10% schooling in corners, 20% swimming on bottom individually
LALL-C	-All fish schooling at rocks
LD-01-B	-80% schooling at rocks, 20% schooling in corners
UMF-01-C	-90% schooling at rocks, 9% schooling in corners, 1 swimming on back in circles
Ctrl-C	-90% schooling at rocks, 10% swimming indiv. on bottom
LALL-B	-95% schooling at rocks, 5% schooling in corners
Ctrl-D	-60% schooling at rocks, 20% schooling in corners, 20% swimming individually on bottom
H_2O-B	-40% swimming individually on bottom, 20% schooling at rocks, 20% schooling in corners, 20% schooling at side ports
Ge-C	-90% schooling at rocks, 10% swimming indiv. on bottom
Ge-A	-80% schooling at rocks, 20% schooling in corners

Scale: 1 square = 4

July 29, 2010 Observations Contd.

Tank ID	Observations
H_2O-A	50% schooling at rocks, 50% swimming indiv. on bottom
NP-03-B	70% schooling at rocks, 20% schooling in corners, 10% swimming individually on bottom
Ge-B	-All fish schooling at rocks
LALL-F	-80% schooling at rocks 20% schooling in corners
LMF-02-D	-All fish swimming individually on bottom
LD-01-A	-All fish schooling at rocks
H_2O-C	-70% schooling at rocks, 10% schooling at side ports, 20% swimming individually on bottom
UMF-01-A	-80% schooling in corners, 10% schooling at rocks, 10% ~~in swimming~~ individually on bottom
LD-01-E	-85% schooling at rocks, 15% swimming indiv. on bottom
Ctrl-A	-90% schooling at rocks, 10% schooling in corners
UMF-01-B	-60% schooling at rocks, 19% schooling in corners, 20% swimming indiv. on bottom, one swimming in circles halfway up from bottom
	-fish in this tank seem to be swimming at faster pace
UMF-01-F	-70% schooling in corners, 30% schooling at rocks
Ctrl-B	-80% schooling at rocks, 20% schooling in corners
LD-01-C	-90% schooling at rocks, 9% schooling in corners, 1 swimming in a circle on his back at the bottom
DE-C	-80% schooling at rocks, 10% schooling in corners, 10% swimming indiv. on bottom
Ctrl-F	-95% schooling at rocks, 5% schooling in corners

Scale: 1 square = 12

July 29 Observations Contd.

Tank ID	Observations
DE-B	-80% schooling at rocks, 20% swimming indiv. on bottom
H_2O-E	-70% schooling at rocks, 30% swimming indiv. on bottom
Ctrl-E	-80% schooling at rocks, 15% schooling in corners, 5% swimming individually on bottom
LALL-E	-70% schooling at rocks, 30% schooling in corners
H_2O-D	-80% schooling at rocks, 20% swimming indiv. on bottom
LMF-02-C	-70% schooling in corners, 10% schooling at rocks, 20% swimming individually on bottom
LALL-A	-85% schooling at rocks, 15% schooling in corners
UMF-01-E	-60% schooling at rocks, 40% schooling in corners
LD-01-F	-75% schooling at rocks, 25% schooling in corners

All Tanks appeared to have clear water

Video of tanks taken today

Observation finished at 9:43

TR July 29, 2010

July 29, 2010 13:30 Sediment Exposure Tank Observations

Tank ID	Observations
DEA	-Same as 9:00
Ge-D	-Same as 9:00
LD-01-D	-85% schooling at rocks, 15% schooling in corners
LMF-02-A	-same as 9:00
UMF-01-D	-80% schooling at rocks, 15% swimming indiv. on bottom, 5% schooling in corners
LALL-D	-same as 9:00

Scale: 1 square = 13

07/29/10 13:30 Observations Continued

Tank ID	Observations
NP-03-A	-80% schooling at rocks, 20% schooling in corners
LMF-02-B	-Same as 9:00
LALL-C	-Same as 9:00
LD-01-B	-70% schooling at rocks, 20% schooling in corners, 10% swimming individually on bottom
UMF-01-C	-same as 9:00
Ctrl-C	-same as 9:00
LALL-B	-same as 9:00
Ctrl-D	-70% schooling at rocks, 30% schooling in corners
H_2O-B	-50% schooling at rocks, 50% swimming indiv. on bottom
GE-C	-Same as 9:00
GE-A	-Same as 9:00
H_2O-A	-Same as 9:00
NP-03-B	-80% schooling at rocks, 20% schooling in corners
GE-B	-Same as 9:00
LALL-F	-Same as 9:00
LMF-02-D	-same as 9:00
LD-01-A	-Same as 9:00
H_2O-C	-same as 9:00
UMF-01-A	-same as 9:00
LD-01-E	-same as 9:00
Ctrl-A	-same as 9:00
UMF-01-B	-same as 9:00
UMF-01-F	-same as 9:00

Scale: 1 square = 14

07/29/10 13:30 Observations Continued

Tank ID	Observations
Ctrl-B	-Same as 9:00
LD-01-C	-Same as 9:00
DE-C	-Same as 9:00
Ctrl-F	-Same as 9:00
DE-B	-Same as 9:00
H_2O-E	-Same as 9:00
Ctrl-E	-Same as 9:00
LALL-E	-Same as 9:00
H_2O-D	-Same as 9:00
LMF-02-C	-Same as 9:00
LALL-A	-Same as 9:00
UMF-01-E	-50% schooling at rocks, 50% schooling in corners
LD-01-F	-85% schooling at rocks, 15% schooling in corners

Observation finished at 14:09
TR July 29, 2010

07/29/10 20:00 observations

Tank ID	Observations
DEA	-Same as 9:00
GE-D	Same as 9:00
LD-01-D	Same as 9:00
LMF-02-A	Same as 9:00, 1 fish circling on bottom
UMF-01-D	Same as 9:00
LALL-D	Same as 9:00
NP-03-A	75% schooling rocks, 20% corners; 5% swimming

Scale: 1 square = 15

LMF-02-B	Same as 9:00
LALL-C	Same as 9:00
LD-01-B	Same as 9:00
UMF-01-C	80% schooling rocks, 15% corners, 5% circling
Ctrl-C	Same as 9:00; 2 fish circling
LALL-B	Same as 9:06
Ctrl-D	Same as 9.00
H2O-B	Same as 9:00
GE-C	95% Schooling rocks, 5% corners
GE-A	80% schooling rocks, 10% corners
H2O-A	Same as 9:00
NP-03-B	Same as 9:00
GE-B	95% schooling at rocks; 10% at corners
LALL-E	75% Schooling rocks; 20% at corners
	~~10%~~ DV WE 5% Swimming in H2O column
LMF-02-D	85% Swimming individually on bottom, 10% in water column, 5% in rocks
LD-01-A	85% schooling @ rocks, 10% in corners
	5% swimming in water column
H2O-C	50% schooling @ rocks, 20% in side ports; 30% swimming @ bottom
UMF-01-A	Same as 9:06
LD-01-E	80% schooling in rocks; 15% in corners; 5% swimming in H2O column
Ctrl-A	Same as 9:00
UMF-01-B	50% schooling @ rocks; 20% in corners

Scale: 1 square = 16

25% swimming @ bottom; 5% circling in water column

UMF-01-F	Same as 9:00
Ctrl-B	85% Schooling @ rocks, 5% in corners
	10% swimming @ bottom, 5% circling on bottom
LD-01-C	85% schooling @ rocks; 14% in corners; 1 fish circling @ bottom
DE-C	Same as 9:00
Ctrl-F	85% schooling @ rocks; 10% in corners
	5% swimming in H2O ~~column~~ DV WE column
DE-B	80% schooling @ rocks; 15% swimming in H2O column; 5% in corners
H2O-E	Same as 9:00; 1 fish circling in H2O column
Ctrl-E	75% schooling @ rocks; 15% in corners; 10% swimming in H2O column
LALL-E	Same as 9:00
H2O-D	Same as 9:00
LMF-02-C	Same as 9:00
LALL-A	Same as 9:06
UMF-01-E	60% schooling @ rocks; 30% in corners; 10% swimming in H2O column
LD-01-F	Same as 9:00
	07/29/10 DV

07/29/10 DV

Scale: 1 square = 17

TR July 30, 2010 08:40 Sediment Exposure Tank observations

Tank ID	Observations
DE-A	90% schooling at rocks, 10% swimming indiv. on bottom
Ctrl-D	~80% schooling at rocks, 10% schooling in corners 10% swimming in water column
LD-01-D	~80% schooling at rocks, 20% swimming in water column
LMF-02-A	~70% schooling at rocks, 30% swimming in water column
UMF-01-D	~85% schooling at rocks, 15% swimming in water column
LALL-D	~All fish schooling at rocks
NP-03-A	~90% schooling at rocks, 10% swimming in H_2O column
LMF-02-B	~20% schooling at rocks, 5% schooling in corners, 75% swimming individually on bottom
LALL-C	~80% schooling at rocks, 20% schooling in corners
LD-01-B	~70% schooling at rocks, 20% schooling in corners 10% swimming in water column
UMF-01-C	~80% schooling at rocks, 20% swimming in water column
Ctrl-C	~90% schooling at rocks, 10% swimming in water column
LALL-B	~90% schooling at rocks, 10% schooling in corners
Ctrl-D	~70% schooling at rocks, 30% schooling in corners
H_2O-B	~50% schooling at rocks, 50% swimming indiv. on bottom
Ctrl-C	~90% schooling at rocks, 10% swimming indiv. on bottom
Ctrl-A	~70% schooling at rocks, 30% schooling in corners
H_2O-A	~80% schooling at rocks, 20% swimming indiv. on bottom
NP-03-B	~90% schooling at rocks, 10% swimming in water column
Ctrl-B	~90% schooling at rocks, 10% swimming in water column
LALL-F	~80% schooling at rocks, 20% swimming in water column

Scale: 1 square = 18

July 30, 2010 0840 Observations Continued

Tank ID	Observations
LMF-02-D	~90% swimming ind N. or bottom, 10% swimming in H_2O column
LD-01-A	~90% schooling at rocks, 10% swimming in water column
H_2O-C	~70% schooling at rocks, 10% schooling at side ports, 20% swimming in water column
UMF-01-A	~50% schooling at rocks, 50% schooling in corners
LD-01-E	~90% schooling at rocks, 10% swimming in water column
Ctrl-A	~60% schooling at rocks, 20% schooling in corners, 20% swimming in water column
UMF-01-B	~70% schooling at rocks, 15% schooling in corners, 15% swimming in water column
UMF-01-F	~60% schooling at rocks, 30% schooling in corners, 10% swimming in water column
Ctrl-B	~70% schooling at rocks, 20% schooling in corners 10% swimming in water column
LD-01-C	~80% schooling at rocks, 20% schooling in corners
DE-C	~70% schooling at rocks, 10% schooling in corners, 20% swimming individually on bottom
Ctrl-F	~90% schooling at rocks, 10% swimming in water column
DE-B	~80% schooling at rocks, 10% schooling in corners, 10% swimming in water column
H_2O-E	~70% schooling at rocks, 10% schooling at side ports, 15% swimming indiv. on bottom, 5% swimming in H_2O column
Ctrl-E	~80% schooling at rocks, 10% schooling in corners, 10% swimming in water column

Scale: 1 square = 19

July 30, 2010 08:40 Observations Continued

Tank ID	Observations
LALL-E	-70% schooling at rocks, 30% schooling in corners
H_2O-D	-90% schooling at rocks, 10% swimming in water column
LMF-02-C	-80% schooling in corners, 10% schooling at rocks, 10% swimming in water column
LALL-A	-75% schooling at rocks, 25% schooling in corners
UMF-01-E	-70% schooling at rocks, 30% schooling in corners
LD-01-F	-70% schooling at rocks, 20% schooling in corners, 10% swimming in water column

Observation finished at 09:55

TR July 30, 2010

July 30, 2010 4:30pm Observations

Tank ID	Obs
DE-A	5% swimming at bottom, 95% schooling at rocks
Ge-D	5% swimming at corners, 5% swimming at bottom, 90% schooling at rocks
LD-01-D	5% swimming at bottom, 15% schooling at corners, 80% schooling at rocks
UMF-02-A	5% swimming at various depths, 10% schooling at corners, 85% schooling at rocks
UMF-01-D	5% swimming at various depths, 15% schooling at corners, 80% schooling at rocks

Tank ID	Obs
LALL-D	5% swimming at bottom, 5% schooling at corners 90% schooling at rocks
NRP-03-A	5% swimming near Top, 5% swimming at corners, 20% schooling at corners, 70% schooling at rocks
LMF-02-B	5% swimming at top, 25% swimming at bottom 5% schooling at corners, 65% schooling at rocks
LALL-C	20% schooling at corners, 80% schooling at rocks
LD-01-B	2% swimming at Top, 5% swimming at bottom, 10% schooling at corners, 83% schooling at rocks
UMF-01-C	5% swimming at various depths, 95% schooling at rocks
CTRL-C	5% swimming at bottom, 95% schooling at rocks
LALL-B	2 swimming at Top, 10% swimming at bottom, 98% schooling at rocks
CTRL-D	2 swimming at Top, 5% swimming at corners, 10% schooling at corners, 85% schooling at rocks
H_2O-B	5% swimming at parts, 30% swimming at bottom, 65% schooling at rocks
Ge-C	5% swimming at various depths, 5% schooling at corners, 90% schooling at rocks
Ge-A	20% schooling at corners, 5% swimming at top 5% swimming at bottom, 70% schooling at rocks

Tank ID	Obs
H_2O-A	10% swimming at bottom, 2% swimming in parts, 1% swimming at top, 87% schooling at rocks
NR03-B	5% swimming at various depths, 40% schooling at corners, 55% schooling at rocks
Ge-B	3% swimming at Top, 2% swimming at bottom, 30% schooling at corners, 65% schooling at rocks
LALL-F	5% swimming at various depths, 5% swimming at corners (higher elevation), 5% swimming at bottom, 5% schooling at corners, 80% schooling at rocks
LMF-02-D	10% swimming at top, 30% schooling at corners, 60% swimming at bottom
LD-01-F	5% swimming at various depths, 95% schooling in corners,
UMF-01-E	10% swimming at bottom, 40% schooling at rocks, 50% schooling in corners
LALL-A	20% schooling in corners, 80% schooling at rocks, 1 swimming at middle depth
LMF-02-C	1 swimming in circles at bottom, 5% swimming at Top 20% swimming at bottom, 5% schooling at rocks, 70% schooling at corners
H_2O-D	20% schooling at rocks, 5% swimming at Top, 1 swimming in circles at bottom, 30% schooling in corners, 30% swimming at bottom, 15% schooling at rocks

Scale: 1 square = 22

Tank ID	Obs
LALL-E	5% swimming at various depths, 1% swimming at bottom, 40% schooling at rocks, 55% schooling at corners
CTRL-E	5% swimming at bottom, 30% schooling at corners, 65% schooling at rocks
H_2O-E	1 swimming on its side at bottom in circles, 5% swimming at corners, 40% swimming at bottom, 55% schooling at rocks
DE-B	1 swimming at top, 15% swimming at bottom, 5% swimming at various depths,, 80% schooling at rocks
CTRL-F	2 swimming at Top, 1 swimming at various depths, 20% schooling at corners, 80% schooling at rocks
DE-C	2 swimming at middle depth, 5% swimming at corners, 15% swimming at bottom 80% schooling at rocks
LD-01-C	1 swimming at Top, 5% swimming at various depths, 5% swimming at bottom, 20% schooling at corners, 70% schooling at rocks
CTRL-B	10% swimming at corners, 90% schooling at rocks, 1 swimming in circles at bottom
UMF-01-F	5% swimming at various depths, 70% schooling at corners, 25% schooling at rocks, 2 swimming at Top

Scale: 1 square = 23

Tank ID	Obs
UMF-01-B	2 swimming at various depths, 10% swimming at bottom, 5% schooling at corners, 85% schooling at rocks
CTRL-A	15% schooling at corners, 1 swimming at Top, 5% swimming at bottom, 80% schooling at rocks
LD-01-E	5% swimming at various depths, 85% schooling at rocks
UMF-01-A	5% swimming at various depths, 10% schooling at rocks, 85% schooling at corners
H_2O-C	5% swimming at corners, 5% schooling at ports, 50% schooling at rocks, 40% swimming at bottom
LD-01-A	1 swimming at Top, 5% swimming at various depths, 5% schooling at corners, 5% swimming at bottom, 85% schooling at rocks

Observation finished at 5:30pm TT

July 30, 2010

July 30, 2010 Observations at 6:30pm

Tank ID	Obs
PE-A	Same at 4:30pm 07/30/10
GE-D	5% swimming at various depths, 5% schooling at corners, 90% schooling at rocks

Tank ID	Obs
LD-01-D	Same as 4:30pm 07/30/10
UMF-02-A	Same as 4:30pm 07/30/10, except 2 swimming at top
UMF-01-D	5% swimming at bottom, 10% schooling at corners, 85% schooling at rocks
LALL-D	5% schooling at corners, 95% schooling at rocks
NP-03-A	10% swimming at bottom, 10% schooling at corners 80% schooling at rocks
UMF-02-B	15% swimming at bottom / near middle depth, 20% schooling at corners, 65% schooling at rocks
LALL-C	Same as 4:30pm 07/30/10, except 1 swimming at bottom
LD-01-B	5% swimming at bottom, 10% schooling at corners, 85% schooling at rocks
UMF-01-C	2 swimming in circles at bottom, 98% schooling at rocks
CTRL-C	1 swimming at top, 99% schooling at rocks
LALL-B	5% swimming at top, 5% swimming at various depths, 5% schooling at corners 85% schooling at rocks
CTRL-D	3 swimming at top at corners, 15% schooling at corners, 85% schooling at rocks
H_2O-B	5% swimming at corners, 5% swimming at various depths, 40% schooling at rocks, 5% schooling at ports, 45% swimming at bottom

Tank ID	Obs
Ge-C	5% schooling at corners, 5% swimming at bottom, 90% schooling at rocks
Ge-A	Same as 4:30pm 07/30/10
H_2O-A	Same as 4:30pm 07/30/10
NP-03-B	5% swimming at bottom, 20% schooling at rocks, 75% schooling at rocks
Ge-B	Same as 4:30 pm 07/30/10
LALL-F	5% schooling at corners, 5% swimming at various depths, 10% swimming at bottom, 80% schooling at rocks
LMF-02-D	10% swimming at top, 20% swimming at bottom, 70% schooling at rocks
LD-01-F	5% swimming at various depths, 95% schooling in corners
UMF-01-E	1 swimming at top 1 swimming at bottom 50% schooling at rocks, 50% schooling at corners
UALL-A	5% swimming at bottom, 30% schooling at corners, 65% schooling at rocks
LMF-02-E	Same as 4:30pm 07/30/10 -> 1 still swimming in circles
H_2O-D	5% swimming at top, 1 swimming in circles at bottom, 65% schooling at rocks, 30% swimming at bottom
UALL-E	5% swimming at bottom, 20% schooling at corners, 75% schooling at rocks

Scale: 1 square = 26

Tank ID	Obs
CTRL-E	Same as 4:30 pm 07/30/10
H_2O-E	Same as 4:30pm 07/30/10, 1 still swimming on its side in circles
DE-B	Same as 4:30pm 07/30/10
CTRL-F	1 swimming at top, 5% swimming at bottom, 10% schooling at corners, 85% schooling at rocks
DE-C	1 swimming at middle depth, 5% swimming at bottom, 20% schooling at corners, 75% schooling at rocks
LD-01-C	5% swimming at top, 5% swimming at various depths, 1 swimming on its backside in circles at bottom. 15% swimming at bottom, 10% schooling at corners, 65% schooling at rocks
CTRL-B	10% swimming at top near corners, 1 swimming on backside in circles at bottom, 10% schooling at corners, 10% swimming at bottom, 70% schooling at rocks
UMF-01-F	10% swimming at top, 5% swimming at various depths, 15% swimming at bottom 30% schooling at rocks, 40% schooling at corners
UMF-01-B	10% swimming at bottom, 10% schooling at corners, 80% schooling at rocks, 1 swimming at top

Scale: 1 square = 27

Tank ID	Obs
CTRL-A	Same as 4:30pm 07/30/10
LD-01-E	5% swimming at various depths, 3 swimming at top, ~~8~~95% seen schooling at rocks
UMF-01-A	10% schooling at rocks, 10% swimming at top, 10% swimming at bottom, 70% schooling at corners
H_2O-E	5% schooling at corners, 5% swimming at top, 5% swimming at ports, 20% swimming at bottom, 65% schooling at rocks
LD-01-A	5% swimming at various depths, 5%, 10% swimming at bottom, 80% schooling at rocks

Observations finished at 7:30pm

TT July 30, 2010

July 31, 2010 SB Sediment exposure tank observations

Tank ID	Observations 10:00 AM
DE-A	10% swimming at bottom, 2 swimming at various depths, 90% schooling at rocks.
GE-D	15% swimming at various depths, 5% swimming at bottom, 80% schooling at rocks.
LD-01-D	5% swimming on bottom, 95% schooling at rocks
LMF-02-A	5% swimming on bottom, 95% schooling at rocks
UMF-01-D	3% swimming at various depths, 5% swimming on bottom, 92% schooling at rocks and corners

Tank ID	Observations
LALL-D	2% swimming at the bottom 98% schooling at rocks and corners.
NP-03-A	10% swimming at various depths, 30% swimming at bottom, 60% schooling at rocks and corners
LMF-02-B	1 swimming in circles, 5% swimming at various depths, 3% swimming on bottom, 92% schooling at rocks and corners.
LALL-C	2% swimming at various depths 2% swimming on bottom 96% schooling on rocks and corners.
LD-01-B	2 swimming at various depths, 3 swimming on bottom, 95% schooling at rocks + corners
UMF-01-C	1 swimming in circles, 5% swimming at various depths, 5% swimming on bottom 90% schooling at rocks and corners.
CTRL-C	2 swimming in circles, 5% swimming at various depths, 5% swimming on bottom, 90% schooling at rocks.
LALL-B	15% swimming at various depths. 5% swimming on bottom 80% schooling at rocks and corners.
CTRL-D	5% swimming on bottom, 5% swimming at various depths, 90% schooling at rocks and corners
H_2O-B	5% swimming at various depths, 10% swimming on bottom, 85% schooling at rocks.

Tank ID	Observations
GE-C	10% swimming at various depths, 15% swimming on bottom 75% schooling at rocks and corners
GE-A	1 swimming at various depths, 15% swimming on the bottom, 85% schooling at rocks + corners
H_2O-A	3 swimming at various depths, 5% swimming on bottom, 95%, schooling at rocks
NP-03-B	5% swimming at various depths, 1 swimming in circles, 2% swimming on bottom, 93% schooling at rocks.
GE-B	5% swimming on bottom, 5% at various depths, 90%, schooling at rocks.
LALL-F	1 swimming barrel-rolls, 5% swimming at various depths, 5% swimming on bottom. 90% schooling at rocks + corners.
LMF-02-D	10% swimming at various depths, 25% schooling at rocks + corners, 65% swimming on bottom
LD-01-A	5% swimming on bottom, 5% swimming at various depths, 90% schooling at rocks,
H_2O-C	5% swimming at various depths, 15% swimming on bottom, 80% schooling at rocks
UMF-01-A	10% swimming at various depths 5% swimming on bottom, 85% schooling on rocks and screens
LD-01-E	5% swimming at various depths, 5% swimming on the bottom, 90% schooling around rocks and screens.

Scale: 1 square = 30

Tank ID	Observations
Ctrl-A	5% swimming at various depths, 5% swimming on bottom, 90% schooling on rocks and corners. 1 doing barrel rolls
UMF-01-F	5% swimming at various depths, 10% swimming on bottom, 85% schooling on rocks + screens
Ctrl-B	10% swimming at top, 5% swimming on bottom, 85% schooling on rocks
LD-01-C	5% swimming at various depths, 1 swimming in circles, 3% swimming on bottom, 92% schooling on rocks and screen corners.
DE-C	10% swimming on bottom, 1 swimming at various depths, 90% schooling on rocks.
Ctrl-F	5 behind inflow screen, 10% swimming at various depths, 5% swimming on bottom, 85% schooling at rocks.
DE-B	25% swimming on bottom, 3% swimming at various depths, 70% schooling on rocks + screens.
H_2O-E	1 swimming in circles, 7% swimming on bottom, 3% swimming at various depths, 90% schooling at rocks and screens.
Ctrl-E	10% swimming on bottom, 5% swimming at various depths, 85% schooling at rocks, and corners.
LALL-E	5% swimming at various depths, 15% swimming on the bottom, 80% schooling around rocks and corners.

Scale: 1 square = 31

Tank ID	Observations
H_2O D	5%. swimming at various depths, 5%. swimming on the bottom. 1 swimming - circles, 90%. schooling on rocks and corners.
LMF-02-C	5%. swimming at various depths, 20%. swimming on bottom, 75% schooling in corners and on rocks.
LALL-A	2%. swimming at various depths, 7%. swimming on the bottom, 91%. schooling at corners + rocks.
UMF-01-E	5%. swimming at various depths, 5% swimming on bottom, 90%. schooling at rocks and corners
LD-01-F	5%. swimming at various depths, 10% swimming on bottom, 85%. schooling at rocks + corners

July 21, 2010 @ B.

July 31, 2010 @ B observations 7:00 pm

Tank ID	Observations
DE-A	Same as 10:00 A.M 07/31/10 → schooling at rocks + screens
GE-D	5% swimming on the bottom, 80% schooling at rocks + screens, 15% swimming at various depths
LD-01-D	Same as 10:00 AM 07/31/10
LMF-02-B	5%. swimming on bottom, 75% schooling at rocks
UMF-01-D	4 swimming at various depths 5%. swimming on the bottom, 90%. schooling on rocks
LALL-D	same as 07/31/10 10:00 am

Scale: 1 square = 32

Tank ID	Observations
NP-03-A	10% at various depths, 30%. swimming on the bottom, 60%. schooling at rocks + corners
LMF-02-B	Same as 10:00 AM - still swimming in circles
LALL-C -	Same as 10:00 am. 07/31/10
LD-01-B	3 swimming at various depths, 5%. at bottom, 92%. schooling at rocks
UMF-01-C	1 swimming in circles, 5%. at various depths, 5%. on bottom, 90%. schooling on rocks + screens.
GIRL-C	Same as 10:00 am. 07/31/10
LALL-B	10%. swimming at various depths, 10%. on bottom, 80%. schooling on rocks
GIRL D -	Same as 10:00 am 07/31/10
H_2O B	Same as 10:00 A.M 07/31/10
GE C	75%. schooling on rocks, 15% on bottom, 5% at various depths
GE-A	2 swimming at various depths, 15%. on bottom, 85%. schooling at corners + rocks
H_2O-A	Same as 10:00 AM 07/31/10
NP-03-B	Same as 10:00 AM 07/31/10
GE-B	90% schooling on rocks + corners, 5%. on bottom, 5%. swimming at various depths
LALL-F	Same as 10:00 AM 7/31/10 - still doing barrel rolls

Scale: 1 square = 33

LMF-02-D	10%. swimming at various depths, 65%. swimming on bottom, 25 schooling on rocks
LD-01-A	Same as 10:00 AM 07/31/10
H20-C	4 swimming at various depths, 15%. on bottom, 20%. schooling at rocks & corners.
UMF-01-A	Same as 10:00 07/31/10
LD-01-B	5%. on bottom, 5%. swimming at various depths, 90%. schooling on rocks & screen
CTRL A	5%. Swimming on bottom, 5%. swimming at various depths, 90%. schooling on rock
UMF-01-F	Same as 10:00 07/31/10
CTRL-B	85%. Schooling, 5%. swimming at various depths, 10%. swimming on bottom
LD 01-C	Same as 07/31/10 10:00-7 swimming in circles
DE-C	2 swimming at various depths 10% swimming on the bottom, 90%. schooling on rocks & screen.
CTRL-F	Same as 10:00 AM 07/31/10 + still 3 behind inflow screen. 2 swimming at various depths
DE-B	5%. swimming at various depths, 20% swimming on bottom, 75%. schooling on rocks & corners
H20-B	1 swimming in circles, 5%. at various depths, 10%. swimming on bottom & 5%. schooling on rocks & corners

Scale: 1 square = 34

CTRL-E	Same as 10:00 07/31/10
LALL-E	5%. swimming at various depths, 15%. swimming on bottom, 85%. schooling on rocks
H20-D	7 swimming at various depths, 3%. swimming on bottom, 10%. schooling on rocks & corners
LMF-02-C	20%. swimming on bottom, 5%. swimming at various depths, 75%. schooling on rocks
LALL-A	3 swimming at various depths, 10%. swimming on bottom 90%. schooling at corners & rocks.
UMF-01-E	Same as 07/31/10 10:00.
LD-01-F	5%. swimming at various depths. 12%. swimming on bottom 83%. schooling at rocks & corners.

July 31, 2010 BB

August 1, 2010 BB Observations 9:15

Tank ID	Observations
DE-A	4 swimming at various depths, 5%. swimming on the bottom, 90%. schooling at corners and rocks.
CE-D	15%. swimming at various depths, 20%. Swimming on the bottom, 65%. schooling at rocks & corners.
LD-01-D	3 swimming at various depths, 3 swimming on bottom, 95%. schooling at rocks & screens.

Scale: 1 square = 35

LMF-02-A	10% swimming at various depths, 10% swimming on bottom, 80% schooling at rocks.
UMF-01-D	7% swimming at various depths, 10% swimming on the bottom, 83% schooling at corners + rocks.
LALL-D	2 swimming at the top, 5% swimming on the bottom, 95% schooling at rocks
NP-03-A	3 swimming at various depths, 10% swimming on the bottom, 80% schooling at rocks + corners
LMF-02-B	1 swimming in circles and spirals. 5% swimming at various depths, 10% swimming on the bottom 85% schooling at rocks + corners
LALL-C	10% swimming at various depths, 5% swimming on the bottom, 85% schooling at rocks and screens.
LD-01-B	3 swimming at various depths, 2 swimming on the bottom, 95% schooling at rocks + corners
UMF 01-C	4 swimming at various depths, 3 swimming on the bottom, 95% schooling at rocks
CTRL-C	1 swimming in circles, 3 swimming at various depths, 4 swimming on the bottom, 92% ~~swimming~~ schooling at rocks
LALL-B	10% swimming at various depths, 10% swimming on the bottom, 80% schooling at corners and rocks.
CTRL-D	5% swimming at various depths, 5% swimming on the bottom, 90% schooling at rocks and screens

Scale: 1 square = 36

HZO-B	7 swimming at various depths, 15% swimming on the bottom, 80% schooling at rocks + screens.
CE-C	4 swimming at various depths, 10% swimming on the bottom, 85% schooling at rocks.
CE-A	5% swimming on the bottom, 1 swimming at various depths, 95% schooling at rocks and screens.
HZO-A	2 swimming at various depths, 5% swimming on the bottom, 95% schooling on rocks,
NP-03-B	4 swimming at various depths, 5% swimming on the bottom, 90% schooling at rocks
CE-B	2 swimming at various depths, 3 stuck behind inflow screen swimming at various depths, 2 swimming on the bottom. 95% schooling on rocks.
LALL-F	1 swimming in spirals, 10% swimming on the bottom, 10% swimming at various depths, 80% schooling at rocks
LMF-02-D	15% swimming at various depths, 10% swimming on the bottom 75% schooling in corners and rocks.
LD-01-A	3 swimming at various depths, 5% swimming on the bottom, 92% schooling at rocks.
HZO-C	8% swimming at various depths, 12% swimming on the bottom, 80% schooling at rocks.
UMF-01-A	5% swimming on the bottom, 3% swimming at various depths 92% schooling at corners + rocks.

Scale: 1 square = 37

Tank ID	Observations
LD-01-E	5%. swimming at various depths, 5%. swimming on the bottom, 90%. schooling at rocks
Ctrl-A	15%. swimming on the bottom, 5%. swimming at various depths. 80%. schooling at rocks and corners
UMF-01-B	5%. swimming at various depths, 10%. swimming on bottom, 1 swimming in spirals, 85%. schooling at rocks
UMF-01-F	15%. swimming at various depths, 15%. swimming on the bottom, 70%. schooling at rocks + corners
Ctrl-B	10%. swimming at various depths, 10%. swimming on the bottom, 80%. schooling at rocks
LD-01-C	5%. swimming at various depths, 15%. swimming on the bottom, 80%. schooling at rocks
DE-C	3 swimming at various depths 10%. swimming on the bottom 87%. schooling at rocks.
CTRL-F	5%. swimming at various depths, 5%. swimming on the bottom, 90%. schooling at rocks
DE-B	1 swimming at various depths, 15%. swimming on the bottom, 85%. schooling at rocks
H2O-E	5%. swimming at various depths, 15%. swimming on the bottom, 80%. schooling at rocks
CTRL-E	3 swimming at various depths, 8%. swimming at bottom, 90%. schooling at rocks.
LALL-E	10% swimming at various depths, 10%. swimming on the bottom. 80%. schooling at corners + rocks

Scale: 1 square = 38

Tank ID	Observations
H2O-D	10%. swimming at various depths, 20%. swimming on the bottom. 70%. schooling in corners + rocks.
LMF-02-C	5%. swimming at various depths, 10%. swimming on the bottom, 85%. schooling in corners + rocks.
LALL-A	10%. swimming on the bottom, 5%. swimming at various depths, 85%. schooling at rocks + corners
UMF-01-E	2 swimming at various depths. 5%. swimming on the bottom, 95%. schooling at rocks
LD-01-F	5%. swimming at various depths, 5% swimming on the bottom, 90% schooling at corners and rocks.

August 1, 2010 SB

August, 2, 2010 at 9:45am TT

Tank ID	Obs
LD-01-F	10% driving at various depths, 30% schooling at corners, 60% swimming at bottom
UMF-01-E	60% schooling at rocks, 30% schooling at corners, 10% swimming at various depths
LALL-A	1 swimming at top, 15% schooling at corners, 15% swimming at bottom, 10% swimming at various depths, 60% schooling at rocks
UMF-02-C	2 swimming at Top, 70% schooling at corners, 30% swimming at bottom

Scale: 1 square = 39

Tank ID	Obs
H_2O-D	2 swimming at Top, 5% swimming at various depths, 30% swimming at bottom, 65% schooling in corner.
LALL-E	5% swimming at various depths, 20% swimming at bottom 50% schooling in corners, 25% schooling at rocks
CTRL-E	5% swimming at Top, 5% swimming at various depths, 10% swimming at bottom, 40% TT 30% schooling at corners, 40% schooling at rocks
H_2O-E	1 swimming at top, 5% swimming at various depths, 30% swimming at bottom, 10% schooling at corners TT at rocks, 55% schooling at rocks
DE-B	33% schooling at rocks, 33% swimming at bottom, 34% schooling in corners
CTRL-F	10% swimming at various depths, 25% schooling at corners, 30% schooling at rocks, 40% swimming at bottom
DE-C	5% swimming at various depths, 20% schooling at corners 10% swimming at bottom, 65% schooling at rocks
LD-01-C	5% swimming at Top, 10% swimming at bottom, 85% schooling at rocks
CTRL-B	2 swimming at Top, 10% swimming at various depths, 10% swimming at bottom, 40% schooling at corners, 40% schooling at rocks
UMF-01-F	10% swimming at various depths, 20% schooling at corners, 20% swimming at bottom, 50% schooling at rocks
UMF-01-B	2 swimming at Top, 5% swimming at various depths, 30% swimming at bottom, 5% schooling at corners, 60% schooling at rocks

Scale: 1 square = 40

Tank ID	Obs
CTRL-A	5% swimming at various depths, 1 swimming at Top, 10% swimming at bottom, 30% schooling at corners, 55% schooling at rocks
LD-01-E	1 swimming at Top, 5% swimming at various depths, 5% swimming at bottom, 10% schooling at corners, 80% schooling at rocks
UMF-01-A	3 swimming at Top at corners, 5% swimming at various depths 5% swimming at bottom, 40% schooling at rocks, 50% schooling at corners
H_2O-C	1 swimming at part, 2 swimming at Top, 20% schooling at rocks 30% swimming at bottom
LD-01-A	1 swimming at Top, 25% swimming at bottom, 20% TT 75% schooling at corners, 55% schooling at rocks
LMF-02-D	3 swimming at Top, 15% swimming at various depths, 10% swimming at bottom, 75% schooling at corners
LALL-E	5% swimming at Top, 5% swimming at various depths, 5% schooling at corners, 15% swimming at bottom, 70% schooling at rocks
GE-B	5% swimming at Top, 5% swimming at various depths, 10% swimming at bottom, 80% schooling at rocks
NP-03-B	1 swimming at Top, 10% swimming at various depths, 10% schooling at corners, 15% swimming at bottom, 65% schooling at rocks
H_2O-A	5% swimming at Top, 10% swimming at bottom, 5% schooling at corner, 80% schooling at rocks

Scale: 1 square = 41

Tank ID	Obs
Ge-A	2 swimming at Top in the corners, 5% swimming at various depths, 15% swimming at bottom, 35% schooling at corners, 45% schooling at rocks
Ge-C	1 swimming at Top, 10% swimming at various depths, 5% schooling at corners, 15% swimming at bottom, 70% schooling at rocks
H_2O-B	10% swimming at various depths, 5% schooling at corners, 20% swimming at bottom, 65% schooling at rocks
CTRL-D	5% swimming at Top, 10% swimming at bottom, 5% swimming at various depths, 80% schooling at corner
LALL-B	5% swimming at various depths, 2 swimming at Top (1 in corner), 40/6 at 80% schooling at rocks, 15% swimming at bottom
CTRL-C	5% swimming at various depths, 5% swimming at bottom, 2 swimming at Top, 90% schooling at rocks
UMF-01-C	15% swimming at bottom, 1 in bottom corner, 85% schooling at rocks
LD-01-B	5% swimming at various depths, 10% swimming at bottom, 15% schooling at corners, 70% schooling at rocks
LALL-C	2 schooling in corner, 3 swimming at Top, 5% swimming at various depths, 10% swimming at bottom, 85% schooling at rocks
LMF-02-B	10% swimming at various depths, 10% swimming at bottom 15% schooling corners, 65% schooling at rocks

Scale: 1 square = 42

Tank ID	Obs
MP-03-A	10% swimming at various depths, 20% swimming at bottom 15% schooling at corners, 55% schooling at rocks
LALL-D	15% schooling at corners, 10% swimming at bottom, 75% schooling at rocks
UMF-01-D	10% swimming at various depths, 5% schooling at corners, 20% swimming at bottom, 65% schooling at rocks
LMF-02-A	5% swimming at Top, 5% swimming at various depths, 35% schooling in corners, 10% swimming at bottom, 45% schooling at rocks
LD-01-D	5% swimming at various depths, 20% swimming at bottom 75% schooling at rocks
GC-D	20% swimming at various depths, 30% schooling at rocks, 50% swimming at bottom
DEA	1 swimming at Top, 5% swimming at various depths, 10% swimming at bottom, 75% schooling at rocks

Observation ended 11:00 am August 2, 2010 TT

August 2, 2010 observations at 1:45pm TT

Tank ID	Obs
LD-01-F	10% swimming at various depths, 5% swimming at Top 60% swimming at bottom 25% schooling at corners, 50% schooling at rocks
UMF-01-E	5% swimming at various depths, 10% swimming at bottom, 30% schooling at corner, 55% schooling at rocks
LALL-A	5% swimming at various depths, 2 swimming at Top, 15% schooling at corners, 15% swimming at bottom

Scale: 1 square = 43

Tank ID	Obs
	65% schooling at rocks
LMF-02-C	10% swimming at various depths, 1 swimming at Top, 5% swimming at bottom, 85% schooling at corners
H_2O-D	5% swimming at Top, 10% swimming at various depths, 20% swimming on bottom, 10% schooling at rocks, 65% schooling at corner
LALL-E	5% swimming at various depths, 20% schooling at corners, 25% swimming at bottom, 50% schooling at rocks
CTRL-E	15% swimming at bottom, 2 swimming at Top, 20% schooling at corners, 65% schooling at rocks
H_2O-E	3 swimming at Top, 5% swimming at various depths, 20% swimming at bottom, 75% schooling at rocks
DE-B	1 swimming at Top, 35% swimming at bottom, 10% schooling at corners, 55% schooling at rocks
CTRL-F	3 swimming at Top, 10% swimming at various depths 10% schooling at corners, 30% swimming at bottom, 50% schooling at rocks
DE-C	5% swimming at various depths, 10% swimming at bottom, 5% schooling at corners, 80% schooling at rocks
LD-01-C	5% swimming at various depths, 5% schooling at corners, 95% schooling at rocks
CTRL-B	1 swimming at Top, 5% swimming at various depths, 35% schooling corners, 60% schooling rocks

Tank ID	Obs
LMF-01-F	15% schooling corners, 40% swimming at various depths, 20% swimming at bottom, 45% schooling at rocks
LMF-01-B	20% schooling corners, 35% swimming at bottom, 45% schooling at rocks
CTRL-A	5% schooling corners, 35% swimming at bottom, 1 swimming at Top, 60% schooling at rocks
LD-01-E	10% swimming at various depths, 5% schooling at corners, 10% swimming at bottom, 75% schooling at rocks
LMF-01-A	2 swimming at Top, 5% swimming at various depths, 5% swimming at bottom, 25% schooling at rocks, 65% schooling at corners
H_2O-C	10% swimming at various depths, 40% 55% Tr swimming at bottom, 50% 45% Tr schooling at rocks
LD-01-A	5% swimming at various depths, 30% swimming at bottom, 10% schooling corners, 65% schooling at rocks
LMF-02-D	2 swimming at Top, 20% swimming at various depths, 10% swimming at bottom, 70% schooling at corners
LALL-F	10% swimming at Top, 5% swimming at various depths, 10% swimming at bottom, 15% schooling at rocks, 60% schooling at corners
Ge-B	15% swimming at various depths, 5% swimming at Top, 10% swimming at bottom, 70% schooling at rocks

Tank ID	Obs
NP-03-B	2 swimming at Top, 10% swimming at various depths, 5% swimming at bottom, 25% schooling at corners, 60% schooling at rocks
H_2O-A	2 swimming at Top, 10% schooling at corners, 5% swimming at various depths, 30% swimming at bottom, 55% schooling at rocks
Ge-A	5% swimming at various depths, 10% swimming at bottom, 30% schooling at corner, 55% schooling at rocks
Ge-C	10% swimming at various depths, 20% schooling at corners, 10% swimming at bottom, 60% schooling at rocks
H_2O-B	5% swimming at various depths, 2 swimming at Top, 5% swimming at ports, 35% swimming at bottom, 55% schooling at rocks
CTRL-D	5% swimming at Top, 15% swimming at bottom, 25% schooling at corners, 50% schooling at rocks
LALL-B	5% swimming at various depths, 10% schooling at corners, 30% swimming at bottom, 55% schooling at rocks
CTRL-C	5% schooling at rocks, 10% swimming at bottom, 85% schooling at corners
UMF-01-C	5% swimming at various depths, 5% schooling at corners, 20% swimming at bottom, 70% schooling at rocks

Scale: 1 square = 46

Tank ID	Obs
LD-01-B	20% swimming at bottom, 30% schooling at corners, 5% swimming at various depths, 45% schooling at rocks
LALL-C	10% swimming at bottom, 5% swimming at various depths, 5% schooling at corners, 80% schooling at rocks
LMF-02-B	10% schooling at rocks, 30% schooling at front screen, 5% swimming at various depths, 20% swimming at bottom, 35% schooling at corners
NP-03-A	10% swimming at various depths, 5% swimming at Top, 20% swimming at bottom, 20% schooling at corners, 45% schooling at rocks
LALL-D	10% schooling at corners, 60% schooling at rocks, 30% swimming at bottom
UMF-01-D	15% swimming at various depths, 5% schooling at corners, 35% schooling at rocks, 45% swimming at bottom
LMF-02-A	15% swimming at various depths, 60% schooling at corners, 5% swimming at Top, 5% swimming at bottom, 15% schooling at rocks
LD-01-D	10% swimming at various depths, 15% swimming at bottom, 75% schooling at rocks
Ge-D	20% swimming at various depths, ~~50%~~ 55% swimming at bottom, 30% schooling at rocks

Scale: 1 square = 47

Tank ID	Obs
DE-A	5% swimming at various depths, 5% schooling at corners, 90% schooling at rocks

Observations ended @ 3:15pm August 4, 2010 TT

Observations August 2, 2010 7:40 PM ST

Tank ID	Obs
DE-A	Same as afternoon Obs.
GE-D	25% swimming at various depth along screens.
	30% schooling near rocks
	40% swimming on bottom
	5% swimming near surface
LD-01-D	15% swimming along screen
	15% swimming at various depths
	40% schooling at rocks
	30% swimming along bottom
LMF-02-A	15% swimming along screen
	5% swimming at various depth.
	50% schooling at rocks
	30% swimming on bottom
LMF-01-D	Same as afternoon ~~with~~ BS
LALL-D	70% schooling at rocks
	25% swiming on bottom
	5% swimming at various depths
NP-03-A	Same as afternoon
LMF-02-B	Same as Afternoon

Scale: 1 square = 4s

Tank ID	Obs
LMF-02-B	10% swimming along screen
	10% swimming at various depths
	10% schooling in corners
	30% swimming on bottom
	40% schooling at rocks
LALL-C	5% swimming at various depths
	25% swimming on bottom
	70% schooling at rocks
LD-01-B	Same as Afternoon
LMF-01-C	Same as afternoon
CtrL-C	70% schooling at rocks
	10% swimming at various depths
	20% swimming along bottom
LALL-B	40% swimming along bottom
	5% swimming along screens
	15% swimming at various depths
	40% schooling at rocks
Ctrl D	10% schooling at rocks
	10% swiming at various depths
	5% swimming along screens
	40% schooling at rocks
	35% swimming on bottom
H_2O-B	15% swimming at various depths
	45% schooling at rocks
	40% swimming along bottom

Scale: 1 square = 4s

Tank ID	Obs
GE-C	20% swimming on screens
	10% swimming at various depths
	40% schooling at rocks
	10% schooling at corner
	20% swimming on bottom
GE-A	15% swimming along screen
	15% schooling in corners
	5% swimming at various depth
	40% schooling at rocks
	25% swimming along bottom
H_2O-A	Same as Afternoon
NP-03-B	20% schooling in corners
	20% swimming on screens
	10% swimming at various depths
	30% schooling at rocks
	20% swimming at bottom
GE-B	15% schooling along screen
	10% schooling at corners
	35% schooling at rocks
	10% swimming on screen
	5% swimming at various depths
	25% swimming on bottom
LALL-F	Same as Afternoon
LMF-02-D	Same as Afternoon

Scale: 1 square = 50

Tank ID	Obs
LD-01-A	15% swimming along screens
	15% swimming at various depths
	10% schooling at corners
	30% schooling at rocks
	30% swimming at bottom
H_2O-C	15% swimming along screens
	25% swimming at various depths
	35% schooling at rocks
	25% swimming along bottom
UMF-01-A	Same as Afternoon.
LD-01-E	5% schooling in corner
	15% schooling along screen
	20% swimming along screen
	10% swimming at various depth
	30% schooling at rocks
	20% swimming at bottom
Ctrl-A	10% swimming along screens
	10% schooling along screens
	10% swimming at various depths
	20% schooling at corners
	30% schooling at rocks
	20% swimming on bottom
UMF-01B	20% swimming at various depths
	50% schooling at rocks
	30% swimming on bottom

Scale: 1 square = 51

Tank ID	Obs
UMF-01-F	30% swimming at various depth
	10% schooling in corner
	40% schooling at rocks
	20% swimming on bottom
Ctrl-B	Same as Afternoon
LD-01-~~B~~C	20% schooling in corners
	10% swimming along screen
	50% schooling at rocks
	20% swimming on bottom
DE-C	50% schooling at rocks
	20% swimming at various depth
	30% swiming at bottom
Ctrl-F	25% swimming at various depths
	25% schooling at corners
	30% schooling at rocks
	20% swimming at bottom
DE-B	10% swimming at various depths
	20% schooling at corners
	40% swimming on bottom
	30% schooling at rocks
H_2O-E	Same as afternoon except only
	1 swimming at top
Ctrl-E	Same As afternoon

Scale: 1 square = 52

Tank ID	Obs
LALL-E	30% schooling at corners
	10% swimming along screens
	10% swimming at various depth
	35% swimming on bottom
	15% schooling at rocks
H_2O-D	30% swimming at various depth
	20% swimming along screen
	20% schooling at rocks
	30% swimming on bottom
LMF-02-C	Same as afternoon
LALL-A	10% swimming at various depths
	40% swimming along bottom
	20% schooling at corners
	30% schooling at rocks
UMF-01-E	Same as Afternoon
LD-01-F	15% Swimming at various depth
	20% Swimming on bottom
	40% Schooling at rocks
	25% Schooling at corners

Observations over at 9:11 PM BT

Scale: 1 square = 53

August 3, 2010

Observations @ 8:45am T1

Tank ID	Obs
LD-01-F	10% swimming at various depths, 15% swimming at bottom, 30% schooling at front screen, 45% schooling at rocks
UMF-01-E	10% swimming at various depths, 10% swimming at bottom, 30% schooling at rocks, 50% schooling at corners
LALL-A	15% swimming at various depths, 15% schooling at rocks, 70% swimming at bottom
UMF-02-C	15% swimming at various depths, 1 swiming in circles at various depth, 5% swimming at Top, 5% schooling at rocks, 15% swimming at bottom. 60% schooling at corners
H_2O-D	20% swimming at various depths, 25% schooling at corners, 25% schooling at rocks, 30% swimming at bottom
LALL-E	10% swimming at various depths, 15% schooling at rocks, 5% swimming at Top, 20% schooling at corners, 40% swimming on bottom
CTRL-E	15% swimming at various depths, 10% schooling at rocks, 5% swimming at Top, 15% schooling at corners, 55% swimming on bottom
H_2O-E	5% swimming at various depths, 2 swimming at Top, 35% swimming on bottom, 65% schooling at rocks

Scale: 1 square = 54

Tank ID	Obs
DE-B	5% swimming at various depths, 15% swimming at bottom, 30% schooling at corners, 50% schooling at rocks
CTRL-F	5% swimming at Top 20% Swimming at various depths, 35% swimming on bottom, 25% schooling at corners, 15% schooling at rocks
DE-C	2 swimming at Top, 35% schooling by front screen, 10% swimming at bottom, 5% schooling at rocks, 55% schooling at corners
LD-01-C	5% swimming at Top, 15% swimming at various depths, 15% schooling at rocks, 65% schooling at corners
CTRL-B	15% swimming at various depths, 1 swimming at Top, 10% schooling at rocks, 25% swimming at bottom, 50% schooling at corners
UMF-01-F	15% swimming at various depths, 20% schooling at front screen, 10% schooling at rocks, 10% swimming at bottom, 45% schooling at corners
UMF-01-B	15% swimming at various depths, 1 swimming in circles at bottom, 20% schooling by front screen, 20% schooling at rocks, 5% schooling at corners, 40% ~~50%~~ swimming at bottom
CTRL-A	15% swimming at various depths, 40% swimming at bottom, 5% schooling at rocks, 40% schooling at corners

Scale: 1 square = 55

Tank ID	Obs
LD-01-E	5% swimming at Top, 5% schooling at corners, 30% swimming at bottom, 10% swimming at various depths, 50% schooling at rocks
UMF-01-A	5% swimming at Top, 10% swimming at various depths, 5% schooling at rocks, 10% swimming at bottom, 70% schooling at corners
H_2O-C	5% swimming at Top, 20% swimming at various depths, 15% schooling front screen, 1 swimming in circles at middle depth, 30% schooling rocks, 25% swimming at bottom
LD-01-A	5% swimming at Top, 25% swimming at various depths, 20% swimming at bottom, 50% schooling corners
LMF-02-D	1 swimming at top, 20% swimming at various depths, 20% swimming at bottom, 5% swimming at Top, 50% schooling corners
LACL-F	10% swimming various depths, 5% swimming at Top 20% schooling corners, 10% schooling rocks, 55% swimming at bottom
Ge-B	5% swimming at Top, 10% swimming at various depths, 15% schooling back screen, 10% swimming at bottom, 60% schooling rocks
NP-03-B	25% schooling rocks, 30% swimming at various depths, 10% schooling front screen, 35% swimming at bottom

Scale: 1 square = 5b

Tank ID	Obs
H_2O-A	10% swimming at various depths, 5% swimming at Top, 40% swimming at bottom, 45% schooling at rocks
Ge-A	5% schooling at corners, 25% swimming at various depths, 15% swimming at bottom, 55% schooling at rocks
Ge-C	25% swimming on bottom, 20% swimming at various depths, 20% schooling at corners, 40% schooling at rocks
H_2O-B	15% swimming at various depths, 5% schooling at parts, 30% schooling at rocks, 50% swimming at bottom
CTRL-D	5% swimming at Top, 5% swimming at various depths 10% swimming at bottom, 30% schooling rocks, 50% schooling at corners
LACL-B	5% schooling rocks, 15% swimming at various depths 15% schooling corners, 20% swimming at bottom 45% swimming at bottom
CTRL-C	10% swimming at various depths, 25% schooling rocks, 65% schooling at corners
UMF-01-C	10% swimming at various depths 30% schooling at corners, 30% schooling at rocks, 30% swimming at bottom
LD-01-B	10% swimming at various depths, 10% schooling corners, 35% swimming at bottom, 45% schooling at rocks

Scale: 1 square = 5b

Tank ID	Obs
LALL-C	10% swimming at various depths, 10% schooling at corners, 50% schooling rocks, 30% swimming at bottom
UMF-02-B	10% swimming at various depths, 5% swimming at Top, 1 sturgeon 'flinching' on sediment surface (swims in circle when passed by another sturgeon), 30% swimming at bottom, 55% schooling at rocks
NP-03-A	20% swimming at various depths, 40% swimming at bottom, 15% schooling at rocks, 25% schooling at corners
LALL-D	5% swimming at various depths, 1 swimming at Top 5% schooling corners, 20% schooling rocks, 70% swimming at bottom
UMF-01-D	5% swimming at Top, 25% swimming at various depths, 30% swimming on bottom, 10% schooling rocks, 30% schooling corners
LMF-02-A	5% swimming at Top, 20% swimming at various depths, 5% schooling rocks, 20% swimming at bottom, 25 50% schooling corners, 25% schooling side wall of exposure tank
LD-01-D	10% swimming at various depths, 5% schooling rocks, 15% swimming at bottom, 70% schooling corners

Scale: 1 square = 5 8

Tank ID	Obs
GC-D	35% TT 30% swimming at various depths, 5% swimming at Top, 60% swimming at bottom
DE-A	20% swimming at various depths 2 swimming at Top, 30% schooling corners, 10% swimming at bottom, 40% schooling rocks

Note: swimming at various depths is usually at the back screen for most Tanks

Observations finished at 10:20am August 3, 2010 TT

August 3, 2010 TT Observations taken at 2:00pm

Tank ID	Obs
LD-01-F	10% swimming at various depths, 20% swimming at bottom 70% schooling at corners
UMF-01-E	5% swimming at various depths, 40% swimming at bottom 40% schooling at corners, 35% schooling at rocks
LALL-A	10% swimming at various depths, 5% swimming at Top, 10% schooling at rocks, 20% schooling at corners, 55% swimming at bottom
LMF-02-C	5% swimming at various depths, 25% swimming at bottom, 70% schooling at corners
H_2O-D	5% swimming at Top, 1 swimming in circles, at bottom, 45% schooling at rocks, 50% swimming at bottom
LALL-E	5% swimming at various depths, 50% swimming at bottom, 5% schooling at rocks, 40% 30% schooling at corners
CTRL-E	5% swimming at Top, 25% schooling at corners, 30% 40% swimming at bottom, 30% schooling at rocks, 10% swimming at

Scale: 1 square = 5 9

Tank ID	Obs
	various depths
H_2O-E	1 swimming at Top, 30% swimming at bottom, 70% schooling at rocks
DE-B	15% swimming at various depths, 20% swimming at bottom, 30% schooling corners, 48% schooling rocks
CTRL-F	5% swimming at Top, 20% swimming at various depths, 5% schooling corners, 50% swimming at bottom, 20% schooling rocks
DE-C	1 swimming at Top, 5% swimming at various depths, 20% schooling front screen, 20% swimming at bottom, 55% schooling corners
LD-01-C	10% swimming at various depths, 3 swimming at Top, 10% swimming at bottom, 40% schooling corners, 40% schooling rocks
CTRL-B	10% swimming at various depths, 1 swimming at Top, 25% swimming at bottom, 40% schooling corners, 25% schooling rocks
UMF-01-F	20% swimming at various depths, 40% swimming at bottom, 20% schooling rocks, 20% schooling corners
UMF-01-B	5% swimming at Top, 10% swimming various depths 40% swimming at bottom, 45% schooling corners
CTRL-A	15% swimming at various depths, 40% swimming at bottom, 45% schooling corners
LD-01-E	1 swimming at Top, 10% swimming at various depths 30% swimming at bottom, 60% schooling rocks

Scale: 1 square = 60

Tank ID	Obs
UMF-01-A	15% swimming at various depths, 25% swimming at bottom, 60% schooling corners
H_2O-C	5% swimming at various depths, 35% swimming at bottom, 60% schooling rocks
LD-01-A	5% schooling corners, 1 swimming at Top, 10% swimming at various depths, 30% swimming at bottom, 55% schooling at rocks
UMF-02-D	5% swimming at Top, ~~20%~~ 25% TT swimming at various depths, 15% schooling corners, 55% swimming at bottom
LALL-F	1 swimming at Top, 10% swimming at various depths, 35% schooling corners, 55% swimming at bottom
Ge-B	15% swimming at various depths, 5% schooling corners, 20% swimming at bottom, 60% schooling rocks
NP-03-B	20% swimming at various depths, 20% schooling front screen, 20% schooling rocks, 10% swimming at bottom, 30% schooling side of tank
H_2O-A	20% swimming at various depths, 5% swimming at Top, 30% schooling rocks, 20% swimming at bottom, 25% schooling corners
Ge-A	20% swimming at various depths, 20% schooling corners, 25% swimming at bottom, 35% schooling rocks
Ge-C	20% swimming at various depths, 15% swimming at bottom, 25% schooling corners, 40% schooling rocks

Scale: 1 square = 61

Tank ID	Obs
H_2O-B	10% swimming at various depths, 1 swimming at Top, 45% swimming at bottom, 45% schooling rocks
CTRL-D	5% swimming at Top, 25% swimming at bottom, 20% schooling corners, 50% schooling rocks
LALL-B	10% swimming at various depths, 5% schooling rocks 10% schooling corners, 75% swimming at bottom
CTRL-C	5% swimming at various depths, 30% swimming at bottom, 65% schooling rocks
UMF-01-C	10% swimming at various depths, 15% swimming at bottom, 75% schooling rocks
LD-01-B	5% swimming at various depths, 10% schooling corners, 10% schooling corners, 75% swimming at bottom
LALL-C	2 swimming at Top, 10% swimming at various depths, 10% schooling corners, 25% schooling rocks 55% swimming at bottom
LMF-02-B	2 swimming at Top, 10% swimming at various depths, 10% schooling corners, 10% schooling rocks 70% swimming at bottom
NP-03-A	20% swimming at various depths, 30% schooling at corners, 40% schooling rocks, 30% swimming at bottom
LALL-D	1 swimming at Top, 10% swimming at various depths, 15% schooling corners, 20% schooling rocks, 55% swimming at bottom

Scale: 1 square = 62

Tank ID	Obs
UMF-01-D	25% swimming at various depths, 40% schooling rocks, 35% swimming at bottom
LMF-02-A	20% swimming at various depths, 50% schooling side of tank, 30% swimming at bottom
LD-01-D	10% schooling corners, 15% swimming at various depths, 20% schooling rocks, 55% swimming at bottom, 1 swimming at Top
GE-D	5% schooling rocks, 5% swimming at Top, 45% swimming at bottom, 45% swimming at various depths
DE-A	5% swimming at Top, 25% swimming at various depths, 25% schooling corners, 15% swimming at bottom, 30% schooling rocks

Observations ended at 3:30pm August 3, 2010 PT

August 3, 2010 Observations taken 6:30PM BT

Tank ID	Observations
DE-A	Same as afternoon
GE-D	30% swimmingon screens, 30% swimming on bottom, 25% schooling at rocks 15% schooling in corners
LD-01-D	Same as afternoon
LMF02-A	Same as afternoon
UMF-01-D	Same as afternoon
LALL-D	Same as afternoon

Scale: 1 square = 63

Tank ID	Obs.
NP-03-A	Same as afternoon
LMF-02-B	20% swimming at various depths
	20% ~~dep~~ BT schooling in corners
	20% schooling at rocks
	40% swimming on bottom
LALL-C	Same as afternoon
LD-01-B	Same as afternoon
UMF-01-C	Same as afternoon ~~with con~~ BT
	with swimming first sturgeon near screen
Ctrl-C	40% swimming on bottom
	60% schooling near rocks
LALL-B	50% swimming on bottom
	20% swimming along screens
	30% schooling at rocks
Ctrl-D	Same as Afternoon
H_2O-B	Same as afternoon
GE-C	Same as afternoon
GE-A	Same as afternoon
H_2O-A	Same as afternoon
NP-03-B	25% swimming along screen
	40% swimming on bottom
	35% schooling at rocks
GE-B	Same as afternoon
LALL-F	Same as afternoon
LMF-02-D	Same as afternoon

Scale: 1 square = 64

~~LD~~ BT

Tank ID	Obs
LD-01-A	Same as afternoon
H_2O-C	Same as afternoon
UMF-01-A	Same as afternoon
LD-01-E	Same as afternoon except none
	swimming at top
Ctrl-A	15% swimming at various depths
	55% swimming on bottom
	30% schooling at rocks
UMF-01-B	10% swimming at screens
	20% schooling at corners
	40% swimming at bottom
	30% schooling at rocks
UMF-01-F	Same as afternoon
Ctrl-B	Same as afternoon
LD-01-C	Same as afternoon
DE-C	Same as afternoon
Ctrl-F	Same as afternoon
DE-B	Same as afternoon
H_2O-E	Same as afternoon
Ctrl-E	10% swimming on screens
	20% schooling in corners
	40% schooling at rocks
	10% swimming at various depths
	20% swimming on bottom

Scale: 1 square = 65

Tank ID	Obs
LALL-E	Same as afternoon
H_2O-D	Same as afternoon
LMF-02-C	Same as afternoon
LALL-A	Same as afternoon
UMF-01-E	Same as afternoon
LD-01-F	40% schooling at corners 10% swimming at various depths 20% schooling along screen 30% swimming on bottom

BP
Observations ended at 7:20PM

August 4, 2010 TT

Observations started at 8:45am

Tank ID	Obs
LD-01-F	5% swimming at Top, 25% swimming at various depths, 10% schooling corners, 60% swimming at bottom
UMF-01-E	35% swimming at various depths, 5% schooling rocks, 15% schooling corners, 45% swimming at bottom
LALL-A	30% swimming at various depths, 5% schooling corners, 15% schooling rocks, 50% swimming at bottom
LMF-02-C	25% swimming at various depths, 30% swimming at bottom, 45% schooling corners, 1 swimming in circles at Top

Scale: 1 square = 6 6

Tank ID	Obs
H_2O-D	5% swimming at Top, 30% swimming at various depths, 20% schooling rocks, 45% swimming at bottom
LALL-E	10% swimming at Top, 30% swimming at various depths, 5% schooling corners, 10% schooling rocks 45% swimming at bottom
CTRL-E	5% swimming at Top, 30% swimming at various depths, 10% schooling corners, 55% swimming at bottom
H_2O-E	5% swimming at various depths, 35% schooling rocks, 60% swimming at bottom
DE-B	5% swimming at various depths, 15% schooling corners, 80% swimming at bottom
CTRL-F	10% swimming at Top, 30% swimming at various depths 5% schooling corners, 15% schooling rocks, 50% swimming at bottom HCS. TT
DE-C	5% swimming at Top, 15% swimming at various depths, 25% schooling corners, 55% swimming at bottom
LD-01-C	10% swimming at Top, 30% swimming at various depths, 10% schooling rocks, 20% swimming at bottom, 30% schooling corners
CTRL-B	5% swimming at Top, 30% swimming at various depths, 65% swimming at bottom
UMF-01-F	10% swimming at Top, 35% swimming at various depths, 5% schooling corners, 50% swimming at bottom

Scale: 1 square = 6 7

Tank ID	Obs
UMF-01-B	35% swimming at various depths, 10% swimming at Top, 15% schooling corners, 5% schooling rocks 40% swimming at bottom
CTRL-A	30% swimming at various depths, 10% swimming at Top, 60% swimming at bottom
LD-01-E	30% swimming at various depths, 10% schooling rocks, 60% swimming at bottom
UMF-01-A	25% swimming at various depths, 5% schooling rocks, 35% swimming at bottom, 40% schooling corners
H_2O-C	1 swimming in circles at middle depths, 5% swimming at Top, 35% swimming at various depths, 10% schooling rocks, 50% swimming at bottom
LD-01-A	40% Tr 25% swimming at various depths, 5% schooling corners, 55% swimming at bottom
LMF-02-D	10% swimming at Top, 5% schooling corners, 30% swimming at various depths, 55% swimming at bottom
LALL-F	5% swimming at Top, 1 swimming at Top in circles, 15% schooling corners, 5% schooling rocks, 30% swimming at various depths, 45% swimming at bottom
GE-B	30% schooling rocks, 5% swimming at Top, 35% swimming at various depths, 5% schooling corners, 25% Tr 30% swimming at bottom

Scale: 1 square = 6 ft

Tank ID	Obs
NP-03-B	5% swimming at Top, 40% swimming at various depths, 25% swimming at bottom, 30% schooling rocks
H_2O-A	5% swimming at Top, 25% swimming at various depths, 30% schooling corners, 15% schooling rocks, 25% swimming at bottom
GE-A	10% schooling corners, 35% swimming at various depths, 10% schooling rocks, 45% swimming at bottom
GE-C	35% swimming at various depths, 5% schooling rocks, 25% schooling corners, 35% swimming at bottom
H_2O-B	25% swimming at various depths, 75% swimming at bottom
CTRL-D	15% swimming at various depths, 85% swimming at bottom
LALL-B	10% schooling corners, 45% swimming at various depths, 45% swimming at bottom
CTRL-C	1 swimming at Top, 20% swimming at various depths, 30% swimming at bottom, 50% schooling at rocks
UMF-01-C	40% swimming at various depths, 15% schooling corners, 45% swimming at bottom
LD-01-B	10% schooling corners, 5% schooling rocks, 35% swimming at various depths, 50% swimming at bottom

Scale: 1 square = 69

Tank ID	Obs
LALL-C	10% swimming at Top, 40% swimming at various depths, 50% swimming at bottom
LMF-02-B	1 swimming in circles at bottom, 5% swimming at Top, 20% schooling corners, 30% swimming at various depths, 45% swimming at bottom
NP-03-A	20% schooling corners, 40% swimming at various depths, 40% swimming at bottom
LALL-D	5% swimming at Top, 35% swimming at various depths, 60% swimming at bottom
UMF-01-D	50% swimming at various depths, 50% swimming on bottom
LMF-02-A	5% swimming at Top, 40% swimming at bottom, 55% swimming at various depths, 1 with curved spine
LD-01-D	5% swimming at Top, 5% schooling TT at corners, 10% swimming at various depths, 80% swimming at bottom
Ge-D	15% swimming at Top, 50% swimming at various depths, 35% swimming at bottom
DE-A	5% schooling corners, ~~35%~~ 30% TT schooling rocks, 45% swimming at various depths, 20% swimming at bottom

Observations finished at 10:00am August 4, 2010 TT

Scale: 1 square = 10

August 4, 2010 TT

Observations started at 12:00pm:

Tank ID	OBS
LD-01-F	Same as at 8:45am
UMF-01-E	35% swimming at various depths, 20% schooling corners, 5% swimming at Top, 10% schooling rocks, 30% swimming at bottom
LALL-A	25% swimming at various depths, 5% schooling corners, 5% swimming at Top, 65% swimming at bottom
LMF-02-C	30% swimming at various depths, 5% swimming at Top, 20% schooling corners, 45% swimming at bottom
H_2O-D	Same as at 8:45am
LALL-E	5% schooling corners, 30% swimming at various depths, 5% schooling rocks, 60% swimming at bottom
CTRL-E	Same as at 8:45am
H_2O-E	Same as at 8:45am → except 2 swimming at Top
DE-B	Same as at 8:45am → except 1 swimming at Top
CTRL-F	5% swimming at Top, 30% swimming at various depths, 5% schooling corners, 5% schooling rocks 55% swimming at bottom
DE-C	Same as at 8:45 am
LD-01-C	5% swimming at Top, 5% schooling corners, 35% swimming at various depths, 55% swimming at bottom

Scale: 1 square = 5

Tank ID	Obs
CTRL-B	5% swimming at Top, 25% swimming at various depths, 20% schooling corners, 50% swimming at bottom
UMF-01-F	30% swimming at various depths, 1 swimming along walls / screens of whole tank, 10% schooling corners, 60% swimming at bottom
UMF-01-B	10% swimming at various depths, 10% schooling corners, 80% swimming at bottom
CTRL-A	20% swimming at various depths, 5% swimming at Top, 75% swimming at bottom
LD-01-E	same as at 8:45am
UMF-01-A	same as at 8:45am
H_2O-C	same as at 8:45am → 1 still swimming in circles at middle depth (albino sturgeon)
LD-01-A	10% swimming at various depths, 5% schooling corners, 85% swimming at bottom
LMF-02-D	same as at 8:45am
LALL-F	same as at 8:45am
Ge-B	same as at 8:45am → except 0% swimming at Top
NP-03-B	5% swimming at Top, 40% swimming at various depths, 10% schooling at rocks, 45% swimming at bottom
H_2O-A	10% schooling rocks, 45% schooling corners, 20% swimming at various depths, 25% swimming at bottom

Tank ID	Obs
Ge-A	same as at 8:45am
Ge-C	5% swimming at Top, 30% swimming at various depths, 15% schooling rocks, 20% schooling corners, 30% swimming at bottom
H_2O-B	same as at 8:45am except 1 swimming at Top
CTRL-D	10% swimming at various depths, 85% swimming at bottom, 5% swimming at Top
LALL-B	5% swimming at Top, 10% schooling corners, 30% swimming at various depths, 55% swimming at bottom
CTRL-C	5% schooling corner, 5% swimming at various depths, 10% swimming at bottom, 80% schooling side of Tank
UMF-01-C	same as at 8:45am
LD-01-B	5% schooling corners, 20% swimming at various depths, 75% swimming at bottom
LALL-C	5% swimming at Top, 10% schooling rocks, 40% swimming at various depths, 45% swimming at bottom
LMF-02-B	same as at 8:45am
NP-03-A	10% schooling corners, 5% swimming at Top 15% schooling rocks, 40% swimming at various depths, 30% swimming at bottom
LALL-D	same as at 8:45am

Tank ID	Obs
UMF-01-D	5% swimming at Top, 30% swimming at various depths, 65% swimming at bottom
LMF-02-A	5% swimming at Top, 35% swimming at various depths, 60% swimming at bottom
LD-01-D	Same as at 8:45am
GE-D	same as at 8:45am
DE-A	5% swimming at Top, 30% swimming at various depths, 15% schooling rocks, 50% swimming at bottom

Observations finished at 1:30pm August 4, 2010 TT

Observations 08/04/10 at 5:30 PM ST

Tank ID	Observations
DE-A	Same as afternoon
GE-D	Same as afternoon
LD-01-D	Same as afternoon
LMF-02-A	Same as afternoon
UMF-01-D	Same as afternoon
LALL-D	Same as afternoon
NP-03-A	50% swimming at various depths 40% swimming on bottom 10% schooling in corners
LMF-02-B	Same as afternoon
LALL-C	Same as afternoon
LD-01-B	Same as afternoon
UMF-01-C	Same as afternoon

Tank ID	observations
Ctrl-C	40% Swimming at various depths 50% swimmin at bottom 5% schooling in corners 5% schooling at rocks
Ctrl-D	Same as afternoon
H_2O-B	Same as afternoon
GE-C	Same as afternoon
GE-A	Same as afternoon
H_2O-A	Same as afternoon
NP-03-B	Same as afternoon
GE-B	40% swimming at bottom 20% swimming at various depths 30% schooling at rocks 10% schooling in corners
LALL-F	Same as afternoon
LMF-02-D	same as afternoon
LD-01-A	Same as afternoon
H_2O-C	Same as afternoon except no circling fish
UMF-01-A	Same as afternoon
LD-01-E	Same as afternoon
Ctrl-A	Same as afternoon
UMF-01-B	Same as afternoon
UMF-01-F	Same as afternoon
Ctrl-B	Same as afternoon
LD-01-C	Same as afternoon

Tank ID	Observations
DE-C	Same as afternoon
Ctrl-F	Same as afternoon
DE-B	Same as afternoon
H_2O-E	40% schooling at rocks
	40% swimming at bottom
	10% schooling at corners
	10% swimming at various depth
Ctrl-E	25% swimming at various depths
	35% swimming at bottom
	40% schooling at rocks
LALL-F	Same as afternoon
H_2O-D	Same as afternoon
LMF-02-C	Same as afternoon
LALL-A	Same as afternoon
UMF-01-E	Same as afternoon
LD-01-F	Same as afternoon

observations ended at 5:50 PM BT

observations 08/05/10 DV

Tank ID	observations
LD-01-F	5% in corners, 25% @ various depths
	5% under rocks, 65% ind. on bottom
UMF-01-E	50% on screen, 10% @ various depths
	20% on bottom, 20% under rocks
LALL-A	30% on screen, 10% @ various depth
	40% on bottom, 20% under rocks

Tank ID	Observations
LMF-02-C	50% on screen, 30% on bottom
	10% at various depth, 10% under rocks
H_2O-D	~~30%~~ 30% on screen, 30% on bottom
	10% at various depths 20% under rocks
	10% in corners
LALL-E	40% on screens, 20% @ various depths
	30% on bottom, 10% under rocks
Ctrl-E	40% on screens, 10% @ various depths
	20% under rocks, 30% on bottom
H_2O-E	10% on screen, 10% @
	60% on bottom, 20% under rocks
DE-B	20% on screen, 10% @ various depths
	40% on bottom, 30% under rocks
Ctrl-F	40% on screen, 10% @ various depths
	~~40~~ BT 30% on bottom, 20% under rocks
DE-C	50% on screen, 5% @ various depths
	15% under rocks, 30% on bottom
LD-01-C	40% on screen, 10% @ various depth
	20% under rocks, 20% on bottom
Ctrl-B	30% on screen, 20% @ various depths
	30% on bottom, 15% under rocks
	5% in corners
UMF-01-F	60% on screen, 10% @ various depths
	20% on bottom, 10% under rocks

Tank ID	Observations
UMF-01-B	40% on screen, 10% @ various depths 30% on bottom, 10 under rocks 10% in corners
Ctrl-A	30% on screens, 10% at various depths 40% on bottom, 20% under rocks
LD-01-E	50% on screen, 20% @ various depths 25% on bottom, 5% under rocks
UMF-01-A	30% in corners, 40% on screen, 10% @ various depth, 20% on bottom
H_2O-C	10% on screen, 20% @ various depths 50% on bottom, 20% under rocks.
LD-01-A	~~20%~~ 30% on screens, 20% @ various depths 40% on bottom, 10% under rocks
LMF-02-D	40% on screen, 20% @ various depths 25% on bottom, 10% under rocks. 5% in corners
LALL-F	25% on screens, 15% @ various depths 40% on bottom, 20% under rocks
GE-B	20% on screen, 10% @ various depths 50% on bottom, 20% under rocks
NP-03-B	35% on screen, 10% in corners 35% on bottom, 20% under rocks
H_2O-A	50% on screen, 5% swimming @ various depth 35% on bottom, 10% under rocks

Tank ID	Observations
GE-A	60% on screen, 5% @ various depth 30% on bottom, 5% under rocks
GE-C	30% on screen 10% @ various depth 30% on bottom 30% under rocks
H_2O-B	30% on screen 20% @ various depth 40% on bottom 10% under rocks
Ctrl-D	10% on screen 20% @ various depth 50% on bottom 20% under rocks
LALL-B	30% on screens, 20% in corners 40% on bottom, 10% under rocks
Ctrl-C	30% on screen 20% @ various depths 30% on bottom 20% under rocks
UMF-01-C	40% on screen, 10% @ various depths 30% on bottom, 10% under rocks 10% in corners
LD-01-B	50% on screen 20% @ various depth 20% on bottom 10% under rocks
LALL-C	40% on screen 20% @ various depths 35% on bottom 5% under rocks
LMF-02-B	50% on screen, 10% @ various depths 30% on bottom, 10% under rocks
NP-03-A	60% on screen, 10% at various depths 25% on bottom, 5% under rocks
LALL-D	30% on screen, 5% @ various depths 45% on bottom 20% under rocks

Tank ID	Observations
LMF-01-D	70% on screen, 10% @ various depth
	15% on bottom, 5% under rocks
LMF-02-A	40% on screen 20% @ various depth
	30% on bottom 10% under rock
LD-01-D	40% on screen 10% @ various depth
	40% on bottom 10% under rocks
GE-D	50% on screen 20% @ various depth
	25% on bottom 5% under rocks
DE-A	40% on screen 10% @ various depth
	30% on bottom 20% under rocks
	Observations finished @ 1:40PM 08/05/10 BT

Observations @ 4:15PM 08/05/10 BT

Tank ID	Observations
LD-01-F	Same as afternoon
LMF-01-E	Same as afternoon
LALL-A	Same as afternoon
LMF-02-C	Same as afternoon
H_2O-D	Same as afternoon
LALL-E	Same as afternoon
Ctrl-E	Same as afternoon
H_2O-E	Same as afternoon
DE-B	Same as afternoon
Ctrl-F	Same as afternoon
DE-C	30% on screen, 10% @ various depths
	30% on bottom, 30% under rocks

Tank ID	Observations
LD-01-C	Same as afternoon
Ctrl-B	Same as afternoon
LMF-01-F	Same as afternoon
LMF-01-B	Same as afternoon
Ctrl A	Same as afternoon
LD-01-E	Same as afternoon
LMF-01-A	Same as afternoon
H_2O-C	Same as afternoon
LD-01-A	30% on screens, 30% @ various depths
	20% on bottom, 20% under rocks
LMF-02-D	Same as afternoon
LALL-F	Same as afternoon
GE-B	40% on screens, 10% @ various depths
	30% on bottom, 20% under rocks
VP-03-B	Same as afternoon
H_2O-A	Same as afternoon
GE-A	Same as afternoon
GE-AC	50% on screen, 10% @ various depth
	30% on bottom, 10% ~~wdd~~ BT under rocks
H_2O-B	Same as afternoon
Ctrl-D	Same as afternoon
LALL-B	Same as afternoon
Ctrl-C	Same as afternoon
LMF-01-C	Same as afternoon
LD-01-B	Same as afternoon

Tank ID	Observations
LALL-C	Same as afternoon
LMF-02B	Same as afternoon
NP-03-B	Same as afternoon
LALL-D	Same as afternoon
UMF-01-D	Same as afternoon
LMF-02A	Same as afternoon
LD-01-D	20% on screen 10% @ various depths
	40% on bottom 30% under rocks
GE-D	Same as afternoon
DE-A	Same as afternoon

Observations Finished @ 5PM 08/05/10 BT

Observations @ 12:00PM 08/06/10 BT

Tank ID	observations
LD-01-F	40% on screens, 20% @ various depths
	30% on bottom, 10% under rocks
UMF-01-E	60% on screen 10% @ various depth
	25% on bottom 5% under rocks
LALL-A	40% on screen 10% @ various depths
	50% on bottom
LMF-02-C	40% on screen 20% @ various depths
	35% on bottom 5% under rocks
H_2O-D	30% on screen 10% @ various depths
	50% on bottom 10% under rocks
LALL-E	30% on screen 20% @ various depths
	30% on bottom 20% under rocks

Tank ID	Observations
Ctrl-E	50% on screen, 15% on BT @ various depth
	30% on bottom, 5% under rocks
H_2O-E	10% on screen 20% @ various depth
	50% on bottom, 20% under rocks
DE-B	40% on screen, 20% @ various depths
	30% on bottom, 10% under rocks
Ctrl-F	40% on screen, 30% @ various depth
	20% on bottom, 10% under rocks
DE-C	50% on screen, 5% @ various depth
	35% on bottom, 10% under rocks
LD-01-L	45% on screen 10% @ various depths
	30% on bottom 20% under rocks
Ctrl-B	40% on screen 30% @ various depths
	30% on bottom
UMF-01-E	60% on screen, 10% @ various depths
	25% on bottom, 5% under rocks
UMF-01-B	50% on screen, 5% @ various depths
	30% on bottom, 15% under rocks
Ctrl-A	30% on screen, 10% @ various depths
	40% on bottom 20% under rocks
LD-01-E	60% on screen 20% @ various depths
	20% on bottom
UMF-01-A	70% on screen, 5% @ various depths
	20% on bottom, 5% under rocks

Tank ID	Observations
H_2O-C	20% on screen 20% @ various depth 50% on bottom 10% under rocks
LD-01-A	30% on screen 30% @ various depth 30% on bottom 10% under rocks
LMF-02-D	50% on screens 10% @ various depths 25% on bottom 15% under rocks
LALL-F	30% on screen 10% @ various depths ~~40~~ BT 50% on bottom 10% under rocks
GE-B	~~40%~~ ~~50%~~ BT on screens, 10% @ various depths 40% on bottom, 10% under rocks
NP-03-B	40% on screen, 5% @ various depths 45% on bottom, 10% under rocks
H_2O-A	40% on screen, 5% @ various depths 50% on bottom, 5% under rocks
GE-A	60% on screen, 5% @ various depths 25% on bottom, 10% under rocks
GE-C	40% on bottom, 50% on bottom 10% under rocks.
H_2O-B	30% on screen, 10% @ various depths 50% on bottom, 10% under rocks
Ctrl-D	10% on screens, 10% @ various depths 60% on bottom, 20% under rocks
LALL-B	60% on screen, 5% @ various depth 30% on bottom, 5% under rocks

Scale: 1 square = 84

Tank ID	Observations
UMF-01-C	50% on screen, 20% @ various depth 25% on bottom, 5% @ BT under rocks
LD-01-B	40% on screen, 20% @ various depth 30% on bottom, 10% under rocks
LALL-C	30% on screen 10% @ various depth 40% on bottom 20% under rocks
LMF-02-B	50% on screen, 5% @ various depth 35% on bottom, 10% under rocks
NP-03-A	55% on screen, 5% @ various depth 40% on bottom
LALL-D	40% on screen, 10% @ various depths 45% on bottom, 5% under rocks
UMF-01-D	60% on screen, 20% @ various depth 15% on bottom, 5% under rocks
LMF-02-A	40% on screen, 20% @ various depths 30% on bottom, 10% under rocks
LD-01-D	30% on screen 10% @ various depths 40% on bottom 20% under rocks
GE-D	60% on screen 5% @ various depths 30% on bottom 5% under rocks
DE-A	50% on screen 10% @ various depths 30% on bottom 10% under rocks

Observations finished @ 1:50 PM 08/06/10 BT

Scale: 1 square = 85

Observations 6:00 PM 08/06/10 BT

Tank ID	Observations
DE-A	Same as afternoon
GE-D	Same as afternoon
LD-01-D	Same as afternoon
LMF-02-A	Same as afternoon
UMF-01-D	Same as afternoon
LALL-D	Same as afternoon
NP-03-A	Same as afternoon
LMF-02-B	Same as afternoon
LALL-C	Same as afternoon
LD-01-B	Same as afternoon
UMF-01-C	Same as afternoon
Ctrl-C	Same as afternoon
LALL-B	Same as afternoon
Ctrl-D	Same as afternoon
H_2O-B	Same as afternoon
GE-C	Same as afternoon
GE-A	Same as afternoon
H_2O-A	Same as afternoon
NP-03-B	Same as afternoon
GE-B	Same as afternoon
LALL-F	Same as afternoon
LMF-02-D	Same as afternoon
LD-01-A	Same as afternoon
H_2O-C	Same as afternoon

Scale: 1 square = 86

Tank ID	Observations
UMF-01-A	Same as afternoon
LD-01-E	Same as afternoon
Ctrl-A	Same as afternoon
UMF-01-B	Same as afternoon
UMF-01-F	Same as afternoon
Ctrl-B	Same as afternoon
LD-01-C	Same as afternoon
DE-C	Same as afternoon
Ctrl-F	Same as afternoon
DE-B	Same as afternoon
H_2O-E	Same as afternoon
Ctrl-E	Same as afternoon
LALL-E	Same as afternoon
H_2O-D	Same as afternoon
LMF-02-C	Same as afternoon
LALL-A	Same as afternoon
UMF-01-E	Same as afternoon
LD-01-F	Same as afternoon

Observations Finished @ 6:20 PM 08/06/10 BT

Observations @ 2:20 PM 08/07/10 BT

Tank ID	Observations
LD-01-F	30% on screens, 20% @ various depths
	40% on bottom, 10% under rocks
UMF-01-E	60% on screens 5% @ various depth
	30% on bottom 5% under rocks

Scale: 1 square = 87

Tank ID	Observations
LALL-A	45% on screens 5% @ various depths 40% on bottom 10% under rocks
LMF-02-C	60% on screen 10% @ various depth 30% on bottom, 1 swimming belly up on surface.
H_2O-D	30% on screen ~~30%~~ 10% @ various depths ~~50%~~ 50% on bottom 10% under rocks
LALL-B	30% on screen 10% @ various depths 55% on bottom, 5% under rocks
Ctrl-E	60% on screens 10% @ various depths 25% on bottom 5% under rocks
H_2O-E	20% on screen 20% @ various depths 50% on bottom, 10% under rocks
DE-B	35% on screen ~~35%~~ 15% @ various depths 50% on bottom 10% under rocks
Ctrl-F	60% on screen, 10% @ various depth 25% on bottom, 5% under rocks
DE-C	50% on screen, 20% @ various depth 30% on bottom
LD-01-C	60% on screens, 20% @ various depths 15% on bottom, 5% under rocks
Ctrl-B	40% on screen, 10% @ various depth 40% on bottom 10% under rocks
UMF-01-F	65% on screen, 10% @ various depths 15% on bottom, 10% under rocks

Tank ID	Observations
UMF-01-B	35% on screen, 15% @ various depths 40% on bottom, 10% under rocks
Ctrl-A	40% on screens, 5% @ various depth 50% on bottom, 5% under rocks
LD-01-E	50% on screen, 10% @ various depths 40% on bottom
UMF-01-A	70% on screen, 5% @ various depths 20% on bottom, 5% under rocks
H_2O-C	30% on screen, 5% @ various depth 55% on bottom, 10% under rocks
LD-01-A	40% on screen, 10% @ various depth 45% on bottom, 5% under rocks
LMF-02-D	50% on screen, 10% @ various depth 35% on bottom 5% under rocks
LALL-F	25% on screen, 10% @ various depths 55% on bottom, 10% under rocks
GE-B	35% on screen, 5% @ various depth 50% on bottom, 10% under rocks
NP-03-B	50% on screen, 10% @ various depth 35% on bottom, 5% under rocks
H_2O-A	30% on screen, 20% @ various depths 40% on bottom, 10% under rocks
GE-A	75% on screen, 5% @ various depth 20% on bottom

Tank ID	Observations	
GE-C	60% on screen	10% @ various depths
	25% on bottom	5% under rocks
H_2O-B	30% on screen	5% @ various depths under rocks
	45% on bottom	20% under rocks
Ctrl-D	25% on screen	10% @ various depths
	60% on bottom	5% under rocks
LALL-B	70% on screen	10% @ various depths
	20% on bottom	
Ctrl-C	30% on screen	10% @ various depths
	50% on bottom	10% under rocks
LMF-01-C	65% on screen	5% @ various depths
	25% on bottom	5% under rocks
LD-01-B	70% on screen	10% @ various depths
	15% on bottom	5% @ BT under rocks
LALL-C	30% on screen	10% @ various depths
	50% on bottom	10% under rocks
LMF-02-B	40% on screen	10% @ various depths
	45% on bottom	5% under rocks
NP-03-A	75% on screen	5% @ various depths
	15% on bottom	5% under rocks
LALL-D	25% on screen	25% @ various depths
	40% on bottom	10% under rocks
LMF-01-D	50% on screen	20% @ various depths
	20% on bottom	10% under rocks

Scale: 1 square = 90

Tank ID	Observations	
LMF-02-A	60% on screen	10% @ various depths
	25% on bottom	5% under rocks
LD-01-D	40% on screen	10% @ various depths
	40% on bottom	10% under rocks
GE-D	80% on screen	5% @ various depths
	15% on bottom	
DE-A	60% on screen	10% @ various depths
	25% on bottom	5% under rocks

Observations finished at 3:35 PM BT

Observations 08/08/10 at 2:00PM BT

Tank ID	Observations	
LD-01-F	70% on screen,	10% @ various depth
	15% on bottom	5% under rocks
LMF-01-E	60% on screen,	20% @ various depth
	20% on bottom	
LALL-A	80% on screen,	10% @ various depth
	10% on bottom	
LMF-02-C	75% on screen,	15% @ various depth
	5% on bottom	5% under rocks
H_2O-D	10% on screen,	20% @ various depth
	50% on bottom	20% under rocks
LALL-E	50% on screen,	10% @ various depth
	30% on bottom	10% under rocks
Ctrl-E	70% on screen,	5% @ various depth
	26% on bottom	5% under rocks

Scale: 1 square = 91

Tank ID	Observations	
H_2O-E	30% on screen	10% @ various depths
	50% on bottom	10% under rocks
DE-B	70% on screen	20% @ various depth
	10% on bottom	
Ctrl-F	50% on screen	30% @ various depth
	15% on bottom	5% under rocks
DE-C	60% on screen	30% @ various depths
	10% on bottom	
LD-01-C	50% on screen	10% @ various depth
	30% on bottom	10% under rocks
Ctrl-B	60% on screen	20% @ various depths
	15% on bottom	5% under rocks
Umf-01-F	80% on screen	15% @ various depths
	5% on bottom	
Umf-01-B	50% on screen	20% @ various depth
	25% on bottom	5% under rocks
Ctrl-A	40% on screen	30% @ various depth
	20% on bottom	10% under rocks
LD-01-E	50% on screen	20% @ various depth
	20% on bottom	10% under rocks
Umf-01-A	50% on screen	30% @ various depth
	20% on bottom	
H_2O-C	30% on screen	30% @ various depth
	30% on bottom	10% under rocks

Tank ID	Observations	
LD-01-A	60% on screen	25% @ various depths
	10% on bottom	5% under rocks
LMF-02-D	20% on screen	30% @ various depth
	40% on bottom	10% under rocks
LALL-E	30% on screen	20% @ various depth
	45% on bottom	5% under rocks
GE-B	60% on screen	20% @ various depth
	15% on bottom	5% under rocks
NP-03-B	30% on screen	30% @ various depth
	30% on bottom	10% under rocks
H_2O-A	40% on screen	10% @ various depth
	45% on bottom	5% under rocks
GE-A	60% on screen	10% @ various depth
	25% on bottom	5% under rocks
GE-C	50% on screen	20% @ various depth
	30% on bottom ~~20% BT~~ BT	
H_2O-B	30% on screen	10% @ various depth
	50% on bottom	10% under rocks
Ctrl-D	40% on screen	30% @ various depth
	25% on bottom	5% under rocks
LALL-B	70% on screen	10% @ various depth
	15% on bottom	5% under rocks
Ctrl-C	30% on screen	20% @ various depth
	40% on bottom	10% under rocks

Tank ID	Observations
umf-01-C	70% on screen 10% @ various depths
	15% on bottom 5% under rocks
LD-01-B	50% on screen 20% @ various depth
	20% on bottom 10% under rocks
LALL-C	30% on screen 10% @ various depth
	50% on bottom 10% under rocks
LMF-02-B	40% on screen 5% @ various depth
	80% on bottom 15% under rocks
NP-03-A	80% on screen 5% @ various depth
	15% on bottom
LALL-D	30% on screen 50% @ various depth
	15% on bottom 5% under rocks
umf-01-D	80% on screen 10% @ various depth
	10% on bottom
LMF-02-A	60% on screen 30% @ various depth
	10% on bottom
LD-01-D	50% on screen 10% @ various depth
	30% on bottom 10% under rocks
DE-D	40% on screen 30% @ ~~under~~ BT various depth
	25% on bottom 5% under rocks
DE-A	60% on screen 5% @ various depth
	25% on bottom 10% under rocks
	Observations finished @ 3:30 PM
	08/08/10 BT

August 9, 2010 BT

Observations started at 8:45am

Tank ID	Obs
LD-01-F	10% on top, 80% on screens, 10% at bottom
UMF-01-E	5% on top, 5% on bottom, 90% on screens
LALL-A	5% various depths, 10% at top, 5% at bottom, 80% on screens
LMF-02-C	5% at bottom, 10% at top, 85% on screens
H_2O-D	5% at top, 20% on screens, 75% at bottom
LALL-E	5% at top, 10% at bottom, 10% various depths, 75% on screens
CTRL-E	5% at top, 5% various depths, 10% on bottom, 80% on screens
H_2O-E	5% at top, 15% on screens, 10% various depths, 70% on bottom
DE-B	5% at top 15% on bottom, 80% on screens
CTRL-F	15% at top, 20% on bottom, 5% various depths, 60% on screens
DE-C	5% on top, 5% on bottom, 85% on screens, 5% various depths
LD-01-C	5% on top, 10% on bottom, 10% various depths 75% on screens
CTRL-B	5% top, 15% on bottom, 80% on screens
UMF-01-F	20% various depths, 5% top, 75% on screens, 2 on bottom
UMF-01-B	10% on top, 10% on bottom facing spray bars

Tank ID	Obs
	5% swimming on bottom, 75% on screens
CTRL-A	15% at top, 10% various depths, 5% at bottom, 70% on screens
LD-01-E	10% at top, 15% at bottom, 10% various depths, 65% on screens
UMF-01-A	10% on top, 5% on bottom, 25% various depths 60% on screens
H_2O-C	5% at top, 5% various depths, 45% at bottom, 45% on screens
LD-01-A	5% on top, 20% various depths, 5% at bottom, 70% on screens
LMF-02-D	5% on top, 10% on bottom, 85% on screens
LALL-F	25% on bottom, 10% various depths, 65% on screens
Ge-B	10% on bottom, 10% various depths, 80% on screens
NP-03-B	5% on bottom, 5% on top, 90% on screens
H_2O-A	5% on top, 10% various depths, 40% on bottom, 45% on screens,
Ge-A	5% various depths, 5% on bottom, 90% on screens
Ge-C	15% on bottom, 5% on top, 80% on screens
H_2O-B	5% on top, 60% on screens, 35% on bottom
CTRL-D	20% various depths, 5% at top, 75% on screens
LALL-B	5% on top, 5% on bottom, 90% on screens
CTRL-C	10% on bottom, 15% various depths, 10% at top, 65% on screens

Tank ID	Obs
UMF-01-C	5% on bottom, 15% various depths, 80% on screens
LD-01-B	5% on top, 5% on bottom, 10% various depths, 80% on screens
LALL-C	15% on top, 5% on bottom, 20% various depths, 60% on screens
LMF-02-B	5% on top, 20% on bottom, 15% various depths, 60% on screens
NP-03-A	15% on top, 10% on bottom, 75% on screens
LALL-D	15% on bottom, 40% at various depths, 5% on top 40% on screens
UMF-01-D	5% on top, 10% on bottom, 85% on screens
LMF-02-A	10% on bottom, 5% various depths, 5% on top, 80% on screens
LD-01-D	10% on bottom, 5% on top, 10% various depths, 75% on screens
Ge-D	20% on bottom, 5% various depths, 75% on screens
DE-A	5% on top, 10% various depths, 5% on bottom, 80% on screens
Observations	finished at 9:55am August 9, 2010 TT
Observations	started at 2:30pm
Tank ID	Obs
LD-01-F	5% on bottom, 5% various depths, 90% on screen
UMF-01-E	10% on bottom, 5% various depths, 80% on screen
LALL-A	same as 8:45am
LMF-02-C	same as 8:45am
H_2O-D	5% at top, 35% on screens, 10% various depths 50% on bottom
LALL-E	same as 8:45am
CTRL-E	15% on bottom, 5% various depths, 80% on screens

Tank ID	Obs
H_2O-E	Same as 8:45am
DE-B	15% on bottom, 85% on screens
CTRL-F	same as 8:45am
DE-C	5% Top, 5% bottom, 15% various depths, 80% on screens
LD-01-C	Same as 8:45am
CTRL-D	5% on Top, 5% bottom, 10% various depths, 80% on screens
UMF-01-F	30% various depths, 5% at Top. 65% on screens, 5% on bottom
UMF-01-B	10% on top, 30% on bottom, 60% on screens
CTRL-A	15% various depths, 15% on bottom, 5% Top, 65% on screens
LD-01-E	5% on Top, 10% various depths, 10% bottom 75% on screen
UMF-01-A	5% on Top, 15% on bottom, 80% on screen
H_2O-C	Same as 8:45am
LD-01-A	Same as 8:45am
LMF-02-D	Same as 8:45am except one swimming in circles
LALL-F	25% on bottom, 10% various depths, 65% on screen
Ge-B	5% various depths, 10% bottom, 85% on screen
NP-03-B	Same as 8:45am
H_2O-A	5% Top, 30% bottom, 65% on screens
Ge-A	Same as 8:45am
Ge-C	Same as 8:45am

Tank ID	Obs
H_2O-B	Same as 8:45am
CTRL-D	Same as 8:45am
LALL-B	Same as 8:45am
CTRL-C	40% on screens, 20% various depths, 40% Bottom
UMF-01-C	75% on screens, 10% bottom, 15% various depth
LD-01-B	10% on bottom, 10% various depths, 5% Top, 75% on screen
LALL-C	same as 8:45am
LMF-02-B	10% various depths, 30% on screens, 60% bottom
NP-03-A	10% bottom, 5% Top, 85% on screen
LALL-D	30% on screen, 10% various depths, 60% bottom
UMF-01-D	Same as 8:45am
LMF-02-A	Same as 8:45am
LD-01-D	Same as 8:45am
Ge-D	Same as 8:45am
DE-A	5% Top, 5% various depths, 20% bottom 75% on screen

Observations finished at 3:15pm August 9, 2010 TT

August 10, 2010 TT

Observations started at 9:15am

Tank ID	Obs
LD-01-F	5% on bottom, 10% various depths, 85% on screens
UMF-01-E	10% bottom, 10% various depths, 80% on screens
LALL-A	5% bottom, 5% on Top, 20% various depths 70% on screens

Tank ID	Obs
LMF-02-C	5% on bottom, [illegible]% on Top, 90% screens
H_2O-D	10% on Top, 15% on bottom, 70% various depths 10% on screens
LALL-E	10% on Top, 5% on bottom, 40% various depths, 45% on screens
CTRL-E	25% on bottom, [illegible]% on Top, 70% on screens
H_2O-E	15% on bottom, 20% various depths, 5% on Top, 60% on screens
TK-E	5% on Top, 15% various depths, 10% on bottom, 70% on screens
CTRL-F	25% on bottom, 1 swimming in circles at Top, 15% on Top, 60% on screens
DE-C	10% on Top, 5% on bottom, 30% various depths 55% on screen
LD-01-C	5% on bottom, 30% various depths, 65% on screens
CTRL-D	10% on bottom, 5% on Top, 15% various depths, 70% on screens
UMF-01-F	5% on bottom, 1 swimming in circles at Top, 5% on Top, 40% various depths, 50% on screens
UMF-01-B	5% on bottom, 20% various depths, 10% on Top, 65% on screen
CTRL-A	5% on Top, 5% on bottom, 25% various depths, 65% on screen
LD-01-E	5% on Top, 35% various depths, 10% on bottom, 50% on screens

Scale: 1 square = 10

Tank ID	Obs TT
UMF-01-A	UMF-01-A
UMF-01-A	10% on bottom, 30% various depths, 60% on screen
H_2O-C	5% on Top. 25% on screens, 20% various depths 50% on bottom
LD-01-A	1 on bottom laying on its back (alive), 10% on Top, 5% on bottom, 20% various depths, 65% on screens
LMF-02-D	10% on bottom, 30% various depths, 10% on Top, 50% on screens
LALL-F	10% on bottom, 5% on Top, 25% various depths, 60% on screen
GE-B	40% various depths, 10% on bottom, 10% on Top, 40% on screens
NP-03-B	15% on bottom, 10% various depths, 75% on screens
H_2O-A	10% on Top, 60% on screens, 30% on bottom
Ge-A	30% various depths, 5% on Top, 65% on screens
Ge-C	10% on top, 25% on bottom, 10% various depths, 55% on screen
H_2O-B	10% on Top. 20% on bottom, 40% on screens, 30% various depths
CTRL-D	25% on screens, 5% on bottom, 70% various depths
LALL-B	5% on top, 20% on bottom, 40% on screens, 35% various depths
CTRL-C	10% on Top, 20% on bottom, 60% on screens, 10% various depths

Scale: 1 square = 10

Tank ID	Obs
~~UMF-01~~	
UMF-01-C	60% on screens, 30% various depths, 10% on bottom
LD-01-B	30% various depths, 70% on screens
LALL-C	10% on bottom, 30% various depths, 5% on Top, 55% on screens
LMF-02-B	5% on Top, 10% on bottom, 15% various depths 70% on screen
NSP-03-A	10% on Top, 5% on bottom, 40% various depths 45% on screens
LALL-D	5% on Top, 20% on bottom, 45% various depths 30% on screens
UMF-01-D	5% on Top, 5% on bottom, 25% various depths, 65% on screens
LMF-02-A	25% on bottom, 5% on Top, 15% various depths, 55% on screens
LD-01-D	5% on bottom, 5% various depths, 90% on screens
Ge-D	15% on bottom, 5% on Top, 10% various depths, 70% on screens
DE-A	10% on Top, 10% on bottom, 5% various depths, 75% on screen
Observations	finished at 10:10am 08/10/10 TT
Observations	started at 2:15 pm TT
Tank ID	Obs
LD-01-F	same as 9:15am
UMF-01-E	Same as 9:15am

Tank ID	Obs
LALL-A	Same as morning
LMF-02-C	Same as morning
H_2O-D	10% Top, 15% bottom, 25% on screens, 60% various depths
LALL-E	Same as morning
CTRL-E	5% Top, 5% bottom, 20% various depths, 70% on screens
H_2O-E	Same as morning
DEB	50% bottom, 5% Top, 15% various depths, 80% on screens
CTRL-F	Same as morning
DEC	Same as morning
LD-01-C	20% bottom, 10% Top, 30% various depths, 40% on screens
CTRL-B	same as morning
UMF-01-F	Same as morning - I was no longer swimming in circles
UMF-01-B	same as morning
CTRL-A	Same as morning
LD-01-E	5% on Top, 10% on bottom, 10% various depths, 75% on screens
UMF-01-A	Same as morning
H_2O-C	5% on Top, 10% various depths, 40% on screens, 45% on bottom
LD-01-A	same as morning

Tank ID	obs
UMF-02-D	same as morning
LALL-F	30% on bottom, 30% - various depths, 40% on screens
Ge-B	20% various depths, 5% on Top, 20% on bottom, 55% on screens
NP-03-B	5% on Top, 15% on bottom, 80% on screens
H_2O-A	same as morning
Ge-A	20% various depths, 20% on bottom, 60% on screens
Ge-C	10% on Top, 40% on screen, 50% on bottom
H_2O-B	same as morning
CTRL-D	same as morning
LALL-B	same as morning
CTRL-C	same as morning
UMF-01-C	same as morning
LD-01-B	same as morning
LALL-C	same as morning
UMF-02-B	5% at Top, 30% at bottom, 65% on screens
NP-03-A	same as morning
LALL-D	same as morning
UMF-01-D	same as morning
UMF-02-A	same as morning
LD-01-D	20% on bottom, 5% on Top, 20% various depths, 55% on screens
Ge-D	same as morning

Scale: 1 square = 10 4

Tank ID	obs
DE-A	same as morning

Observations finished at 3:10 pm 08/10/10 TT

August 11, 2010 TT

Observations started at 8:40am

Tank ID	obs
LD-01-F	5% on Top, 5% on bottom, 30% various depths, 60% on screens
UMF-01-E	10% on Top, 5% on bottom, 40% various depths, 45% on screens
LALL-A	5% on bottom, 15% on Top, 30% various depths, 50% on screens
UMF-02-C	10% on top, 5% on bottom, 10% various depths, 75% on screens
H_2O-D	10% on bottom, 50% various depths, 40% on screens
LALL-E	10% on bottom, 5% on Top, 60% various depths, 25% on screens
CTRL-C	10% various depths, 50% on bottom, 40% on screens
H_2O-E	15% various depths, 40% on screens, 45% on bottom
DE-B	25% on bottom, 5% on Top, 15% various depths, 60% on screens
CTAL-F	15% on bottom, 5% on Top, 10% various depths, 75% on screens
DE-C	40% on bottom, 15% various depths, 45% on screens
LD-01-C	5% on Top, 1 swimming in circles at Top, 20% various depths 20% at bottom, 55% on screens
CTRL-B	20% on bottom, 5% on Top, 10% various depths, 65% on screens

Scale: 1 square = 10 5

Tank ID	Obs
UMF-01-E	5% on bottom, 10% on Top, 20% various depths, 65% on screens
UMF-01-B	5% at Top, 5% on bottom, 30% various depths, 60% on screens
CTRL-A	5% on Top, 5% on bottom, 30% various depths, 60% on screens
LD-01-E	5% at Top, 25% at bottom, 15% various depths, 55% on screens
UMF-01-A	15% on bottom, 10% various depths, 10% at top, 65% on screens
H_2O-C	5% at Top, 1 swimming in circles at Top, 20% various depths, 40% on screens, 35% at bottom
LD-01-A	10% on Top, 5% on bottom, 20% various depths 65% on screens
LMF-02-D	10% on bottom, 5% on Top, 25% various depths, 60% on screens
LALL-F	20% on bottom, 5% on Top, 20% various depths 55% on screens
Ge-B	30% on bottom, 5% at Top, 30% various depths 35% on screens
NSP-03-B	5% on bottom, 5% on Tops, 20% various depths 70% on screens
H_2O-A	10% on Top, 15% various depths, 60% on screens, 15% on bottom
Ge-A	40% various depths, 60% on screens

Scale: 1 square = 10%

Tank ID	Obs
Ge-C	10% various depths, 30% on bottom, 60% on screens
H_2O-B	30% various depths, 10% on Top, 15% on bottom, 45% on screens
CTRL-D	5% on bottom, 40% various depths 10% on Top 45% on screens
LALL-B	20% on bottom, 20% various depths, 5% on Top, 55% on screens
CTRL-C	20% on bottom, 5% on Top, 15% various depths 60% on screens
UMF-01-C	10% on bottom, 5% on Top, 10% various depths, 75% on screens
LD-01-B	5% on bottom, 3% on Top, 22% various depths, 70% on screens
LALL-C	5% on bottom, 5% on Top, 45% on screens, 45% various depths
UMF-02-B	10% on bottom, 25% various depths, 65% on screens
NSP-03-A	20% on bottom, 10% various depths, 70% on screens
LALL-D	25% on bottom, 15% various depths, 5% on Top, 55% on screens
UMF-01-D	5% on bottom, 20% various depths, 5% on Top, 70% on screens
UMF-02-A	20% on bottom, 5% on Top, 5% various depths, 70% on screens
LD-01-D	15% various depths, 85% on screens
Ge-D	10% on bottom, 20% various depths, 70% on screens
DE-A	10% on bottom, 10% various depths 5% at top, 75% on screens

Scale: 1 square = 10%

Observations finished @ 9:30 am 08/11/2010 TT

08/11/10 Observations began @ 4:15pm TT

Tank ID	Obs
ID-01-F	same as morning
UMF-01-E	same as morning
LALL-A	15% on bottom, 10% on Top, 20% various depths, 55% on screen
LMF-02-C	Same as morning
H_2O-D	30% various depths, 10% bottom, 60% on screen
LALL-E	20% on bottom, 25% various depths, 5% Top, 50% on screen
CTRL-E	20% on bottom, 15% various depths, 5% at Top, 60% on screen
H_2O-E	10% on screen, 20% various depth, 70% at bottom
DE-B	Same as morning
CTRL-F	40% various depth, 30% on screen, 5% at Top, 25% at bottom
DE-C	30% at bottom, 5% at Top, 20% various depth 45% on screen
LD-01-C	Same as morning except none swimming in circles
CTRL-B	30% at bottom, 10% at Top, 20% various depths 40% on screen
UMF-01-F	Same as morning
UMF-01-B	10% on Top, 10% on bottom, 30% various depths, 50% on screen

Scale: 1 square = 108

Tank ID	Obs
CTRL-A	same as morning
LD-01-E	same as morning
UMF-01-A	30% at bottom, 5% at Top, 20% various depths, 45% on screen
H_2O-C	40% various depths, 10% at Top, 20% on bottom, 35% on screen
LD-01-A	10% on Top, 5% on bottom, 20% on screen, 65% various depths
LMF-02-D	Same as morning
LALL-F	40% on bottom, 30% various depths, 5% on Top, 25% on screen
Ge-B	Same as morning
NP-03-B	Same as morning
H_2O-A	Same as morning
Ge-A	5% on bottom, 30% various depths, 65% on screen
Ge-C	Same as morning
H_2O-B	20% various depths, 10% at Top, 15% on bottom, 55% on screen
CTRL-D	5% on bottom, 40% on screen, 55% various depths
~~LALL-B~~ TT	
LALL-B	20% at bottom, 30% on screen, 50% various depths
CTRL-C	Same as morning
UMF-01-C	40% various depths, 5% at bottom, 5% at Top 55% on screen

Scale: 1 square = 109

Tank ID	Obs
LD-01-B	60% various depths, 5% on Top, 5% on bottom, 30% on screen
LALL-C	5% on Top, 5% on bottom, 35% various depths 55% on screen
LMF-02-B	5% various depth, 20% on bottom, 75% on screen
NP-03-A	10% on bottom, 15% various depth, 75% on screen
LALL-D	40% on screen, 20% various depth, 10% on Top. 30% on bottom
UMF-01-D	40% on screen, 20% on bottom, 15% on Top, 25% various depths
LMF-02-A	20% various depths, 10% at bottom, 60% on screen, 10% Top
LD-01-D	10% on bottom, 5% on top, 55% on screens, 35% various depths
Ge-D	same as morning
De-A	10% on bottom, 10% on Top, 30% various depths 50% on screen

Observations finished at 5:10pm TH 08/11/10

TR Aug. 11/10 Sediment Exposure Tank Observations 18:55

Tank ID	Observations
LMF-02-A	-Same as before (16:15)
LD-01-D	-Same as 16:15
Ge-D	-Same as 16:15
DE-A	-Same as 16:15
UMF-01-D	-50% on screen, 20% on bottom, 15% on top, 15% various

Scale: 1 square = 110

Observations Continued

Tank ID	Observations
LALL-D	-Same as 16:15
NP-03-A	60% on screen, 20% on bottom, 20% at various depths
LMF-02-B	-Same as 16:15
LALL-C	-70% on screen, 5% on top, 5% on bottom 20% various
LD-01-B	-50% on screen, 30% various, 10% top, 10% bottom
UMF-01-C	-Same as 16:15
Ctrl-C	-Same as 16:15
LALL-B	-Same as 16:15
Ctrl-D	-Same as 16:15
H_2O-B	-40% on screen, 40% various, 20% bottom
Ge-C	-Same as 16:15
Ge-A	-Same as 16:15
H_2O-A	-Same as 16:15
NP-03-B	-40% screen, 40% various, 10% top, 10% bottom
Ge-B	-Same as 16:15
LALL-F	-Same as 16:15
LMF-02-D	-75% screens, 25% various depths
LD-01-A	-Same as 16:15
H_2O-C	-Same as 16:15
UMF-01-A	-60% screen, 20% various, 10% top, 10% bottom
LD-01-E	-70% screen, 20% various, 10% bottom
Ctrl-A	-Same as 16:15
UMF-01-B	-40% screen, 30% various, 20% bottom, 10% top
UMF-01-F	-50% screen, 30% various, 10% bottom, 10% top

Scale: 1 square = 111

Observations Continued

Tank ID	Observations
Ctrl-B	-35% screen, 35% various, 20% bottom, 10% top
LD-01-C	-40% screens, 30% various, 15% top, 15% bottom
DE-C	-Same as 16:15
Ctrl-F	-Same as 16:15
DE-B	-40% screens, 40% bottom, 10% various, 10% top
H_2O-E	-Same as 16:15
Ctrl-E	-50% screen, 30% bottom, 15% various, 5% top
LALL-E	-40% screen, 30% bottom, 30% various
H_2O-D	-50% bottom, 38% screen, 12% various
LMF-02-C	-Same as 16:15
LALL-A	-Same as 16:15
UMF-01-E	-50% screens, 20% various, 20% bottom, 10% top
LD-01-F	-Same as 16:15

Observation finished at 19:23

August 12, 2010 TT

Observations started at 9:00am

Tank ID	obs
LD-01-F	5% on bottom, 30% various depths, 10% at top 55% on screen
UMF-01-E	5% at top, 30% various depths, 65% on screen
LALL-A	15% on bottom, 10% various depths, 5% Top, 70% on screen
UMF-01-C	5% bottom, 10% at Top, 40% various depths, 45% on screen

Scale: 1 square = 1/2

Tank ID	obs
LMF-02-C	35% various depths, 10% on bottom, 55% on screen
H_2O-D	30% on screen, 25% on bottom 5% on Top, 40% various depths
LALL-E	10% on screen, 25% on bottom, 65% various depths
CTRL-E	10% on bottom, 5% on Top, 40% on screens, 45% various depths
H_2O-E	30% on screens, 20% various depths, 50% on bottom
DE-B	5% at Top, 40% on bottom, 10% various depths, 45% on screen
- CTRL-F	30% on bottom, 10% various depths, 60% on screen
- DEC	10% on bottom, 20% various depths, 70% on screen
LD-01-C	5% at bottom, 20% various depths, 75% on screen
CTRL-B	10% on bottom, 20% various depths, 5% at Top, 65% on screen
UMF-01-F	5% on bottom, 10% on Top, 1 swimming ants back at bottom, 70% various depths, 15% on screen
UMF-01-D	5% on Top, 10% on bottom, 50% various depths, 35% on screen
CTRL-A	60% on screen, 10% on bottom, 30% various depths
LD-01-E	5% at Top, 70% on screen, 5% at bottom, 20% various depths
UMF-01-A	1 swimming in circles at Top, 10% at Top, 30% at bottom, 10% various depths, 50% on screen
H_2O-C	1 swimming in circles at top, 5% at Top, 20% various depths, 60% on screen, 15% at bottom

Scale: 1 square = 1/3

Tank ID	Obs
LD-01-A	10% at Top, 5% at bottom, 40% various depths, 45% on screens
LMF-02-D	5% at bottom, 10% at Top, 25% various depths, 60% on screen
LALL-F	10% at bottom, 1 swimming in circles at Top, 5% at Top, 20% various depths, 65% on screen
Ge-B	10% at Top, 5% at bottom, 30% various depths, 55% on screen
NP-03-B	40% on screen, 10% on bottom, 15% on Top, 35% various depths
H_2O-A	1 swimming in circles at Top, 10% at Top 30% various depths, 5% at bottom, 55% on screens
Ge-A	5% at Top, 20% various depths, 5% bottom, 70% on screens
Ge-C	30% on bottom, 10% on Top, 15% various depths, 45% on screens
H_2O-B	20% on Top, 15% on bottom, 25% on screen, 40% various depths
CTRL-D	10% at bottom, 30% on screen, 60% various depths
LALL-B	20% at bottom, 5% at Top, 20% various depths, 55% on screen
CTRL-C	20% on bottom, 5% at top, 60% on screen, 15% various depths
UMF-01-C	15% at Top, 10% at bottom, 40% on screen, 35% various depths

Tank ID	obs
LD-01-B	15% at bottom, 30% various depths, 55% on screen
LALL-C	5% on Top, 5% on bottom, 40% on screen, 50% various depths
LMF-02-B	20% on bottom, 15% various depths, 5% at Top 60% on screens
NP-03-A	5% Top, 30% bottom, 50% on screens, 15% various depths
LALL-D	20% on screens, 30% on bottom, 50% various depths
UMF-01-D	35% various depths, 20% on bottom, 50% on screen
LMF-02-A	15% on bottom, 10% various depths, 75% on screen
LD-01-D	20% Various depths, 30% on screen, 50% on bottom
Ge-D	30% on bottom, 70% on screen
DE-A	10% on bottom, 10% various depths, 5% Top, 75% on screen

Observations finished at 10:15am 08/12/16 TT

Observations started at 1:30pm 08/12/16 TT

Tank ID	Obs
LD-01-F	same as morning
UMF-01-E	5% at Top, 60% on screen, 30% various depths, 5% at bottom
LALL-A	same as morning
LMF-02-C	same as morning

Tank ID	Obs
H_2O-D	Same as morning
LALL-E	60% on screen, 10% on bottom, 30% various depths
CTRL-E	25% on bottom, 65% on screens, 10% on Top, 10% various depths
H_2O-E	Same as morning
DE-B	Same as morning
CTRL-F	Same as morning
DE-C	Same as morning
LD-01-C	Same as morning
CTRL-B	35% at bottom, 40% at Top, 20% various depths, 40% on screens
UMF-01-F	Same as morning
UMF-01-B	1 swimming in circles at Top, 15% on bottom, 5% on Top, 30% various depths, 50% on screen
CTRL-A	Same as morning
LD-01-B	Same as morning
UMF-01-A	Same as morning
H_2O-C	Same as morning
LD-01-A	20% on screens, 10% at Top, 10% at bottom, 60% various depths
LMF-02-D	5% at Top, 80% on Screen, 10% various depths, 5% at bottom
LALL-F	Same as morning
Ge-B	65% on screen, 15% at bottom, 5% at Top, 15% various depths

Scale: 1 square = 116

Tank ID	Obs
NP-03-B	Same as morning
H_2O-A	Same as morning → 1 still swimming circles
Ge-A	10% on screens, 10% at bottom, 40% at Top, 40% various depths
Ge-C	30% at bottom, 10% at Top, 60% on screens
H_2O-B	Same as morning
CTRL-D	Same as morning
LALL-B	Same as morning
CTRL-C	Same as morning
UMF-01-E	Same as morning
LD-01-B	40% on screen, 50% various depths, 5% at Top, 5% at bottom
LALL-C	Same as morning
UMF-02-B	Same as morning
NP-03-A	Same as morning
LALL-D	50% on screen, 5% at Top, 20% at bottom, 25% various depths
UMF-01-D	Same as morning
LMF-02-A	Same as morning
LD-01-D	60% on screen, 30% various depths, 10% at bottom
Ge-D	Same as morning
DE-A	Same as morning

Observations finished @ 2:15pm 08/12/10 TR

TR 08/12/10

Scale: 1 square = 117

08/12/10 P.M. Observations 14:30

Tank ID	Observations
LD-01-F	-Same as 13:30
UMF-01-E	-50% screen, 30% bottom, 10% top, 10% various
LALL-A	-50% screen, 20% various, 15% top, 15% bottom
LMF-02-C	-Same as 13:30
H_2O-D	-40% screen, 40% bottom, 5% various, 5% top
LALL-E	-50% bottom, 30% screen, 20% various
Ctrl-E	-Same as 13:30
H_2O-E	-same as 13:30
DE-B	-Same as 13:30
Ctrl-F	-same as 13:30
DE-C	-Same as 13:30
LD-01-C	-70% screens, 30% various
Ctrl-B	-same as 13:30
UMF-01-F	-Same as 13:30
UMF-01-B	-45% screen, 50% bottom, 20% various, 10% top
Ctrl-A	-70% screen, 15% bottom, 15% various
LD-01-E	-same as 13:30
UMF-01-A	-Same as 13:30
H_2O-C	-35% screen, 35% bottom, 20% various, 10% top
LD-01-A	-same as 13:30
UMF-01-D	-60% screen, 20% various, 15% bottom, 5% top
LALL-F	-50% bottom, 30% screens, 15% various, 5% top
Gre-B	-50% screen, 20% bottom, 20% various, 10% top
NP-03-B	-50% screen, 30% various, 10% bottom, 10% top

Scale: 1 square = 118

Observations Continued

Tank ID	Observations
H_2O-A	-Same as 13:30
Gre-A	-Same as 13:30
Gre-C	-50% screen, 25% bottom, 20% various, 5% top
H_2O-B	-40% screen, 40% bottom, 10% various, 10% top
Ctrl-D	-Same as 13:30
LALL-B	-60% screen, 20% various, 10% bottom 10% top
Ctrl-C	-Same as 13:30
UMF-01-C	-Same as 13:30
LD-01-B	-Same as 13:30
LALL-C	-60% screen, 15% bottom, 15% various, 10% top
LMF-02-B	-Same as 13:30
NP-03-A	-Same as 13:30
LALL-D	-50% screen, 30% various, 10% bottom 10% top
UMF-01-D	-40% screen, 30% bottom, 20% various, 10% top
LMF-02-A	-same as 13:30
LD-01-D	-Same as 13:30
Gre-D	-Same as 13:30
DE-A	-Same as 13:30

Observation finished @ 20:00 08/12/10

08/12/10 TT

Observations taken at 8:40 am

Tank ID	Obs
LD-01-F	10% on bottom, 30% on screen, 60% various depths
UMF-01-F	15% at top, 20% bottom, 50% various depths, 15% on screen

Scale: 1 square = 119

Tank ID	Obs
LALL-A	15% on bottom, 20% various depths, 65% on screen
LMF-02-C	20% various depths, 15% bottom, 70% on screen
H_2O-D	30% on bottom, 40% various depths, 30% on screen
LALL-E	20% on bottom, 15% various depths, 65% on screen
CTRL-E	20% various depths, 10% Top, 40% bottom 30% on screen
H_2O-E	20% on screen, 5% at Top, 15% various depths 60% on bottom
DE-B	40% on bottom, 20% various depths, 40% on screen
CTRL-F	40% on bottom, 10% various depths, 50% on screen
DE-C	30% on bottom, 10% various depths, 60% on screen
LD-01-C	20% on bottom, 40% various depths, 5% Top 35% on screen
CTRL-B	5% on Top, 10% on bottom, 15% various depths 70% on screen
UMF-01-F	30% various depths, 5% on bottom, 65% on screen
UMF-01-B	40% on bottom, 60% on screen
CTRL-A	20% 80% on bottom, 80% various depths
UMF-01-A	30% on bottom, 20% various depths, 50% on screen
H_2O-C	20% on screen, 30% various depths, 50% on bottom
LD-01-A	40% on bottom, 15% various depths, 45% on screen
LMF-02-D	15% various depths, 40% on bottom, 45% on screen

Scale: 1 square = 120

Tank ID	Obs
LALL-F	10% various depths, 20% on bottom, 70% on screen
Ge-B	10% various depths, 15% on bottom, 75% on screen
NP-03-B	10% on bottom, 20% various depths, 70% on screen
H_2O-A	10% on Top, 30% on bottom, 60% on screen
Ge-A	30% bottom, 15% various depths, 55% on screen
Ge-C	20% on bottom, 10% on Top, 5% various depths, 65% on screen
H_2O-B	1 swimming in circles at Top, 30% various depths, 30% on screen, 40% on bottom
CTRL-D	20% on bottom, 30% various depths, 50% on screen
LALL-B	20% on bottom, 10% various depths, 70% on screen
CTRL-C	30% on screen, 20% on bottom, 50% various depths
UMF-01-C	5% on bottom, 20% on screen, 5% on Tip, 70% various depths
LD-01-B	15% on bottom, 10% various depths, 75% on screen
LALL-C	40% on bottom, 30% various depths, 30% on screen
LMF-02-B LALL-C	30% on bottom, 5% various depths, 65% on screen
NP-03-A	40% on bottom, 5% at top, 55% on screen
LALL-D	30% on bottom, 60% on screen, 10% various depths
UMF-01-D	10% at Top, 30% on bottom, 60% on screen
LMF-02-A	10% bottom, 10% various depths, 80% on screen
LD-01-D	10% on bottom, 5% at Top, 85% on screen
Ge-D	20% on bottom, 5% various depths, 75% on screen
DE-A	40% on Top 10% on screen, 10% on bottom, 40% various depths

Scale: 1 square = 121

Observations finished @ 9:30am 08/13/10 FT

Observations started @ 12:00pm 08/13/10 FT

Tank ID	Obs
LD-01-F	Same as 8:40am
UMF-01-E	70% on screen, 10% at Top, 5% at bottom, 15% various depths
LALL-A	same as 8:40 am
LMF-02-C	Same as 8:40 am
H_2O-D	Same as 8:40am
LALL-E	10% at Top, 60% on screen, 20% on bottom, 10% various depths
CTRL-E	Same as 8:40am
H_2O-E	Same as 8:40am
DE-B	70% on screen, 20% on bottom, 10% various depths
CTRL-F	70% on screen, 15% on bottom, 15% various depths
DE-C	10% various depths, 80% on screen, 10% bottom
LD-01-C	Same as 8:40 am
CTRL-B	40% on screen, 30% on bottom, 30% various depths
UMF-01-F	Same as 8:40am
UMF-01-B	60% on screen, 30% on bottom, 10% various depths
CTRL-A	20% on bottom, 80% on screen
LD-01-E	75% on screen, 5% at bottom, 20% various depths
UMF-01-A	Same as 8:40 am
H_2O-C	Same as 8:40am

Scale: 1 square = 1/2

Tank ID	Obs
LD-01-A	Same as 8:40 am
LMF-02-D	1 is swimming in circles at Top, 10% at Top, 10% at bottom, 10% various depths, 70% on screen
LALL-F	Same as 8:40am
Ge-B	25% various depths, 10% bottom, 65% on screen
NP-03-B	Same as 8:40am
H_2O-A	Same as 8:40am
Ge-A	Same as 8:40am
Ge-C	30% at bottom, 5% at Top, 10% various depths, 55% on screen
H_2O-B	Same as morning => still swimming in circles
CTRL-D	Same as 8:40 am
LALL-B	Same as 8:40 am
CTRL-C	60% on screen, 20% at bottom, 5% Top, 15% various depths
UMF-01-C	5% at bottom, 25% various depths, 5% Top, 65% on screen
LD-01-B	Same as 8:40am
LALL-C	Same as 8:40 am
LMF-02-B	10% on bottom, 10% various depths, 80% on screen
NP-03-A	25% on bottom, 10% various depths, 65% on screen
LALL-D	Same as 8:40am
UMF-01-D	90% on screen, 10% on bottom
LMF-02-A	Same as 8:40 am
LD-01-D	Same as 8:40am

Scale: 1 square = 1/2

Tank ID	Obs
" "	5% on bottom, 20% on top, 10% various depths, 65% on screen
DE-A	5% on top, 10% on bottom, 10% various depths 75% on screen

Observations finished at 12:30pm 08/13/10 FT

08/13/10 Observation 18:00 ~~FT~~

Tank ID	Observations
LD-01-F	50% Screens, 30% various, 20% bottom
UMF-01-E	70% screen, 20% various, 10% bottom
LALL-A	50% screen, 25% various, 25% bottom
LMF-02-C	- Same as 12:00
H_2O-D	- Same as 12:00
LALL-E	- 60% Screen, 20% bottom, 15% various, 5% top
Ctrl-E	- Same as 12:00
H_2O-E	- 50% bottom, 20% screen, 20% various, 10% top
DE-B	- 80% screen, 10% various, 5% top, 5% bottom
Ctrl-F	- 60% screen, 40% bottom
DE-C	- 70% Screen, 10% top, 10% bottom, 10% various
LD-01-C	- Same as 12:00
Ctrl-B	- 60% screens, 20% bottom, 10% top, 10% various
UMF-01-F	- Same as 12:00
UMF-01-B	- 50% screen, 20% bottom, 20% various, 10% top
Ctrl-A	- Same as 12:00
LD-01-E	- Same as 12:00
UMF-01-A	- 70% screens, 20% bottom, 10% top

Scale: 1 square = 124

Observations Continued

Tank ID	Observations
H_2O-C	- 40% bottom, 30% screens, 20% various, 10% top
LD-01-A	- Same as 12:00
LMF-02-D	- 80% screens, 10% bottom, 5% various, 5% top
LALL-F	- 60% screens, 20% bottom, 10% top, 10% various
Ge-B	- 50% Screen, 35% bottom, 15% various
NP-03-B	- 60% screens, 25% bottom, 10% various, 5% top
H_2O-A	- Same as 12:00
Ge-A	- 60% screen, 30% bottom, 5% various, 5% top
Ge-C	- 60% screens, 30% bottom, 5% various, 5% top
H_2O-B	- 50% bottom, 35% screens, 10% various, 5% top
Ctrl-D	- Same as 12:00
LALL-B	- Same as 12:00
Ctrl-C	- same as 12:00
UMF-01-C	- 70% screen, 20% various, 5% bottom, 5% top
LD-01-B	- 60% screens, 20% bottom, 15% various, 5% top
LALL-C	- Same as 12:00
LMF-02-B	- 70% screen, 20% bottom, 5% top, 5% various
NP-03-A	- 60% screens, 30% bottom, 10% various
LALL-D	- Same as 12:00
UMF-01-D	- Same as 12:00
LMF-02-A	- 70% screens, 20% bottom, 5% top, 5% various
LD-01-D	- 60% screens, 20% bottom, 10% top, 10% various
Ge-D	- 70% screen, 20% bottom, 10% various
DE-A	- Same as 12:00 Observation finished @ 18:32 ~~FT~~

Scale: 1 square = 125

08/14/10 Observations 10:15 start TR

Tank ID	Observations
LD-01-F	-50% screen, 30% various, 20% bottom
UMF-01-E	-40% screen, 25% various, 25% bottom, 10% top
LALL-A	-50% screens, 40% bottom, 10% various
LMF-02-C	-80% screen, 20% various, 10% bottom
H_2O-D	-50% bottom, 30% screen, 10% top, 10% various
LALL-E	-40% screen, 40% bottom, 20% various
Ctrl-E	-60% screen, 25% bottom, 15% various
H_2O-E	-50% bottom, 20% various, 30% screen
LALL-E	-40% screen, 40% bottom, 20% various
Ctrl-F	-50% bottom, 40% screen, 10% various
H_2O-E	TR 08/14/10
DE-B	-40% screen, 40% bottom, 20% various
Ctrl-F	TR 08/14/10
DE-C	-60% screen, 20% bottom, 10% various, 10% top
LD-01-C	-30% screen, 30% bottom, 30% various, 10% top
Ctrl-B	-50% bottom, 30% screen, 20% various
UMF-01-F	-50% screen, 50% various
UMF-01-B	-50% screen, 30% various, 10% bottom, 10% top
Ctrl-A	-80% screen, 20% various
LD-01-E	-60% screen, 20% bottom, 20% various
UMF-01-A	-65% screen, 20% bottom, 10% various, 10% top
H_2O-C	-30% bottom, 30% screen, 30% various, 10% top
LD-01-A	-50% various, 20% screen, 20% bottom, 10% top
LMF-02-D	-60% screen, 20% various, 15% bottom, 5% top

Scale: 1 square = 12b

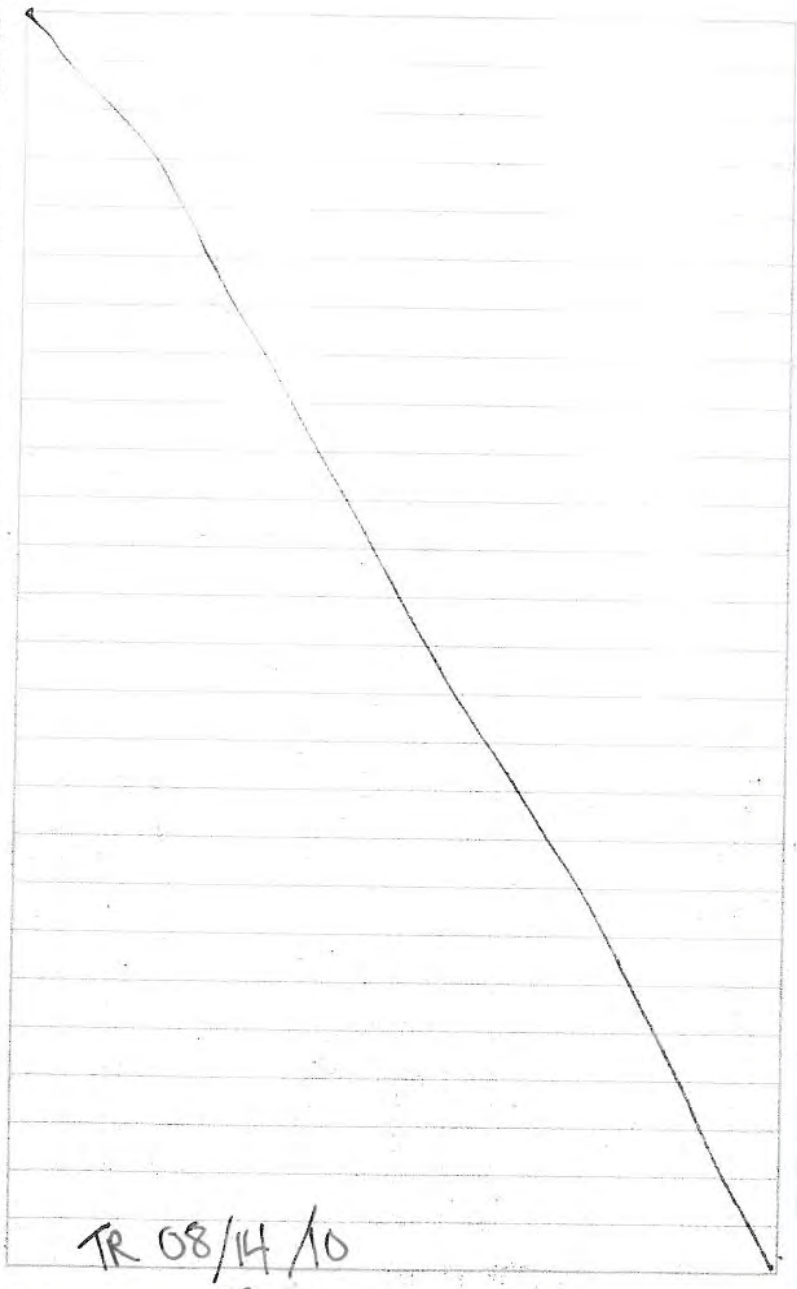
Observations Continued

Tank ID	Observations
LALL-F	-40% bottom, 40% screen, 10% top, 10% various
Gre-B	-70% screen, 20% various, 10% bottom
NP-03-B	-50% screen, 20% various, 15% bottom, 5% top
H_2O-A	-50% screen, 30% bottom, 10% various, 10% top
Gre-A	-55% screen, 55% various
Gre-C	-50% screen, 40% bottom, 10% various
H_2O-B	-40% bottom, 40% screen, 10% top, 10% various
Ctrl-D	-60% screen, 30% various, 10% bottom
LALL-B	-70% screen, 20% bottom, 10% various
Ctrl-C	-50% screen, 30% bottom, 20% various
UMF-01-C	-50% screen, 30% various, 10% bottom, 10% top
LD-01-B	-60% screen, 20% various, 20% bottom
LALL-C	-30% screen, 50% bottom, 20% various
LMF-02-B	-60% screen, 30% bottom, 10% various
NP-03-A	-70% screen, 20% bottom, 10% various
LALL-D	-60% bottom, 20% screen, 10% various, 10% top
UMF-01-D	-60% screen, 40% various
LMF-02-A	-55% screen, 40% bottom, 10% various
LD-01-D	-40% screen, 40% bottom, 20% various
Gre-D	-40% screen, 30% bottom, 20% various, 10% top
DE-A	-70% screen, 10% various, 10% top, 10% bottom

Observation finished @ 10:56 TR 08/14/10

TR 08/14/10

Scale: 1 square = 12b



Scale: 1 square = 128

ENGLISH SYSTEM OF LINEAR MEASURE.

12 inches	=	1 foot
36 inches	=	1 yard
3 feet	=	1 yard
1,760 yards	=	1 mile statute
2,026.8 yards	=	1 mile nautical
5,280 feet	=	1 mile statute
6,080.4 feet	=	1 mile nautical
63,360 inches	=	1 mile statute
72,963 inches	=	1 mile nautical

METRIC TO ENGLISH CONVERSIONS.

1 millimeter	=	millimeter	=	0.0393 inches
10 millimeters	=	centimeter	=	0.3937 inches
10 centimeters	=	decimeter	=	3.937 inches
10 decimeters	=	meter	=	39.37 inches
10 meters	=	decameter	=	32.81 feet
10 decameters	=	hectometer	=	328.1 feet
10 hectometers	=	kilometer	=	0.62 mile
10 kilometers	=	1.0 myriameter	=	6.21 miles

MAP SCALES - ENGLISH AND METRIC.

SCALE	1 INCH = 'S	1 CENTIMETER = 'S
1:5,000	416.67 feet 127.00 meters	164.00 feet 50.00 meters
1:10,000	833.33 feet 254.00 meters	328.10 feet 100.00 meters
1:12,500	1,041.66 feet 317.00 meters	410.10 feet 125.00 meters
1:20,000	1,666.70 feet 508.00 meters	656.20 feet 200.00 meters
1:25,000	2,083.30 feet 635.00 meters	820.20 feet 250.00 meters
1:50,000	4,166.70 feet 1,270.00 meters	1,640.40 feet 500.00 meters
1:63,360	5,280.00 feet 1,609.30 meters	2,078.70 feet 633.60 meters
1:100,000	8,333.30 feet 2,540.00 meters	3,280.80 feet 1,000.00 meters
1:250,000	20,833.00 feet 6,350.00 meters	8,202.00 feet 2,500.00 meters
1:500,000	41,667.00 feet 12,700.00 meters	16,404.00 feet 5,000.00 meters

"Rite in the Rain"®
ALL-WEATHER
UNIVERSAL
No. 374

UCR 2010
Observations
Behaviour
White Sturgeon Sediment
Toxicity Study
Book #2

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ALL-WEATHER WRITING PAPER

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Project _____

CONTENTS

PAGE		DATE

08/14/10 15:45 Observations 末

Tank ID	observations
LD-01-F	-Same as 10:15
UMF-01-E	-Same as 10:15
LALL-A	-40% screen, 40% bottom, 15% various, 5% top
LMF-02-C	-60% screen, 20% bottom, 10% various, 10% top
H_2O-D	-Same as 10:15
LALL-E	-Same as 10:15
Ctrl-E	-Same as 10:15
H_2O-E	-Same as 10:15
DE-B	-70% screen, 25% bottom, 5% various
Ctrl-F	-40% screen, 25% bottom, 25% various, 10% top
DE-C	-70% screen, 15% bottom, 10% various, 5% top
LD-01-C	-50% Screen, 20% bottom, 20% various, 10% top
Ctrl-B	-Same as 10:15
UMF-01-F	-60% screen, 40% various
UMF-01-B	-Same as 10:15
Ctrl-A	-Same as 10:15
LD-01-E	-50% screen, 30% bottom, 20% various
UMF-01-A	-Same as 10:15
H_2O-C	-Same as 10:15
LD-01-A	-50% screen, 40% various, 5% top, 5% bottom
LMF-02-D	-60% screen, 20% various, 20% bottom
LALL-F	-Same as 10:15
Ctrl-B	-50% Screen, 30% bottom, 15% various, 5% top
NP-03-B	-Same as 10:15

Scale: 1 square = _____

Observations Continued

Tank ID	Observations
H_2O-A	-Same as 10:15
Ctr-A	-50% screen, 40% various, 10% bottom
Ctr-C	-50% screen, 40% bottom, 10% various
H_2O-B	- Same as 10:15
Ctrl-D	-Same as 10:15
LALL-B	-Same as 10:15
Ctrl-C	-same as 10:15
UMF-01-C	-40% screen, 30% various, 20% bottom, 10% top
LD-01-B	-60% screen, 20% bottom, 10% various, 10% top
LALL-C	-Same as 10:15
LMF-02-B	-50% screen 20% bottom, 20% various, 10% top
NP-03-A	-50% screen, 40% bottom, 10% various
LALL-D	-Same as 10:15
UMF-01-D	-50% screen, 50% various
LMF-02-A	-40% screen, 30% bottom, 30% various
LD-01-D	-Same as 10:15
Ctr-D	-60% screen, 30% bottom, 10% various
DE-A	-60% screen, 20% bottom, 20% various

Observation Finished @ 16:03 ~~K~~ 08/14/10

08/15/10 09:15 observation ~~K~~

Tank ID	Observations
LD-01-F	-60% screen, 20% bottom, 10% various, 10% top
UMF-01-E	-50% screen, 20% bottom, 20% various, 10% top
LALL-A	-40% screens, 30% various, 25% bottom, 5% top

Scale: 1 square = _____

Observations Continued

Tank ID	Observations
MF-02-C	-60% screen, 20% top, 10% bottom, 10% various
H_2O-D	-30% screen, 30% bottom, 20% various, 20% top
LALL-E	-40% screen, 30% various, 20% bottom, 10% top
Ctrl-E	-40% screen, 40% bottom, 20% various
H_2O-E	-40% bottom, 30% screen, 20% various, 10% top
DE-B	-50% various, 30% screen, 10% bottom, 10% top
Ctrl-F	-40% bottom, 25% screen, 25% various, 10% top
DE-C	-70% screen, 20% bottom, 10% bottoms
LD-01-C	-40% various, 40% screen, 15% bottom, 5% top
Ctrl-B	-50% screen, 20% bottom, 20% various, 10% top
UMF-01-F	-50% various, 30% screen, 15% bottom, 5% top
UMF-01-B	-60% screen, 20% various, 20% bottom
Ctrl-A	-50% screen, 30% various, 20% bottom
LD-01-E	-70% screen, 20% bottom, 10% various
UMF-01-A	-50% screen, 20% bottom, 20% various, 10% top
H_2O-C	-50% bottom, 30% screen, 15% various, 5% top
LD-01-A	-30% screen, 30% various, 30% bottom, 10% top
LMF-02-D	-50% screen, 30% various, 20% bottom, 1 on top swim. invertebrates
LALL-F	-40% bottom, 40% screen, 20% various
Ctr-B	-50% various, 40% screen, 5% bottom, 5% top
NP-03-B	-50% screen, 35% bottom, 15% various, 5% top
H_2O-A	-50% screen, 30% bottom, 10% various, 10% top
Ctr-A	-50% screen, 35% bottom, 15% various, 5% top
Ctr-C	-40% screen, 40% bottom, 15% various, 5% top

Scale: 1 square = _____

Observations Continued

Tank ID	Observations
H_2O-B	-40% bottom, 40% screen, 15% various, 5% top
Ctrl-D	-70% screen, 20% various, 10% bottom
LALL-B	-60% screen, 30% bottom, 10% various
Ctrl-C	-60% screen, 25% bottom, 15% various, 5% top
UMF-01-C	-40% screen, 30% various, 20% bottom, 10% top
LD-01-B	-70% screen, 15% bottom, 10% various, 5% top
LALL-C	-40% bottom, 40% screen, 10% various, 10% top
LMF-02-B	-60% screen, 30% bottom, 10% various
NP-03-A	-50% screen, 30% bottom, 10% various, 10% top
LALL-D	-50% bottom, 30% screen, 20% various
UMF-01-D	-50% screen, 40% various, 10% bottom
LMF-02-A	-50% screen, 30% various, 10% bottom, 10% top
LD-01-D	-50% screen, 25% bottom, 20% various, 5% top
Gre-D	-60% screen, 25% bottom, 10% various, 5% top
DE-A	-70% screen, 20% bottom, 10% various

Observation finished @ 09:51 来 08/15/10

08/15/10 15:30 Observations 来

Observations Continued

Tank ID	Observations
LD-01-F	-Same as 09:15
UMF-01-E	-Same as 09:15
LALL-A	-60% screen, 30% bottom, 10% various
LMF-02-C	-Same as 09:15
H_2O-D	-40% screen, 40% bottom, 10% various, 10% top
LALL-E	-50% bottom, 30% screen, 15% various, 5% top

Scale: 1 square = _____

Observations Continued

Tank ID	Observations
Ctrl-E	-Same as 09:15
H_2O-E	-Same as 09:15
DE-B	-Same as 09:15
Ctrl-F	-40% bottom, 40% screen, 20% various
DE-C	-Same as 09:15
LD-01-C	-60% various, 30% screen, 5% top, 5% bottom
Ctrl-B	-40% screen, 30% bottom, 20% various, 10% top
UMF-01-F	-Same as 09:15
UMF-01-B	-60% various, 30% screen, 10% bottom
Ctrl-A	-70% screen, 15% bottom, 15% various
LD-01-E	-Same as 09:15
UMF-01-A	-Same as 09:15
H_2O-C	-Same as 09:15
LD-01-A	-Same as 09:15
LMF-02-D	-70% screen, 10% bottom, 10% various, 10% top
LALL-F	-60% screen, 15% bottom, 15% various, 10% top
Gre-B	-50% screen, 45% various, 5% bottom
NP-03-B	-60% screen, 20% bottom, 15% various, 5% top
H_2O-A	-Same as 09:15
Gre-A	-40% screen, 40% various, 15% bottom, 5% top
Gre-C	-Same as 09:15
H_2O-B	-Same as 09:15
Ctrl-D	-30% screen, 60% various, 10% bottom
LALL-B	-Same as 09:15

Scale: 1 square = _____

Observations Continued

Tank ID	Observations
Ctrl-C	-40% Screen, 25% various, 25% bottom, 10% top
UMF-01-C	-Same as 09:15
LD-01-B	-60% screen, 20% bottom, 10% various, 10% top
LALL-C	-50% bottom, 25% screen, 15% various, 10% top
LMF-02-B	-Same as 09:15
NP-03-A	-70% screen, 20% bottom, 5% various, 10% top
LALL-D	-60% Screen, 20% bottom, 15% various, 5% top
UMF-01-D	-50% Screen, 30% various, 20% bottom
LMF-02-A	-Same as 09:15
LD-01-D	-Same as 09:15
Ctrl-D	-70% screen, 20% bottom, 5% various, 5% top
DE-A	-same as 09:15

Observation finished @ 16:08 TR 08/15/10

08/16/10 Observations 08:56 TR

Tank ID	Observations
LD-01-F	-70% screen, 20% bottom, 10% various
UMF-01-E	-50% Screen, 25% bottom, 20% various, 5% top
LALL-A	-60% screen, 30% bottom, 10% various
LMF-02-C	-70% screen, 20% bottom, 5% various, 5% top
H_2O-D	-50% screen, 30% bottom, 10% various, 10% top
LALL-E	-50% bottom, 40% screen, 10% various
Ctrl-E	-60% Screen, 30% bottom, 10% various
H_2O-E	-60% bottom, 25% screen, 10% various, 5% top
DE-B	-40% Screen, 40% bottom, 15% various, 10% top

6

Scale: 1 square = _____

Observations Continued

Tank ID	Observations
Ctrl-F	-60% bottom, 40% screen
DE-C	-70% screen, 25% bottom, 5% various
LD-01-C	-70% screen, 20% bottom, 10% various
Ctrl-B	-65% screen, 15% bottom, 15% various, 5% top
UMF-01-F	-50% screen, 50% various
UMF-01-B	-50% screen, 40% various, 10% bottom
Ctrl-A	-70% screen, 30% bottom
LD-01-E	-60% screen, 20% various, 10% bottom, 10% top
UMF-01-A	-60% screen, 20% bottom, 10% various, 10% top
H_2O-C	-50% bottom, 30% screen, 15% various, 5% top
LD-01-A	-60% screen, 20% bottom, 20% various
LMF-02-D	-55% screen, 20% bottom, 20% various, 5% top
LALL-F	-60% screen, 25% bottom, 15% various
Ctrl-B	-60% screen, 25% bottom, 10% various, 5% top
NP-03-B	-70% screen, 10% bottom, 10% various, 10% top
H_2O-A	-70% screen, 20% bottom, 5% various, 5% top
Ctrl-A	-50% screen, 20% bottom, 20% various, 10% top
Ctrl-C	-70% screen, 25% bottom, 5% top
H_2O-B	-50% screen, 30% bottom, 10% various, 10% top
Ctrl-D	-50% screen, 25% various, 25% bottom
LALL-B	-70% screen, 20% bottom, 5% various, 5% top
Ctrl-C	-60% screen, 25% various, 10% bottom, 5% top
UMF-01-E	-50% screen, 35% various, 15% bottom
LD-01-B	-70% screen, 15% various, 10% bottom, 5% top

7

Scale: 1 square = _____

Observations Continued

Tank ID	Observations
LALL-C	-50% bottom, 40% screen, 5% various, 5% top
LMF-02-B	-50% screen, 30% bottom, 10% various, 10% top
NP-03-A	-50% screen, 38% bottom, 12% various
LALL-D	-50% screen, 30% bottom, 15% various, 5% top
UMF-01-D	-60% screen, 20% bottom, 20% various
LMF-02-A	-60% screen, 30% various, 10% bottom
LD-01-D	-40% screen, 30% bottom, 25% various, 5% top
Ge-D	-60% screen, 25% bottom, 10% various, 5% top
DE-A	-70% screen, 20% bottom, 5% various, 5% top

Observation finished @ 09:27 ✱ 08/16/10

Observation started @ 1:00pm TT 08/16/10

Tank ID	Obs
LD-01-F	same as morning
UMF-01-F	60% screen, 10% various, 30% bottom
LALL-A	70% on screen, 30% bottom
LMF-02-C	same as morning
H_2O-D	same as morning
LALL-E	50% on screen, 10% various depths, 40% bottom
CTRL-E	same as morning
H_2O-E	same as morning
DE-B	5% various, 75% screen, 20% bottom
CTRL-F	same as morning
DE-C	same as morning
LD-01-E	same as morning

Scale: 1 square = _____

Tank ID	Obs
CTRL-B	70% screen, 10% various, 20% bottom
UMF-01-F	10% bottom, 45% screen, 45% various
UMF-01-B	same as morning
CTRL-A	same as morning
LD-01-E	same as morning
UMF-01-A	70% screen, 20% bottom, 10% various
H_2O-C	same as morning
LD-01-A	same as morning
LMF-02-D	95% screen, 5% various, 1 swimming in circles at Top
LALL-F	80% screen, 20% bottom
Ge-B	10% various, 70% screen, 20% bottom
NP-03-B	same as morning
H_2O-A	same as morning
Ge-A	70% screen, 20% various, 10% bottom
Ge-C	same as morning
H_2O-B	same as morning
CTRL-D	same as morning
LALL-B	same as morning
CTRL-C	5% various, 20% bottom, 5% Top, 70% screen
UMF-01-C	same as morning
LD-01-B	same as morning
LALL-C	same as morning
LMF-02-B	70% screen, 5% Top, 5% various, 20% bottom
NP-03-A	80% screen, 20% bottom
LALL-D	same as morning

Scale: 1 square = _____

Tank ID	obs
UMF-01-D	80% screen, 20% bottom
LMF-02-A	70% screen, 10% top, 20% bottom
LD-01-D	70% screen, 10% various, 20% bottom
Ge-A	10% various, 10% bottom, 80% screen
DE-A	same as morning

Observations finished @ 1:45pm TT 08116110

Observations started @ 6:30pm TT 08/16/10

Tank ID	obs
LD-01-F	same as morning
UMF-01-E	40% screen, 10% various, 50% bottom
LALL-A	Same as afternoon
LMF-02-C	Same as afternoon
H_2O-D	Same as afternoon
LALL-E	Same as afternoon
CTRL-E	same as afternoon
H_2O-E	same as afternoon
DE-B	Same as afternoon
CTRL-F	60% screen, 30% bottom, 10% various
DE-C	80% screen, 5% bottom, 15% various
LD-01-C	Same as afternoon
CTRL-B	same as afternoon
UMF-01-F	70% screen, 30% various
UMF-01-B	60% screen, 30% various, 10% bottom
CTRL-A	same as morning
LD-01-E	same as afternoon

Scale: 1 square = _____

Tank ID	obs
UMF-01-A	same as afternoon
H_2O-C	70% TT ~~85%~~ screen, 25% bottom, 5% various, 1 swimming in circles at middle depth
LD-01-A	80% screen, 10% various, 10% bottom
LMF-02-D	5% bottom, 10% various, 85% screen
LALL-F	same as afternoon
Ge-B	same as afternoon
NP-03-B	5% various, 95% screen
H_2O-A	same as afternoon
Ge-A	70% screen, 25% bottom, 5% various
Ge-C	Same as afternoon
H_2O-B	same as afternoon
LALL-B	same as afternoon
CTRL-D	same as afternoon
CTRL-C	same as afternoon
UMF-01-C	same as afternoon
LD-01-B	90% screen, 5% various, 5% bottom
LALL-C	30% screen, 70% bottom
LMF-02-B	70% screen, 5% various, 25% bottom
NP-03-A	same as afternoon
LALL-D	same as afternoo
UMF-01-D	80% screen, 20% various
LMF-02-A	Same as afternoon
LD-01-D	same as afternoon
Ge-D	Same as afternoon

Scale: 1 square = _____

Tank ID	obs
DE-A	same as afternoon

Observations finished at 7:10pm TT 08/16/10

08/17/10 08:50 Observations 天

Tank ID	Observations
LD-01-F	-80% screen, 10% bottom, 10% various
UMF-01-E	-60% screen, 20% bottom, 15% various, 5% top
LALL-A	-75% screen, 10% bottom, 10% various, 5% top
LMF-02-C	-70% screen, 20% bottom, 5% various, 5% top
H_2O-D	-40% screen, 40% bottom, 5% various, 5% top
LALL-E	-40% bottom, 35% screen, 15% various, 10% top
Ctrl-E	-40% bottom, 30% screen, 25% various, 5% top
H_2O-E	-60% bottom, 30% screen, 10% various
DE-B	-50% screen, 25% bottom, 20% various, 5% top
Ctrl-F	-50% bottom 25% screen, 20% various, 5% top
DE-C	-70% screen, 20% bottom, 10% various
LD-01-C	-60% screen, 30% bottom, 10% various
Ctrl-B	-60% screen, 20% bottom, 10% various, 10% top
UMF-01-F	-60% screen, 25% various, 10% bottom, 5% top
UMF-01-B	-30% screen, 30% various, 30% bottom, 10% top
Ctrl-A	-70% screen, 20% various, 10% bottom
LD-01-E	-70% screen, 20% bottom, 5% various, 5% top
UMF-01-A	-50% screen, 20% bottom, 20% various, 10% top
H_2O-C	-35% screen, 30% bottom, 30% various, 5% top
LD-01-A	-80% screen, 10% bottom, 10% various
LMF-02-D	-65% screen, 15% bottom, 15% various, 5% top

Scale: 1 square =

Observations Continued

Tank ID	Observations
LALL-F	-70% screen, 10% bottom, 10% various, 10% top
Ge-B	-50% screen, 40% bottom, 10% various
NP-03-B	-70% screen, 15% bottom, 10% various, 5% top
H_2O-A	-40% screen, 30% bottom, 20% various, 10% top
Ge-A	-60% screen, 20% bottom, 20% various
Ge-C	-50% screen, 40% bottom, 10% various
H_2O-B	-40% screen, 30% bottom, 15% various, 15% top
Ctrl-D	-40% screen, 40% bottom, 20% various
LALL-D	-70% screen, 30% bottom
Ctrl-C	-60% screen, 20% bottom, 20% various
UMF-01-C	-50% screen, 25% various, 20% bottom, 5% top
LD-01-B	-75% screen, 10% various, 10% bottom, 5% top
LALL-C	-50% bottom, 40% screen, 10% various
LMF-02-B	-60% screen, 20% bottom, 15% various, 5% top
NP-05-A	-70% screen, 20% various, 10% bottom
LALL-D	-60% screen, 20% bottom, 10% various, 10% top
UMF-01-D	-40% screen, 40% various, 10% bottom, 10% top
LMF-02-A	-70% screen, 15% various, 10% bottom, 5% top
LD-01-D	-40% bottom, 30% screen, 20% various, 10% top
Ge-D	-60% screen, 30% bottom, 10% top
DE-A	-70% screen, 10% bottom, 10% various, 10% top

Observation finished @ 09:24 天 08/17/10

Scale: 1 square =

Observations started @ 1:30pm 08/17/10

Tank ID	Obs
LD-01-F	Same as afternoon
UMF-01-E	80% screen, 10% various, 10% bottom
LALL-A	80% screen, 5% various, 5% Top, 10% bottom
LMF-02-C	Same as morning
H_2O-D	Same as morning
LALL-E	30% bottom, 10% various, 60% screen
CTRL-E	Same as morning
H_2O-E	Same as morning
DE-B	70% screen, 20% bottom, 10% various
CTRL-F	75% screen, 20% bottom, 5% various
DE-C	Same as morning
LD-01-C	Same as morning
CTRL-B	Same as morning
UMF-01-F	Same as morning
UMF-01-B	20% bottom, 10% various, 70% screen
CTRL-A	Same as morning
LD-01-E	Same as morning
UMF-01-A	70% screen, 20% various, 10% bottom
H_2O-C	Swimming in circles near Top, 40% various 20% bottom, 40% screen
LD-01-A	Same as morning
LMF-02-D	Swimming in circles at Top, 80% screen, 10% various 10% bottom
LALL-F	Same as morning

Scale: 1 square = _____

Tank ID	Obs
NR-03-B	Same as morning
H_2O-A	60% screen, 5% Top, 35% bottom
Ge-A	Same as morning
Ge-C	30% bottom, 5% Top, 65% screen
H_2O-B	Same as morning
CTRL-D	80% screen, 20% bottom
LALL-B	Same as morning
CTRL-C	Same as morning
UMF-01-C	70% screen, 20% bottom, 10% various
LD-01-B	Same as morning
LALL-C	Same as morning
LMF-02-B	70% screen, 5% various, 25% bottom
NR-03-A	80% screen, 20% bottom
LALL-D	Same as morning → water is murky/dirty
UMF-01-D	80% screen, 20% bottom
LMF-02-A	10% bottom, 5% various, 85% screen
LD-01-D	70% screen, 20% bottom, 10% various
Ge-D	90% screen, 10% bottom
DE-A	80% screen, 10% various, 10% bottom

Observations finished at 2:15pm TT 08/17/10

Scale: 1 square = _____

Observation started at 5:15pm TT 08/17/10

Tank ID	Obs
LD-01-F	Same as morning
UMF-01-E	Same as afternoon
LALL-A	Same as afternoon
LMF-02-C	Same as afternoon
H_2O-D	Same as afternoon
LALL-E	70% screen, 5% various, 25% bottom
CTRL-E	80% screen, 20% bottom
H_2O-E	Same as afternoon
DE-B	Same as afternoon
CTRL-F	Same as afternoon
DE-C	40% screen, 10% bottom, 50% various
LD-01-C	Same as afternoon
CTRL-B	Same as afternoon
UMF-01-F	Same as afternoon
UMF-01-B	Same as afternoon
CTRL-A	Same as afternoon
LD-01-E	Same as afternoon
UMF-01-A	Same as afternoon
H_2O-C	40% screen, 35% bottom, 10% Top, 20% various
LD-01-A	Same as afternoon
LMF-02-D	90% screen, 10% various
LALL-F	80% screen, 10% bottom, 10% various
Ge-B	90% screen, 10% bottom
NP-03-B	Same as afternoon

16

Scale: 1 square = _____

Tank ID	Obs
H_2O-A	Same as afternoon
Ge-A	Same as afternoon
Ge-C	Same as afternoon
H_2O-B	60% screen, 10% various, 30% bottom
CTRL-D	60% screen, 20% various, 20% bottom
LALL-B	Same as afternoon
CTRL-C	60% screen, 10% bottom, 30% various
UMF-01-C	90% screen, 10% various
LD-01-B	80% screen, 15% bottom, 5% various
LALL-C	15% on screen, 15% various, 70% bottom
LMF-02-B	Same as afternoon
NP-03-A	Same as afternoon
LALL-D	40% screen, 30% various, 40% bottom
UMF-01-D	50% various, 50% screen
LMF-02-A	Same as afternoon
LD-01-D	Same as afternoon
Ge-D	Same as afternoon
DEA	90% screen, 10% bottom

Observations finished at 5:50pm TT 08/17/10

17

Scale: 1 square = _____

08/18/10 09:07 Observation TR

Tank ID	Observations
LD-01-F	-70% screen, 20% bottom, 10% various
UMF-01-E	-70% screen, 20% bottom, 5% various, 5% top
LALL-A	-60% screen, 28% bottom, 10% various, 5% top
LMF-02-C	-80% screen, 20% bottom
H_2O-D	-35% screen, 35% bottom, 20% various, 10% top
LALL-E	-50% screen, 40% bottom, 10% various
Ctrl-E	-50% screen, 40% bottom, 5% various, 5% top
H_2O-E	-45% bottom, 35% screen, 15% various, 5% top
DE-B	-60% screen, 30% bottom, 5% various, 5% top
Ctrl-F	-50% bottom, 45% screen, 5% various
DE-C	-60% screen, 30% bottom, 10% various
LD-01-C	-70% screen, 20% bottom, 5% various, 5% top
Ctrl-B	-60% screen, 25% bottom, 10% various, 5% top
UMF-01-F	-30% screen, 30% various, 30% bottom, 10% top
UMF-01-B	-50% screen, 20% bottom, 20% various, 10% top
Ctrl-A	-60% screen, 40% various
LD-01-E	-50% screen, 35% bottom, 10% various, 5% top
UMF-01-A	-50% screen, 25% various, 20% bottom, 5% top
H_2O-C	-50% screen, 30% bottom, 15% various, 5% top
LD-01-A	-70% screen, 15% bottom, 10% various, 5% top
LMF-02-D	-80% screen, 10% bottom, 5% various, 5% top
LALL-F	-70% screen, 20% bottom, 10% various
Ge-B	-70% screen, 20% bottom, 5% various, 5% top
NP-03-B	-60% screen, 20% bottom, 10% various, 10% top

Scale: 1 square = _____

Observations Continued

Tank ID	Observations
H_2O-A	-60% screen, 25% bottom, 10% various, 5% top
Ge-A	-65% screen, 20% bottom, 10% top, 5% various
Ge-C	-50% screen, 45% bottom, 5% various
H_2O-B	-65% screen, 20% bottom, 10% various, 5% top
Ctrl-D	-60% screen, 20% various, 20% bottom
LALL-B	-60% screen, 20% bottom, 10% various, 10% top
Ctrl-C	-65% screen, 20% bottom, 10% various, 5% top
UMF-01-C	-70% screen, 20% bottom, 10% various
LD-01-B	-70% screen, 15% bottom, 10% various, 5% top
LALL-C	-50% screen, 30% bottom, 10% various, 10% top
LMF-02-B	-60% screen, 15% bottom, 15% various, 10% top
NP-03-A	-60% screen, 30% bottom, 5% various, 5% top
LALL-D	-40% screen, 40% bottom, 10% various, 10% top
UMF-01-D	-75% screen, 25% various
LMF-02-A	-70% screen, 10% bottom, 10% various, 10% top
LD-01-D	-50% screen, 40% bottom, 5% various, 5% top
Ge-D	-70% screen, 30% bottom
DE-A	-90% screen, 10% bottom

Observation finished @ 09:36 TR 08/18/10

TR 08/18/10

Scale: 1 square = _____

08/18/10 TT Observations started at 2:30pm

Tank ID	Obs
LD-01-F	5% bottom, 5% various, 90% screen
LMF-01-E	same as morning
LALL-A	Same as morning
LMF-02-C	Same as morning
H_2O-A	40% screen, 10% various, 50% bottom
LALL-E	15% bottom, 85% screen
CTRL-E	5% Top, 40% screen, 55% bottom
H_2O-E	Same as morning
DE-B	15% bottom, 10% various, 75% screen
CTRL-F	Same as morning
DE-C	Same as morning
LD-01-C	Same as morning
CTRL-B	Same as morning
LMF-01-F	Same as morning
LMF-01-B	Same as morning
CTRL-A	Same as morning
LD-01-E	60% screen, 10% Top, 20% bottom, 10% various
LMF-01-A	70% screen, 20% various, 10% bottom
H_2O-C	50% screen, 40% bottom, 10% various
LD-01-A	Same as morning
LMF-02-D	Same as morning → 1 swimming in circles at Top
LALL-F	Same as morning
GE-B	Same as morning

20

Scale: 1 square = _____

Tank ID	Obs
NP-03-B	85% screen, 10% various, 5% bottom
H_2O-A	10% bottom, 5% Top, 5% various, 85% screen
GE-A	Same as morning
GE-C	Same as morning
H_2O-B	15% bottom, 10% various, 75% screen
CTRL-D	20% various, 80% screen
LALL-B	20% bottom, 80% Top
CTRL-C	5% various, 10% bottom, 85% screen
LMF-01-C	Same as morning
LD-01-B	5% Top, 80% screen, 15% bottom
LALL-C	30% screen, 10% various, 60% bottom
LMF-02-B	Same as morning
NP-03-A	1 swimming in circles at bottom, 80% screen, 20% bottom
LALL-D	50% screen, 5% various, 45% bottom
LMF-01-D	Same as morning
LMF-02-A	95% screen, 5% various
LD-01-D	Same as morning
GE-D	Same as morning
DE-A	same as morning

Observations finished at 3:00pm TT 08/18/10

21

Scale: 1 square = _____

Observations started at 6:30pm 08/18/10 TT

Tank ID	Obs
LD-01-F	Same as afternoon
UMF-01-E	same as afternoon
LALL-A	80% screen, 10% bottom, 10% various
LMF-02-C	Same as afternoon
H_2O-D	Same as afternoon
LALL-E	same as afternoon
CTRL-E	Same as afternoon
H_2O-E	Same as afternoon
DE-B	Same as afternoon
CTRL-F	same as afternoon
DE-C	70% screen, 30% bottom
LD-01-C	Same as afternoon
CTRL-B	same as afternoon → still swimming in circles at top
UMF-01-F	70% screen, 15% bottom, 15% various
UMF-01-B	Same as afternoon
CTRL-A	40% screen, 10% bottom, 50% various
LD-01-E	Same as afternoon
UMF-01-A	same as afternoon
H_2O-C	10% various, 35% bottom, 60% screen
LD-01-A	same as afternoon
LMF-02-D	Same as after → still swimming in circles
LALL-F	Same as afternoon
GE-B	Same as afternoon

Scale: 1 square = _____

Tank ID	Obs
NP-03-B	Same as afternoon
H_2O-A	same as afternoon
GE-A	5% various, 20% bottom, 75% screen
GE-C	80% screen, 20% bottom
H_2O-B	same as afternoon
CTRL-D	60% screen, 20% various, 20% bottom
LALL-B	Same as afternoon
CTRL-C	Same as afternoon
UMF-01-C	Same as afternoon
LD-01-B	same as afternoon
LALL-C	Same as afternoon
LMF-02-B	Same as afternoon
NP-03-A	70% screen, 5% various, 25% bottom,
LALL-D	Same as afternoon
UMF-01-D	100% screen
LMF-02-A	Same as afternoon
LD-01-D	Same as afternoon
GE-D	Same as afternoon
DE-A	Same as afternoon
Finished	at 7:00pm TT 08/18/10

Scale: 1 square = _____

Aug 19, 2010 - observations started at ~~8:45 A.M.~~ 12:00pm TT

Tank ID	obs
LD-01-E	10% bottom, 5% various, 85% screen
UMF-01-E	15% bottom, 85% screen
LALL-A	10% bottom, 15% various, 75% screen
LMF-02-C	10% bottom, 10% various, 80% screen
H_2O-D	20% bottom, 20% various, 60% screen
LALL-E	20% bottom, 10% various, 70% screen
CTRL-E	20% screen, 10% various, 70% bottom
H_2O-E	30% bottom, 10% various 25% bottom, 35% screen
DE-B	20% bottom, 10% various, 70% screen
CTRL-F	30% bottom, 20% various, 50% screen
DE-C	20% bottom, 5% Top, 75% screen
LD-01-C	10% bottom, 5% various, 85% screen, 1 swimming in circles at Top
CTRL-B	20% bottom, 80% screen
UMF-01-F	10% various, 20% bottom, 70% screen
UMF-01-B	10% various, 20% bottom, 70% screen
CTRL-A	40% various, 20% bottom, 40% screen
LD-01-E	30% bottom, 10% various, 60% screen
UMF-01-A	5% Top, 30% bottom, 65% screen
H_2O-C	30% bottom, 20% various, 50% screen
LD-01-A	5% Top, 10% bottom, 85% screen
LMF-02-D	20% bottom, 10% various, 70% screen
LALL-F	10% various, 20% bottom, 70% screen
GE-B	20% bottom, 20% various, 60% screen

Scale: 1 square =

Tank ID	obs
NP-03-B	1 swimming in circles at bottom, 10% bottom, 90% screen
H_2O-A	30% bottom, 70% screen
GE-A	20% bottom, 5% Top, 75% screen
GE-C	30% bottom, 5% various, 65% screen
H_2O-B	60% screen, 30% bottom, 10% various
CTRL-D	40% Top, 20% various, 40% screen
LALL-B	30% bottom, 70% screen
CTRL-C	10% various, 30% bottom, 60% screen
UMF-01-C	10% various, 10% bottom, 80% screen
LD-01-B	20% bottom, 80% screen
LALL-C	10% various, 30% screen, 60% bottom
LMF-01-B	30% bottom, 70% screen
NP-03-A	20% bottom, 10% various, 70% screens
LALL-D	20% bottom, 20% various, 60% screen
UMF-01-D	40% bottom, 60% screen
LMF-02-A	10% various, 5% bottom, 85% screen
LD-01-D	20% various, 10% bottom, 70% screen
GE-D	10% bottom, 5% various, 85% screen
DE-A	20% bottom, 80% screen

Finished @ 12:30 pm TT 08/19/10

Scale: 1 square =

Observations started at 6:00pm on 8/19/10

Tank ID	obs
LD-01-F	Same as 12:00
UMF-01-G	Same as 12:00
LALL-A	Same as 12:00
LMF-02-C	Same as 12:00
H_2O-D	Same as 12:00
LALL-E	Same as 12:00
CTRL-E	Same as 12:00
H_2O-E	Same as 12:00
DE-B	Same as 12:00
CTRL-F	20%. bottom, 80%. screen
DE-C	same as 12:00
LD-01-C	same as 12:00
CTRL-B	Same as 12:00
UMF-01-F	Same as 12:00
UMF-01-B	Same as 12:00
CTRL-A	80%. screen, 20%. bottom
LD-01-E	Same as 12:00
UMF-01-A	5% various, 20%. bottom, 75%. screen
H_2O-C	Same as 12:00
LD-01-A	Same as 12:00
LMF-02-D	Same as 12:00
LALL-F	Same as 12:00
Ge-B	20% bottom, 10%. various, 70%. screen
NP-03-B	10% bottom 10%. various, 80%. screen

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Scale: 1 square = _____

Tank ID	obs
H_2O-A	Same as 12:00
Ge-A	Same as 12:00
Ge-C	30%. bottom, 10%. various, 60%. screen
H_2O-B	Same as 12:00
CTRL-D	100%. screen
LALL-B	Same as 12:00
CTRL-C	Same as 12:00
UMF-01-C	Same as 12:00
LD-01-B	Same as 12:00
LALL-C	Same as 12:00
LMF-02-B	Same as 12:00
NP-03-A	Same as 12:00
LALL-D	Same as 12:00
UMF-01-D	100%. screen
LMF-02-A	Same as 12:00
LD-01-D	Same as 12:00
Ge-D	Same as 12:00
DE-A	same as 12:00

Observation was finished at 6:30 pm on 08/19/10

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Scale: 1 square = _____

08/20/10 TT - Observations started at 18:15pm

Tank ID	Obs
Note: AS = Actively Swimming	
IN = Inactive	
LD-01-F	5% AS at Top, 10% AS at various depths, 5% IN at bottom, 10% AS at bottom, 70% AS on screen
UMF-01-E	20% AS at various depths, 20% AS at bottom, 60% AS on screen
LALL-A	5% swimming at top, 5% AS at bottom, 10% IN at bottom, 80% AS on screen
LMF-02-C	5% IN at bottom, 5% AS at bottom, 5% AS at various depths, 85% AS on screen
H_2O-D	5% AS on bottom, 20% IN at bottom, 5% AS at various depths, 70% AS on screen
LALL-E	5% IN at bottom, 5% AS at bottom, 10% AS at various depths, 80% AS on screen
CTRL-E	20% IN at bottom, 10% AS at various depths, 70% AS on screen
H_2O-E	30% IN at bottom, 10% AS at various depths, 60% AS on screen
DE-B	5% IN at bottom, 5% AS at bottom, 5% AS at various depths, 85% AS on screen
CTRL-F	5% AS at Top, 5% AS at corners, 10% AS at bottom, 30% IN at bottom, 50% AS on screen

Scale: 1 square = _____

Tank ID	Obs
DE-C	20% IN at bottom, 80% AS on screen
LD-01-C	5% AS at bottom, 20% AS at Top, 75% AS on screen
CTRL-B	5% IN at bottom, 10% AS at various depths 5% AS at corners, 80% AS on screen
UMF-01-F	20% AS at bottom, 20% AS at various depths, 10% AS at Top, 50% AS on screen
UMF-01-B	10% AS at top, 20% AS at various depths, 5% IN at bottom, 5% AS at bottom, 60% AS on screen
CTRL-A	40% AS on bottom, 60% AS on screen
LD-01-B	20% AS at various depths, 5% IN at bottom, 5% AS at bottom, 70% AS on screen
UMF-01-A	10% IN at bottom, 5% AS at bottom, 10% AS at various depths, 75% AS on screen
H_2O-C	1 swimming in circles at middle depth, 15% IN at bottom, 30% AS at various depth, 5% AS at bottom, 50% AS on screen
LD-01-A	5% IN at bottom, 5% AS at bottom, 10% AS at various depths, 80% AS on screen
LMF-02-D	1 swimming in circles at Top (very small size compared to other sturgeon) 15% AS at Top, 5% IN at bottom, 10% AS at various depths, 70% AS on screen

Scale: 1 square = _____

Tank ID	Obs
LALL-F	30% IN at bottom, 10% AS at bottom, 5% AS at various depths, 55% AS on screen
Ge-B	20% IN at bottom, 10% AS at various depths 70% AS on screen
[illegible]-B	10% IN at bottom, 5% AS at Top, 85% AS on screen
H_2O-A	10% AS on bottom, 5% AS at top, 10% AS at various depths, 75% AS on screen
[illegible]e-A	20% IN at bottom, 5% AS at various depths, 75% AS on screen
[illegible]e-C	30% IN at bottom, 10% AS at various depths, 60% AS on screen
H_2O-B	10% IN at bottom, 20% AS at various depths, 70% AS on screen
CTRL-D	100% AS at various depths
LALL-B	5% AS at Top, 15% IN at bottom, 5% AS at bottom, 80% AS on screen
CTRL-C	20% IN at bottom, 10% AS at bottom, 10% AS at various depths, 60% AS on screen
UMF-01-C	10% IN at bottom, 10% AS at various depths, 5% AS at bottom, 75% AS on screen
LD-01-B	10% IN at bottom, 5% AS at various depths, 85% AS on screen
LALL-C	10% IN at bottom, 20% AS at bottom, 5% AS at various depths, 65% AS on screen

Scale: 1 square = _____

Tank ID	Obs
UMF-02-B	20% IN at bottom, 5% AS at various depths, 75% AS on screen
NP-03-A	20% IN at bottom, 10% AS at bottom, 80% AS on screen
LALL-D	10% IN at bottom, 5% AS at bottom, 5% AS at various depths, 70% AS on screen
UMF-01-D	20% IN at bottom, 80% AS on screen
UMF-02-A	10% IN at bottom, 10% AS at bottom, 5% AS at various depths, 75% AS on screen
LD-01-D	5% IN at bottom, 10% AS at bottom, 10% AS at various depths, 75% AS on screen
Ge-D	20% IN at bottom, 10% AS at bottom, 70% AS on screen
DE-A	10% IN at bottom, 5% AS at bottom, 85% AS on screen
Observations finished at 1:00pm TT 08/20/10	

Scale: 1 square = _____

08/21/10 TT - Observations started at 9:00am

Tank ID	obs
LD-01-F	50% AS on screen, 10% AS at Top, 10% AS at bottom 30% AS at various depths
UMF-01-E	5% IN at bottom, 40% AS at various depths 15% AS on Top, 40% AS on screen
LALL-A	30% AS on screen, 10% AS on bottom, 5% AS on Top 55% AS on screen
LMF-02-C	20% AS at various depths, 10% AS on bottom 70% AS on screen
H_2O-D	10% IN on bottom, 20% AS on screen, 5% AS on Top, 65% AS at various depths
LALL-E	30% AS at various depths, 70% AS on screen
CTRL-E	5% IN on bottom, 10% AS on bottom, 20% AS at various depths, 65% AS on screen
H_2O-E	5% IN at bottom, 30% AS on bottom, 20% AS at various depths, 45% AS on screen
DE-B	20% AS at bottom, 30% AS at various depths, 50% AS at screen
CTRL-F	20% AS at bottom, 10% AS at various depths, 70% AS on screen
DE-C	10% AS on bottom, 10% AS at various depths, 80% AS on screen
LD-01-C	10% AS on Top, 20% AS at various depths, 10% AS at bottom, 60% AS on screen
CTRL-B	10% AS on bottom, 20% AS at various depths

Scale: 1 square = 32

Tank ID	obs
	70% AS on screen
UMF-01-F	10% AS at bottom, 60% AS at various depths, 30% AS on screen
UMF-01-B	5% IN at bottom, 10% AS at bottom, 20% AS at various depths, 65% AS on screen
CTRL-A	30% AS on screen, 70% AS at various depths
LD-01-E	10% AS at bottom, 0% AS at Top, 10% AS at various depths, 70% AS on screen
UMF-01-A	30% AS at bottom, 30% AS at various depths, 40% AS on screen
H_2O-C	30% AS at bottom, 40% AS at various depths, 30% AS on screen
LD-01-A	10% AS on bottom, 20% AS at various depths, 70% AS on screen
LMF-02-D	10% AS on bottom 20% AS at various depths 70% AS on screen, 1 swimming in circles at Top → smaller size
LALL-F	20% AS at bottom, 5% AS at various depths, 70% AS on screen
GE-B	25% AS at bottom, 20% AS at various depths, 55% AS on screen
NP-03-B	10% AS at bottom, 10% AS at various depths, 80% AS on screen
H_2O-A	10% AS at bottom, 30% AS at various depths, 60% AS on screen

Scale: 1 square = 33

Tank ID	Obs
Ge-A	10% AS on bottom, 5% AS at top, 5% AS at various depths, 80% AS on screen
Ge-C	15% IN at bottom, 10% AS at bottom, 20% AS at various depths, 55% AS on screen
H_2O-B	20% AS on bottom, 40% AS at various depths, 40% AS on screen
CTRL-D	100% AS at various depths
LALL-B	10% AS at bottom, 10% AS at various depths, 80% AS on screen
CTRL-C	20% AS at bottom, 15% AS at various depths 65% AS on screen
UMF-01-C	10% AS on bottom, 30% AS at various depths, 60% AS on screen
LD-01-B	10% AS on bottom, 5% AS at various depths 10% AS at top, 75% AS on screen
LALL-C	60% AS on bottom, 20% AS on screen, 20% AS at various depths
UMF-02-D	5% AS at bottom, 5% IN at bottom, 5% AS at various depths, 85% AS on screen
NP-03-A	30% AS at bottom, 10% AS at top, 15% AS at various depths, 45% AS on screen
LALL-D	20% AS on bottom, 30% AS at various depths 50% AS on screen
UMF-01-D	20% AS at bottom, 80% AS on screen
UMF-02-A	10% AS at bottom, 10% AS at various depths

Scale: 1 square = 34

Tank ID	Obs
	80% AS on screen
LD-01-D	20% AS on screen, 10% AS at bottom, 70% AS at various depths
Ge-D	10% AS at bottom, 30% AS at various depths, 60% AS on screen
DE-A	10% AS at bottom, 5% AS at various depths, 85% AS on screen

Observations finished at 9:40am TF 08/21/10

Scale: 1 square = 35

08/22/10 - TT

Observations started at 9:30 am

Tank ID	Obs
LD-01-F	5% AS at Top, 10% AS at various depths, 5% AS at bottom, 80% AS on screen
UMF-01-E	10% AS at various depths, 20% AS at bottom, 70% AS on screen
LALL-A	5% IN at bottom, 10% AS at bottom, 5% AS various depths, 20% AS at Top, 60% AS on screen
LMF-02-C	10% AS at bottom, 20% AS various depths, 70% AS on screen
H_2O-D	10% AS on bottom, 40% AS various depths, 50% AS on screen
LALL-E	20% AS at bottom, 60% AS various depths, 20% AS on screen
CTRL-E	10% AS on bottom, 40% AS various depths, 50% AS on screen

Note → Various = various depths

H_2O-E	15% AS at bottom, 30% AS on screen, 55% AS various
DE-B	20% AS Top, 10% AS bottom, 10% AS various, 60% AS screens
CTRL-F	20% AS bottom, 20% AS Top, 20% AS various, 40% AS screens
DE-[illegible]	30% AS Top, 10% AS bottom, 60% AS screens
LD-01-C	20% AS various, 80% AS screens

Scale: 1 square = 36

Tank ID	Obs
CTRL-B	40% AS bottom, 20% AS various, 10% AS Top, 30% AS screens
UMF-01-F	20% AS bottom, 30% AS various, 50% AS screens
UMF-01-B	20% AS various, 10% AS bottom, 70% AS screens
CTRL-A	20% AS Top, 20% AS screen, 60% AS bottom
LD-01-E	20% AS bottom, 10% AS Top, 5% AS various, 65% AS screen
UMF-01-A	20% AS Top, 10% AS various, 40% AS bottom, 30% AS screens
H_2O-C	10% IN bottom, 30% AS bottom, 10% AS various, 50% AS screen
LD-01-A	60% AS bottom, 40% AS screen
LMF-02-D	20% AS bottom, 5% AS at various, 75% AS on screen
LALL-F	5% IN bottom, 30% AS bottom, 10% AS various, 55% AS screen
Ge-B	5% IN bottom, 40% AS bottom, 10% AS various, 45% AS screen
MP-03-B	5% IN bottom, 20% AS bottom, 10% AS various, 65% AS screen
H_2O-A	5% IN bottom, 60% AS bottom, 10% AS various, 25% AS screen
Ge-A	10% IN bottom, 20% AS bottom, 20% AS various, 50% AS screen
Ge-C	10% IN bottom, 50% AS bottom, 10% AS various, 30% AS screen

Scale: 1 square = 37

Tank ID	obs
H_2O-B	60% AS bottom, 20% AS various, 20% AS screen
CTRL-D	20% IN bottom, 40% AS bottom, 40% AS screen
LALL-B	60% AS bottom, 5% AS various, 35% AS screen
CTRL-C	5% IN bottom, 20% AS screen, 10% AS various 65% AS bottom
UMF-01-C	30% AS bottom, 10% AS various, 60% AS screen
LD-01-B	30% AS bottom, 10% AS various, 60% AS screen
LALL-C	5% IN bottom, 20% AS bottom, 35% AS screen, 45% AS various
UMF-02-B	5% IN bottom, 30% AS bottom, 10% AS various, 55% AS screen
NP-03-A	10% AS various, 50% AS bottom, 40% AS screen
LALL-D	20% AS bottom, 20% AS various, 60% AS screen
UMF-01-D	20% AS various, 80% AS screen
UMF-02-A	1 swimming in loops at middle depth, 10% AS bottom, 20% AS various 70% AS screen
LD-01-D	10% AS bottom, 10% AS Top, 15% AS various, 65% AS screen
Ge-D	5% IN bottom, 20% AS Top, 20% AS bottom, 10% AS various, 45% AS screen
DE-A	5% AS bottom, 15% AS various, 80% AS screen

Observations finished at 10:15am TT 08/22/10

Scale: 1 square = 38

08/23/10 TT - Observations started at 9:45am

Tank ID	obs
LD-01-F	10% AS Bottom, 20% AS various, 70% AS on screen
UMF-01-E	30% AS bottom, 40% AS various, 30% AS screen
LALL-A	10% AS Top, 0% AS Bottom, 10% AS various, 70% AS on screen
UMF-02-C	10% AS Bottom, 10% AS various, 80% AS on screen
H_2O-D	5% IN Bottom, 30% AS at bottom, 30% AS screen 35% AS various
LALL-E	20% AS Bottom, 10% AS various, 70% AS screen
CTRL-E	10% AS Bottom, 20% AS various, 70% AS screen
H_2O-E	20% AS bottom, 20% AS screen, 60% AS various,
DE-B	30% AS bottom, 20% AS various, 50% AS screen
CTRL-F	30% AS screen, 10% AS Top, 30% AS various, 30% bottom
DE-C	10% AS Top, 20% AS screen, 20% AS various, 30% AS bottom
LD-01-C	5% AS Bottom, 5% AS various, 90% AS screen 20% AS bottom 10% various, 70% AS screen
UMF-01-F	20% AS Bottom, 10% AS various, 70% AS screen
UMF-01-B	10% AS Bottom, 5% AS various, 85% AS screen
CTRL-A	100% AS Bottom, 20% AS Bottom, 10% AS various, 70% AS screen
UMF-01-A	10% AS Bottom, 30% AS various, 60% AS screen
H_2O-C	30% AS bottom, 40% AS screen, 35% AS various
LD-01-A	30% AS various, 20% AS bottom 5% AS screen

Scale: 1 square = 39

Tank ID	Obs
NP-03-A	10% AS Bottom, 10% AS various, 80% AS screens
LALL-D	5% AS Bottom, 30% AS various, 65% AS screen
UMF-01-D	10% IN Bottom, 10% AS various, 80% AS screen
LMF-02-A	20% AS Bottom, 20% AS various, 60% AS screen
LD-01-D	10% AS Bottom, 10% AS various, 80% AS screen
Ge-D	30% AS various, 20% AS Bottom, 50% AS screen
DE-A	10% AS Bottom, 90% AS screen
Finished	@ 10:30Am TT 08/23/10
Observations	started at 2:45pm TT 08/23/10
Tank ID	Obs
LD-01-F	30% AS Bottom, 70% AS screen
UMF-01-E	20% AS Bottom, 10% AS various, 70% AS screen
LALL-A	10% AS various, 20% AS screen. 70% AS Bottom
LMF-02-C	20% AS Bottom, 20% AS various, 60% AS screen
H_2O-D	5% IN Bottom, 10% AS various, 30% AS Bottom, 55% AS screen
LALL-E	5% IN Bottom, 30% AS Bottom, 10% AS various, 55% AS screen
CTRL-E	5% IN Bottom, 20% AS Bottom, 75% AS screen
H_2O-E	5% IN Bottom, 30% AS various, 20% AS Bottom, 10% AS Top, 35% AS screen
DE-B	20% AS Bottom, 20% AS various, 60% AS screen
CTRL-F	10% AS Top 30% AS Bottom, 20% AS various, 40% AS screen

Tank ID	Obs
NP-03-B	20% AS Bottom, 40% AS various, 5% AS Top, 35% AS screen
H_2O-A	10% AS Bottom, 5% IN Bottom, 20% AS various, 65% AS screen
Ge-A	20% AS Bottom, 10% AS various, 10% AS Top, 60% AS screen
Ge-C	40% AS Bottom, 10% AS various, 50% AS screen
H_2O-B	5% IN Bottom, 20% AS Bottom, 30% AS screen 45% AS various
CTRL-D	30% AS screen, 10% IN Bottom, 60% AS various
LALL-B	5% IN Bottom, 20% AS Bottom, 10% AS various, 65% AS screen
CTRL-C	20% AS Bottom, 10% AS various, 70% AS, screen
UMF-01-C	10% AS Bottom, 30% AS various, 60% AS screen
LD-01-B	20% AS Bottom, 20% AS various, 60% AS screen
LALL-C	30% AS Bottom, 20% AS various, 50% AS screen
LMF-02-B	10% AS Bottom, 40% AS various, 50% AS, screen

Tank ID	obs
DE-C	40% AS various, 20% IN Bottom, 60% AS screen
LD-01-C	20% AS various, 10% AS Bottom, 70% AS screen
CTRL-D	20% AS bottom, 80% AS screen
UMF-01-C	5% IN Bottom, 10% AS various, 85% AS screen
UMF-01-B	10% AS Bottom, 10% AS various, 80% AS screen
CTRL-A	60% IN Bottom, 20% AS various, 20% AS screen
LD-01-E	20% AS bottom, 40% AS various, 40% AS screen
UMF-01-A	10% IN Bottom, 15% AS various, 85% AS screen
H_2O-C	5% IN Bottom, 20% AS screen, 30% AS Bottom, 45% AS various
LD-01-A	30% AS various, 20% AS Bottom, 50% AS screen
LMF-02-D	5% IN Bottom, 20% AS various, 20% AS Bottom 55% AS screen
LALL-F	5% IN Bottom, 20% AS Bottom, 20% AS various, 55% AS screen
Ge-B	10% IN Bottom, 25% AS Bottom, 10% AS various, 55% AS screen
NP-03-B	20% AS Bottom, 10% AS various, 70% AS screen
H_2O-A	20% AS Bottom, 30% AS various, 50% AS screens
Ge-A	5% IN Bottom, 20% AS Bottom, 5% AS various 70% AS screen
Ge-C	20% IN Bottom, 10% AS Bottom, 10% AS various, 60% AS screen
H_2O-B	5% IN Bottom, 30% AS screen, 20% AS

Scale: 1 square = 42

Tank ID	obs
	Bottom, 10% AS Top, 25% AS various
CTRL-D	10% AS Bottom, 30% AS screen, 60% AS various
LALL-B	10% IN Bottom, 10% AS Top, 10% AS Bottom, 70% AS screen
CTRL-C	5% IN Bottom, 20% AS Bottom, 10% AS various, 65% AS screen
UMF-01-C	15% AS Bottom, 10% AS various, 75% AS screen
LD-01-B	10% AS Bottom, 10% AS various, 80% AS screen.
LALL-C	20% AS Bottom, 10% AS various, 70% AS screen
LMF-02-B	10% AS Bottom, 5% AS various, 85% AS screen
NP-03-A	5% AS various, 40% AS bottom, 55% AS screen
LALL-D	20% AS Bottom, 10% AS various, 70% AS screen
UMF-01-D	10% IN Bottom, 5% AS Top, 10% AS various, 75% AS screen
LMF-02-A	10% AS bottom, 5% AS Top, 10% AS various, 75% AS screen
LD-01-D	10% AS Bottom, 5% AS various, 85% AS screen
Ge-D	15% AS Bottom, 5% AS various, 80% AS screen
DE-A	10% AS Bottom, 5% AS various, 85% AS screen
Finished	4:05 pm TT 08/23/10

Scale: 1 square = 43

Observations at system, TT 08/24/10:

Tank ID	Obs
LD-01-F	20% AS various, 10% AS Bottom, 70% AS screen
UMF-01-E	30% AS Bottom, 20% AS various, 5% AS Top, 45% AS screen
LACL-A	20% AS Bottom, 10% AS Top, 15% AS various, 55% AS screen
UMF-02-C	20% AS Bottom, 10% AS various, 70% AS screen
H_2O-D	10% IN Bottom, 40% AS Bottom, 20% AS various 30% AS screen
LACL-E	20% AS Bottom, 5% AS Top, 10% AS various, 65% AS screen
CTRL-E	10% IN Bottom, 10% AS Bottom, 80% AS screen
H_2O-E	40% AS Bottom, 10% AS various, 50% AS screen
DE-B	5% IN Bottom, 30% AS Bottom, 20% AS various, 45% AS screen
CTRL-F	5% AS Top, 30% AS Bottom, 20% AS screen, 45% AS various
DE-C	5% AS Top, 15% AS various, 40% AS screen, 40% AS Bottom
LD-01-C	30% AS screen, 20% AS various, 50% AS Bottom
CTRL-B	40% AS screen, 20% AS various, 40% AS Bottom
UMF-01-F	60% AS screen, 15% AS various, 25% AS Bottom
UMF-01-B	20% AS Bottom, 10% AS various, 70% AS screen

Scale: 1 square = 44

Tank ID	obs
CTRL-A	100% AS Bottom
LD-01-E	30% AS Bottom, 20% AS various, 50% AS screen.
UMF-01-A	5% IN Bottom, 30% AS Bottom, 20% AS various, 50% AS screen
H_2O-C	30% AS screen, 60% AS Bottom, 10% AS various
LD-01-A	20% AS Bottom, 30% AS various, 60% AS screen
UMF-02-D	20% AS Bottom, 10% AS various, 70% AS screen
LACL-F	60% AS Bottom, 40% AS screen
GE-B	10% IN Bottom, 40% AS Bottom, 50% AS screen
NP-CB-B	20% AS Bottom, 5% AS Top, 5% AS various, 70% AS screen
H_2O-A	20% AS screen, 30% AS various, 50% AS Bottom
GE-A	10% IN Bottom, 20% AS Bottom, 10% AS various, 60% AS screen
GE-C	30% AS Bottom, 20% IN Bottom, 40% AS screen, 10% AS various
H_2O-B	30% AS screen, 10% AS Top, 10% IN Bottom, 50% AS Bottom
CTRL-D	20% IN Bottom, 40% AS various, 40% AS screen
LACL-B	20% IN Bottom, 40% AS Bottom, 30% AS screen, 10% AS various
CTRL-C	20% AS screen, 30% AS various, 10% IN Bottom, 40% AS Bottom
UMF-01-C	20% AS various, 10% AS Bottom, 70% AS screen
LD-01-D	10% AS Bottom, 20% AS various, 70% AS screen

Scale: 1 square = 45

Tank ID	obs
LALL-C	10% IN Bottom, 30% AS screen, 30% AS various 30% AS Bottom
UMF-02-B	40% IN Bottom, 30% AS various 30% AS screen
NP-03-A	10% IN Bottom, 15% AS Top, 25% AS Bottom 50% AS screen
LALL-D	5% IN Bottom, 20% AS Bottom, 10% AS various 65% AS screen
UMF-01-D	40% IN Bottom 10% AS various, 50% AS screen
LMF-02-A	30% AS various on side, 10% AS Top, 10% AS Bottom, 50% AS screen
LD-01-D	20% AS Bottom, 20% AS various 60% AS screen
Ge-D	10% IN Bottom, 20% AS various, 70% AS screen
DE-A	10% AS Top, 10% AS various, 5% AS Bottom, 75% AS screen

Finished @ 9:30 am TT 08/24/10

Scale: 1 square = 46

Observations started at 1:30pm TT 08/24/10

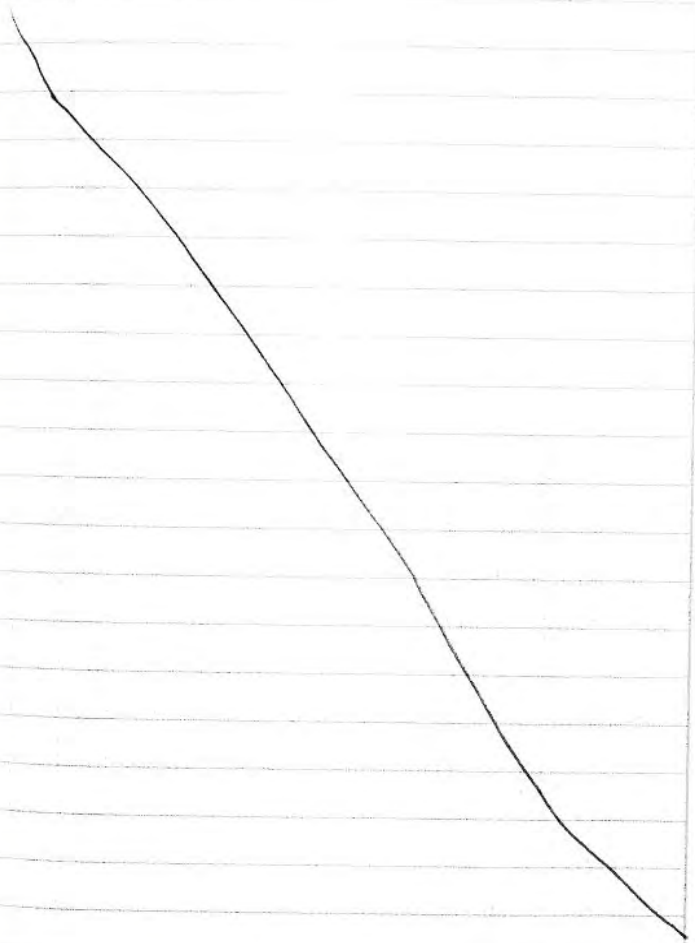
Tank ID	obs
LD-01-F	Same as morning
UMF-01-E	Same as morning
LALL-A	20% IN Bottom, 10% AS Bottom, 10% AS Top 60% AS screen
LMF-02-C	Same as morning
H_2O D	20% IN Bottom, 10% AS Bottom, 10% AS various, 60% AS screen
LALL-E	Same as morning
CTRL-E	Same as morning
H_2O-E	Same as morning
DE-B	10% IN Bottom, 30% AS Bottom, 60% AS screen
CTRL-F	Same as morning
DE-C	5% AS Top, 10% AS various, 10% AS Bottom, 75% AS screen
LD-01-C	Same as morning
CTRL-B	Same as morning
UMF-01-F	Same as morning
UMF-01-B	Same as morning
CTRL-A	40% AS screen, 60% AS Bottom
LD-01-E	Same as morning
UMF-01-A	5% IN Bottom, 20% AS Bottom, 5% AS various, 70% AS screen
H_2O-C	Same as morning
LD-01-A	10% AS Bottom, 10% AS various, 80% AS screen
LMF-02-D	10% IN Bottom, 10% AS various, 80% AS screen

Scale: 1 square = 47

Tank ID	Obs
HLC-F	60% AS Bottom, 15% AS various, 25% AS screen
Ge-B	Same as morning
MF-03-B	Same as morning
H_2O-A	Same as morning
Ge-A	0% IN Bottom, 5% AS Bottom, 10% AS various 75% AS screen
Ge-C	Same as morning
H_2O-B	40% AS Bottom, 15% AS various, 45% AS screen
TRL-D	40% IN Bottom, 20% AS various, 50% AS screen
LALL-B	Same as morning
CTRL-C	10% IN Bottom, 20% AS Bottom, 10% AS various, 55% AS screen
OMF-01-C	5% AS various, 10% AS Bottom, 85% AS screen
LD-01-B	Same as morning
LALL-C	10% AS various, 40% AS screen, 50% AS Bottom
LMF-02-B	5% IN Bottom, 10% AS Bottom, 5% AS Top, 80% AS screen
NP-03-A	20% AS Bottom, 80% AS screen
LALL-D	Same as morning
OMF-01-D	20% AS Bottom, 80% AS screen
LMF-02-A	20% AS Bottom, 10% AS various, 70% AS screen
LD-01-D	10% AS Bottom, 5% AS various, 85% AS screen

Scale: 1 square = 48

Tank ID	Obs
Ge-D	Same as morning
DE-A	10% AS various, 10% AS Bottom, 80% AS screen
Finished	2:00pm 08/24/10 MT



Scale: 1 square = 49

Observations started at 8:45am TT 08/25/10

Tank ID	obs
LD-01-F	20% AS various, 10% AS Bottom, 70% AS screen
UMF-01-E	30% AS various, 25% AS Bottom, 50% AS screen
LALL-A	5% IN Bottom 10% AS Bottom, 20% AS Top, 25% AS various, 40% AS screen
LMF-02-C	20% AS various, 10% AS Bottom, 70% AS screen
H_2O-D	10% IN Bottom, 20% AS Bottom, 40% AS various, 30% AS screen
LALL-E	20% AS Bottom, 5% AS various, 75% AS screen
CTRL-E	5% IN Bottom, 20% AS Bottom, 10% AS various, 5% AS Top, 60% AS screen
H_2O-E	5% IN Bottom, 20% AS Bottom, 30% AS various, 45% AS screen
DE-B	30% AS Bottom, 15% AS various, 55% AS screen
CTRL-F	60% AS Bottom, 10% AS screen, 30% AS various
DE-C	20% AS various, 10% AS Bottom, 70% AS screen
LD-01-C	10% AS Bottom, 5% AS Top 85% AS screen
CTRL-B	5% AS Top 20% AS various, 10% AS Bottom 65% AS screen
UMF-01-F	5% AS Top, 30% AS Bottom, 10% AS various, 65% AS screen
UMF-01-B	20% AS Bottom 10% AS various, 70% AS screen
CTRL-A	20% AS screen, 80% AS Bottom
LD-01-G	60% AS Bottom, 10% AS various, 30% AS screen
UMF-01-A	20% AS Bottom, 20% AS various, 5% AS Top, 55% AS screen

Scale: 1 square = 50

Tank ID	obs
H_2O-C	60% AS Bottom, 5% AS Top, 15% AS various, 20% AS screen
LD-01-A	20% AS Bottom, 10% AS various, 70% AS screen
LMF-02-D	20% AS Bottom 10% AS various, 70% AS screen, 1 swimming in circles at middle depth
LALL-F	10% AS various depths, 30% AS Bottom, 60% AS screen
GE-B	30% AS Bottom, 10% AS various, 60% AS screen, Bottom TT
NP-03-B	20% AS screen, 10% AS various, 70% AS screen
H_2O-A	30% AS Bottom TT screen, 20% AS various, 50% AS screen
GE-A	20% AS Bottom 20% AS various, 60% AS screen
GE-C	15% AS Bottom, 5% IN Bottom, 10% AS various, 70% AS screen
H_2O-B	20% AS Bottom 40% AS various, 40% AS screen
CTRL-D	10% AS Bottom, 10% AS screen, 80% AS various
LALL-B	5% IN Bottom, 20% AS Bottom, 5% AS Top, 70% AS screen
CTRL-C	40% AS Bottom 10% AS various, 5% AS Top, 45% AS screen
UMF-01-C	50% AS various, 50% AS screen
LD-01-B	10% AS Bottom, 20% AS various, 70% AS screen
LALL-C	20% AS screen, 10% AS various, 70% AS Bottom
LMF-02-B	5% IN Bottom, 10% AS various, 60% AS Bottom, 25% AS screen
NP-03-A	40% AS Bottom, 10% AS various, 50% AS screen Bottom
LALL-D	5% IN Bottom, 20% AS various, 30% AS Bottom, 45% AS screen
UMF-01-D	20% AS Bottom, 80% AS screen

Scale: 1 square = 51

Tank ID	obs
LMF-02-A	20% AS Bottom, 20% AS various, 60% AS screen
LD-01-D	10% AS various, 20% AS Bottom 70% AS screen
Ge-D	5% AS Top, 30% AS Bottom, 65% AS screen
DE-A	20% AS Bottom, 10% AS various, 70% AS screen

Observations finished @ 9:30am TT 08/25/10

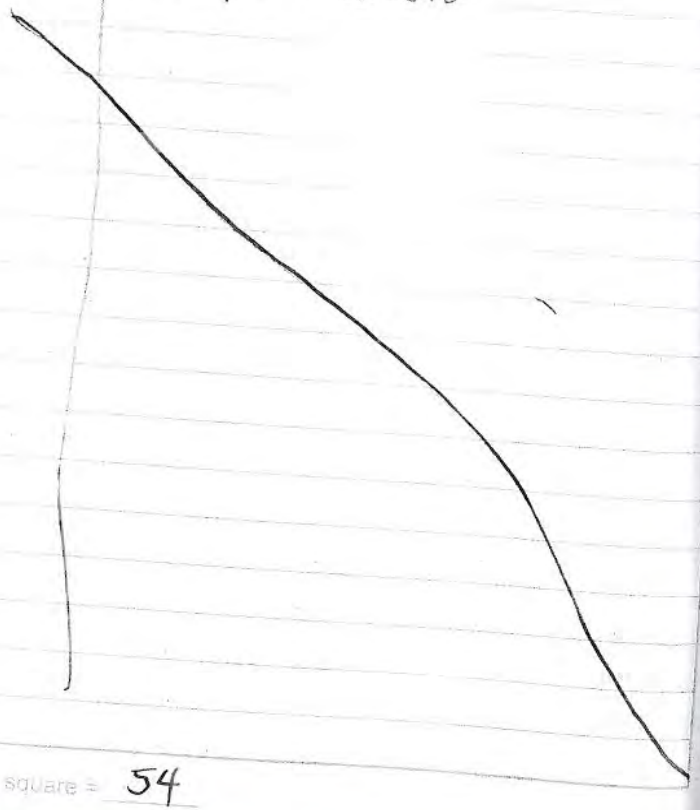
Observations started @ 3:40pm TT 08/25/10

Tank ID	obs
LD-01-F	Same as ~~afternoon~~ morning
UMF-01-E	Same as morning
LALL-A	20% IN Bottom, 10% AS Bottom, 20% AS various, 50% AS screen
LMF-02-C	same as morning
H_2O-D	Same as morning
LALL-E	20% AS Bottom, 10% AS various, 70% AS screen
CTRL-E	Same as morning
H_2O-E	20% AS Bottom, 10% AS Top, 40% AS various 30% AS screen
DE-B	Same as morning
CTRL-F	20% AS Bottom, 20% AS various, 60% AS screen
DE-C	Same as morning
LD-01-C	10% AS Bottom, 10% AS various, 5% AS Top, 75% AS screen
CTRL-B	Same as morning

Tank ID	obs
UMF-01-F	Same as morning
UMF-01-B	Same as morning
CTRL-A	40% AS Bottom, 60% AS screen
LD-01-E	Same as morning
UMF-01-A	20% AS Bottom, 10% AS various, 70% AS screen
H_2O-C	50% AS screen, 20% AS various, 30% AS, Bottom
LD-01-A	Same as morning
LMF-02-D	Same as morning
LALL-F	Same as morning
Ge-B	Same as morning
NP-03-B	Same as morning → 1 swimming in circles at Top
H_2O-A	30% AS screen, 20% AS various, 50% AS Bottom
Ge-A	Same as morning
Ge-C	30% AS Bottom, 70% AS screen
H_2O-B	20% AS Bottom, 10% AS various, 60% AS screen
CTRL-D	40% AS various, 60% AS Bottom
LALL-B	20% IN Bottom, 10% AS Bottom, 10% AS various, 60% AS screen
CTRL-C	Same as morning
UMF-01-C	10% AS Bottom, 20% AS various, 70% AS screen
LD-01-B	Same as morning
LALL-C	Same as morning
LMF-02-B	30% AS Bottom, 20% AS various, 50% AS screen

Tank ID	Obs
NP-03-A	60% AS Bottom, 5% AS various, 35% AS screen
LALL-D	50% AS screen, 30% AS Bottom, 20% AS various
UMF-02-D	35% AS Bottom, 5% AS various, 60% AS screen
LMF-02-A	same as morning
LD-01-B	Same as morning
GE-D	10% IN Bottom, 20% AS bottom, 10% AS various, 60% AS screen
DE-A	Same as morning

Finished @ 4:15pm TT 08/25/10



Scale: 1 square = 54

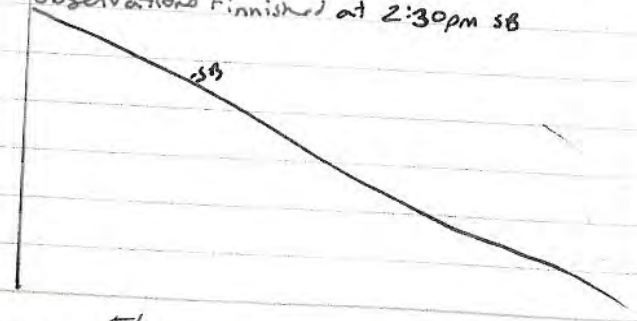
Observations at 1:15 p.m Aug 26, 2010 DB

Tank ID	Observations
DE-A	5% AS bottom, 5% AS various 90% AS screen
GE-D	15% AS bottom 10% AS various 75% AS screen
LD-01-D	5% AS various 10% AS bottom 85% AS screen
LMF-02-A	20% AS bottom 20% AS various 60% AS screen
UMF-01-D	5% AS various, 10% AS bottom 85% AS screen.
LALL-D	10% AS various 10% AS bottom 80% AS screen
NP-08-A	30% AS bottom, 2% IN Bottom, 15% AS various, 53% AS screen
LMF-02-B	5% IN bottom, 5% AS bottom, 5% AS various, 85% AS screen
LALL-C	10% AS various 20% AS bottom, 70% AS screen
LD-01-B	8% AS bottom 2% IN bottom, 5% AS various 85% AS screen
UMF-01-C	15% AS various, 10% AS bottom, 75% AS screen
CTRL-C	5% IN bottom, 10% AS various, 15% AS bottom, 70% AS screen
LALL-B	5% IN bottom, 5% AS various, 20% AS bottom, 70% AS screen
CTRL-D	40% AS various, 10% AS bottom, 40% AS screen
H2O-B	40% AS bottom, 40% AS screen, 20% AS various
GE-C	15% AS various, 5% IN bottom, 40% AS bottom, 40% AS screen
GE-A	10% AS various, 5% IN bottom, 15% AS bottom, 70% AS screen
H2O-A	2% IN bottom, 18% AS various, 15% AS bottom, 65% AS screen
NP-03-B	15% AS various, 15% AS bottom, 70% AS screen
GE-B	15% AS various, 5% IN bottom, 60% AS screen, 20% AS bottom
LALL-F	20% AS bottom, 20% AS various, 60% AS screen
LMF-02-D	25% AS various, 20% AS bottom, 55% AS screen
LD-01-A	5% IN bottom, 20% AS various, 30% AS bottom, 45% AS screen
H2O-C	30% AS screen 80% AS various, 50% AS bottom

Scale: 1 square = 55

Tank ID	Observations
UMF-01-A	20%. AS various, 40%. AS screen, 40% AS bottom
LD-01-E	25% AS various, 70%. AS screen, 35%. AS bottom
CTRL-A	30%. AS bottom, ~~35%. SB~~ ~~40%~~ AS various ~~40%~~ 35%. SB AS screen
UMF-01-B	5%. IN bottom, 10%. AS various 35%. AS bottom, 50% AS screen
UMF-01-F	15%. AS various, 45%. AS screen, 40% AS bottom
CTRL-B	15%. AS various, 45%. AS screen, 40% AS bottom
LD-01-C	10%. AS various, 30%. AS bottom, 60%. AS screen
DE-C	10%. AS various, 45%. AS bottom, 45%. AS screen
CTRL F	5%. AS various, 55%. AS bottom, 40% AS screen
DE-B	15%. AS various, 35% AS bottom, 50% AS screen
H_2O-E	20%. AS various, 40%. AS bottom, 40%. AS screen
CTRL-E	15%. AS various 40%. AS bottom, 45% AS screen
LALL-E	5%. IN bottom, 10%. AS various, 20%. AS bottom, 65% AS screen
H_2O-D	10%. AS various, 45% AS bottom, 45% AS bottom
LMF-02-C	60%. AS screen, 20%. AS various, 20%. AS bottom
LALL-C	20%. AS various, 5%. IN bottom, 30%. AS bottom, 45% AS screen
UMF-01-E	20%. AS various, 20%. AS bottom, 60% AS screen
LD-01-F	10%. AS bottom, 20%. AS various, 70%. AS screen

Observations Finished at 2:30pm SB



Scale: 1 square = 56

Aug 28, 2010 Observations. Started at 2:30pm. SB

Tank ID	Observations
DE-A	40%. AS various, 20%. AS bottom, 60%. AS screen
GE-D	30%. AS bottom, 30%. AS screen, 40%. AS various
LD-01-D	10%. AS bottom, 30%. AS various, 60%. AS screen
LMF-02-A	5%. IN bottom, 10%. AS bottom, 45% AS screen, 40%. AS various
UMF-01-D	5%. IN bottom, 35%. AS various, 15%. AS bottom, 45%. AS screen
LALL-D	10%. AS bottom, 50%. AS screen, 40%. AS various
NP-03-A	5%. IN bottom, 20% AS various, 50%. AS screen, 25%. AS bottom
LMF-02-B	5%. IN bottom, 15%. AS bottom, 25%. AS various, 55%. AS screen
LALL-C	10%. IN bottom, 30%. AS bottom, 30%. AS various, 30%. AS screen
LD-01-C	5%. IN bottom, 10%. AS bottom, 65%. AS screen, 20%. AS various
UMF-01-C	10% IN Bottom, 5% AS Bottom, 35%. AS screen, 50% AS various
CTRL-C	5% IN Bottom, 10% AS bottom, 55% AS screen, 30% AS various
LALL-B	5% IN Bottom, 50% AS bottom, 30% As screen, 15% AS various
Ctrl-D	25% IN Bottom, 5% AS Screen, 70% AS various
H_2O-B	50% AS Screen, 25% AS bottom, 25% AS various
Ge-C	5% IN Bottom, 20% AS Bottom, 60% AS screen, 15% AS various
Ge-A	10% IN Bottom, 5% AS Bottom, 80% AS Screen, 5% AS various
H_2O-A	10% IN Bottom, 10% AS Bottom, 50% AS Screen, 30% AS various
NP-03-B	10% In Bottom, 5% AS Bottom, 50% AS Screen, 35% AS various
Ge-B	10% IN Bottom, 20% AS Bottom, 80% AS screen, 10% AS various
LALL-F	5% IN Bottom, 10% AS Bottom, 20% AS various, 65% AS Screen
LMF-02-D	10% AS Bottom, 50% AS various, ~~AS~~ 40% AS screen
LD-02-A	5% AS Bottom, 10% AS various, 85% AS Screen
H_2O-C	20% AS Bottom, 50% AS various, 30% AS Screen

Scale: 1 square = 57

Tank ID	Observations
UMF-01-A	5% AS Bottom, 10% AS Various, 85% AS Screen
LD-01-E	5% IN Bottom, 5% AS Bottom, 45% AS Various, 45% AS Screen
Ctrl-A	5% IN Bottom, 5% AS Bottom, 5% AS Various, 85% AS Screen
UMF-01-B	10% AS Bottom, 15% AS Various, 75% AS Screen
UMF-01-F	5% AS Bottom, 45% AS various, 50% AS Screen
Ctrl-B	15% AS Bottom, 40% AS Various, 45% AS Screen
LD-01-C	5% AS Bottom, 15% AS various, 80% AS Screen
DE-C	10% AS Bottom, 15% AS Various, 75% AS Screen
Ctrl-F	30% AS Bottom, 35% AS Various, 35% AS Screen
DE-B	30% AS Bottom, 20% AS various, 50% AS Screen
H_2O-E	30% AS Bottom, 15% AS various, 55% AS Screen
Ctrl-E	15% AS Bottom, 10% AS various, 75% AS Screen
LALL-E	5% IN Bottom, 30% AS Bottom, 30% AS various, 35% AS Screen
H_2O-D	20% AS Bottom, 40% AS Various, 40% AS Screen
LMF-02-C	10% AS Bottom, 20% AS Various, 70% AS Screen
LALL-A	10% AS Bottom, 25% AS Various, 65% AS Screen
UMF-01-E	15% AS Bottom, 15% AS various, 70% AS Screen
LD-01-F	5% AS Bottom, 20% AS various, 75% AS Screen

Aug 28/2010 observations started @ 6:00 pm L.L

Tank ID	Observations
DE-A	10% AS Bottom, 30% AS Various, 60% AS Screen
GE-D	same as afternoon
LD-01-D	5% AS Bottom, 35% AS various, 60% AS Screen
LMF-02-A	Same as afternoon
UMF-01-D	20% AS Bottom, 30% AS Various, 50% AS Screen

Scale: 1 square = 3d

Aug 28/2010 observations don't L.L

Tank ID	Observation
LALL-D	same as afternoon
MP-03-A	same as afternoon
LMF-02-B	same as afternoon
LALL-C	same as afternoon
LD-01-B	5% IN Bottom, 10% AS Bottom, 25% AS Various, 60% AS Screen
UMF-01-C	same as afternoon
Ctrl-C	15% AS Bottom, 45% AS Various, 40% AS Screen
LALL-B	5% AS Bottom, 25 30% AS Various, 75% AS Screen
Ctrl-D	Same as afternoon
H_2O-B	Same as afternoon
Ge-C	10% AS Bottom, 20% AS Various, 70% AS Screen
Ge-A	same as afternoon
H_2O-A	10% AS Bottom, 30% AS Various, 60% AS Screen
MP-03-B	same as afternoon
Ge-B	Same as afternoon
LALL-F	Same as afternoon
LMF-02-D	20% AS Bottom, 30% AS Various, 50% AS Screen
LD-01-A	10% AS Bottom, 20% AS Various, 70% AS Screen
H_2O-C	50% AS Bottom, 45% AS Various, 5% AS Screen
UMF-01-A	same as afternoon
LD-01-E	5% IN Bottom, 25% AS Bottom, 40% AS Various, 30% Screen
Ctrl-A	Same as afternoon
UMF-01-B	same as afternoon
UMF-01-F	Same as afternoon

Scale: 1 square = 59

Tank ID	Observations
Ctrl-B	Same as afternoon
LD-01-C	Same as afternoon
DE-C	Same as afternoon
Ctrl-F	30% AS Bottom, 30% AS various, 40% AS screen
DE-B	20% AS Bottom, 20% AS various, 60% AS screen
H2OE	Same as afternoon
Ctrl-E	Same as afternoon
LALL-E	15% AS Bottom, 30% AS various, 55% AS screen
H2O-D	30% AS Bottom, 20% AS various, 50% AS screen
LMF-02-C	15% AS Bottom, 15% AS various, 70% AS screen
LALL-A	Same as afternoon
UMF-01-E	Same as afternoon
LD-01-F	Same as afternoon

Aug 29, 2010 SB Observations 1:20 pm

Tank ID	Observations
DE-A	5% AS bottom, 25% AS various, 70% AS screen
GE-D	30% AS bottom, 30% AS various, 40% AS screen
LD-01-D	25% AS bottom, 25% AS various, 50% AS screen
LMF-02-A	45% AS screen, 40% AS various, 15% AS bottom
UMF-01-D	10% AS bottom, 15% AS various, 75% AS screen
LALL-D	20% AS screen, 30% AS various 50% AS bottom
NP-03-A	30% AS screen, 40% AS bottom, 30% AS various
LMF-02-B	20% AS bottom, 20% AS various, 60% AS screen
LALL-C	15% AS screen, 15% AS various, 70% AS bottom
LD-01-B	15% AS bottom, 25% AS various, 60% AS screen

Scale: 1 square = 60

Tank ID	Observations
UMF-01-C	15% AS bottom, 30% AS various, 55% AS screen
CTRL-C	20% AS bottom, 40% AS various, 40% AS screen
LALL-B	20% AS bottom, 20% AS various, 60% AS screen
CTRL-D	25% AS bottom, 35% AS screen 20% AS various, 20% AS bottom
H2O-B	25% AS screen, 30% AS various, 45% AS bottom
GE-C	15% AS bottom, 30% AS various, 55% AS screen
GE-A	5% AS bottom, 50% AS screen, 10% AS bottom, 35% AS various
H2O-A	25% AS various, 35% AS bottom, 40% AS screen
NP-03-B	15% AS bottom, 25% AS various, 60% AS screen
GE-B	20% AS various, 30% AS bottom, 50% AS screen
LALL-F	25% AS various, 25% AS bottom, 50% AS screen
LMF-02-D	20% AS bottom, 40% AS various, 40% AS screen
LD-01-A	20% AS bottom, 30% AS various, 50% AS screen
H2O-C	25% AS bottom, 25% AS screen, 50% AS various
UMF-01-A	45% AS various, 45% AS screen, 10% AS bottom
LD-01-E	30% AS bottom, 35% AS screen, 35% AS various
CTRL-A	20% AS bottom, 35% AS various, 30% AS screen SB, 15% AS bottom
UMF-01-B	25% AS bottom, 25% AS various, 50% AS screen
UMF-01-F	30% AS bottom, 35% AS various, 35% AS screen
CTRL-B	30% AS bottom, 35% AS screen, 35% AS various
LD-01-C	10% AS bottom, 45% AS screen, 45% AS various
DE-C	30% AS bottom, 30% AS various, 40% AS screen
CTRL-F	20% AS bottom, 40% AS screen, 40% AS various
DE-B	5% AS bottom, 15% AS bottom, 40% AS various, 40% AS screen
H2O-E	30% AS various, 30% AS screen, 40% AS bottom

Scale: 1 square = 61

Tank ID	Observations cont'd 08/29/10 SB
CTRL-E	25% AS bottom, 35% AS various, 40% AS screen
LALL-E	25% AS bottom, 35% AS various 40% AS screen
H2O-D	50% AS various, 30% AS screen, 20% AS bottom
UMF-02-BC	25% AS bottom, 35% AS various, 40% AS screen
LALL-A	20% AS bottom, 40% AS various, 40% AS screen
UMF-01-E	5% AS bottom, 20% AS various, 30% AS bottom, 45% AS screen
LD-01-F	45% AS screen, 30% AS various, 25% AS bottom

Observations finished 2:30 p.m. SB

August 29, 2010 SB observations 6:05 p.m. SB

Tank ID	Observations
DE-A	5% AS bottom, 45% AS various, 50% AS screen
GE-D	10% AS bottom, 50% AS various, 40% AS screen
LD-01-D	20% AS bottom, 40% AS various, 40% AS screen
LMF-02-A	10% AS bottom, 60% AS various, 30% AS screen
UMF-01-D	10% AS bottom, 20% AS various, 70% AS screen
LALL-D	30% AS bottom, 50% AS various, 20% AS screen
NP-03-A	10% AS bottom, 40% AS various, 50% AS screen
LMF-02-B	50% AS bottom, 25% AS various, 25% AS screen
LALL-C	50% AS bottom, 25% AS various, 25% AS screen
LD-01-B	5% AS bottom, 25% AS various, 70% AS screen
UMF-01-C	10% AS bottom, 45% AS various, 45% AS screen
CTRL-C	30% AS bottom, 60% AS various, 10% AS screen
LALL-B	50% AS bottom, 25% AS various, 25% AS screen
CTRL-D	50% AS bottom, 25% AS various, 25% AS screen
H2O-B	50% AS bottom, 30% AS various, 20% AS screen

Scale: 1 square = 62

Tank ID	Observations
GE-C	25% AS bottom, 50% AS various, 25% AS screen
GE-A	10% AS bottom, 30% AS various, 60% AS screen
H2O-A	10% AS bottom, 30% AS various, 60% AS screen
NP-03-B	30% AS bottom, 50% AS various, 20% AS screen
GE-B	33% AS bottom, 33% AS various, 33% AS screen
LALL-F	5% AS bottom, 75% AS various, 20% AS screen
LMF-02-D	10% AS bottom, 80% AS various, 30% AS screen
LD-01-A	10% AS bottom, 45% AS various, 45% AS screen
H2O-C	20% AS bottom, 60% AS various, 20% AS screen
UMF-01-A	10% AS bottom, 45% AS various, 15% AS screen
LD-01-E	20% AS bottom, 60% AS various, 20% AS screen
CTRL-A	50% AS bottom, 25% AS various, 25% AS screen
UMF-01-B	25% AS bottom, 25% AS various, 50% AS screen
UMF-01-F	20% AS bottom, 20% AS various, 60% AS screen
LD-01-C	45% AS bottom, 45% AS various, 10% AS screen
DE-C	10% AS bottom, 45% AS various, 45% AS screen
CTRL-F	10% AS bottom, 5% AS various, 85% AS screen
DE-B	20% AS bottom, 40% AS various, 40% AS screen
H2O-E	10% AS bottom, 45% AS various, 45% AS screen
CTRL-B	33% AS bottom, 33% AS various, 33% AS screen
LALL-E	20% AS bottom, 30% AS various, 50% AS screen
H2O-D	40% AS bottom, 40% AS various, 20% AS screen
UMF-02-C	25% AS bottom, 25% AS various, 50% AS screen
LALL-A	20% AS bottom, 20% AS bottom various, 60% AS screen
UMF-01-E	33% AS bottom, 33% AS various, 33% AS screen

Scale: 1 square = 63

Tank ID	observations
~~UMF-01-E~~ LD-01-F	25% AS bottom, 25% AS various, 50% AS screen
LD-01-F	10% AS bottom, 45% AS various, 45% AS screen

Aug 30, 2010 observations - started 8:30 am SB

Tank ID	observations
DE-A	25%. AS bottom, 25%. AS various, 50% AS screen
GE-D	20%. AS screen, 40%. AS various, 40%. AS bottom
LD-01-D	50%. AS various, 30%. AS screen, 20% AS bottom
LMF-02A	30%. AS bottom, 30%. AS various, 40%. AS screen
UMF-01-D	25%. AS bottom, 25%. AS various, 50%. AS screen
LALL-D	30%. AS bottom, 30%. AS screen, 40%. AS various.
NP-03-A	20%. AS bottom, 40%. AS various, 40%. AS screen
LMF-02-B	30%. AS screen, 35%. AS various, 35%. AS bottom
LALL-C	25%. AS bottom, 30%. AS screen, 45%. AS various
LD-01-B	50%. AS screen, 20%. AS bottom, 30%. AS various
UMF-01-C	10%. AS bottom, 45%. AS screen, 45%. AS various
CTRL-C	20%. AS bottom, 35%. AS screen, 45%. AS various
LALL-B	60%. AS various, 20%. AS bottom, 20%. AS screen
CTRL-D	20%. IN bottom, 20%. AS bottom, 30%. AS screen, 30%. AS various
H_2O-B	30%. AS bottom, 35%. AS screen, 35%. AS various.
GE-C	30%. AS bottom, 35%. AS various, 75%. AS screen
GE-A	30%. AS various, 20%. AS screen, 40%. AS bottom
H_2O-A	20%. AS bottom, 50% AS various, 30% AS screen
NP-03-B	25%. AS bottom, 30%. AS screen, 45%. AS various.
GE-B	40%. AS screen, 35%. AS bottom, 25%. AS various
LALL-F	25%. AS various, 25%. AS bottom, 50% AS screen

Scale: 1 square = 64

Tank ID	observations continued
LMF-02-D	20%. AS screen, 20%. AS bottom, 60%. AS various
LD-01-A	10% AS bottom, 35%. AS screen, 55%. AS various
H_2O-C	30% AS bottom, 35%. AS screen, 35%. AS various
UMF-01-A	20%. AS bottom, 40% AS screen, 40%. AS various
LD-01-E	25%. AS bottom, 30% AS screen, 45%. AS various.
CTRL-A	50% AS screen 30% IN bottom, 20%. AS various.
UMF-01-B	5%. IN bottom, 10%. AS bottom, 40%. AS various, 45%. AS screen
UMF-01-F	25%. AS bottom, 25%. AS various, 50%. AS screen
CTRL-B	50%. AS various, 30%. AS screen, 20%. AS bottom
LD-01-C	20% AS bottom, 35%. AS screen, 80%. AS various
DE-C	10%. AS bottom, 30%. AS screen, 60%. AS various
CTRL-F	55%. AS various, 20%. AS bottom, 85%. AS screen
DE-B	30%. AS bottom, 35%. AS various, 35%. AS screen
H_2O-E	30%. AS bottom, 85% AS screen, 35%. AS various.
CTRL-E	20% AS bottom, 40%. AS screen, 40%. AS various.
LALL-E	5%. IN bottom, 15%. AS bottom, 15%. AS screen, 65%. AS various
LD-01-D	5%. IN bottom, 20%. AS bottom, 20%. AS various 55%. AS screen
LMF-02-C	25%. AS bottom, 35%. AS screen, 40%. AS various
LALL-A	30%. AS bottom, 35%. AS various, 35%. AS screen
UMF-01-E	30%. AS bottom, 35%. AS various, 35%. AS screen.
LD-01-F	20%. AS bottom, 40%. AS screen, 40%. AS various

observations finished 9:45 a.m SB

SB

Scale: 1 square = 65

August 30, 2010 Observations taken at 12:20pm TT

Tank ID	obs
DE-A	5% IN Bottom, 15% AS various, 80% AS screen
Ge-D	same as morning
LD-01-D	50% AS screen, 25% AS various, 25% AS Bottom
LMF-02-A	Same as morning
UMF-01-D	10% AS Bottom, 5% AS various, 85% AS screen
LALL-D	Same as morning
NP-03-A	Same as morning
LMF-02-B	60% AS screen, 20% AS Bottom, 20% AS various
LALL-C	Same as morning
LD-01-B	Same as morning
UMF-01-C	Same as morning
CTRL-C	20% AS various, 40% AS screen, 40% AS Bottom
LALL-B	60% AS screen, 10% AS various, 30% AS Bottom
CTRL-D	Same as morning
H_2O-B	60% AS various, 20% AS screen, 20% AS Bottom
Ge-C	Same as morning
Ge-A	20% AS screen, 40% AS Bottom, 40% AS various
H_2O-A	40% AS screen, 50% AS various, 10% AS Bottom
NP-03-B	Same as morning
Ge-B	Same as morning
LALL-F	Same as morning
LMF-02-D	Same as morning
LD-01-A	Same as morning

Scale: 1 square = 66

Tank ID	obs
H_2O-C	10% AS screen, 20% AS various, 70% AS Bottom
UMF-01-A	Same as morning
LD-01-E	Same as morning
CTRL-A	60% IN Bottom, 40% AS screen
UMF-01-B	20% AS various, 10% AS Bottom, 70% AS screen
UMF-01-F	Same as morning
CTRL-B	Same as morning
LD-01-C	Same as morning
DE-C	30% AS screen, 20% AS various, 50% AS Bottom
CTRL-F	10% AS various, 40% AS Bottom, 50% AS screen
DE-B	20% AS Bottom, 20% AS various, 60% AS screen
H_2O-E	Same as morning
CTRL-E	20% AS Bottom, 10% AS various, 70% AS screen
LALL-E	30% AS screen, 70% AS Bottom
H_2O-D	Same as morning
LMF-02-C	60% AS screen, 30% AS various, 10% AS Bottom
LALL-A	Same as morning
UMF-01-E	20% AS Bottom, 20% AS various, 60% AS screen
LD-01-F	Same as morning

Finished at 1:00pm 08/30/10 TT

Scale: 1 square = 67

Aug 31, 2010 SB observations. 9:00 am

Tank ID	Observations
DE-A	20% AS bottom, 35% AS various, 45% AS screen
GE-D	20% AS bottom, 35% AS various, 45% AS screen
LD-01-D	25% AS bottom, 25% AS screen, 50% AS various
LMF-02-A	30% AS bottom, 35% AS screen, 35% AS various
UMF-01-D	5% IN bottom, 45% AS various, 50% AS screen
LALL-D	25% AS bottom, 35% AS screen, 40% AS various
NF-03-A	20% AS bottom, 30% AS screen, 50% AS various
LMF-02-B	10% AS bottom, 45% AS screen, 45% AS various.
LALL-C	30% AS bottom, 35% AS screen, 35% AS various
LD-01-B	25% AS bottom, 25% AS various, 50% AS screen
UMF-01-C	5% AS bottom, 25% AS screen, 70% AS various
CTAL-C	60% AS various, 30% AS screen, 10% AS bottom
LALL-B	5% IN bottom, 25% AS bottom, 35% AS various, 35% AS screen
CTAL-D	20% AS bottom, 20% IN bottom, 20% AS various, 40% AS screen
H_2O-B	20% AS bottom, 40% AS screen, 40% AS various
GE-C	5% IN bottom, 20% AS bottom, 25% AS screen, 50% AS various
GE-A	10% IN bottom, 20% AS bottom, 20% AS various 50% AS screen
H_2O-A	50% AS various, 25% AS bottom, 25% AS screen
NF-03-B	25% AS bottom, 30% AS screen, 45% AS various
GE-B	5% IN bottom, 25% AS bottom, 35% AS screen, 35% AS various
LALL-F	20% AS various, 40% AS bottom, 40% AS screen
LMF-02-D	50% AS various, 30% AS screen, 20% AS bottom
LD-01-A	25% AS bottom, 35% AS various, 40% AS screen
H_2O-C	30% AS bottom, 35% AS various, 35% AS screen

Tank ID	Observations continued
UMF-01-A	30% AS bottom, 30% AS various, 40% AS screen
LD-01-E	30% AS bottom, 35% AS screen, 35% AS various.
CTAL-A	40% AS screen, 30% IN bottom, 20% AS bottom 10% AS various
UMF-01-B	30% AS bottom, 30% AS various, 40% AS screen
UMF-01-F	5% IN bottom, 25% AS bottom, 25% AS various, 45% AS screen
CTAL-B	30% AS bottom, 35% AS screen, 35% AS various.
LD-01-C	25% AS bottom, 35% AS various, 40% AS screen
DE-C	20% AS bottom, 30% AS screen, 50% AS various.
CTAL-F	30% AS bottom, 35% AS various, 35% AS screen found SB
DE-B	20% AS bottom, 35% AS various, 45% AS screen
H_2O-E	30% AS bottom, 30% AS various 40% AS screen
CTAL-E	25% AS various, 35% AS bottom, 40% AS screen
LALL-E	30% AS bottom, 35% AS screen, 35% AS various
H_2O-D	30% AS screen, 30% AS bottom, 40% AS various
LMF-02-C	20% AS bottom, 30% AS various, 50% AS screen
LALL-A	20% AS bottom, 40% AS screen 40% AS various
UMF-01-E	20% AS bottom, 35% AS various, 45% AS screen
LD-01-F	10% AS bottom, 40% AS various, 50% AS screen

Observations Finished 9:45 a.m SB

08/31/10 TT

Observations at 12:00pm

Tank ID	obs
DE-A	Same as morning
Ge-D	20% AS screen, 20% AS Bottom, 60% AS various
LD-01-D	50% AS various 20% AS screen, 30% AS Bottom
LMF-02-A	Same as morning
UMF-01-D	70% AS screen, 10% AS Bottom, 20% AS various
LALL-D	Same as morning
VP-03-A	50% AS various, 40% AS screen, 10% AS Bottom
LMF-02-B	5% IN Bottom, 20% AS Bottom, 40% AS screen 35% AS various
LALL-C	Same as morning
LD-01-B	Same as morning
UMF-01-C	5% AS Bottom, 30% AS screen, 65% AS various
CTRL-C	Same as morning
LALL-B	20% IN Bottom, 10% AS Bott various TT, 70% AS screen
CTRL-D	Same as morning
H_2O-B	20% AS Bottom, 30% AS screen, 50% AS various
Ge-C	5% IN Bottom, 30% AS Bottom, 20% AS various, 45% AS screen
Ge-A	Same as morning
H_2O-A	Same as morning
MP-03-B	Same as morning
Ge-B	10% IN Bottom, 40% AS Bottom, 20% AS various, 30% AS screen
LALL-F	Same as morning

Scale: 1 square = 70

Tank ID	obs
LMF-02-D	Same as morning
LD-01-A	Same as morning
H_2O-C	Same as morning
UMF-01-A	Same as morning
LD-01-G	30% AS Bottom, 20% AS screen, 50% AS various
CTRL-A	60% AS screen, 40% IN Bottom
UMF-01-B	10% IN Bottom, 20% AS Bottom, 10% AS various, 60% AS screen
UMF-01-F	20% AS Bottom, 10% AS various, 70% AS screen
CTRL-B	Same as morning
LD-01-C	Same as morning
DE-C	Same as morning
CTRL-F	20% AS screen, 10% AS Bottom, 70% AS various
DE-B	Same as morning
H_2O-E	20% AS various, 20% AS screen, 60% AS Bottom
CTRL-E	20% AS Bottom, 30% AS various, 50% AS screen
LALL-E	Same as morning
H_2O-D	30% AS Bottom, 20% AS various, 50% AS screen
LMF-02-C	Same as morning
LALL-A	Same as morning
UMF-01-E	Same as morning
LD-01-F	Same as morning
Finished @	12:30 pm 08/31/10 TT

Scale: 1 square = 71

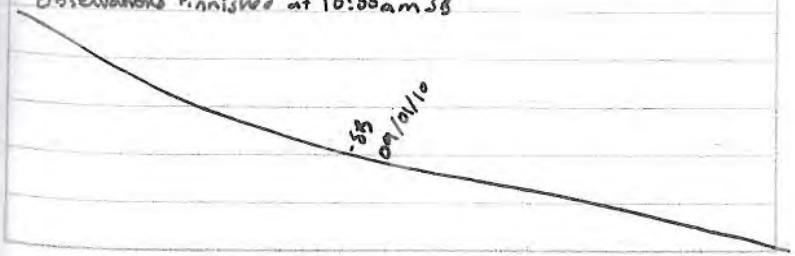
Sept 1, 2010 - observations 8:45a.m SB

Tank ID	Observations
DE-A	20% AS various, 30% AS screen, 50% AS bottom
GE-D	5% IN bottom, 10% AS various, 15% AS screen, 70% AS bottom
~~LMF-02-A~~ ~~ED-01-D~~ ED-01-D SB	5% AS various, 15% AS screen, 5% IN bottom, 65% AS bottom, 1 has tail bit
~~LMF-02-B~~	15% AS various, 25% AS screen, 60% AS bottom
UMF-01-D	35% AS bottom, 25% AS screen, 15% IN bottom, 25% AS various
LALL-D	25% AS various, 25% AS screen, 50% AS bottom
NP-03-A	5% IN bottom, 45% AS bottom, 30% AS screen, 20% AS various
LMF-02-B	25% AS various, 25% AS screen, 50% AS bottom
LALL-C	20% AS various, 20% AS screen, 60% AS bottom
LD-01-B	5% IN bottom, 20% AS various, 30% AS screen, 45% AS bottom
UMF-01-C	20% AS screen, 40% AS bottom, 40% AS ~~larvae~~ SB various
CTRL-C	25% AS screen, 25% AS various, 50% AS bottom
LALL-B	15% AS various, 25% AS screen, 60% AS bottom
CTRL-D	15% AS various, 15% IN bottom, 30% AS bottom, 40% AS screen
H2O-B	30% AS screen, 30% AS various, 40% AS bottom
GE-C	20% AS screen, 40% AS bottom, 40% AS various
GE-A	25% AS various, 35% AS screen, 40% AS bottom
H2O-A	25% AS screen, 35% various, 40% AS bottom
NP-03-B	30% AS screen, 35% AS various, 35% AS bottom
GE-B	5% IN bottom 45% AS bottom, 30% AS screen 20% AS various
LALL-F	20% AS various, 35% AS screen, 45% AS bottom
LMF-02-D	30% AS bottom, 35% AS various, 35% AS screen
LD-01-A	30% AS screen, 30% AS bottom, 40% AS various
H2O-C	30% AS bottom, 35% AS screen, 35% AS various

Scale: 1 square = 72

Tank ID	observations continued 09/01/10 SB
UMF-01-A	30% AS various, 30% AS screen, 40% AS bottom
LD-01-E	30% AS screen, 35% AS bottom, 35% AS various
CTRL-A	50% AS bottom, 30% AS screen, 20% AS various
UMF-01-B	30% AS various, 35% AS screen, 35% AS bottom
CTRL-B SB	
~~H2O-B~~ ~~GE-F~~	5% IN bottom, 30% AS bottom, 35% AS various, 30% AS screen
UMF-01-F SB ~~LALL-B~~	20% AS screen, 30% AS bottom, 40% AS various
LD01-C	20% AS bottom, 40% AS various, 40% AS screen
DE-C	25% AS bottom, 35% AS ~~bottom~~ SB various, 40% AS screen
CTRL-F	30% AS screen, 35% AS various, 30% AS bottom
DE-B	5% IN bottom, 15% AS bottom, 40% AS screen, 40% AS various
H2O-E	20% AS screen, 40% AS bottom, 40% AS various
CTRL-E	5% IN bottom, 15% AS bottom, 25% AS various, 55% AS screen
LALL-E	30% AS bottom, 35% AS various, 35% AS screen
H2O-D	20% AS bottom, 40% AS screen, 40% AS various.
LMF-02-C	10% AS bottom, 40% AS screen, 50% AS various
LALL-A	15% AS bottom, 30% AS screen, 55% AS various
UMF-01-E	20% AS bottom, 35% AS various, 45% AS screen
LD-01-F	20% AS bottom, 35% AS screen, 45% AS various, 1 more IN on bottom, doesn't move tail till provoked.

observations finished at 10:00am SB



Scale: 1 square = 73

Observations started @ 12:00pm 09/01/10

Tank ID	obs
DE-A	60% AS screen, 30% AS various, 10% AS Bottom
Ge-D	20% AS Bottom, 40% AS screen, 40% AS various
LD-01-D	10% AS Bottom, 20% AS various, 70% AS screen
LMF-02-A	40% AS Bottom, 50% AS screens, 10% AS various
UMF-01-D	Same as morning
LALL-D	Same as morning
NP-03-A	20% AS Bottom. 60% AS various, 20% AS screen
LMF-02-B	Same as morning
LALL-C	Same as morning
LD-01-B	20% AS Bottom, 20% AS various, 60% AS screen
UMF-01-C	Same as morning
CTRL-C	Same as morning
LALL-B	15% AS Bottom. 40% AS various, 45% AS screen
CTRL-D	Same as morning
H_2O-B	Same as morning → 1 swimming in circles at Top
Ge-C	Same as morning
Ge-A	10% AS Bottom, 30% AS various, 60% AS screen
H_2O-A	Same as morning
NP-03-B	Same as morning
Ge-B	Same as morning
LALL-F	20% AS Bottom, 30% AS various, 50% AS screen
LMF-02-D	Same as morning → 1 swimming in circles at bottom
LD-01-A	Same as morning
H_2O-C	20% AS screen, 40% AS various, 90% AS Bottom

Scale: 1 square = 74

Tank ID	obs
UMF-01-A	Same as morning
LD-01-E	Same as morning
CTRL-A	40% AS Bottom, 10% AS various, 50% AS screen
UMF-01-B	Same as morning
UMF-01-F	20% AS Bottom, 30% AS various, 50% AS screen
CTRL-B	Same as morning
LD-01-C	Same as morning
DE-C	Same as morning
CTRL-F	80% AS various, 10% AS screen, 10% AS Bottom
DE-B	Same as morning
H_2O-E	Same as morning
CTRL-E	Same as morning
LALL-E	20% AS various, 60% AS Bottom, 20% AS screen
H_2O-D	Same as morning
LMF-02-C	60% AS screen, 30% AS various, 10% AS Bottom
LALL-A	Same as morning
UMF-01-E	Same as morning
LD-01-F	20% AS Bottom, 10% AS various, 70% AS screen
Finished	@ 12:30pm 09/01/10 TT

Scale: 1 square = 75

09/02/10 TT started at 12:00pm:

Tank ID	obs
DE-A	10% AS Bottom, 70% AS various, 20% AS screen
Ge-D	20% AS Bottom, 20% AS various, 60% AS screen
LD-01-D	10% AS Bottom, 20% AS various, 70% AS screen
LMF-02-A	30% AS Bottom, 20% AS screen, 50% AS various
LMF-01-D	20% AS Bottom, 10% AS various, 70% AS screen
LALL-D	30% AS Bottom, 10% AS screen, 50% AS various
NP-03-A	30% AS Bottom, 30% AS various, 40% AS screen
LMF-02-B	20% AS Bottom, 10% AS various, 70% AS screen
LALL-C	20% AS screen, 30% AS various, 50% AS Bottom
LD-01-B	10% AS Bottom, 20% AS various, 70% AS screen
LMF-01-C	20% AS Bottom, 60% AS screen, 20% AS various
CTRL-C	20% AS Bottom, 40% AS screen, 40% AS various
LALL-B	30% AS Bottom, 20% AS screen, 50% AS various
CTRL-D	20% AS Bottom, 20% AS various, 60% AS screen
H_2O-B	30% AS Bottom, 20% AS screen, 50% AS various
Ge-C	20% AS Bottom, 30% AS screen, 50% AS various
Ge-A	20% AS various, 40% AS Bottom, 40% AS screen
H_2O-A	10% AS Bottom, 20% AS screen, 70% AS various
NP-03-B	10% AS Bottom, 30% AS various, 60% AS screen
Ge-B	30% AS Bottom, 20% AS various, 50% AS screen
LALL-F	20% AS Bottom, 10% AS various, 70% AS screen
LMF-02-D	10% AS Bottom, 20% AS various, 70% AS screen, swimming in circles at bottom
LD-01-A	10% AS Bottom, 20% AS various, 70% AS screens

Scale: 1 square = 76

Tank ID	obs
H_2O-C	30% AS Bottom, 20% AS screen, 50% AS various
LMF-01-A	20% AS Bottom, 40% AS various, 40% AS screen
LD-01-E	10% AS Bottom, 45% AS screen, 45% AS various
CTRL-A	50% AS screen, 50% AS various
LMF-01-B	50% AS Bottom, 20% AS various, 30% AS screen
LMF-01-F	10% AS Bottom, 30% AS various, 60% AS screen
CTRL-B	40% AS Bottom, 30% AS screen, 30% AS various
LD-01-C	10% AS Bottom, 30% AS various, 60% AS screen
DE-C	20% AS Bottom, 30% AS various, 50% AS screen
CTRL-F	10% AS screen, 15% AS Bottom, 75% AS various
DE-B	10% AS Bottom, 30% AS screen, 60% AS various
H_2O-E	50% AS Bottom, 10% AS screen, 40% AS various
CTRL-E	20% AS Bottom, 60% AS various, 20% AS screen
LALL-E	50% AS Bottom, 40% AS screen, 10% AS various
H_2O-D	20% AS screen, 40% AS Bottom, 40% AS various
LMF-02-C	10% AS Bottom, 60% AS various, 30% AS screen
LALL-A	10% AS Bottom, 10% AS screen, 80% AS various
LMF-01-E	10% AS Bottom, 20% AS various, 70% AS screen
LD-01-F	10% AS Bottom, 30% AS various, 60% AS screen

Finished @ 12:45pm TT 09/02/10

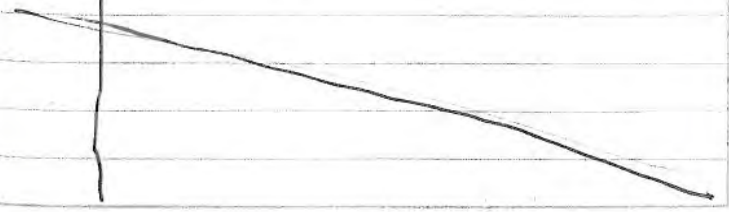
Scale: 1 square = 77

09/03/10 TT Observations started at 12:00pm

Tank ID	obs
DE-A	10% AS Bottom, 10% AS screen, 80% AS various
Ge-D	20% AS Bottom, 20% AS various, 60% AS screen
LD-01-D	10% AS Bottom, 20% AS various, 70% AS screen
LMF-02-A	20% AS Bottom, 10% AS various, 70% AS screen
UMF-01-D	30% AS Bottom, 20% AS various, 50% AS screen
LALL-D	20% AS Bottom, 40% AS screen, 40% AS various
NP-03-A	20% AS screen, 30% AS various, 50% AS Bottom
LMF-02-B	10% AS Bottom, 10% AS screen, 80% AS various
LALL-C	20% AS various, 20% AS screen, 60% AS Bottom
LD-01-B	10% AS Bottom, 20% AS various, 70% AS screen
UMF-01-C	10% AS Bottom, 30% AS various, 60% AS screen
CTRL-C	20% AS screen, 20% AS various, 60% AS Bottom
LALL-B	40% AS screen, 10% AS various, 50% AS Bottom
CTRL-D	40% AS Bottom, 60% AS screen
H_2O-B	30% AS various, 15% AS screen, 55% AS Bottom
Ge-C	10% AS screen, 30% AS various, 60% AS Bottom
Ge-A	30% AS Bottom, 35% AS screen, 35% AS various
H_2O-A	20% AS Bottom, 10% AS screen, 70% AS various
NP-03-B	10% AS screen, 40% AS various, 50% AS Bottom
Ge-B	20% AS Bottom, 30% AS various, 50% AS screen
LALL-F	20% AS Bottom, 40% AS various, 40% AS screen
LMF-02-D	20% AS Bottom, 20% AS various, 60% AS screen, swimming in circles at bottom
LD-01-A	20% AS Bottom, 30% AS various, 50% AS screen

Scale: 1 square = 78

Tank ID	obs
H_2O-C	30% AS Bottom, 30% AS screen, 40% AS various
UMF-01-A	20% AS Bottom, 30% AS various, 50% AS screen
LD-01-F	20% AS Bottom, 80% AS various
CTRL-A	40% AS various, 60% AS screen
UMF-01-B	10% AS Bottom, 40% AS various, 50% AS screen
UMF-01-F	10% AS Bottom, 60% AS screen, 30% AS various
CTRL-B	20% AS Bottom, 40% AS various, 60% AS screen
LD-01-C	5% AS Bottom, 30% AS various, 65% AS screen
DE-C	30% AS Bottom, 20% AS various, 50% AS screen
CTRL-F	40% AS Bottom, 20% AS screen, 40% AS various
DE-B	20% AS Bottom, 60% AS screen, 20% AS various
H_2O-E	30% AS Bottom, 20% AS screen, 50% AS various
CTRL-E	40% AS Bottom, 10% AS various, 50% AS screen
LALL-E	20% AS screen, 30% AS Bottom, 50% AS various
H_2O-D	10% AS Bottom, 20% AS screen, 70% AS various
LMF-02-C	10% AS Bottom, 30% AS various, 60% AS screen
LALL-A	20% AS Bottom, 40% AS various, 40% AS screen
UMF-01-E	30% AS Bottom, 30% AS various, 40% AS screen
LD-01-F	10% AS Bottom, 45% AS screen, 45% AS various
Finished @	12:30pm 09/03/10 TT



Scale: 1 square = 79

09/03/10 TT started at 4:30pm:

Tank ID	Obs
DE-A	40% AS Bottom, 20% AS various, 60% AS screen
Ge-D	60% AS bottom, 30% AS various, 10% AS screen
LD-01-D	60% AS various, 10% AS Bottom, 30% AS screen
UMF-02-A	40% AS Bottom, 60% AS various, 50% AS screen
UMF-01-D	Same as noon
LACL-D	Same as noon
NP-03-A	Same as noon
LMF-02-B	40% AS screen, 60% AS various, 50% AS screen
LACL-C	Same as noon
LD-01-B	Same as noon
UMF-01-C	Same as noon
CTRL-C	Same as noon
LACL-B	Same as noon
CTRL-D	40% AS Bottom, 40% AS screen, 20% AS various
H_2O-B	Same as noon
Ge-C	40% AS screen, 20% AS various, 40% AS Bottom
Ge-A	30% AS screen, 10% AS various, 60% AS Bottom
H_2O-A	Same as noon
NP-03-B	Same as noon
Ge-B	Same as noon
LACL-F	Same as noon
LMF-02-D	Same as noon
LD-01-A	Same as noon
H_2O-C	Same as noon → 1 swimming in circles at Top

Scale: 1 square = 8D

Tank ID	Obs
UMF-01-A	Same as noon
LD-01-E	20% AS Bottom, 10% AS various, 70% AS screen
CTRL-A	20% AS Bottom, 40% AS various, 40% AS screen
UMF-01-B	60% AS various, 30% AS screen, 10% AS Bottom
UMF-01-F	Same as noon
CTRL-B	Same as noon
LD-01-C	Same as noon
DE-C	Same as noon
CTRL-F	Same as noon
DE-B	Same as noon
H_2O-E	60% AS Bottom, 20% AS various, 20% AS screen
CTRL-E	Same as noon
LACL-E	Same as noon
H_2O-D	20% AS screen, 40% AS various, 40% AS Bottom
UMF-02-C	Same as noon
LACL-A	60% AS Bottom, 20% AS various, 20% AS screen
UMF-01-E	Same as noon
LD-01-F	Same as noon
Finished	@ 5:00pm 09/03/10 TT

Scale: 1 square = 8I

09/04/10 SB Observations - 9:15 am

Tank ID	Observations
DE-A	25% AS bottom, 25% AS various, 50% AS screen
GE-D	30% AS screen, 35% AS various, 35% AS bottom
LD-01-D	30% AS screen, 30% AS bottom, 40% AS various
LMF-02-A	20% AS screen, 30% AS bottom, 50% AS various
UMF-01-D	5% IN bottom 10% AS bottom, 20% AS various, 65% AS screen
LALL-D	20% AS bottom, 30% AS screen, 50% AS various
NP-03-A	30% AS screen, 30% AS bottom, 40% AS various
LMF-02-B	5% IN bottom, 20% AS bottom, 35% AS various, 40% AS screen
LALL-C	30% AS bottom, 35% AS various, 35% AS screen
LD-01-B	20% AS bottom, 30% AS screen, 50% AS various
UMF-01-C	20% AS bottom, 30% AS screen, 50% AS various
CTRL-C	15% AS bottom, 25% AS screen, 60% AS various
LALL-B	30% AS bottom (SB), 35% AS screen, 35% AS various
CTRL-D	10% IN bottom, 20% AS bottom, 20% AS various 50% AS screen
H_2O-B	25% AS screen, 35% AS bottom, 40% AS various
GE-C	30% AS bottom, 30% AS screen, 40% AS various
GE-A	30% AS bottom, 35% AS screen, 35% AS various
H_2O-A	20% AS bottom, 30% AS screen 50% AS various
NP-03-B	20% AS various, 30% AS bottom, 50% AS screen
GE-B	20% AS bottom, 40% AS various, 40% AS screen
LALL-F	20% AS bottom, 35% AS screen, 45% AS various
LMF-02-D	30% AS bottom, 35% AS screen, 35% AS various
LD-01-A	25% AS bottom, 35% AS various, 40% AS screen
H_2O-C	30% AS screen, 35% AS various, 35% AS bottom

Tank ID	Observations continued 09/04/10 9:15 am SB
UMF-01-A	30% AS bottom, 35% AS various, 35% AS screen
LD-01-E	30% AS bottom, 30% AS various, 40% AS screen
CTRL-A	50% AS various, 30% AS screen, 20% AS bottom - 1 on bottom very IN [illegible] prod.
UMF-01-B	30% AS bottom, 5% IN bottom, 35% AS screen, 30% AS various.
UMF-01-F	25% AS bottom, 25% AS various, 50% AS screen
CTRL-B	30% AS bottom, 35% AS various, 35% AS screen
LD-01-C	5% IN bottom, 15% AS bottom, ~~25%~~ SB 35% AS various, 45% AS screen
DE-C	30% AS bottom, 35% AS screen, 35% AS various
CTRL-F	~~5% IN bottom~~ SB, ~~35%~~ 30% AS bottom, 35% AS screen, 35% AS various.
DE-B	15% AS bottom, 30% AS screen, 55% AS various
H_2O-E	30% AS bottom, 35% AS screen, 35% AS various
CTRL-E	30% AS various, 35% AS screen, 35% AS bottom
LALL-E	30% AS bottom, 35% AS various, 35% AS screen
H_2O-D	30% AS bottom, 35% AS various, 35% AS screen
LMF-02-C	20% AS bottom, 40% AS various, 40% AS screen
LALL-A	25% AS bottom, 25% AS screen, 50% AS various
UMF-01-E	30% AS bottom, 35% AS screen, 35% AS various
LD-01-F	5% IN bottom, 25% AS bottom, 35% AS screen, 35% AS various

Observations finished 10:15 SB

09/04/10 TT started at 1:00 pm:

Tank ID	obs
DE-A	same as morning
Ge-D	same as morning
LD-01-D	20% AS Bottom, 50% AS screen, 30% AS various
LMF-02-A	20% AS various, 10% AS screen, 70% AS Bottom
UMF-01-D	10% AS various, 40% AS screen, 50% AS Bottom
LALL-D	same as morning
NP-03-A	same as morning
LMF-02-D	10% AS Bottom, 45% AS screen, 45% AS various
LALL-C	same as morning
LD-01-B	same as morning
UMF-01-C	same as morning
CTRL-C	same as morning
LALL-B	20% AS Bottom, 30% AS various, 50% AS screen
CTRL-D	20% AS Bottom, 5% IN Bottom, 75% AS screens
H_2O-B	same as morning
Ge-C	20% AS screen, 10% AS Bottom, 70% AS various
Ge-A	same as morning
H_2O-A	same as morning
NP-03-B	same as morning
Ge-B	20% AS various, 20% AS screen, 20% AS Bottom
LALL-F	10% AS screen, 10% AS various, 80% AS Bottom
LMF-02-B	10% AS screen, 5% AS various, 85% AS Bottom
LD-01-A	5% AS various. 95% AS Bottom
H_2O-C	10% AS various, 10% AS screen, 80% AS Bottom

Scale: 1 square = 84

Tank ID	obs
UMF-01-A	10% AS various, 30% AS screen, 60% AS Bottom
LD-01-E	same as morning
CTRL-A	60% AS screen, 5% AS various, 35% AS Bottom
UMF-01-B	same as morning
UMF-01-F	10% AS various, 30% AS screen, 60% AS Bottom
CTRL-B	20% AS various, 30% AS screen, 50% AS Bottom
LD-01-C	20% AS various, 30% AS Bottom, 50% AS screen
DE-C	same as morning
CTRL-F	same as morning
DE-B	same as morning
H_2O-E	same as morning
CTRL-E	same as morning
LALL-E	same as morning
H_2O-D	same as morning
LMF-02-C	same as morning
LALL-A	same as morning
UMF-01-E	same as morning
LD-01-F	5% AS Bottom, 15% AS screen, 80% AS various
Finished	@ 1:45 pm 09/04/10 TT

Scale: 1 square = 85

09/05/10 SA Observations 12:00pm

Tank ID	Observations
DE-A	25% AS Various, 25% AS Bottom, 50% AS Screen
GE-D	25% AS Screen, 20% AS Bottom, 55% AS Various
LD-D	25% AS Bottom, 25% AS Various, 50% AS Screen
LMF-02-A	20% AS Bottom, 20% AS Screen, 60% AS Various
UMF-01-D	60% AS Screen, 30% AS Various, 10% AS Bottom
LALL-D	30% AS Bottom, 30% AS Screen, 40% AS Various
NP-03-A	60% AS Screen, 20% AS Various, 20% AS Bottom
LMF-02-B	5% AS Bottom, 65% AS Various, 30% AS Screen
LALL-C	20% AS Bottom, 40% AS Screen, 40% AS Various
LD-01-B	10% AS Bottom, 45% AS Screen, 45% AS Various
UMF-01-C	20% AS Bottom, 50% AS Various, 30% AS Screen
CTRL-C	60% AS Various, 25% AS Screen, 15% AS Bottom
LALL-B	60% AS Screen 20% AS Various, 20% AS Bottom
CTRL-D	85% IN Bottom, 75% AS Various, 20% AS Screen
H_2O-B	40% AS Bottom, 40% AS Various, 20% AS Screen
GE-C	25% AS Screen, 20% AS Bottom, 55% AS Various
GE-A	20% AS Bottom, 40% AS Various, 40% AS Screen
H_2O-A	70% AS Various, 20% AS Bottom, 10% AS Screen
NP-03-B	50% AS Various, 25% AS Bottom, 25% AS Screen
GE-B	25% AS Various, 50% AS Screen, 25% AS Bottom
LALL-F	60% AS Various, 30% AS Bottom, 10% AS Screen
LMF-02-D	20% AS Screen, 10% AS Bottom, 70% AS Various
LD-01-A	20% AS Bottom, 20% AS Screen, 60% AS Various
H_2O-C	80% AS Various, 10% AS Screen, 10% AS Bottom

Tank ID	Observations
UMF-01-A	20% AS Bottom, 20% AS Various, 60% AS Screen
LD-01-E	30% AS Bottom, 30% AS Various 40% AS Screen
CTRL A	10% IN Bottom 45% AS Various, 45% AS Screen
UMF-01-B	40% AS Screen 40% AS Bottom, 20% AS Various
UMF-01-F	50% AS Screen 25% AS Bottom, 25% AS Various
CTRL B	20% AS Bottom, 40% AS Screen 40% AS Various
LD-01-C	10% AS Bottom, 70% AS Screen 20% AS Various
DE-C	40% AS Screen, 30% AS Various, 30% AS Bottom
CTRL-F	25% AS Bottom 25% AS Screen 50% AS Various
DE-B	50% AS Bottom, 25% AS Screen, 25% AS Various
H_2O-E	20% AS Screen, 40% AS Bottom, 40% AS Various
CTRL-E	20% AS Various 60% AS Screen 20% AS Bottom
LALL-E	45% AS Various, 40% AS Screen 15% AS Bottom
H_2O-D	20% AS Screen, 40% AS Bottom, 40% AS Various
LMF-02-C	50% AS Screen, 40% AS Various 10% AS Bottom
LALL-A	20% AS Bottom, 40% AS Screen 40% AS Various
UMF-01-E	50% AS Screen 25% AS Bottom 25% AS Various
LD-01-F	20% AS Screen 40% AS Various 40% AS Bottom

Finished @ 1:00pm 09/05/10 SA

09/05/10 SA Observations 4:30 pm

Tank ID	Observations
DE-A	50% AS Screen, 40% AS Various, 10% AS Bottom
GE-D	Same as noon
LD-01-D	Same as noon
LMF-02-A	Same as noon
UMF-01-D	Same as noon
LALL-D	40% AS Various, 40% AS Bottom 20% AS Screen
NP-03-A	Same as noon
LMF-02-B	Same as noon
LALL-C	20% AS Screen, 20% AS Bottoms, 60% AS Various
LD-01-B	Same as noon
UMF-01-C	40% AS Screen, 40% AS Various, 20% AS Bottom
CTRL-C	Same as noon
LALL-B	Same as noon
CTRL-D	Same as noon
H_2O-B	Same as noon
GE-C	70% AS Bottom, 15% AS Various, 15% AS Screen
GE-A	Same as noon
H_2O-A	Same as noon
NP-03-B	Same as noon
GE-B	60% AS Screen, 20% AS Various, 20% AS Bottom
LALL-F	Same as noon
LMF-02-D	30% AS Screen, 60% AS Various, 10% AS Bottom
LD-01-A	30% AS Bottom, 30% AS Various, 40% AS Screen
H_2O-C	60% AS Various, 20% AS Bottom, 20% AS Screen

Scale: 1 square = 88

Tank ID	Observations
UMF-01-A	Same as noon
LD-01-E	20% AS Screen, 60% AS Various, 20% AS Bottom
CTRL-A	Same as noon
UMF-01-B	40% AS Screen 40% AS Various 20% AS Bottom
UMF-01-F	60% AS Various 20% AS Screen, 20% AS Bottom
CTRL-B	Same as noon
LD-01-C	Same as noon
DE-C	Same as noon
CTRL-F	Same as noon
DE-B	Same as noon
H_2O-E	Same as noon
CTRL-E	40% AS Screen 40% AS Various 20% AS Bottom
LALL-E	Same as noon
H_2O-D	Same as noon
LMF-02-C	25% AS Screen, 25% AS Bottom 50% AS Various
LALL-A	40% AS Bottom, 40% AS Screen 20% AS Various
UMF-01-E	Same as noon
LD-01-F	Same as noon

Finished @ 5:15pm 09/05/10 SA

Scale: 1 square = 89

09/06/10 TT Started 8:30am:

Tank ID	Obs AS =
LD-01-F	5% screens, 30% AS Bottom, 65% AS various
LMF-01-E	20% AS screens, 20% AS various, 60% AS Bottom
LALL-A	10% AS screen, 30% AS Bottom, 70% AS various
LMF-02-C	6% AS screen, 10% AS Botom, 80% AS various
H_2O-D	10% AS screen, 30% AS Bottom, 60% AS various
LALL-E	10% AS Bottom, 20% AS various, 70% AS screens
CTRL-E	30% AS screen, 20% AS various, 50% AS Bottom
H_2O-E	20% AS screen, 15% AS various, 65% AS Bottom
GE-B	10% AS Bottom, 20% AS screen, 70% AS various
CTRL-F	10% AS Bottom, 10% AS screen, 80% AS various
GE-C	20% AS Bottom, 10% AS screen, 70% AS various
LD-01-C	30% AS screen, 35% AS Bottom, 35% AS various
CTRL-B	5% AS Bottom, 20% AS screen, 75% AS various
LMF-01-F	20% AS Bottom, 40% AS screen, 40% AS various
LMF-01-B	20% AS Bottom, 30% AS various, 50% AS screen
CTRL-A	40% AS screen, 20% AS various, 40% AS Bottom
LD-01-E	10% AS Bottom, 20% AS various, 70% AS screen
LMF-01-A	20% AS Bottom, 30% AS various, 50% AS screen
H_2O-C	10% AS Bottom, 10% AS screen, 80% AS various
LD-01-A	10% AS Bottom, 10% AS screen, 80% AS various
LMF-02-D	10% AS Bottom, 20% AS screen, 70% AS various
LALL-F	10% AS Bottom, 20% AS screen, 70% AS various
GE-B	20% AS Bottom, 10% AS screen, 70% AS various
NP-03-B	30% AS Bottom, 10% AS screen, 60% AS various

Scale: 1 square = 90

Tank ID	obs
H_2O-A	5% AS Bottom, 20% AS Bottom, 75% AS various
GE-A	10% AS Bottom, 20% AS screen, 70% AS various
GE-C	20% AS screen, 30% AS various, 50% AS Bottom
H_2O-B	30% AS Bottom, 10% AS screen, 60% AS various
CTRL-D	5% AS Bottom, 10% AS Bottom, 85% AS screens
LALL-B	20% AS screen, 30% AS screen, 50% AS Bottom
CTRL-C	20% AS screen, 30% AS Bottom, 50% AS various
LMF-01-C	10% AS various, 90% AS Bottom
LD-01-B	10% AS various, 45% AS screen, 45% AS Bottom
LALL-C	100% AS Bottom
LMF-02-B	5% AS various, 5% AS screen, 90% AS Bottom
NP-03-A	10% AS screen, 5% AS various, 85% AS Bottom
LALL-D	10% AS screen, 90% AS Bottom
LMF-01-D	50% AS screen, 50% AS Bottom
LMF-02-A	20% AS screen, 20% AS various, 60% AS Bottom
LD-01-D	20% AS screen, 10% AS various, 70% AS Bottom
GE-D	10% AS screen, 10% AS various, 80% AS Bottom
DE-A	40% AS Bottom, 40% AS screen, 20% AS various
Finished 9:45am TT 09/06/10	

Scale: 1 square = 91

09/06/10 Observations 12:00 pm SA

Tank ID	Observations
DE-A	Same as morning
GE-D	10% AS Bottom, 20% AS Screen, 70% AS Various
LD-01-D	Same as morning
LMF-02-A	Same as morning
UMF-01-D	5% AS Bottom, 40% AS Various, 45% AS Screen
LALL-D	25% AS Bottom 25% AS Screen, 50% AS Various
NP-03-A	50% AS Screen, 40% AS Various, 10% AS Bottom
LMF-02-B	10% AS Bottom, 20% AS Screen, 70% AS Various
LALL-C	80% AS Bottom, 10% AS Screen, 10% AS Various
LD-01-B	10% AS Bottom, 45% AS Screen, 45% AS Various
UMF-01-C	50% AS Various, 30% AS Bottom, 20% AS Screen
CTRL-C	Same as morning
LALL-B	40% AS Screen, 40% AS Bottom, 20% AS Various
CTRL-D	Same as morning
H_2O-B	Same as morning
GE-C	50% AS Various 30% AS Bottom, 20% AS Screen
GE-A	Same as morning
H_2O-A	Same as morning
NP-03-B	Same as morning
GE-B	40% AS Various, 40% AS Bottom, 20% AS Screen
LALL-F	Same as morning
LMF-02-D	Same as morning
LD-01-A	Same as morning
H_2O-C	Same as morning

Scale: 1 square = 92

Tank ID	Observations
UMF-01-A	Same as morning
LD-01-E	20% AS Screen 10% AS Bottom 70% AS Various
CTRL-A	Same as morning
UMF-01-B	10% AS Screen, 60% AS Various, 30% AS Bottom
~~REPORT~~	
UMF-01-F	Same as morning
CTRL-B	Same as morning
LD-01-C	Same as morning
DE-C	30% AS Various, 30% AS Screen, 20% AS Bottom
CTRL-F	Same as morning
DE-B	Same as morning
H_2O-E	Same as morning
CTRL-E	40% AS Screen, 40% AS Various, 20% AS Bottom
LALL-E	Same as morning
H_2O-D	Same as morning
LMF-02-C	Same as morning
LALL-A	30% AS Bottom, 20% AS Screen, 50% AS Various
UMF-01-E	30% AS Screen, 30% AS Bottom, 40% AS Various
LD-01-F	Same as morning

Finished @ 12:45 pm 09/06/10 SA

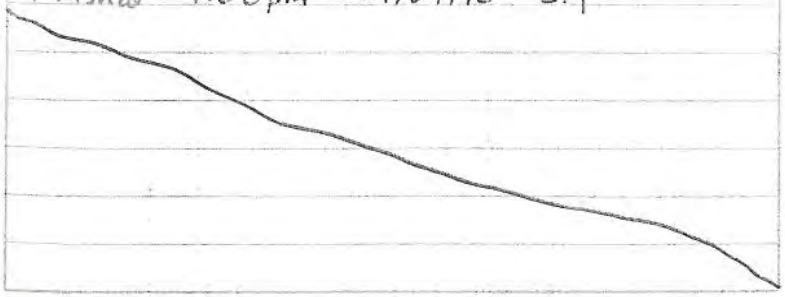
Scale: 1 square = 93

09/07/10	Observations 12:00pm SA
Tank ID	Observations
DE-A	50% AS Screen, 30% AS Various, 20% AS Bottom
Ge-D	40% AS Screen 55% AS Various, 5% AS Bottom
LD 01-D	70% AS Various, 25% AS Screen, 5% AS Bottom
LMF-02-A	80% AS Various, 20% AS Screen
UMF-01-D	60% AS Screen, 20% AS Various, 20% AS Bottom
LALL-D	40% AS Bottom, 40% AS Various, 20% AS Screen
NP-03-A	70% AS Various 20% AS Screen, 10% AS Bottom
LMF-02-B	80% AS Various, 10% AS Screen, 10% AS Bottom
LALL-C	30% AS Bottom, 60% AS Various, 10% AS Screen
LD-01-B	70% AS Screen, 15% AS Bottom, 15% AS Various
UMF-01-C	30% AS Screen, 40% AS Various, 30% AS Bottom
CTRL-C	30% AS Screen, 40% AS Various, 30% AS Bottom
LALL-B	80% AS Screen 10% AS Bottom, 10% AS Various
CTRL-D	90% AS Screen, 5% IN Bottom, 5% AS Various
H_2O-B	10% AS Screen, 45% AS Bottom, 45% AS Various
Ge-C	50% AS Bottom, 30% AS Various, 20% AS Screen
Ge-A	60% AS Screen 30% AS Various, 10% AS Bottom
H_2O-A	10% AS Screen, 50% AS Various, 30% AS Bottom
NP-03-B	20% AS Bottom, 30% AS Screen, 50% AS Various
Ge-B	70% AS Various, 20% AS Screen, 10% AS Bottom
LALL-F	20% AS Bottom, 30% AS Screen, 50% AS Various
LMF-02-D	20% AS Bottom 20% AS Screen, 60% AS Various
LD-01-A	10% AS Screen, 80% AS Various, 10% AS Bottom
H_2O-C	70% AS Various 25% AS Bottom, 5% AS Screen

Scale: 1 square = 94

Tank ID	Observations
UMF-01-A	40% AS Screen, 40% AS Various, 20% AS Bottom
LD 01-E	60% AS Screen 30% AS Various, 10% AS Bottom
CTRL-A	40% AS Screen 20% AS Bottom 40% AS Various
UMF-01-B	60% AS Screen, 30% AS Various, 10% AS Bottom
UMF-01-F	20% AS Bottom 40% AS Various, 40% AS Screen
CTRL-B	10% AS Screen 45% AS Bottom, 45% AS Various
LD-01-C	50% AS Screen 40% AS Various, 10% AS Bottom
DE-C	40% AS Screen 40% AS Various, 20% AS Bottom
CTRL-F	50% AS Screen 25% AS Various, 25% AS Bottom
DE-B	40% AS Various 30% AS Screen, 30% AS Bottom
H_2O-E	10% AS Screen 70% AS Bottom, 20% AS Various
CTRL-E	60% AS Screen 20% AS Bottom, 20% AS Various
LALL-E	20% AS Screen 60% AS Various, 10% AS Bottom
H_2O-D	20% AS Screen, 60% AS Bottom, 20% AS Various
LMF-02-C	40% AS Screen, 30% AS Bottom, 30% AS Various
LALL-A	20% AS Various 60% AS Bottom 20% AS Screen
UMF-01-E	40% AS Screen, 40% AS Bottom 20% AS Various
LD-01-F	10% AS screen, 10% AS Bottom, 80% AS Various

Finished 1:00pm 09/07/10 SA



Scale: 1 square = 95

09/07/10 SA Observations 7.00 pm

Tank ID	Observations
DE-A	Same as noon
Ge-D	20% As Bottom, 30% As Screen, 50% As Various
LD-01-D	20% As Various, 20% As Screen, 60% As Bottom
LMF-02-A	60% As Various, 20% As Screen, 20% As Bottom
UMF-01-D	Same as noon
LALL-D	Same as noon
NP-03-A	80% As Screen, 10% As Bottom, 10% As Various
LMF-02-B	Same as noon
LALL-C	Same as noon
LD-01-B	Same as noon
UMF-01-C	Same as noon
CTRL-C	Same as noon
LALL-B	60% As Bottom, 20% As Various, 20% As Screen
CTRL-D	Same as noon
H_2O-B	Same as noon
Ge-C	Same as noon
Ge-A	Same as noon
H_2O-A	Same as noon
NP-03-B	30% As Screen, 30% As Bottom, 40% As Various
Ge-B	60% As Screen 30% As Various, 10% As Bottom
LALL-F	Same as noon
LMF-02-D	10% As Screen, 50% As Various, 40% As Bottom
LD-01-A	60% As Various, 30% As Screen, 10% As Bottom
H_2O-C	Same as noon

Scale: 1 square = 96

Tank ID	Observations
UMF-01-A	40% As Bottom, 30% As Screen, 30% As Various
LD-01-E	Same as noon
CTRL A	Same as noon
UMF-01-B	Same as noon
UMF-01-F	Same as noon
CTRL B	60% As Various, 30% As Bottom, 10% As Screen
LD-01-C	Same as noon
DE-C	Same as noon
CTRL F	80% As Various, 10% As Screen, 10% As Bottom
DE-B	Same as noon
H_2O-E	Same as noon
CTRL-E	Same as noon
LALL-E	Same as noon
H_2O-D	40% As Various, 40% As Bottom, 20% As Screen
LMF-02-C	Same as noon
LALL-A	Same as noon
UMF-01-E	Same as noon
LD-01-F	30% As Bottom, 40% As Various, 30% As Screen
Finished	7.45pm SA 09/07/10

Scale: 1 square = 97

09/08/10 SB Observations. 8:30 am

Tank ID	Observations
DE-A	25% AS bottom, 25% AS screen, 50% AS various
GE-D	25% AS bottom, 30% AS screen, 45% AS various
LD-01-D	25% AS bottom, 30% AS various, 45% AS screen.
LMF-02-A	30% AS various, 35% AS bottom, 35% AS screen.
UMF-01-D	20% AS various, 40% AS screen, 40% AS bottom
LALL-D	25% AS bottom, 30% AS screen, 45% AS various.
NP-03-A	30% AS screen, 35% AS various, 35% AS bottom
LMF-02-B	30% AS bottom, 35% AS screen, 35% AS various.
LALL-C	35% AS bottom, 35% AS screen, 30% AS various.
LD-01-B	15% AS bottom 45% AS various, 40% AS screen.
UMF-01-C	25% AS bottom, 30% AS screen, 45% AS various
CTRL-C	25% AS screen, 35% AS various, 40% AS bottom.
LALL-B	30% AS various, 30% AS screen, 40% AS bottom
CTRL-D	30% AS bottom, 5% AS bottom, 35% AS screen, 40% AS various
H_2O-B	30% AS bottom, 30% AS screen, 40% AS various.
GE-C	30% AS screen, 35% AS bottom, 35% AS various.
GE-A	20% AS bottom, 40% AS screen, 40% AS various.
H_2O-A	30% AS screen, 35% AS bottom, 35% AS various
NP-03-B	30% AS screen, 30% AS various, 40% AS bottom
GE-B	35% AS screen, 35% AS various, 30% AS bottom.
LALL-F	30% AS bottom, 35% AS various, 35% AS screen.
LMF-02-D	30% AS bottom, 35% AS various, 35% AS screen.
LD-01-A	25% AS various, 25% AS bottom, 50% AS screen.
H_2O-C	30% AS bottom, 30% AS various, 40% AS screen

Scale: 1 square = 98

Tank ID	Observations - continued 09/08/10 SB
UMF-01-A	20% AS bottom, 35% AS various, 35% AS screen
LD-01-E	25% AS bottom, 35% AS screen, 40% AS various.
CTRL-A	20% AS bottom, 40% AS various, 40% AS screen.
UMF-01-B	25% AS bottom, 30% AS various, 45% AS screen.
UMF-01-F	25% AS various, 35% AS screen, 40% AS bottom.
CTRL-B	20% AS various, 20% AS screen, 60% AS bottom
LD-01-C	30% AS screen, 35% AS bottom, 35% AS various.
DE-C	30% AS various, 35% AS screen, 35% AS bottom
CTRL-F	30% AS various, 30% AS screen, 40% AS bottom.
DE-B	30% AS various, 35% AS screen, 35% AS bottom.
H_2O-E	30% AS screen, 30% AS various, 40% AS bottom.
CTRL-E	30% AS various, 35% AS screen, 35% AS bottom
LALL-E	20% AS screen, 40% AS bottom, 40% AS various.
H_2O-D	30% AS screen, 35% AS bottom, 35% AS various.
LMF-02-C	30% AS screen, 35% AS various, 35% AS bottom.
LALL-A	30% AS screen. 35% AS various, 35% AS bottom.
UMF-01-E	30% AS bottom, 30% AS various, 40% AS screen
LD-01-F	30% AS screen, 30% AS bottom, 40% AS various.

Observations finished 9:45 am SB.

Scale: 1 square = 99

09/08/10 SA observations 1:00 pm

Tank ID	Observations
DE-A	Same as morning
Ge-D	Same as morning
LD-01-D	Same as morning
LMF-02-A	60% AS Screen, 10% AS Bottom, 30% AS Various
UMF-01-D	10% AS Bottom, 50% AS Screen, 40% AS Various
LALL-D	60% AS Screen, 30% AS Various, 10% AS Bottom
NP-03-A	Same as morning
LMF-02-B	10% AS Bottom, 20% AS Various, 70% AS Screen
LALL-C	Same as morning
LD-01-B	Same as morning
UMF-01-C	Same as morning
CTRL-C	70% AS Bottom, 20% AS Various, 10% AS Screen
LALL-B	30% AS Bottom, 30% AS Screen, 20% AS Various
CTRL-D	60% AS Screen, 20% AS Various, 20% AS Bottom
H2O-B	10% AS Screen, 45% AS Bottom, 45% AS Various
Ge-C	Same as morning
Ge-A	Same as morning
H2O-A	Same as morning
NP-03-B	Same as morning
Ge-B	Same as morning
LALL-F	10% AS Screen, 10% AS Bottom, 80% AS Various
LMF-02-D	Same as morning
LD-01-A	60% AS Various, 35% AS Screen, 5% AS Bottom
H2O-C	Same as morning

Scale: 1 square = 100

Tank ID	Observations
UMF-01-A	Same as morning
LD-01-E	Same as morning
CTRL-A	20% IN Bottom, 40% AS Screen, 40% AS Various
UMF-01-B	Same as morning
UMF-01-F	20% AS Bottom, 40% AS Screen, 40% AS Various
CTRL-B	20% AS Bottom 60% AS Various, 20% AS Screen
LD-01-C	Same as morning
DE-C	Same as morning
CTRL-F	45% AS Various, 45% AS Bottom, 10% AS Screen
DE-B	Same as morning
H2O-E	Same as morning
CTRL-E	25% AS Bottom 25% AS Various, 50% AS Screen
LALL-E	20% AS Bottom, 40% AS Screen, 40% AS Various
H2O-D	Same as morning
LMF-02-C	Same as morning
LALL-A	Same as morning
UMF-01-E	Same as morning
LD-01-F	Same as morning

Finished 1:45 pm SA 09/08/10

Scale: 1 square = 101

09/09/10 10 observations 6 l/s pmp.

Tank ID	Observations
DE-A	75% AS bottom, 15% AS various, 10% AS screen
GE-D	75% AS bottom, 10% AS various, 15% AS screen
LD-01-D	5% AS bottom, 45% AS various, 50% AS screen
LMF-02-A	70% AS bottom, 25% AS various, 15% AS screen
UMF-01-D	10% AS bottom, 60% AS various, 30% AS screen
LALL-D	80% AS bottom, 10% AS various, 10% AS screen
NP-03-A	50% AS bottom, 40% AS various, 10% AS screen
LMF-02-B	10% AS bottom, 80% AS various, 10% AS screen
LALL-C	80% AS bottom, 10% AS various, 10% AS screen
LD-01-B	60% AS bottom, 60% AS various, 80% AS screen
UMF-01-C	20% AS bottom, 70% AS various, 10% AS screen
CTRL-C	45% AS bottom, 45% AS various, 10% AS screen
LALL-B	50% AS bottom, 30% AS various, 20% AS screen
CTRL-D	25% AS bottom, 25% AS various, 50% AS screen
H2O-B	75% AS bottom, 20% AS various, 5% AS screen
GE-C	60% AS bottom, 30% AS various, 10% AS screen
GE-A	33% AS bottom, 33% AS various, 33% AS screen
H2O-A	15% AS bottom, 80% AS various, 5% AS screen
NP-03-B	75% AS bottom, 20% AS various, 5% AS screen
GE-B	40% AS bottom, 40% AS various, 20% AS screen
LALL-F	20% AS bottom, 60% AS various, 20% AS screen
LMF-02-D	15% AS bottom, 60% AS various, 25% AS screen
LD-01-A	33% AS bottom, 33% AS various, 33% AS screen
H2O-C	45% AS bottom, 45% AS various, 10% AS screen

Scale: 1 square = 102

Tank ID	Observations
UMF-01-A	45% AS bottom, 45% AS various, 10% AS screen
LD-01-E	15% AS bottom, 75% AS various, 10% AS screen
CTRL-A	5% AS bottom, 50% AS various, 25% AS screen
UMF-01-B	10% AS bottom, 80% AS various, 10% AS screen
UMF-01-F	25% AS bottom, 25% AS various, 50% AS screen
CTRL B	30% AS bottom, 45% AS various, 25% AS screen
LD-01-C	25% AS bottom, 45% AS various, 30% AS screen
DE-C	33% AS bottom, 33% AS various, 33% AS screen
CTRL-F	40% AS bottom, 40% AS various, 20% AS screen
DE-B	20% AS bottom, 60% AS various, 20% AS screen
H2O-E	40% AS bottom, 40% AS various, 20% AS screen
CTRL E	33% AS bottom, 33% AS various, 33% AS screen
LALL-E	40% AS bottom, 40% AS various, 20% AS screen
H2O-D	30% AS bottom, 60% AS various, 10% AS screen
LMF-02-C	25% AS bottom, 50% AS various, 25% AS screen
LALL-A	40% AS bottom, 40% AS various, 20% AS screen
UMF-01-E	20% AS bottom, 60% AS various, 20% AS screen
LD-01-F	33% AS bottom, 33% AS various, 33% AS screen

Scale: 1 square = 103

09/10/10 observations 9:00 am SB

Tank ID	observations
DE-A	30% AS screen, 35% AS bottom, 35% AS various.
GE-D	30% AS bottom, 35% AS screen, 35% AS various
LD-01-D	30% AS bottom, 35% AS screen, 35% AS various.
LMF-02-A	1% IN bottom; 29% AS bottom, 35% AS various, 35% AS screen
UMF-01-D	10% AS various, 45% AS screen, 45% AS various
LALL-D	10% AS various, 10% AS screen, 80% AS bottom
NP-03-A	10% AS various, 40% AS screen, 50% AS bottom
LMF-02-B	10% AS various 30% AS screen 60% AS bottom
LALL-C	15% AS screen, 15% AS various, 70% AS bottom.
LD-01-B	25% AS various, 30% AS screen 45% AS bottom
UMF-01-C	30% AS bottom, 35% AS various, 35% AS screen
CTRL-C	25% AS bottom, 25% AS screen, 50% AS various.
LALL-B	25% AS screen, 35% AS various, 40% AS bottom.
CTRL-D	25% AS screen, 25% AS bottom, 50% AS various
H_2O-B	30% AS bottom, 30% AS various, 40% AS screen
GE-C	30% AS screen. 35% AS bottom, 35% AS various.
GE-A	30% AS screen 35% AS various 35% AS bottom
H_2O-A	30% AS screen 35% AS various 35% AS bottom
NP-03-B	30% AS bottom, 35% AS various, 35% AS screen.
GE-B	30% AS bottom, 35% AS various 35% AS screen
LALL-F	30% AS screen 35% AS various 35% AS bottom
LMF-02-D	30% AS bottom 35% AS various 35% AS screen
LD-01-A	30% AS bottom 35% AS various 35% AS screen
N_2O-C	30% AS bottom 35% AS various 35% AS screen

Scale: 1 square = 104

Tank ID	observations continued 09/10/10 SB
UMF-01-A	30% AS bottom, 35% AS screen 35% AS various
LD-01-E	30% AS various, 30% AS screen, 40% AS bottom
CTRL-A	25% AS various, 25% AS screen, 50% AS bottom
UMF-01-B	30% AS bottom, 35% AS screen, 35% AS various
UMF-01-F	30% AS bottom, 35% AS screen, 35% AS various.
CTRL-B	25% AS bottom. 25% AS screen, 50% AS various.
LD-01-C	30% AS screen, 35% AS bottom, 35% AS various
DE-C	20% AS screen 40% AS various, 40% AS bottom
CTRL-F	20% AS bottom, 40% AS various, 40% AS screen
DE-B	20% AS bottom, 40% AS various, 40% AS screen
H_2O-E	30% AS bottom, 35% AS screen, 35% AS various
CTRL-E	30% AS various 30% AS bottom 40% AS screen
LALL-E	30% AS bottom, 35% AS screen 35% AS various
H_2O-D	30% AS bottom, 35% AS screen, 35% AS various.
LMF-02-C	30% AS bottom, 30% AS various, 40% AS screen
LALL-A	20% AS bottom, 40% AS screen, 40% AS various
UMF-01-E	20% AS various 20% AS bottom 60% AS screen
LD-01-F	30% AS bottom, 35% AS screen, 35% AS various
	Observations Finished 10:00 am SB

SB

Scale: 1 square = 105

Tank ID	Observations
DE-A	10% As bottom, 45% As various, 45% As screen
Ge-D	20% As bottom, 60% As various, 20% As screen
LD-01-D	15% As bottom, 35% As various, 50% As screen
LMF-02-A	10% As bottom, 60% As various, 30% As screen
UMF-01-D	33% As bottom, 33% As various, 33% As screen
LALL-B	40% As bottom, 40% As various, 20% As screen
NP-03-A	35% As bottom, 35% As various, 30% As screen
LMF-02-B	15% As bottom, 45% As various, 40% As screen
LALL-C	45% As bottom, 45% As various, 10% As screen
LD-01-B	10% As bottom, 60% As various, 30% As screen
UMF-01-C	30% As bottom, 60% As various, 10% As screen
CTRL-C	45% As bottom, 45% As various, 10% As screen
LALL-B	33% As bottom, 33% As various, 33% As screen
CTRL-D	33% As bottom, 33% As various, 33% As screen
H_2O-B	50% As bottom, 35% As various, 15% As screen
Ge-C	60% As bottom, 20% As various, 20% As screen
Ge-A	60% As bottom, 20% As various, 20% As screen
H_2O-A	30% As bottom, 60% As various, 10% As screen
NP-03-B	33% As bottom, 33% As various, 33% As screen
Ge-B	80% As bottom, 10% As various, 10% As screen
LALL-F	20% As bottom, 60% As various, 20% As screen
LMF-02-D	25% As bottom, 50% As various, 25% As screen
LD-01-A	15% As bottom, 60% As various, 25% As screen
H_2O-C	45% As bottom, 45% As various, 10% As screen

Scale: 1 square = 106

Tank ID	Observations
UMF-01-A	33% bottom, 33% As various, 33% As screen
LD-01-E	30% As bottom, 60% As various, 10% As screen
CTRL-A	35% bottom, 35% As various, 30% As screen
UMF-01-B	33% As bottom, 33% As various, 33% As screen
UMF-01-F	40% As bottom, 40% As various, 20% As screen
CTRL-B	60% As bottom, 20% As various, 20% As screen
LD-01-C	20% As bottom, 20% As various, 60% As screen
DE-C	50% As bottom, 25% As various, 25% As screen
CTRL-F	40% As bottom, 40% As various, 20% As screen
DE-B	40% As bottom, 20% As various, 40% As screen
H_2O-E	60% As bottom, 30% As various, 10% As screen
CTRL-E	35% As bottom, 30% As various, 35% As screen
LALL-E	20% As bottom, 60% As various, 20% As screen
H_2O-D	45% As bottom, 45% As various, 10% As screen
LMF-02-C	10% As bottom, 80% As various, 10% As screen
LALL-A	45% As bottom, 45% As various, 10% As screen
UMF-01-E	30% As bottom, 30% As various, 20% As screen
LD-01-F	25% As bottom, 25% As various, 50% As screen

Scale: 1 square = 107

09/11/10 SB observations 1030 am

Tank ID	Observations
DE-A	30% AS screen, 35% AS various, 35% AS bottom
GE-D	30% AS bottom, 30% AS various, 40% AS screen
LD-01-D	30% AS bottom, 30% AS various, 40% AS screen
LMF-02 A	30% AS bottom, 35% AS various 35% AS screen
UMF-01-D	5% IN bottom, 20% AS bottom, 35% AS screen, 40% AS various
LALL-D	30% AS bottom, 30% AS screen, 40% AS various
NP-03-A	30% AS screen, 30% AS various, 40% AS bottom
LMF-02-B	20% AS bottom, 40% AS screen, 40% AS various
LALL-C	40% AS screen, 20% AS various, 60% AS bottom
LD-01-B	30% AS various, 35% AS bottom, 35% AS screen
UMF-01-C	30% AS bottom, 35% AS screen, 35% AS various
CTRL-C	30% AS various, 30% AS screen, 40% AS bottom
LALL-B	30% AS various, 35% AS screen, 35% AS bottom
CTRL-D	20% IN bottom, 50% AS SB various, 30% AS screen
H_2O-B	30% AS various, 35% AS bottom, 35% AS screen
GE-C	25% AS screen, 35% AS various, 40% AS bottom
GE-A	30% AS bottom, 35% AS various, 35% AS screen
H_2O-A	30% AS bottom, 35% AS various, 35% AS screen
NP-03-B	25% AS bottom, 25% AS various, 50% AS screen
GE-B	30% AS bottom, 35% AS screen, 35% AS various
LALL-F	20% AS bottom, 20% AS screen, 60% AS various
LMF-02-D	30% AS screen, 35% AS bottom, 35% AS various
LD-01-A	30% AS various, 35% AS screen, 35% AS bottom
H_2O-C	30% AS various, 35% AS screen, 35% AS bottom

Scale: 1 square = 108

Tank ID	observations Continued 09/11/10 10:30 am SB
UMF-01-A	30% AS bottom, 35% AS screen, 35% AS various
LD-01-E	30% AS various, 35% AS screen, 35% AS bottom
CTRL-A	25% AS various, 25% AS screen, 40% AS bottom 10% IN bottom
UMF-01-B	25% AS various, 25% AS screen, 50% AS bottom
UMF-01-F	30% AS bottom, 35% AS screen, 35% AS various.
CTRL-B	30% AS screen, 35% AS bottom, 35% AS various
LD-01-C	30% AS bottom, 35% AS screen, 35% AS various
DE-C	20% AS various, 40% AS screen, 40% AS bottom
CTRL-F	30% AS various, 35% AS screen, 35% AS bottom
DE-B	30% AS various, 35% AS screen, 35% AS bottom
H_2O-E	30% AS screen, 35% AS bottom, 35% AS various.
CTRL-E	30% AS various, 35% AS screen, 35% AS bottom
LALL-E	30% AS screen, 30% AS various, 40% AS bottom.
H_2O-D	30% AS screen, 30% AS various, 40% AS bottom.
LMF-02-C	30% AS bottom, 35% AS screen, 35% AS various
LALL-A	30% AS various, 30% AS screen, 40% AS bottom
UMF-01-E	20% AS bottom, 40% AS screen, 40% AS various.
LD-01-F	30% AS bottom, 35% AS various, 35% AS screen

observations Finished 11:15 am. SB

SB

Scale: 1 square = 109

09/11/2010 - Observations @ 3:30pm DS

Tank ID	Observations
DE-A	20% AS Bottom, 30% AS screen, 50% AS various
Ge-D	20% AS Bottom, 20% AS Screen, 60% AS various
LD-01-D	5% AS bottom, 75% AS screen, 20% AS various
LMF-02-A	20% AS Bottom, 20% AS various, 60% AS screen
UMF-01-D	10% AS Bottom, 20% AS various, 70% AS screen
LALL-D	20% AS Bottom, 30% AS various, 50% AS screen
NP-03-A	40% AS Bottom, 30% AS various, 30% AS screen
LMF-02-B	15% AS bottom, 55% AS various, 30% AS screen
LALL-C	70% AS bottom, 15% AS various, 15% AS screen
LD-01-B	10% AS Bottom, 30% AS various, 60% AS screen
UMF-01-C	10% AS Bottom, 45% AS various, 45% AS screen
Ctrl-C	30% AS Bottom, 30% AS various, 40% AS screen
LALL-B	20% AS Bottom, 40% AS various, 40% AS screen
Ctrl-D	5% AS Bottom, 10% AS various, 85% AS screen
H_2O-B	60% AS Bottom, 20% AS various, 20% AS screen
Ge-C	50% AS Bottom, 20% AS various, 30% AS screen
Ge-A	70% AS Bottom, 20% AS various, 10% AS screen
H_2O-A	30% AS Bottom, 50% AS various, 20% AS screen
NP-03-B	40% AS Bottom, 30% AS various, 30% AS screen
Ge-B	50% AS Bottom, 30% AS various, 20% AS screen
LALL-F	60% AS Bottom, 20% AS various, 20% AS screen
LMF-02-D	30% AS Bottom, 20% AS various, 50% AS screen
LD-01-A	30% AS Bottom, 30% AS various, 40% AS screen
H_2O-C	50% AS Bottom 40%, various, 10% screen

Scale: 1 square = 1/0

UMF-01-A	40% Bottom, 50% Various, 10% AS screen
LD-01-E	60% Bottom, 20% Various, 20% AS screen
Ctrl-A	20% Bottom, 70% Various, 10% AS screen
UMF-01-B	30% Bottom, 30% Various, 40% AS screen
UMF-01-F	30% Bottom, 20% Various, 50% AS screen
Ctrl-B	30% Bottom, 50% Various, 20% AS screen
LD-01-C	20% Bottom, 40% Various, 40% AS screen
DE-C	10% Bottom, 50% Various, 40% screen
Ctrl-F	20% Bottom, 60% Various, 20% screen
DE-B	20% Bottom, 40% Various, 40% screen
H_2O-E	40% Bottom, 30% Various, 30% screen
Ctrl-E	35% Bottom, 40% Various, 25% screen
LALL-E	30% Bottom, 50 Various, 20% screen
H_2O-D	40% Bottom, 20% Various, 40% screen
LMF-02-C	50% Bottom, 45% Various, 5% screen
LALL-A	40% Bottom, 40% Various, 20% screen
UMF-01-E	30% Bottom, 20% Various, 50% screen
LD-01-F	25% Bottom, 35% Various, 30% screen

Scale: 1 square = 1/1

09/17/2010 observations @ 2:00 p.m. SD

Tank ID	observations
DE-A	33% AS bottom, 33% AS various, 33% AS screen
Ge-D	40% AS bottom, 40% AS various, 20% AS screen
LD-01-D	25% AS bottom, 25% AS various, 50% AS screen
UMF-02-A	45% AS bottom, 45% AS various, 10% AS screen
UMF-01-D	20% AS bottom, 60% AS various, 20% AS screen
LALL-D	60% AS bottom, 20% AS various, 20% AS screen
NP-03-A	33% AS bottom, 33% AS various, 33% AS screen
UMF-02-B	40% AS bottom, 40% AS various, 20% AS screen
LALL-C	60% AS bottom, 30% AS various, 10% AS screen
LD-01-B	25% AS bottom, 25% AS various, 50% AS screen
UMF-01-C	33% AS bottom, 33% AS various, 33% AS screen
CTRL-C	40% AS bottom, 40% AS various, 20% AS screen
LALL-B	40% AS bottom, 20% AS various, 40% AS screen
~~UMF~~ CTRL-D	33% AS bottom, 33% AS various, 33% AS screen
H2O-B	45% AS bottom, 45% AS various, 10% AS screen
Ge-C	60% AS bottom, 30% AS various, 10% AS screen
Ge-A	60% AS bottom 20% AS various, 20% AS screen
H2O-A	30% AS bottom, 60% AS various, 10% AS screen
NP-03-B	33% AS bottom 33% AS various, 33% AS screen
Ge-B	45% AS bottom, 45% AS various, 10% AS screen
LALL-F	45% AS bottom, 45% AS various, 10% AS screen
UMF-02-D	10% AS bottom, 30% AS various, 60% AS screen
LD-01-A	20% AS bottom, 40% AS various, 40% AS screen
H20-C	40% AS bottom, 40% AS various, 20% AS screen

Scale: 1 square = 112

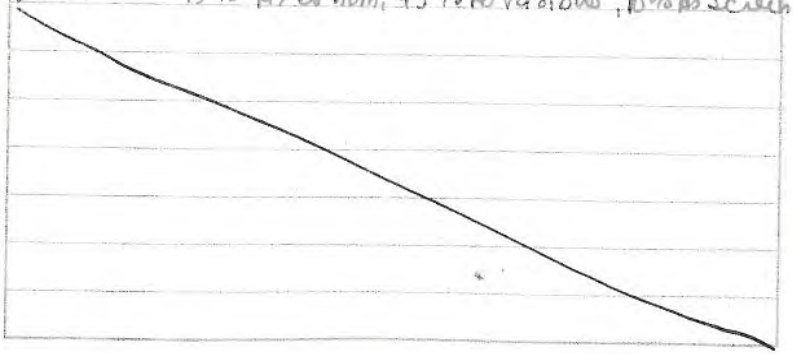
Tank ID	observations
UMF-01-A	10% AS bottom 45% AS various, 45% AS screen
~~LD-01-E~~ ~~UMF-01-A~~	25% AS bottom, 25% AS various, 50% AS screen
CTRL-A	60% AS bottom, 20% AS various, 20% AS screen
~~UMF-01-B~~ ~~LD-01-C~~	60% AS bottom, 20% AS various, 20% AS screen
~~UMF-01-F~~ ~~DE-E~~	45% AS bottom 45% AS various, 10% AS screen
CTRL-B	45% AS bottom, 45% AS various, 10% AS screen
~~LD-01-C~~ ~~DF-B~~	33% AS bottom, 33% AS various, 33% AS screen
~~DE-E~~ ~~H2O-E~~	25% AS bottom, 25% AS various, 50% AS screen
CTRL-F	33% AS bottom, 33% AS various, 33% AS screen
~~DE-B~~ ~~LALL-E~~	20% AS bottom, 40% AS various, 20% AS screen
H2O-E	45% AS bottom, 45% AS various, 10% AS screen
~~CTRL-E~~ ~~UMF-01-C~~	33% AS bottom, 33% AS various, 33% AS screen
LALL-E	20% AS bottom, 40% AS various, 40% AS screen
~~H2O-D~~ ~~UMF-01-F~~	45% AS bottom, 45% AS various, 10% AS screen
~~LMF-02-C~~ ~~LD-01-F~~	33% AS bottom, 33% AS various, 33% AS screen
LALL-A	60% AS bottom, 20% AS various, 20% AS screen
UMF-01-E	25% AS bottom, 50% AS various, 25% AS screen
LD-01-F	33% AS bottom, 33% AS various, 33% AS screen

Scale: 1 square = 113

12 sept 2010 @ 4:30 PM AV

Tank ID	Observation
DE-A	40% Bottom, 30% Various, 30% Screen
Ge-D	20% Bottom, 50% Various, 20% Screen
LD-01-D	45% Bottom, 40% Various 15% Screen
LMF-02-A	25% Bottom, 25% Various 50% Screen
UMF-01-D	60% Bottom, 30% Various 10% Screen
LALL-D	30% As Bottom, 20% As Various, 50% Screen
NP-03-A	50% As Bottom, 25% As Various, 25% Screen
LMF-02-B	75% As Bottom, 20% As Various, 5% As Screen
LALL-C	60% As Bottom, 30% As Various, 10% As Screen
LD-01-B	45% As Bottom, 25% As Various, 30% As Screen
UMF-01-C	45% As Bottom, 15% As Various, 40% As Screen
CTRL-C	65% As Bottom, 5% As Various, 30% As Screen
LALL-B	45% As Bottom 15% As Various, 40% As Screen
CTRL-D	5% As Bottom, 35% As Various, 60% As Screen
H_2O-B	40% As Bottom, 30% As Various, 30% As Screen
Ge-C	35% As Bottom, 20% As Various, 15% As Screen
Ge-A	50% As Bottom, 30% As Various, 20% As Screen
H_2O-A	55% As Bottom, 35% As Various, 10% As Screen
NP-03-B	70% As Bottom, 5% As Various, 25% As Screen
Ge-B	50% As Bottom, 20% As Various, 30% As Screen
LALL-F	30% As Bottom, 45% As Various, 25% As Screen
LMF-02-D	15% As Bottom, 60% As Various, 25% As Screen
LD-01-A	25% As Bottom, 45% As Various, 40% As Screen
H_2O-C	50% As Bottom, 10% As Various, 40% As Screen

Tank ID	Observation
UMF-01-A	30% As Bottom, 30% As Various, 40% As Screen
LD-01-E	75% As Bottom, 20% As Various, 5% As Screen
CTRL-A	0% As Bottom, 80% As Various, 20% As Screen
UMF-01B	25% As Bottom, 65% As Various, 10% As Screen
UMF-01-F	15% As Bottom, 55% As Various, 30% As Screen
CTRL-B	30% As Bottom, 50% As Various, 20% As Screen
LD-01-C	70% As Bottom, 15% As Various, 15% As Screen
DE-C	50% As Bottom, 40% As Various, 10% As Screen
CTRL-F	20% As Bottom, 60% As Various, 20% As Screen
DE-B	80% As Bottom, 10% As Various, 10% As Screen
H_2O-E	50% As Bottom, 25% As Various, 25% As Screen
CTRL-E	80% As Bottom, 15% As Various, 5% As Screen
LALL-E	10% As Bottom, 5% As Various, 25% As Screen
H_2O-D	60% As Bottom, 20% As Various, 20% As Screen
LMF-02-C	50% As Bottom, 5% As Various, 45% As Screen
LALL-A	35% As Bottom, 15% As Various 50% As Screen
UMF-01-E	20% As Bottom, 40% As Various, 40% As Screen
LD-01-F	45% As Bottom, 45% As Various, 10% As Screen



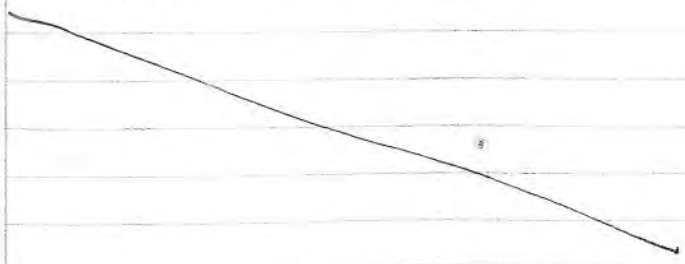
09/13/10 SB Observations 9:00 am

Tank ID	Observations
DE-A	25% AS bottom, 25% AS screen, 50% AS various
GE-D	30% AS bottom, 30% AS bottom, 40% AS various.
LD-01-D	30% AS bottom, 40% AS screen, 30% AS various
LMF-01-A	25% AS bottom, 25% AS screen, 50% AS various
UMF-01-D	20% AS bottom, 40% AS screen, 40% AS various.
LALL-D	30% AS bottom, 30% AS screen, 40% AS various.
NP-03-A	5% IN bottom, 25% AS bottom, 35% AS screen, 35% AS various
LMF-02-B	25% AS bottom, 25% AS various, 50% AS screen
LALL-C	30% AS screen, 30% AS various, 40% AS bottom.
LD-01-B	30% AS bottom, 35% AS screen, 35% AS various.
UMF-01-C	1 IN bottom, 24% AS bottom, 35% AS various, 40% AS screen
CTRL-C	30% AS various, 35% AS bottom, 35% AS bottom
LALL-B	10% AS screen, 10% AS various, 80% AS bottom
CTRL-D	30% AS screen, 30% AS various, 15% AS IN bottom, 25% AS bottom
H_2O-B	15% AS screen, 15% AS various, 70% AS bottom.
GE-C	10% AS screen, 10% AS various, 80% AS bottom
GE-A	10% AS screen, 10% AS various, 80% AS bottom.
H_2O-A	15% AS screen, 20% AS various, 65% AS bottom.
NP-03-B	20% AS screen, 20% AS various, 60% AS bottom.
GE-B	30% AS screen, 35% AS various, 35% AS bottom.
LALL-F	25% AS screen, 25% AS various, 50% AS bottom
LMF-02-D	30% AS screen, 35% AS various, 35% AS bottom.
LD-01-A	1 IN bottom, 34% AS bottom, 30% AS various, 35% AS screen
H_2O-C	30% AS various, 35% AS bottom, 35% AS screen

Scale: 1 square = 1/10

Tank ID	Observations Continued 09/13/10 9:00 am SB
UMF-01-A	30% AS bottom, 35% AS various, 35% AS screen.
LD-01-E	30% AS various, 35% AS bottom, 35% AS screen.
CTRL-A	20% AS various, 40% AS bottom, 40% AS screen
UMF-01-B	1 IN bottom, 24% AS bottom, 30% AS various, 45% AS screen
UMF-01-F	30% AS bottom, 35% AS screen, 35% AS various.
CTRL-B	30% AS bottom, 35% AS screen, 35% AS various.
LD-01-C	30% AS screen, 35% AS various, 35% AS bottom
DE-C	20% AS bottom, 40% AS various, 40% AS screen
CTRL-F	1% IN bottom, 34% AS bottom, 35% AS screen, 30% AS various
DE-B	30% AS bottom, 35% AS screen, 35% AS various.
H_2O-E	30% AS bottom, 35% AS screen, 35% AS various.
CTRL-E	30% AS bottom, 35% AS screen, 35% AS various
LALL-E	30% AS bottom, 35% AS screen, 35% AS various
H_2O-D	30% AS various, 35% AS screen, 35% AS bottom
LMF-02-C	1% IN bottom, 29% AS bottom, 40% AS screen, 30% AS various
LALL-A	30% AS bottom, 35% AS screen, 35% AS various
UMF-01-E	20% AS bottom, 40% AS screen, 40% AS various.
LD-01-F	30% AS various, 35% AS screen, 35% AS bottom

Observations Finished 9:45 am SB



Scale: 1 square = 1/7

09/13/10 - Taken at 12:30pm TT

Tank ID	Obs
DE-A	Same as morning
Ge-D	Same as morning
LD-01-D	20% AS screen, 20% AS Bottom, 60% AS various
LMF-02-D	10% AS Bottom, 80% AS screens, 10% AS various
UMF-01-D	Same as morning
LALL-D	Same as morning
NP-03-A	Same as morning
LMF-02-B	25% AS screen, 20% AS Bottom, 55% AS various
LALL-C	Same as morning
LD-01-B	Same as morning
UMF-01-C	10% AS Bottom, 15% AS screen, 75% AS various
CTRL-C	Same as morning
LALL-B	30% AS screen, 20% AS Bottom, 50% AS various
CTRL-D	Same as morning
H_2O-B	20% AS Bottom, 10% AS screen, 70% AS various
Ge-C	Same as morning
Ge-A	Same as morning
H_2O-A	5% AS screen, 10% AS Bottom, 85% AS various
NP-03-B	Same as morning
Ge-B	20% AS screen, 30% AS Bottom, 50% AS various
LALL-F	Same as morning
LMF-02-D	Same as morning
LD-01-A	20% AS Bottom, 10% AS screen, 70% AS various
H_2O-C	Same as morning

Tank ID	Obs
UMF-01-A	Same as morning
LD-01-E	20% AS screen, 10% AS Bottom 70% AS various
CTRL-A	Same as morning
UMF-01-B	20% AS screen, 10% AS Bottom 70% AS various
UMF-01-F	Same as morning
CTRL-B	Same as morning
LD-01-C	Same as morning
DE-C	Same as morning
CTRL-F	10% AS Bottom, 30% AS screen, 60% AS various
DE-B	Same as morning
H_2O-E	Same as morning
CTRL-E	Same as morning
LALL-E	60% AS various, 20% AS Bottom, 20% AS screen
H_2O-D	Same as morning
LMF-02-C	10% AS Bottom, 30% AS various, 60% AS screen
LALL-A	Same as morning
UMF-01-G	20% AS various, 40% AS Bottom, 40% AS screen
LD-01-F	Same as morning
Finished @	1:05pm 09/13/10 TT

09/14/10 1:15pm S-4 Observations

Tank ID	Observations
DE-A	40% AS Screen, 40% AS Various, 20% AS Bottom
Ge-D	10% AS Bottom, 60% AS Screen, 30% AS Various
LD-01-D	10% AS Bottom 40% AS Screen, 50% AS Various
LMF-02-A	15% AS Bottom, 15% AS Screen, 70% AS Various
UMF-01-D	20% AS Bottom, 5% IN Bottom, 25% AS Screen, 50% AS Various
LALL-D	25% AS Bottom, 25% AS Screen, 50% AS Various
NP-03-A	60% AS Screen, 20% AS Various, 15% AS Bottom, 5% IN Bottom
LMF-02-B	45% AS Screen, 45% AS Various, 10% AS Bottom
LALL-C	50% AS Bottom, 30% AS Screen, 20% AS Various
LD-01-B	10% AS Bottom, 45% AS Screen, 45% AS Various
UMF-01-C	1 IN Bottom, 19% AS Bottom, 20% AS Screen, 60% AS Various
CTRL C	40% AS Screen, 40% AS Various, 20% AS Bottom
LALL-B	25% AS Screen, 25% AS Bottom, 50% AS Various
CTRL-D	70% AS Various, 10% AS Screen, 20% IN Bottom
H_2O-B	30% AS Various, 10% AS Screen, 60% AS Bottom
Ge-C	35% AS Bottom, 35% AS Various, 30% AS Screen
Ge-A	10% AS Bottom, 60% AS Screen, 30% AS Various
H_2O-A	10% AS Screen, 70% AS Various 20% AS Bottom
NP-03-B	10% AS Screen, 20% AS Various, 70% AS Bottom
Ge-B	35% AS Screen, 35% AS Various, 30% AS Bottom
LALL-F	5% AS Screen, 65% AS Various, 30% AS Bottom
LMF-02-D	10% AS Screen, 10% AS Bottom, 80% AS Various
LD-01-A	10% AS Bottom, 60% AS Various, 30% AS Screen
H_2O-C	20% AS Screen, 60% AS Various, 20% AS Bottom

Scale: 1 square = 120

Tank ID	Observations
UMF-01-A	10% AS Bottom, 45% AS Screen, 45% AS Bottom
LD-01-E	10% AS Bottom, 30% AS Screen, 60% AS Various
CTRL A	80% AS Bottom, 10% AS Screen, 10% AS Various
UMF-01-B	10% AS Bottom, 70% AS Various 20% AS Screen
UMF-01-F	15% AS Bottom 60% AS Various 25% AS Screen
CTRL-B	20% AS Screen, 20% AS Bottom, 60% AS Various
LD-01-C	10% AS Screen, 15% AS Bottom, 75% AS Various
DE-C	1 IN Bottom, 9% AS Bottom, 20% AS Screen, 70% AS Various
CTRL-F	20% AS Bottom, 40% AS Screen, 40% AS Various
DE-B	20% AS Bottom, 30% AS Screen, 50% AS Various
H_2O-E	10% AS Screen, 30% AS Bottom, 60% AS Various
CTRL E	30% AS Various, 20% AS Bottom, 50% AS Screen
LALL-E	10% AS Bottom, 40% AS Screen, 50% AS Various
H_2O-D	10% AS Screen, 30% AS Bottom, 60% AS Various
LMF02-C	70% AS Various, 15% AS Screen, 15% AS Bottom
LALL-A	20% AS Bottom, 20% AS Screen, 60% AS Various
UMF-01-E	10% AS Bottom 40% AS Screen, 50% AS Various
LD-01-F	70% AS Various, 25% AS Bottom, 5% AS Screen
Finished	2:00pm 09/14/10 S4

Scale: 1 square = 121

Observations - 09/14/2010 @ 5:30PM JE

Tank ID	Observations
DE-A	5% AS Screen, 30% AS various, 65% AS Bottom
Ge-D	15% AS Screen, 20% AS various, 60% AS Bottom
LD-01-D	20% AS Screen, 10% AS various, 70% AS Bottom
LMF-02-A	15% AS Bottom, 25% AS Screen, 60% AS various
UMF-01-D	5% AS Bottom, 10% AS various, 20% AS various, 65% AS Screen
LALL-D	10% AS Screen, 10% AS various, 80% AS Bottom
NP-03-A	20% AS Screen, 30% AS various, 50% AS Bottom
LMF-02-B	25% AS screen, 50% AS various, 25% AS Bottom
LALL-C	20% AS Screen, 15% AS various, 65% AS Bottom
LD-01-B	30% AS various, 35% AS Bottom, 35% AS Screen
UMF-01-C	20% AS Screen, 40% AS Bottom, 40% AS various
Ctrl-C	10% AS Screen, 10% AS various, 80% AS Bottom
LALL-B	60% AS Bottom, 30% AS various, 10% AS Screen
Ctrl-D	50% AS various, 25% AS Screen, 25% AS Bottom
H_2O-B	80% AS Bottom, 10% AS Screen, 10% AS various
Ge-C	10% AS Screen, 10% AS various, 80% AS Bottom
Ge-A	10% AS Screen, 45% AS various, 45% AS Bottom
H_2O-A	20% AS Screen, 50% AS various, 30% AS Bottom
NP-03-B	70% AS Bottom, 20% AS Screen, 10% AS various
Ge-B	30% AS Screen, 30% various, 40% bottom
LALL-F	10% AS Screen, 45% AS various, 45% AS Bottom
LMF-02-D	20% AS Screen, 20% AS various, 60% AS Bottom
LD-01-A	20% AS Screen, 30% AS Bottom, 50% AS various

Scale: 1 square = 122

Tank ID	Observations
H_2O-C	10% AS Screen, 45% AS various, 45% AS Bottom
UMF-01-A	20% AS Screen, 20% AS Bottom, 60% AS various
LD-01-E	30% AS Screen, 30% AS Bottom, 40% AS various
Ctrl-A	10% AS Bottom, 60% AS Screen, 30% AS various
UMF-01-B	40% AS various, 40% AS Screen, 20% AS Bottom
UMF-01-F	30% AS various, 30% AS Screen, 40% AS Bottom
Ctrl-B	30% AS Bottom, 30% AS Screen, 40% AS various
LD-01-C	20% AS Screen, 50% AS Bottom, 30% AS various
DE-C	5% AS Screen, 50% AS Bottom, 45% AS various
Ctrl-F	20% AS Screen, 40% AS Bottom, 40% AS various
DE-B	15% AS Screen, 45% AS Bottom, 40% AS various
H_2O-E	10% AS Screen, 25% AS various, 65% AS Bottom
Ctrl-E	20% AS Screen, 40% AS various, 40% AS Bottom
LALL-E	25% AS Screen, 25% AS Bottom, 50% AS various
H_2O-D	20% AS various, 30% AS Screen, 50% AS Bottom
LMF-02-C	30% AS various, 25% AS Screen, 45% AS Bottom
LALL-A	25% AS Screen, 25% AS various, 50% AS Bottom
UMF-01-E	30% AS Screen, 30% AS Bottom, 40% AS various
LD-01-F	15% AS Bottom, 30% AS Screen, 55% AS various

09/14/2010 @ 6:30 PM JE

Scale: 1 square = 123

09/15/10 SB · Observations 8:45 am.

Tank ID	Observations.
DE-A	20% AS screen, 40% AS bottom, 40% AS various
GE-D	25% AS bottom, 35% AS various, 40% AS various.
LD-01-D	20% AS bottom, 40% AS screen, 40% AS various.
LMF-02-A	25% AS screen, 35% AS bottom, 40% AS various
UMF-01-D	5% IN bottom, 20% AS bottom, 30% AS screen, 45% AS various
LALL-D	30% AS screen, 35% AS bottom, 35% AS various.
NP-03-A	5% IN bottom, 30% AS bottom, 35% AS various, 30% AS screen
LMF-02-B	30% AS bottom, 30% AS screen, 40% AS various.
LALL-C	30% AS bottom, 35% AS various, 35% AS screen.
LD-01-B	30% AS bottom, 35% AS various, 35% AS screen
UMF-01-C	25% AS screen, 25% AS bottom, 50% AS various
CTRL-C	30% AS bottom, 35% AS various, 35% AS screen
LALL-B	20% AS screen, 20% AS various, 60% AS bottom
CTRL-D	10% AS bottom, 46% AS various 45% AS screen.
H_2O-B	30% AS screen, 30% AS bottom, 40% AS various.
GE-C	30% AS screen, 35% AS bottom, 35% AS various.
GE-A	25% AS various, 30% AS bottom, 45% AS screen.
H_2O-A	30% AS screen, 35% AS bottom, 35% AS various
NP-03-B	30% AS various, 35% AS bottom, 35% AS screen.
GE-B	30% AS bottom, 35% AS screen, 35% AS various.
LALL-F	30% AS screen, 35% AS various, 35% AS bottom.
LMF-02-D	1% IN bottom, 24% AS bottom, 35% AS screen, 40% AS various
LD-01-A	30% AS bottom, 30% AS screen, 40% AS various
H_2O-C	25% AS screen 25% AS various, 50% AS bottom

Scale: 1 square = 124

Tank ID	Observations Continued - 09/15/10 SB.
UMF-01-A	50% AS bottom, 25% AS screen, 25% AS various.
LD-01-E	50% AS bottom, 25% AS screen, 25% AS various.
CTRL-A	20% AS screen, 10% AS various, 70% AS bottom
UMF-01-B	20% AS screen, 20% AS various, 55% AS bottom, 5% IN bottom
UMF-01-F	20% AS various, 5% AS screen, 75% AS bottom
CTRL-B	50% AS bottom, 25% AS screen, 25% AS various.
LD-01-C	30% AS screen, 35% AS bottom, 35% AS various.
DE-C	35% AS bottom, 30% AS screen, 35% AS various
CTRL-F	20% AS various, 40% AS screen, 40% AS bottom
DE-B	20% AS various, 30% AS screen, 50% AS bottom.
H_2O-E	30% AS bottom, 30% AS screen, 40% AS various.
CTRL-E	30% AS bottom, 20% AS various, 40% AS screen
LALL-E	30% AS screen, 35% AS various, 35% AS bottom
H_2O-D	30% AS bottom, 35% AS various, 35% AS screen
LMF-02-C	30% AS bottom, 35% AS various, 35% AS screen
LALL-A	30% AS screen, 35% AS various, 35% AS bottom
UMF-01-E	30% AS bottom, 35% AS various, 35% AS screen.
LD-01-F	30% AS screen, 30% AS bottom, 35% AS various.

Observations Finished. 9:45 am. SB

09/15/10
SB

Scale: 1 square = 125

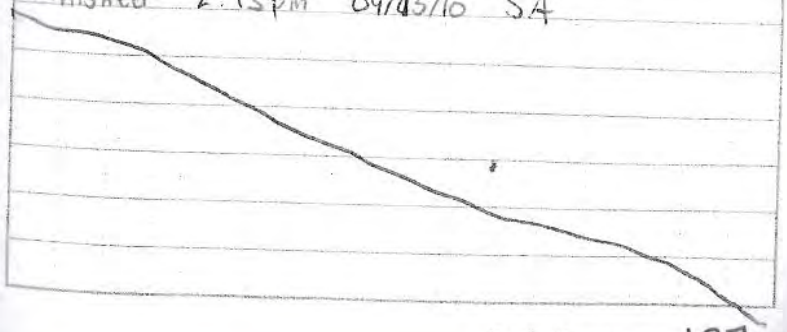
09/15/10 Observations 1:30pm SA

Tank ID	Observations
DE-A	20% AS Screen, 20% AS Bottom, 60% AS Various
Ge-D	50% AS Screen, 20% AS Bottom, 30% AS Various
LD-01-D	30% AS Screen, 35% AS Bottom, 35% AS Various
LMF-02-A	50% AS Various, 30% AS Screen, 20% AS Bottom
UMF-01-D	60% AS Screen, 10% AS Bottom, 30% AS Various
LALL-D	10% AS Screen, 60% AS Various, 30% AS Bottom
NP-03-A	20% AS Screen, 20% AS Bottom, 60% AS Various
LMF-02-B	25% AS Screen, 25% AS Bottom, 50% AS Various
LALL-C	30% AS Screen, 30% AS Bottom, 40% AS Various
LD-01-B	20% AS Bottom, 10% AS Screen, 70% AS Various
UMF-01-C	5% AS Bottom 25% AS Screen 70% AS Various
CTRL-C	10% AS Screen, 10% AS Bottom, 80% AS Various
LALL-B	10% AS Screen, 20% AS Various, 70% AS Bottom
CTRL-D	50% AS Screen, 50% AS Various
H_2O-B	10% AS Screen, 40% AS Various, 50% AS Bottom
Ge-C	30% AS Screen, 35% AS Various, 35% AS Bottom
Ge-A	10% AS Bottom, 30% AS Screen, 60% AS Various
H_2O-A	20% AS Screen, 20% AS Bottom, 60% AS Various
NP-03-B	70% AS Various, 15% AS Screen, 15% AS Bottom
Ge-B	50% AS Screen, 30% AS Various, 20% AS Bottom
LALL-F	10% AS Screen, 45% AS Bottom, 45% AS Various
LMF-02-D	20% AS Bottom, 20% AS Screen, 60% AS Various
LD-01-A	20% AS Bottom, 25% AS Screen, 55% AS Various
H_2O-C	10% AS Screen, 45% AS Bottom, 45% AS Various

Scale: 1 square = 12.6

Tank ID	Observations
UMF-01-A	10% AS Screen, 70% AS Various, 20% AS Bottom
LD-01-E	20% AS Screen, 30% AS Bottom, 50% AS Various
CTRL-A	80% AS Bottom, 10% AS Screen, 10% AS Various
UMF-01-B	70% AS Bottom, 10% AS Various, 20% AS Screen
UMF-01-F	80% AS Bottom, 10% AS Various, 10% AS Screen
CTRL-B	70% AS Bottom 25% AS Screen, 5% AS Various
LD-01-C	15% AS Screen, 15% AS Various, 70% AS Bottom
DE-C	80% AS Bottom, 10% AS Various, 10% AS Screen
CTRL-F	70% AS Bottom 20% AS Various, 10% AS Screen
DE-B	60% AS Bottom, 30% AS Screen, 10% AS Various
H_2O-E	75% AS Bottom, 15% AS Various, 10% AS Screen
CTRL-E	30% AS Various, 35% AS Bottom, 35% AS Screen
LALL-E	50% AS Bottom, 30% AS Various, 20% AS Screen
H_2O-D	25% AS Screen, 25% AS Bottom, 50% AS Various
LMF-02-C	60% AS Screen, 20% AS Bottom, 20% AS Various
LALL-A	40% AS Screen, 20% AS Various, 40% AS Bottom
UMF-01-E	30% AS Screen, 35% AS Various, 35% AS Bottom
LD-01-F	70% AS Various, 10% AS Screen, 20% AS Bottom

Finished 2:15pm 09/15/10 SA



Scale: 1 square = 12.7

10/08/10 DF

Scale: 1 square = 128

ENGLISH SYSTEM OF LINEAR MEASURE:

12 inches	=	1 foot
36 inches	=	1 yard
3 feet	=	1 yard
1,760 yards	=	1 mile statute
2,026.8 yards	=	1 mile nautical
5,280 feet	=	1 mile statute
6,080.4 feet	=	1 mile nautical
63,360 inches	=	1 mile statute
72,963 inches	=	1 mile nautical

METRIC TO ENGLISH CONVERSIONS:

1 millimeter	=	millimeter	=	0.0393 inches
10 millimeters	=	centimeter	=	0.3937 inches
10 centimeters	=	decimeter	=	3.937 inches
10 decimeters	=	meter	=	39.37 inches
10 meters	=	decameter	=	32.81 feet
10 decameters	=	hectometer	=	328.1 feet
10 hectometers	=	kilometer	=	0.62 mile
10 kilometers	=	1.0 myriameter	=	6.21 miles

MAP SCALES - ENGLISH AND METRIC:

SCALE	1 INCH = 'S	1 CENTIMETER = 'S
1:5,000	416.67 feet 127.00 meters	164.00 feet 50.00 meters
1:10,000	833.33 feet 254.00 meters	328.10 feet 100.00 meters
1:12,500	1,041.66 feet 317.00 meters	410.10 feet 125.00 meters
1:20,000	1,666.70 feet 508.00 meters	656.20 feet 200.00 meters
1:25,000	2,083.30 feet 635.00 meters	820.20 feet 250.00 meters
1:50,000	4,166.70 feet 1,270.00 meters	1,640.40 feet 500.00 meters
1:63,360	5,280.00 feet 1,609.30 meters	2,078.70 feet 633.60 meters
1:100,000	8,333.30 feet 2,540.00 meters	3,280.80 feet 1,000.00 meters
1:250,000	20,833.00 feet 6,350.00 meters	8,202.00 feet 2,500.00 meters
1:500,000	41,667.00 feet 12,700.00 meters	16,404.00 feet 5,000.00 meters

"Rite in the Rain"®
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UNIVERSAL
No. 374

UCR 2010
Observations Behaviour
White Sturgeon Sediment
Toxicity Study
Book #3

"Rite in the Rain"®
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PAGE		DATE

This book is printed on "Rite in the Rain" All-Weather Writing Paper - A unique paper created to shed water and enhance the written image. It is widely used throughout the world for recording critical field data in all kinds of weather. For best results, use a pencil or an all-weather pen.

09/16/10 observations 12:30 pm JB

Tank ID	observations
DE-A	25% AS bottom, 50% AS various, 25% AS screen
Ge-D	33% AS bottom, 33% AS various, 33% AS screen
LD-01-D	20% AS bottom, 30% AS various, 50% AS screen
LMF-02-A	25% AS bottom, 50% AS various, 25% AS screen
UMF-01-D	33% AS bottom, 33% AS various, 33% AS screen
LALL-D	40% AS bottom, 40% AS various, 20% AS screen
NP-03-A	40% AS bottom, 40% AS various, 20% AS screen
LMF-02-B	25% AS bottom, 50% AS various, 25% AS screen
LALL-C	33% AS bottom, 33% AS various, 33% AS screen
LD-01-B	25% AS bottom, 25% AS various, 50% AS screen
UMF-01-C	40% AS bottom, 50% AS various, 10% AS screen
CTRL-C	50% AS bottom, 40% AS various, 10% AS screen
LALL-B	60% AS bottom, 20% AS various, 20% AS screen
CTRL-D	33% AS bottom, 33% AS various, 33% AS screen
H_2O-B	45% AS bottom, 45% AS various, 10% AS screen
Ge-C	60% AS bottom, 20% AS various, 20% AS screen
Ge-A	60% AS bottom, 20% AS various, 20% AS screen
H_2O-A	45% AS bottom, 45% AS various, 10% AS screen
NP-03-B	80% AS bottom, 10% AS various, 10% AS screen
Ge-B	33% AS bottom, 33% AS various, 33% AS screen
LALL-F	45% AS bottom, 45% AS various, 10% AS screen
LMF-02-D	25% AS bottom, 50% AS various, 25% AS screen
LD-01-A	25% AS bottom, 50% AS various, 25% AS screen
H_2O-C	40% AS bottom, 40% AS various, 20% AS screen

Scale: 1 square = 1

Tank ID	observations
UMF-01-A	33% AS bottom, 33% AS various, 33% AS screen
LD-01-E	45% AS bottom, 45% AS various, 10% AS screen
CTRL-A	33% AS bottom, 33% AS various, 33% AS screen
UMF-01-B	25% AS bottom, 25% AS various, 50% AS screen
UMF-01-F	30% AS bottom, 50% AS various, 20% AS screen
CTRL-B	33% AS bottom, 33% AS various, 33% AS screen
LD-01-C	33% AS bottom, 33% AS various, 33% AS screen
DE-C	45% AS bottom, 45% AS various, 10% AS screen
CTRL-F	30% AS bottom, 60% AS various, 10% AS screen
DE-B	33% AS bottom, 33% AS various, 33% AS screen
H_2O-E	60% AS bottom, 10% AS various, 30% AS screen
CTRL-E	30% AS bottom, 60% AS various, 10% AS screen
LALL-E	25% AS bottom, 50% AS various, 25% AS screen
H_2O-D	33% AS bottom, 33% AS various, 33% AS screen
LMF-02-C	10% AS bottom, 60% AS various, 30% AS screen
LALL-A	33% AS bottom, 33% AS various, 33% AS screen
UMF-01-E	20% AS bottom, 40% AS various, 20% AS screen
LD-01-F	10% AS bottom, 45% AS various, 45% AS screen

1% Inactive bottom

Finished 1:15 pm 09/16/10 JB

2

Scale: 1 square = _____

09/16/10 observations 6:30 pm JB

Tank ID	observations
DE-A	same as noon
Ge-D	50% AS bottom, 30% AS various, 20% AS screen
LD-01-D	33% AS bottom, 33% AS various, 33% AS screen
LMF-02-A	same as noon
UMF-01-D	50% AS bottom, 25% AS various, 25% AS screen
LALL-D	60% AS bottom, 20% AS various, 20% AS screen
NP-03-A	60% AS bottom, 20% AS various, 20% AS screen
LMF02-B	33% AS bottom, 33% AS various, 33% AS screen
LALL-C	60% AS bottom, 20% AS various, 20% AS screen
LD-01-B	60% AS bottom, 10% AS various, 30% AS screen
UMF-01-C	33% AS bottom, 33% AS various, 33% AS screen
CTRL-C	50% AS bottom, 25% AS various, 25% AS screen
LALL-B	45% AS bottom, 10% AS various, 45% AS screen
CTRL-D	same as noon
H_2O-B	60% AS bottom, 30% AS various, 10% AS screen
Ge-C	80% AS bottom, 10% AS various, 10% AS screen
Ge-A	60% AS bottom, 20% AS various, 20% AS screen
H_2O-A	30% AS bottom, 50% AS various, 10% AS screen
NP-03-B	50% AS bottom, 25% AS various, 25% AS screen
Ge-B	80% AS bottom, 10% AS various, 10% AS screen
LALL-F	45% AS bottom, 45% AS various, 10% AS screen
LMF-02-D	same as noon
LD-01-A	20% AS bottom, 40% AS various, 40% AS screen
H_2O-C	same as noon

3

Scale: 1 square = _____

Tank ID	Observations
UMF-01-A	50% AS bottom, 25% AS various, 25% AS screen
LD-01-E	50% AS bottom, 30% AS various, 20% AS screen
CTRL-A	same as noon
UMF-01-B	45% AS bottom, 45% AS various, 10% AS screen
UMF-01-F	33% AS bottom, 33% AS various, 33% AS screen
CTRL-B	40% AS bottom, 40% AS various, 20% AS screen
LD-01-C	same as noon
DE-C	same as noon
CTRL-F	60% AS bottom, 20% AS various, 20% AS screen
DE-B	same as noon
H_2O-E	60% AS bottom, 20% AS various, 20% AS screen
CTRL-E	60% AS bottom, 30% AS various, 10% AS screen
LALL-E	same as noon
H_2O-D	same as noon
LMF-02-C	33% AS bottom, 33% AS various, 33% AS screen
LALL-A	60% AS bottom, 20% AS various, 20% AS screen
UMF-01-E	33% AS bottom, 33% AS various, 33% AS screen
LD-01-F	33% AS bottom, 33% AS various, 33% AS screen

Finished 7:00 pm 09/16/10 JB

SB 09/16/10

Scale: 1 square = _____

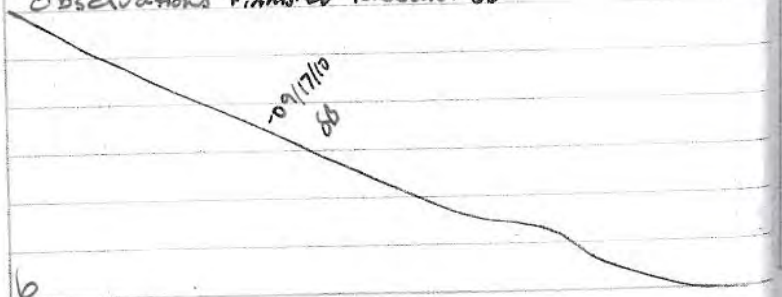
09/17/10 SB observations 9:00 am

Tank ID	Observations
DE-A	25% AS screen, 30% AS various, 45% AS bottom
GE-D	30% AS bottom, 35% AS screen, 35% AS various.
LD-01-D	25% AS bottom, 25% AS various, 50% AS screen.
LMF-02-A	30% AS bottom, 35% AS various, 35% AS screen.
UMF-01-D	50% AS various, 25% AS screen, 25% AS bottom
LALL-D	30% AS bottom, 35% AS screen, 35% AS various.
NP-03-A	20% AS bottom, 40% AS screen, 40% AS various.
LMF-02-B	25% AS screen, 25% AS various, 50% AS bottom
LALL-C	10% AS screen, 10% AS various, 80% AS bottom.
LD-01-B	10% AS various, 20% AS screen, 70% AS bottom
UMF-01-C	25% AS various, 25% AS screen, 50% AS bottom.
CTRL-C	20% AS various, 20% AS screen, 60% AS bottom
LALL-B	20% AS various, 20% AS screen, 60% AS bottom
CTRL-D	30% AS bottom, 30% AS various, 40% AS screen.
H_2O-B	25% AS screen, 25% AS various, 50% AS bottom.
GE-C	25% AS screen, 25% AS various, 50% AS bottom
GE-A	25% AS screen, 25% AS various, 50% AS bottom.
H_2O-A	25% AS screen, 35% AS various, 40% AS bottom.
NP-03-B	30% AS screen, 35% AS various, 35% AS bottom.
GE-B	30% AS various, 35% AS screen, 35% AS bottom
LALL-F	30% AS screen, 30% AS various, 40% AS bottom
LMF-02-D	30% AS screen, 35% AS various, 35% AS bottom.
LD-01-A	35% AS bottom, 35% AS various, 35% AS screen.
H_2O-C	30% AS various, 35% AS screen, 35% AS bottom

Scale: 1 square = _____

Tank ID	Observations Continued 09/17/10 10:00am
UMF-01-A	30% AS bottom, 35% AS various, 30% AS screen
LD-01-E	30% AS various, 35% AS bottom, 35% AS screen
CTRL-A	20% AS various, 30% AS screen, 50% AS bottom
UMF-01-B	30% AS screen, 35% AS various, 35% AS bottom
UMF-01-F	20% AS bottom, 30% AS various, 50% AS screen
CTRL-B	30% AS bottom, 30% AS screen, 40% AS various
LD-01-C	30% AS bottom, 30% AS screen, 40% AS various
DE-C	20% AS screen, 20% AS, bottom 60% AS various
CTRL-F	20% AS bottom, 40% AS screen, 40% AS various
DE-B	30% AS bottom, 30% AS screen, 40% AS various
H_2O-E	30% AS screen, 35% AS bottom, 35% AS various
CTRL-E	30% AS bottom, 35% AS screen, 35% AS various
LALL-E	25% AS bottom, 25% AS screen, 50% AS various
H_2O-D	30% AS screen, 35% AS bottom, 35% AS various
LMF-02-C	15% AS bottom, 35% AS screen, 50% AS various
LALL-A	20% AS bottom, 30% AS screen, 50% AS various
UMF-01-E	30% AS bottom, 30% AS screen, 40% AS various
LD-01-F	25% AS bottom, 25% AS screen, 50% AS various

Observations Finished 10:00am SB



Scale: 1 square = _____

09/17/10 SA Observations 1:30pm

Tank ID	Observations
DE-A	20% AS Bottom, 5% AS Screen, 75% AS Various
Ge-D	30% AS Screen, 30% AS Bottom, 40% AS Various
LD-01-D	25% AS Screen, 25% AS Bottom, 50% AS Various
LMF-02-A	20% AS Screen, 10% AS Bottom, 70% AS Various
UMF-01-D	20% AS Screen, 20% AS Bottom, 60% AS Various
LALL-D	20% AS Bottom, 30% AS Screen, 50% AS Various
NP-03-A	5% IN Bottom, 40% AS Bottom, 5% AS Screen, 50% AS Various
LMF-02-B	40% AS Screen, 10% AS Bottom, 50% AS Various
LALL-C	35% AS Various, 50% AS Bottom, 15% AS Screen
LD-01-B	35% AS Screen, 35% AS Various, 30% AS Bottom
UMF-01-C	20% AS Bottom, 10% AS screen, 70% AS Various
CTRL-C	10% AS Bottom, 20% AS Screen, 70% AS Various
LALL-B	50% AS Bottom, 20% AS Screen, 30% AS Various
CTRL-D	60% AS Screen 30% AS Various, 10% AS Bottom, 1 IN Bottom
H_2O-B	70% AS Bottom, 15% AS Various, 15% AS Screen
Ge-C	80% AS Bottom, 20% AS Various
Ge-A	60% AS Bottom, 20% AS Screen, 20% AS Various
H_2O-A	50% AS Various, 45% AS Bottom, 5% AS Screen
NP-03-B	40% AS Bottom, 10% AS Screen, 50% AS Various
Ge-B	35% AS Screen, 30% AS Bottom, 35% AS Various
LALL-F	50% AS Various, 30% AS Bottom, 20% AS Screen
LMF-02-D	20% AS Bottom, 40% AS Screen, 40% AS Various
LD-01-A	40% AS Screen, 40% AS Various, 20% AS Bottom
H_2O-C	10% AS Screen, 45% AS Bottom, 45% AS Various

Scale: 1 square = _____

Observations 09/17/10 Continued SA

Tank ID	Observations
UMF-01-A	30% AS Bottom, 30% AS Screen, 40% AS Various
LD-01-E	10% AS Screen, 30% AS Bottom, 60% AS Various
CTRL A	20% AS Screen 40% AS Various 20% IN Bottom, 20% AS Bot
UMF-01-B	30% AS Bottom, 30% AS Screen, 40% AS Various
UMF-01-F	50% AS Various, 30% AS Screen, 20% AS Bottom
CTRL B	35% AS Bottom 40% AS Various, 25% AS Screen
LD-01-C	20% AS Bottom, 50% AS Various, 30% AS Screen
DE-C	40% AS Various, 30% AS Screen, 30% AS Bottom
CTRL-F	80% AS Various 10% AS Bottom, 10% AS Screen
DE-B	20% AS Bottom, 40% AS Various, 40% AS Screen
H_2O-E	60% AS Bottom, 35% AS Various, 5% AS Screen
CTRL-E	35% AS Various, 35% AS Bottom, 30% AS Screen
LALL-E	50% AS Screen, 10% AS Bottom, 40% AS Various
H_2O-D	20% AS Screen, 40% AS Various 40% AS Bottom
LMF-02-C	50% AS Screen 40% AS Various 10% AS Bottom
LALL-A	35% AS Various, 35% AS Bottom, 30% AS Screen
UMF-01-E	40% AS Various, 40% AS Bottom, 20% AS Screen
LD-01-F	30% AS Bottom, 35% AS Various, 35% AS Screen

Finished 2:15pm 09/17/10 SA

Scale: 1 square = _____

observation 18 Sept 2010 AV 2:00PM

Tank ID	Observation		
DE-A	50% As Screen	40% as Bottom	10% Various
Ge-D	60% As Screen	20% as Bottom	20% Various
LD-01-D	20% As Screen	35% as Bottom	45% Various
LMF-02-A	50% As Screen	10% as Bottom	40% Various
UMF-01-D	50% As Screen	20% as Bottom	30% Various
LALL-D	70% As Screen	20% as Bottom	10% Various
NP-03-A	35% As Screen	60% as Bottom	5% Various
LMF-02-B	20% as Screen	50% as Bottom	30% Various
LALL-C	10% as Screen	70% as Bottom	20% Various
LD-01-B	50% as Screen	20% Bottom	30% Various
UMF-01-C	60% as Screen	30% Bottom	10% Various
CTRL-C	20% as Screen	70% Bottom	10% Various
LALL-B	80% as Screen	15% Bottom	5% Various
CTRL-D	70% as Screen	30% Bottom	0% Various
H_2O-B	15% as Screen	80% as Bottom	5% Various
Ge-C	20% as Screen	70% as Bottom	10% Various
Ge-A	30% as Screen	50% as Bottom	20% Various
H_2O-A	20% as Screen	60% as Bottom	20% Various
NP-03-B	15% as Screen	70% as Bottom	15% Various
Ge-B	50% as Screen	30% as Bottom	20% Various
LALL-F	20% as Screen	60% as Bottom	20% Various
LMF-02-D	60% as Screen	30% Bottom	10% Various
LD-01-A	30% Screen	50% Bottom	20% Various

Scale: 1 square = _____

Tank ID	Observation		
H_2O-C	50% Bottom	30% Screen	20% Various
UMF-01-A	20% Bottom	40% Screen	40% Various
LD-01-E	30% Bottom	60% Screen	10% Various
Ctrl-A	10% Bottom	10% Screen	80% Various
UMF-01-B	50% Bottom	20% Screen	30% Various
UMF-01-F	20% Bottom	30% Screen	50% Various
CtRL-B	70% Bottom	20% Screen	10% Various
LD-01-C	20% Bottom	30% Screen	50% Various
DE-C	10% Bottom	70% Screen	20% Various
CtRL-F	30% Bottom	45% Screen	25% Various
DE-B	50% Bottom	30% Screen	20% Various
H_2O-E	60% Bottom	20% Screen	20% Various
CtRL E	40% Bottom	40% Screen	20% Various
LALL E	60% Bottom	30% Screen	10% Various
H_2O-D	20% Bottom	60% Screen	20% Various
UMF-02-C	80% Bottom	40% Screen	30% Various
LALL-A	50% Bottom	30% Screen	20% Various
UMF-01-E	40% Bottom	40% Screen	20% Various
LD-01-F	70% Bottom	15% Screen	15% Various

finished 3:00 PM

AV

Scale: 1 square = _____

observation 18 sept 2010 AV 6:15 PM

Tank ID	observation		
DE-A	80% as Bottom	5% as Screen	5% as Various
Ce-D	50% as Bottom	30% as Screen	20% as Various
LD-01-D	70% as Bottom	20% as Screen	10% as Various
UMF-02-A	60% as Bottom	30% as Screen	10% as Various
UMF-01-D	50% as Bottom	30% as Screen	20% as Various
LALL-D	40% as Bottom	40% as Screen	20% as Various
NR03-A	60% as Bottom	30% as Screen	10% as Various
UMF-02-B	40% as Bottom	30% as Screen	30% as Various
LALL-C	50% as Bottom	25% as Screen	25% as Various
LD-01-B	40% as Bottom	40% as Screen	20% as Various
UMF-01-C	50% as Bottom	30% as Screen	20% as Various
CTRL-C	60% as Bottom	20% as Screen	20% as Various
LALL-B	70% as Bottom	15% as Screen	15% as Various
CTRL-D	90% as Bottom	5% as Screen	5% as Various
H_2O-B	80% as Bottom	15% as Screen	5% as Various
Ce-C	60% as Bottom	10% as Screen	30% as Various
Ce-A	80% as Bottom	15% as Screen	5% as Various
H_2O-A	70% as Bottom	20% as Screen	10% as Various
NP-03-B	60% as Bottom	30% as Screen	10% as Various
CE-B	40% as Bottom	40% as Screen	20% as Various
LALL-F	50% as Bottom	10% as Screen	40% as Various
UMF-02-D	40% as Bottom	30% as Screen	30% as Various
LD-01-A	30% as Bottom	30% as Screen	40% as Vari

Scale: 1 square = _____

Tank ID	observation		
H2O-C	50% as Bottom	30% as Screen	20% as Various
UMF-01-A	40% as Bottom	35% as Screen	25% as Various
LD-01-E	30% as Bottom	40% as Screen	30% as Various
CTRL-A	90% as Bottom	0% as Screen	10% as Various
UMF-01-B	80% as Bottom	15% as Screen	5% as Various
UMF-01-F	90% as Bottom	80% as Screen	10% as Various
CTRL-B	50% as Bottom	10% as Screen	40% as Various
LD-01-C	40% as Bottom	40% as Screen	20% as Various
DE-C	30% as Bottom	60% as Screen	10% as Various
CTRL-F	40% as Bottom	50% as Screen	10% as Various
DE-B	30% as Bottom	40% as Screen	30% as Various
H2O-E	20% as Bottom	60% as Screen	20% as Various
CTRL-E	30% as Bottom	20% as Screen	50% as Various
LALL-E	40% as Bottom	30% as Screen	30% as Various
H2O-D	60% as Bottom	30% as Screen	10% as Various
LMF-02-C	50% as Bottom	20% as Screen	20% as Various
LALL-A	70% as Bottom	10% as Screen	20% as Various
UMF-01-E	40% as Bottom	40% as Screen	20% as Various
LD-01-F	60% as Bottom	30% as Screen	10% as Various

Finished at 4:00 PM

AN

Scale: 1 square =

observation 19 Sept 2010 1:30 PM AN

Tank ID	observation		
DE-A	40% as Screen	40% as Bottom	20% as Various
GE-D	30% as Screen	35% as Bottom	35% as Various
LD-01-D	5% as Screen	75% as Bottom	20% as Various
LMF-02-A	20% as Screen	45% as Bottom	35% as Various
UMF-02-D	25% as Screen	60% as Bottom	15% as Various
LALL-D	30% as Screen	30% as Bottom	40% as Various
NP-03-A	20% as Screen	50% as Bottom	30% as Various
LMF-02-B	20% as Screen	70% as Bottom	10% as Various
LALL-C	30% as Screen	30% as Bottom	40% as Various
LD-01-B	20% as Screen	55% as Bottom	25% as Various
UMF-01-C	20% as Screen	30% as Bottom	50% as Various
CTRL-C	10% as Screen	70% as Bottom	20% as Various
LALL-B	30% as Screen	60% as Bottom	10% as Various
CTRL-D	50% as Screen	10% as Bottom	40% as Various
H2O-B	30% as Screen	40% as Bottom	30% as Various
GE-C	20% as Screen	50% as Bottom	30% as Various
GE-A	40% as Screen	40% as Bottom	20% as Various
H2O-A	30% as Screen	50% as Bottom	20% as Various
NP-03-B	5% as Screen	90% as Bottom	5% as Various
GE-B	20% as Screen	40% as Bottom	40% as Various
LALL-F	30% as Screen	30% as Bottom	40% as Various
LMF-02-D	40% as Screen	40% as Bottom	20% as Various
LD-01-A	30% as Screen	20% as Bottom	50% as Various
H2O-C	20% as Screen	40% as Bottom	40% as Various

Scale: 1 square =

Tank ID	observation		
UMF-01-A	20% on Screen	30% on Bottom	50% on Various
LD-01-E	10% on Screen	30% on Bottom	60% on Various
CtRL-A	20% on Screen	50% on Bottom	30% on Various
UHF-01-B	20% on Screen	60% on Bottom	20% on Various
UHF-01-F	5% on Screen	80% on Bottom	15% on Various
CtRL-B	30% on Screen	50% on Bottom	2 on Various
LD-01-C	40% on Screen	40% on Bottom	20% on Various
DE-C	30% on Screen	30% on Bottom	40% on Various
CtRL-F	20% on Screen	40% on bottom	40% on Various
DE-B	40% on Screen	40% on Bottom	20% on Various
H_2O-E	30% on Screen	50% on Bottom	20% on Various
CtRL-E	25% on Screen	25% on Bottom	50% on Various
LALL-E	40% on Screen	30% on Bottom	30% on Various
H_2O-D	20% on Screen	40% on Bottom	40% on Various
LMF-02-C	10% on Screen	50% on Bottom	40% on Various
LALL-A	40% on Screen	40% on Bottom	20% on Various
UMF-01-E	30% on Screen	35% on bottom	35% on Various
LD-01-F	20% on Screen	30% on Bottom	50% on Various

finished 2:30 PM

AV

Scale: 1 square = _____

09/20/10 observations 9:15 am SG

Tank ID	observations
DE-A	30% AS screen, 30% AS various, 40% AS bottom
GE-D	25% AS screen, 25% AS various, 50% AS bottom
LD-01-D	30% AS various, 35% AS bottom, 35% AS screen.
LMF-02-A	25% AS screen, 35% AS various, 40% AS bottom.
UMF-01-D	25% AS screen, 25% AS various, 50% AS bottom, 1 IN bottom
LALL-D	20% AS various, 30% AS screen, 50% AS bottom
NP-03-A	25% AS screen, 35% AS various, 40% AS bottom.
LMF-02-B	30% AS screen, 35% AS various, 35% AS bottom
LALL-C	25% AS screen, 25% AS various, 50% AS bottom
LD-01-B	30% AS screen, 35% AS various, 35% AS bottom
UMF-01-C	30% AS screen 30% AS various 40% AS bottom
CTRL-C	30% AS screen, 35% AS various, 35% AS bottom
LALL-B	30% AS screen, 35% AS various, 35% AS bottom
CTRL-D	15% AS various, 30% AS screen, 55% AS bottom.
H_2O-B	30% AS screen, 35% AS various, 35% AS bottom
GE-C	30% AS screen 35% AS various, 35% AS bottom
GE-A	25% AS screen, 35% AS various, 40% AS bottom
H_2O-A	30% AS screen, 30% AS various, 40% AS bottom
NP-03-B	30% AS screen, 35% AS various, 35% AS bottom
GE-B	30% AS various, 35% AS screen, 35% AS bottom
LALL-F	30% AS bottom, 35% AS screen, 35% AS various.
LMF-02-D	30% AS screen, 30% AS bottom, 40% AS various.
LD-01-A	20% AS screen, 40% AS various, 40% AS bottom
H_2O-C	30% AS screen, 35% AS various, 35% AS bottom

Scale: 1 square = _____

Tank ID	Observations Continued 09/20/10 SB
LMF-01-A	30% AS various, 35% AS screen, 35% AS bottom
LD-01-E	30% AS screen, 35% AS various, 35% AS bottom.
CTRL-A	30% AS bottom, 35% AS screen, 35% AS various
UMF-01-B	30% AS screen, 30% AS bottom, 40% AS various.
UMF-01-F	30% AS bottom, 35% AS screen, 35% AS various
CTRL-B	20% AS bottom, 30% AS screen, 50% AS various.
LD-01-C	25% AS screen, 25% AS bottom, 50% AS various.
DE-C	25% AS screen, 25% AS bottom, 50% AS various.
CTRL-F	20% AS bottom, 40% AS screen, 40% AS various.
DE-B	20% AS bottom, 40% AS screen, 40% AS various
H2O-E	30% AS bottom, 35% AS screen, 35% AS various
CTRL-E	30% AS bottom, 35% AS screen, 35% AS various
LALL-E	30% AS bottom, 35% AS screen, 35% AS various
H2O-D	30% AS screen, 30% AS bottom, 40% AS various
LMF-02-C	30% AS screen, 30% AS bottom, 40% AS various
LALL-A	5% AS bottom, 25% AS bottom, 35% AS various, 35% AS screen
UMF-01-E	30% AS bottom, 35% AS various, 35% AS screen
LD-01-F	30% AS bottom, 35% AS various, 35% AS screen.

Observations finished 1045 am. SB

09/20/10

SB

16

Scale: 1 square = _____

09/20/10 SA Observations 8:00pm

Tank ID	Observations
DE-A	30% AS Screen, 40% AS Various, 30% AS Bottom
Ge-D	30% AS Screen 10% AS Bottom, 60% AS Various
LD-01-D	40% AS Screen 20% AS Bottom, 40% AS Various
LMF-02-A	40% AS Screen 30% AS Various, 30% AS Bottom
UMF-01-D	50% AS Various, 30% AS Bottom, 20% AS Screen
LALL-D	20% AS Screen, 40% AS Various, 40% AS Bottom
NP-03-A	50% AS Screen 40% AS Various, 10% AS Bottom
LMF-02-B	50% AS Screen 30% AS Various, 20% AS Bottom
LALL-C	30% AS Screen, 30% AS Various, 40% AS Bottom
LD-01-B	60% AS Various, 20% AS Bottom, 20% AS Screen
UMF-01-C	70% AS Various, 20% AS Screen, 10% AS Bottom
CTRL-C	40% AS Bottom, 40% AS Various, 20% AS Screen
LALL-B	60% AS Various, 30% AS Bottom, 10% AS Screen
CTRL-D	50% AS Various, 25% AS Screen, 25% AS Bottom
H2O-B	40% AS Various, 40% AS Bottom, 20% AS Screen
Ge-C	50% AS Various 25% AS Bottom, 25% AS Screen
Ge-A	80% AS Screen, 15% AS Various, 5% AS Bottom
H2O-A	40% AS Bottom, 40% AS Various 20% AS Screen
NP-03-B	35% AS Bottom, 35% AS Various, 30% AS Screen
Ge-B	40% AS Bottom, 40% AS Various, 20% AS Screen
LALL-F	50% AS Various, 20% AS Screen, 30% AS Bottom
LMF-02-D	50% AS Various 25% AS Screen, 25% AS Bottom
LD-01-A	70% AS Various, 10% AS Screen, 20% AS Bottom
H2O-C	60% AS Various, 30% AS Bottom, 10% AS Screen

Scale: 1 square = _____

Tank ID	Observations Cont'd 09/20/10 SA
UMF-01-A	60% AS Various, 20% AS screen, 20% AS Bottom
LD-01-E	50% AS screen, 30% AS Various, 20% AS Bottom
CTRL-A	35% AS Bottom, 35% AS Various, 30% AS Screen
UMF-01-B	40% AS Various, 30% AS Bottom, 30% AS screen
UMF-01-F	50% AS Various, 20% AS Screen, 30% AS Bottom
CTRL-B	40% AS various, 40% AS Bottom, 20% AS Screen
LD-01-C	40% AS Various, 40% AS Screen, 20% Bottom
DE-C	60% AS Various, 20% AS Screen, 20% AS Bottom
CTRL-F	70% AS Various 20% AS Bottom, 10% AS Screen
DE-B	50% AS Various, 30% AS Screen 20% AS Bottom
H_2O-E	70% AS Various, 20% AS Screen, 10% AS Bottom
CTRL E	50% AS Various, 25% AS screen, 25% AS Bottom
CALL-E	50% AS Screen 40% AS Various, 10% AS Bottom
H_2O-D	60% AS Various, 30% AS Bottom, 10% AS Screen
LMF-02-C	50% AS screen, 25% AS Bottom, 25% AS Various
LALL-A	40% AS Screen, 30% AS Bottom, 30% AS Various
UMF-01-E	60% AS Bottom, 20% AS Various, 20% AS Screen
LD-01-F	60% AS Bottom, 30% AS Screen, 10% AS Various
Finished	8:45 pm 09/20/10 SA

Scale: 1 square = _____

Scale: 1 square = _____

1.1 GB file, available upon request.

APPENDIX I-4

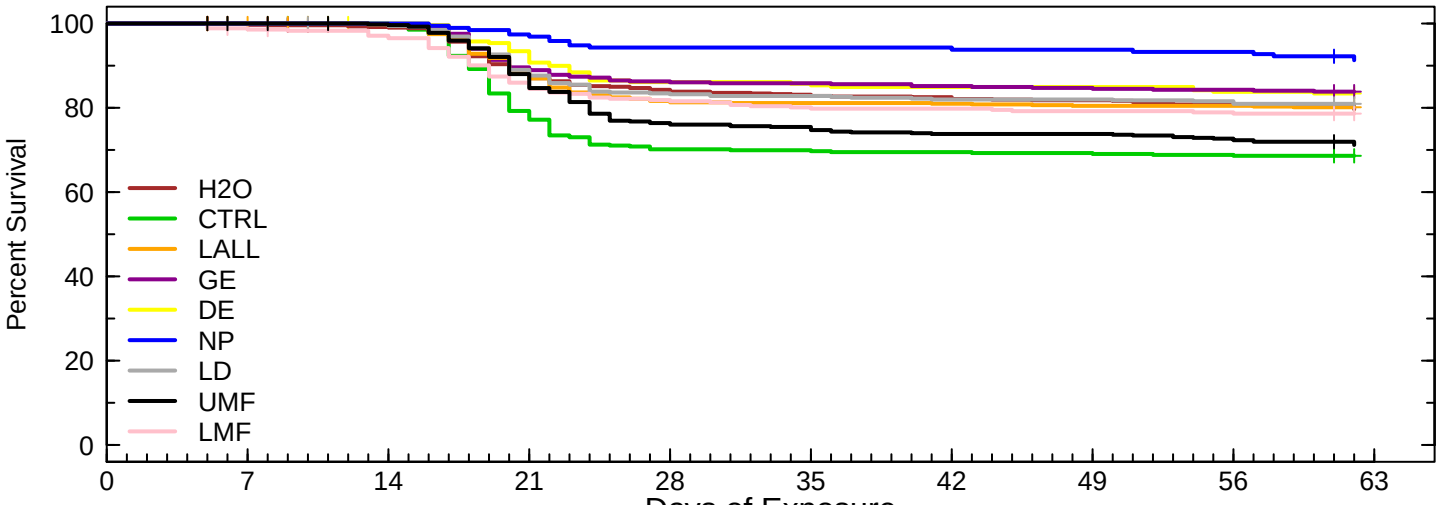
FISH TERMINATION PHOTOS

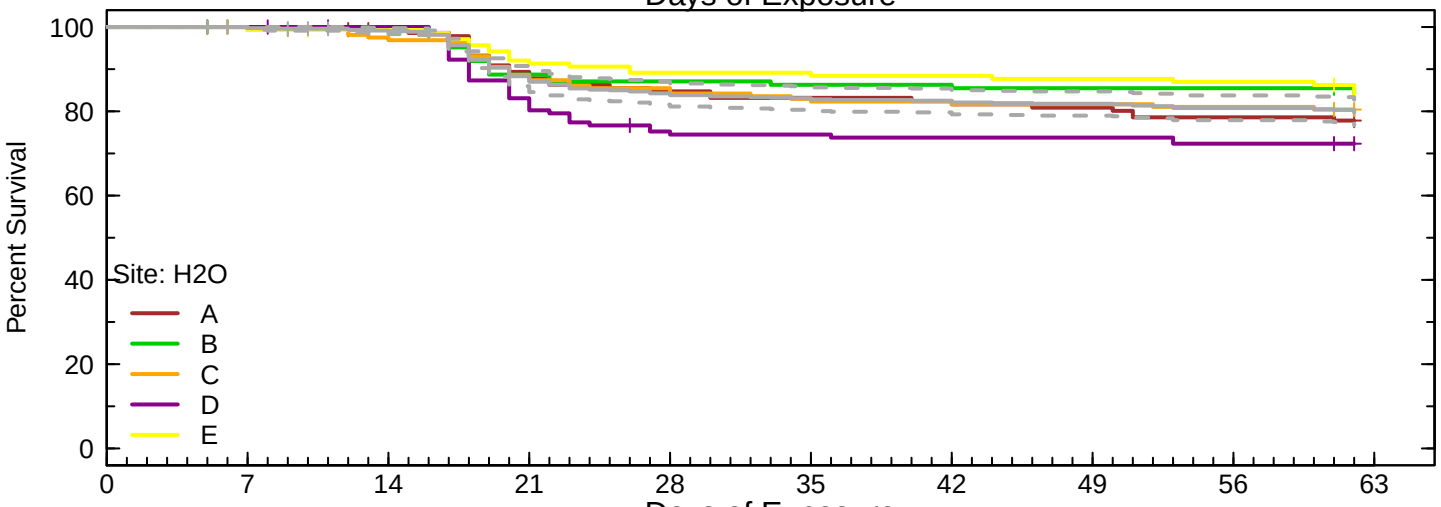
APPENDIX J

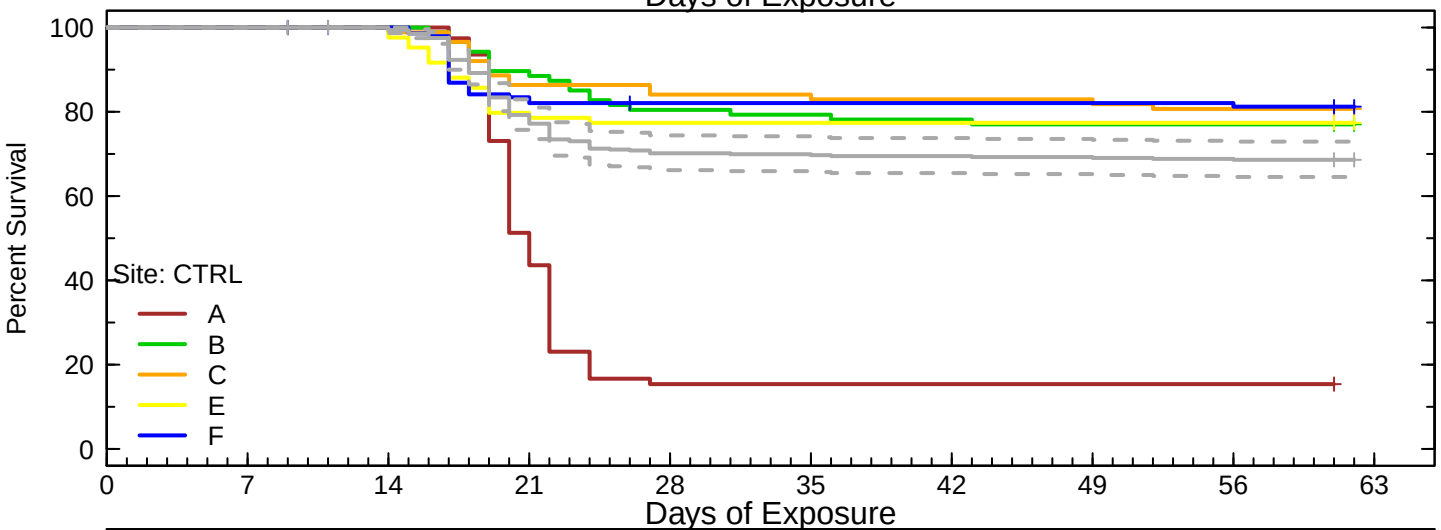
SURVIVAL CURVES FOR STUDY TREATMENTS AND INDIVIDUAL EXPOSURE CHAMBERS

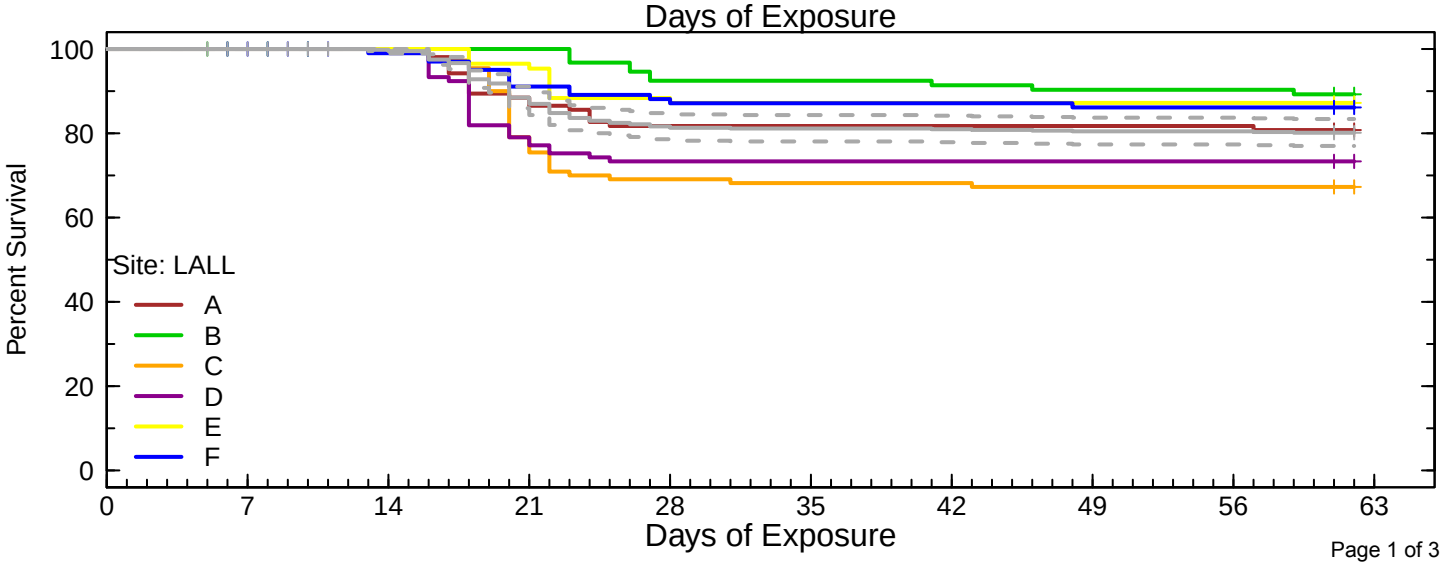
Legend for Survival Analysis Figures:

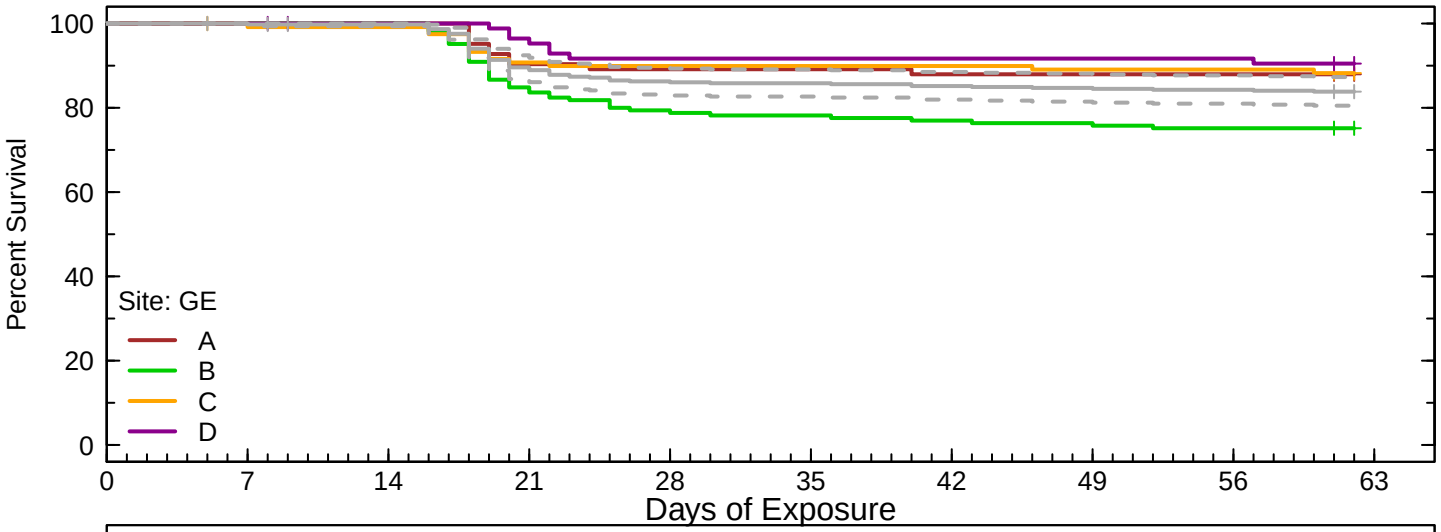
Graphs in this figure collection were constructed with a consistent format. On the graph for overall survival for all sites, colored lines represent the mean survival for each site as indicated by the inset legend. On graphs for individual sites, colored lines represent survival for each exposure chamber as indicated by the inset legend. Solid grey lines on figures for individual site (e.g., H20, DE, UMF, etc.) represent the mean survival of all replicate exposure chambers for the site. Dashed grey lines represent the upper and lower 95% confidence limits about the mean.

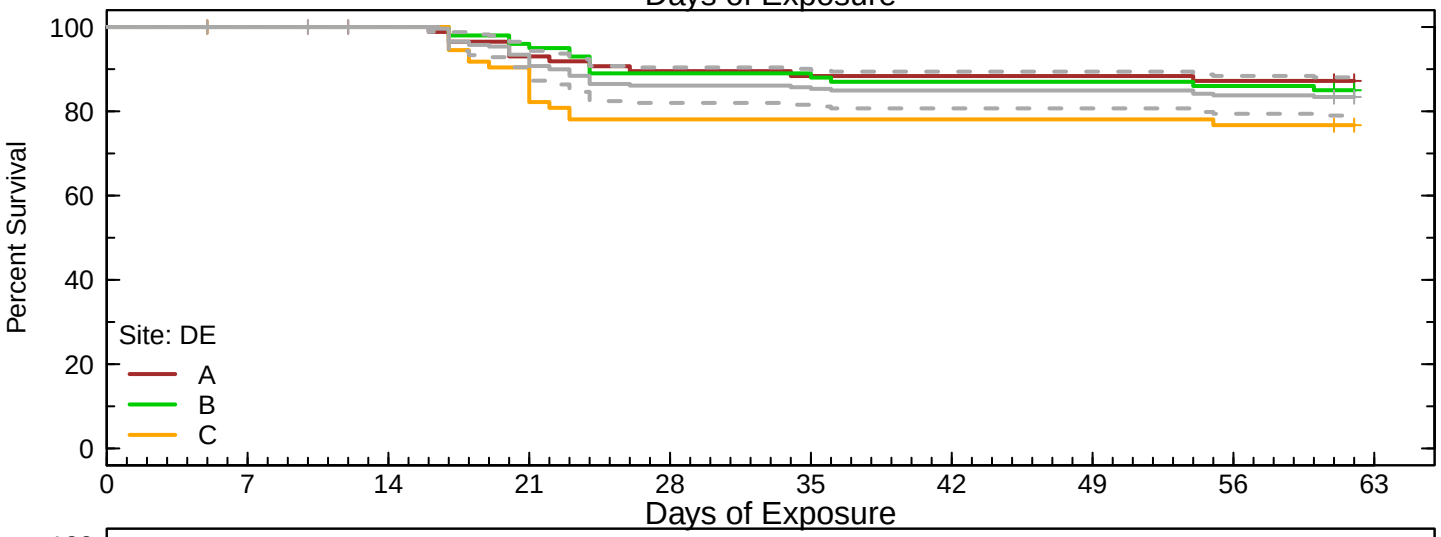

Percent Survival
Days of Exposure
H2O
CTRL
LALL
GE
DE
NP
LD
UMF
LMF

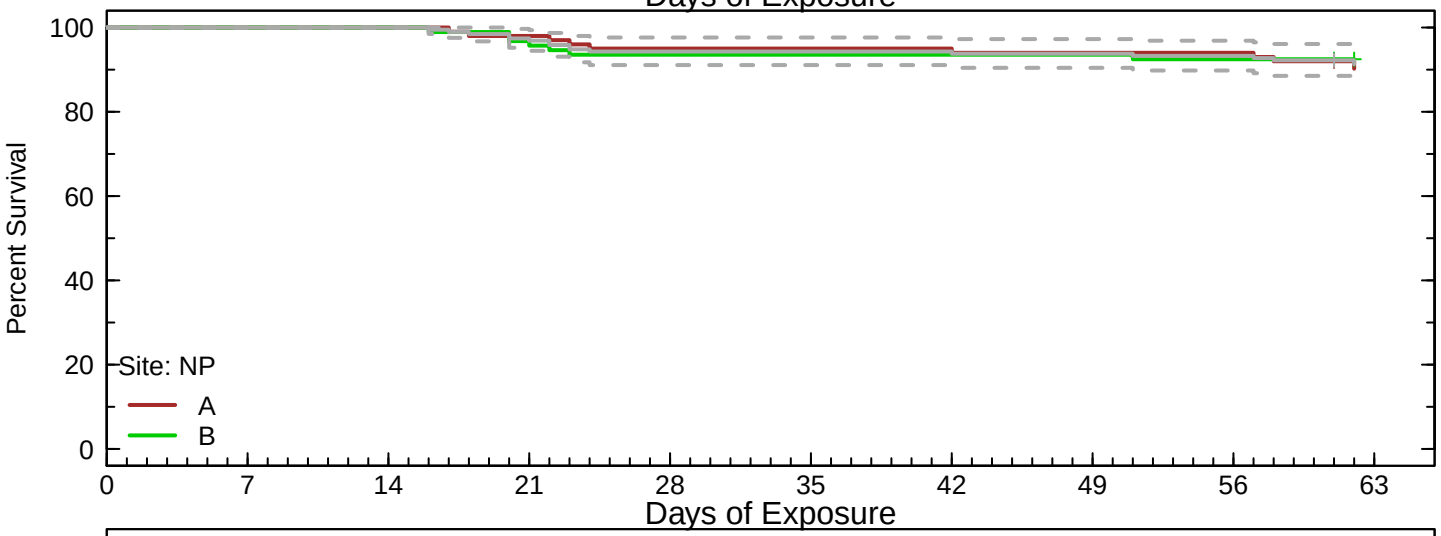

Percent Survival
Days of Exposure
Site: H2O
A
B
C
D
E

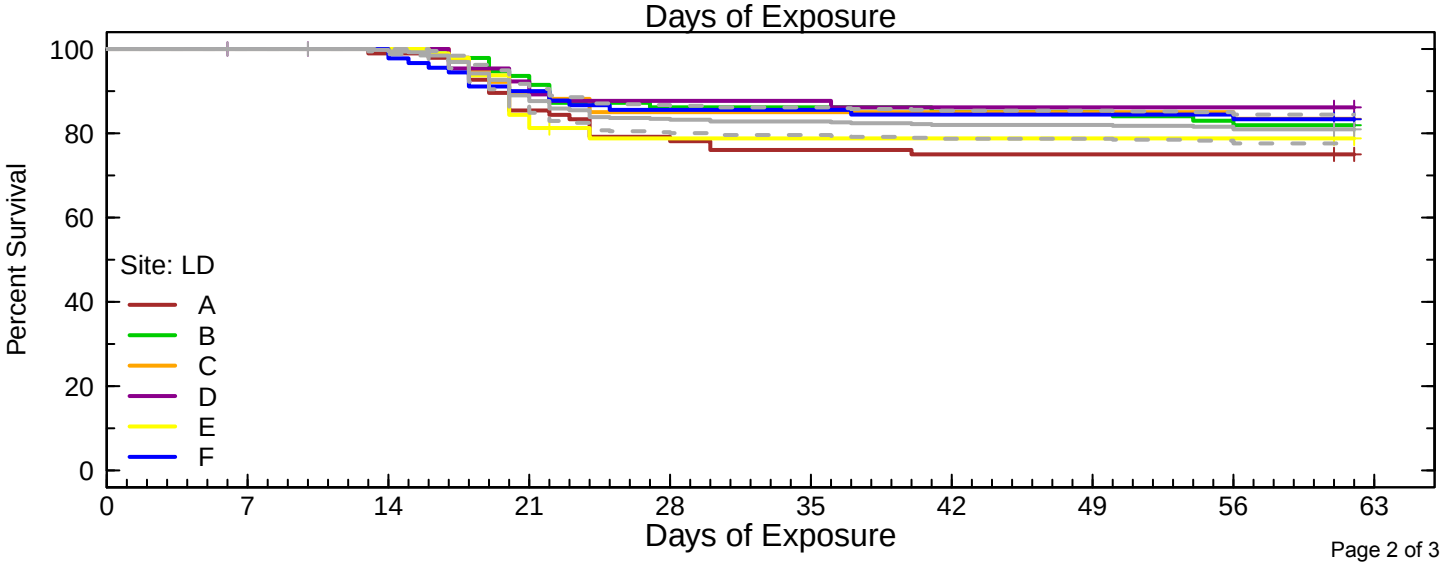

Percent Survival
Days of Exposure
Site: CTRL
A
B
C
E
F

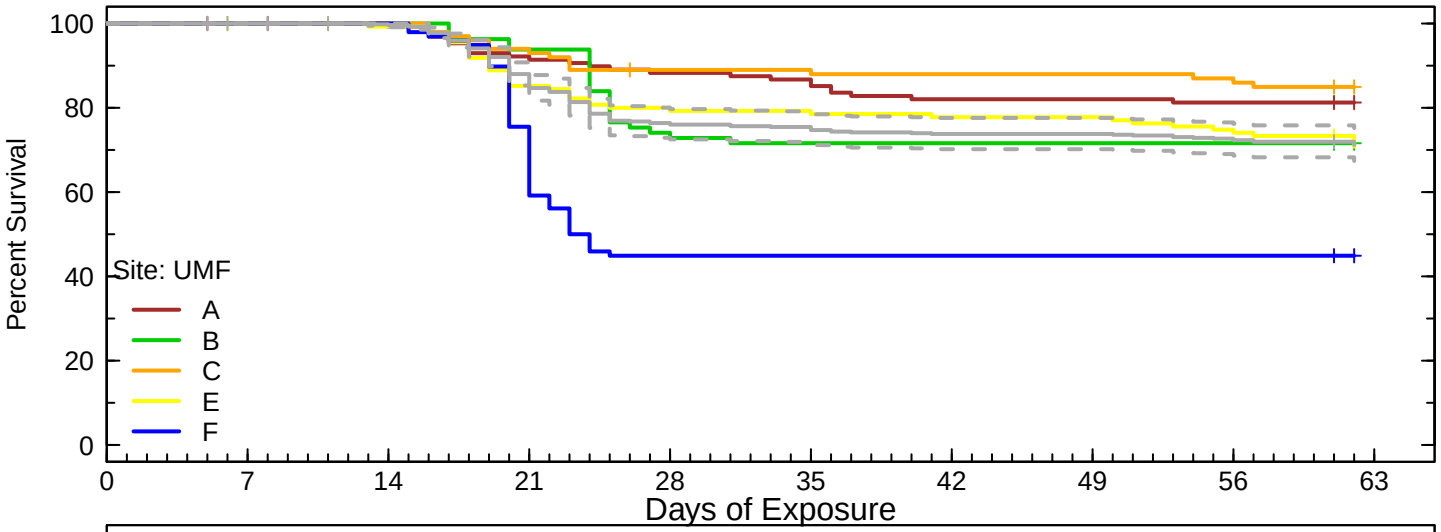

Percent Survival
Days of Exposure
Site: LALL
A
B
C
D
E
F

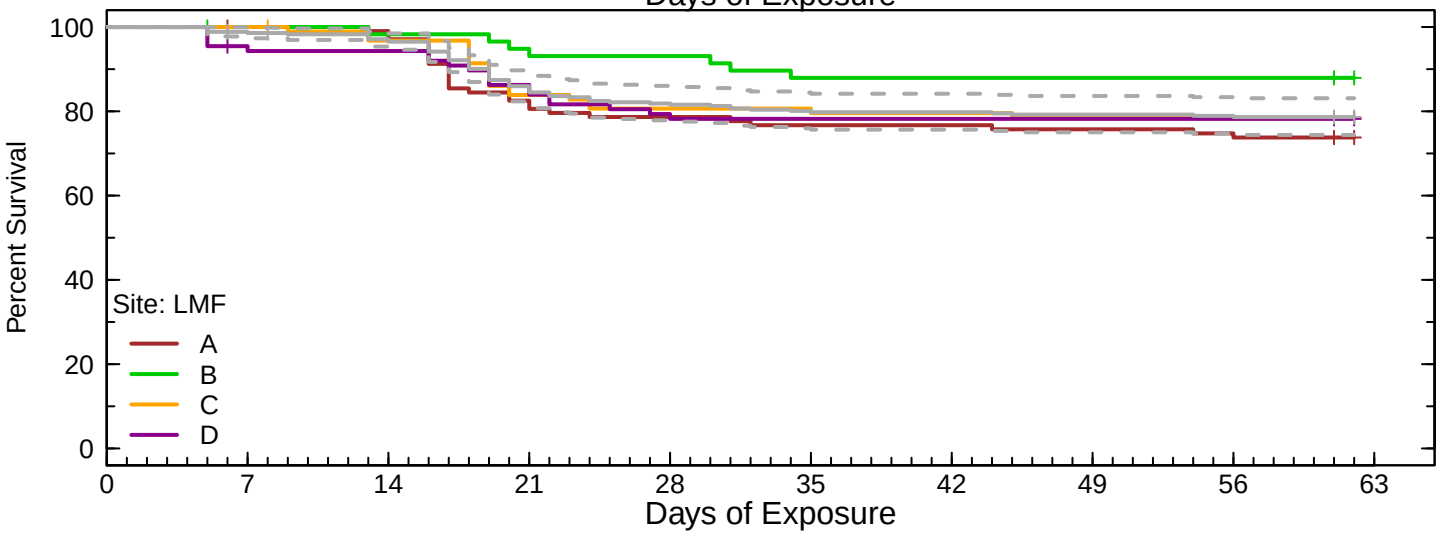

Percent Survival
Site: GE
A
B
C
D
0
20
40
60
80
100
0
7
14
21
28
35
42
49
56
63
Days of Exposure


Percent Survival
Site: DE
A
B
C
0
20
40
60
80
100
0
7
14
21
28
35
42
49
56
63
Days of Exposure


Percent Survival
Site: NP
A
B
0
20
40
60
80
100
0
7
14
21
28
35
42
49
56
63
Days of Exposure


Percent Survival
Site: LD
A
B
C
D
E
F
0
20
40
60
80
100
0
7
14
21
28
35
42
49
56
63
Days of Exposure


Percent Survival
100
80
60
40
20
0
Site: UMF
A
B
C
E
F
0
7
14
21
28
35
42
49
56
63
Days of Exposure


Percent Survival
100
80
60
40
20
0
Site: LMF
A
B
C
D
0
7
14
21
28
35
42
49
56
63
Days of Exposure